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**The Experience of Eating: The effects of music on
food-taste, food-pleasantness, and the rate of mastication**

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Abstract

The prevalence of obesity and overweight presents one of the most serious health challenges for the UK and the rest of the developed world. According to recent figures about a quarter of adults in the UK are obese. Children are becoming obese at a younger age and they remain obese for longer, a third of children between the ages of 2 and 15 are either overweight or obese. Reports suggest that we spend more each year on the treatment of obesity and diabetes than we do on the police, fire service, and judicial system combined. Therefore, the cost of the obesity epidemic is high and the associated societal burden substantial.

Obesity is a multi-factorial disorder with a wide range of biological, psychological and social contributors. However, at the root of obesity is the energy imbalance caused by taking in more calories through food than expending through activity, in other words overeating. Recommended non-medical solutions include behavioural interventions, controlled calorie intake, and regular exercise. So far, these approaches to tackling obesity have been largely ineffective. The lack of efficacy of conventional treatments to date highlights the need to explore alternative avenues and look for novel solutions to the problem. The focus of this thesis is to investigate the possibility of utilising music in the ongoing effort to curb obesity and overweight.

Listening to music is a pleasurable activity that is cognitively undemanding and its implementation does not require much effort. Music is also easily accessible, customizable, portable, and relatively inexpensive. The ability of music to influence arousal and the mood of individuals has made listening to music one of the favourite emotion regulation strategies across all age groups. Music has been used as a successful motivational tool in exercise and this represents its main contribution to the obesity effort so far. However, the vast potential of music to directly influence eating behaviours and consequently eating outcomes remains largely untapped.

This thesis develops and tests the notion that listening to music can provide an alternative or complementary treatment to support weight loss programs and special eating regimes. In addition, it investigates the experiences of eating in the general population in order to tap into the meanings, connotations, and associations related to these experiences. These narratives should provide additional insights whether and how music could be utilized best in the context of eating, particularly in relation to food-taste, food-pleasantness, and emotional eating.

A mixed-method approach was undertaken. Three studies were conducted - two quantitative laboratory studies, and one qualitative study comprising interviews. The first laboratory study investigates the influence of music on the perception of taste. The existence of cross-modal correspondences between different senses allows music to exert an influence on the perception of taste. The potentiality of music to modify perceptions of taste of more bland-tasting, healthy foods could be advantageous when adhering to specific diets; low sugar in particular. The second laboratory study investigates the effect of the speed of music on the rate of mastication. The influence of music on the levels of arousal and consequently the speed of chewing could lead to slower eating thus reducing the incidents of overeating which are often a consequence of eating too fast. The third study consists of four largely unstructured interviews which explore the lived experience of eating. The aim of the study was to investigate the “experience of eating” as understood and narrated by participants to ascertain whether a basis and adequate conditions for utilization of applied music exist in their day-to-day lives.

The findings of the first experiment suggest that taste congruent music has a significant effect on both the perception of food-taste and hedonic ratings for sweet as well as bland-tasting-healthy food items. The results of the second experiment indicate that the speed of music (slow, moderate and fast) has a significant effect on the rate of mastication e.g. slow

music is related to a lower number of bites per minute. The interviews highlighted important and interesting insights about what eating means to individuals and how often they rely on food and eating as a way to improve/change the way they feel. It is conceivable that utilizing music as an alternative/additional coping strategy could reduce the need to rely on food to the same effect. Findings also suggest that food-taste is a significant factor in day-to-day food selection and food consumption. Applied music could be used to modify the perception of food-taste and its desirability and in so doing influence food choices. The limitations of the study, methodological issues and future research directions are discussed. Overall, this thesis posits that music might be a promising line of enquiry in a continuing search for appropriate and cost-effective solutions to the current obesity crises.

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Chapter 1

Introduction to the Thesis

Chapter 1 sets the scene for the whole thesis. It introduces overweight conditions as one of the main challenges of our time and gives statistical evidence to exemplify and explain some of the related issues. This is followed by the aims of the thesis and a broad outline of each chapter included in the thesis. The concepts, models and theories introduced in Chapter 1 will be discussed in greater detail in the subsequent chapters.

1.0 Background

Obesity is on the increase worldwide. The number of cases has more than doubled since 1980 (WHO, 2016). The World Health Organization declared excess weight a public health challenge of the 21st century (WHO, 2007). Reports suggest that in 2014 over 1.9 billion adults over the age of 18 were overweight and 600 million of these were obese. In other words, 39% of the adult world population was over the normal weight with 13% of them obese (WHO, 2016). There is also a significant rise in obesity cases among children of school age (Wang, McPherson, Marsh, Gortmaker & Brown, 2011), according to the World Health Organization (2016) an estimated 41 million children under the age of 5 years are either overweight or obese. In line with recent figures one third of women in the European Union are overweight and 20% are obese (Iozzo et al., 2014). This is particularly worrying since foetal over-nutrition in obese and overweight mothers represents one of the developmental pathways to obesity (Iozzo et al., 2014). Current overweight and obesity figures show that 64.2% of the adult population in the UK are overweight and 26.9% are obese. Adulthood obesity forecasts for years 2010 - 2030 calculate that by 2020, 31% of men

and 30% of women will be obese with the predicted increase to 36% for men and 33% for women by 2030 (WHO, 2016).

There is no single cause of obesity as it is a multifactorial disorder. The Foresight report recognizes and exemplifies the multifaceted structure of obesity. The high degree of complexity as well as the connections and interactions between different factors are illustrated in the Obesity System Map (Vandenbroeck, Goossens, & Clemens, 2007). Although many pathways and contributors may lead to the accumulation of excess weight, put simply, obesity and overweight are a result of the energy imbalance between the calories consumed and the calories expended over a period of time (WHO, 2016).

Weight status is most commonly defined using the Body Mass Index (BMI). BMI is based on the calculation where bodily weight in kilograms is divided by the square of the height in meters (WHO, 2015). Illustrating the levels of severity of the condition, a BMI of 30-34.9 indicates Obesity I, Obesity II is a BMI of 35-39.9, while a BMI of 40 and above indicates Obesity III. There are other measures of excess weight and fat such as the waist-circumference or waist-to-hip ratio which take into account the distribution of fat versus muscle. Nevertheless, BMI remains the most widely known and the most commonly used measure, thus providing the best comparator.

Obesity has a dramatic impact on individual lives as well as the society at large (Wang et al., 2011). This challenging condition may lead to medical problems like heart and cardiovascular disease, type 2 diabetes, musculoskeletal problems and specific forms of cancer (Wang et al., 2011, WHO 2016). The consequences of obesity can result in reduced life-satisfaction and productivity, loss of income, problems in social relationships and shorter life expectancy (Carr & Friedman, 2005). Direct as well as indirect costs of obesity and overweight are putting a considerable strain on the national health and supporting services (Dee et al., 2014). Obese and overweight individuals tend to consume more prescription

drugs, make more frequent doctor and hospital visits (Dee et al., 2014) and owing to the lack of mobility obese patients require more frequent home visits (Carr & Friedman, 2005; Wang et al., 2011). In the UK hospital costs attributable to obesity and obesity related diseases in the year 2011 - 2012 were £1,338 million (NICE, 2013), while in the year 2015 - 2016 there were 525 thousand admissions where obesity was recorded as either the primary or secondary cause (NHS Digital, 2017).

Although most research agrees that overweight and obesity have an adverse impact on health and quality of life, there are also some controversies. The findings of a 27-year longitudinal population based study suggest that individuals who are obese in mid-life are 74% more likely to have dementia in later life compared to those with normal weight (Whitmer, Gunderson, Barrett-Connor, Quesenberry & Yaffe, 2005). These findings are challenged by the results of another population based study which investigated the association between BMI and dementia risk in older individuals. Since low weight is a recognized clinical feature of dementia and weight loss tends to precede the onset of all types of dementia, the results posit that people with higher BMI have a lower risk of developing the condition (Dahl, Löppönen, Isoaho, Berg, & Kivelä, 2008).

Research reports that obesity (BMI \geq 30) is associated with higher all-cause mortality (Aune et al., 2016). However a systematic review and meta-analyses by Flegal, Kit, Orpana, and Graubard (2013) suggests that excess mortality in obesity is mainly due to the more severe types of the condition such as Obesity II (BMI \geq 35 – 39.9) and Obesity III (BMI \geq 40). According to the findings (Flegal et al., 2013), Obesity I (BMI \geq 30-34.9) is generally not associated with higher mortality. On the other hand, a systematic review and meta-analyses (Kramer, Zinman, & Retnakaran, 2013) which investigated a metabolically healthy subgroup of obese individuals concludes that there is no benign form of obesity. The findings propose that the concomitant health risks increase progressively leading to adverse

consequences. This suggests that there is no harmless type of obesity when health outcomes are considered over a long period of time.

The recommended treatment options for obesity include medical solutions such as the use of pharmacological and surgical treatments (Gloy et al., 2013), while non-medical solutions look at behavioural changes, calorie controlled diets, and regular physical exercise (Doucet, King, Levine & Ross, 2011; Katan, 2009). To date, these conventional approaches to tackling obesity have been largely ineffective. Research evidence suggests that most obese adults regain weight within 12 months of the initial weight loss (Dombrowski, Knittle, Avenell, Araujo-Soares & Sniehotta, 2014). A study of 176,495 UK primary healthcare records over a nine-year period concluded that the probability of obese persons attaining normal weight or maintaining the weight loss is extremely low (Fildes et al., 2015) thus recommending focus on prevention and interventions targeted at the individual level (Fildes et al., 2015).

1.1 Aims of the thesis

The lack of efficacy of recommended treatments for overweight and obesity underlines the need to explore less conventional avenues and look for alternative solutions to the problem. The shifting focus on prevention and treatments directed at the individual level are opening up new lines of enquiry, some of them in the fields of music and the arts. In this thesis, the potential of music to influence eating behaviours and outcomes is investigated. The aim of the inquiry has a twofold aspect: (a) the primary aspect is concerned with understanding and investigating the possible influences of music on food-taste, food-pleasantness and eating speed, while (b) the secondary aspect focuses on the key features of eating experience, in particular (but not exclusively) on the features related to food-taste,

food-pleasantness, eating speed and emotional eating. The possibility of applying music to modify eating experience and subsequently eating behaviour is discussed and deliberated.

The thesis is organized in nine chapters which are followed by the reference list and appendices. Below is a brief outline of the chapters.

1.2 Outline of the chapters

Chapter 1 introduces obesity and overweight as one of the most serious health challenges of the 21st century. The recent statistical evidence is brought out to illustrate and support this view. The impact of obesity and overweight on the individual, along with its effect on society at large, are discussed and the recommended medical and non-medical options outlined. The lack of long-term success of conventional treatments is considered in view of recent findings together with the controversies regarding excess weight and its impact on health and wellbeing. The need to look further afield for effective solutions to the current obesity crises is highlighted. As music with its considerable potential to exert a direct influence on eating behaviours and, as a result, affect eating outcomes remains largely unexplored, a gap in the knowledge is identified.

Chapter 2 reviews the literature on the influence of psychological factors on eating behaviours and their contribution to overweight and obesity. The differences between disturbed eating patterns and eating disorders are discussed along with the contrast in the severity of conditions and health outcomes for obesity with and without the presence of eating disorders. Emotions and their effect on eating behaviours and food choices are debated in some detail, emotion regulation with food in particular. The summary at the end of the chapter postulates that some of the reliance on food to alleviate negative emotions could be offset by listening to music. This introduces the section on music in the next chapter.

In Chapter 3 a definition of music is given with a more in-depth description of tonal music which was used in the thesis. Both, cognitivist and emotivist stance which define current research on music elicited emotions are discussed. Music induced emotions, mechanisms involved in their eliciting, physiological responses, and the brain areas involved are outlined. The potential of music to influence moods, emotions, and levels of arousal are discussed. An overview of current research on music, emotion and eating is given. The summary at the end of the chapter brings to focus the need for a systematic review of the literature on music and eating with a well-defined search strategy and clear parameters.

Chapter 4 includes a systematic review of the literature on music and eating, a narrative synthesis of the literature and outlines the aims of the thesis. The protocol used for the systematic review comprising the background, aims, methodology, inclusion/exclusion criteria and the search strategy is included in the Appendix A. In this chapter, the method for the systematic review is described in some detail. The literature searches and the selection process are documented in the Search record sheet and Systematic flow chart. This is followed by the full-text screening of selected articles, data extraction, and quality assessment. Rich and diverse data are summarized in the narrative synthesis which begins with the Theory of change model. The overview of the literature and the findings of the systematic review were considered and reflected upon when formulating the aims of the thesis.

Following that Chapter 5 reflects on how this research project evolved over time and suggests that a mixed methodology approach presented the most comprehensive way to address the twofold aspect of the thesis. Quantitative methods were used to investigate the effects of music on eating during two laboratory experiments. A qualitative approach explored the meanings of eating in the course of four in-depth interviews. The general overview of the research paradigms and the assumptions about what constitutes valid

research and appropriate methodology are presented. The philosophy of pragmatism is discussed in some detail since it is the theoretical framework which underpins the mixed methodology used in the thesis. This is followed by an overview of mixed methods. The follow-up sequential explanatory design is discussed in more detail since it represents the closest fit to the model used in the thesis.

Chapter 6 describes the first laboratory experiment. It gives a brief overview of the literature on the effects of music on the perception of taste and the likely influence of cross-modal correspondences. The aim of the experiment was to investigate whether taste-congruent music has an effect on the perception of food-taste and its pleasantness for two very different food items - cinder toffee and shredded wheat. This was done by replicating (cinder toffee) and extending (shredded wheat) the original experiment “A bittersweet symphony: Systematically modulating the taste of food by changing the sonic properties of the soundtrack playing in the background” (Crisinel et al., 2012). The participants, method, and procedure are described in detail. This is followed by the framework for the core analyses which replicated the original analyses and exploratory analyses which looked at possible covariates. The findings are reported and the results of the original, replication and extension experiments are compared and contrasted.

Chapter 7 gives a detailed account of the second laboratory experiment. It provides a background overview of the literature on the effect of music on the speed of eating. The aim of the experiment was to examine the influence of three music tempi (slow, medium, and fast) on the speed of mastication which was measured in bites per minute. The procedure and the apparatus utilized to video participants eating behaviours and calculate the number of bites per minute are described in great detail. Technical hitches and issues inherent in observing eating behaviours which caused some data to be lost are brought to attention. The

core and exploratory statistical analyses are delineated and the findings reported and discussed.

Chapter 8 describes the third, qualitative study. It considers the reasons for doing a qualitative study and explains the advantages of using interpretative phenomenological analyses to explore individual experiences, associations and meanings given to food and eating. Special attention is given to participants' disclosures related to the emotional cues to eat and the relevance of food-taste and food-pleasantness for their food choices and consumption. Reflective diaries were kept throughout the analyses in order to provide an audit trail of the process (see Appendix C). Discussion at the end of the analyses provides an overview of the main themes related to food and eating for each participant, it gives some suggestions on when and how music could be utilized, and reflects on the shared aspects of participants' eating experiences.

Chapter 9 includes a general critique, limitations, discussion and overview of the thesis followed by directions for future research.

Chapter 2

The influence of psychological factors on eating behaviours

2.0. Psychological factors

The influence of psychological factors on eating behaviours and their contribution to overweight and obesity is significant. Psychiatric illness, mood disorders, depression, stress, and anxiety as well as eating disorders are pervasive in obese populations (Hoare, Skouteris, Fuller-Tyszkiewicz, Millar, & Allender, 2014; McElroy et al., 2004). Obesity related overeating is often reinforced by specific personality traits and dysregulated eating behaviours (Buckroyd, 2011; Gade, Rosenvinge, Hjelmæsæth & Firborg, 2014).

2.0.1 *Psychiatric illness*

The prevalence of mental conditions, mood disorders, anxiety, and depression are relatively high among obese individuals (Hoare et al., 2014; McElroy et al., 2004; Simon et al., 2006). It has been suggested that about one-quarter of obesity cases in the overall population are associated with mood disorders, while one-fifth of mood disorders can be blamed on the association with obesity (Mason & Lewis, 2014). One of the symptoms of depression is a tendency to gain weight either through an increase in appetite or because of its effect on binge eating. This is often compounded by the weight gain caused by medications prescribed to control the disorder and a reduction in physical activity due to anhedonia (Antony, Bieling, Cox, Enns, & Swinson, 1998). Moreover, there are indications that the causal relationship between obesity and mental disorders could be bidirectional. Shame, discrimination, and activity restrictions caused by obesity and its comorbidities contribute to depression, anxiety, and mood disorders (Hoare et al., 2014).

2.0.2 Personality traits

It appears that personality traits have a long-term association with eating behaviours of obese individuals (Bénard et al., 2017; Gade et al., 2014). In contrast to the changeable influence of mood disorders, personality characteristics remain stable over time exerting a constant influence over eating styles. The most relevant personality traits regarding dysfunctional eating patterns appear to be *neuroticism* and *conscientiousness* (Gade et al., 2014). Neuroticism implies a lack of emotional stability and elevated levels of irritability and moodiness. It predisposes an individual for depression, anxiety, and mood disorders (Antony et al., 1998). *Neuroticism* (sub-facet impulsiveness) is positively correlated with emotional eating which is thought to be more prevalent among obese females (Gade, et al., 2014). Furthermore, *neuroticism* (sub-facet impulsiveness and vulnerability) is positively correlated to uncontrolled eating (Bénard et al., 2017; Gade et al., 2014). The association between overweight and obesity and the personality trait of impulsivity appears to be stronger in men (Bénard et al., 2017). On the other hand, the personality trait *conscientiousness* is negatively correlated to uncontrolled eating as well as emotional eating. Both personality characteristics, *conscientiousness* (positively) and *neuroticism* (sub-facet dutifulness-positively and sub-facet impulsiveness-negatively), are related to cognitive restraint type eating which overly restricts food consumption in order to control weight and body shape (Gade et al., 2014).

2.0.3 Eating behaviours

Eating style, when disturbed, presents another potential pathway to overeating which may lead to overweight and obesity. Dysregulated eating behaviours can range from irregular eating patterns and skipping meals to more extreme eating behaviours such as frequent dieting, bingeing, purging, or losing control over food intake (Buckroyd, 2011). Generally, dysregulated eating behaviours are categorized as cognitive restraint, uncontrolled eating or external eating,

and emotional eating (Angle et al., 2009; Braet et al., 2014; Cappelleri et al., de Lauzon et al., 2004; Jáuregui-Lobera, García-Cruz, Carbonero-Carreño, Magallares, & Ruiz-Prieto, 2014).

Cognitive restraint indicates the tendency of an individual to regularly limit food intake in order to control weight and body shape (Gade et al., 2014). Restrained eaters do not rely on physiological cues to regulate their food intake and although they consume less food than they would like, restrained eaters do not necessarily eat less than required to preserve the energy balance. Consequently, and in spite of deliberately restricting food intake they may still overeat, particularly during stressful times (Angle et al., 2009; de Lauzon et al., 2004).

Uncontrolled eating points to a propensity to overeat due to the loss of control over food intake. This is accompanied by a subjective feeling of hunger despite eating more than usual (Gade et al., 2014). High scores on uncontrolled eating have been associated with binge eating as well as overeating in obese individuals (de Lauzon et al., 2004; Kavazidou et al., 2012). *External eating* is characterized by the oversensitivity to food cues such as the smell and look of food, despite evident satiety. This oversensitivity to food may point to reward sensitive individuals and lead to cravings and possibly “food addictions” (Braet et al., 2014; Curtis & Davis, 2014).

Emotional eating signifies a susceptibility to overeating during negative emotional states. Eating and food are utilized as coping mechanisms in times of adversity (Buckroyd, 2011). Emotional cues to eat are associated with greater consumption of snacks high in fat, salt, or sugar (de Lauzon et al., 2004; Macht, 2008) as well as a higher BMI (Angle et al., 2009). Although most individuals display some type of dysregulated eating behaviour from time to time, this generally is not at a level that merits an eating disorder diagnoses. However, when taken to the extreme, dysregulated eating patterns may lead to full blown eating disorders.

2.1 Eating disorders

Eating disorders are a group of mental conditions characterized by a preoccupation with food, weight, or dieting to the point where individuals can hardly focus on anything else. Eating disorders can cause serious health problems which can sometimes become life threatening. A mental disorder defines a condition categorized by clinically significant disturbance in individual's cognition, emotion regulation, or behaviour. This is reflected as a dysfunction in the psychological, biological, or developmental processes which underpin mental functioning as stated in Diagnostic and Statistical Manual of Mental Disorders -V (American Psychiatric Association, 2013). Eating disorders represent a serious mental condition. The latest Eating Disorder Inventory-3 (Garner, 2004) offers a comprehensive screening tool to assess the risk factors and aid early diagnoses. It addresses relevant issues such as drive for thinness, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness, maturity fears, asceticism, impulse regulation, social insecurity and eating habits.

2.1.1 Types of eating disorders

Recognized types of eating disorders are anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED) and eating disorder not otherwise specified (EDNOS) (DSM-V, 2013). Anorexia nervosa is an eating disorder characterized by an intense fear of becoming fat even though underweight (DSM-V, 2013). People with AN avoid eating in spite of hunger and as a result fail to maintain body weight at a normal level (at least 85 percent of expected weight for age and height). Bulimia nervosa (BN) is an eating disorder characterized by recurrent episodes of binge eating (at least once a week). It is accompanied by a sense of loss of control and the feelings of shame and disgust, and compensatory behaviours such as self-induced vomiting, use of laxatives, diuretics or excessive exercise

(DSM-V, 2013). Despite the offsetting behaviour BN can result in overweight and sometimes obesity.

Binge Eating Disorder is a condition characterized by repeated episodes of “uncontrolled” eating, which occur at least once a week over three months. It has similar symptoms to bulimia nervosa but without the habitual compensatory behaviour used to prevent the weight gain (DSM-V, 2013). Due to the lack of purging, BED often results in overweight and obesity. Although eating disorders are thought to be more prevalent in female populations, BED seems to affect as many males as females (DSM-V, 2013). Eating Disorder Not Otherwise Specified does not meet the full criteria for any specific eating disorder although it often includes a combination of symptoms relevant for AN and BN.

2.1.2 Personality traits and cognitive biases in eating disorders

Research has shown (Cassin & von Ranson, 2005) that there are many similarities in the personality traits between individuals with eating disorders regardless of the specific diagnoses (Text box 2.1). It seems that perfectionism, obsessive-compulsiveness, neuroticism, negative emotionality, harm avoidance, low self-directedness, low cooperativeness and certain traits associated with the avoidant personality disorder are traits present across the eating disorder spectrum (Cassin & von Ranson, 2005).

Text box 2.1

Personality traits linked to eating disorders (Cassin & von Ranson, 2005)

Persistence denotes an ability to maintain behaviour despite frustration, tiredness or the lack of regular reinforcement

Cooperativeness measures the extent to which individuals consider themselves as integral parts of a group

Harm avoidance is inhibition of behaviour in response to punishment or a possibility of frustrating non-reward

Self-directedness measures the extent to which an individual is responsible, reliable, capable, goal-oriented and self-confident

Interoceptive awareness measures the ability of an individual to discriminate between sensations and feelings and between the sensations of hunger and satiety

Ineffectiveness refers to the feelings of inadequacy, insecurity, worthlessness and having no control over their lives

Eating disorders (EDs) are characterized by biases in external and internal stimuli processing (Lilenfeld, Wonderlich, Riso, Crosby, & Mitchell, 2006; Siep, Jansen, Havermans, & Roefs, 2011). It is thought that biases in cognitive processing support and maintain the presence of eating disorders. Individuals with EDs display biases in attention, interpretation and memory regarding the processing of food, weight, and body shape-related cues (Siep et al., 2011). *Attention bias* is a propensity to selectively attend to disorder-relevant cues such as body and food related information (Popien, Frayn, von Ranson, & Sears, 2015). *Interpretation bias* is a tendency to interpret ambiguous stimuli in a disorder relevant way. Patients with EDs are often under the impression that their weight and shape are the most likely reason for the negative events that occur in their lives. *Memory bias* refers to an inclination to remember disorder-specific information more easily. Patients with eating EDs demonstrate an explicit memory bias for food, weight, and shape information (Lilenfeld et al., 2006; Siep et al., 2011).

2.1.3 Obesity with eating disorder diagnoses

There is a marked difference in severity of the condition and prognoses for obesity compared to obesity with a specific eating disorder diagnoses. A study (Alvarenga et al., 2014) which looked at similarities and differences in the levels of psychopathology reports that obese people who do not have an eating disorder display the lowest degree of general psychopathology, while obese individuals with BED followed by BN exhibit progressively more serious psychopathology. The results of this study suggest that low persistence and low cooperativeness as well as low interoceptive awareness and ineffectiveness are personality characteristics specific to obesity with EDs, while high harm avoidance and low self-directedness are the traits that all obese groups have in common (Alvarenga et al., 2014).

Overall, obese individuals with eating disorders report considerably more health-related issues and more major medical and psychiatric conditions compared to obese individuals without EDs (Curtis & Davis, 2014). Evidently, if obesity is accompanied by a specific ED it presents a more serious medical condition in terms of comorbidities as well as prognoses for treatment when compared to obesity without EDs (DSM-5, 2013). Amongst other issues, this raises a question: to which degree are adverse medical outcomes attributed to obesity a result of the weight status and what is the contribution of the underlying conditions and mechanisms such as mental illness, mood disorders, disturbed eating patterns, frequent dieting with its potentially harmful effects on the body or unhealthy food choices that drive obesity-related overeating?

2.2 Emotions and eating

Although there are many definitions and theories of emotion, the discrete emotions model, the dimensional model, and the broaden-and-build theory will be considered below as they characterise the three main concepts. The skills to accurately evaluate and regulate

emotions are discussed in more detail since they address important issues related to the subject of emotions and eating.

2.2.1 Defining emotion

Emotions are said to be evolutionary adaptations to frequently occurring human states (Ekman, 2007). Emotions have a short onset time and a brief duration and as a result frequently take place before any awareness of them. Their role is to prepare the organism for action in response to a major event. Emotion mobilizes the organism by producing a set of physiological (heart rate, sweating, cutaneous blood flow, etc.) and behavioural (facial expressions, readiness for action) response changes. Their normally short duration insures that the organism remains reactive and ready for response to changing circumstances in the environment (Ekman, 2007; Scarantino, 2012).

2.2.2 Discrete emotions model

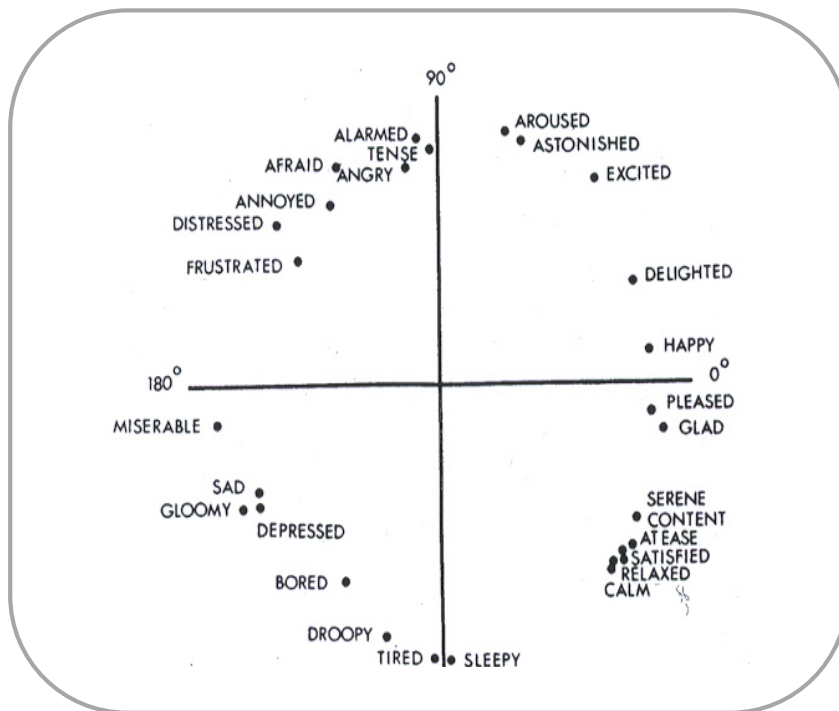
According to Ekman's discrete theory of emotion, there are six basic emotions: *anger, fear, enjoyment, sadness, surprise and disgust* (Ekman, 1992). Each one of those highly discrete basic categories has a "family" of related emotions preceded by similar events and comparable in their physiology, expression and appraisal processes. Shaped through the course of evolution as adaptations to specific, recurring human situations, emotions are easily differentiated by the distinctive patterns of autonomic nervous system activation (Ekman, 2007).

2.2.3 Dimensional model

The dimensional approach to emotions is based on semantic clustering on a grid of affective space (Russell & Pratt, 1980). It posits that emotions are not discrete categories but

continua of affective states without clearly differentiated boundaries. Russell's circumplex model of affect (Russell & Barrett, 1999) is organized on a circle which is placed on two lines representing dimensions of valence and arousal. Emotions are seen as affective states varying along those two independent, bipolar dimensions. The arousal dimension represents a degree of energy of emotion and ranges from aroused/tense at the top to calm/sleepy at the bottom. Valence refers to a continuum of subjective experience of pleasantness ranging from happy/delighted at one end to sad/distressed at the other (Figure 2.1).

Figure 2.1
Russell's circumplex model (Russell, 1980)



2.2.4 Broaden-and-build theory

The specific action tendency is what makes emotions evolutionary adaptive. However, in the discrete and dimensional models of emotion action tendencies of positive emotions are not clearly defined. Fredrickson's (2004) broaden-and-build theory posits that

positive emotions such as *joy, interest, contentment, pride* and *love* serve to permanently broaden peoples' thought and action repertoire and prepare them for forthcoming challenges. The evolutionary role of positive emotions is to enlarge the scope of psychological, physical and intellectual resources. In contrast to the narrowing effect of negative emotions which is driven by the urgency to survive, a broadening effect of positive emotions facilitates building of new resources for the future.

2.3 Emotional intelligence and emotion regulation

Emotional intelligence comprises a range of skills and abilities evolved for the “accurate appraisal and expression of emotions in oneself and others and the regulation of emotion in a way that enhances living” (Mayer, DiPaolo & Salovey, 1990, p. 772). Emotion in oneself can be used as an important source of information about the surrounding environment. The physical manifestation of that information is perceived as a bodily experience or feeling. Although people frequently make evaluations, judgments and decisions based on their emotions, this process is mostly unconscious. “Affect-as-information” seems to be an integral part of evaluative judgments and the capacity to recognize and interpret information made available through emotions is a valuable skill (Barrett & Salovey, 2002). However if not regulated, instead of being a valuable source of insight into oneself and others, emotions become a source of confusion and inner tension (DeGangi, 2012; Gross & Thompson, 2007).

Emotion regulation refers to an action system or a coping mechanism used to reduce or change the elevated levels of arousal due to negative emotional states (Kopp, 1989). Emotion regulation skills are varied as well as adaptive (DeGangi, 2012; Gross & Thompson, 2007). They can be extended or strengthened over time by observation, consolidation of learned skills and self-monitoring (Kopp, 1989). Nonetheless emotion regulation skills are

first and foremost learned in childhood through the child-parent interaction (Kopp, 1989). Due to the lack of parental support in childhood some people may have an insufficient ability to self-regulate. Individuals exposed to prolonged or frequent periods of stress have elevated levels of cortisol and might find it difficult to regulate their emotional responses as a result. A natural response to stressful situations, prolonged activation of HPA axis is very taxing for the body and mind. Chronic stress can have a detrimental effect on general mood, levels of motivation as well as health outcomes (Hamilton-West, 2011; McEwen, 1998).

2.3.1 Process model of emotion regulation

The Process Model of emotion regulation differentiates between *antecedent* focused and *response* focused strategies (Gross & John, 2003). Antecedent focused emotion regulation refers to a set of anticipatory regulatory behaviours employed pre-emptively (Gross & John, 2003). They include tactics employed quite early in the process and before the emotion has been triggered (Text box 2.2). Strategies such as situation selection or modification, attention deployment, and cognitive reassessment help control the event as well as related feelings. Antecedent focused tactics have been related to a number of positive outcomes like higher self-esteem, more optimistic outlook on life and the ability to form and maintain close relationships (Gross & John, 2003).

Text box 2.2

Antecedent emotion regulation strategies (Gross & John, 2003)

Situation selection denotes making a choice to either approach or avoid an emotionally significant situation

Situation modification refers to modifying an emotionally significant situation in order to alter its emotional impact

Attention deployment indicates diverting attention away from an emotional stimulus towards other content

Cognitive reassessment is interpreting an emotionally significant situation in a way that changes its emotional impact

A response focused strategy is primarily characterized by expressive suppression, venting (letting it out), and ruminating. Since it is used relatively late in the emotion generating process it is largely aimed at modifying the behavioural aspect of the reaction tendencies (Chin & Rickard, 2013; Randall, Rickard, & Vella-Brodrick, 2014). However, the suppression of negative emotions does not seem to diminish the experience of them, while at the same time it suppresses the experience of positive emotions. Furthermore, expressive suppression is cognitively demanding and may lead to memory impairment for social information at the time of “suppression” (Gross & John, 2003). Suppression of true emotions creates in an individual a sense of inauthenticity and is associated with lower self-esteem and depression (Gross & John, 2003). It is observed that males and people from minority groups are more inclined to use expressive suppression as a way of coping (Gross & John, 2003).

2.3.2 Effects of emotions on eating behaviours

The conditions such as mental illnesses and mood disorders characterised by negative affective states as well as prolonged periods of stress, depression, and anxiety often result in disturbed eating patterns and changes in metabolic rate which underpin obesity-related overeating (Epel, Lapidus, McEwen, & Brownell, 2001; Mason & Lewis, 2014; Simon et al.,

2006). The effects of emotions on eating behaviours are as profound as they are complex. Depending on the valence, arousal, and intensity, emotions appear to exert a considerable and varied influence over every aspect of food consumption from motivation to eat, hedonic responses, choice of food, speed of chewing, food intake, to metabolism and the process of digestion.

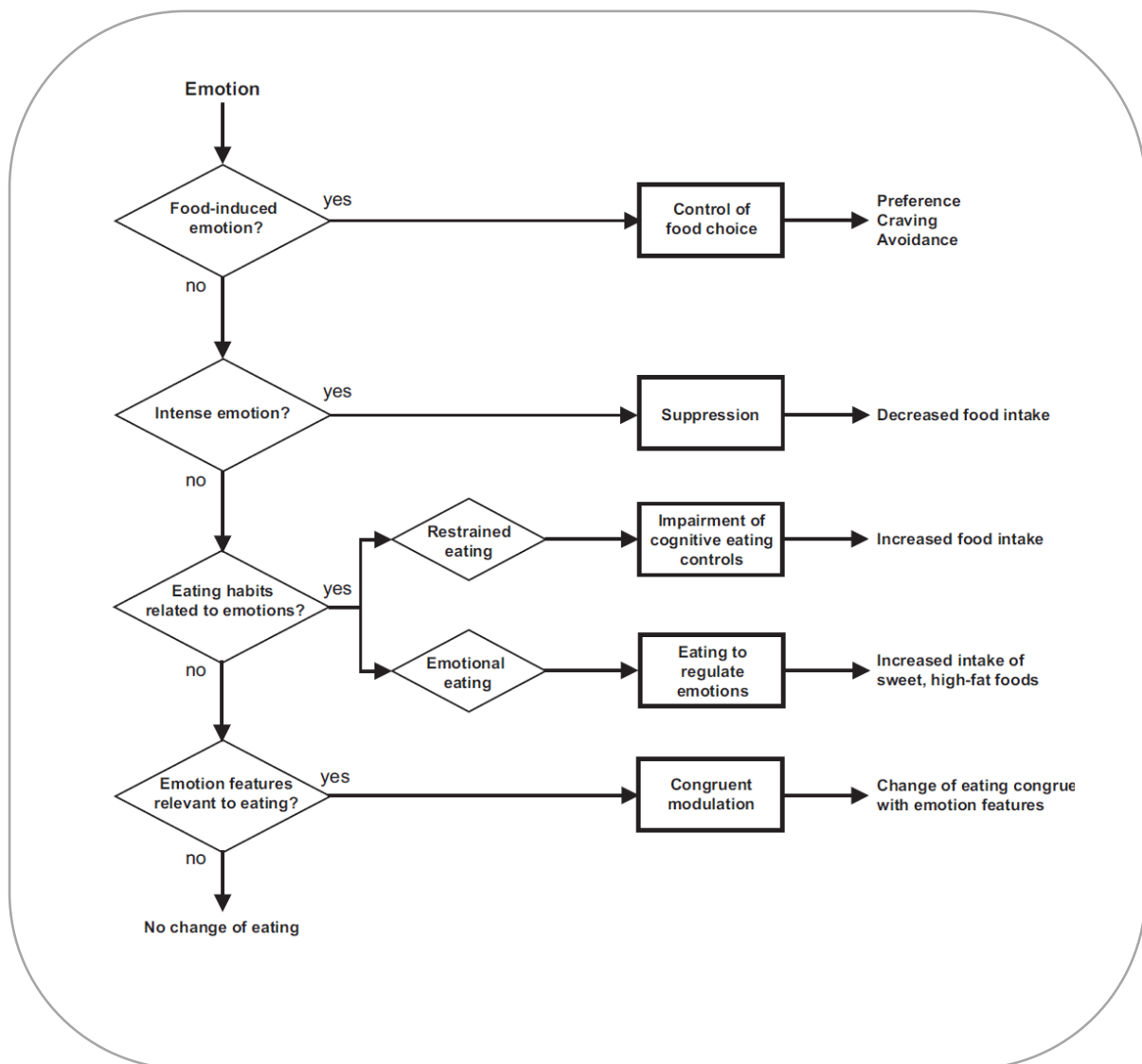
Since emotions have a motivational function they influence eating behaviours in ways that could be stimulating, interfering, accompanying, or regulating. According to Macht's five-way model (2008) the effects of emotions on eating are manifest in: (1) the choice of food, (2) weakening of cognitive controls related to eating behaviour, (3) suppression of food consumption, (4) eating to regulate emotions, and (5) modification of eating behaviour in congruence with the emotion felt at the time (Figure 2.2). The findings of a number of surveys suggest that even normal populations e.g. people of normal weight whose scores on eating behaviour fall within a normal range, report changes in eating habits due to emotions. These changes vary according to the individual drives for eating, personality traits, as well as the specificity of the emotional state. Overall, adverse emotions that are high in intensity and arousal tend to reduce food intake while negative emotions of a moderate intensity and prolonged duration are more likely to increase the food consumption (Buckroyd, 2011; Curtis & Davis, 2014; Epel et al., 2001).

As a result of disinhibition of cognitive controls, restrained eaters tend to increase food consumption in response to both, positive and negative emotional states (Macht, 2008). The more control individuals exert over their eating behaviour the more vulnerable they are likely to be during stressful times (Angle et al., 2009; Cappelleri et al., 2009). In response to the negative affect, emotional eaters tend to consume more salty, sweet, and high-fat foods (de Lauzon et al., 2004), while the number of binge episodes increases for bulimics and binge eaters (Blomquist et al., 2014). The propensity to overeat in difficult times is so astutely

epitomised in the German saying “kummerspeck” which literally translates to “grief bacon” or the fat of sorrow.

It is not quite clear why some people increase food intake in response to negative affect, however the proposed mechanisms are: (a) the hedonic pleasure of food reduces or masks adverse feelings (Singh, 2014); (b) food provides an escape from an aversive self-awareness (Spoor, Bekker, Van Strien, & van Heck, 2007); (c) food induces an increase in serotonin and dopamine (Curtis & Davis, 2014; Davis et al., 2009); and (d) food reduces the HPA activation which dampens the stress responses (Macht, 2008).

Figure 2.2
Emotion-induced changes in eating behaviour (Macht, 2008)



2.3.3 “Binging” as a way to cope with negative emotions

Dysregulated affect often serves as a prompt for a “binge” (Fuller-Tyszkiewicz et al., 2014; Gianini, White, & Masheb, 2013). Some people lack the skills to self-sooth, cope, or reduce the levels of negative emotion. Others may find that the negative emotions are too easily triggered or so intense that they remain resistant to the usual emotion regulation strategies (Whiteside, Chen, Neighbors, Hunter & Larimer, 2007). In an attempt to cope with

the aversive emotional states and reduce the level of tension, individuals resort to self-defeating behaviours like “binging” on alcohol, drugs or food (Hamilton-West, 2011).

Haedt-Matt and Keel’s study (2011) investigated the effect of varying levels in negative affectivity on the likelihood of a “binge eating episode” using Ecological Momentary Assessment (EMA). The results of EMA confirm that the raise in negative affectivity predicts the onset of a “binge eating episode” (Haedt-Matt & Keel, 2011). Results of another study (Fuller-Tyszkiewicz et al., 2014) suggest that the threshold value of 6 out of 10 on the negative emotion scale predicts the onset of a binge eating episode and that the more severe a negative mood becomes the more likely is the occurrence of a binge.

However, the aftermath of a binge eating episodes presents a more complex picture. “Binge eating” is followed by an increase in depression along with a decrease in anxiety (Haedt-Matt & Keel, 2011). Possible explanation for this discrepancy is provided by the “trade off” theory in which a current negative affect such as *anger* is traded for a less aversive one such as *guilt*. Also, it is plausible that the relief from an existing negative affect is only momentary and quickly replaced by the negative affect caused by the “binge” (Haedt-Matt & Keel, 2011).

The lack of an appropriate emotion regulation strategy or deficiency in skills that would facilitate its implementation may lead individuals to seek relief in self-defeating behaviours such as drinking, taking drugs, or overeating. These attempts at coping provide only a temporary relief which is quickly replaced by adverse emotions caused by the behaviour itself (DeGangi, 2012). Therefore, the ability to emotion regulate represents an important set of skills which enhances the quality of living by keeping self-defeating behaviours at bay.

2.4 Summary and conclusions

Obesity and overweight are a growing problem in modern societies. They are on the increase among individuals and countries of diverse socioeconomic status, sometimes coexisting alongside malnutrition (WHO, 2016). An obesogenic environment has caused a dramatic shift in eating behaviours among the general population (Ogden, 2011). People are increasingly inclined to eat in order to satisfy hedonic hunger as opposed to eating in order to satisfy homeostatic hunger. However, hedonic hunger is hard to satisfy. Food intake leads to the release of dopamine and feelings of pleasure and satisfaction which propagates eating for its hedonic effect (Davis et al., 2009). Over time the reward cues take over from satiety and hunger cues which may lead to overeating and spiralling weight (Davis et al., 2009; Singh, 2014).

Obesity-related overeating has a strong emotional component. There is ample evidence that emotions disturb eating behaviours of most people (Macht, 2008). In the normal populations (weight status and eating behaviour scores within normal range), 43% of participants report an increase, 39% a decrease and 26% no change in their eating habits in response to emotions (Macht, 2008). When it comes to obese and overweight individuals this effect appears to be even stronger (Buckroyd, 2011). Because of the profound effect food has on the way people feel, eating behaviours often serve to ease difficult emotional states (Macht, 2008). Eating behaviour, whether manifest as a dysregulated eating pattern or as part of a wider eating disorder diagnoses, is habitually misappropriated and utilized as an emotion regulatory tactic. Thus, overeating has an important role in regulating emotions some obese and overweight people depend upon for their day-to-day functioning.

Most recommended non-medical solutions for overweight and obesity are calorie controlled diet, behavioural change, and exercise. In order to adhere to such regimes for any length of time a degree of emotional stability is required (Crescioni et al., 2011). Conversely, more often than not obese and overweight individuals rely on food for the maintenance of

emotional stability. The study of Teixeira, Going, Sardinha, & Lohman (2005) reports that only autonomous, self-motivated individuals with a cognitive style benefit from the “reduced calorie, exercise, and behavioural change” approach. It is estimated that only 20% of obese individuals fall into that category (Buckroyd, 2011). It does not seem likely that the remaining 80% will be able to part with such an effective emotion regulatory tool, without finding an adequate replacement first.

Research has shown that listening to music represents one of the most popular emotion regulation tactics (Chin & Rickard, 2013; Huron, 2011; Pelletier, 2004; Randall et al., 2014; Saarikallio, 2011; van Goethem & Sloboda, 2011) across the life-span. Listening to music appears to be successfully implemented across a range of antecedent and response-focused strategies. In fact, listening to music seems to be just as effective for the response-focused *expressive suppression* resulting in a reduction of the experienced negative affect (Randall et al., 2014). The following chapters review the literature on music, emotion, and eating, and explore the potentiality of music to influence eating behaviours and outcomes in effort to curb obesity-related overeating.

Chapter 3

Music and emotion

3.0 Background

Music is ubiquitous. The evidence of its existence can be found in every known culture in the history of mankind (Juslin & Västfjäll, 2008; Perlovsky, 2010). Although Pinker (1994) argues that music appears to be inefficacious and just a “by-product” of evolution, its pervasiveness, the innateness of musical ability and the place music has in contemporary lives point in a different direction (Cross, 2003; Hallam, Cross, & Thaut, 2011; Lonsdale & North, 2011).

Darwin considered aptitude for music one the most intriguing abilities in humans (Perlovsky, 2010; Darwin, 1888). In his theory of natural and sexual selection, musical vocalizations are seen as a bridge between animal communications and language (Bannan, 2017; Darwin, 1888). Mother and infant interactions are characterized by the use of proto-musical behaviour (Volgsten, 2012; Juslin & Sloboda, 2011) which helps development of an ability for social and emotional bonding in later life (Cross, 2003). Huron (2001) suggests that music developed in the course of evolution through “multistage adaptations” involved in mate selection, maintenance of social unity, coordination of group labour, and conflict management.

Music was the “language” of choice, since all of the above-mentioned activities assume sharing of the emotional space and affect attunement rather than explicit communication. According to Perlovsky (2010) the vocalizations of proto-humans split into two distinct groups, language and music. Language grew into a semantic instrument suitable for communicating precise, detailed and elaborate information, while music remained powerfully connected to feelings by maintaining elusiveness and multiplicity of meanings.

Hence, it appears that music has the ability to communicate and elicit emotions. At the core of all aspects of music's functionality is its association with feelings (Juslin & Sloboda, 2011; Juslin & Västfjäll, 2008; Perlovsky, 2010). The latest advances in neuroscience and music psychology have come up with novel insights regarding the physiology, functions, and the nature of music induced emotions (Conrad et al., 2007; Fancourt, Ockelford, & Belai, 2014). This newly acquired knowledge and understanding could pave the way for novel procedures involving music in the fields such as health and psychology (Juslin & Sloboda, 2011).

3.1 Defining music

Defining music has been the subject of debates across time. Definitions of music have changed through the course of history according to various cultures and civilizations as well as according to different philosophers, scholars, and musicians (Goehr, 1992). This is hardly surprising since music, like all arts, epitomizes a subjectively perceived phenomenon. In fact, music is perhaps the most abstract of the arts since it evokes relatively intense feelings in spite of maintaining ambiguity of meanings.

One of the more general characterisation of music is represented in the statement - music is the science or art of organized sound (Mckeown-Green, 2014). This is contrasted by an all-inclusive as well as a lot more controversial viewpoint expressed by the Italian composer Luciano Berio: "Music is everything that one listens to with the intention of listening to music" (Berio, Dalmonte, & Varga, 1985). Although music is notoriously difficult to define, for the purpose of this thesis it would probably suffice to say that music is "sounds temporally organized by a person for the purpose of enriching or intensifying experience through active engagement (e.g., listening, dancing, performing) with the sounds

regarded primarily, or in significant measure as sounds” (Jerrold Levinson as cited in Mckeown-Green, 2014, p.400).

3.1.1 Tonal music

Most Western classical music and popular music since the XVI century is tonal. Tonal music is a system in which all notes and harmonies are related to the *tonic* (tonal centre). Tonic is the note (or harmony) which represents the point of ultimate stability within tonality (Deutsch & Feroe, 1981). The relationship between the tonic and other notes in the tonality is characterized by various degrees of tension. *Dominant* (fifth degree in the tonality) represents the highest point of tension and it usually resolves in the *tonic* while the inherent tension-relaxation principal drives the music forward (Larson, 1997).

Tonalities can be major or minor and due to their intrinsic qualities they are sometimes seen in terms of gender. Major tonalities are perceived as hard, strong, clear and predominantly happy (sometimes as masculine); while minor tonalities are perceived as dark, soft, mellow and predominantly sad (sometimes as feminine) (Petrovic, Antovic, Milankovic, & Acic, 2012). The difference in character between major and minor modes represents a fundamental expressive element in tonal music along with pitch (perceived frequency of sound), rhythm (patterns of sound duration), tempo (the pace of music), timbre (instrument, quality or colour of sound), harmony (notes sounding simultaneously) and dynamics (the volume of sound) (Aiello & Sloboda, 1994; Cooke, 1959).

Tonal music is not the only musical system. Music can be atonal (without a tonal centre); or based on a different system such as ragas (Indian music) or pentatonic scales (Chinese and Japanese music) (Anderson & Campbell, 2011). Also, in alternative contexts music may encompass elements such as bird song, the sound of a machine, a hairdryer or

rainfall (Mckeown-Green, 2014). Since most Western music (classical and popular) is based on the tonal system, only tonal music will be considered in this thesis.

3.2 Music induced emotions

As mentioned earlier, emotions are at the core of all aspects of music's functionality (Juslin & Västfjäll, 2008; Juslin & Sloboda, 2011; Perlovsky, 2010). Most people tend to agree that the association with feelings is what gives music a significant place in their lives (Chin & Rickard, 2013; Huron, 2011; Pelletier, 2004; Randall et al., 2014; Saarikallio, 2011; van Goethem & Sloboda, 2011). However, there is a degree of controversy regarding music induced emotions. According to most theories, emotions are elicited in response to an event significant enough to alter our life goals - a survival function (Juslin & Västfjäll, 2008; Perlovsky, 2010). Clearly, the circumstances for eliciting music induced emotions are not the same. In order to resolve this discrepancy regarding the nature of music induced emotions, it has been suggested that music emotions may be of a special kind. Scherer (2004) proposes that they should be classified as "aesthetic" rather than "utilitarian" (real life) emotions. This view is challenged by Koelsch (2010) who suggests that music *does* satisfy vitally important goals by fulfilling social needs as well as by providing an alternative language for communication.

Research regarding music induced emotions encompasses two distinct views - *cognitivist* and *emotivist*. Cognitivists posit that music emotions are not induced by music but merely "decoded" along with other musical features of the piece (Kivy, 1981). Konecni (2008) adds that music may be able to induce emotions, however only through the association with real life events (memory) or through the mediation of movement. This is, he reiterates, why the intensity of music induced emotions seems insignificant in comparison with real life emotions (Konecni, 2008). In contrast, the emotivist stance is that emotions are induced by

music in a direct manner and unintentionally (Hunter & Schellenberg, 2010). This view is further supported by three quantifiable elements: *expression* (facial expressions and related behaviours); *experience* (self-reports); and *physiology* (bodily functions).

3.2.1 Mechanisms involved in eliciting music induced emotions

Proposed mechanisms involved in eliciting music induced emotions are: *brain stem reflex*, *visual imagery*, *emotional contagion*, *evaluative conditioning*, *musical expectancy* and *episodic memory* (Juslin & Vastfjall, 2008). Activation of the *brain stem reflex* occurs upon hearing a loud, dissonant or unexpected sound. Brain stem reflex is hard-wired and its response is linked to the identification of a significant auditory input signalling potential danger. Because of this brain stem reflex has an effect on emotional arousal, level of attention, heart rate, and breathing (Juslin & Sloboda, 2011).

Emotional contagion refers to the internal “mimicking” of the perceived emotion. Once the listener has perceived the expression of emotion in the music they “mimic” it internally. Emotional contagion is related to the “automatic” model of empathy whereby perceiving an emotional gesture in another elicits the same emotion in the perceiver. Another explanation involves the idea of “iconic” source, where the structure of music exhibits formal resemblance to the structure of emotion and via that resemblance the same emotion is evoked in the listener (Juslin & Vastfjall, 2008). Overall, *emotional contagion*, elicits the same emotion as the one perceived in music and as such is effectively utilized in emotion regulation strategy.

Evaluative conditioning is a form of a learned response whereby a piece of music has been repeatedly paired up with either a positive or negative emotion caused by a different stimulus. Over time that piece of music alone (without unconditioned stimuli) would elicit the emotion it was repeatedly paired up with during the conditioning process. Research suggests

that *evaluative conditioning* is resistant to elimination more than any other form of conditioning. In sum, once a piece of music is associated with a desirable emotion it will persistently continue to elicit that emotion. This outcome could be very valuable for emotion regulation with music.

Visual imagery refers to the musical emotions elicited by the visual images invoked by music. Visual imagery is described as an experience that has similarities with a perceptual experience but takes place in the absence of the relevant stimuli. Music seems to be very effective in stimulating visual imagery and according to Plutchik (1984) mental images provide “internal triggers” for emotional experiences. Guided Imagery and Music (GIM) is a method developed by Helen Bonny. GIM has been widely used in music therapy (including eating disorders) to induce relaxation and reduce the levels of cortisol (Juslin & Vastfjall, 2008).

Music expectancy is rooted in the Gestalt theory whereby emotion is induced in the listener when music disrupts the expectation of a good continuity (expectancy) in some way (Hallam et al., 2011). Since music represents a “semantic language” it is comprised of discrete elements organized into sequences according to the “good continuity” rule of its syntax. Emotions are elicited in the listener when this rule is violated in some way. However, the musical expectancy mechanism is strongly dependent on learning and familiarity with a particular musical style (Meyer, 1956).

Episodic memory refers to a process whereby music evokes a memory of an event from the past and the emotions associated with that event (Juslin & Vastfjall, 2008). Davis (1978) refers to this as the “darling, they are playing our tune” phenomenon. When prompted by music people generally tend to recall autobiographical memories from their youth (15-25 years). Perhaps because music plays such an important role in the life of teens and young

adults episodic memory tends to retrieve events and associated emotions from that period of life (Juslin & Sloboda, 2011).

3.2.2 Physiological responses to music and the brain areas involved

Physiological responses (van der Zwaag, Westerink, & Broek, 2011) to music are an indication that emotion is being felt. They are evidenced by changes in heart rate, blood pressure, skin conductance and skin temperature (sad music); blood transit time and amplitude (fearful music); and increased respiration and heart rate (happy music) (Krumhansl, 1997). The physiological responses are usually accompanied by hormonal secretion (Juslin & Vastfjall, 2008).

A recent systematic review investigated psycho-neuro-immunological effects of listening to music (Fancourt et al., 2013). Findings confirm that music reduces the levels of *cortisol* while at the same time it increases levels of *oxytocin* and *growth hormone*. There are indications that the reduction of cortisol in response to music might have a sustained effect (Fancourt et al., 2013). In addition, it was reported that in response to relaxing music the neurotransmitters *beta-endorphin*, *adrenaline* and *noradrenaline* as well as the cytokine *Interleukin-6* decrease (Fancourt et al., 2013). Music modulates activity in the dopamine reward system (Blum et al., 2010), mediating levels of neurochemicals such as *dopamine*, *serotonin*, and *prolactin* (Rentfrow et al., 2012).

Other research shows that responses to music involve brain regions already recognized to play a part in emotional responses such as thalamus, hippocampus, amygdala, prefrontal cortex, orbitofrontal cortex, midbrain, insula, and nucleus accumbens (Juslin & Vastfjall, 2008). The existence of two separate processing pathways in the brain, one for *music perception* (temporal and frontal lobes) and the other for the *emotional processing* of music

stimuli (limbic structures, insula, ventral striatum and thalamus) further supports the emotivist view that emotions are induced and not merely decoded by the listener (Lamme, 2012).

Furthermore, it seems that each mechanism involved in inducing musical emotions is processed in a different brain region and with various degrees of induction speed and availability to consciousness. *Brain stem reflex, evaluative conditioning* and *emotional contagion* are high in induction speed but low in availability to consciousness and degree of volitional influence (Juslin & Vastfjall, 2008). On the other hand, *visual imagery, episodic memory* and *musical expectancy* seem to be low in the induction speed but overall higher in availability to consciousness while *visual imagery* appears to be responsive to volitional influence to a high degree (Juslin & Vastfjall, 2008). The speed of induction, availability to consciousness, as well as degree of volitional influence could be of particular importance in choosing an emotion regulation strategy with music (Juslin & Sloboda, 2011).

3.3 Emotion regulation with music

A study investigating the emotional outcomes of music-based affect regulation strategies conveyed some interesting findings, 93% of people reported using music to change their mood and 49% stated that they use music regularly for that purpose (Randall et al., 2014). Undesirable affective states such as boredom, stress, worry and frustration are effectively alleviated by listening to music, resulting in the listeners becoming happier, more energized and motivated, or calmer (Chin & Rickard, 2013; Randall et al., 2014; Saarikallio, 2011; van Goethem & Sloboda, 2011).

Generally, emotion regulation tactics such as reading a book or taking a walk, show different rates of success for different emotion regulation strategies. However music listening has been shown to be effective across a wide range of strategies (Text box 3.1) such as *relaxation, revival, distraction, active coping, good mood maintenance, discharge, strong*

sensation, mental work, and solace (Chin & Rickard, 2013; Huron, 2011; Saarikallio, 2011; van Goethem & Sloboda, 2011). Although effective in both antecedent and response focused emotion regulation, listening to music seems to be particularly suitable for a solitary emotion regulation strategy - *introspection* (van Goethem & Sloboda, 2011).

Text box 3.1

Emotion regulation strategies with music

Good mood maintenance: prolonging good mood by listening to emotionally congruent music

Relaxation: listening to music in order to recover from hard work, stress or frustration

Revival: listening to music in order to recharge energies when feeling tired

Strong sensation: experiencing intense enjoyment or strong feelings through music

Distraction: distraction from unwanted thoughts or feelings via the involvement with music

Discharge: releasing emotions

Mental work: using music to help with concentration, studying or other mental activities

Introspection: working through unsettling experiences

Solace: feelings of being comforted, accepted and understood

Psyching up: getting mentally ready for an activity or task

3.3.1 Process model of emotion regulation and music

In a recent study (Randall et al., 2014) researchers utilized mobile experience sampling (MuPsych application) in order to assess emotional outcomes of regulation strategies used during personal music listening. The results indicate that music listening was particularly effective in the response-focused, *expressive suppression* strategy. Listening to music resulted in a decrease of negative emotion experience. According to the process model of emotion regulation *expressive suppression* is not effective in reducing the experience of negative affect while at the same time it results in the suppression of positive emotions

(Gross & John, 2003). Expressive suppression is deemed to be cognitively demanding and since the expression of true feelings is suppressed it frequently results in the feelings of inauthenticity. As listening to music appears to be an effective tactic for a response-focused strategy like *expressive suppression*, it was suggested that music listening might not occur in accordance with the process model of emotion regulation and perhaps may be best used as an independent regulatory tactic, separately from other forms of emotion regulation (Randall et al., 2014).

3.3.2 Music and well-being

The study of Chin and Rickard (2013) investigated the relationship between music engagement and well-being outcomes such as feelings of happiness and fulfilment of self-concordant goals e.g. goals congruent with developing interests and core values of a person (Sheldon & Elliot, 1999). The findings propose that the type of engagement with music and its motives determine the effect of the regulation strategy on the well-being of individuals. Using emotion regulation with music for the purpose of cognitive reappraisal leads to more positive outcomes, while listening to music, music making, or social engagement which are normally associated with expressive suppression may have less favourable effects on the well-being of individuals.

Overall, the research evidence suggests that passive involvement with music, such as listening to music, is particularly effective in stress reduction and restoration of homeostasis (Clift et al., 2010). Thus music is becoming increasingly recognized for its effect on health and well-being (MacDonald, Kreutz, & Mitchell, 2012; Baker, 2013). Studies which examined the experience of group singing on health and quality of life show that group singing increased positive affect and the production of salivary immunoglobulin (MacDonald et al., 2012), while a study of university choral society members (Clift & Hancox, 2001)

proposes six dimensions of benefit associated with singing such as: (1) well-being and relaxation; (2) breathing and posture; (3) social; (4) spiritual; (5) emotional, and (6) benefits for the heart and the immune system. The newly emerging appreciation of the effects music has on the health and well-being of individuals is opening up an array of possibilities for its use in fields such as medicine and psychology (Juslin & Sloboda, 2011).

3.4 Music and eating behaviours

The relationship between food consumption and music has a long history. In most cultures music and food form a part of the same rituals e.g. weddings, celebrations and religious ceremonies (Dissanayake, 2008; Dissanayake, 2006). Since engagement with music (listening, playing, singing, etc.) as well as food consumption are pleasurable activities, it is not surprising that they often come together with a compounding effect. The strong influence of both, music and food consumption, on the way individuals feel may have resulted in their frequent use as emotion regulatory strategies. However, the pertinent question for the investigation undertaken in this thesis is - since historically music and food often come together, could music be utilized to influence eating behaviours and their outcomes?

3.4.1 The effect of music on eating

There is some evidence that music can influence eating behaviours. Music therapy, an individual treatment involving music, has been successfully applied in specialized units for eating disorders (Lejonclou & Trondalen, 2009). Individuals with eating disorders often have problems with self-regulation; alexithymia (lack of words for feelings) and feelings of disconnectedness between the body and the mind (Trondalen & Skårderud, 2007). Affect attunement (sharing of the inner feeling states) that takes place between the music therapist and the client during music improvisation provides a relating experience (Trondalen &

Skårderud, 2007). The literature suggests that this type of musical interaction gives clients a foundation for contact with nonverbal senses of self, enhancing connectedness between the body and the mind. This creates a more coherent sense of self, helps the therapeutic process leading to a reduction in eating disorder manifestation. In addition, a Guided Imagery with Music (GIM) has been used in the treatment of eating disorders to help relaxation and reduce the levels of cortisol which results in an overall improvement of the condition (Juslin & Vastfjall, 2008).

Other research has begun providing evidence that when food and music are presented together, music has an ability to influence eating behaviours and their outcomes in a more direct and immediate manner. This is evident in the effects of music on the perception of taste and its pleasantness as well as in its influence on the speed of eating, duration of a meal, and overall food consumption.

Since the perception of food-taste is fundamentally a multisensory experience, some research suggests that what we hear exerts an influence on what we taste (Crisinel & Spence, 2010a; Crisinel & Spence, 2010b; Zampini & Spence, 2004). Background sounds can affect the perception of food in a variety of ways such as the perception of its crunchiness and freshness (Zampini & Spence, 2004), the overall impression of food-taste and its pleasantness, as well as the ability to discriminate between different food items (Fiegel, Meullenet, Harrington, Humble, & Seo, 2014). It is thought that cross-modal correspondences underpin the effect of music on the perception of food-taste and its pleasantness (Crisinel & Spence, 2009; Spence & Deroy, 2013). Cross-modal correspondences are reflected in the tendency of our minds to associate certain characteristics of a stimuli across different senses or modalities. These tendencies are automatic in various types of synaesthesia, but they also seem to be present to some extent in non-synesthetes (Spence & Deroy, 2013). The consequence of cross-modal correspondences is that altering

what people experience in one modality could modify their perception of a stimuli presented in a different modality. It might be possible to utilize the cross-modality between taste and sound in order to make bland healthy foods and low sugar food-items taste more palatable and as a result more desirable.

Another line of research suggests that playing music in the background during mealtimes has an effect on eating behaviours such as the speed of eating and mealtime duration. In turn, eating behaviours often result in changes to eating outcomes reflected in the overall amount of food consumed and meal satisfaction (Caldwell & Hibbert, 2002; Milliman, 1986; Pinke, 2010; Ragneskog, Bråne, Karlsson, & Kihlgren, 1996a; Roballey et al., 1985; Stroebele & de Castro, 2006). Music has always been used as a tool in synchronizing movements, e.g. long marches, collective labour, or on a dance floor (Huron, 2001). Children have an instinctive need to adjust their movements to the speed and rhythm of music (Boone & Cunningham, 2001). Research has shown that music has an effect on the levels of arousal (Husain, Thompson, & Schellenberg, 2002; Lamont & Eerola, 2011; Rickard, 2004), while a meta-analysis (Pelletier, 2004) posits that music is particularly effective in reducing arousal due to stress. It is conceivable that the instinctive need to synchronize movements to the speed and rhythm of music could be utilized to slow down the rate of mastication and in this way regulate or slow down the speed of food consumption.

3.5 Summary and conclusions

Emotions appear to be at the centre of all aspects of music's functionality. This association with feelings is what gives music a meaningful place in peoples' lives (Chin & Rickard, 2013; Huron, 2011; Saarikallio, 2011). Although cognitivists posit that emotions are not induced by music but only deciphered alongside other musical elements of the piece (Kivy, 1981), emotivists suggest that emotions are elicited by music in a direct manner and

unintentionally (Hunter & Schellenberg, 2010). Juslin & Vastfjall's (2008) model of music induced emotions proposes that six mechanisms, brain stem reflex, visual imagery, emotional contagion, evaluative conditioning, musical expectancy and episodic memory, are involved in the process of emotion induction with music.

Physiological responses to music provide markers that emotions are being felt (van der Zwaag et al., 2011) and include changes in heart rate, blood pressure, skin conductance and skin temperature, blood transit time and amplitude, and increased respiration and heart rate (Krumhansl, 1997; Juslin & Vastfjall, 2008). Listening to relaxing music reduces the levels of cortisol, adrenaline, noradrenaline, and Interleukin-6, while at the same time it increases levels of oxytocin and growth hormone (Fancourt et al., 2013; Conrad et al., 2007). It has been noted that listening to music also modulates levels of dopamine, serotonin, and prolactin (Blum et al., 2010; Rentfrow et al., 2012).

Adverse emotional states such as boredom, stress, worry and frustration can be eased by listening to music, making people feel happier, more energized and motivated, or more relaxed and peaceful. Music can provide an extensive range of emotion regulation strategies including relaxation, revival, distraction, active coping, good mood maintenance, discharge, strong sensation, mental work, and solace (Chin & Rickard, 2013; Saarikallio, 2011). Research evidence suggests that listening to music is particularly effective in stress reduction and restoration of homeostasis (Clift et al., 2010) which makes music increasingly valued for its effect on well-being (MacDonald et al., 2012) opening up a range of possibilities for its use in health-related fields (Juslin & Sloboda, 2011).

There is also some evidence that music can influence eating behaviours. Music therapy has been successfully applied in specialized units for eating disorders and nursing homes for the elderly. Since the perception of food-taste is essentially a multisensory experience, what we hear may exert considerable influence on what we taste (Crisinel &

Spence, 2010a; Crisinel & Spence, 2010b; Zampini & Spence, 2004). Our instinctive need to synchronize movements to the speed and rhythm of music (Huron, 2001; Boone & Cunningham, 2001) and the effect of music on levels of arousal (Pelletier, 2004) could affect the speed of eating and mealtime duration resulting in changes to eating outcomes e.g. the amount of food consumed and meal duration (Milliman, 1986; Stroebele & de Castro, 2006).

In the next chapter a systematic review is undertaken in order to gain a deeper understanding of the literature on the influence of music on eating-related behaviours and outcomes. This review will help to identify the extent to which research has shown how different kinds of music have been used to influence eating-related behaviors and outcomes and evaluate their effectiveness.

Chapter 4

Systematic review

4.0 Aims and objectives

A systematic review was conducted in order to provide an overview of the literature investigating the effectiveness of using different kinds of music to influence eating-related behaviors and outcomes. This was a key stage in development of the thesis since, to our knowledge, there is no systematic review that considers the influence of music on eating behaviors to date. The aims of the review were to (a) ascertain the extent to which different kinds of music have been used to influence eating-related behaviours and outcomes, (b) evaluate their effectiveness and (c) summarize the outcomes in a narrative synthesis. Electronic databases were systematically searched using terms relevant to music and a range of eating-related behaviours and outcomes according to predetermined search criteria outlined in the protocol (see Appendix A). The findings of the systematic review help inform and underpin the design and development of three studies intended to explore the potentiality of music to influence eating behaviors and outcomes.

4.1 Method

4.1.1 Literature search

The systematic review was conducted following the Centre for Reviews and Dissemination (CRD) guidance for undertaking reviews in health care, and the Economic and Social Research Council (ESRC) Research Methods Programme guidance on narrative synthesis (Liberati et al., 2009; Popay et al., 2006; Bridle et al., 2005). The following databases were searched: EBSCO (academic search complete); Web of Science (all databases); Scopus; Cochrane Library; PubMed; NLM; PsycINFO and the CRD database.

Additional records were identified through WHO International Trial Registry and ISRCTN Registry.

The search terms included: music* and eat*; music* and food*; music* and weight*; music* and kalori*; music and energy consumption; music and energy expenditure; music and waist circumference; music and obesity (limiter-exercise); music and BMI (limiter-exercise); music and adiposity (limiter-exercise); music and hunger; music and satiety; music and vegetables; music and fruit; music and meal; music and metabolism.

The search was kept broad and wide-ranging since to our knowledge this is the first systematic review appraising the modulating effects of music on eating behaviors and outcomes. A concerted effort was made to capture all promising articles regarding music and a variety of eating behaviors/outcomes. During the searches involving the terms “obesity”; “adiposity”; and “BMI”, an additional limiter “exercise” was applied. The reasons for a selective application of the additional limiter are: a) the effect of music on exercise is not the focus of this review; and b) there is already ample existing literature on the subject (Clark, Baker, & Taylor, 2016).

The initial search yielded 3787 articles (see Table 4.1). During the first screening (title and abstract) 3541 articles were removed due to the lack of relevance. The most common reasons for the exclusion were: Music as surname (Stanley I. Music; Maja Marolt Music; Melisa Music and etc.); popular music lyrics as well as opera libretti (e.g. hungry for music, love and etc.); biology (Latin names of banana varieties, family *Musaceae*: *Musa paradisiaca*; *Musa acuminata*; *Musa balbisiana* etc.); as well as the use of the term “music” as a metaphor and allegory (e.g. music is the food of love).

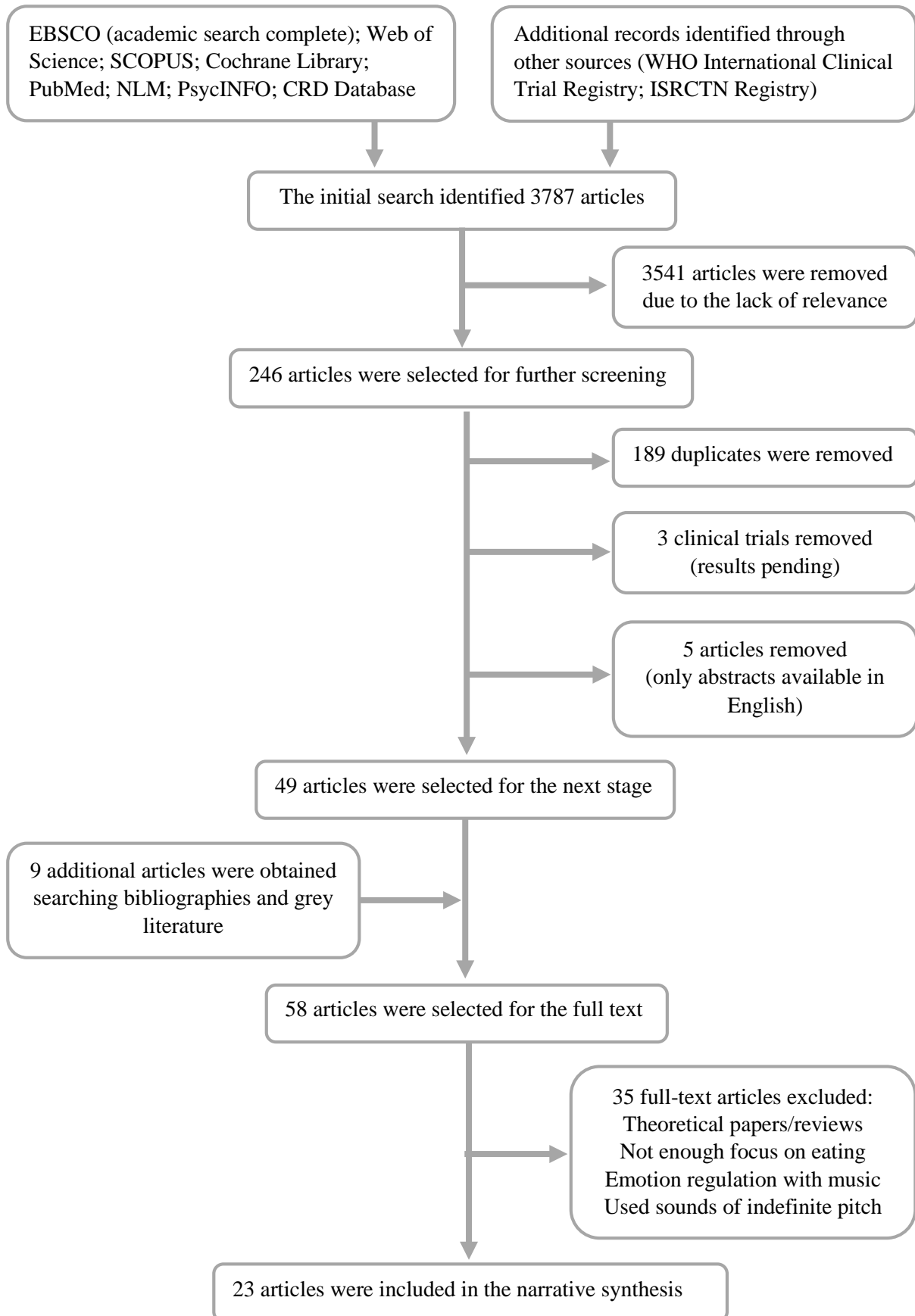
Table 4.1
Search record sheet

Database	Date of search	Limiters	Number of hits	Titles/ Abstracts selected	Reasons for elimination	After duplicates were removed
EBSCO Academic search complete	27/04/15	Academic journals Peer reviewed Adults 18 and over	734	62	Music as a surname; song lyrics; name of banana varieties; use of metaphor & allegory; etc.	16
Web of Science	1/05/15	Same	1410	78	Same	14
Scopus	6/05/15	Same	831	53	Same	22
Cochrane Library	11/05/15	Same	63	16	Same	0
Medline (PubMed Interface)	11/05/15	Same	632	28	Same	0
PsycInfo (EBSCO Host)	13/05/15	Same	20	4	Same	2
CRD Database	18/05/15	N/A	16	2	Same	0
Medline (NLM Gateway Interface)	18/05/15	N/A	15	0	Same	0
WHO Clinical Trial registry	18/05/15	N/A	45	3	Same	3
ISRCTN Registry	18/05/15	N/A	21	0	Same	0

After screening the titles and abstracts for relevance, 246 articles were chosen for further assessment. During this stage 189 articles were removed because they were duplicates. Of the remaining 57 articles, 5 articles were removed because only the abstracts were available in English and 3 because they were clinical trials with the results pending. This left 49 articles for the full-text screening. Screening of bibliographies during the full-text search yielded a further seven articles and an additional two were obtained through direct contact with authors. In total, 58 articles were considered for the full-text stage (Figure 4.1).

Figure 4.1

Systematic review flow chart



4.1.2 Full-text screening and eligibility criteria

The full-text stage considered 58 articles in their entirety. The focus of this systematic review is the assessment of empirical studies investigating the effect of music/soundscapes on eating behaviours/outcomes. Studies that do not have eating behaviours/outcomes as their end-result as well as all theoretical papers/reviews were excluded at this stage. A total of 35 studies fall into these categories and they are briefly described below.

A number of theoretical and empirical studies investigated the use of music as a way to reduce the levels of agitation and anxiety during mealtimes in dementia and Alzheimer's patients in nursing homes (Dinner music, 2007; Chang, Huang, Lin, & Lin, 2010; Chang & Roberts, 2011; Hicks-Moore, 2005; Ho et al., 2011; Hooper, Carson, & Lindsay, 2012; Ragneskog, Asplund, Kihlgren, & Norberg, 2001; Van der Geer, Vink, Schols, & Slaets, 2009; Watson & Green, 2006). Playing soothing background music resulted in meal-times being calmer (less disruptive) and more pleasant for both patients and the nursing staff (Chang et al., 2010; Ho et al., 2011; Ragneskog & Kihlgren, 1997; Ragneskog et al., 2001; Whear et al., 2014).

Another group of papers reviewed the benefits of music therapy in the treatment of patients with eating disorders (EDs) in inpatient settings (Hilliard, 2001; Justice, 1994; Lejonclou & Trondalen, 2009). Music, as an addition to cognitive behavioural therapy (CBMT), was particularly well received. Music therapy (MT) is shown to give extra support in crises (e.g. anger expression; empowerment) and to work extremely well under the cognitive-behavioral model (Hilliard, 2001). It was noted that music helps promote relaxation and fosters self-expression which leads to self-acceptance (Justice, 1994). Also, music seems to be an effective tool in overcoming alexithymia (inability to find words for emotions) and as a result assists learning to relate to self and others (Lejonclou & Trondalen, 2009). A study evaluating the Musical Mood Induction Procedure (MMIP) (Carter, Wilson, Lawson, &

Bulik, 1995) among 12 bulimic and 12 control women highlighted the importance of individualizing music. The analyses showed that the participants are extremely individual in their responses to the music stimuli (Carter et al., 1995).

A number of studies examined the effect of music on metabolic function and gastric secretion (Carlsson, Heegner, & Slinde, 2005; Cioca, 2013; Demling, Tzschoppe, & Classen, 1970; Fullmer & Snell, 2014; Mandel, Davis, & Secic; Yamasaki et al., 2013). A review article (Yamasaki et al., 2012) looked at the impact of music on metabolism considering the levels of cortisol; growth hormone; adrenocorticotrophic hormone; oxytocin; epinephrine and norepinephrine; and heart rate variability, concluding that music has a positive effect on the Hypothalamic Pituitary-Adrenal (HPA) and Sympathetic Nervous System (SNS) regulation. This research suggests that listening to music helps to regulate the immune system; gastric and intestinal motility; moderate cancer related gastrointestinal symptoms and increase lipid metabolism and lactic acid clearance during exercise (Yamasaki et al., 2012).

The findings of Yamasaki's review (2012) were further supported by two experimental studies (Cioca, 2013; Mandel et al., 2013) which probed the effects of music/music therapy on relaxation and metabolic regulation in diabetic patients (type 1 and type 2). The results confirmed that listening to music significantly reduces systolic blood pressure, state anxiety, stress (Mandel et al., 2013) as well as the levels of glycaemia in people with type 2 diabetes (Cioca, 2013).

Two empirical studies (Carlsson et al., 2005; Fullmer & Snell, 2014) investigated the effects of listening to music on the resting metabolic rate. The findings showed that the energy expenditure while listening to relaxing music, although not significantly higher than the energy expenditure during resting condition, amounts to 27.6 calories per day (Fullmer & Snell, 2014). Furthermore, it was noted that whether listening to "relaxing" or "stressful"

classical music, energy expenditure is not significantly higher compared to the resting energy expenditure (Carlsson et al., 2005).

A study considering the effects of various types of music on the secretory function of the stomach (Demling et al., 1970) reported a significant reduction in the volume of gastric secretion as well as reduced production of HCL during all music conditions compared to unchanged basal secretion in the control condition (silence).

A different experimental study investigated the relationship between waist circumference and the central auditory dysfunction in adults (Hwang, Chen, Yang, & Liu, 2012). The central auditory function (measured by the pitch pattern sequence score) showed a negative correlation with waist circumference. The result of this study suggests that central obesity might be an independent risk factor contributing to an early auditory function decline, particularly in males over 55.

Finally, a number of empirical studies investigating cross-modal associations between the sensory channels of taste and sound were excluded because they utilized: 1) the “tastes” evoked by the food-names rather than the tastes of “real food” (Crisinel & Spence, 2009; Crisinel & Spence, 2010a); 2) background white noise (Woods et al., 2011); 3) phonetic qualities of speech (Simner, Cuskley, & Kirby, 2010); or 4) amplified chewing sounds (Zampini & Spence, 2004) rather than music/soundscape. Empirical studies exploring the effect of music on consumers’ attitudes towards the atmosphere in dining areas (North & Hargreaves, 1996) or consumers’ ability to recall food items (Yeoh & North, 2010) as well as all theoretical papers and reviews (Knöferle & Spence, 2012; Massimiliano & Spence, 2008; Spence & Deroy, 2013; Spence & Shankar, 2010; Spence, 2012) were not included.

As already mentioned, the reason for the exclusion was the fact that the studies listed above did not measure the effect of *music/soundscape* on *eating behaviors/outcomes* (e.g. the

amount or taste of food consumed, duration of the meal-time, rate of eating or a change in weight/BMI status) as the final outcome.

4.1.3 Data extraction and quality assessment

For each of the remaining 23 articles investigating the influence of music/soundscape on eating behaviors/outcomes relevant data were extracted. Extracted data are comprised of pertinent information regarding: reference, intervention, setting and context, participants, sample size, study design, method, eating behavior/outcome measures, results, and the music/sound condition utilized.

Following data extraction, methodological quality was assessed using the Critical Appraisal Skills Programme (CASP) tool (Taylor et al., 2000). Quality assessment considered the following criteria: the degree to which the design and conduct of a study match the study objectives; description of what happened in the study and whether it can be replicated; process of allocating the participants into groups; sample size; blinding (i.e. participants or assessors) and outcomes (i.e. data and reporting) (Higgins & Green, 2008). The subsequent ratings for quality were given: A (high); B (medium); and C (low).

Rating “A” was given to those studies that meet all assessment criteria to a high degree; rating “B” was given for either a medium or partial compliance with the assessment criteria; and rating “C” was given to studies that have incomplete data or fail to meet most of the assessment criteria conditions. Regardless of the ratings all the empirical studies that investigate the effect of music on eating behaviors/outcomes were considered. However, during the narrative synthesis an effort was made to differentiate between more and less robust studies (Popay et al., 2006).

The vast majority of the included studies fall into category “B” which denotes medium quality or partial compliance with the assessment criteria. The common

shortcomings were related to the process of allocating to groups; sample size, blinding and controlling for confounding variables.

Since the participants were either volunteers, university students, consumers in restaurants, or residents in nursing homes randomized allocation was not always possible. Low sample sizes often resulted in the lack of statistical power and “blinding” of the participants/ assessors frequently remained unclear. Controlling for confounding variables was at best partial and often missing. In addition, the choice of music/soundscape (e.g. music stimuli) was not always provided. Regardless of these deficiencies, all 23 included studies were reviewed and their findings incorporated in the narrative synthesis.

The systematic review generated three distinct groups of articles according to their research field and focus:

1) Articles with a research focus on cross-modality between different sensory channels. These studies explore the possibility of altering/modifying the perception of taste/flavour of food using designer background music/soundscape with the resulting difference in food evaluation and acceptance.

2) Articles that investigate the use of background music during mealtimes in order to promote relaxation (reduce levels of agitation and anxiety) and mood change and its effect on eating behaviours in inpatient setting. These studies concentrate on the influence of music induced mood change on eating behaviour/outcomes in patients with dementia and Alzheimer’s in nursing homes or patients with eating disorders in psychiatric units.

3) Articles that examine the effects of various types of background music on the speed of eating, amount of food consumed and mealtime duration. Most of these studies focus on consumer behaviour and the use of music in restaurants and fast-food chains.

The apparent heterogeneity of the research areas, study designs and the outcomes of interest included in this systematic review suggest that the best way to combine the evidence would be a narrative synthesis (Popay et al., 2006; Rodgers et al., 2009).

4.2 Narrative synthesis

Narrative synthesis is a method used to summarize diverse data and it relays primarily (but not exclusively) on the use of words and text to “tell the story” (Popay et al., 2006). It is considered useful to start the narrative synthesis with a “theory of change”. Theory of change is a model which describes the chain of causal assumptions. In other words, it is a model that shows the expected link between the resources, intermediate results and the final outcomes (Popay et al., 2006; Rodgers et al., 2009).

4.2.1 Theory of change model

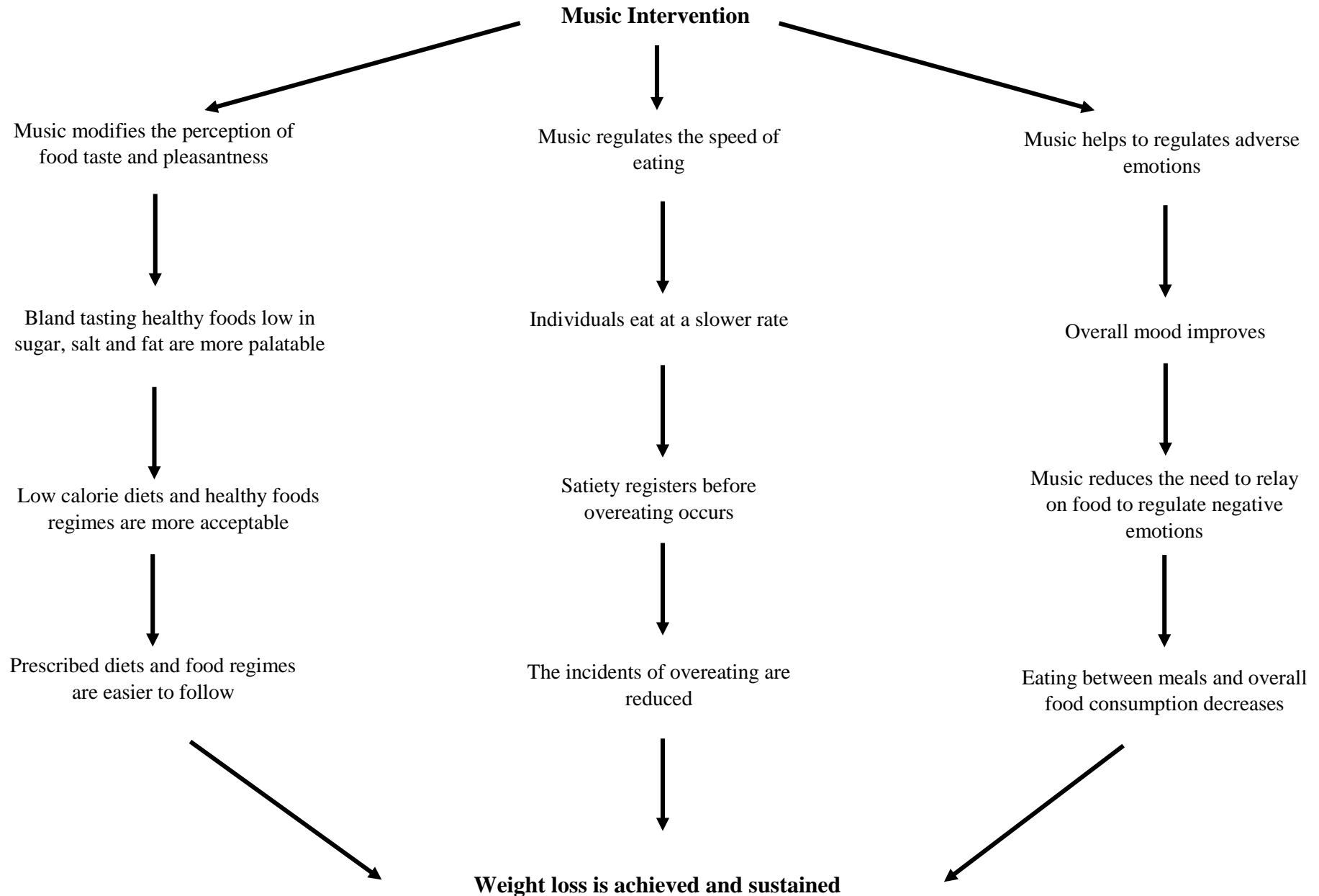
Therefore, a theory of change model was created in order to aid synthesis of the evidence with a clear focus on how music intervention might work, for whom it is likely to work and why (Figure 4.2). The proposed theory model of change includes three separate mechanisms through which music intervention could affect the final outcome - weight loss and weight loss maintenance:

- 1) Music modified perception of taste and pleasantness
- 2) Emotion regulation with music
- 3) Music modified speed of eating

The mechanisms involved in the proposed theory of change model are closely interrelated and correspond to the grouping of articles identified in the systematic review according to their research field and focus. Therefore, each one of the above mentioned threads /mechanisms will be examined separately.

Figure 4.2

Theory of Change Model



Note. Theory of change model (Popay et al., 2006) applied on the current study

4.2.2 The effect of music on taste perception and food acceptance

Cross-modal correspondences are general analogies that exist between different senses (Knöferle & Spence, 2012). Synaesthesia is a perceptual condition where a stimulus in one sensory modality brings about a sensation in another sensory modality, e.g. upon hearing a sound we see color (Eagleman, Kagan, Nelson, Sagaram, & Sarma, 2007). However, while synaesthesia is a rare neurological condition, the existence of general analogies or correspondences between different sensory modalities is inherent and present in everyone (Bronner, Frieler, Bruhn, Hirt, & Piper, 2012; Crisinel & Spence, 2009; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012).

The existence of cross-modal correspondences/analogies is obvious in the everyday use of language such as: a “sharp” scream, a “warm” colour, or a “low” sound. *Dolce* (Italian for “sweet” or “desert”), *Dolcissimo* (Italian for “as sweet as possible”) or *Amarevole* (Italian for “bitter”) are frequently used musical terms instructing a performer to play/sing a piece of music “sweetly” or “bitterly” (Cooke, 1959). It appears that awareness of the existing analogies between the sensory channels of sound and taste is at least as old as written music.

The systematic review has identified a number of papers investigating cross-modality between the sensory channels of taste and sound (Bronner et al., 2012; Crisinel & Spence, 2009; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Holt-Hansen, 1968; Knöferle & Spence, 2012; Rudmin & Cappelli, 1983). Findings suggest that the properties of background music/soundscapes such as pitch (Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Holt-Hansen, 1968; Rudmin & Cappelli, 1983), timbre (Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012), volume (Ferber & Cabanac, 1987), articulation (Bronner et al., 2012; Crisinel et al., 2012), tempo (Bronner et al., 2012), rhythm (Bronner et al., 2012), musical style and performer (Fiegel et al., 2014) can change the perception of food-taste. In

turn, music induced modification of food-taste leads to changes in food evaluation such as altered levels of food enjoyment and acceptance (Crisinel et al., 2012; Ferber & Cabanac, 1987; Fiegel et al., 2014; Holt-Hansen, 1968).

The results of the reviewed empirical studies demonstrate a link between different tastes/flavours and the pitch of sound/music (Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c; Holt-Hansen, 1968; Rudmin & Cappelli, 1983). “Pitch” is a property of sound which indicates the frequency of oscillation and while the frequency of oscillation is an objective measure, pitch of a tone represents its subjective perception.

Some of the reviewed studies expressed the pitch of sound using the tonal system (names of the notes); others tended to express it as the frequency of oscillation (in Hz); while a number of studies used vague descriptive words such as low and high sounds. To aid analyses all measures were converted and expressed in both, notation as well as the corresponding frequency in Hz whenever possible.

The results suggest (Table 4.2) that bitter and umami tastes, as well as the flavors of caffeine, coffee, and monosodium glutamate are associated with low pitched sounds ranging from *C2 (64.4 Hz)* to *G3 (196 Hz)* (Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012). Sweet and sour tastes, as well as the flavors of sucrose, chocolate, (apart from dark chocolate 70% cocoa which is linked to a lower pitch), peppermint, citrus fruit and beer are associated with higher pitched sounds ranging from *G4 (392 Hz)* to *G6 (1567.98 Hz)* (Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c; Holt-Hansen, 1968; Rudmin & Cappelli, 1983).

Furthermore, it has been noted that the association between pitch and sourness increases along the psychoacoustic property of sound “sharpness” (Bronner et al., 2012). In

other words, the more sourness is perceived in citrus fruit, the higher (“sharper”) will be the pitch of sound it is associated with. As a result, a degree of sourness in citrus fruit will correspond to the degree of high pitch (e.g. from lower to higher - orange, grapefruit and lemon).

Table 4.2
Associations between pitch and taste/flavour

Pitch of sound in Hz	Tastes	Flavours	References
C2 (64.4 Hz) – G3 (196Hz)	<ul style="list-style-type: none"> • Bitter • Umami 	<ul style="list-style-type: none"> • Caffeine • Coffee • Monosodium glutamate 	Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012
G3 (196Hz) - G4 (392Hz)		<ul style="list-style-type: none"> • Salt • Rose • Orange flower • Almond • Vanilla • Dark chocolate 	Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c
G4 (392Hz) - C5 (523.25Hz)	<ul style="list-style-type: none"> • Sweet • Sour 	<ul style="list-style-type: none"> • Lemon • Peppermint • Citric acid • Sucrose • Marzipan filled chocolate • Milk chocolate • Carlsberg Lager 	Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c; Holt-Hansen, 1968
C5 (523.25Hz) - G6 (1567.98Hz)		<ul style="list-style-type: none"> • Carlsberg Elephant Beer • Non-alcoholic beer • Alcoholic beer • Grapefruit juice • Pickle 	Holt-Hansen, 1968; Rudmin & Cappelli, 1983

According to Holt-Hansen’s research (1968), there is a point of perfect harmony between taste and background sound e.g. “pitch of fit”. They note that “pitch of fit” enhances

taste (beer in this case), leading to an extraordinarily pleasant experience. These findings were largely confirmed by a replication study, following the Holt-Hansen design (Rudmin & Cappelli, 1983).

Although the pitch of sound is primarily associated with tastes and to a lesser extent flavors, it is also linked to the hedonic evaluation of food items alongside timbre (musical instruments) and the style of music (Table 4.3). The sound of brass instruments was rated as largely unpleasant (especially at low pitches) and associated with bitter (unpleasant) tastes. On the other hand, piano sounds had high pleasantness ratings at all pitches and were associated with sweet (pleasant) tastes and flavors (Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c).

Table 4.3
Associations between timbre and taste/flavour

Musical instruments (timbre)	Tastes	Flavours	Hedonic ratings	References
Brass	<ul style="list-style-type: none"> • Bitter • Sour 	<ul style="list-style-type: none"> • Caffeine • Citric acid • Orange flower • Salty 	<ul style="list-style-type: none"> • Unpleasant (especially at low pitch) 	Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c
Woodwind		<ul style="list-style-type: none"> • Coffee 		
Guitar		<ul style="list-style-type: none"> • Orange 		
Piano	<ul style="list-style-type: none"> • Sweet 	<ul style="list-style-type: none"> • Sucrose • Peppermint • Vanilla 	<ul style="list-style-type: none"> • Pleasant (at all pitches) 	

Further, two studies investigate the direct consequence of manipulating sonic properties (e.g. pitch, timbre, etc.) of background music/soundscapes on the perception of taste (Crisinel et al., 2012). In order to empirically test the effect of different sonic properties on the perception of taste, two soundscapes were created. They were designed specifically for the experiment utilizing previously acquired information regarding taste/sound associations (Crisinel & Spence, 2010b).

In the first experiment (Crisinel et al., 2012) the “bitter congruent soundscape” was made of low pitched notes ranging between *F2* (73.42 Hz) and *C3* (130.81Hz) played by brass instruments. The “sweet congruent soundscape” comprised high pitched notes ranging between *C4* (261.63 Hz) and *C6* (1046.5 Hz) played by a piano. The results of this study (Crisinel et al., 2012) suggest that the “sweet congruent soundscape” enhances the sweetness of the bittersweet taste of cinder toffee while the “bitter congruent soundscape” increases its bitterness. Furthermore, the ratings for sweetness (as well as piano sound) correlated with the ratings for pleasantness.

The second experiment (Wang & Spence, under review) appraising samples of pure taste solutions (sweet, bitter, & bittersweet) as well as complex foodstuffs (70% and 85% cacao chocolates) confirmed that the “sweet congruent soundscape” enhances the sweetness of pure taste solutions and chocolate, while the “bitter congruent soundscape” heightened their bitterness. However, the findings show that these two soundscapes did not affect the hedonic ratings for the chocolate samples, although they did for the pure taste solutions. One suggested explanation for this inconsistency is the fact that most participants were familiar with the taste of chocolate (unlike pure taste solutions) and were likely to have their preference already established.

A recent empirical study (Fiegel et al., 2014) looked at the effect of four music genres (Jazz, Classical, Rock, Hip-Hop), arranged by either single or multiple performers, on flavor

pleasantness and the overall impression of the food stimuli. Findings suggest that the hedonic evaluation of “emotional food” is influenced by both, the genre of music playing in the background and the performer. “Emotional food” denotes food items people tend to crave or consume when faced with adverse emotional states e.g. chocolate. These are contrasted by the “non-emotional food” items, e.g. bell-pepper, which have no effect on mood states and are not associated with cravings (Fiegel et al., 2014). The results show that the pleasantness ratings for “emotional food” (but not “non-emotional food”) are influenced by the background music style. Hedonic ratings for “emotional foods” were significantly higher when *Jazz* (followed by *Classical*, *Rock*) music was playing in the background compared to *Hip-Hop*. However, this was only in evidence for music genres arranged by a single performer (Fiegel et al., 2014).

Moreover, Ferber and Cabanac’s study (1987) investigated the influence of noise on affective ratings for sweet (sucrose solutions) and salt (sodium chloride solutions). The sound stimuli were comprised of noise at 70dB, noise at 90dB, music at 90dB, and silence. The results show increased hedonic ratings for sweet tastes when either music or noise at 90dB was being played in the background. It was noted that the heart rate significantly increased during the noise condition (90dB), while during the music condition (90dB) it remained normal (Ferber & Cabanac, 1987). Hedonic ratings for salt did not change.

Another study investigating the effects of background sound on consumers’ discriminatory ability among foods, confirmed that background sounds affect our perception of food taste to a significant degree (Pellegrino et al., 2015). The results indicate that participants demonstrate a better discriminatory ability between two carbonated sodas while listening to classical music than to other sound conditions such as: crisp chewing-sound, white noise, or listening to a news broadcast. In contrast, discriminatory ability between two different potato chips was the lowest during the classical music condition. Based on these

results, the authors (Pellegrino et al., 2015) suggest that foods with high chewing noise might be less susceptible to background sounds.

Overall, there is growing evidence that background music/ soundscapes effect our perception of food taste, pleasantness ratings, as well as the ability to discriminate among foods. Despite these findings according to one study (Pellegrino et al., 2015) listening to music is the rarest eating scenario (5.9% while eating breakfast; 5.6% during lunch; 3.2 % for dinner and 7.3% while snacking). Likewise, only 6.2% of participants thought that listening to music would be their preferred meal setting compared to 58.8% of people who like to eat while having a conversation.

4.2.3 The influence of music induced mood change on eating behaviors/outcomes

This group of reviewed articles investigates the use of music as a way to change eating behaviors in inpatient settings. Most articles explore the possibility of improving food consumption (e.g. amount of food consumed, calorie intake) in care/nursing homes for the elderly; dementia, and dementia of the Alzheimer's type patients (Divert et al., 2015; Pinke, 2010; Ragneskog, Kihlgren, Karlsson, & Norberg, 1996b; Thomas & Smith, 2009; Wong, Burford, Wyles, Mundy, & Sainsbury, 2008).

Malnutrition is common in elderly people. It tends to be exacerbated among nursing home residents (Divert et al., 2015) especially if they are suffering from Alzheimer's and other types of dementia (Pinke, 2010; Thomas & Smith, 2009; Wong et al., 2008). A deficiency in nutritional intake (e.g. calories, nutrients and micronutrients) can lead to muscle wasting, increased risk of falls and fractures, and a weakened immune system (Divert et al., 2015). Difficulties with feeding in dementia and Alzheimer's patients create an atmosphere of stress and agitation for both the nursing staff and patients (Pinke, 2010; Thomas & Smith, 2009).

Empirical studies investigating the use of relaxing music during mealtimes in nursing homes for dementia and Alzheimer's patients tend to use music of a more general or traditional musical style, slow tempo, and played at a slightly lower volume (about 60dB). The results show that music creates a calm environment which in turn provides a window of opportunity for the increase in food intake (Pinke, 2010; Ragneskog et al., 1996a). This is evidenced by an average caloric intake improvement of 20%, from 667cal to 797cal, (Thomas & Smith, 2009); and the gain of 0.39/m² in BMI with a 0.09±0.44 increase in mid-arm circumference (Wong et al., 2008) during music conditions.

However, these findings are not confirmed by the results of a study investigating the impact of contextual factors, one of them music, on food intake in nursing homes (Divert et al., 2015). In this study there was no observed impact of music on food intake. In fact, playing music during mealtimes led to a decrease in food enjoyment but had no impact on meal enjoyment.

Another study focused on the effects of music on patients with eating disorders (Cardi, Esposito, Clarke, Schifano, & Treasure, 2014). It investigates the effect of induced positive mood (vodcasts with positive music, images and statements) on symptomatic behavior in eating disorders (EDs) during a test-meal. The findings suggest that although an increase in positive mood after watching the vodcast was evident for all groups, it was larger for EDs patients. Reduction in food consumption, negative affect as well as anxiety and attentional bias to food stimuli were noted for Bulimia Nervosa (BN) patients (Cardi et al., 2014) while a significant increase in food consumption was observed in Anorexia Nervosa (AN).

Overall, these studies show that a music-induced improvement in emotional status (increase in positive as well as decrease in negative moods) has an effect on eating behaviors/outcomes. This influence seems to be bi-directional. A decrease in food

consumption was observed in BN patients (Cardi et al., 2014), while an increase was noted in AN (Cardi et al., 2014) as well as in dementia and Alzheimer's patients in nursing homes (Pinke, 2010; Ragneskog et al., 1996b; Thomas & Smith, 2009; Wong et al., 2008).

4.2.4 The effects of music on amount, duration and the rate of food consumption

Another group of reviewed articles considered the influence of music on consumer behavior in restaurants and fast-food chains. These studies investigate the effect of background music on eating behaviors and outcomes such as: amount of food eaten and meal duration (Milliman, 1986; Stroebele & de Castro, 2006; Wansink & van Ittersum, 2012), meal satisfaction (Wansink & van Ittersum, 2012), speed of eating (Roballey et al., 1985), as well as the choice of food items (Yeoh & North, 2010b).

Results of two studies investigating the influence of background music on consumer behavior in restaurants show that during slow music conditions customers take significantly longer to finish their meal (Milliman, 1986; Wansink & van Ittersum, 2012). However the total amount of food consumed during fast versus slow music condition is not significantly different (Milliman, 1986). Another study (Wansink & van Ittersum, 2012) reported that consumers in a fine-dining condition (soft, relaxing music) consumed 133 calories less, even though their meal was 4.7% longer, when compared to customers in a fast-food condition (loud, fast music). Customers in the fine-dining condition also rated their food as tasting better (Wansink & van Ittersum, 2012). Furthermore, the speed of background music has been shown to significantly affect the speed of eating, although this did not seem to influence the overall duration of the meal (Roballey et al., 1985).

Stroebele & de Castro (2006) investigated the influence of music on food consumption in the 'natural environment' (day to day environment). In this study, seventy-eight students were instructed to keep a diary of their eating behaviors as well as their eating

situations/environments for 7 consecutive days. Results reveal that listening to music is associated with an increase in food intake, meal duration, as well as the number of people present. However further analyses showed that the number of people present, not music, predicts the mealtime duration. In fact, all three factors: the number of people present, meal duration and music were inter-correlated. This study did not observe an effect of the volume or speed of music on either food intake or meal duration (Stroebele & de Castro, 2006).

Finally, the results of an experiment investigating the influence of a “musical fit” on the choice between two competing foods, suggest that cognitive priming by music can lead people to choose one food item over another (Yeoh & North, 2010b). During the first experiment Malay participants (Malay, Chinese and Indian ethnicity) were offered the choice between Malay (kuih bahulu) and Western food (cupcakes). Although Western music was playing in the background, Malay participants chose Malay food over the Western food. During the second experiment, Chinese participants chose Indian food items while Indian music was playing, and Malay food while Malay music was playing. Chinese food or music were not offered during the experiment. In conclusion, cognitive priming with music appears to influence the choice of one food item over another. However, the music induced “bias” appears to be less effective if people already have a strong preference for one food article over another (Yeoh & North, 2010b).

The findings of this line of research suggest that background music has an effect on eating behaviors. The speed of music seems to affect the speed of eating and meal duration as well as meal satisfaction. Cognitive priming with a suitable selection of music (e.g. French music for French food) can influence food choice with some degree of success.

4.3 Discussion

The systematic review has provided some evidence to show that background music/soundscape can affect the perception of food taste, food evaluation and choice, speed of eating, duration of mealtimes and the amount of food consumed. The influences of music on eating behaviors /outcomes are as complex as they are varied. They appeared to be mediated by physiological arousal, cross-modal associations between different sensory channels e. g. sounds and tastes, as well as subjective experiences. The musical attributes which influence eating behaviors/outcomes include: *pitch, tempo, volume, timbre, rhythm, tonal range, melody, mood, musical style* and the “*musical fit*”.

Overall, the evidence provided by the systematic review suggests (Table 4.4) that *perceptions of taste* and *hedonic ratings* are influenced by the pitch, tempo, timbre, melody and articulation of music (Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Holt-Hansen, 1968; Rudmin & Cappelli, 1983; Wansink & van Ittersum, 2012). The *perception of taste* is also affected by the tonal range and rhythm of the music being played (Bronner et al., 2012), while *hedonic ratings* seem to depend more on the musical style and performer (Fiegel et al., 2014), mood (Wansink & van Ittersum, 2012), and the volume of background music (Ferber & Cabanac, 1987; Wansink & van Ittersum, 2012). *Speed of eating* seems to be affected primarily by the tempo of music (Roballey et al., 1985). *Attentional bias to food* stimuli is effected by the mood of music (Cardi et al., 2014) while *food choice* seems to be influenced via cognitive priming induced by a “musical fit” (Yeoh & North, 2010). Finally, *meal duration* and the *amount of food* consumed appear to be affected by the tempo, volume, mood of the music, melody, articulation and the musical style/genre (Cardi et al., 2014; Milliman, 1986; Pinke, 2010; Ragneskog et al., 1996a; Stroebele & de Castro, 2006; Thomas & Smith, 2009; Wansink & van Ittersum, 2012; Wong et al., 2008).

Table 4.4

Musical attributes influencing different eating behaviours and outcomes

Musical attributes	Pitch	Tempo	Volume	Instrument	Rhythm	Musical fit	Mood	Melody	Articulation	Tonal range	Musical style
Eating behaviours & outcomes											
Amount of food eaten		✓					✓	✓	✓		✓
Speed of eating		✓									
Meal duration		✓	✓				✓	✓	✓		✓
Perception of taste	✓	✓		✓	✓			✓	✓	✓	
Hedonic ratings	✓	✓	✓	✓	✓		✓	✓	✓		✓
Attentional bias to food							✓				
Food choice						✓					

Although the findings of the systematic review indicate that music/soundscapes can be used to influence a variety of eating-related behaviors and outcomes, there are some limitations and questions requiring further clarification. Apart from the already mentioned shortcomings regarding the process of allocating to groups, sample size, blinding and controlling for confounding variables there are issues with the choice of music as well as the choice of investigated meal-times (breakfast, lunch or dinner) and meal-settings.

Out of 23 reviewed studies, fourteen used music excerpts in the experiments (Cardi et al., 2014; Divert et al., 2015; Ferber & Cabanac, 1987; Fiegel et al., 2014; Milliman, 1986; Pellegrino et al., 2015; Pinke, 2010; Ragneskog et al., 1996a; Roballey et al., 1985; Stroebele & de Castro, 2006; Thomas & Smith, 2009; Wansink & van Ittersum, 2012; Wong et al., 2008; Yeoh & North, 2010a), whereas the other nine studies (Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c; Holt-Hansen, 1968; Rudmin & Cappelli, 1983) used either pure tones (sounds of definite pitch) or designer-soundscapes (acoustic environments designed to correspond to food-tastes).

The information given about the music used in the experiments is often limited or non-existent. In three studies (Divert et al., 2015; Ferber & Cabanac, 1987; Stroebele & de Castro, 2006) participants used music of their own choice (unspecified) and in one study the music was described only as soothing (Wong et al., 2008). The lack of detail regarding music stimuli makes replication of the studies, as well as comparison between different studies challenging. Investigation into the effects of music on eating behaviors/outcomes would benefit from identifying and consequently manipulating musical attributes that are shown to affect a behavior change. However, this would necessitate careful consideration as well as more transparency regarding the choice of music stimuli.

Seven studies used pieces or arrangements of pieces from classical/traditional repertoire (Cardi et al., 2014; Fiegel et al., 2014; North & Hargreaves, 1998; Pellegrino et al., 2015; Pinke, 2010; Ragneskog et al., 1996a; Thomas & Smith, 2009; Yeoh & North, 2010a). Most of these studies either did not describe the tonality of the music used in the experiment or they utilized the pieces in a major key. None of the studies, however, considered the influence of the mode/tonality on the resulting eating behavior or outcome. Since major/minor juxtaposition is one of the most important elements in mood induction with music (Eerola & Vuoskoski, 2010; Hunter & Schellenberg, 2010), future studies could explore the modulating effects musical modes (major vs. minor) may have on eating behaviour/outcome, especially in the cases of “emotional eating”.

Tempo is a fundamental element of music and when expressed in MM (metronome mark) it denotes the number of beats per minute. Tempo defines the degree of activation in music and it modulates the levels of arousal in the listener (Pelletier, 2004). Three studies (Milliman, 1986; Roballey et al., 1985; Wansink & van Ittersum, 2012) described music only in terms of slow/fast and although two of these studies provided metronome marks (MM), their understanding of fast vs. slow tempo differ by 20-30 beats per minute. Prior to the main experiment, Milliman (1986) surveyed 227 randomly chosen dinners in an attempt to define slow/fast tempo. This resulted in fast tempo at MM=92 (or above) and slow tempo at MM=72 (or below). However, in a study conducted one year earlier (Roballey et al., 1985) the authors defined fast tempo as considerably faster at MM=122, while slow tempo (MM=56) was noticeably slower.

Subjective definitions of slow and fast tempo are related to age and other demographic characteristics of the listeners (Milliman, 1986). It is quite probable that the subjective perceptions of tempi in music are also dependent on the time of the day due to circadian rhythms e.g. variations in the levels of activation throughout the day (Nater, Abbruzzese,

Krebs, & Ehlert, 2006). It would be useful for future research to adhere to a constant measure/definition of fast and slow tempo. Terms slow or fast are provided with each metronome device, alongside the numbers and they are the same worldwide. The uniformity of these terms and measures would aid analyses and comparison between different studies.

The results of Fiegel et al. study (2014) report that hedonic ratings of the food-flavour and overall food impression are significantly higher when Jazz music (followed by Classical and Rock) is playing in the background. The music stimuli used in the experiment comprised four arrangements (Jazz, Classical, Rock and Hip-Hop) of the Air on G string (J.S. Bach), all in D major at 75dB volume. Tempi of the arrangements by the single performer in four different genres were in the range of MM = 80-102. MM = 80 is described in music as a *moderate* tempo - neither fast nor slow. In contrast, the tempi of the arrangements by different multiple performers were in the range of MM = 40-90. MM = 40 denotes *slow* and *solemn* speed suitable for funeral marches but not necessarily conducive to eating. Consequently, the *moderate* tempo of music arranged by the single performer might have provided a more optimal musical background which resulted in higher food-flavour and overall food impression ratings. Future research would benefit from investigating the effects of the musical genre and performer on eating behaviours/outcomes while keeping other musical elements constant (e.g. tempo, volume).

The same study (Fiegel et al., 2014) claims that hedonic ratings of the food-flavour and overall food impression are significantly higher when Jazz music is being played, but then this was only evident when the music was performed by the single performer. Since the piece of music (Air on G string) was arranged and performed by the *same* single performer (soloist) while multiple performers (band/group) changed with each performance, the results might have been affected by the increased liking for the single performer as a factor of *exposure*. It has been suggested that the liking for music initially increases with the frequency

of exposures (Hunter & Schellenberg, 2011). In order to further examine the effect of a performer (soloist or band) on food evaluation, familiarity and the number of exposures would have to be held constant. The lack of consistency regarding the choice of music as well as the number of exposures makes the comparison of results across studies as well as any attempt at generalization of the findings challenging.

Results of the study by Ferber & Cabanac (1987) exploring the effects of noise on the affective ratings for sweet and salty flavors reports that the hedonic ratings for sucrose during a loud noise at 90dB and own choice music played at 90dB were significantly higher. A significant increase in heart rate (HR) was observed during the noise condition, particularly at 90dB. Since the heart rate was taken as a reliable stress marker (Ferber & Cabanac, 1987) it was proposed that the increased ratings of pleasure for sucrose were a result of the stress-response activation. However, it was noted that HR remained unchanged during the music condition at 90dB. This suggests that the mechanisms behind the increased ratings of pleasure for sucrose during the music condition might have been different. Further exploration of the effects music has on the hedonic ratings for sweet (and other tastes) as well as the stress-response activation would help clarify the mechanisms involved.

Nine studies explored the effect of sound on the perception of taste. These studies utilized either pure tones or designer-soundscapes. Two studies used pure tones defined by pitch in Hz and rhythm (Holt-Hansen, 1968; Rudmin & Cappelli, 1983); four studies (Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c) used 52 different sounds (13 notes played by 4 different instruments) and three (Bronner et al., 2012; Crisinel et al., 2012; Wang & Spence, under review) utilized designer soundscapes. The results of the research utilizing pure tones, different sounds and designer-soundscapes demonstrated implicit as well as explicit associations between sounds and tastes. The

emerging evidence suggests that soundscapes may possibly be utilized to change the perception of taste e.g. as “sonic seasoning”.

Furthermore, out of 23 reviewed studies, six studies investigated the influence of music on eating behaviors/outcomes during lunch-time (Divert et al., 2015; Pinke, 2010; Roballey et al., 1985; Thomas & Smith, 2009; Wansink & van Ittersum, 2012; Yeoh & North, 2010b), two studies considered the effects of music during dinner-times (Milliman, 1986; Ragneskog et al., 1996a), while three studies evaluated the influence of music on eating behaviors/outcomes during all/any meal-time (Pellegrino et al., 2015; Stroebele & de Castro, 2006; Wong et al., 2008). The rest of the studies investigated the effects of music on eating behaviors/outcomes during a test-meal (time of day not specified). Research indicates that food consumption increases throughout the day with the longest and the largest meals at dinner-time, while breakfast denotes the lightest and the shortest meal of the day (Scheer, Morris, & Shea, 2013). It is probable that the effectiveness of music to influence eating behaviour fluctuates throughout the day as well. Thus, future studies should take into account the impact of *day-time* on eating behaviors and outcomes as well as the effectiveness of music to influence it.

Most of the 23 reviewed studies did not investigate the impact of music on eating behaviors/outcomes in natural environments such as eating at home. Twelve studies examined the influence of music/soundscape during a test-meal (Cardi et al., 2014; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Crisinel & Spence, 2012c; Ferber & Cabanac, 1987; Fiegel et al., 2014; Pellegrino et al., 2015); six during meal-times in inpatient settings such as nursing homes and eating disorder units (Cardi et al., 2014; Divert et al., 2015; Pinke, 2010; Ragneskog et al., 1996b; Thomas & Smith, 2009; Wong et al., 2008); four in restaurants (Milliman, 1986; Roballey et al., 1985; Wansink & van Ittersum, 2012; Yeoh & North, 2010b); with only one study collecting data on the effects of music on

eating behaviors and outcomes in natural environment. However, most meals are consumed at home.

Nursing homes and eating disorder units present very specific environments when it comes to eating-related behaviors. In both settings eating is recognized as a *problem*. This is either due to feeding difficulties and agitation caused by cognitive decline in dementia and Alzheimer's patients; or overeating/under-eating caused by cognitive distortions in relation to food, weight and eating in eating disorder patients (Cardi et al., 2014; Divert et al., 2015; Pinke, 2010; Ragneskog et al., 1996a; Thomas & Smith, 2009; Wong et al., 2008).

On the other hand, restaurant settings present researchers with a range of confounding variables such as "recreational" eating, the number of people present at the table and a high cost of restaurant meals. Once people chose to have a treat of eating out they make allowance of time and money which in turn increases expectations of having a good time. As a result, eating out is often seen as a social occasion (e.g. eating with friends, eating in groups) or a special experience (e.g. recreational eating, adventure eating). Music playing in the background is just an addition which makes the meal even more special e.g. even more different to an everyday meal. And, of course, the function of the musical background in restaurants is to boost sales, increase turnover, and motivate people to order/eat more.

Since most meals are consumed at home, with work and school closely following, future research into the effects of music on eating behaviors/outcomes might want to stay away from commercial as well as inpatient settings and examine the impact of music on eating behaviors/outcomes during everyday meals in everyday settings (e.g. home, work, school). The increased understanding of the effect music has on eating behaviours of general populations in their natural settings would better inform us about (a) peoples' eating habits, and (b) if and how they could be successfully manipulated by music. After all, most obese individuals made a transition through overeating and overweight to their current weight

status. Finding a way to utilize music somewhere along the path of spiraling weight and recurrent dieting would make an intervention with music worthwhile.

4.4 Summary and conclusions

Regardless of the diversity in participants, experimental settings and desired outcomes, the findings of this systematic review largely demonstrate that playing background music during mealtimes affects eating-related behavior. The systematic review has provided evidence that music/soundscapes can affect eating behaviors and outcomes in a variety of settings. These effects seem to be mediated by the emotion regulation, altered levels of arousal and modified perceptions of food-taste. Although most reviewed studies are concerned with the *increase* in food consumption (nursing homes, eating disorder units and restaurants), there is an indication that so far untapped potentiality to utilize music/soundscapes in order to *decrease* the amount of food intake exists. Through a considered manipulation of different musical attributes, utilizing the very same mechanisms (emotion regulation, levels of arousal and modified taste perception), this may be possible.

It seems that by alleviating underlying psychological problems, music is able to influence eating behaviors. This is evidenced in the reduction of agitation and restlessness which leads to improved food consumption in nursing homes, or decrease in attentional bias to food and anxiety resulting in increased (AN) as well as decreased (BN) food intake in eating disorder units. As stated in Chapter 3 music is a potent emotion regulator (Juslin & Sloboda, 2011; Eerola & Vuoskoski, 2010). It modulates activity in the mesocorticolimbic dopamine reward system (Blum et al., 2010) mediating levels of neurochemicals such as dopamine, serotonin, oxytocin and prolactin (Rentfrow et al., 2012) and it appears to be very effective in lowering the levels of cortisol (Fancourt et al., 2013). Through a variety of emotion regulation strategies like relaxation, distraction or venting music could be utilized to

enhance, maintain or alter individual's affective states (Goethem & Sloboda, 2011), thus offsetting some of their dependence on food to the same effect.

There is evidence that playing taste-congruent soundscapes has an effect on the perception of food-taste and pleasantness thus having a potential to influence food acceptance and desirability which will be explored further in Chapter 6. The modification of food-taste via background music could be particularly valuable in promoting healthy foods to children at school canteens or holiday camps as well as in improving pleasantness of specific food regimens such as diets for diabetics or patients on dialyses. Taste-congruent music could be used by overweight and obese individuals as a means to improve the palatability of very low-calorie diets, low in salt and sugar.

The tempo of background music appears to exert an influence on the speed of eating and meal duration. Particular features of music such as *tempo* (and perhaps *rhythm* and *percussiveness*) could be used to influence the speed of food consumption by slowing down the rate of mastication thus helping to reduce incidents of overeating. The influence of music tempo will be investigated in more detail in Chapter 7. Music is effective in synchronizing movements (Huron, 2001) and our need to adjust movements to the speed and rhythm of music appears to be instinctive (Boone & Cunningham, 2001). Since eating too quickly is one of the most significant obesity-related eating behaviors (Maruyama et al., 2008) using music to slow down the rate of mastication could meaningfully reduce the incidents of overeating and food intake in some obese and overweight individuals.

The next chapter (Chapter 5) gives a general overview of research paradigms and mixed method approaches. The philosophy of pragmatism as a theoretical framework underpinning the mixed method approach and the sequential follow up design used in this thesis are outlined and discussed in detail.

Chapter 5

Methodology, research paradigm and design

This chapter outlines the research paradigm, methodology and research design used in the thesis. A mixed method approach was utilized to investigate the effects of music on eating behaviours (eating speed) and outcomes (perception of food-taste and food-pleasantness) as well as to find out what lived experience of eating means to people, and if and how music could be utilized to modify it. The mixed method is underpinned by the philosophical perspective of pragmatism. The reasons for using pragmatism as a research paradigm are discussed. This is followed by a more detailed account of mixed methodologies and the follow-up sequential explanatory design.

5.0 Theoretical perspective

Research paradigms determine how knowledge claims, strategies, and methods are combined to form different approaches to research. The four schools of thought regarding knowledge claims and their philosophical underpinnings are positivism/post-positivism, constructivism/interpretivism, advocacy/participatory, and pragmatism/neo-pragmatism (Creswell, 2013). The positivist/post-positivist knowledge claim is sometimes called the scientific method or quantitative research. A positivist stance is rooted in deterministic philosophy where causes determine the effects or outcomes. Knowledge is advanced through empirical observation and measurement of objective reality. In other words, experimental data and evidence give rise to knowledge. The researcher being objective and controlling for bias is a fundamental aspect of positivism and quantitative research (Howitt & Cramer, 2007).

On the other hand, constructivism/interpretivism claims that meanings are constructed by human beings through sense making and interpreting the world they engage with. Meanings are socially constructed and arise from interaction with human society, therefore dependent on the context and setting. Qualitative researchers use open ended questions so that participants can express and deliberate their thoughts and feelings (Smith, 2015). The constructivist/interpretivist approach is inductive and theories are generated through the multiplicity of meanings and iterative processes (Forrester, 2010; King & Horrocks, 2010).

The advocacy/participatory approach to producing knowledge is relatively new (Creswell, 2013). It was put forward in the 1980s and 1990s by researchers who did not believe that either positivism or constructivism are doing enough to address issues of marginalised people and it is based on feminist, disability, race and gender theories. Advocacy/participatory research is emancipatory and focused on bringing about change by helping individuals to free themselves from the constraints and limitations found in work place structures, educational settings, or media. It is collaborative since the enquiry is completed with others rather than “to” or “on” others. In other words, researchers engage participants as active co-workers during the process of investigation.

Finally, the pragmatic knowledge claim stems from the work of pragmatists James, Mead and Peirce (Teddle & Tashakkori, 2003). Pragmatists are concerned with solutions to the problem rather than methodology and often use all available approaches to understand and develop knowledge about it. Since pragmatism is problem-centred and not committed to any particular understanding of reality, researchers are free to draw on both qualitative and quantitative methods alike, thus making mixed methods a suitable choice. A pragmatic stance is not based on a division between the mind and objective reality which exists independent of the mind. The researcher is at liberty to choose what works at the time to provide the best understanding and consequently solution to the problem (Creswell, 2013).

5.0.2 Pragmatism as a research paradigm and mixed method approach

All research is based on a set of philosophical assumptions about what constitutes valid research and appropriate methodology (Howitt & Cramer, 2007). In this thesis the philosophy of pragmatism is adopted as a research paradigm. The philosophical theory of pragmatism is seen as a way of bringing together the experimental scientific method and interpretative inquiry by providing the link between qualitative and quantitative research paradigms. Pragmatism as a philosophical movement originated in the late 19th century deriving its name from the Greek word *pragma*, meaning action. Its founders were American philosopher Charles Sanders Peirce, William James, John Dewey and George Mead (Morgan, 2014; Feilzer, 2010). The early pragmatists rejected dualistic epistemology and a belief that reality can be determined by a singular scientific method. Pragmatism made a comeback as neo-pragmatism in the 1960s and had a significant influence on social science methods and the philosophy of science in general. Fundamentally, pragmatists believe that thought is inherently connected to action and that ideas act as instruments. Human beings are able to shape their experiences through the power of their intellect. Contemporary pragmatism is largely founded on common sense and a conviction that the best research method is one that solves the problem. Hence, the aim of research is to be useful and not just accurately represent reality (Morgan, 2014).

A pragmatism perspective suggests that major approaches in social sciences are not dependent on either qualitative or quantitative methods exclusively. A mixed method approach is used with ever increasing recognition in the fields of sociology, education, and health (Feilzer, 2010). All research enquiries have an underlining philosophical stance or world view which serve to guide the investigation (Morgan, 2014). According to Creswell and Clark (2007) a mixed method approach is rooted in the philosophy of pragmatism. The fundamental principle governing the mixed method approach is that using qualitative and

quantitative methods together offers a better understanding of the problem than either method would be able to provide on its own (Tashakkori & Teddlie, 1998). In this way the researcher avoids drawbacks inherent in the “measurements” versus “meanings” division between quantitative and qualitative methodologies. The mixed method approach is based on the assumption that people tend to solve problems using both words as well as numbers, thus encouraging the investigator to embrace a pluralistic worldview and different paradigms (Creswell & Clark, 2007).

5.1 Research design: Mixed method

It was noted by Teddlie and Tashakkori (2003) that there are about forty types of mixed method designs found in the literature, however they can be subsumed into four major ones: (1) triangulation design; (2) embedded design; (3) exploratory design; and (4) the explanatory design. The most commonly used approach to mixing methods is the triangulation design. The purpose of this design is gathering diverse yet complementary data on the same subject by combining the strengths of quantitative research (large sample size and generalizability) with those of qualitative research (depth and availability of detail). The triangulation design is used to contrast and compare the statistical quantitative results with the qualitative findings.

An embedded design mixed method approach utilizes different data sets where one type of data are embedded within a methodology of the other data type. The embedded design assumes collection of both qualitative and quantitative data, although one data type has a supplemental role in the overall design. This approach may be used to either inform the treatment before the intervention or to explain the results after the intervention.

The sequential exploratory design has two phases where the results of the first-phase method which is qualitative can help to develop or inform the second-phase method which is

quantitative. Since the sequential exploratory design begins with the qualitative method it is best suited to explore in depth a phenomenon under investigation. On the other hand, the sequential explanatory design starts with the quantitative method which is followed by the qualitative second-phase. A sequential explanatory design is used when qualitative data are needed to illuminate or develop further the findings of the quantitative phase.

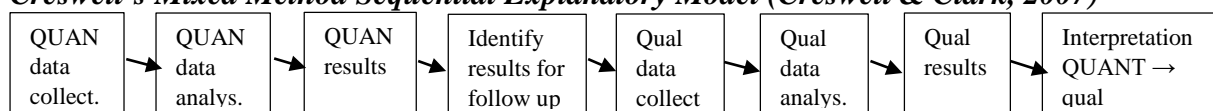
5.1.1 The follow-up sequential explanatory method

There are two types of sequential explanatory design, the follow-up explanation model and the participant selection model. The follow-up explanation model is used when the investigator needs qualitative data to explain or expand on the quantitative results. The participant selection model is employed when the researcher needs the quantitative study to purposefully select participants for the in-depth qualitative phase (Creswell & Clark, 2007).

The follow-up sequential explanatory method represents the closest fit to the mixed method model used in this thesis. A visual representation of the mixed method approach is deemed to be an important step in the research design. Hence a specific notation, commonly used in mixed method literature, was developed by Morse (Creswell & Clark, 2007). Arrows (→) indicate methods occurring in sequence while the primary method is indicated by upper-case letters and the secondary method by lower-case letters. A diagram of the Creswell Follow-up Sequential Explanatory Method (Creswell & Clark, 2007) is illustrated below (Figure 5.1). This is followed by the visual representation of how the original model is applied to the current thesis (Figure 5.2).

Figure 5.1

Creswell's Mixed Method Sequential Explanatory Model (Creswell & Clark, 2007)



5.1.1.1 Creswell's Mixed Method Sequential Explanatory Model applied to the current study

In this thesis the quantitative phase came first and comprised the collection of data, statistical analyses and results (Figure 5.2). The results of the two experimental studies, Study 1 and Study 2, provided a springboard for an in-depth exploration of eating experiences in the qualitative phase, Study 3 (Figure 5.2). The qualitative phase consisted of data collection, analyses and results. Each study has a short discussion at the end of the result section. The final discussion section of this thesis provides an overall interpretation and integration of the quantitative and qualitative findings.

Data collection for Study 1 and Study 2 included demographic information: age; gender; height (in cm) and weight (in kg) from which BMI was calculated; the short version of the Profile of Mood States (POMS-SF) from which the total mood disturbance (TMD) score was calculated; and the Three Factor Eating Questionnaire (TFEQ- R18) which encompasses three factors of eating behaviours - emotional eating, uncontrolled eating and cognitive restraint. Participants were also asked whether they had any specialist music training and whether they are currently on a diet to lose weight.

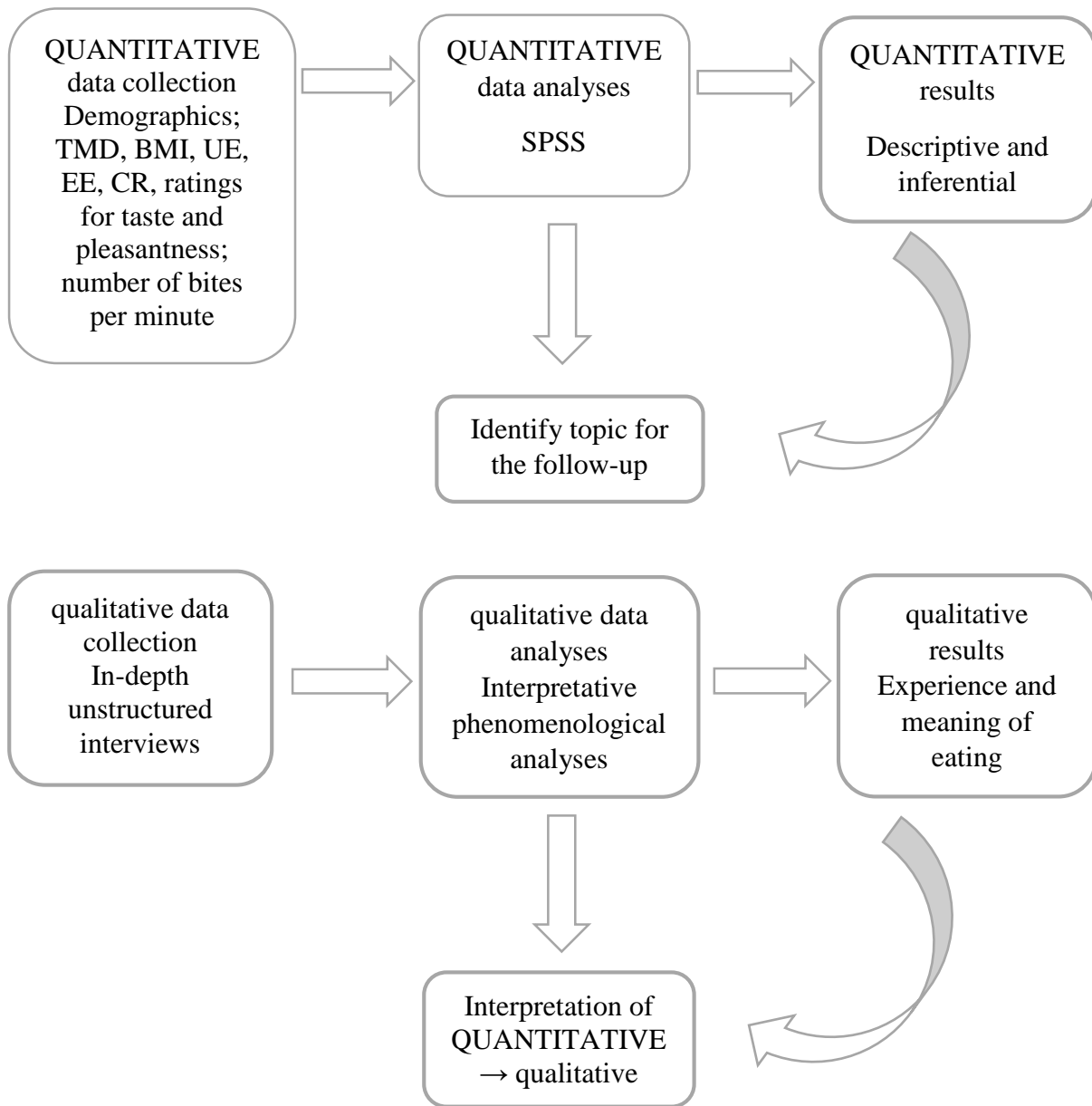
In addition to the above, data specific for each study were collected. Since Study 1 examined the effect of taste-congruent music on the perception of taste and pleasantness of two food items, cinder toffee and shredded wheat, evaluations of the taste (bitter-sweet) and pleasantness (pleasant-unpleasant) ratings on a 9-point scale for the two food items under two taste congruent music conditions, sweet and bitter, were collected. As Study 2 investigated the influence of different music tempi (slow, moderate and fast) on the speed of mastication, the number of bites per minute (bpm) was calculated for each participant under each of the three music tempi conditions. The data of both quantitative studies, Study 1 and Study 2, were statistically analysed using SPSS version 22. The results were reported in the result section for each study and followed by a short discussion.

In Study 3 the demographic information included age, gender and information regarding the participant's role on the campus (member of staff or student). The qualitative method explored the experiences of food and eating, above all (but not limited to) the aspects related to the perception of food-taste, food-pleasantness, eating speed and emotional eating. Interpretative phenomenological analyses were used to analyse the data. This was followed by a visual representation and interpretation of each individual case, and discussion of the findings with the aim of identifying when and how music might be introduced.

Finally, in the Discussion section of this thesis the findings of the quantitative and qualitative phase are brought together to summarize the empirical contribution of the thesis and demonstrate how these studies advance our knowledge of eating behaviours and outcomes and the impact background music has on them. The effects of music on the perception of taste and speed of eating are discussed in the view of peoples' experiences of eating and the meanings and connotations they ascribe to it. The possible ways of utilizing music to influence eating behaviours and outcomes are considered.

Figure 5.2

Creswell's Mixed Method Sequential Explanatory Model applied to this thesis



Note. TMD = Total mood disturbance, BMI = Body mass index, UE = uncontrolled eating, EE = Emotional eating, CR = Cognitive restraint eating

5.2 Summary and conclusions

In this thesis a mixed method approach was chosen since it was expected to offer a better understanding of the problem than either a quantitative or qualitative method on its own. In the words of Smith “the whole is greater than the sum of the parts when qualitative and quantitative approaches and methods are combined” (Smith, 1986, p. 37). The advantage of using a mixed method are that the inherent limitations and biases of each research method, quantitative and qualitative, are offset by the other offering a more comprehensive understanding of the problem under investigation. Furthermore, quantitative and qualitative methods are employed to investigate different aspects of the phenomenon of eating giving us a greater and more wide-ranging understanding of it (Smith, 2015).

Underpinned by the research paradigm of pragmatism, the mixed method utilized in this thesis brings together positivist and interpretivist claims to knowledge, attempting to benefit from both. While different paradigms tend to represent incompatible assumptions about the world and the ways of knowing, pragmatism is not committed to any particular understanding of reality. Thus, the researcher is free to choose what works at the time to provide the best understanding and solution to the problem (Creswell, 2013). Although this might raise some issues regarding irreconcilable worldviews and approaches to knowledge “epistemological purity does not get the research done” (Greene, Caracelli, & Graham, 1989). Pragmatism is problem-centred and founded on a belief that the best research method is the one that solves the problem. In this thesis the investigator adopted a pluralistic worldview as well as different research methods attempting to overcome some of the limitations inherent in qualitative and quantitative research methodologies while capitalizing on their strengths. The overarching aim was to provide a comprehensive exploration of the phenomenon of eating and the ability of music to modify it.

The following chapters (6, 7 and 8) describe the three studies in their sequential order. Each chapter provides a brief background to the study, followed by a detailed account of the methods, analyses, results and a concluding discussion section.

Chapter 6

The influence of music on the perception of taste

6.0 Background

Western diets are rich in calorie dense foods high in sugar, salt and fat (De Vogli, Kouvonen, & Gimeno, 2014). This, combined with a lack of exercise, has contributed to the dramatic rise in overweight and obesity in recent years (Wang et al., 2011). Current efforts intended to lower the amount of salt, sugar, and fat in our diet are not without challenges (Manning, 2017). The fact that food cravings are often associated with food palatability (Macht, 2008; Singh, 2014) adds to the difficulties posed by low calorie diets and special food regimes recommended for overweight and obese individuals. Finding novel and creative ways to improve food taste and palatability could provide valuable support to the current effort to reduce the prevalence of overeating and overweight conditions.

A growing body of research in recent years has demonstrated that what we hear exerts an influence on what we taste. The perception of food-taste is a multisensory experience (Crisinel & Spence, 2010b; Zampini & Spence, 2004). Evidence suggests that background sounds can affect the perceptions of food crunchiness and freshness (Zampini & Spence, 2010). Sound can modulate food flavour, pleasantness, and the overall impression of food items as well as affect our ability to discriminate between different food items (Fiegel et al., 2014). The investigated auditory stimuli include environmental sounds comprising amplified chewing sounds (Zampini & Spence, 2004), varying levels of background noise including white noise (Ferber & Cabanac, 1987; Pellegrino et al., 2015; Woods et al., 2011), as well as pulsed pure tones produced using an audio-frequency generator and the impulse shaper (Holt-Hansen, 1968; Rudmin & Cappelli, 1983). Other studies utilize musical notes played by piano, woodwind, brass and strings, varying in dynamics and articulation (Bronner et al.,

2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel & Spence, 2012c), as well as different music genres such as jazz, classical, rock and hip-hop (Fiegel et al., 2014).

The systematic review undertaken in this thesis identified a number of papers specifically concerned with the effects of cross-modal congruence between the sensory channels of taste and sound. These studies advocate the existence of cross-modal correspondences e.g. general associations between seemingly unrelated characteristics of different sensory modalities. The findings suggest that there is a point of perfect harmony between taste and the pitch of sound e.g. “pitch fit” (Holt-Hansen, 1968; Rudmin & Cappelli, 1983), and that existing associations between taste/flavours and musical notes of different pitch, timbre, articulation and dynamics exceed the chance level (Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011). For example, high-pitched notes played on the piano are commonly associated with sweetness and the taste of sucrose while low-pitched notes played by brass instruments are associated with bitterness and the taste of coffee. Overall, the results of the studies reviewed suggest that different attributes of background sound such as pitch, timbre, volume, articulation, rhythm and dynamics contribute to the level of congruence between what we hear and what we taste.

This line of investigation was taken forward by the study of Crisinel et al. (2012) which attempted to modulate the perception of food-taste by changing the sonic properties of a soundtrack playing in the background. For their experiment two designer soundtracks were created (www.condimentjunkie.co.uk). One soundtrack was sweet-taste-congruent while the other one was bitter-taste-congruent. The design of the taste-congruent soundtracks was based on the results of a study which investigated synesthetic correspondences in non-synesthetes between tastes/flavours and musical notes (Crisinel, 2010b). In this context designer soundscapes describe an acoustic environment comprised of sounds which are

purposely manipulated in order to achieve a desired effect e.g. modify the perception of food-taste and increase food pleasantness and acceptance.

The Crisinel et al. (2012) study used a laboratory experiment in which participants were asked to evaluate four pieces of cinder toffee while listening to sweet-taste-congruent and bitter-taste-congruent soundtracks presented in a randomized order. The pieces of cinder toffee were evaluated on a bitter-sweet scale and through hedonic ratings. The results show that cinder toffee was rated as significantly sweeter when participants listened to the sweet-taste-congruent soundtrack, while the same cinder toffee tasted significantly more bitter when they listened to the bitter-taste-congruent soundtrack. These findings provide the first empirical evidence that the cross-modal congruency of a background soundtrack may be used to modify the perception of food-taste.

While the Crisinel et al. (2012) study reports that the taste-congruent soundtracks have a significant effect on the perception of food-taste, the following points merit further investigation. First, since the original experiment with cinder toffee (Crisinel et al., 2012) had a relatively small number of participants ($n = 20$), replicating it with a bigger sample would provide more robust evidence. Successful replications provide greater confidence in the strength of the obtained results and they pave the way for future research thus contributing to cumulative knowledge (Brandt et al., 2014). Second, the researchers evaluated the effects of sweet and bitter-taste-congruent soundtracks on only one food item, cinder toffee. Cinder toffee is high in sugar content, and it is both bitter and sweet in its taste. The bitter-taste-congruent soundtrack was designed to complement the bitter taste present in cinder toffee while the sweet-taste-congruent soundtrack was designed to complement the sweet taste instead. This suggests that the taste-congruent soundtracks might have alternately enhanced the sweetness and the bitterness already present in cinder toffee. Therefore, it is not clear at this point whether the taste-congruent soundtracks can be used just as effectively in

modulating the perception of taste of other food items, bland-tasting ‘healthy’ food items in particular.

Healthy foods can sometimes appear bland and unappetizing to the Western taste buds which are used to foods high in sugar, salt and fat content (De Vogli et al., 2014). Since the existence of cross-modal correspondences between different senses allows music to exert an influence on the perception of taste, the potential of music to modify the perception of taste of more bland-tasting, healthy foods could be advantageous when adhering to specific diets as well as in promoting healthier eating regimes.

6.1 Aim

This experiment investigates whether the sweet-taste-congruent and bitter-taste-congruent soundtracks can exert influence on the perception of food-taste and food-pleasantness. The aim of this experiment is twofold. The first aim is to replicate the original experiment “A bittersweet symphony: Systematically modulating the taste of food by changing the sonic properties of the soundtrack playing in the background” (Crisinel et al., 2012) with cinder toffee using a larger number of participants. The second aim is to extend the experiment with the introduction of shredded wheat, a bland-tasting healthy food item which is low in sugar, salt, and fat. If the taste-congruent soundtracks are as effective when used with a bland-tasting food item, they may possibly be utilized to modify the perception of food-taste and pleasantness of calorie controlled diets and healthy foods.

6.2 Hypotheses

This study hypothesizes that: (a) listening to the sweet-taste-congruent soundscape will enhance the perception of sweetness for both, cinder toffee and shredded wheat and listening to the bitter-taste-congruent soundscape will enhance the perception of bitterness for

both, cinder toffee and shredded wheat; (b) listening to the sweet-congruent-soundscape will result in higher hedonic ratings for both, cinder toffee and shredded wheat while listening to the bitter-taste-congruent soundscapes will result in a lower hedonic ratings for the same food items.

6.3 Method

6.3.1 Design

This study replicates the original experiment with cinder toffee “A bittersweet symphony: Systematically modulating the taste of food by changing the sonic properties of the soundtrack playing in the background” (Crisinel et al., 2012) as well as extending it further by introducing a healthy, bland-tasting food item - shredded wheat. Replication of an experiment as faithfully as possible includes adhering to the following five steps: (1) defining effects and the method to be replicated; (2) following the method of the original study as closely as possible; (3) ensuring statistical power by using a larger sample; (4) making all replication details available; (5) assessing the new results and comparing them with the original (Brandt et al., 2014).

To follow the original design as closely as possible a within subject experimental design (repeated measures) was used. All participants tasted both food items, cinder toffee and shredded wheat, while listening to the bitter-taste-congruent soundtrack and the sweet-taste-congruent soundtrack presented to them in a randomized order. In order to counterbalance the order effects participants were randomized into two groups A and B. Group A started the experiment with sampling cinder toffee while group B started the experiment with shredded wheat.

6.3.2 Participants

Participants were students at the School of Psychology, University of Kent. They were recruited via the Research Participation Scheme, School of Psychology. Participants were awarded course credits as compensation for taking part in the experiment in accordance with the participation scheme. Potential participants were asked to abstain from consuming food for two hours prior to the experiment. Students with food allergies/intolerances, diabetes, and impairments to taste, hearing, and smell (including the common cold) were excluded. This research was conducted in accordance with the British Psychological Society Code of Ethics and Conduct which safeguards psychological well-being, mental health, personal values, and dignity of research participants. Prior to the experiment all participants gave their informed consent. Participants were told that they would be required to taste eight pieces of food and give their ratings for food-taste and food-pleasantness. Participants were not aware that the eight pieces of food comprised only two different food items (cinder toffee and shredded wheat).

6.3.3 Apparatus and stimuli

The food stimuli consisted of eight pieces of food, four pieces of cinder toffee and four pieces of shredded wheat. All eight pieces of food were cut to approximately the same size (0.3g.) as in the original experiment. This was done using an electronic spoon scale-KW120. Shredded wheat was chosen as a bland-tasting healthy food item since it is of a similar color and texture as cinder toffee but low in salt, sugar and fat. The cinder toffee used in the experiment was obtained from Hardy's Original Sweetshop, 1 High St, Canterbury CT1 (www.hardyssweets.co.uk). The shredded wheat, Nestle (100% whole grain, no added salt, low in saturated fat, low in sugar) used in the experiment was purchased in the local Sainsbury, Kingsmead Road, Canterbury CT1.

The music stimuli comprised two taste-congruent soundtracks. The bitter-taste-congruent and the sweet-taste-congruent music stimuli were developed for and used in the original experiment (Crisinel et al., 2012). The original soundtracks used in this experiment were obtained directly from the researchers. One soundtrack was sweet-taste-congruent while the other one was bitter-taste-congruent. The sweet-congruent soundtrack comprises notes played on the Yamaha grand piano. The notes are legato and move through the F scale pitched around C4-C6. This sound is overlaid by a generated sinewave-based synthesized tone as well as abstractions of the piano sound created by resampling and reversing the sound several times. The bitter-congruent soundtrack consists of a blend of generated sinewave-based synthesized tones pitched at F2-C3. These sounds were overlaid with a single trombone note F2 and a low frequency rumble created by a recording of car traffic in a tunnel through a low pass filter. All the sounds are in the key of F and each soundtrack is 60 seconds long.

6.3.4 Procedure

Full ethics approval was obtained from the School of Psychology Research Ethics Committee (ethics approval number 20153642) prior to the experiment. The experiment took place at the experimental laboratory, School of Psychology, University of Kent. A pilot study involving 5 participants (not included in the final sample number) was run first in order for the researcher to refine the procedure and deal with any technical issues. The entire experiment comprising embedded taste-congruent soundtracks (sweet and bitter) and questionnaire items was set up on Qualtrics, a powerful survey software which allows investigators to build, distribute, collect, and analyze responses. It took participants just under an hour to complete the experiment.

After signing the consent form participants were taken to a laboratory booth. They were asked to try on the headphones in order to make sure that the headphones are in working

order and the level of sound was set at 70dB. Participants were randomized into groups (A or B) by the Qualtrics program and they were provided with a plastic tray containing eight pieces of food assigned to their group, A or B (Figure 6.1). Group A started by tasting 4 pieces of cinder toffee followed by 4 pieces of shredded wheat while group B sampled 4 pieces of shredded wheat followed by 4 pieces of cinder toffee. Each piece of food was placed in a paper cup. Paper cups were numbered from 1- 8 and participants were asked to taste the pieces of food in the given order, from 1 to 8. At the same time, each participant was given a bottle of water (500ml) and a receptacle so they could rinse their mouth between food items. Following that, the Profile of Mood States (POMS-short form) (Shacham, 1983) questionnaire was completed. The Profile of Mood States POMS-SF was done before the experiment since both, food and music, may have an effect on the participants' mood state. It should be noted that the objective was to ascertain whether participants' current mood possibly affects the impact of the taste-congruent soundtracks on perceptions of food-taste and pleasantness.

Participants were seated in front of a computer screen in a darkened laboratory booth during the entire experiment. The experiment consisted of food tasting and giving the ratings on taste and pleasantness while listening to the soundtracks over headphones. The two soundtracks, sweet-taste congruent and bitter-taste-congruent were presented in a randomized order. Participants were required to listen to each soundtrack for a few seconds before they put the piece of food in their mouth and give their rating while the soundtrack was still playing, as was the case in the original study (Crisinel et al., 2012). Overall, they were required to listen to the soundtrack for 40 seconds in total (including the initial few seconds) while rating a piece of food on taste and pleasantness before being able to move on to the next food item and the next soundtrack. Participants were asked to rinse their mouth after tasting each piece of food and use the receptacle provided.

Figure 6.1
Sample food tray



The eating part of the experiment was followed by an additional questionnaire. The questionnaire consisted of demographic questions which asked participants to report their age, gender, weight in kg, and height in cm. Participants were requested to state whether they had any previous musical training and if they were currently dieting to lose weight.

Following that, participants completed the Three-Factor Eating Questionnaire TFEQ-R18 (Karlsson, Persson, Sjostrom, & Sullivan, 2000). As participants left the laboratory cubicle a short exit interview took place in a quiet seating area. Each participant was asked: (1) whether he/she enjoyed the experiment; (2) how many *different* foods they think they sampled; (3) if they would like to offer any suggestions or comments regarding the experiment.

6.3.5 Measures

6.3.5.1 Taste and pleasantness ratings

The ratings for both taste and pleasantness were given using a 9-point computer based scale while listening to either the sweet-congruent or bitter-congruent sound track. Since there were four pieces of cinder toffee and four pieces of shredded wheat to taste, each taste-congruent (sweet and bitter) soundtrack was played twice for each food item. The soundtracks were presented in a randomized order. The taste scale was anchored with a pair of terms *bitter* and *sweet*. The pleasantness scale was anchored with a pair of terms *not at all* and *very much*.

6.3.5.2 Profile of Mood States POMS-SF

The POMS-SF (Shacham, 1983) is a 37-item long instrument designed to assess transient (present time and/or within a week) mood states. Since mood state may affect participants' eating behaviours as well as their responsiveness to music stimuli, mood was measured prior to the music and food tasting part of the experiment.

The POMS-SF instrument was chosen for two reasons. First, it clearly differentiates between active and passive emotional states along 6 subscales. The six subscales are: tension-anxiety, anger-hostility, depression-dejection, fatigue-inertia, vigour-activity, and confusion-bewilderment. Other considered instruments such as the 20-item Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegan, 1988), comprise two mood scales, positive and negative, without distinguishing between active and passive emotional states while the Depression Anxiety Stress Scale-48 (DASS-48) and its shortened version DASS-21 (Antony et al., 1998) consider only negative emotional states such as depression, anxiety and stress, thus not measuring positive moods at all. Second, POMS-SF provides a total mood disturbance score (TMD), hence taking into account the interaction between positive and negative mood states, while other mood inventories do not.

Although POMS-SF is a shortened version of POMS (65 items), Baker, Denniston, Zabora, Polland, & Dudley (2002) report that all correlations between the two scales are above 0.95. The internal consistency of POMS-SF ranges from 0.80 to 0.91 compared to the 65-item long POMS which ranges from 0.74 to 0.91 (Curran, Andrykowski, & Studts, 1995). This suggests that POMS-SF is not only quicker and less taxing to complete but it also offers improved internal consistency in two subscales, Confusion and Tension (Baker et al., 2002). Brevity of the chosen mood questionnaire was considered important for two reasons. First, since it was done prior to the music and food tasting experiment a longer instrument could make participants fatigued or lose interest before the experiment started. Second, mood assessment was not a central focus of this study, thus the abbreviated POMS-SF which in addition offers a total mood disturbance score (TMD), provided a better fit on this occasion.

Participants gave answers using a 5-point Likert scale by selecting one of the possible statements: not at all (0), a little (1), moderately (2), quite a lot (3), and extremely (4). In order to calculate the total score for *tension-anxiety* the scoring for the following items were added: tense, on edge, uneasy, restless, nervous and anxious. Total scoring for *depression* was calculated by adding the scores for: unhappy, sad, blue, discouraged, miserable, helpless, and worthless. The total score for *anger* was determined by adding the scores for: anger, peeved, grouchy, annoyed, resentful, bitter, and furious. The total score for *fatigue* was calculated by adding the scores for: worn out, fatigued, exhausted, weary and bushed. The total score for *confusion* was determined by adding the scores for: confused, unable to concentrate, bewildered, forgetful, and uncertain; while the total score for *vigour* was calculated by adding the scores for: lively, active, energetic, cheerful, full of pep, carefree and vigorous. Total mood disturbance (TMD) was determined by adding the scores for *tension, depression, anger, fatigue* and *confusion*, and then subtracting the score for *vigour* from their total sum (Baker et al., 2002; Curran et al., 1995; Shacham, 1983).

6.3.5.3 Descriptive information

After completing the music and food tasting part of the experiment participants were required to fill in a questionnaire presented to them on the computer screen and provide demographic information regarding age, gender, height and weight (in order for the investigator to calculate BMI), musicianship and information regarding current dieting to lose weight.

Gender. Participants were asked to indicate their gender by ticking a box for either Male or Female.

Age. Age was captured in years. To state their age participants were asked to select a number from a drop-down menu.

Weight. Participants were asked to report their weight in kg using a sliding scale that ranged from 40kg to 100kg. A conversion chart from imperial to metric units was available on request.

Height. Participants provided the information on their height in cm using a sliding scale that ranged from 140cm to 200cm. A conversion chart from imperial to metric units was available on request.

BMI. The investigator calculated body mass index (BMI) for each participant from the height and weight information already provided. BMI was calculated by dividing the weight in kilograms by the height in meters squared (WHO, 2015).

Music training. Participants were asked to indicate if they had any previous music training by ticking a box for either *yes* or *no*.

Current dieting. Participants were asked to state whether they are currently on a diet to lose weight by ticking a box for either *yes* or *no*.

6.3.5.4 *Three-Factor Eating Questionnaire (TFEQ-R18)*

The three-Factor Eating Questionnaire (TFEQ-R18) (Karlsson et al., 2000) is an abbreviated version of a 51-item SMEQ by Stunkard and Messick (1985) designed to assess three facets of eating behaviour: cognitive restraint (CR), uncontrolled eating (UE), and emotional eating (EE). Since it is plausible that participants' eating behaviours may have an effect on their evaluation of the taste and pleasantness of both food items (cinder toffee and shredded wheat) under two taste-congruent music conditions, participants were asked to complete the TFEQ-R18.

The TFEQ-R18 (Karlsson et al., 2000) comprises 18 questions designed to assess eating behaviours: cognitive restraint (6 items); uncontrolled eating (9 items) and emotional eating (3 items). Cognitive restraint (CR) denotes a tendency of an individual to consciously and regularly limit food intake. Hence restrained eaters do not rely on physiological cues for hunger and satiety to regulate their food intake. Although they consume less food than they would like to, restrained eaters do not necessarily eat less than required to preserve the energy balance. In other words, even though they deliberately restrict food intake, restrained eaters may still overeat (Angle et al., 2009; de Lauzon et al., 2004).

Uncontrolled eating (UE) is a tendency to overeat due to the loss of control over food intake. The loss of control is typically accompanied by a subjective feeling of hunger despite eating more than usual. High scores on uncontrolled eating in the TEFQ have been associated with binge eating as well as overeating in obese individuals (de Lauzon et al., 2004; Kavazidou et al., 2012). Emotional eating (EE) is a propensity to overeat during negative emotional states. Emotional cues to eat have been associated with greater consumption of snacks high in fat, salt or sugar (de Lauzon et al., 2004) as well as a higher BMI (Angle et al., 2009).

The TFEQ-R18 was chosen since it is one of the most frequently used eating behaviour questionnaires (Jáuregui-Lobera et al., 2014) along with the Dutch Eating Behaviour Questionnaire (van Strien, Frijters, & Defares, 1986) and the Emotional Eating Scale (Arnou, Kenardy, & Agras, 1995). Clear differentiation between the three types of eating behaviours (CR, UE and EE) and good reliability and validity makes this instrument an appropriate measure for the assessment of eating behaviours (Angle et al., 2009; de Lauzon et al., 2004). Although developed in an obese population, TEFQ-R18 showed robust factor structure and good internal reliability for the use in obese and non-obese populations (Angle et al., 2009; Cappelleri et al., 2009; de Lauzon et al., 2004; Jáuregui-Lobera et al., 2014). The study of Angle et al. (2009) reports high Cronbach's alphas for the three scales with 0.75 for cognitive restraint; 0.85 for uncontrolled eating and 0.87 for emotional eating. In addition, comprising only eighteen items TFEQ-R18 is a brief measure and since this study does not have eating behaviour as a focus of the investigation it was deemed appropriate.

Participants were asked to state the frequency with which they find themselves feeling or experiencing what is being described in eighteen statement type sentences. The choice of answers is: definitely true; mostly true; mostly false; and definitely false, with scoring from 1-4. For the last statement participants were asked to evaluate their restraint in eating on a scale of 1-8, where 1 means no restraint in eating while 8 means total restraint.

6.3.6 Statistical Analyses

6.3.6.1 Computing variables

Prior to the analyses two sets of variables were created. To calculate the average score for the taste of cinder toffee while listening to a sweet-taste congruent soundtrack the two ratings given by group A participants and two ratings given by group B participants were

summed and divided by two. A new variable *cinder toffee sweet-music taste* was computed. To find out the average score for the taste of cinder toffee while listening to a bitter-taste congruent music the two rating scores provided by group A participants and the two rating scores provided by group B participants were summed and divided by two creating a new variable *cinder toffee bitter-music taste*.

The average scores for the pleasantness of cinder toffee under the two taste-congruent music conditions were computed using the same procedure. In order to calculate the average score for hedonic ratings of cinder toffee while listening to sweet-taste congruent music the two rating scores given by group A participants and the two rating scores given by group B participants were summed and divided by two. This variable is called *cinder toffee sweet-music pleasantness*. The variable *cinder toffee bitter-music pleasantness* was calculated using the same procedure.

Following that, another set of variables were created to measure the difference between the average scores for the taste and for the pleasantness of cinder toffee under the two music conditions. A new variable *cinder toffee taste difference* was computed by subtracting the scores for the taste of cinder toffee under bitter-taste congruent soundtrack from the scores for the taste of cinder toffee under sweet-taste congruent music. A second variable *cinder toffee pleasantness difference* was computed by subtracting the scores for the pleasantness of cinder toffee during the bitter-taste congruent music condition from the scores for pleasantness of cinder toffee during sweet-taste congruent soundtrack. The same set of new variables were computed for shredded wheat in the extension-part of the experiment.

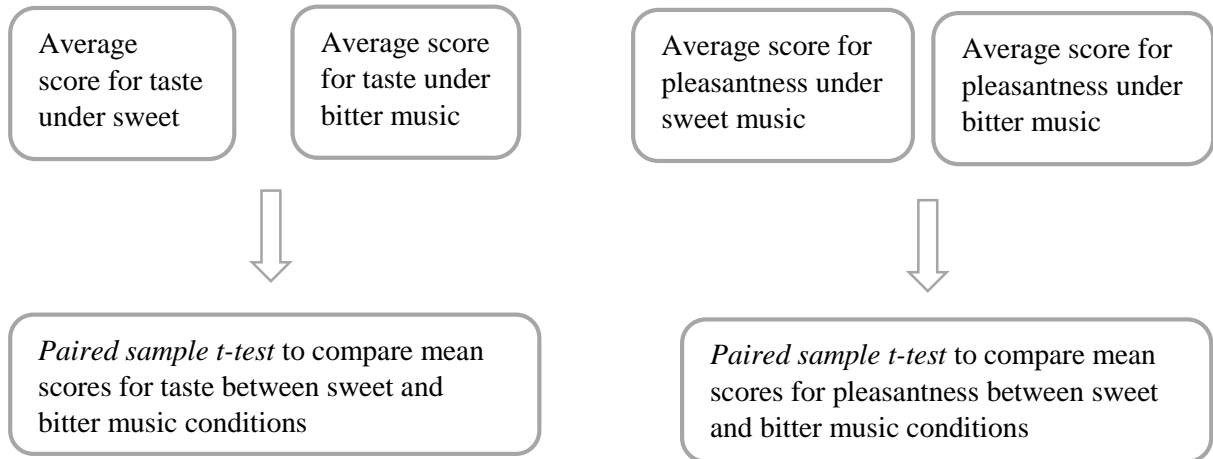
A number of statistical tests were used to replicate and extend the original study (Figure 6.2). Two separate paired sample t-tests were run to analyze the taste and pleasantness of cinder toffee (and shredded wheat) under two taste-congruent (bitter and sweet) music conditions. This was followed by a Pearson correlation between the difference

in taste of cinder toffee (and shredded wheat) under sweet-taste congruent and bitter-taste congruent music conditions and its pleasantness under the same taste-congruent music. This mirrored the statistical procedure carried out in the original experiment (Crisinel et al., 2012).

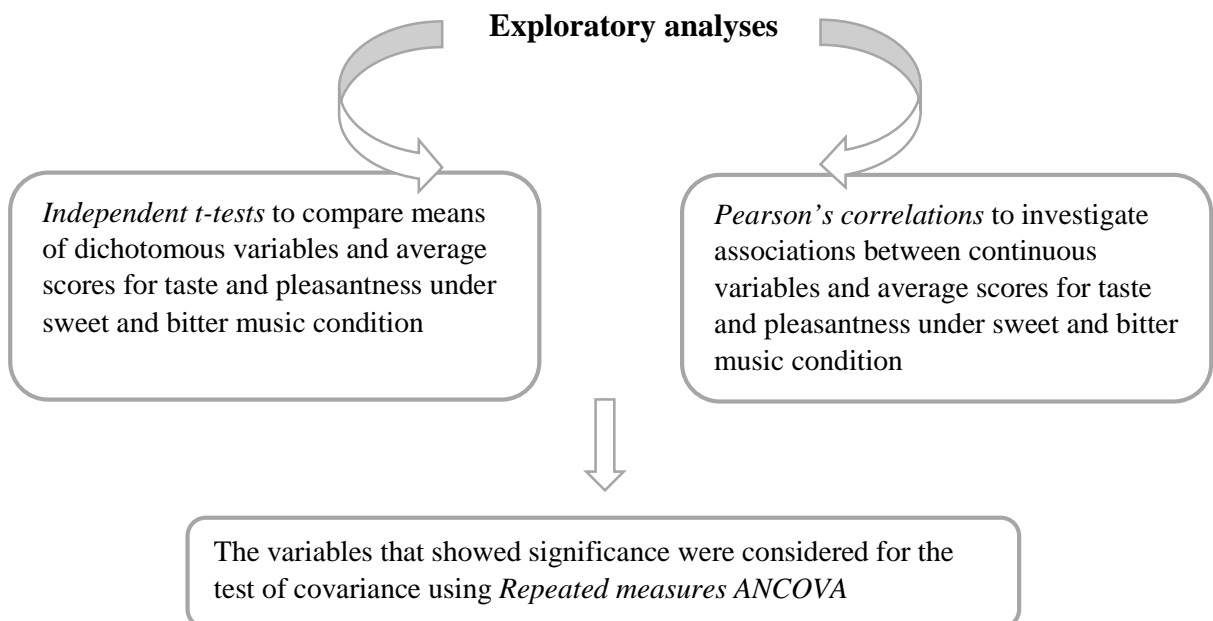
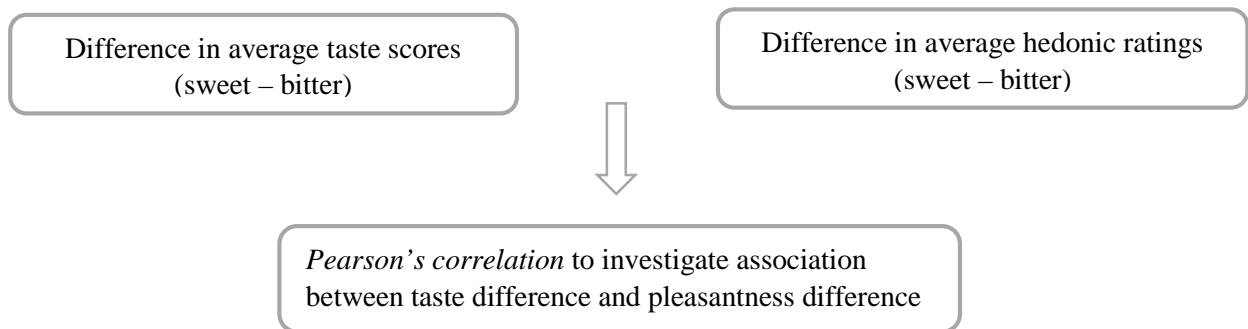
Following the core analyses a range of exploratory tests were run to determine if any variables could be acting as covariates. Since there is no literature to date which explores the effect of confounding variables on the influence of taste-congruent music on the perception of taste or hedonic ratings, initial analyses were run in order to look for possible covariates. Independent t-tests were used to compare means in the perception of taste and pleasantness of cinder toffee (and shredded wheat) under two taste-congruent music conditions (sweet and bitter) as a factor of gender, musicianship and current dieting. Pearson two-tailed correlations were run to explore the possible association between age, current mood state and three dimensions of eating behavior e.g. uncontrolled eating, cognitive restraint, emotional eating with the perception of taste and pleasantness of cinder toffee (and shredded wheat) under two taste-congruent music conditions (sweet and bitter). The results of the replication-part (cinder toffee) and the extension-part (shredded wheat) of the experiment are reported separately. Statistical analyses were carried out using SPSS Version 22.0. The significance value was set to $p < .05$, with precise p values reported for all test results.

Figure 6.2
Core analyses (replication and extension)

Four new variables created: average scores for taste and pleasantness under sweet and bitter music conditions



Two new variables created: difference in average taste and pleasantness scores under sweet and bitter music conditions



6.4 Results

6.4.1 Participants

In total, 107 participants comprising 92 (86%) females and 15 (14%) males took part in the experiment. Participants ranged in age from 18 to 44 ($M = 19.80$, $SD = 3.65$). Sixty-four (59.8%) participants reported having some formal music training while 43 participants (40.2%) never had any formal musical training in the past. However, the entire cohort reported listening to music. Twenty-three participants (21.5%) reported that they are currently on a diet to lose weight while 84 participants (78.5%) were not dieting at the time. Table 6.1 summarizes the continuous control variables and notes the reliabilities for the multi-item scales.

Table 6.1
Means, Standard deviations and Cronbach's Alpha for the control variables

Variables	Mean	SD	Cronbach's Alpha
Age	19.80	3.65	
Total mood disturbance (TMD)	39.95	16.02	.920
Body Mass Index (BMI)	22.53	3.29	
Uncontrolled Eating (UE)	22.41	5.33	.855
Cognitive Restraint (CR)	16.63	3.87	.796
Emotional Eating (EE)	6.95	2.50	.814

Note. $n = 107$

6.4.2 The Replication-part of the experiment: Cinder Toffee

6.4.2.1 Taste and pleasantness of cinder toffee: The effect of music condition

In the replication experiment two separate paired-sample t-tests were used. This was done to investigate taste and pleasantness rating differences of cinder toffee under two music conditions (Figure 6.3). A paired-sample t-test indicated that participants rated cinder toffee

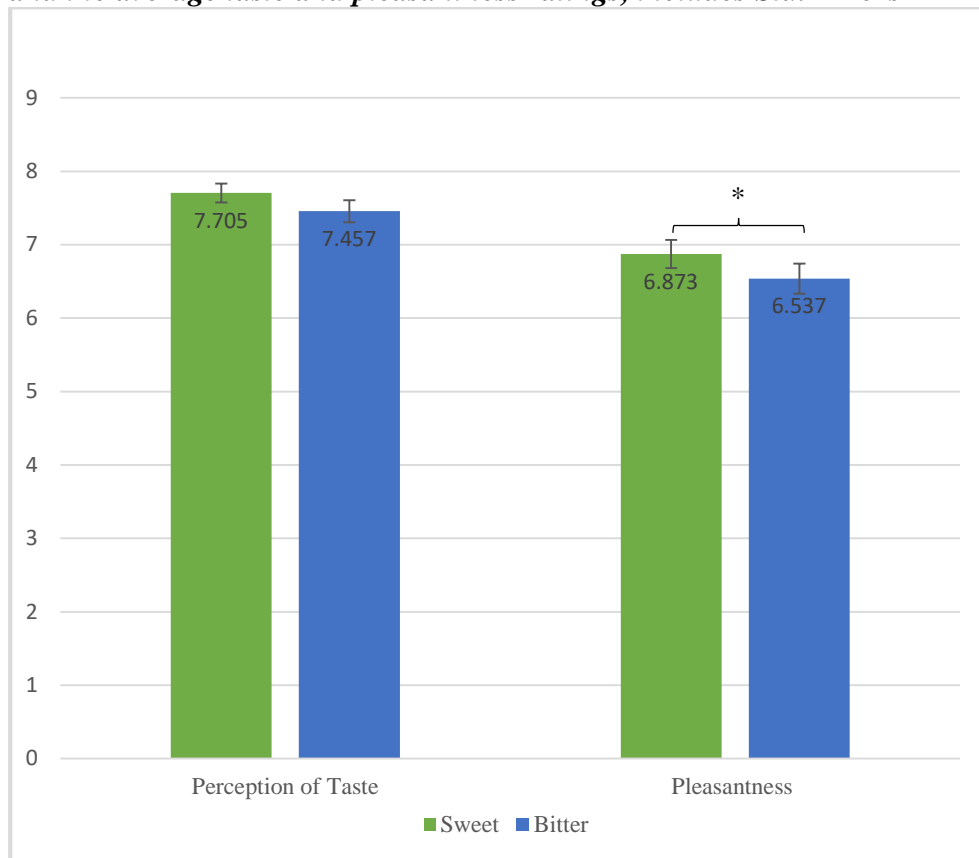
as more sweet during the sweet-taste congruent soundtrack ($M = 7.71$, $SD = 1.32$) compared with the bitter-taste congruent soundtrack ($M = 7.46$, $SD = 1.57$) ($t(106) = -1.97$, $p = .051$).

The Cohen's effect size ($d = .21$) suggested a relatively small effect size. Although this result is marginally significant it lends tentative support to the findings of the original study where a significant difference in the taste of cinder toffee was reported between the two taste-congruent music conditions.

A paired sample t-test revealed a significant difference in the pleasantness ratings of cinder toffee between the sweet-taste congruent soundtrack condition ($M = 6.87$, $SD = 2.00$) and the bitter-taste congruent music condition ($M = 6.54$, $SD = 2.14$), ($t(106) = -3.00$, $p = .003$), Cohen's effect size $d = .30$. More specifically, this result shows that participants rated cinder toffee as more pleasant while the sweet-taste congruent soundtrack was playing. This result does not support the findings of the original study which reported no significant difference in the pleasantness of cinder toffee under the two taste-congruent music conditions.

Figure 6.3

Cinder Toffee: Paired Sample t-tests for sweet vs. bitter congruent music and the average taste and pleasantness ratings, includes Std. Errors



Note. * $p < .05$, bars show Standard Errors

Furthermore, there was a significant positive correlation between the difference in the taste of cinder toffee under sweet-taste congruent and bitter-taste congruent music condition and its pleasantness under the two taste-congruent music ($r = .720$, $p < .001$). This result does not corroborate the original study where perception of taste was not significantly correlated with pleasantness ratings.

In conclusion, the replication study with cinder toffee has tentatively supported the first part, while confirming the second part of the hypothesis: (a) listening to the sweet-taste-congruent soundscape enhanced the perception of sweetness in cinder toffee and listening to the bitter-taste-congruent soundscape enhanced the perception of bitterness in cinder toffee; (b) listening to the sweet-congruent-soundscapes resulted in higher hedonic ratings for cinder

toffee while listening to the bitter-taste congruent soundscape resulted in a lower hedonic ratings for the same food item.

6.4.2.2 Exploratory analyses: possible covariates

Following the replication part of the experiment a range of exploratory analyses were run in order to determine if any of the control variables were significantly related to the outcome dependent variables - *cinder toffee sweet-music taste*, *cinder toffee bitter-music taste*, *cinder toffee sweet-music pleasantness*, and *cinder toffee bitter-music pleasantness* - and therefore could be acting as covariates. The considered control variables were: age, gender, musicianship, current dieting, mood state (TMD), BMI, and the scores on three eating behaviour scales (CR, UE, EE). For each of the dichotomous control variables - gender, musicianship and current dieting, independent t-tests was used to investigate whether there was a significant difference between means for each of the dependent variables. Pearson two-tailed correlation was run in order to explore the possible association of continuous control variables - age, TMD, BMI, CR, UE, and EE, with the dependent variables.

For gender, there was no statistically significant difference in the perception of cinder toffee taste scores under sweet-taste congruent ($p = .740$) and bitter-taste congruent soundtrack ($p = .878$). Non-significance was also found for cinder toffee with the difference in means for pleasantness under sweet-taste congruent ($p = .988$) and bitter-taste congruent music condition ($p = .790$) between male and female participants.

Since this was a music based experiment a possible effect of musicianship was plausible. An independent sample t-test was conducted to compare means between musically trained and non-trained participants. However, there was no statistically significant difference in the perception of cinder toffee taste under sweet-taste congruent ($p = .323$) and bitter-taste congruent soundtrack ($p = .590$) as a factor of musicianship. Non-significance was also

demonstrated for cinder toffee with the scores for pleasantness ($p = .116$) under the sweet-taste congruent and bitter-taste congruent music condition ($p = .067$) between musically trained participants and participants with no previous musical training.

As this experiment involves food evaluation a possible influence of current dieting to lose weight was considered. In order to test the possible effect of current dieting an independent sample t-test to compare means between the dieting and non-dieting participants was conducted. There was no statistically significant difference in the scores for the perception of cinder toffee taste under sweet-taste congruent ($p = .624$) and bitter-taste congruent soundtrack ($p = .409$) as a factor of current dieting. The pleasantness ratings for cinder toffee under the sweet-taste congruent ($p = .489$) and bitter-taste congruent music condition ($p = .988$) between dieting and non-dieting participants did not reach statistical significance either.

A Pearson correlation was conducted to explore possible associations between a range of continuous variables e.g. age, mood state (TMD), BMI, and the scores for uncontrolled eating (UE), cognitive restraint (CR), and emotional eating (EE) with the scores for taste and pleasantness of cinder toffee during sweet-taste congruent and bitter-taste congruent soundtracks (Table 6.2).

Table 6.2
Cinder Toffee:
Correlations of Taste and Pleasantness with Age, TMD, BMI, UE, CR, and EE

Cinder toffee	Age	TMD	BMI	UE	CR	EE
Taste (bitter music)	.059	.081	.081	-.036	-.065	.066
Taste (sweet music)	.047	.122	.037	-.060	.123	.003
Pleasantness (bit. m.)	-.128	.134	.192*	.201*	-.002	.072
Pleasantness (sw. m.)	-.249**	.223*	.143	.242*	.060	.046

Note. TMD = Total Mood Disturbance, BMI = Body Mass Index, UE = Uncontrolled Eating, CR = Cognitive Restraint, EE = Emotional Eating
 N = 107 * p < .05. ** p < .01.

The results of the Pearson correlation tests showed that there is no statistically significant relationship between the taste ratings of cinder toffee under two taste-congruent music conditions and any of the potential covariates. However, pleasantness ratings for cinder toffee under sweet-taste congruent music condition were positively correlated with the scores for UE ($r = .242, p = .012$) and TMD score ($r = .223, p = .021$), and negatively correlated with the age ($r = -.249, p = .010$). Pleasantness ratings for cinder toffee under the bitter-taste congruent music condition were positively correlated with the scores for UE ($r = .201, p = .038$) and participants' BMI ($r = .192, p = .048$). The results suggest that the scores on UE and TMD and the pleasantness of cinder toffee under the sweet-taste congruent music condition were positively correlated while the opposite was the case for the age of participants. The scores on UE and participants BMI showed the same positive direction as the scores on pleasantness of cinder toffee under bitter-taste congruent music condition. Although correlation does not imply causality these finding are interesting in themselves and merit further investigation so they were considered for the test of covariance.

6.4.2.3 *The effect of age, mood, BMI, and uncontrolled eating*

All the variables were significantly correlated with the scores for pleasantness of cinder toffee under the two taste-congruent music conditions during the exploratory analyses e.g. age, total mood disturbance score, body mass index and uncontrolled eating score were considered as possible covariates. A repeated measures ANCOVA was used to test for covariates (Table 6.3). It examined the differences in pleasantness ratings for cinder toffee between the two music conditions (sweet and bitter) while controlling for these potential covariates. Results indicated that there was no significant interaction between pleasantness ratings and age ($p = .076$), TMD ($p = .154$), BMI ($p = .453$), or UE ($p = .780$) demonstrating that the considered variables did not influence the effect of the music conditions on the pleasantness ratings of participants.

Table 6.3
Repeated measures ANCOVA for the pleasantness of cinder toffee and UE, TMD, BMI, and Age under two taste-congruent music conditions

Covariates	SS	df	F	Sig.
UE	.051	1.000	.078	.780
TMD	1.35	1.000	2.06	.154
BMI	.372	1.000	.567	.453
Age	2.10	1.000	3.20	.076

Note. TMD = Total Mood Disturbance, BMI = Body Mass Index, UE = Uncontrolled Eating

6.4.3 *The Extension-part of the experiment: Shredded wheat*

In the extension experiment cinder toffee was replaced with shredded wheat. Four new dependent variables were computed, following identical procedures previously outlined for cinder toffee. The same analyses that were run to explore the effect of music-congruent

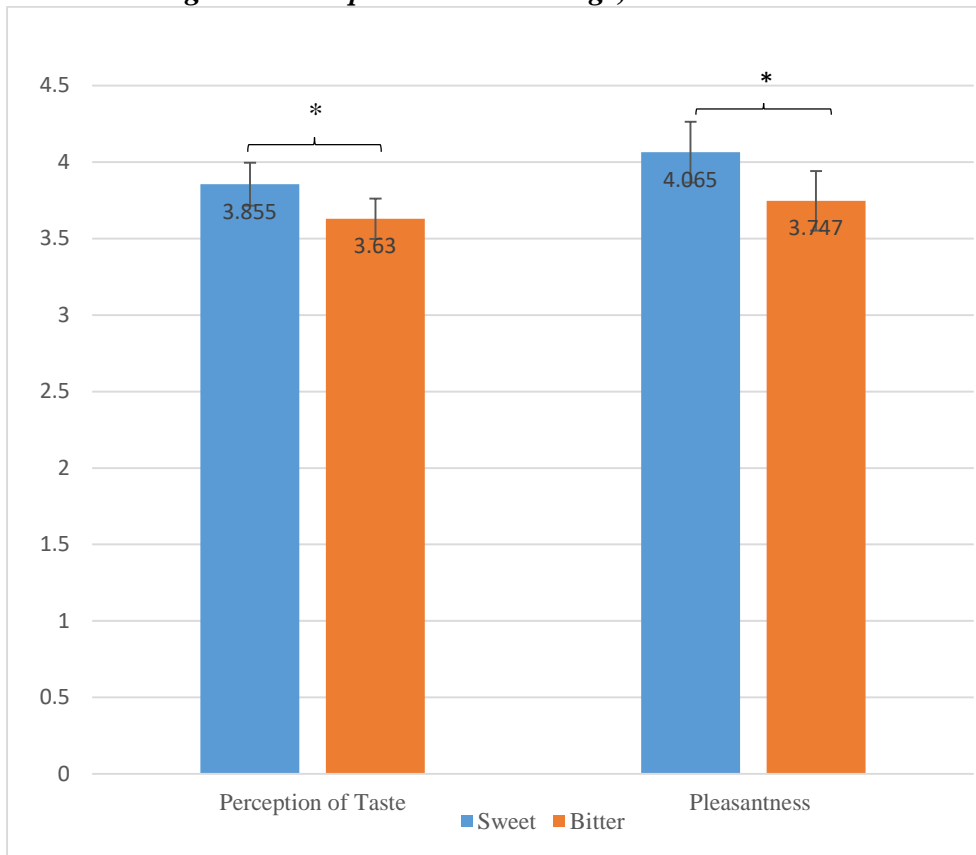
soundtracks on the perception of taste and pleasantness of cinder toffee were now conducted for shredded wheat.

6.4.3.1 Taste and pleasantness of shredded wheat: The effect of music condition

As paired-sample t-test and Pearson correlations were conducted in the original and replication study, the same analyses were performed in the extension study with shredded wheat (Figure 6.4). A paired sample t-test revealed that participants rated the taste of shredded wheat as more sweet when listening to the sweet-congruent soundtrack ($M = 3.85$, $SD = 1.45$) than when listening to the bitter-congruent soundtrack ($M = 3.63$, $SD = 1.37$) ($t(106) = 2.52$, $p = .013$). Although the effect size ($d = 0.24$) was fairly small, the ability of music to alter the perception of taste in bland tasting shredded wheat is encouraging. This corroborates the original findings with cinder toffee. As in the replication experiment with cinder toffee, a paired samples t-test also revealed a significant difference in pleasantness ratings of shredded wheat. Participants rated shredded wheat as more pleasant while the sweet-congruent soundtrack was playing ($M = 4.06$, $SD = 2.06$) compared to when the bitter-congruent soundtrack was playing ($M = 3.75$, $SD = 2.02$), ($t(106) = 2.87$, $p = .005$) with the Cohen's effect size $d = 0.27$.

Figure 6.4

Shredded wheat: Paired Sample t-tests for sweet vs. bitter congruent music and the average taste and pleasantness ratings, includes Std. Errors



Note. * $p < .05$, bars show Standard Errors

A Pearson two-tailed correlation was run to examine the association between taste and pleasantness for shredded wheat. The difference between the taste of shredded wheat under sweet-taste congruent and bitter-taste congruent music was compared to the difference in pleasantness under the two taste-congruent music conditions. The difference in perceived taste was positive and statistically significantly correlated with the difference in hedonic ratings ($r = .525$, $p < .001$).

Overall, the extension study with shredded wheat has confirmed both parts of the hypothesis: (a) listening to a sweet-taste-congruent soundscape enhanced the perception of sweetness for shredded wheat and listening to a bitter-taste-congruent soundscape enhanced the perception of bitterness for shredded wheat; (b) listening to a sweet-congruent-

soundscape resulted in higher hedonic ratings for shredded wheat while listening to a bitter-taste-congruent soundscape resulted in lower hedonic ratings for the same food item.

6.4.3.2 Exploratory analyses: possible covariates

Following the extension part of the study with shredded wheat, a range of exploratory analyses were run to determine whether any of the control variables were in fact covariates. Independent t-tests were used to investigate whether there was a significant difference in any of the dependent variables – *shredded wheat sweet-music taste*, *shredded wheat bitter-music taste*, *shredded wheat sweet-music pleasantness*, and *shredded wheat bitter-music pleasantness* - as a factor of gender, musicianship and current dieting. Pearson two-tailed correlations were run in order to explore the possible association between the four dependent variables and age, mood state (TMD), and the three scales of eating behaviors (UE, CR, EE).

For gender, there was no statistically significant difference in the perception of shredded wheat taste under the sweet-taste congruent ($p = .658$) or the bitter-taste congruent soundtrack ($p = .846$). Neither was there any significance for the ratings of shredded wheat with the scores for pleasantness under the sweet-taste congruent ($p = .690$) or the bitter-taste congruent music condition ($p = .969$) between male and female participants.

To explore the possible influence of musicianship on the difference in evaluation of taste and pleasantness of shredded wheat under the two taste-congruent music conditions, an independent sample t-test between musically trained and non-trained participants was conducted. There was no statistically significant difference in means for the perception of shredded wheat taste under sweet-taste congruent ($p = .481$) and bitter-taste congruent soundtrack ($p = .362$) as a factor of musicianship. Nor was there any significance for the ratings of shredded wheat with the pleasantness under sweet-taste congruent ($p = .173$) and

bitter-taste congruent ($p = .185$) music conditions between musically trained participants and participants with no previous music training.

In order to investigate the possible effect of current dieting to lose weight on the evaluation of taste and pleasantness of shredded wheat an independent sample t-test was run for the dieting and non-dieting participants. However, there was no statistically significant difference in the perception of shredded wheat taste under the sweet-taste congruent ($p = .831$) or the bitter-taste congruent soundtrack ($p = .671$) as a factor of current dieting. Non-significance was also shown for the ratings for pleasantness under the sweet-taste congruent ($p = .909$) and bitter-taste congruent music condition ($p = .628$) between dieting and non-dieting participants.

A Pearson correlation was run to explore associations between the four dependent variables and the continuous control variables e.g. age, mood state (TMD), BMI and uncontrolled eating (UE), cognitive restraint (CR), and emotional eating (EE) (Table 6.4).

Table 6.4
Shredded Wheat:
Correlations of Taste and Pleasantness with Age, TMD, BMI, UE, CR, and EE

Shredded Wheat	Age	TMD	BMI	UE	CR	EE
Taste (bitter music)	-.052	-.084	-.084	.042	.078	.113
Taste (sweet music)	-.074	-.117	-.082	-.063	.027	.086
Pleasantness (bit. m.)	.039	-.044	-.029	.041	-.083	.201*
Pleasantness (sw. m.)	.024	-.010	-.054	.041	-.077	.244*

Note. TMD = Total Mood Disturbance, BMI = Body Mass Index, UE = Uncontrolled Eating, CR = Cognitive Restraint, EE = Emotional Eating
N = 107 * $p < .05$.

A two-tailed Pearson correlation indicated that there were no statistically significant relationships between the scores for the taste of shredded wheat under the two taste-

congruent music conditions with either age, TDM, participants' BMI, or uncontrolled eating, cognitive restraint and the emotional eating scores.

However, the pleasantness of shredded wheat was significantly correlated with the emotional eating (EE) score during the sweet-taste congruent soundtrack ($r = .244, p = .010$) as well as during the bitter-taste congruent soundtrack ($r = .201, p = .038$). This suggests that the scores on EE and the scores on pleasantness of shredded wheat under both taste-congruent music conditions (bitter and sweet) moved in the same positive direction. Although not indicative of causality this result was interesting and worthy of further investigation. Other results report no statistically significant correlation with the two facets of eating behavior (UE and CR), age, TMD, participants' BMI with the scores for either the taste or the pleasantness of shredded wheat under two taste-congruent music conditions.

6.4.3.3 The effect of Emotional Eating

Since the only variable that was significantly correlated to the scores for pleasantness of shredded wheat under the two taste-congruent music conditions during the exploratory analyses was emotional eating, EE was considered as a potential covariate. A repeated measures ANCOVA was carried out in order to see if the difference in pleasantness ratings between the two music conditions was affected by emotional eating scores (Table 6.5). Results indicated that there was no significant interaction between the pleasantness ratings and EE ($p = .387$) indicating that EE did not influence the effect of the music conditions on pleasantness ratings of participants.

Table 6.5

Repeated measures ANCOVA for the pleasantness of Shredded Wheat and EE under two taste-congruent music conditions

Covariate	SS	df	F	Sig.
EE	.492	1.000	.754	.387

Note. EE = Emotional Eating

6.5 Discussion, limitations and conclusion

Although the findings suggest that taste-congruent soundscapes can influence the perception of food-taste and its pleasantness, the results of the replication study only partially corroborate the original study. The replication study shows that the effect of the taste-congruent soundtrack on the perception of taste of cinder toffee is trending toward statistical significance thus tentatively supporting the original findings. It is not quite clear why the replication result is only bordering on significance. One possible explanation is the sample size. The original study had only twenty participants while the replication study had a much larger sample size with a cohort of 107 participants. Larger sample size gives more statistical power as well as provide greater power to detect differences thus reducing the margin of error and increasing confidence in the obtained result. Nonetheless, since the replication result is trending toward significance the findings of the original study are not refuted but tentatively supported. Another replication experiment with a larger sample would help to shed further light on this issue.

The results of the replication study investigating the effect of taste-congruent soundtracks on the hedonic ratings of cinder toffee were statistically significant. In the original study no statistical significance was found. Again, it is not clear why the replication study result differs from the original study. One possible reason, again, is the sample size, with the replication study having a considerably larger number of participants. Larger sample

size reduces the margin of error thus increasing the confidence in the obtained result and its generalizability. It also has more power to detect differences. The original study, with a smaller number of participants, may not have had enough statistical power for that.

Unlike the original study, the replication study shows a significant positive correlation between the perception of taste of cinder toffee and the pleasantness of its taste under the two taste-congruent music conditions. In other words, the sweeter the perceived taste of cinder toffee the more pleasant it tastes while the more bitter cinder toffee tastes the less pleasant it appears to the participants. One possible explanation is the fact that the results of the original study do not report a significant effect of taste-congruent soundtracks on the hedonic ratings in the first place. As there was no significant effect of taste-congruent soundtracks on the pleasantness of cinder toffee, it is not likely that the perception of taste and pleasantness ratings would be significantly correlated under the same taste-congruent music conditions.

Overall, the replication study tentatively supports the significant effect of the taste-congruent soundtracks on the perception of taste of cinder toffee. It goes further to suggest a significant effect of the same soundtracks on the pleasantness ratings of cinder toffee and a significant correlation between its perceived taste and pleasantness under the two taste-congruent music conditions. As the replication study had a considerably larger sample size and consequently more statistical power its findings are fairly robust. In order to clarify existing discrepancies in the findings between the two studies, conducting another replication experiment would be helpful. This would provide valuable information regarding the existing associations between perceived sweetness of taste and the degree of its pleasantness as well as the ability of taste-congruent soundscapes to modulate both.

The extension study found that the perception of taste of shredded wheat is significantly sweeter under the sweet-taste congruent music condition compared to its taste under the bitter-taste congruent music condition. Being low in salt, sugar and fat, shredded

wheat is also low in “taste”. In spite of the relatively small effect size, the fact that taste-congruent soundtracks significantly altered the perceived level of sweetness in a “low in sugar” food-item is particularly encouraging.

During individual exit interviews participants were asked to state how many different food-items they thought they tasted during the experiment. Forty-eight participants reported tasting only 2 different food items, twenty-seven participants thought there were 3 food-items, a further twenty-seven participants reported tasting 4 different foods, while five participants thought they tasted 5 or more different food-items. The effect of background music on the perception of food-taste is further substantiated by their accompanying comments such as “when music wasn’t nice the food didn’t taste nice” (Participant 8); “music confused what I tasted, food tasted different when music was different” (Participant 33); or “when music was lower, the food was “more bitterer” (Participant 46).

These intriguing findings could open a new line of enquiry which investigates further and in some depth the potential of music to modify the perception of taste of healthy foods that are low in sugar and possibly salt and fat. Using taste-congruent soundscapes to modify the perceived sweetness of taste in low sugar foods enhances their taste and desirability. Taste-congruent music backgrounds could offer a type of “sonic seasoning” which may help people transition from high sugar consumption to a healthier eating regimen. These soundscapes could also provide a discreet and unobtrusive background support to people adhering to special diets as these diets can be monotonous as well as challenging at times. In other words, taste-congruent designer soundscapes could give us an instrument which by modifying the perceived sweetness of taste in low sugar foods may help to make such foods more likeable. This would be helpful in a wide range of settings, particularly in environments such as schools where making healthy foods more appealing to children as well as trying to wean them off too much sugar is extremely important.

When it comes to the effectiveness of taste-congruent music to modulate hedonic ratings of food items, the findings of the extension study with shredded wheat suggest that listening to taste-congruent music has a significant effect on hedonic ratings. The sweet-congruent music increases the pleasantness ratings for shredded wheat while bitter-taste congruent music decreases it. These results are consistent with the findings of the replication study with cinder toffee.

In addition, the findings indicate that the perception of sweetness in shredded wheat is significantly correlated with the increase in its pleasantness while the higher perception of bitterness in shredded wheat is significantly correlated to the decrease in hedonic ratings for the same food item. It appears that by enhancing the perception of sweetness in shredded wheat we can make it more pleasant tasting and therefore more enjoyable. Modulating the levels of food-taste and pleasantness in low in sugar food-items could make these items more desirable and easier to accept.

Overall, the results of this study suggest that taste-congruent soundtracks can significantly modify the perception of taste in sugary food-items like cinder toffee as well as in bland tasting food items such as shredded wheat. Contrary to the original findings, the results of the replication and extension studies find that the taste-congruent soundtracks can significantly modify the pleasantness ratings for both food-items. In addition, according to the findings of this study the ratings for the perceived level of sweetness (or bitterness) of taste and hedonic ratings under the two taste-congruent music conditions are significantly correlated for both food items, cinder toffee and shredded wheat.

It is not clear what neural mechanisms lie behind the cross modal influence of taste-congruent soundtracks on the perception of taste or pleasantness reported in this study. Researchers (Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel & Spence, 2012c; Spence, 2012; Spence & Deroy, 2013) speculate that the effect of sound on the perception of

taste could be either a consequence of multisensory integration of two constituent uni-modal stimuli (sound and taste) or it may be down to the effect of priming and expectations brought on by the sound stimuli on the subsequent sensory evaluations of the food-taste. As in the original study, participants in the replication as well as extension part, listened to the taste-congruent soundtrack for a few seconds before they put the food in their mouth. Therefore, it seems more likely that the priming with taste-congruent music stimuli had an influence on the subsequent food evaluations.

In any case the pertinent question is not what mechanisms underpin the cross-modal correspondences between the modalities of sound and taste but whether and how these could be applied. Given that soundtracks containing different musical attributes (pitch, timbre, dynamics, tempo, articulation, mode and others) are associated with one of the tastes (e.g. sweet), and that hearing them in the background has an effect on our perception of food-taste and its pleasantness, a few possibilities come to mind: (1) existing pieces of music could be electronically manipulated in order to satisfy the established parameters (e.g. pitch range, choice of instruments, dynamics, tempo, articulation, mode, and etc.) required for a particular taste-congruent sound; (2) through the careful investigation of the individual music elements we could attempt to classify already existing pieces of music into taste-congruent selections; (3) entirely new soundscapes intended for the purpose and designed to be taste-congruent could be created. This would generate a library of taste-congruent soundtracks varied in music style (e.g. jazz, classical, musicals) available for use as required.

However, before embarking along this route, more research is needed. First, future research could investigate further and in some depth the effect of sweet-taste congruent background music on a variety of foodstuffs, particularly the ones that are low in sugar or sugar free. It is of paramount importance to know whether e.g. sweet-taste congruent music has an effect on a variety of different foods and to which degree, as this would facilitate its

application on a wide range of food items. Second, determining clear parameters for the sweet-taste congruent sound by manipulating all available musical attributes (mode, pitch, tempo, volume, articulation, timbre, etc.) would make creating a broad range of sweet-taste congruent soundtracks possible. Having extensive choice of sweet-taste congruent music is essential since listening to the same soundtrack repeatedly and for prolonged periods of time would probably render it ineffective as well as nauseating. Furthermore, having this collection available would make selecting music with the eating environment or individuals in mind a lot easier.

6.5.1 Limitations

Although this study reports some interesting findings regarding the effects of taste-congruent soundtracks on the perception of food-taste and its pleasantness there are a number of limitations. Firstly, the sample was mostly composed of psychology undergraduate students which accounted for its narrow age range. Conducting the same studies with a sample that has a wider age range would be useful. Since the original study as well as replication and extension study were conducted with a student sample, there is no evidence to show that taste-congruent music is as effective for all age groups. Including older age participants could be particularly informative since losing the acuteness of senses is a concomitant of old age (Schmall, 1991) which may affect the outcomes.

Since the vast majority of participants in the experiments were female the investigator was not able to explore gender differences. Research suggests that males and females differ in their eating behaviours (Conner, Johnson, & Grogan, 2004) as well as their food choices (Wardle et al., 2004). Male and female listeners also diverge in their preferences (Chamorro-Premuzic, Fagan, & Furnham, 2010) and responses to music (Nater et al., 2006). Having a higher number of male participants would open up the opportunity to investigate a possible

influence of gender on the effectiveness of taste-congruent soundtracks to modify the perception of food taste and pleasantness.

As this was a laboratory experiment which allowed for a controlled environment that was beneficial at this stage of enquiry, it did not resemble a real-life situation. The duration of each soundtracks is 60 seconds while the participants were required to listen to only 40 seconds. This does not represent the length of an average snack or a mealtime. In order to have a more realistic assessment of the applicability of taste-congruent music, longer soundtracks (30 minutes) would have to be designed, validated and tested in both, laboratory settings and real-life situations.

Furthermore, the food samples were 0.3grams in weight and they were tasted and evaluated on a one at a time basis. Participants were required to rinse their mouth between food samples. However, meals in real life situations comprise a range of foodstuffs of different sizes which are consumed during one sitting. Therefore, it would be helpful to test the effectiveness of taste-congruent soundtracks when multiple food items are consumed at the same time before we can consider their effectiveness on real-life meals which consist of multiple foodstuffs.

Replicating these studies with different ethnic groups would give us an insight into any possible cultural differences. This is particularly relevant since both, food and music, are culturally dependent and epitomize the everyday symbols of ethnicity. Although, western pop chart music as well as film music are nowadays widely known round the globe, it is plausible that what constitutes for example a sweet-congruent sound in one culture may differ for another ethnic group. Exploring the cultural differences in relation to the taste-congruent sound could be particularly illuminating.

Finally, a larger sample would make the results more robust. The original study had 20 participants while the replication and the extension experiments were conducted with a

considerably larger sample of 107 participants. The difference in sample size might have been a reason behind discrepancies in the findings between the original and the replication-extension studies. Replicating these studies with a larger sample may help clarify the existing inconsistencies in the findings.

6.5.2 Conclusion

Overall, the original study with cinder toffee was effectively replicated while the extension study with shredded wheat introduced a low in sugar, salt and fat food item. The findings of both experiments demonstrate the effect of taste-congruent soundtracks on the perception of taste as well as food pleasantness. Therefore, the prospect of using existing cross-modal correspondences between different senses, e.g. sound and taste, to influence eating behaviors and food acceptance looks encouraging and merits further investigation. By manipulating the background sound stimuli individuals could modify their perceptions of taste and pleasantness of different food items. This in turn, may lead to healthier food choices and changes in eating behaviours.

The music medium seems to be particularly suitable for this purpose since: a) music has a direct and a relatively powerful effect on peoples' emotions and moods (Habibi & Damasio, 2014; Hunter & Schellenberg, 2010; Juslin & Västfjäll, 2008); and b) music is a complex blend of different sound attributes (mode, pitch, tempo, volume, articulation, timbre and etc.) which can be individually manipulated offering an infinite number of possibilities (Bruner, 1990). Being a pleasurable activity which does not require either concentration or a conscious effort, music holds promise of being an easy to use aid for individuals as they attempt to modify their diets and eating behaviors. However, more research is needed to investigate the role specific music elements play in cross-modal correspondences between sound and food-taste and their individual contribution to the overall effect. The end result of

this enquiry could give us a powerful and adaptable tool which could be used in the background to inconspicuously influence the perception of food-taste and its desirability.

Chapter 7

The influence of music on the rate of mastication

7.0 Background

As discussed in previous chapters, the prevalence of obesity and overweight pose one of the most serious health challenges for the developed world. Research suggests that the speed of eating is related to the rate of weight gain and that eating too fast along with eating until uncomfortably full is one of the characteristic eating behaviours in overweight and obesity (Maruyama et al., 2008; Tanihara et al., 2011). A longitudinal study which investigates the relationship between weight change and eating speed over an eight-year period suggests that the speed of eating is correlated with the rate of weight gain (Tanihara et al., 2011). Identifying innovative ways to slow down 'eating speed' could help reduce incidents of overeating, particularly where overeating is a consequence of eating too fast. In turn, a decrease in overeating, one of the main contributors to overweight and obesity, may help in the current obesity effort.

There is emerging evidence that playing music in the background during mealtimes has an effect on eating behaviours which may result in changes to eating outcomes (Caldwell & Hibbert, 2002; Milliman, 1986; Pinke, 2010; Ragneskog et al., 1996b; Roballey et al., 1985; Stroebele & de Castro, 2006). Studies indicate that the volume, tempo, style and genre of background music can influence eating behaviours such as speed of eating and mealtime duration. In turn, changes in eating behaviours result in changes to eating outcomes like the overall amount of food consumed and meal satisfaction.

To date the reported impact of music on these outcomes seems to be somewhat contradictory. While some studies suggest that slow and relaxing music playing in the background leads to an increase in food consumption (Pinke, 2010; Ragneskog et al., 1996a;

Stroebele & de Castro, 2006; Thomas & Smith, 2009) others report that this type of music has no impact on the amount of food eaten (Divert et al., 2015; Milliman, 1986) or even suggest that it might result in fewer calories being ingested (Wansink & van Ittersum, 2012). Likewise, some research suggests that slow and soft background music increases meal enjoyment (Pinke, 2010; Wansink & van Ittersum, 2012) while Divert et al. (2015) reports no difference in meal satisfaction. Except for Roballey et al. (1985), most reviewed studies indicate that when slow music is playing in the background people spend more time over their meal than when fast music is being played (Caldwell & Hibbert, 2002; Milliman, 1986; Wansink & van Ittersum, 2012).

Despite the important contributions made by these studies (Caldwell & Hibbert, 2002; Massimiliano & Spence, 2008; Milliman, 1986; Roballey et al., 1985; Wansink & van Ittersum, 2012) they tend to focus on eating behaviours by assessing the duration of a meal by recording the beginning and the end of the mealtime during different music speed conditions (slow and fast), thus assuming that the amount of time spent over a meal provides an indication of the speed of eating. Since eating is primarily a social occasion, particularly in the case of restaurants, cafeterias and care/nursing homes, where these studies took place, the duration of a meal is often driven by the number of people present, conversation at the table, food pleasantness as well as the amount of time available. Therefore, it is doubtful whether 'meal duration' can be taken as a conclusive indicator of eating speed.

The study of Roballey et al. (1985) is the only study identified in the systematic review which utilizes a more consistent measure of eating speed by looking at the number of bites per minute. Results suggest that the speed of music has a significant effect on the number of bites per minute e.g. playing slow music in the background results in fewer bites per minute compared to when fast music is being played. However, a number of weaknesses in the study merit further consideration. First, the study only involved a small number of

participants (11 people in total), thus lacking in statistical power. Second, since the experiment took place over a period of sixteen days it is likely that the observed eleven participants ordered different meals on different days regardless of the music condition. The probability is that the ordered meals comprised foods of varied textures, consequently differing in the levels of food-chewiness as well as degrees of taste-pleasantness. It is also likely that on different days observed participants experienced varying levels of hunger as well as time availability. Therefore, it is problematic to distinguish to which degree the number of bites per minute was influenced by the speed of music playing in the background and to which extent it was a consequence of: (a) chewiness of the food; (b) pleasantness of the food-taste; (c) degree of hunger; or (d) the amount of time available.

Furthermore, music of different speeds (slow and fast) utilized in the reviewed studies tends to vary in all its attributes such as style, genre, mode, rhythm and performer. The measure of music speed is not always clear and often appears to be arbitrary. The only objective measure of music speed is metronome mark (MM) which denotes the number of beats per minute but this was often missing from the studies. Of those studies using the metronome mark, for some (Caldwell & Hibbert, 2002; Milliman, 1986) slow music comprised any piece of music below $MM = 72$ and fast music over $MM = 92$, whereas for Roballey et al. (1985) slow music is considerably slower at $MM = 56$ and fast music tempo considerably faster at $MM = 122$. In addition, within each study a different selection of music is used for the fast and slow conditions. The choice of music can affect the outcomes since Caldwell and Hibbert (2002) note that music preference is a better predictor of meal duration than its tempo. Generally, fast and slow music conditions utilized in the past studies use a variety of music which seems to be wide ranging in every aspect including the metronome marks considered for fast and slow tempo.

7.1 Aim

The aim of this study was to examine the influence of different music tempi (fast, moderate, and slow) playing in the background on the speed of eating measured in bites per minute e.g. speed of mastication. In other words, the objective was to investigate whether playing slow music in the background results in significantly fewer number of bites per minute compared to playing fast music in the background. If music is effective in modifying the speed of eating, slow music could be utilized to slow down the rate of mastication in a variety of health settings.

7.2 Hypotheses

The study hypothesis is that while slow music is playing in the background participants' rate of mastication measured in bites per minute would be significantly slower than when fast music is being played in the background.

7.3 Method

7.3.1 Design

A within subject laboratory experiment was used to test the hypothesis. This design allowed the investigator to video-record participants' eating behaviours as well as to keep: (a) choice of music; (b) choice of food; and (c) the total time of eating constant. The same music was electronically manipulated in order to alter the tempo without altering any other feature of the music. Two soundtracks were created (1) Fast-Moderate-Slow and (2) Slow-Moderate-Fast. To counterbalance order effects participants were randomized in two groups A and B. Group A listened to the soundtrack comprising Fast-Moderate-Slow music whereas group B listened to the Slow-Moderate-Fast soundtrack.

All participants were given a choice of six (3 packs of 2) sweet or savoury oat biscuits to eat during the experiment. The duration of the eating part of the experiment was 30 minutes. During this time participants were required to: (1) evaluate the biscuits on a 9-point computer based scale on taste and pleasantness while listening to music; and (2) mouse click every time they hear the sound of a human voice. The purpose of the two music based tasks was to (a) maintain participants' focus on music and eating; (b) ensure that participants are looking at the computer screen thus keeping their faces in the video camera's field of view, as well as to (c) distract them from the real objective of the experiment which was to investigate the effect of music-tempo on the speed of eating.

A time schedule of events for each music condition (A and B) was produced and embedded into the Qualtrics program (see Appendix B). Participants were required to follow the pop-up instructions on the screen. The time schedule ensured that (a) one pack containing two biscuits was eaten during each music-tempo condition; (b) participants were exposed to 3 minutes of each music-tempo before they started eating biscuits for that condition; (c) participants stopped eating the biscuits required for that music-tempo as soon as the time for that music condition ended and the next music-tempo condition started.

Following completion of the experiment for each participant the video recording was downloaded on to an expansion drive and deleted from the computer files. The video recordings were later transferred on to DVDs for long-term storage and retrieval. A total of one-hundred-three, 30-minute long videos of participants' eating behaviours were analysed. The eating speed, e.g. speed of mastication, was measured in the number of bites per minute. A Salter digital kitchen timer, set on 60 seconds and counting down was used for this purpose.

7.3.2 Participants

Participants were 106 students and staff at the University of Kent. They were recruited via the Research Participation Scheme, School of Psychology and the University-wide Research Participation Scheme, University of Kent as well as the university job centre. Forty-two participants recruited via the Research Participation Scheme were awarded course credits as compensation for taking part in the experiment in accordance with the participation scheme. Forty-eight participants recruited through the University-wide Research Participation Scheme and the university job centre were given £6.00 each as compensation for their time and participation. A further thirteen participants recruited through the University-wide Research Participation Scheme did not wish to be reimbursed for their involvement. None of the participants recruited for the second laboratory experiment took part in the previous experiment.

Potential participants were asked to abstain from consuming food for two hours prior to the experiment. Applicants with food allergies/intolerances, diabetes, eating disorder diagnoses or impairments to taste, hearing, and smell (including the common cold) were excluded. This research was conducted in accordance with British Psychological Society Code of Ethics and Conduct which safeguards psychological well-being, mental health, personal values, and dignity of research participants.

Out of 106 participants taking part, 103 participants completed the experiment. Three participants were not able to complete the experiment because of a fire alarm going off in the middle the experiment (2 participants) and technical issues with the sound (1 participant). Fifty-seven females and 46 males completed the experiment. Prior to the experiment all participants gave their informed consent. They were told that they would be required to taste six biscuits and give their ratings for food-taste and food-pleasantness. Participants were not aware that all six biscuits were the same.

7.3.3 Apparatus and stimuli

The food stimuli comprised six oat biscuits, sweet or savoury in taste. The sweet and savoury biscuits were similar in size and texture. They were presented on a plastic tray as three packs containing two biscuits each and the packs were numbered from 1-3. Participants were asked to eat the biscuits in order from 1-3 when pop-up prompts appeared on the computer screen telling them which pack-number to eat. Before going into the laboratory cubical each participant was asked to choose between a tray with sweet or a tray with savoury biscuits according to personal preference and was given a bottle of water (500ml). The savoury-biscuit choice was Rough Oatcakes by Sainsbury's purchased at the local Sainsbury, Kingsmead Road, Canterbury CT1. The sweet-biscuit choice comprised Milk Chocolate Oat crumbles by Asda purchased at the local Asda, Sturry Road, Canterbury CT1.

The music stimulus was a 30-minute long compilation of film music by Philip Glass. It comprised a selection of music tracks from the film "The Hours" (2002): "Dead things", "Tearing Herself Away" and "Escape". The original tempo of all three music tracks (Mp3s) used was MM = 96 which denotes Andante (medium speed). Mp3s were converted to audio files so that they could be manipulated. The tempo of the original music was changed without changing any other features of the music. An Audacity 2.1.2 digital audio editor was used for this purpose.

Initially, a Moderate audio file, 10 minutes long at MM = 96 was created using excerpts from Philip Glass' music. The newly created Moderate audio file was then manipulated in order to reduce tempo by 40% creating a Slow audio file, 10 minutes long at MM = 58 (57.6). To make a Fast audio file, the Moderate audio file was manipulated again, this time to increase tempo by 40% thus creating a Fast audio file at MM = 134 (134.2). A short voice overlay was recorded over each audio file (slow, moderate, fast) as a part of the decoy task, since participants were asked to click when they heard the sound of a human

voice. At this point three 10-minute long audio files, comprising the same music at three different speeds, with a short voice overlay in each, were put together in two different orders. This created two 30-minute long sound tracks: (1) Fast-Moderate-Slow; and (2) Slow-Moderate-Fast. Finally, the two soundtracks were converted to Mp3s so that they could be embedded into the Qualtrics program.

The gradual speed progression from slow tempo, through moderate tempo, to fast tempo, and vice versa was designed as a continuous flow so that the tempo changes are not easily perceptible. The main function of the moderate tempo section was to make the transition between the slow and fast music tempo conditions subtle and therefore unnoticeable. The music of Philip Glass was deemed a suitable choice for this project since the use of repetitive music structures is one of its main features. The characteristic repetitiveness of his music helped to disguise the fact that the same music is being played at three different speeds. The film music genre was selected since it represents the music style all participants would have been exposed to, regardless of their music preference, age, education, or socioeconomic status.

7.3.4 Procedure

Full ethics approval was obtained from the School of Psychology Research Ethics Committee (ethics approval number 20163826) prior to the experiment. The experiment took place at the experimental laboratory, School of Psychology, University of Kent. A pilot study involving 6 participants (not included in the final sample number) was run first so that the researcher could refine the procedure and deal with any technical issues. The entire experiment comprising embedded Fast-Moderate-Slow and Slow-Moderate-Fast soundtracks and questionnaire items was set up on Qualtrics. It took participants about an hour to complete.

After signing the consent form participants were asked to choose between a tray with sweet or a tray with savoury oat biscuits according to personal preference. Their choice was noted by the investigator. Participants were told that the experiment was going to be video-recorded. They were asked to eat as much or as little of the biscuits as they wanted and to evaluate them on taste and pleasantness when prompted by a pop-up on the computer screen. They were also asked to mouse-click every time they heard the sound of a human voice over the headphones. Participants were not aware that the experiment was investigating the effect of music-tempo on the speed of mastication until the study closed when all participants were debriefed via a block email.

Following these instructions, each participant was given a bottle of water (500ml) and taken to the laboratory cubicle. Participants were seated in front of a computer screen in a darkened laboratory booth during the entire experiment. Each computer screen had a portable video camera sitting on top of it. The video camera was adjusted to the height and seating preference of each participant before the beginning of the experiment. They were asked to try on the headphones to make sure that the headphones were in working order and the level of sound was set at 70dB. Participants were randomized into groups (A or B) by the Qualtrics program. Group A was played the soundtrack with the tempo order Fast-Moderate-Slow while group B was played the soundtrack with the tempo order Slow-Moderate-Fast.

After being allocated to groups all participants completed the Profile of Mood States - short form questionnaire (Shacham, 1983). The POMS-SF was completed before the start of the experiment because our objective was to ascertain whether participants' current mood state affects the influence music tempi may have on their eating speed. A mood questionnaire was not administered after the experiment as we were not interested in determining the impact of food or music on mood states. In addition, both food and music are known to have an effect on mood states (Chin & Rickard, 2013; Saarikallio, 2011; Buckroyd, 2011; Macht,

2008) so a post-experiment mood measure would not add to knowledge. From a range of relatively brief instruments for assessing mood such as Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988), short version of Depression Anxiety Stress Scale (DASS-21) (Antony et al., 1998) and the Visual Analogue Scale-Mood (VASM) (Killgore, 1999) which are quick and easy to administer (Polak, Richardson, Flett, Brookie, & Conner, 2015) the Profile of Moods States (POMS-SF) was selected. The POMS-SF instrument was chosen for a number of reasons. First, it clearly differentiates between active and passive emotional states along 6 subscales unlike other considered measures. Secondly, POMS-SF is recommended as a measure of multiple mood states (Polak et al., 2015) and represents a “gold standard” mood assessment instrument (Stern, Arruda, Hooper, & Wolfner, 1997). Furthermore, POMS-SF also provides a total mood disturbance score (TMD), offering an account of the interaction between positive and negative mood states in one score (Baker et al., 2002; Curran et al., 1995; Shacham, 1983), thus enabling the investigator to ascertain whether the overall mood of participants affected the ability of music to influence the speed of eating.

The eating part of the experiment comprised two music-based decoy tasks: (1) evaluate the biscuits on a 9-point computer based scale on taste and pleasantness while listening to the soundtrack over headphones; and (2) mouse click every time they hear the sound of a human voice. Both music based tasks were designed to take place in each 10-minute tempo-section (fast, moderate, slow) of the 30-minute long experiment. The timings of events were embedded in Qualtrics and appeared to the participants as pop-up prompts on the computer screen throughout the experiment.

The eating part of the experiment was followed by an additional questionnaire. The questionnaire consisted of demographic questions which asked participants to report their age, gender, weight in kg, and height in cm. Participants were also asked to provide some

information regarding dieting to lose weight and previous music training. Following that, the Three-Factor Eating Questionnaire TFEQ-R18 (Karlsson et al., 2000) was completed. As participants left the laboratory cubicle a short exit interview took place in the seating area. Each participant was asked three questions: (1) whether he/she enjoyed the experiment; (2) whether they noticed any *changes* in the speed of background music; (3) if they would like to offer any suggestions or comments regarding the experiment.

7.3.5 Measures

7.3.5.1 The speed of eating

The speed of eating, e.g. speed of mastication, was measured in bites per minute (Roballey et al., 1985). All 103 video recordings were analysed and "bites per minute" calculated. In order to view the video recordings of participants' eating behaviours and count the number of bites per minute the VLC cross-platform multimedia player was installed on the computer. The VCL application can slow down (or speed up) video recordings thus making micro movements easily visible. Viewing video recordings at slower speed assisted the researcher during the counting process. Since participants were listening to music over the headphones, the investigator (and other counters) was not able to hear the music at any point during the counting procedure.

The number of bites was counted during the 1st, 3rd and 5th biscuit. The bites were counted during 60-second long segments whenever possible. Alternatively, two 30-second long segments were considered. A Salter digital kitchen timer, set on 60 seconds and counting down was used for this purpose. The investigator counted "bites per minute" for each participant in each music condition twice. The average number of bites per minute during each music-tempo condition was then calculated for each participant. Three other PhD students were recruited to double check the counting in the three music conditions (slow,

moderate, and fast) for a sample of 22 participants. A random number generator was used to choose participants for double checking. The inter-rater reliability between the main researcher and the reviewers was assessed and the correlations are: 0.96 for slow music condition (Music 1); 0.91 for moderate music condition (Music 2); and 0.94 for fast music condition (Music 3).

After the videos were reviewed and an attempt made to count the bites per minute a further six participants were excluded due to a range of unforeseen issues. The problems that caused data to be lost are: (1) participant continuously moving the swivel chair thus getting in and out of the video camera's field of vision; (2) holding the biscuit in front of the mouth, licking fingers or scratching nose thus blocking the view; (3) accidentally moving the video camera which was resting on top of the computer screen; (4) unintentionally turning off the video camera by mouse-clicking to answer a question on the screen; (5) computer screen freezing and preventing further counting; (6) moving the head in time to the music; (7) eating biscuit and biting nails at the same time; or (8) drinking water throughout the chewing process. The elimination process left a cohort of 97 participants for analyses.

7.3.5.2 Other measures

The same measures were collected as in the previous experiment (see Chapter 6). These are: the Profile of Mood States (POMS-SF) (Shacham, 1983), the Three-Factor Eating Questionnaire (TFEQ-R18) (Karlsson et al., 2000), and self-reported descriptive information comprising gender, age, music training, current dieting to lose weight, and weight and height (which were subsequently used to calculate each participants' BMI).

7.3.6 Statistical analyses

7.3.6.1 Computing variables

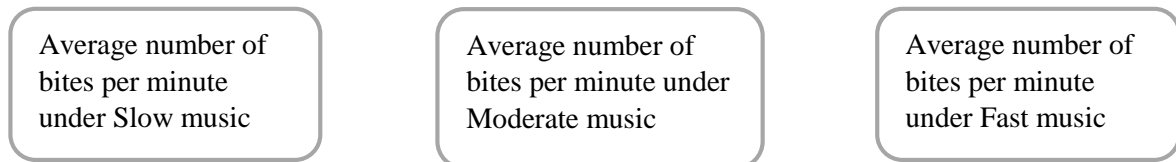
Before conducting the analyses, three new variables were computed. To calculate the average number of bites per minute (bpm) for each of the three music tempo conditions the bites per minute (bpm) provided by group A and group B participants were summed and a new variable was created. For example, to find out the average eating speed for the Slow music condition, the number of bites per minute during the Slow music tempo condition for group A and group B participants were summed. The same process was followed to calculate the average bpm under the Moderate and the Fast music tempo conditions.

A number of statistical tests were used in the study (Figure 7.1). At the beginning of the analyses a repeated measures ANOVA was run to see if there were significant differences between the number of bites per minute (bpm) during the Slow tempo, Moderate tempo, and the Fast tempo music conditions.

Following the primary analysis a range of exploratory tests were run in order to determine if any of the variables could be acting as covariates. Independent t-tests were used to investigate whether there was a significant difference between means in the number of bites per minute during each music tempo condition as a factor of the choice of biscuit (sweet or savory), gender, musicianship, and current dieting to lose weight. Pearson two-tailed correlations were run in order to explore the possible association between age, current mood state and the three dimensions of eating behavior (UE, CR, and EE) with the speed of eating under the three music tempo conditions. If any of the t-tests or correlations identified a variable as a potential covariate (identified a significant effect), a repeated measures ANCOVA was run with the variable of interest included as a covariate. Statistical analyses were carried out using SPSS Version 22.0. The significance value was set to $p < .05$, with precise p-values reported for all test results.

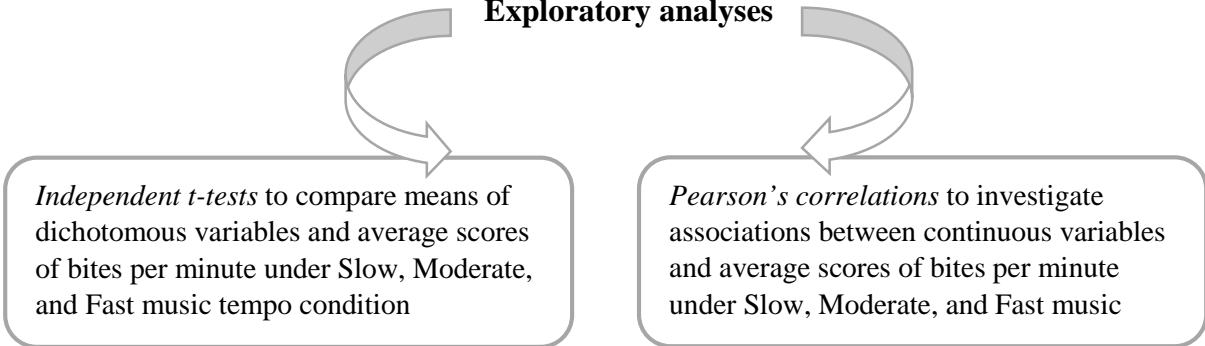
Figure 7.1
Core analyses

Three new variables created: average number of bites per minute under three music tempo conditions



ANOVA was run to compare mean scores of bites per minute under Slow, Moderate, and Fast music condition

Exploratory analyses



The variables that showed significance were considered for the test of covariance using Repeated measures ANCOVA

7.4 Results

7.4.1 Participants

In total 97 participants comprising 54 (55.7%) females and 43 (44.3%) males took part in the experiment. Participants ranged in age from 18 to 51 ($M = 22.93$; $SD = 5.62$). Forty-nine participants (50.5%) reported having some formal music training in the past while the remaining 48 participants (49.5%) never had any formal music training. However, the entire cohort reported listening to music. Twelve participants (12.4%) stated that they are currently on a diet to lose weight while 85 participants (87.6%) were not dieting at the time of the experiment. When offered a choice between sweet and savoury oat biscuits, 61 participants (62.9%) selected sweet, while 36 (37.1%) opted for the savoury biscuits. Table 7.1 provides a summary of the continuous control variables and notes the reliabilities for the multi-item scales.

Table 7.1
Means, Standard deviations and Cronbach's Alpha for the control variables

Control variables	Mean	SD	Cronbach's Alpha
Age	22.93	5.62	
Total mood disturbance (TMD)	38.87	17.04	.897
Body Mass Index (BMI)	22.97	3.65	
Uncontrolled Eating (UE)	21.30	5.28	.827
Cognitive Restraint (CR)	12.30	3.68	.832
Emotional Eating (EE)	6.47	2.59	.718

Note. $N = 97$

7.4.2 Speed of mastication: The effect of music condition

To determine if there were differences between the number of bites per minute (bpm) during the Slow tempo, Moderate tempo, and the Fast tempo music conditions a repeated

measures ANOVA was conducted (Table 7.2). The results of the repeated measures ANOVA indicate that there was a significant difference between music tempi in the speed of eating measured in number of bites per minute ($F(2, 192) = 9.153, p < .001$), with eta squared statistic $\eta^2 = .087$ indicating medium effect size.

Table 7.2
Repeated measures ANOVA for the difference in speed of mastication (bpm) during three music tempi conditions (slow, medium, and fast)

Source	SS	df	MS	F	<i>p</i>	η^2
Music speed	621.14	2	312.58	9.153	.000	.087

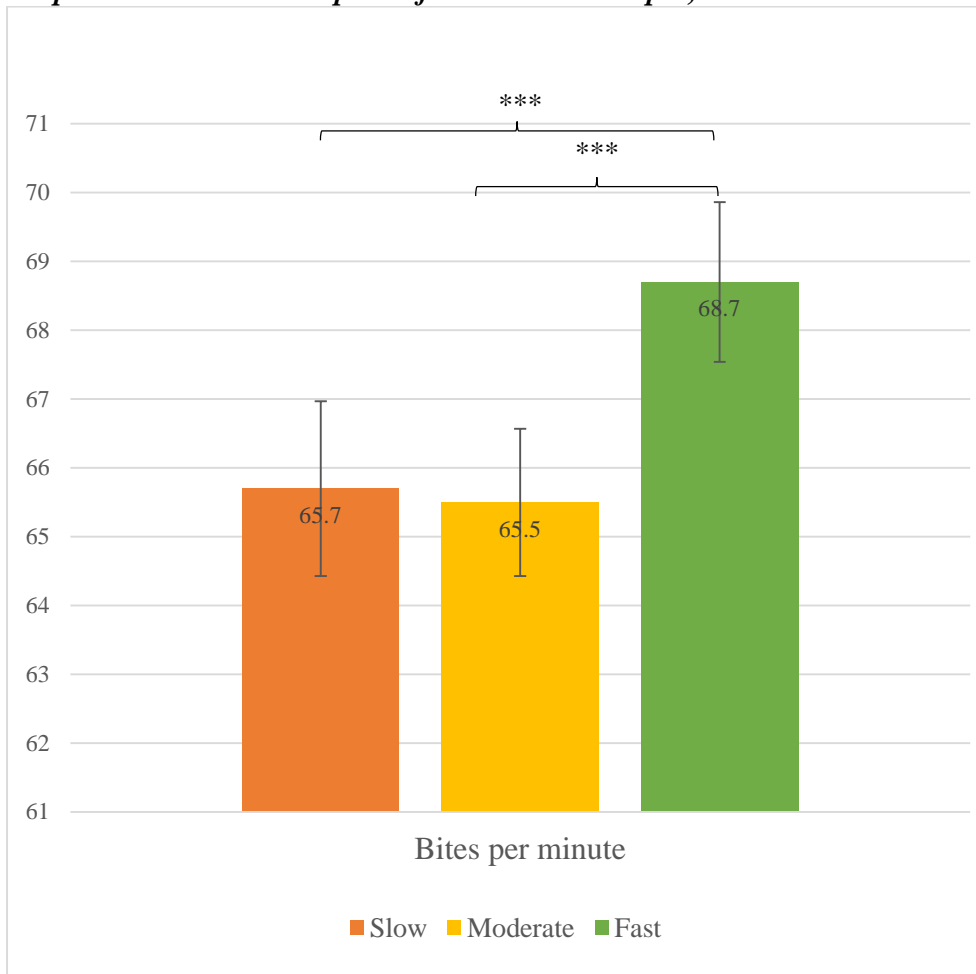
Note. bpm = bites per minute

Pairwise comparisons revealed that the Slow music tempo differed significantly from the Fast music tempo condition ($p < .001$). Comparing the means showed that Fast music elicited a faster eating speed ($M = 68.70$ bpm, $SE = 1.16$) than the Slow music ($M = 65.74$ bpm, $SE = 1.27$). Also, pairwise comparisons showed that the Moderate music tempo differed significantly from the Fast music tempo condition ($p < .001$). Means comparison indicated that Moderate music elicited a slower eating speed ($M = 65.46$ bpm, $SE = 1.07$) than the Fast music ($M = 68.70$ bpm, $SE = 1.16$). However, the Slow music tempo condition did not differ significantly from the Moderate music tempo condition ($p = .735$), with Moderate music resulting in about the same eating speed ($M = 65.46$ bpm, $SE = 1.07$) as the Slow music tempo condition ($M = 65.74$ bpm, $SE = 1.27$).

Overall, the hypothesis stating that participants' rate of mastication measured in bites per minute will be significantly slower while slow music is playing in the background compared to fast music has been confirmed, see Figure 7.2.

Figure 7.2

Speed of mastication: Repeated measures ANOVA for the effect of music tempi conditions on the speed of mastication in bpm, includes Std. Errors



Note. *** $p < .001$, bars show Standard Errors, bpm = bites per minute

7.4.3 Exploratory analyses: Possible covariates

Independent t-tests were run to see if any of the dependent variables, e.g. mean number of bites per minute during Slow, Moderate or Fast music speed conditions, differed as a factor of the control variables gender, choice of biscuit, musicianship, or current dieting to lose weight. Independent t-tests revealed that the number of bites per minute in the Slow, Moderate, and the Fast music conditions did not differ significantly as a factor of the biscuit choice (sweet v savoury), musicianship, or current dieting to lose weight as detailed below.

At the start of the experiment participants were offered a choice between sweet or savoury oat biscuits. In order to test the effect of biscuit choice an independent sample t-test was run. The independent sample t-test compared the mean eating speeds (bites per minutes) of sweet and savoury biscuit choice to determine whether they are significantly different. There was no significant difference between the number of bites per minute for the sweet and savoury biscuits during the Slow music ($p = .118$); Moderate music ($p = .281$) or the Fast music condition ($p = .300$).

Since this is a musically based experiment an independent sample t-test was conducted to compare mean eating speeds between musically trained and non-trained participants. There was no statistically significant difference between the number of bites per minute as a factor of musicianship either, with the difference in means for musically trained and non-trained participants during the Slow music ($p = .428$); Moderate music ($p = .188$) or the Fast music condition ($p = .415$).

As this experiment involves food and assesses the speed of eating a possible influence of current dieting to lose weight was likely. To test the possible effect of current dieting an independent sample t-test to compare mean eating speeds for the dieting and non-dieting participants was conducted. The t-test did not show any statistical difference in means between the number of bites per minute for the dieting and non-dieting participants under the Slow music ($p = .284$); Moderate music ($p = .633$) or the Fast music condition ($p = .624$).

However, when the independent sample t-test was conducted to investigate the mean number of bites per minute during Slow, Moderate, and Fast music conditions between males and females a statistically significant difference was reported. During the Slow music condition the number of bites per minute for male participants ($M = 69.26$, $SD = 10.11$) compared to female participants ($M = 62.94$, $SD = 10.10$), ($t(96) = 3.058$, $p = .003$) reached statistical significance. A significant difference was also shown under the Moderate music

condition with male participants ($M = 68.32$, $SD = 14.71$) compared to female participants ($M = 63.18$, $SD = 10.11$), ($t(96) = 2.035$, $p = .045$). The same was the case with the Fast music condition where the number of bites per minute of male participants ($M = 72.58$, $SD = 11.92$) was again statistically higher compared to female participants ($M = 65.59$, $SD = 10.10$), ($t(96) = 3.123$, $p = .002$).

Two-tailed Pearson's correlations were run in order to explore possible associations between the continuous control variables (age, mood state (TMD), BMI, and the three eating behaviour scales UE, CR, and EE), and the number of bites per minute during the three music tempo conditions. There were no statistically significant correlations between the variables listed above and the number of bites per minute during the Slow, Moderate and Fast music tempo conditions (Table 7.3).

Table 7.3
Correlations of mastication speed (bpm) during three music tempi conditions with Age, TMD, BMI, UE, CR, and EE

Music tempo condition	Age	TMD	BMI	UE	CR	EE
Slow tempo music	.078	.690	.484	.330	.658	.941
Moderate tempo music	.085	.819	.279	.123	.665	.479
Fast tempo music	.056	.618	.909	.742	.974	.280

Note. Table of p values, TMD = Total Mood Disturbance, BMI = Body Mass Index, UE = Uncontrolled Eating, CR = Cognitive Restraint, EE = Emotional Eating, bpm = bites per minute
N = 97

7.4.3.1 The effect of gender

The only variable which showed a significant difference in mean eating speeds during the Slow, Moderate, and Fast music conditions was gender. A repeated measures ANOVA was carried out in order to see if the difference in the number of bites per minute between the

three music tempo conditions was affected by a gender interaction. A repeated measures ANOVA with gender included as a covariate revealed no significant speed by gender interaction ($p = 0.541$) (Table 7.4). This finding is in line with the results of previous research on gender differences in mastication which suggest that men tend to eat at a faster rate and with more chewing power than women (Hill & McCutcheon, 1984; Park & Shin, 2015). Although a significant difference is evident in the number of bites per minute between males and females during all three music tempo conditions, gender does not appear to act as a covariate in the influence of music on the speed of mastication.

Table 7.4
Repeated measures ANOVA for the impact of gender on speed of mastication

Covariate	SS	df	F	Sig.
Gender	41.94	2	.616	.541

7.5 Discussion, limitations and conclusion

Tempo is the most rudimentary element of music and it represents the rate at which musical events unfold in time. Tempo is also present in other human activities i.e. in synchronising body movements within and between individuals where common beat patterns are established as well as in verbal communications (question-answer patterns). Sensitivity to small changes in music tempo are observed during the first year of infancy, well before development of sensitivity to other musical elements (Dalla Bella, Peretz, Rousseau, & Gosselin, 2001). It is reported that the tempo (speed) of background music affects the speed of ongoing activity while individuals are being exposed to the music i.e. in sport (Kämpfe, Sedlmeier, & Renkewitz, 2011; Smith & Curnow, 1966). A study of electrocardiography signals shows that our hearts work differently in response to sedative compared to arousing

music (Dousty, Daneshvar, & Haghjoo, 2011). The fact that tempo is such a fundamental constituent of music, as well as daily life, may help explain why music tempo appears to be so effective in influencing the speed of mastication.

Overall, the findings of this study suggest that the tempo of background music influences the speed of eating measured in bites per minute (bpm). Although the difference in eating speed between music tempo conditions amounts to just over three bites (by 4.3%) per minute considering this figure in terms of an average meal duration which is somewhere around 30 minutes changes the initial perception. The reduction in the number of bites could amount to 100 bites less for every meal, every day.

The results show that the Slow music tempo condition does not differ significantly from the Moderate music tempo condition. It is not quite clear why Moderate music tempo resulted in a similar number of bites per minute as the Slow music tempo condition. One possible explanation is that the Moderate tempo music at MM = 96 was a little slower than Moderato which ranges between MM = 108 and MM = 120 thus slow enough to produce the maximum effect in lowering the number of bites per minute. On the other hand, the Slow tempo condition might have been just too slow at MM = 58 to feel natural and to be effective in slowing down the eating speed any further.

Another possible explanation is the fact that the Moderate music tempo condition was composed of the music selection at its original tempo MM = 96, in other words the tempo that the composer envisioned. Since it was not altered by electronic means, the Moderate tempo soundtrack had the best quality of sound as well. Both, the Slow and Fast tempo conditions were electronically manipulated, Slow to be 40% slower and Fast to be 40% faster than the original music. The fact that the Moderate tempo condition comprised a better quality of sound and music at its intended speed, could have had some influence on the participants. However, since most participants did not notice any tempo changes in the music

it is unlikely that they were aware of any variations in the quality of sound either. Hence, the most likely explanation is that there is a cut-off point metronome mark below which the music becomes slow enough to result in a reduced number of bites per minute. In addition, there could also be a cut-off point for the number of bites per minute below which the speed of mastication is not likely to be lowered. These issues of the possible range in the number of bites per minute from slow to fast as well as a cut-off point for slow music need further consideration.

The results of the exploratory analyses suggest that the effect of music on the speed of eating is not influenced by the choice of food, musicianship, mood or the eating behaviour measures. No difference in the effect of music on the speed of mastication was found between participants consuming sweet versus savoury oat biscuits. There was also no significant difference between musicians and non-musicians. However, musicianship in this study was understood very broadly, as those with some extra-curricular musical training (singing or playing a musical instrument) in the past. Future research could explore if and how different degrees of musical training influence the impact of music tempo on the speed of eating.

Total mood disturbance did not appear to have any significant effect on the impact of music on the speed of eating either, although research suggests that moods can influence eating behaviours to a considerable degree (Buckroyd, 2011; Gibson, 2012). Furthermore, the influence of the three types of eating behaviours (UE, CR, and EE) on the impact of music did not reach statistical significance. It could be that a largely student sample did not include individuals whose eating behaviours or disturbed mood states were extreme enough to sway the impact of music on the speed of mastication.

Since none of the control variables impacted the influence of music tempo on the speed of mastication to a significant degree, it is likely that the effect that was observed in

eating speed was due to the considerable impact music has on the levels of arousal. Yet this has to be stated with some caution since indicators of arousal such as heart rate, respiration, skin conductance and biochemistry were not measured during the experiment. However the literature suggests that the elements of music such as volume, tempo, rhythm, percussiveness and mode have an effect on levels of arousal (Husain et al., 2002; Lamont, 2011; Rickard, 2004). A meta-analysis (Pelletier, 2004) concluded that music is particularly effective in reducing arousal due to stress. Future studies might advance our knowledge by exploring these arousal indicators and the influence of music on eating speed.

Although this experiment confirmed that the speed of music can influence the speed of eating, future research could look into the possibility of making this effect even more pronounced by examining the role of other music elements which are known to effect arousal such as articulation, mode, volume, rhythm and percussiveness. By manipulating these other musical elements a collection of relaxing music designed or selected specifically to lower arousal and slow down the speed of eating could be created. A recent study (Lamont & Eerola, 2011) noted that physiological measures show changes in affect even when subjective measures suggest that participants were unaware of it. Thus, the subliminal effect of background music could provide a discreet and unobtrusive support to individuals trying to slow down the rate of eating as a way to control the incidents of overeating. Investigating the contribution of each music component individually and the extent of its impact on eating speed would make creating designer soundtracks intended to lower arousal and consequently eating speed possible. These may be particularly helpful to overweight and obese individuals whose overeating is a consequence of eating too fast.

7.5.1 Limitations

Although the findings regarding the influence of music tempi on the speed of mastication look encouraging there are several limitations. Firstly, the sample was composed of university students of which a large proportion were psychology students and university staff which is not representative of the general population. Conducting the same experiment with a sample that has a wider range in age, education and socioeconomic status would be very useful.

As this was a laboratory experiment which allowed for a controlled environment and close-up video recordings of participants' eating behaviours, it did not bear resemblance to a real-life situation. In everyday life people share their mealtimes with friends and family. The effectiveness of background soundtracks to influence the speed of eating while individuals are engaged in mealtime conversations should be investigated. However, during the current experiment participants were engaged in a number of decoy tasks which did not appear to lessen the effect of music on their eating speed.

The choice of oat biscuits (sweet or savoury) used in the experiment did not have an impact on the results possibly because these food items were very similar in all other aspects. Testing the effectiveness of background music to influence the speed of mastication with a wider range of different food items that vary in taste, texture, flavour, viscosity and appeal could be very informative. In addition, replicating this study with a larger sample would make the results more robust. Larger sample size would give more statistical power to detect differences thus reducing the margin of error and increasing confidence in the results.

7.5.2 Conclusion

Overall, this experiment demonstrated the influence of background music tempo on the speed of eating. The ability of music to influence arousal as well as help synchronize movements has the potential to influence eating behaviours. Findings from this study showed

that the speed of mastication measured in bites per minute is significantly different during Slow versus Fast music conditions. The prospect of using slow background music in order to influence eating behaviour and slow down the speed of eating seems plausible and merits further investigation. By manipulating the tempo of background music individuals could modify their rate of mastication which may result in slower eating and consequently reduced consumption. This in turn, may lead to fewer incidents of overeating, particularly in cases where overeating is an outcome of eating too fast.

Chapter 8

The experience of eating

8.0 Personal statement

The aim of this study is to attempt to understand the participants' individual experiences related to "eating" in some depth and to try and tease out the meanings they give to these experiences. Newly gained insights may help to inform whether and how the benefits of music, identified during laboratory experiments in Chapters 6 and 7, could be applied in the daily lives of participants. Following an interpretative phenomenological analysis approach, which is idiographic and primarily concerned with experiences of a relatively small number of people, I will not attempt to make any generalisations beyond my particular sample. My role, as an interviewer, is to facilitate personal exploration of the subject of eating, therefore I will try to leave behind any preconceived ideas I might have about the subject. The idea is to keep the interviews free-flowing and open without imposing too much structure. This will give me freedom to follow the cues coming from participants and probe further when interesting associations, memories or meanings arise.

Since this study is a part of my PhD which investigates the influence of music on food-taste, food-pleasantness, and the speed of eating, although non-directional, I will be particularly attentive to any disclosures related to eating behaviours (such as eating faster or slower than usual, adverse mood states as prompts to eat and typical food-choices, etc.), eating outcomes (varying degrees of pleasure derived from food-taste, eating more or less than usual as a consequence of food-taste and its pleasantness, etc.) or any sign of a possible contributing influence to either eating behaviours or outcomes. My role as a facilitator requires me to stand back but at the same time remain alert in order to recognize the

importance of what is being said and ready to probe further as opportunities present themselves.

8.1 Aims

The aim of the study was to investigate the “experience of eating” as understood and narrated by participants through the meanings, associations and connotations they attach to it. Exploration of participants’ subjective experiences and narratives may help to further illuminate whether a basis and adequate conditions for utilization of applied music exist in their day-to-day lives. The overarching subject of interest (although not exclusive), brought on by the findings of the two laboratory experiments and systematic review, is exploring the potentiality of applying background music as means to: (a) control emotional eating; (b) modify food-taste and its pleasantness; (c) influence the eating speed and consequently the amount of food eaten. Detailed analyses of participants’ individual accounts as well as the level of convergence and divergence between their narratives should provide some information regarding the frequency and awareness of emotional eating; the prevalence and intensity of cravings for sugar/sweets; the importance of food-taste as regards to food choices and amount of food consumed as well as the internal/external influences on the speed of eating.

8.2 Method

8.2.1 Design

Interpretive phenomenological analysis was selected as the research approach since it is primarily concerned with the essence of lived experience (Pietkiewicz & Smith, 2014). The analysis was conducted in accordance to the methodology outlined in Langdridge (2007) and Shaw (Forrester, 2010). Largely unstructured, one-off and in-depth interviews were used to

collect the data. Phenomenology, as a method, is firmly embedded in the philosophical movement of “phenomenology” founded on the ideas of Husserl and Heidegger, and later existentialists Kierkegaard, Sartre, de Beauvoir and Merleau-Ponty (Langdrige, 2007). Since phenomenologists reject the mind-body dualism, the IPA methodology is not primarily interested in cognitions and mental processes but instead it is concerned with “lived experience” of the phenomenon under investigation (Forrester, 2010). Hence, the interviews were largely unstructured and understood as interactional events - interviewer was as much a part of the interview as the interviewee.

What might constitute the “experience of eating” or “eating” was not pre-defined by the investigator. Although eating can be approached in many different ways such as eating food, having meals, or snacking, no attempt was made to follow a fixed topic guide or impose a specific research orientation other than to encourage participants to elaborate on the topic of eating as *they* understand it. Langdrige (2007) suggests that the role of the interviewer during unstructured interviews is merely to assist personal exploration of the subject and follow participant’s initiative. Approached in this way, unstructured interviews may potentially capture richer data as well as more authentic responses from the participants. Therefore, all predetermined ideas of what “eating” is or might be for others were left behind. Participants were prompted to consider, reflect, and define the meaning of the term “eating” for themselves.

8.2.2 Participants

This study consisted of four participants over the age of 18. Since all participants were recruited on the University of Kent (Canterbury) campus, the sample was fairly homogenous. Students, as well as members of staff, willing to talk about their experiences related to eating were all volunteers. Participants were asked to provide information

regarding their: name, age, gender and professional status (student or member of staff) on the campus. A unique identification number was created for each participant, in case they decide to withdraw their data at a later stage. Participants were provided with an information sheet and had an opportunity to ask questions before giving written consent to participate in this study. To ensure complete confidentiality, the actual names of the participants, people and places were omitted from the transcriptions and analysis.

Since the interviews were focused on exploring experiences related to eating, there was a potential risk of distress to some participants. Although no participant expressed distress during the interview, information regarding free counselling services was provided on the debriefing sheet: Support, Health and Wellbeing, The University of Kent, Canterbury, Kent, CT2 7NZ, T: +44 (0)1227 823206 or (0)1634 888875; and BEAT (Beat Eating Disorders): Helpline 0345 634 1414; Youthline 0345 634 7650

8.2.3 Procedure

Before any participants were approached, full ethics approval was obtained from The School of Social policy, Sociology and Social research, University of Kent. The interviews were held in a quiet and informal setting of the coffee room at the Centre for Health Service Studies, Cornwallis George Allen Wing, University of Kent, CT2 7NF. Both, the interviewer and interviewee were seated comfortably on the sofa with the voice recorder (SANYO ICR-B170NX) placed on the coffee table between them. Since the interviewer was a PhD student and interviewees were either students or members of staff from different departments, the issues of power and dependency did not arise.

All interviews started with a few minutes of normal conversation in order to make interviewees feel more relaxed and comfortable. Following the informal chat, the voice recorder was switched on and the participants were asked to talk in free, uninhibited style

about their personal experience of eating. The researcher probed further, asking follow-up questions, whenever interesting opinions, observations or associations presented themselves. At the end of the interview all participants were thanked for their time and participation. Participants were debriefed and asked if they had any questions. A few minutes of normal conversation followed to ensure that participants were feeling comfortable before leaving the room. Although no financial inducement was used to procure participants, each participant was given £20.00 after the interview session as compensation for their time and participation. The length of four interviews ranged from thirty-nine to seventy-six minutes. Each interview was transcribed verbatim and analysed using the procedure outlined in the analysis section.

8.2.4 Analyses

The basic analytic process in the IPA is transition from descriptive to interpretative (Brocki, & Wearden, 2006). The double hermeneutic nature of the analyses comprises a twofold interpretative procedure. Initially, descriptions and meaning making was done by the participant during the interview. Following that, the researcher interpreted participant's meaning making, creating new meanings from a twice removed position which suggests a high degree of personal involvement by the investigator (Langdrage, 2007). The double hermeneutic nature makes the interpretative analyses a dynamic as well as a creative method. That said, the analytic process itself is not prescriptive. The IPA method does not claim objectivity, nor does it rely on formulaic procedures, suggesting that two researchers working with the same data are not necessarily expected to replicate the same analyses or duplicate the same list of themes (Smith, 1999).

In the current study, through analyses of the transcripts, emerging themes were identified and explored further in order to make sense of, and understand as much as possible participants' individual experiences related to "eating". The main themes were not selected

merely as a result of their prevalence but according to how vividly they exemplify the narrative. The meaning of eating for each participant became clearer and more apparent through the different stages of the analysis. Since reflexivity is an integral part of interpretative phenomenological analysis, a reflexive diary was kept throughout the study so as to help provide an audit trail of the process.

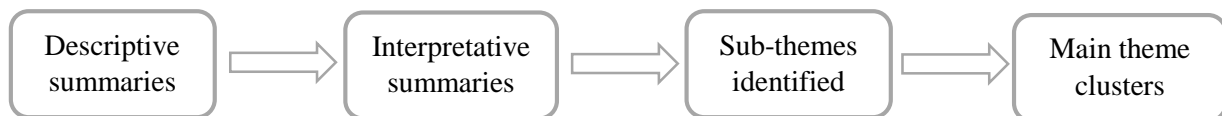
A full analysis of one participant was completed before moving on to the next participant (Forrester, 2010). The audio interview data were transcribed verbatim by the researcher and are included in Appendix C (Participant 1: pages 352-363; Participant 2: pages 386-396; Participant 3: pages 417-430; Participant 4: pages 458-479). During the transcription process initial notes were recorded in the reflexive diary, included in Appendix C (Participant 1: pages 380-385; Participant 2: pages 411-416; Participant 3: pages 451-457; Participant 4: pages 510-515). The transcript was read multiple times by the researcher in order to become familiar with the material. Each reading resulted in new observations and comments being noted in the reflexive diary. An IPA interview summary for was developed for each interviewee and is included in Appendix C (Participant 1: pages 364-379; Participant 2: pages 397-410; Participant 3: pages 431-450; Participant 4: pages 480-509). The analysis began by summarizing participant's thoughts in a descriptive summary column. Following this, the initial interpretations were recorded in the interpretative summary column (Table 8.1).

Table 8.1
Sample IPA interview summary form

Interview extract	Descriptive summary	Interpretative summary
<p>That was a big family event but it was much more relaxed and a happier event, really. There was quite a big contrast to the different places that I would eat.</p> <p>Grandparents on the [place name] side would be big teas, trifles and things like that and then the [place name] side grandparents would be formal around the table but relaxed and then home would be where we sat around a table, very strict and very formal. I had those quite varied different eating experiences and</p>	<p>Happy, relaxed, big tea parties at grandparents</p> <p>Cold, formal, strict and silent</p>	<p>Early experiences are contradictory</p>

This procedure allowed for easier identification of sub-themes and their subsequent clustering into the main themes (Figure 8.1). In the end, participants' accounts of their experiences with food and eating were clustered around four or five main themes comprising a number of sub-themes.

Figure 8.1
IPA analysis procedure



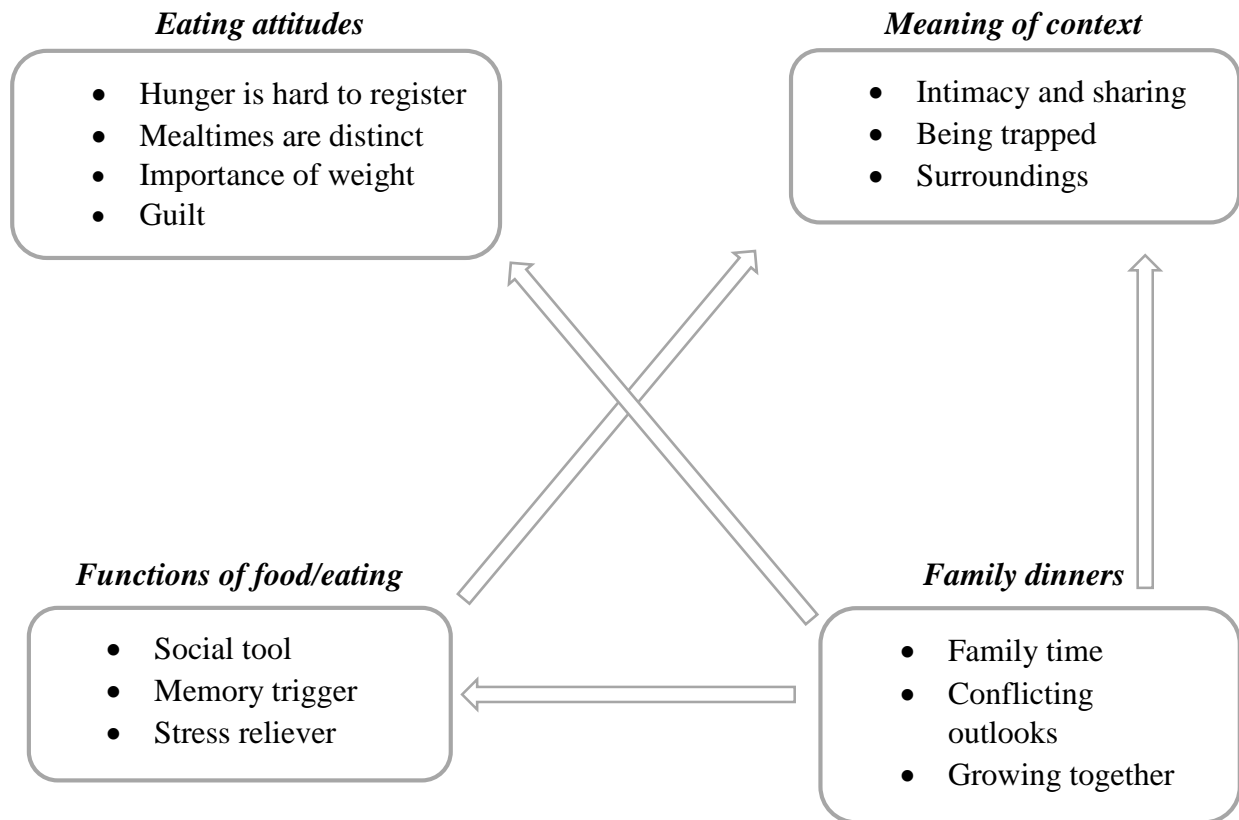
8.3 Analysis: Participant 1 - David

David's experiential account of eating revolves round four main themes: eating attitudes, the functions of food and eating, the meaning of different contexts, and the importance of family dinners (Figure 8.2). Family dinners and the underlying connotations associated with them carry a lot of significance for David. Heart is where the home is, and although he is a third-year student now, David's eating attitudes as well as the functions food and eating provide are largely related to family meals eaten back home. This is particularly evident in the use of food as a facilitator in social interactions. The enjoyment of food tends to bring people together. As a result, conversations over a meal seem to flow in a more relaxed and friendly manner.

Food provides a powerful memory trigger for David, food brings about memories of people and places as well as the feelings associated with them. The power of food to recall positive feelings can be used as a source of comfort during difficult times. Favourite meals from childhood and dishes with emotional background are what David craves when feeling stressed or under pressure.

His family gives high importance to being slim, fit, and lean, and to David being anything but that is undesirable. He manages his weight through exercise and controlled food intake. A degree of guilt is experienced when eating certain foods, like chocolate, and this seems to serve as a deterrent for David. Very distinct mealtimes and their underlying connotations mirror family attitudes and the meanings given to food and eating in general.

Figure 8.2
Main Themes – David



8.3.1 Eating attitudes

- Hunger is hard to register
- Mealtimes
- Importance of weight
- Guilt

David’s eating attitudes comprise four distinct features (1) the difficulty to register hunger cues, (2) difference in duration and significance allocated to mealtimes (3) as well as the importance given to controlling his weight and (4) the guilt he experiences when eating

certain foods. Hunger is hard to register for David, either because the hunger cues are too weak or because he is not attentive enough to notice them. This causes David to forget to eat, sometimes for a whole day or even longer. Breakfast, lunch and dinner have an entirely different underlying meaning for him. Breakfast is quick and necessary, lunch can be omitted (and often is), but dinner is an important and enjoyable time-out, free from any work or worry. David is very concerned about his weight which he associates with both, health and looks. To some extent this is reflected in the way David tends to judge overweight people. Also, David experiences a fair amount of guilt when eating certain foods, like chocolate. This can be quite off-putting for him and seems to serve as a deterrent.

8.3.1.1 Hunger is hard to register

Ever since he was a child David liked to eat and would always ask for more food. These days, although he is prepared to invest the time and the effort necessary to cook a nice meal for himself, he often forgets to eat altogether. It seems that hunger is difficult to register for him or perhaps David learnt not to pay any attention to it. Because of this he frequently relies on time cues in order to remember to eat.

(page 354; line 95) “I think a bit of both, it takes me quite a lot of hunger to go, “Okay I’m hungry, I should probably eat.” Quite often I’ll only eat because it’s the time to eat, if that makes sense, just like, “I should probably eat now because it’s lunch time.” (p. 354; l. 103) “I don’t know, hunger is odd with me, I don’t know whether I’ve learnt to ignore it, I don’t know really.”

Forgetting to eat becomes an issue for David when he is ill or too busy. Since hunger cues are either too weak or absent they cannot be relied upon. If David is distracted or otherwise preoccupied mealtimes go unnoticed as well. It is not uncommon for David to go through a whole day (or even longer) without having any food at all.

(p. 354; l. 97) “Generally, if I’m busy I won’t notice and I can carry on throughout the day, and I’ll get to 9:00pm and I’ll realise I haven’t eaten all day. It’s just I don’t

really get hungry often. Quite often I'll come home and I'll realise I've got nothing in the fridge and I haven't eaten all day, so my friend will cook me up something quick.” (p. 354; l. 86) “I forget to eat basically. I forget to eat quite a lot and I have to keep reminding myself to. A few Christmases back I got quite ill and lost a lot of weight because I just stopped eating for a couple of weeks. My mum was too busy to notice, and then suddenly put me on a massive protein diet to get my weight back up.”

People close to David, like his mother or his university friends, come to the rescue and provide the necessary nourishment as soon as they realize that David has not eaten for some time. In doing so, they make their concern for David's wellbeing evident and demonstrate the willingness to help. I wonder whether not remembering to eat when under too much pressure or when feeling poorly may be a cry for help to some extent. Interestingly when David is feeling content and happy this issue does not arise. When happy and relaxed he seems to eat a lot more and a lot more regularly. This could also be due to the fact that when David is well and stress-free he is likely to have more time and a better awareness of meal-time cues.

(p. 354; l. 84) “When I'm feeling content and happy I'll eat quite a lot, just because I'm relaxed”

(p. 354; l. 90) “So basically just how I'm feeling, if I'm feeling well I'll eat a bit more, but if I'm feeling under the weather I'll not eat anything”

8.3.1.2 Mealtimes

Different meals throughout the day are given different levels of importance and allocated different amounts of time. Breakfast is fuss free, necessary but generally a rushed meal, comprising a variety of cereals. David and his brother were choristers since early childhood so breakfast was always eaten quite quickly, early in the morning on the way to rehearsals.

(p.352; l. 17) “No, so we've never- in my family breakfast is not a big thing, it's cereals, so it's usually just Weetabix and another cereal on top like Shreddies or Frosties.”

(p.352; l. 18) “So it would usually just be thatbreakfast is something very quickly done, no time is taken towards it, it’s something that just has to be eaten.”

Lunch is normally a snack type food, as it was in his childhood. Sometimes David eats his lunch while working and sometimes he does not eat it at all. Lunch is a meal that may be skipped if David gets too busy or distracted doing other things. Also, David likes routine and prefers to keep his lunch always the same. Lunch is not all that important and having to make choices can be stressful, he rationalizes.

(p. 352; l. 29) “Then for a lot of our young life it was packed lunch, and it was just “snacky” food, just like a sandwich, a packet of crisps which I still eat now.”

(p. 352; l. 30) “I’m not very adventurous when it comes to that because I like routine, and thinking about food and thinking about different types of food and all the different things I could have is just too stressful. I’d rather just have exactly the same thing every day, even when it comes to lunch, because it’s simply, for me, just something that holds back a hunger.”

However, supertime is cherished. Preparing dinner as well as eating it takes time and is worth the effort. It is the most important meal of the day for David. Supper signifies a break from any work or worry. David embraces his father’s rule of never talking about work at the dinner table. Dinner time symbolizes a time-out which is dedicated to rest and relaxation and food is just an excuse.

(p. 353; l. 42) “....yes supper is by far and away the most important meal of the day for me, it’s the thing even now I put the most time and effort into. It’s what I try and relax around, so I’ll still carry on doing work if I’m having my lunch, or with breakfast I’ll be rushing around doing other things. With supper, I sit down and I just shut off and I eat it, and I don’t put anything else on, it’s time for me to relax.”

(p. 353; l. 52) “So it’s not so much that the food makes me relaxed, it’s more that I have a relaxed period where I can enjoy not worrying about anything, and then the food is just an excuse”.

8.3.1.3 Importance of weight

David has always been very concerned about his weight and appearance. He tends to weigh himself regularly and is aware of any changes in his weight. All his family have

always been fit and lean and being anything else but that would seem abnormal, David explains. He associates weight with both, health and looks, and is prepared to exercise regularly in order to maintain it.

(p. 360; l. 317) “No, my family is all very, very fit and sporty. None of my family are overweight, and so I see it as something abnormal to be anything but fit and lean. So any bit of extra fat I just don’t like at all.”

(p. 360; l. 324) “I will actively eat less when I feel like I’m not doing enough sport, so I can keep the same weight.”

Although he tries not to judge other people, David finds it hard to understand why anyone would value food over their weight and consequently their health and looks. He had some concerns over expressing his opinion but David believes that overweight people are a bit lazy and lacking in self-control. They must be eating more food than they really need, he guesses, and they are probably far too lazy to exercise in order to offset the calories consumed.

(p. 360; l. 327) “...so quite often I’ll get confused by people who always complain about their weight and then eat big meals and then don’t go out and go running. Because to me weight and looks is quite important, I don’t understand why people would prize food over their weight basically.”

(p. 360; l. 332) Int: “Why do you do that, what do you think when you see an overweight person, what kind of a judgement do you pass?”

Part: “It makes me sound so awful.”

Int: “Don’t worry about it.”

Part: “Generally, that they’re lazy and they have no self-control basically.”

(p. 361; l. 338) “Not active enough to keep their weight down, and then self-control because I don’t see how you can put on that weight without eating more than you need.”

8.3.1.4 Guilty foods

Although David likes chocolate a lot, he does not eat it. David thinks that he does not really get any pleasure from eating chocolate because it makes him feel guilty. There are other “guilty foods” David would not normally eat, like sweets, crisps, biscuits, or any sort of junk food. For David “guilty foods” are foods full of things that are not good for him like salt,

sugar or fat. This of course does not mean that he does not enjoy their taste nevertheless. However, the pleasure David gets from eating these foods seems to get annulled by the amount of guilt he is likely to feel at the same time. Guilt seems to serve as a safeguard against eating certain foods for David.

(p. 359; l. 293) “I do like it actually, I like it a lot, I don’t get any kick out of eating it because I feel guilty.”

(p. 359; l. 296) Part: “Yes, there’s definitely guilty foods (Laughing)”

Int: “Can you name a few? Obviously chocolate.”

Part: “Chocolate, sweets, crisps, biscuits, any sort of junk food, take away food.”

8.3.2 *Functions of food/eating*

- Social tool
- Memory trigger
- Stress reliever

Eating is, above all, an important social tool for David. The context, conversation and the company around the table matter a lot more to him than the food. On the other hand, food can also serve as a potent memory trigger. It helps David recall people, places, events and the feelings associated with these. The foods that have an emotional background can give rise to feelings of joy and happiness associated with the memories they trigger. As a result, David is likely to cook these meals for himself during stressful times.

8.3.2.1 *Social tool*

Eating in the company of other people is paramount. David does not like eating alone and will very rarely opt to have a meal alone in his room. Since eating on his own makes him feel lonely and isolated, David will try to at least eat in the same room with other people. This way, he gets to share the dinner table if not the actual meal with others.

(p. 357; l. 197) “I will try to eat in the same room with other people here, so when I’m sharing my house with my housemates I will try and eat in the same room as them.”

(p. 357; l. 199) “Because I really don’t like taking my food up to my room and eating on my own, because that does make me feel a lot more isolated, I just hate doing it, I much prefer eating in the company of others, even if they’re not sharing my food.”

For David eating represent an essential social tool, the food is of a secondary importance. The context of the meal, who he is eating it with and the way the interaction unfolds are vitally important to him. Food does not matter so much as long as the company is good. A pleasant interaction with other people can make a meal very enjoyable for David.

(p. 357; l. 209) “I think it’s important for me as a social tool, it’s not important for me in terms of the taste of the food or my interest in the food, it’s much more”

(p. 357; l. 212) “In the context I eat it and the way I eat it and who I eat it with it’s important, but the actual food itself is a minor thing. I could eat an awful meal but still really enjoy it if I’m with other people.”

8.3.2.2 *Memory trigger*

Meals and foods David used to like in his childhood trigger memories of people and places. Years later, they seem to remain closely associated with the events from the past. These meals bring about vivid memories of happy times with friends and family. David’s favourite seafood pasta used to be his perennial birthday dish. In David’s mind seafood pasta will always be connected with fond memories of birthday celebrations and the people involved.

(p. 357; l. 220) “At home I definitely do, so if my mum makes a new dish, it might be delicious, but it still wouldn’t really equate to my favourite or things that we’ve always had. I guess you associate memories with certain dishes.”

(p.357; l.227) “I’ve got happy memories of sharing it with friends and family because it was always my birthday. So I guess that’s the most important one I can think of, of a positive reaction when I have a certain food.”

His father’s chicken barbeque marinade sauce will always bring about memories of the house with the stream going past it, which did not have an oven, so the family had to

barbeque throughout that summer. It will also help him recall the happy times when David, his brother and father had a lot of fun building a bench and a catapult in the backyard.

(p. 359; l. 274) “So the certain chicken barbeque that he [father] does, he’s got a certain marinade sauce, it will always bring me back to that house and when we built a bench and built a catapult and things like that. So it’s certainly from that which I can associate memories with it.”

David would rate meals he has familiarity with, childhood favourites, or in fact any meal with an emotional background to it above the rest. Regardless of how skilfully the dish is prepared or how seductively it might be presented, David will always favour old, familiar meals that he shared with his friends and family.

(p. 357; l. 218) “Certain foods like that I think, say when I go to a restaurant when there’s no emotional background to any of the dishes, I would only- I wouldn’t really class any food above the other”

(p. 357; l. 220) “At home I definitely do, so if my mum makes a new dish, it might be delicious, but it still wouldn’t really equate to my favourite or things that we’ve always had. I guess you associate memories with certain dishes.”

As a powerful memory trigger for David, food is also able to recreate the feelings associated with these memories. Happy moments are not only remembered but they get to be relived again. Just for a brief moment in time the happiness from the past can be re-experienced in the present.

(p. 359; l. 270) “Yes, recreating that feeling, or just you can relive the memories, it helps trigger memories for me I guess”

(p. 359; l. 266) “So I made it the other day at Uni and it made me feel happy simply because of the memories I’ve got with it”

8.3.2.3 *Stress reliever*

As a result, familiar meals with pleasant connotations can serve as powerful stress reliever for David. More through the association with the past than through the sensual pleasure of the taste, food provides a breather and allows David to step back in time. Reliving

the memories of pleasure and happiness can make him feel a little better and a little more secure in himself during stressful times.

(p. 358; l. 237) “Yes, I was feeling a bit stressed out the other day, and I just needed a bit of a pick me up, so just went back to a meal I knew.”

(p. 358; l. 260) “So it just made me feel a bit more secure in myself, and so it allowed me to take a step back, just for a little bit, I felt a bit better.”

Consequently, it is not chocolate that David identifies as his comfort food. For David comfort foods are old familiar dishes and meals associated with an emotional background. When feeling down, David will crave the meals from his childhood in order to get comfort and relief from the happiness associated with them.

(p. 359; l. 286) “Yes, I would say, it has to be a comfort food, the same as I would have to take comfort from it, and I would ask for it at home when I’m feeling a bit down, I’d ask for my mum to make it. So I guess it is a comfort food. I don’t have comfort food like say people eat chocolate or...”

A good example of this relationship is that David will always try to eat tuna and sweetcorn sandwiches when feeling unwell. He believes that this had become some sort of a tradition for him. In the past David’s mother would always feed him tuna and sweetcorn sandwiches when he was sick off school. These days, David rationalizes, eating tuna and sweetcorn sandwiches when feeling ill has become a habit.

(p. 353; l. 67) Part: “Not generally, the tradition that I’ve always had is when I’m ill I have tuna and sweetcorn sandwiches, but there’s no reason behind that, it’s just I think when I was home and ill I just started eating them and now it’s become a habit.”

Int: “When you say at home, at home with your parents?”

Part: “At home, home, so when I’d be missing school my mum would- that was just what it was; tuna and sweetcorn sandwiches.”

However, I wonder whether this is done routinely and through the force of habit alone. Food provides a potent memory trigger for David. Food also brings about the feelings associated with the memories it elicits. It is likely that eating tuna and sweetcorn sandwiches

evokes the feelings of being nurtured and cared for as he felt being nursed back to health by his mother. This might explain why the routine continues today, although tuna and sweetcorn sandwiches are not as readily available as they were in his childhood.

(p. 353; l. 72) “That still continues today, so whenever I get ill it’s like I’ll go and have a tuna and sweetcorn sandwich.”

8.3.3 Meaning of context

- Sharing and intimacy
- Being trapped
- Different settings

Context of a meal is hugely important for David. It can elicit a range of feelings, from pleasantness and intimacy in the company of his closest friends and family to feelings of anxiety and unease brought about by eating in the company of strangers or large numbers of people. Having a pleasant background to a meal can increase the enjoyment of food for David. Attention to detail is appreciated.

8.3.3.1 Sharing and intimacy

Sharing a meal with other people is hugely important for David. He enjoys the company and social interchange accompanying the meal as much as he delights in sharing the sensual experience. Clearly, it is not enough to just occupy the same space and partake in the same conversation for him. David wants to eat the same food and share in the same tastes with other people. I wonder whether the act of sharing on this many levels enhances the feelings of closeness and intimacy for David.

(p. 354; l. 107) “I enjoy food a lot more when I eat it with other people, I think that’s just generally because I enjoy the company as well and enjoy the sharing of the food. When I eat it on my own it’s sort of, you’re not sharing that taste and you’re not sharing that same sort of sense- just a sensual thing, it’s all on you so there’s nothing to share with other people”

(p. 356; l. 171) “I don’t know, it’s massively important for me to share a meal, that we’re all eating the same food and we can all share in the same tastes.”

David acknowledges that he is more of a ‘close-unit’ person. He loves eating in the company of intimate friends since he is able to relax completely in the knowledge that he is not being judged. The level of closeness and trust among the group of close friends insures that everyone is at ease and the meals are good-humoured and enjoyable.

(p. 362; l. 380) “In terms of eating in the close company of friends, I love it because you can completely relax, it’s just very, very funny and jovial. I don’t feel trapped with a close group of friends because you’re not judging each other.”

Even if he is a little quiet and does not feel like saying a lot during the meal, David trusts that his friends still love him being there. Being accepted for who he is, David does not feel the need to either pretend or perform.

(p. 362; l. 389) “...but with friends you just don’t have to bother, you could sit there and not say anything and people would still love you being there. I’ve got a very close-knit group of friends back where I’m from, we often will go around to each other’s houses just for the evening and have a meal, which is great. That’s what I love”

8.3.3.2 Being trapped

David has some anxiety regarding speaking in large groups of people. This anxiety seems to extend to having meals in social settings, like big birthday parties. This is not surprising since eating in large groups means that one has to talk to many people, some of them strangers. However, even if he knows the people, David can find this kind of situation

overwhelming. Not being able to leave or take a breather can make him feel surrounded and trapped in a difficult spot.

(p. 361; l. 367) “I struggle to speak in large crowds or people I know, I’m much more of a close unit person”

(p. 362; l. 370) “Actually I quite often actively dislike the meal if I’m surrounded by a lot of people, even if I know them, because it’s too much for me.”

Int: “Overwhelming?”

Part: “Yes, I feel trapped.”

This is not an enjoyable eating experience for David. Regardless of its quality, the meal tends to be disliked as well. Another point here. Eating in the company of strangers often seems to David just a display of manners and conversational skills. The feeling that he is being judged and evaluated does not contribute to the overall pleasantness of the meal.

(p. 362; l. 376) “I feel I can’t cope with that many people very well, and certainly feeling like I can’t walk off and have a breather. Feeling locked in your seat and stuck around lots of people is not an enjoyable experience for me.”

(p. 362; l. 386) “Exactly, with strangers it’s much more like a show of manners and a show of - like a test, and the conversation has to be exciting and new and interesting.”

8.3.3.3 *Different settings*

Family dinners were traditionally eaten at the dinner table. Since he moved away from home and started sharing student accommodations, David had to get used to eating on the sofa. He also learned that this is common practice in some households. New experiences modified old attitudes and David got used to the idea that a sofa could be just another place to eat.

(p. 355; l. 146) “I think a few years ago I would have found it [eating on the sofa] very weird, but I’ve had a few girlfriends along the way who their families just ate on the sofas. Which was weird at the time, but I sort of accustomed to this idea that some people don’t eat at the table. Now it’s not so weird it’s just a different place to eat.”

Even so, a pleasant setting is important to David. Candles and background music create a cosy feeling and the resulting atmosphere of warmth and friendliness increases the enjoyment of a meal. The intensified feelings of pleasure contribute to an increase in its duration.

(p. 356; l. 162) “So yes, I do think the background would change it. I think candles, making it feel a lot more cosy, there’s a Danish word Hygge, that sort of feeling which will extend the meal and increase the enjoyment of the food.”

On rare occasions when David eats alone, having music in the background makes a meal not just a lot more enjoyable but a lot less lonely as well.

(p. 361; l. 356) “For me, I love having it [music] on, and actually if I ever eat alone I’ll always put music on because it makes me feel less alone. So the layout of the meal and if there’s music on will make a difference in how much I enjoy the meal.”

Attention to detail is appreciated, even the utensils can make a difference. Nice cutlery, big and heavy, will contribute to the overall satisfaction with a meal.

(p. 361; l. 345) “They [cutlery] need to be big and heavy, and I don’t really know why, I really hate small cutlery.”

(p. 361; l. 347) “It increases my enjoyment if I have nice cutlery, and I’m not really sure why, I have no idea why.”

8.3.4 Family dinners

- Family time
- Different outlooks
- Growing together

Family dinners represent family time spent in sharing delicious foods and interesting conversations. It is sometimes easier to voice different opinions or negotiate conflicting

attitudes over a meal. This daily interchange, in an atmosphere of trust and relaxation, enables the family to grow and develop as one unit.

8.3.4.1 Family time

Sharing a meal is associated with the family time. Gathering around the table to share a meal and converse embodies the family unit for David. Interesting topics get to be discussed and different opinions expressed. David enjoys long-drawn out mealtime conversations which take place in the atmosphere of trust and acceptance his family provides.

(p. 356; l. 177) “I don’t know, for me it’s [sharing a meal] my family unit, just sitting down and talking, just around the table.”

(p. 356; l. 183) “Yes, and increasingly we can talk for hours and hours about lots of different things, and we’re all very interesting in politics and music and so there’s never a shortage of arguments, but conversational. That’s just what I love, I love talking and arguing, and around the others is a lovely way to do it; with the family, where you can just trust in what each other is saying, I think. I think that’s the main thing.”

8.3.4.2 Different outlooks

David’s family went through some turbulent times recently and things did not work out between his parents. David believes that one of the reasons might have been that his parents talked too much about work at the dinner table so they never got any respite from it. His father’s new rule is that work should never be discussed at the table. Today, dinners at his parent’s respective places are entirely different. Leisurely suppers at his dad’s go on for about one and a half to two hours, comprising three dishes and ample conversation while dinners at his mother’s place are a lot more hurried and would last not more than thirty minutes. This discrepancy appears to illustrate a broader difference in attitude between David’s parents.

(p. 355; l. 126) “Yes, I think he and my mum talked about work too much at the table, and I don’t think they ever got a break from work. I think that’s probably one of the reasons why things didn’t work out, so as he’s trying to reshape himself that’s one of his new rules, he never talks about work around the table.”

(p. 355; l. 117) “Yes, well it depends really, at my dad’s a supper or a dinner will last typically about an hour and a half to two hours. That doesn’t mean we’re eating the whole time, that just means we’re at the table talking, and we’ll have three dishes in that time. At my mum’s, my mum is a lot more busy and so dinners will last maybe 30 minutes at most”

8.3.4.3 Growing together

However, for David, dinner times are all about the family coming together as one unit. A pleasant and relaxed atmosphere during mealtimes presents the perfect opportunity for dialogue. In turn, it seems inevitable that the daily exchange of ideas and opinions will help the family to grow together as one unit.

(p. 356; l. 180) “Yes, coming together as one unit, for years we were all fighting for ages, and it’s recent years we’ve all sort of grown up, including my parents.”

(p. 356; l. 191) “That just feels completely alien to me because the meal definitely does bring the family together, it’s the time that everyone just stops what they’re doing or stops worrying and you can grow as a family I think around the table. So many things get talked about and it’s inevitable, for my family it’s where we always make conversations if anything happened it’s over a meal.”

8.3.5 Summary

David’s eating habits as well as the meanings given to food and eating are largely related to family meals and this is particularly evident in the use of food as a facilitator during social interactions. The ability of certain foods to bring back positive memories and associated feelings is utilized during difficult times. Favourite meals from childhood is what David chooses to eat in order to comfort himself when stressed or under pressure. Since being fit and slim is important, David manages his weight through exercise and controlled food intake successfully negotiating the need to look and feel good with his love of eating. A degree of guilt is experienced when eating certain foods, like chocolate.

8.4 Analysis: Participant 2 - Jackie

Overall Jackie's experience of eating comprises four main themes: eating behaviours, the meaning of food/eating, an unsupportive environment, and family legacy (Figure 8.3). Although distinct, these themes are in a dynamic relationship. Eating behaviours which entail joyful participation, dieting and cravings, anxieties and eating alone represent Jackie's engagement with food and are influenced by her environment, the meanings she attaches to food and eating as well as her family legacy.

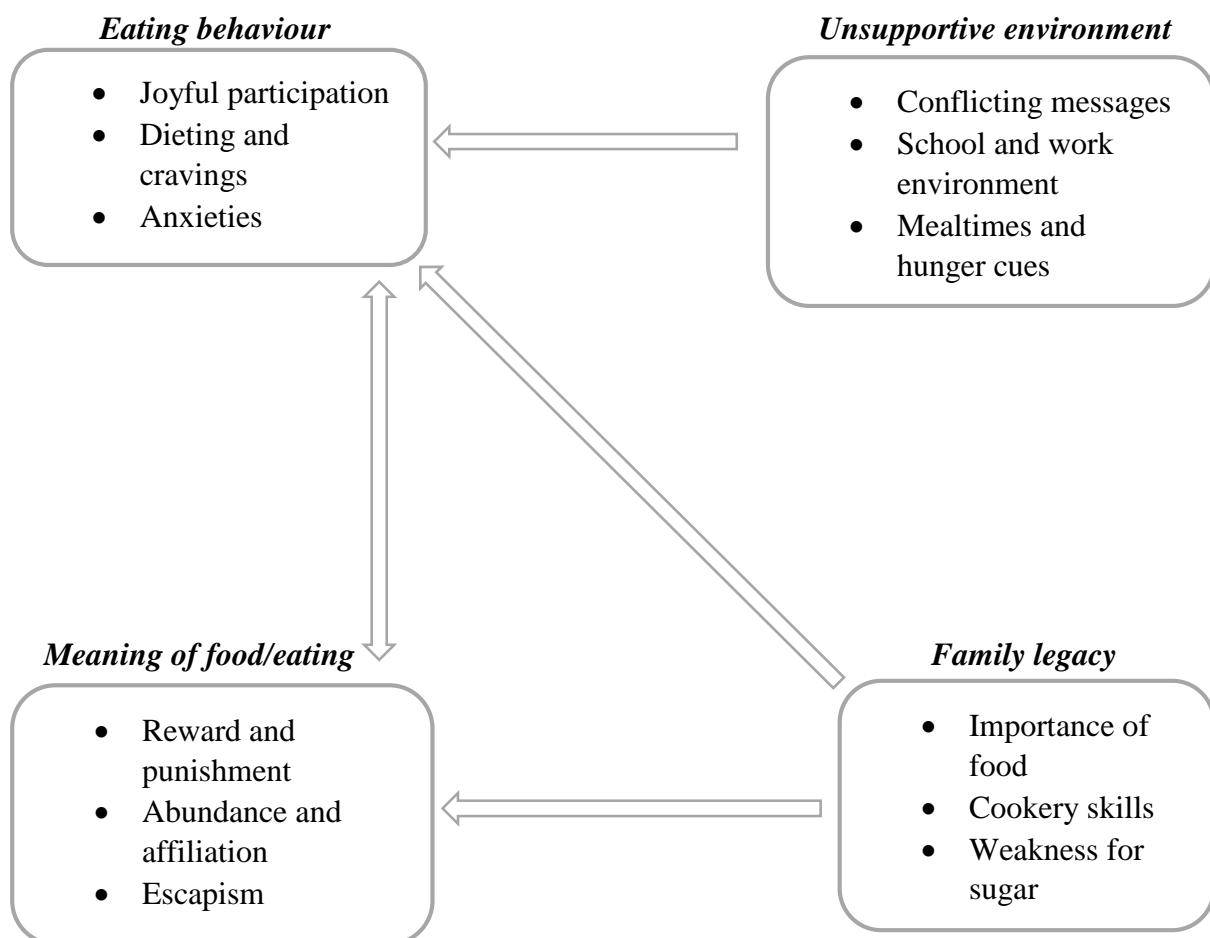
The environment in which Jackie lives and works does not seem particularly helpful when it comes to eating and food. It sabotages Jackie's efforts at modifying eating habits in order to cope with sugar addiction and weight issues. Furthermore, advice regarding diets and what constitutes healthy eating, although abundant is often contradictory. It appears that sugary foods are woven into the fabric of Jackie's daily life, both at work and leisure, which makes following a sugar free diet difficult. Since hunger cues do not coincide with prescribed mealtimes, additional snacking is a potential risk.

Family narratives seem to influence Jackie's eating behaviours as well as the association and meaning she ascribes to food and eating. The high importance allocated to cooking and eating is a part of her family heritage which exerts a considerable influence on Jackie's eating behaviours. Food and eating permeate all aspects of her life. The weakness for sugar seems to be a more challenging aspect of that heritage. The same legacy feeds directly into the symbolic meanings Jackie allocates to food/eating which are food as reward and punishment, eating as an occasion for bonding and opportunity for escapism.

Through her daily involvement with food, either as a partaker in the act of food sharing or as an individual trying to deal with food related anxieties and the challenges of dieting, Jackie continually reinforces the meanings she allocated to food/eating. In turn, the use of food as a reward and/or punishment, the affiliation of communal eating and a

possibility for escapism through food and cooking exert an influence on her daily eating behaviour. This makes the relationship between eating behaviours and the meanings Jackie ascribes to food and eating reciprocal and dynamic as well as particularly significant.

Figure 8.3
Main Themes – Jackie



8.4.1 Eating Behaviour

- Joyful participation
- Dieting and cravings
- Anxieties
- Eating alone

One of the most prominent themes in Jackie's account of eating experiences is her, at times, contradictory relationship with food. Eating behaviours seem to oscillate between the joyful participation in food sharing on the one hand and a search for that perfect diet which can offset the calorie intake on the other. Cravings accompany her dieting efforts and she is bound to occasionally give in. This seems to be particularly the case when tired, fed up or alone. Perhaps the most difficult thing for her to deal with is the importance Jackie allocates to food and eating in the first place. The associations between eating and relaxation, togetherness and pleasure makes diets and prescribed eating regimes quite challenging. Jackie also has some anxieties related to formal eating and portion size dating back to her early childhood experiences. These exert a subtler influence on her eating behaviour.

8.4.1.1 Joyful participation

Jackie's first pleasurable memory of eating dates back to her grandmother's big tea parties. Although the food was lovely and enticingly displayed on the table, it was the relaxed and friendly atmosphere of giving and sharing that made a big impact on Jackie.

(page 386; line 7) "On the other side, I have a [place name] side to my family and visiting grandparents, they would always have huge big tea parties and trolleys that used to squeak as they brought them into the room because it was laden with tea party food. That was a big family event but it was much more relaxed and a happier event, really"

(p. 387; l. 59) “Very sharing, giving, everybody wanting to offer things to people across the table and hands everywhere across the table, offering rather than taking.”

Being a willing participant as well as a provider in the act of food sharing is a continuing theme throughout Jackie’s life. It would appear that bonding in her life is facilitated and maintained through the interaction of passing food and the feelings of togetherness it creates. This is not surprising since eating together is one of the most fundamental and most deeply unifying of human experiences.

(p. 393; l. 282) “I think it’s all about getting together and having that interaction of passing food, try this, do that and people also bringing food along that they’ve made and contributed so we’re all working together”.

8.4.1.2 Dieting and cravings

The joyful participation in food sharing is contrasted by the ongoing search for that perfect diet which can offset the calorie intake. Constant struggles with weight issues and sugar addiction throughout her life paint a picture of a more challenging relationship with food. This strain is compounded by Jackie’s worries about diabetes which runs in her family. The pleasure she gets from eating is tainted with guilt and worries about health.

(p. 389; l. 137) “Sugar was the bane of my life in the sense of if I was tired, fed-up, I’d go for sugar, something sugary and, of course, I now realise that it’s probably the worst possible thing you could do because it makes you hungry to want to have something else.”

Jackie attributes the lack of concentration, mood swings and problems with memory she used to have to sugar addiction. At the present, she acknowledges the benefits of a sugar free diet, mainly as a restored “clarity of mind”.

(p. 390; l. 161) “It took about a good ten days to, actually, go through this process and come out the other side and suddenly woke up thinking, “Gosh, I’ve got a clear head, I’m okay, I can deal with this”. I realised then the impact that sugar does have on me because I did feel a lot better”

Although Jackie manages to stick with her new diet regime most of the time, cravings seem to persist. The need to treat herself with food hasn't gone away. Sausage rolls appear to have replaced sugary treats. Jackie seems particularly vulnerable to temptation when feeling tired. It is not surprising since tiredness makes the need for an energy boost high while resistance to temptation low. At least sausage rolls are not sugary, she rationalizes.

(p. 393; l. 288) "Yes, sausage rolls. That is my guilty food. It's not sweet and it is my guilty food that makes it feel it's not so bad because it's not sweet. It is my guilty food. It's what I would go for if I was really feeling really tired."

(p. 394; l. 308) "I think it's more noticeable now that I've got rid of the sugar that that is my weakness."

I could sense how difficult it is for her to alter the lifelong habits regarding sugar and food intake in general. It has also been extremely hard for Jackie to find a replacement for sugary treats to give to others. She feels that people expect a sweet desert at the end of a meal and a satisfactory substitute for sugar is proving hard to find.

(p. 391; l. 225) "I haven't got a really good replacement yet. It's a bit of struggle, to be quite honest".

The new eating regime also means that Jackie has to learn new recipes as well as look for food replacements which are not always easily available. The search for alternatives demands a lot of time and energy. However, it seems that the effort required does not quite match the satisfaction gotten out of it. Even when the change is accomplished, something doesn't feel quite right or normal.

(p. 392; l. 232) "It's quite difficult to reverse everything that you've been programmed and taught over your lifetime to try and make it seem normal. You don't have to think, usually, you can just start working on making things but when you're doing something completely new and constantly having to read or check how do you do this."

8.4.1.3 *Anxieties*

Jackie has some anxiety regarding formal eating that stems back to the cold formality and strict discipline around the familial table. She does not like eating in a formal setting since it brings about less pleasant memories from her childhood.

(p. 386; l. 3) “it was a very disciplined experience to eating that I experienced in family life, which was very strict, sitting around a table, sitting upright, having to eat everything on your plate, hold your knife and fork correctly and it was incredibly Victorian and very formal in the family life.”

(p. 392; l. 256) “I do have that cold feeling coming over me of that formality. I don’t like it at all. I don’t like formal eating.”

A meal for Jackie is a time for sharing and affiliation. Rapport and companionship are essential ingredients. A cold and formal atmosphere, devoid of warmth and friendship, can spoil a meal for her.

(p. 393; l. 266) “If it’s a cold environment, you just think, “That ruins it, really”. Cold in atmosphere, not cold in food. For me, I don’t mind formal eating but I do like an atmosphere that is warm and friendly.”

This anxiety around formal eating was reinforced by her mother’s perfectionistic tendencies. Jackie remembers the enormous pressure which used to accompany entertaining at home. Her mother, a cordon bleu cook, was focused on the accomplishment rather than relaxation and enjoyment which Jackie craved.

(p. 388; l. 76) “My mother, although she had this very strict approach, my parents did, she was very much a cordon bleu cook and would love to entertain but it was very stressful entertaining, very stressful, because everything had to be perfection. It was very much around perfection. It wasn’t that relaxed farmyard kitchen.”

Jackie also feels that she must finish everything on her plate and has to be very careful not to put too much food on the plate. Strictly enforced table rules during her childhood did not permit Jackie to leave the table until all the food on her plate was eaten.

Nowadays Jackie must be extremely mindful of how much food she puts on the plate since she is compelled to eat everything on it.

(p. 386; l. 25) “I just didn’t want some of the food on the plate and, of course, the rule was that you had to eat everything on your plate. It sticks with me today, that rule, I would say. I have to be careful that I haven’t got too much on my plate because I know that I have to eat everything on the plate.”

8.4.1.4 *Eating alone*

Jackie admits that she does not like to eat alone and would not normally make an effort to cook for herself. She would rather grab a snack on the go. I’m noticing here that “eating alone” contradicts the general picture of pleasurable eating. Does “eating alone” serve a different purpose? It seems more like a quick pick-me-up on the go. Eating alone is most likely to involve her “guilty foods” - chocolate and sausage rolls.

(p. 392; l. 243) “I like eating with people. I don’t like eating on my own. I really can’t be bothered to eat on my own unless it’s just a snack. That would be possibly when the evil sugars in the past have come in. It’s probably that I wouldn’t make anything, I’d just have some chocolate and a cup of tea instead of having proper food.”

Jackie feels that the preparation of food and cooking would take too much time and effort to make a meal just for one person. She does not like to cook either by herself or for herself. Snacking provides a solution that is easy, convenient and it also involves some of her favourite treats (e.g. chocolate).

(p. 392; l. 251) “Because I’m not that keen on cooking by myself or for myself so I wouldn’t be able to make a great effort to making a soup and chopping up all the vegetables and blending it all just for me. I’d just think, “Oh, it’s just me”. I’d grab a snack and have a cup of tea, which is not particularly good.”

Another interesting point here is that the real function of a meal for Jackie is to provide a pleasurable setting for interaction and bonding between people. This is what makes the effort

of cooking worthwhile for her. Eating alone, devoid of this communal aspect, seems to be a different experience altogether - just a quick snack on the go.

(p. 389; l. 125) “Funnily enough, it doesn’t really translate to my own eating in the sense that I like to make nice flavours and make other people happy but, if it was just me eating on my own, I wouldn’t bother to cook. I wouldn’t care, really, what I was going to eat. I would just snack on something. It is about the participation with other people that’s really important, I think.”

8.4.2 Meaning of food/eating

- Reward and punishment
- Abundance and affiliation
- Escapism

The meaning of food and eating is another important theme in Jackie’s experiential account. The associations and symbolic meanings assigned to eating and food are often the driving force behind her eating behaviours and are therefore closely related to them.

8.4.2.1 Reward and punishment

The contradictory meaning of eating/food for Jackie is evident in the use of food as both, reward and punishment. The reward is delicious food and punishment not being able to eat it (albeit for different reasons at different stages in life). The anticipation and gratification of a pudding is felt even keener when faced with the threat of not being allowed to eat it. Cravings are more intense when on a diet, temptation seems to be everywhere. Some of her childhood memories very vividly portray this conflict. Having to eat everything on her plate including foods Jackie really struggled with in order to be able to have pudding afterwards felt like punishment.

(p. 386; l. 30) “Yes. It was definitely a punishment. You weren’t able to have any pudding or anything nice afterwards until you’d eaten that. It was very strict.”
(p. 386; l. 34) “... the food that I didn’t like might have been something like dark cabbage or something like that or something that seemed indigestible to a young child.”

In order to lose weight and keep diabetes at bay Jackie completely altered her eating habits. She stopped eating sugar and all starch (wheat, rice and bread) although these are the foods she enjoyed most. Abstaining from her favourite foods and having to replace them with less appealing alternatives feels like a form of “punishment” today.

(p. 390; l. 176) “Cutting out wheat and rice. Wheat is unbelievable. People used to say to me, “Have porridge in the morning, it will keep you going all day”. I would have porridge in the morning and, by the time I got to work, I would be starving hungry”
(p. 390; l. 155) “The [place name] side has this diabetic side so I have to be quite careful and just cutting out sugar has a massive impact on me because I was, obviously, so addicted to it.”

At the same time food has always been a favourite reward and an anticipated treat, particularly sugar. Jackie remembers that sugar was associated with rewards since early childhood.

(p. 386; l. 34) “Yes. Absolutely. The reward food was the sugar”
(p. 390; l. 184) “I think sugar has always been a reward throughout and I think, even when we were doing our exams, and mum, again, was very strict, staying in our rooms to do our revision, my mother would bring up a cup of tea and a little Mars bar or something. It was always the sugar reward.”

Although, even now Jackie occasionally gives into sweets, her main treat has become a sausage roll. Interestingly, treating herself with a sausage roll seems to work in the same way sugary treats did in the past. The only difference is that Jackie feels less guilty since it is not a sweet treat.

(p. 393; l. 293) Interviewer: “Is it a treat in a different way from sugary foods or is it pretty much the same?”

(p. 393; l. 294) Jackie: “Yes. I think it’s the same. It just seems to make it feel better because it’s not sweet.”

8.4.2.2 Abundance and affiliation

Jackie has very pleasant early memories of tea parties at her grandmother’s house. In order to be welcoming, her grandparents would offer large quantities of elaborately prepared food to their guests. All that admiration of wonderful abundance displayed on the table had a great impact on Jackie as a child. Sharing this bounty with the nearest and dearest was a sign of affection and a cause for celebration. Food seems to be a symbol for both - abundance and affiliation.

(p. 387; l. 39) “It was quite different and it was very cosy, very warm and with lots of people circled around the table all in admiration of the creaking table laden with lots of goodies, along with things like the old-fashioned celery sticks that people used to have on the table with cheese. It was very traditional sort of food that they would put on and it’s very much part of the [place name] culture, I think, is to over-elaborate and over-feed people because it’s not right for people to come for a small tea. You should feel welcoming and give them a big tea. I can feel the room. I can smell the room.”

8.4.2.3 Escapism

Jackie enjoyed watching her grandmother prepare the food that the whole family would eat later. Jackie and her sister were allowed to experiment with food and cooking while her mother was out of the kitchen.

(p. 387; l. 73) “She would be making her pastry and things like that. That was nice to be able to sit and watch her making the food and then we’d all be eating it later. Those are good memories, actually, of food making.”

(p. 388; l. 92) “When she [mother] was out of the kitchen, she would allow us to go in there to experiment on our own so we could play around with doing anything we wanted in the kitchen. She wasn’t worried about that at all as long as she wasn’t in there. All those things that we’ve learned, it was very creative.”

Memories of food making are pleasant and have a significance for Jackie. Cooking is seen as a creative activity. It is relaxing as well as fully absorbing. Food seems to provide ample opportunity for escapism. Both, cooking and eating, creating and consuming the product, are pleasurable diversions from the trials and tribulations of daily life.

(p. 398; l. 105) “Yes, it’s very relaxing as well. It’s something very...It will take your mind away completely.”

(p. 395; l. 370) “I do associate food with pleasure. It’s integrated throughout my life, really.”

Jackie loves cooking and believes that people can be made happy through what they are eating. Through her food and cooking Jackie tries to provide moments of happiness for the people she cares about.

(p. 389; l. 117) “Part: I think it does have to be taste. I’m not as good at presentation as others so it is a lot to do with taste and making people happy, actually.”

Interviewer: “It’s to do with the mood as well, the mood you create with your food”

Jackie: “Yes. I don’t actually particularly enjoy cooking for myself but I do enjoy cooking for others and making people happy through what they’re eating.”

8.4.3 Unsupportive environment

- Conflicting messages
- School and work environment
- Mealtimes and hunger cues

The eating environment, as a part of a challenge to healthy/controlled food consumption, is a significant theme for Jackie. She feels that the environment is not particularly supportive. Contradictory messages regarding what comprises healthy food and eating add to the confusion. Situations like children’s parties are full of sugary foods and the

work environment does not seem a lot better. Another issue for Jackie seems to be the discrepancy between hunger cues and traditional meal times.

8.4.3.1 Conflicting messages

Jackie finds that there are a vast number of diets and conflicting recommendations regarding healthy eating. She chooses to experiment in order to find out what works for her. Nevertheless, the volume of contradictory information available can be confusing at times. This is particularly the case when what the government and the NHS advise goes against her personal experience.

(p. 395; l. 349) “I think the difficulty is the fact that there’s so much confusion from what the government and the NHS say you should do and that’s very much the low-fat diet. When I read something else and I try something else, this other way of eating and it’s clearly working and I’ve been to the doctor and had my cholesterol checked and it’s all fine. I’m eating high fat, not massive amounts of high fat but I’m taking away that wheat and the rice and the starch, just taking it away.”

Jackie believes that a certain amount of full fat foods in her diet keeps hunger at bay and helps sustain her for longer periods of time. Since she is getting the desired result, Jackie is prepared to stick to her full fat diet even though it goes against NHS recommendations.

(p. 390; l. 169) “Now, at the moment, and I’m not hungry all the time. Instantly I’m not hungry all the time. It means that I’ve lost a stone in weight.”

8.4.3.2 School and work environment

Jackie feels that the environment outside the home is not particularly helpful or supportive of healthy eating habits. She experienced this as a mother when her daughter was at school. Although she tried her best to control the amount of sugar in her daughter’s diet this was very difficult. Children’s parties and the school environment are sugar ridden and Jackie felt she was fighting a losing battle.

(p. 394; l. 337) “It’s very difficult. You are fighting a losing battle when they go to school. I insisted that she had school lunches because what she wanted, as an alternative, is sandwiches, crisps and chocolate like her friends had.”

(p. 394; l. 335) “She would still go to other people’s parties and come back with masses of sweets. I would try to avoid too many sweets in the goody bags and things like that.”

The work environment at the university campus does not seem much better. For every meeting there are coffee/tea and biscuits available. People bring in birthday cakes in order to celebrate and treat their colleagues at work. Although commensality of eating and drinking together helps bonding in the work place, these seem to consist of mainly sugary foods. I can see how challenging it must be for her to partake in such activities while trying to stick to her new eating regime at the same time.

(p. 391; l. 196) “The University is terrible. For every meeting you go to, you have tea, coffee, and biscuits. I’m completely immune to those now. I’m not at all interested in the biscuits. If somebody comes in with birthday cake, it’s very difficult to say no.”

(p. 391; l. 200) Int: “You give in to temptation, it’s not that you go out actively seeking the reward?”

Part: “No, I give in to temptation occasionally. I have to reign myself back in because I don’t want that addiction to grab hold of me again.”

8.4.3.3 *Mealtimes*

Another issue for Jackie is the discrepancy between traditional meal times and hunger cues. She feels that although this is how she used to eat until recently, following traditional mealtimes does not suit her.

(p. 389; l. 134) “It’s funny because I do think we have been programmed that you have to have your breakfast and lunch and main meal and, in actual fact, more recently I’ve realised, that you don’t really need that at all just through me trying to lose weight and cutting out sugar from my diet.”

(p. 389; l. 141) “I would have always said I would have to have breakfast because, again, I would have had to have sat at home and had breakfast. I was always brought up to have breakfast but, actually, I don’t need breakfast.”

She would rather have her main meal in the middle of the day than in the evening but working hours are not conducive for that. I wonder whether not being able to eat a substantial meal in the middle of the day, when she feels most hungry, results in more cravings and a higher consumption of snacks?

(p. 389; l. 143) “I probably need brunch/lunch more than anything else. As the afternoon goes on I don’t want so much food in the evening either. If that was me, that’s the way I’d work. I’d probably want something in the middle of the day in reality but working isn’t conducive sometimes to eating something sensible in the middle of the day”

8.4.4 Family legacy

- Importance of food
- Cookery skills
- Weakness for sugar

Family legacy seems to be another prominent theme in Jackie’s story. The high importance given to food and eating has fed down through the generations. Cookery skills are admired and passed on from grandmother to granddaughter. Unfortunately, it seems that some of the weakness for sugar have been passed on too, albeit inadvertently.

8.4.4.1 Importance of food

Eating and food seem to permeate all aspects of Jackie’s life. Mealtimes outline the shape of day-to-day living and provide occasions for bonding with friends and family. Breaking bread together is an act of closeness and intimacy for her. Many of Jackie’s memories revolve around “eating together”. Food is associated with pleasure and integrated throughout her life.

(p. 395; l. 363) “I suppose eating crosses all sorts of areas in life. I’m looking at the beach hut in the photograph there, the second one in is my beach hut and that’s where we would have family meals. I’d come from work, from here, and my mother would have my little daughter, when she was little, and she would have cooked a big casserole and we would heat it up and we’d sit and have meals. Everything in my life has been associated around those meal times down at the beach, eating with my friends down at the beach, eating with my family at the beach. Quite pleasurable times as well. I do associate food with pleasure. It’s integrated throughout my life, really.”

8.4.4.2 Cookery skills

Cookery skills are cherished and passed on as an heirloom of value in Jackie’s family. Her mother is a cordon blue cook and would teach her daughters cookery skills. Jackie and her sister were encouraged to experiment in the kitchen as children.

(p. 388; l. 87) “She was incredibly skilled at cooking and that has fed its way through to my sister and I and we enjoy cooking too.”

Jackie’s daughter was taught how to cook by her mother and grandmother from a very early age. Food and cooking are taken seriously. The three generations of females are accomplished and creative cooks.

(p. 388; l. 96) “When my daughter was born, when she was very little, we’ve got photographs of her in my kitchen with my mother teaching her to make pastry standing on a stool and she was only about that height and yet she was already being taught how to bake and cook. She was in full concentration.”

8.4.4.3 Weakness for sugar

However, it seems that alongside the love of food the same weakness for sugar has fed through the generations too. Jackie’s Mother, in her 80s, is now trying to cut out sugar. While aware of the benefits she finds this a bit of a challenge.

(p. 390; l. 189) “I think she [mother] now realises, she’s in her 80s. I was talking to her about cutting out sugar and she’s cut out sugar herself now and she can feel that difference as well. She struggles with that.”

Although Jackie made an effort to steer her daughter away from sugary foods, she has the same weakness for sugar. I wonder how much of that weakness for sugar had been passed down the generations inadvertently?

(p. 394; l. 325) “She has the same sugar thing that I have and it is something that I talk to her about to try and avoid the sugars because I think we were still brought up as sugar as treat from... My parents would take her out and cover my holidays and look after her. Inevitably, there would be sugary treats happening all the time. I think, in the same way that my mother did that to me, there’s no doubt that happened with my mother and her granddaughter as well.”

8.4.5 Summary

Food and eating permeate all aspects of Jackie’s life. Her eating behaviours as well as meanings ascribed to food and eating are imbued with family narratives. The high importance given to cooking and eating and the apparent weakness for sugar form a part of her family heritage. Jackie feels that her attempts at changing eating habits in order to cope with sugar addiction and weight issues are sabotaged by an unhelpful environment. Being surrounded by tempting foods whether at work or leisure does not seem particularly helpful. There is a palpable sense of a continuing struggle. The abundance of contradictory advice regarding diets and healthy eating add to her feelings of uncertainty and confusion.

8.5 Analysis: Participant 3 - Molly

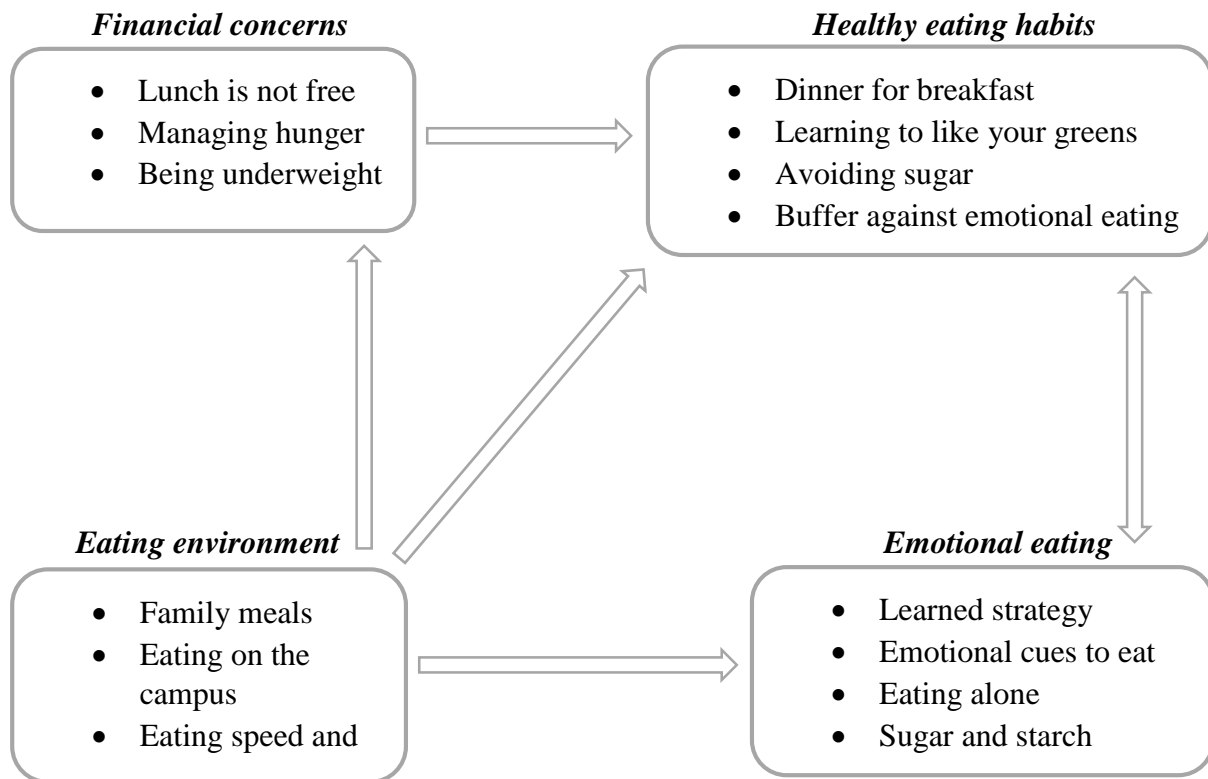
Molly's experiential account of eating comprises four main themes: financial concerns, eating environment, healthy eating habits and emotional eating (Figure 8.4). First year undergraduate Molly, embarked on a new chapter in life. This resulted in several new and different experiences related to food and eating. Managing her own finances for the first time, Molly decided to skip lunch on a regular basis in order to save money. As a result, she is having to find a way to deal with hunger and the issue of being underweight.

Since she came to the University Molly's eating environment has radically changed too. Eating on the campus is very different from eating at home in terms of food as well as surroundings and company. This has had some effect on the speed of Molly's eating as well as the amount of food she is likely to consume on a day-to-day basis.

Healthy eating habits, she was given at home, comprising eating the main meal of the day in the morning, plenty of vegetables, greens in particular, and avoiding sugar use to serve as a buffer against emotional eating in the past. Now, they are being tested against the new circumstances and financial constraints.

Demands of the new environment and lifestyle are putting pressure on Molly and issues with emotional eating may surface again. Emotional eating as a learned strategy to cope with adverse emotions, characterized by the need to eat alone and cravings for starch and sugar is a continuing issue for Molly. Problems with "stress eating" always coexisted with her healthy eating habits in a dynamic, give-and-take relationship. Demands of the new environment and lifestyle are bound to stress this relationship even further.

Figure 8.4
Main Themes – Molly



8.4.1 Financial concerns

- Lunch is not free
- Managing hunger
- Being underweight

Molly is one of the new students living on the university campus. She is given breakfast and dinner for free but at lunch time Molly has to fend for herself. She opts to skip lunch on a regular basis trying to save as much money as possible. To stave off hunger Molly drinks plenty of water and snacks until dinner time. Although slightly underweight she

prefers not to think about her weight in this context. Being underweight is not as bad as being overweight she rationalizes. In fact, Molly speculates that being underweight at her age might serve as some kind of insurance against being overweight in later life.

8.5.1.1 Lunch is not free

Since lunch is not a free meal for the students on campus Molly chooses not to have it in order to save money. Molly's strategy for coping with hunger is to drink plenty of water and have small snacks until dinner time. Presently financial concerns seem to outweigh any other concerns she might have.

(page 417; line 17) "Nowadays I try not to eat lunch because lunch isn't free and at the moment I am trying to save as much money as I can. I am having small snacks throughout the day to keep myself going until we get to dinner."

Although a few kilograms underweight, Molly prefers not to think about her weight in this context. Being underweight and skipping lunch do not seem to correlate in Molly's mind. This seems quite surprising considering that healthy eating was such a prominent theme in our conversation.

(p. 423; l. 231) Int: "How do you feel about knowing you are slightly underweight and still skipping lunch?"

Part: "I don't know. The two things don't really correlate, I don't know."

It seems that Molly has made a choice (although it might not have been a conscious one) between two conflicting needs, eating lunch and saving money. She prefers to keep concerns about weight to the back of her mind and focus on saving money for other things. Molly keeps any misgivings at bay by not connecting these two issues in her mind.

(p. 423; l. 234) "They are two separate things. I am underweight, but also lunch is not free. I am not shockingly underweight, it doesn't disturb my health. I am still fine in terms of my health and wellbeing. It is like one of those things that is the back of ... It is just because you said it and I was like, "Oh yes, this might be useful." I don't know, for me the two things don't connect. They should, but they don't."

When this contradiction surfaced during our conversation, Molly rationalized that not being hugely underweight meant that her health and wellbeing are not compromised by the choice she made. However, it is doubtful whether Molly can sustain eating only two meals a day for the duration of her studies without any consequence to her health and progress.

8.5.1.2 Managing hunger

At the moment managing hunger is a real issue for Molly. Already an hour after breakfast she is feeling hungry. This is probably exacerbated by the fact that Molly knows that she will not eat a proper meal again until the evening.

(p. 417; l. 27) “Yes, an hour after breakfast I am like, “I am dying.” It is great, I am working my way through it. I am drinking a lot more water like I used to just to try and fill the void before dinner. Working on it.”

Molly can become sleepy in lectures or a little irritated at times. Although reluctant to attribute these symptoms to hunger, she goes to Essentials (an on-campus store) for a pack of sweets or crisps in order to make herself feel better. Even though Molly knows that this might not be the healthiest of options, sugar seems to work particularly well for her when feeling annoyed or irritated.

(p. 418; l. 39) “I think sometimes it makes me sleepier for my lectures, but I can’t tell if that is the lack of food or just the lecture itself. Sometimes I feel myself getting tired or a tiny bit irritated at which point I will go to Essentials and get a packet of crisps or a packet of sweets. Usually when I am very irritated I go straight for sugar, probably not healthy.”

Molly is not entirely sure whether “feeling better” after consuming sugar is actual or just in her mind. However, sweets seem to help provide an energy pick-up so she does not feel as down as before. It is likely that if Molly continues to skip lunch regularly she will become reliant on sugar as an energy boost in the middle of the day.

(p. 418; l. 46) Part: “It makes me feel better, but I think that is just my mind as opposed to it actually making me feel better.”

Int: “In what ways does it make you feel better?”

Part: “I don’t know. I think it just picks my energy up a bit so I am not feeling as down as I was before.”

8.5.1.3 *Being underweight*

Although Molly is aware that she is slightly underweight this does not seem to worry her too much. Initially, she was surprised and concerned to find out that she is below normal weight.

(p. 423; l. 219) “I am a bit underweight, a few kilograms underweight.”

(p. 423; l. 224) “I didn’t think it was anything and then when I figured out I was actually underweight I was like, [she makes a surprised face] I didn’t think I was.”

After being reassured by her father, Molly stopped worrying and saw her weight in a new light. She now perceives being underweight as much better and healthier than being overweight. Also, it seems that Molly believes that being underweight at her age will serve as some sort of protection against being overweight in later life.

(p. 423; l. 226) “My dad was like, “It doesn’t matter.” I am only a few kilograms underweight, so he was like, “Don’t try and put on any more weight, just let it happen.”

(p. 423; l. 251) “Yes, it was something that disturbed me at first. He would expect me to worry, so he was like, “It is okay, it is not bad thing.” It is better that I am underweight and able to put on weight as I grow up. I am probably going to be this height for the rest of my life. If I stay a bit underweight now so that later when I have given birth I am not freaking out about my weight. It is better to be underweight than to be overweight and be freaking out about my health, but that is fine, it is okay.”

Molly also thinks that being underweight is something that makes her interesting and different. It sets her apart from others and provides a good topic for conversation. She might work her way to a normal weight in the future but for the time being Molly prefers not to think about it.

(p. 423; l. 238) “I don’t mind being underweight. It is one of those things about me that I get to tell people like when they find out I am black and I don’t eat chicken they are like, “Oh my god, what is wrong with you?”

(p. 423; l. 245) “Yes, I don’t look underweight. If you say it people are like, “Really? No way.” Maybe one day I will eat myself back to a normal weight, I don’t know. It is not a conscious thing, I don’t think about it a lot.”

8.5.2 Healthy eating habits

- Dinner for breakfast
- Learning to like your greens
- Avoiding sugar
- Buffer against emotional eating

Molly believes that she was given a good start in life regarding healthy eating habits. Her family was very concerned with eating healthily, especially when her father became the main cook in the household. Having the main meal of the day in the morning, light supper and a lot of greens were the main features of her family’s new diet. Although Molly has some issues with emotional eating, she believes that being given healthy eating habits at home provides at least a partial barrier against “stress eating”.

8.5.2.1 Dinner for breakfast

Molly’s father had to deal with being overweight in the past. He is adamant to spare his children from having to go through the same struggle. When he became the main cook in the family, everyone’s eating habits changed. Breakfast became the main meal of the day, substantial and varied, while the evening meal was a lot lighter.

(p. 418; l. 8) “Then he [father] went on a health kick and now we do dinner in the morning. We have pasta, sausages and vegetarian and we have that all in the morning and then in the evening we will have something lighter like chips or salad and fish. He has changed the way that we eat.”

(p. 429; l. 457) “I think it is the variety of breakfast. I think with my dad he would cook what was there. One day it might be pasta and sausages, one day it might be spaghetti and schnitzels or rice. He changed it up.”

Molly believes that her healthy eating comes from her parents. Her father’s difficulties with being overweight in the past are a significant influence here. Molly’s father is trying to establish eating habits which will keep his family slim and free from worries about weight.

(p. 422; l. 215) “I think my main health thing stems from my parents. They tried to eat healthily and then my dad gained a load of weight just before I was born or a bit before I was born. He has been trying to lose it, he was losing it but in a healthy way. “I don’t want you to have to be the way that I was and then now be struggling. I just want you to stay slim.”

8.5.2.2 *Learning to like your greens*

Eating ‘greens’ forms a substantial part of the healthy diet in Molly’s family home. Although she did not always find vegetables particularly enjoyable, Molly made a considerable effort to learn to like them. With her father’s encouragement Molly first got used to the idea of eating less palatable vegetables. Subsequently, she managed to accept and even learn to like their taste too.

(p. 422; l. 188) “I am coming around to them [vegetables] because my dad is like, “You need to eat your greens.” He is very persistent about you eating vegetables, so I am learning to like kale that is coming around into a favourite. I like spinach, it is better in a sandwich than it is by itself, but I am learning to like it. Most other vegetables I just put up with, I know I have to eat them so I go for it.”

(p. 422; l. 195) “You get yourself used to how it tastes, you get it into your mind that this is what you have to eat. When you see it this is something you should try, you should put it on your plate and try and eat it. It is good for you, it is healthy and it benefits you so then you are attempting to get yourself used to the idea of liking it and having to eat it.”

Most of the time this strategy works really well for Molly. She often develops a genuine liking for a vegetable, like kale and spinach, over time. However, the taste of some vegetables remains outside of what is desirable despite her best efforts. This is of little concern to Molly since her approach seems to work with most vegetables, most of the time.

(p. 422; l. 200) “Most of the time, it works for a lot of vegetables. I find it helps to get used to [them].”

(p. 422; l. 208) “It sounds very stereotypical but I can’t do it. I can do broccoli and you can put cheese or salt on it to make it better, but Brussel sprouts are - no.”

8.5.2.3 *Avoiding sugar*

Molly has a bit of a sweet tooth. Although she enjoys cakes and sweets she tries not to eat sugary foods. In family get-togethers Molly tries to make everyone think that she does not like cake and in that way discourages them from offering a slice. Thus, not being tempted with a piece of cake Molly manages to stay in control of her sugar cravings. This strategy seems to work well for her.

(p. 421; l. 177) “Then I realised I have a bit of a sweet tooth. I do like cake, but I try not to eat it. I say a lot to my family, “I am not a cake person.” Every time we get together there is always cake and I can’t eat the cake”

Molly is quite thrifty too. Since sweets cost money to buy, they are not as healthy, and they cause her skin to break out, Molly decided to “stress eat” celery during the exams period this year.

(p. 419; l. 84) “Yes. (Laughter) I am trying not to. I am a very frugal person, so it does cost money to keep buying sweets. Also health and trying to keep my face clear and stuff. I shouldn’t eat so many sweets, so then I will try and eat other things. For my exams this year I was eating celery instead of sweets.”

Although Molly would generally reach out for either sugar or starch during stressful times, eating celery with hummus instead of sweets seemed to be quite effective on this

occasion. The fact that celery is one of Molly's favourite vegetables may have contributed to its effectiveness.

(p. 419; l. 89) "I don't know, I like celery a lot. It is a weird food, but I really like it especially with the chickpea hummus. When I was revising I would make myself go to celery instead of going to something sweet."

8.5.2.4 *Buffer against emotional eating*

Molly thinks that she grew up in a health-conscious environment and was given a good start in life regarding healthy eating habits by her parents. Although aware of having some issues with emotional eating, Molly believes that her eating is healthy overall.

(p. 427; l. 385) "I think we had a lot of vegetables growing up. My family was like, "We are going to be the healthy family." We had a lot of vegetables on everything."
(p. 428; l. 433) "I think the stress eating isn't healthy, but the rest of it the way that we used to eat and form our diets I am glad that we had a healthy look into it as opposed to a lot of other people who don't eat very well."

Unlike people who were not as fortunate to have healthy eating habits established in their childhood, Molly needs to be quite upset to resort to emotional eating. Molly believes that the healthy eating habits she was given in childhood serve as a buffer against emotional eating now. Although emotional eating occasionally occurs, it would take a few steps for Molly to get to the point where she will break the rules and give into "stress eating". It is also likely that she would be able to return to her normal way of eating sooner than someone who does not eat as healthily on a day-to-day basis.

(p. 428; l. 438) "I don't think they would have that mind-set where they say, "This food isn't good for me, so I am not going to eat it." If you were used to always having chips or beans on toast, if that was your thing and that is what you have always had and you have never had vegetables then it is easier for you to turn to that when you are stressed or upset. I guess for me it is a few steps to get to where I am like..."
(p. 429; l. 444) "Yes, I have to be very stressed or upset to go for it."

8.5.3 Emotional eating

- Learned strategy
- Emotional cues to eat
- Eating alone
- Sugar and starch

Emotional eating becomes a real issue for Molly at times of stress and adversity. Although she regards eating habits learned in the family home to be healthy and desirable overall, there seems to be a degree of inconsistency. Molly's mother often relied on food in order to de-stress after work. Eating as a stress relieving strategy seems to be a behaviour pattern Molly learned at home. Eating alone, as well as a preference for sugary and starchy foods are accompanying features of her "stress eating" habit.

8.5.3.1 Learned strategy

Molly is aware of the fact that she occasionally relays on food to manage adverse emotions. She believes that eating as an emotion regulation strategy is something she learned quite early on through observing her mother.

(p. 418; l. 50) "When I did my GCSEs I used to stress eat, I was good at stress eating. I am trying not to stress eat, but it is a habit that keeps coming back. I think it was something I watched my mum do when I was younger."

Molly's mother used food in order to de-stress after work on regular basis. Since food achieved the desired result for her mum, Molly assumed that it would work for her too.

(p. 419; l. 76) "My mum works as a school teacher, so she is very stressed all the time. Usually when she comes back from work after she has said hi to everybody and stuff she will sit in her bed and she will have a packet of crisps or a packet of Skittles. She will sit there and she will be on eBay or watch whatever show she wants to watch and it is to calm herself down after the day. I guess watching her do that I am like, "it seems to work for her, maybe it will for me."

In the beginning Molly used to rely exclusively on ‘pear drops’ to achieve the desired improvement in mood and the feeling of well-being. However, after a while this habit has transferred to any food. Thus, what used to be just having a few ‘pear drops’ in order to feel better, has become an emotion regulation strategy with food in general.

(p. 418; l. 57) “Now it is any food. It used to just be pear drops, pear drops used to be my thing.”

(p. 418; l. 59) “They are like a pear shaped boiled sweet covered in sugar. I used to have those all the time and then the corner shop stopped selling them, so I realised it didn’t make sense for me to keep eating the same sweet.”

8.5.3.2 *Emotional cues to eat*

Emotional cues to eat seem to be generally the same and therefore easily recognisable for Molly. Stress, irritation and anger serve as prompts to eat. Through the pleasant taste and distraction, food brings a wanted relief from adverse emotions. However, the respite from these unpleasant feelings would last only for about an hour at which point Molly would have to look for a different snack.

(p. 418; l. 54) “It is just whenever I feel stressed, a bit annoyed or a bit angry I reach for food as a way to make myself to feel better.”

(p. 418; l. 67) “I would feel irritated and stuff before. I would have to leave my house to walk to the corner shop and on the walk there I would get fresh air and whatnot. Then I had the sweets, I ate the sweets, they taste so nice and it made me feel slightly better.”

(p. 418; l. 71) “It would last for an hour maybe and by then I would have to reach for a different snack, it would be dinner time or I would be busy studying by then.”

Molly believes that eating/food gives her the necessary “time-out” from difficult situations and emotions. Eating sweets was her coping mechanism during a stressful period when Molly’s father was in hospital and she had to cook for the family while doing her A-levels. Eating sweets has given Molly a needed break and a pleasurable time-out allocated

just to herself. The fact that this stress relieving strategy had been so effective will make it harder for Molly not to resort to eating sugary foods during challenging periods in the future.

(p. 427; l. 403) “It is like a timeout thing, so when my dad was in hospital at this time last year. He was in for about a month and a bit and because my dad was the one who feeds us the most and stuff then it was on me to make sure my brothers ate because my mum worked long hours.”

(p. 428; l. 410) “I used sweets as a coping mechanism to deal with the stress of having to feed them as well as trying to do my A-levels.”

8.5.3.3 *Eating alone*

Another important feature of Molly’s emotional eating is the need to eat alone when upset. In all other circumstances she would prefer to eat in the company of other people. However, when unhappy or despondent Molly chooses to have a take-away and eat in her bedroom.

(p. 425; l. 297) “They have little takeaway boxes for us. If I was really upset I would get a takeaway and then just go up to my room to eat.”

(p. 425; l. 309) “Yes, I don’t want everybody to ask me what is wrong and how I am feeling and stuff. I would just want to eat alone by myself for a bit. I think that is generally how I tend to deal with being upset.”

Molly does not like to face the world in times of weakness. She does not like to be asked how she is feeling and to have to explain what is wrong or pretend to be fine. When upset Molly prefers to “lick her wounds” alone. At that time food serves like a blanket, it comforts and nurtures her until she is ready to face the world again. Eating provides an effective distraction from the cause of distress while tasty foods offer the experience of sensory pleasure at the same time.

(p. 425; l. 325) “Then the food is like a blanket. I don’t need to fake being chatty to eat, I don’t have to pretend that I am okay and I don’t have to be okay to eat my food and just enjoy the food itself.”

(p. 426; l. 329) “Yes, it is a good distraction from everything that is going on and it is a good reward.”

8.5.3.4 *Sugar and starch*

Molly believes that food/eating helps in stressful situations by providing a time-out from distress as well as enjoyment through their pleasant taste. It seems that some foods, like celery, give her the time necessary to restore clarity of mind through the temporary distraction, while sweets offer the experience of sensory pleasure as well as diversion from unpleasant states.

(p. 419; l. 98) Int: “What do you think it is that helps, which part of eating? Is it the taste, is it just distraction or is it the chewing itself? What do you think brings that momentary relief from stressful situations?”

Part: “I don’t know. I think maybe with the sweets it was the taste. I think with the celery it could be definitely be that it was just distracting me for a minute and giving me time to clear my head whilst eating. I don’t know, I think it is more of a distraction than anything else.”

If given a choice of foods to eat when in a stressful situation, Molly would opt for foods like cake, crisps and sweets. Sugary and starchy foods seem to be more effective as stress relievers for her.

(p. 426; l. 365) Int: “Are there foods you would gravitate more towards in these situations?”

Part: “I guess starchy things. Things like chips and pasta and really, so many things. So with already sweeter things as opposed to savoury, more like cake and sweets as opposed to food that you would eat as a meal.”

(p. 427; l. 370) “If I had my own choice it would probably be cake, crisps or sweets probably.”

Molly speculates that because her family did not get to eat a lot of sugary foods when growing up, sugar might be such a powerful reward now. Although not sure why, Molly admits that eating sugar tends to make her feel better every time she eats it. Not surprisingly, such a powerful “feel-good” stimulus as sugar seems to be rather difficult to resist in times of adversity.

(p. 427; l. 398) Int: “So what is it about sugar then that makes it such a powerful reward?”

Part: “I don’t know. I remember we didn’t have much of it growing up. Now it works as a reward because I am not used to having a lot of sugar. Then also generally eating sweets makes me feel better. I don’t know if that is a genuine thing or not.”

(p. 428; l. 415) “You have moments of very stressful times and using sweets to cope with it always seems to work every time.”

8.5.4 Eating environment

- Family meals
- Eating on the campus
- Eating speed and amount

Molly has recently joined the University which resulted in a number of changes to her eating environment. Family meals were fun and comfortable, everyone following the healthy eating plan devised by Molly’s father. But now, meals on campus are more conventional and eating in the company of people she barely knows is not quite as relaxing. Also, Molly skips lunch regularly to save money. The changes in her eating environment have had some effect on Molly’s eating behaviours and their outcomes. These are particularly evident in the speed of eating and the overall amount of food consumed.

8.5.4.1 Family meals

Mealtimes at Molly’s familial home were eaten together. This provided a relaxed atmosphere full of fun and jokes creating an enjoyable setting. Family members relished being together, the food was delicious and everyone had a great time. Mealtimes equated to happy times for Molly and her family.

(p. 420; l. 120) “I think my family is the kind of family where we always like to try and eat together. We are all at the dinner table and there are loads of jokes, it is like a fun setting.”

(p. 420; l. 131) “Everybody is around and it is very calm and very relaxed in my family. We love to make jokes and embarrass people. We love being together, so when we eat everybody is happy. The food is good food and we have a great time.”

Although family members enjoy being together, they would not necessarily talk to each other during the meals. On some days, listening to music or watching things on an iPad, was a part of the mealtime scenario. Being together, as in occupying the same space and having awareness of each other’s presence, seems to have been enough. Conversation was not absolutely necessary.

(p. 420; l. 139) “Depending on what day it is usually we will have music in the background or sometimes everybody will just be watching things on their iPads and stuff. It is the fact that we are together, we are like a close family so it is nice being together. Even if we aren’t necessarily talking to each other it is nice to be together.”

Over time Molly learned to put up with most foods, even if she does not particularly like them. However, home food remains her favourite food to eat and for Molly Caribbean food and fruit is the greatest food of all.

(p. 422; l. 182) “You kind of learn to put up with other foods that are around like your pasta and your rice, plain rice and plain pasta with tomato sauce. You learn to put up with everything else, but to me the Caribbean food and then my fruit are the best foods to eat.”

8.5.4.2 *Eating on campus*

Breakfast at Molly’s house was the main meal of the day. Substantial and varied, her family breakfast was very different compared to a more conventional, hotel type breakfasts available on campus. Molly is missing the variety of her father’s cooking. Eating the same thing every morning can get quite tiring at times.

(p. 417; l. 15) “It is more like a hotel breakfast where we have beans and hash browns and stuff. You can have cereal and whatnot as opposed to having pasta and stuff. It is very different.”

(p. 429; l. 461) “Yes, whereas with breakfast here it is the same thing every morning. So you are getting tired of having to have the hash browns and the beans.”

Also, dinners on the university campus are a lot heavier than Molly is used to having at home. Apart from chips, carrots and peas there are not many vegetables available. Having no greens or salads on her plate seems to be a difficult adjustment for Molly to make.

(p. 417; l. 19) “Now dinner is a much heavier meal than it used to be and I think my body is still getting used to it.”

(p. 429; l. 480) “That is a bit weird not having the vegetables that I am used to, it is a weird adjustment to make. I feel like there should be something green on my plate. When I look down there is only whatever the main meal was and then a bit of chips and then a bit of the carrots. I am like, “There should be something green on my plate.”

Molly likes to eat in the company of other people. She is fine to be by herself at other times, but mealtimes Molly prefers to share with other people. This is especially the case in the social setting of the University. However, only four weeks into the term, Molly does not feel entirely at ease while eating with her new friends.

(p. 420; l. 124) “It is just I don’t know them as well. We only met four weeks ago, so I don’t know them as well. I don’t necessarily feel as comfortable as I do with my family.”

(p. 428; l. 419) “Yes, I don’t like to eat alone. I like to be in a group of people at least when I am eating. The rest of the time I can be by myself and be fine, but I think food especially because where we eat is such a social setting and if you are eating by yourself it would be a bit weird.”

Another interesting point here is that Molly believes that just sitting down and eating a meal is a waste of time. Unless she is socially engaged, Molly will try to occupy herself in some other way while eating. Consequently, her mealtimes are not dedicated to just eating, they are always accompanied by either social interaction or another activity.

(p. 421; l. 158) “I watch quite a lot of series and I am trying to squeeze them in with attempting to be social and having to go out to eat and go out to do different clubs and different societies. I am trying to balance everything. I feel like if I am just sitting

down eating and I am not watching something or I am not occupying myself in some other way that I am wasting time.”

8.5.4.3 *Eating speed and amount*

Although naturally a slow eater, Molly tries to keep up with her mealtime companions. Therefore, the speed of her eating depends largely on who she is eating with. However, if the food is really delicious Molly is prepared to make an exception and be the last person to finish. In order to savour the taste of the food for as long as possible, she will take her time regardless of her company.

(p. 424; l. 260) “I guess who I am eating with. If I am eating with somebody who eats slowly I don’t have to try and eat as quickly to finish the meal.”

(p. 424; l. 267) Int: “You try to follow suit and keep up with the company around you?”

Part: “Yes, but if the food is really good then I will just take my time and I don’t mind if I am the last person left. It is okay, they will wait for me probably.”

The amount of food Molly used to eat at her family home was dependant mainly on the quantity of food available. The finite amount of food had to be shared evenly between five family members which predetermined portion sizes. Here, on the campus, buffet style mealtimes leave the portion size to personal choice.

(p. 424; l. 280) “For example at home if somebody cooks in a pot and there are five of us, so you have to do the math. You can only have a certain amount of food so that everybody else can have a lot of food as well if that makes sense. You have to share it out evenly between the five of you.”

(p. 424; l. 285) “Yes, whereas at uni that is not really a problem because it is like a buffet and you can have as much of it as you want. Then it becomes your choice.”

If the food is really good, in terms of taste rather than nutritional value, Molly will eat more. She will take a bigger serving of tasty food in order to extend the enjoyment and experience as much of the sensory pleasure as she possibly can.

(p. 424; l. 273) “I think it depends on the quality of the food. If I know it is good food I will probably take more.”

(p. 424; l. 276) “Because I want more. If it is good food I want to experience as much of it as I can.”

Int: “Is it the taste that drives it or good food in terms of nutritional value?”

Part: “The taste.”

In addition, if she is upset or despondent Molly will tend to eat more food. Since food serves as a distraction and comfort for her, when stressed Molly will take a larger portion of food. In this way she will try to extend the time of relief and comfort the food is likely to provide.

(p. 425; l. 295) “I think I am that kind of person that if I am upset I am going to eat more food. It is like the whole stress eating thing where food is a nice distraction and comfort for me. I think if I was that upset I would get more food”

8.5.5 Summary

Molly believes that she was given healthy eating habits at her family home. They comprise eating the main meal of the day in the morning, plenty of green vegetables and cutting down on sugar. The healthy eating habits are juxtaposed to emotional eating she also learned at home, from her mother. Hence the problems with “stress eating” always exist alongside healthy eating behaviours in a dynamic, give-and-take relationship. The strains and stresses of her new lifestyle as a university student are challenging Molly and issues with emotional eating are resurfacing. Her healthy eating behaviours are being tested against the pressures brought on by the new circumstances and financial constraints.

8.6 Analysis: Participant 4 - Nicola

Nicola's experiential account of food and eating is rich as well as complex. It comprises four main themes: the meaning of cooking, the meaning of food, beliefs and attitudes and emotional eating (Figure 8.5). Cooking plays an important role in Nicola's life. It is as much a playtime as it is a way to de-stress after work. Cooking allows Nicola to engage in a creative activity which does not accumulate too much clutter. The foodstuffs are given away as consumable gifts to friends and family. Nicola enjoys both the creating and the giving aspect of food making.

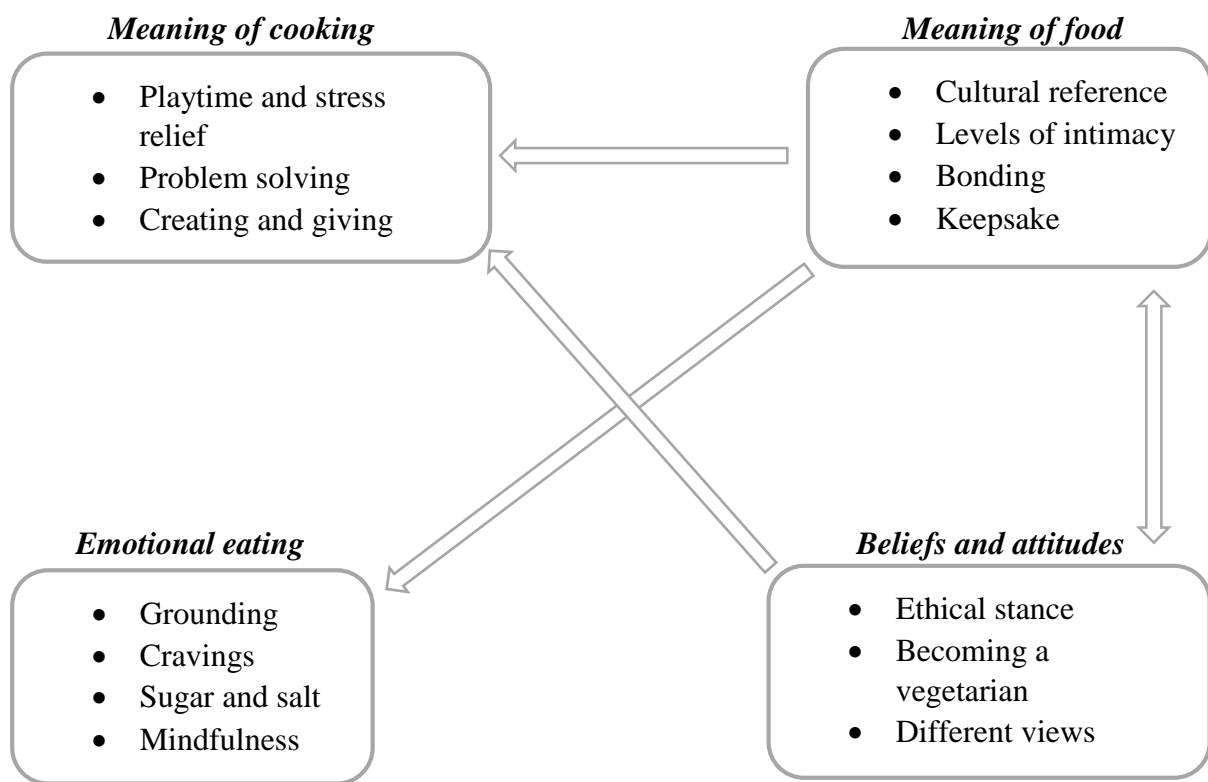
When travelling Nicola pays special attention to different foods and local cuisines. She believes that one way to get to know people and the culture is through their food practices. Eating customs and traditional dishes provide a frame of reference. Sharing food symbolises bonding and togetherness. It is associated with the closeness between family members and good friends. On the other hand, meals can imply different degrees of intimacy. Having to share food in stressful circumstances or with people who are not as close, can be awkward at times. Breakfast represents the most intimate meal for Nicola since it is shared only with the people she loves. The recipes she has been given in the past serve as reminders of people and relationships.

Nicola is very interested in the ethics of food production. She tries to eat seasonal foods that are locally produced whenever she can. Although vegetarianism was imposed on her when she was a child, Nicola grew into it over time. She believes that becoming a vegetarian was a result of a natural progression and she is fully committed to it now. Although aware that people have very different ideas when it comes to food and eating, Nicola's own motto is "all things in moderation".

Cravings and emotional eating are a significant feature in Nicola's experiential account. Food and eating are used for the fulfilment of other needs. At times Nicola uses food

as a way to connect to her own body as well as the environment. Strong cravings are associated with specific moods and mental states. Stress and irritability serve as emotional prompts to eat and foods high in sugar or salt are her usual go-to choices. Recent attempts to eat more mindfully has resulted in a better awareness of her bodily cues, satiety and hunger in particular.

Figure 8.5
Main Themes - Nicola



8.6.1 *The meaning of cooking*

- Playtime and stress relief
- Problem solving
- Creating and giving
- Keepsake

Cooking is ‘playtime’ for Nicola. The fun of selecting food ingredients and combining their textures, colours and flavours is fully absorbing and relaxing at the same time. The process of beating and kneading dough while baking can help release some of the pent-up energy after a stressful day. Cooking is also a way for Nicola to express her creativity as well as her problem-solving abilities. Keepsake recipes serve as reminders of people and times gone by.

8.6.1.1 *Playtime and stress relief*

Cooking is a ‘playtime’ for Nicola. She gets to let her hair down and have a good time playing with food ingredients. Combining different flavours, textures and colours is as much a creative outlet as it is a fun time. Getting her hands messy while slicing, chopping and squashing can be quite liberating. If Nicola feels tense, making bread will help release some of the pent-up energy. Beating, kneading, and squeezing the dough seems to be a good way to de-stress. The enjoyment Nicola gets from cooking serves to help her unwind and relax after a busy day.

(page 477; line 768) Yes, I think it is like play time. Flavours, textures and colours. I get to play with things, I get to stick my hands in them and make them messy, chop things up and squish things together. Making bread is a lot of fun. If you are quite tense making bread is ideal because you get to hit things, squish them and hit them.
(p. 470; l. 478) Yes, I think it is a bit of stress relief as well because it is quite nice to cook, “Okay, I will make some cake.”

Baking cakes provides her with another occasion for playing and engaging in a creative activity. Doing things with her hands seems to carry a lot of importance for Nicola. Feeling different textures and the sensations these create are an indispensable part of the baking experience. Baking also presents Nicola with an opportunity to “get the glitter out” and indulge in some light-hearted fun.

(p. 478; l. 783) “I really enjoy the creativity behind cooking. You are basically playing. You get to do something with your hands and there is a real texture.”

(p. 479; l. 825) Int: “So it is a real playtime for you.”

Part: “Yes, definitely. Especially if I am making a birthday cake for somebody it is like now I can get the glitter out.”

8.6.1.2 Problem solving

Nicola quite likes to have a few challenges set when she is cooking. Implementing straight forward recipes does not seem to provide her with an adequate level of stimulation. She enjoys having to think how to get around certain limitations, like cooking for people with a wheat or dairy intolerance. The challenge of researching different options and looking for suitable alternatives is part of the fun of cooking for her.

(p. 459; l. 62) “I really enjoy baking and I really enjoy having certain boundaries set and then having to think about it. One of my friends for a while really suffered with wheat and then I had to think about all the cakes I could make that didn’t have any wheat in them and how do you get around that boundary.”

(p. 459; l. 65) “My flatmate’s daughter has a dairy intolerance, so that was really fun looking up ways of making her deserts that she could have without any dairy because when she goes out to eat there are hardly any options.”

It is also about solving technical problems inherent in carrying out more complex recipes and the learning process that accompanies this. Which flavours to use, how well they are likely to blend together and whether this might affect the boiling point of the mixture are technical questions that require Nicola’s careful consideration. Her problem-solving capacity and willingness to learn through the process come to the fore.

(p. 478; l. 800) “It is a real learning process and it is something I can get stuck into and I can really think about what flavours I want. Then I also have to think about the context of that and the engineering problem of, “How is that going to gel? If I put those things together does that affect the boiling point?” It is a lot more technical than just cooking a meal. In a way that was quite nice because that is a slight engineering problem.”

8.6.1.3 *Creating and giving*

Nicola acknowledges that she is likely to cook a lot better when she cooks for others than for herself. She wants to make something nice and nourishing, and she wants to give it to other people. Nicola sees cooking as an expression of her creativity. Cooking for others is an act of giving as much as it is a means of letting them share in that creativity.

(p. 460; l. 98) “Yes. I probably cook better meals when I am cooking for other people than I would just for myself. I think sometimes if it is just me it is like, “I can have toast.” That is fine, I like toast. If I am with somebody else I want to give them things. I want to make them things, nourishing things.”

(p. 459; l. 56) “Yes, it is partly a creative thing in me that I quite like doing stuff. Then it means once I have done that I have that. That is a thing that I have got and I can give it to other people. I think it is both, it is like an expression of my creativity and it is also a sharing of what I am doing.”

For Nicola cooking is perceived as a creative outlet that does not accumulate too much stuff. Homemade jams and chutneys are given away as consumable gifts to friends and family. This allows Nicola to engage in a creative activity time and time again without amassing too much clutter.

(p. 478; l. 788) “Yes, you are like, “What do I do with it?” At least if I make food then that is consumable and then I can do it all again when I want to do it all again. A lot of my family they are like, “You know we have so much stuff, we really don’t need any more stuff.” If I give them things for Christmas like jars of jam and chutney they can eat and then it is done.”

(p. 478; l. 797) “Yes, I think there is a certain amount of that aspect as well of creative outlet that then doesn’t accumulate lots of stuff.”

8.6.1.4 Keepsake

The heirloom cake recipe that Nicola got from her grandmother serves as a keepsake. Whenever she misses her grandmother Nicola makes this particular cake. It brings back the memories of her grandmother as well as connects Nicola with her childhood while her grandmother was still alive. There is an element of nostalgia in Nicola's longing for the past and the people in it. Her grandmother's cake is just a symbol of it.

(p. 458; l. 27) "I think I only received one family heirloom recipe from her [grandmother], but it was one that is really specific to her. I only ever tend to make it when I miss her, she has been dead two or three years. When I miss her then I make her cake basically."

(p. 458; l. 30) Int: "Is that your way of connecting with her now?"

Part: "Yes, I think it is also a way of connecting with my childhood when she was still alive. It is a kind of nostalgic action I guess."

Nicola's step-mother has a signature dish that is a favourite. Her step-mother would always make it for Nicola's visits. Over time this particular dish has become a signature dish of their bonding. Now, whenever Nicola makes it for herself, she is reminded of her step-mother and their relationship.

(p. 476; l. 714) "Whenever I eat that I think of her. When I go over there she [step-mother] always make it because she knows I like it. She makes it anyway, I think it is one of her favourite dishes to make. She is very much like, "Oh yes, I know you like this."

(p. 476; l. 719) "Now when I make it for myself, which I don't do very often. When I do it reminds me of her because that is one of the things that we bond over."

8.6.2 The meaning of food

- Cultural reference
- Degrees of intimacy
- Bonding

Nicola likes traveling almost as much as she likes eating. On her journeys she pays special attention to the local cuisine and customs related to food and eating. Nicola believes that one can get to know a culture through their food practices. Eating together and sharing food is a sign of bonding and intimacy for Nicola. Breakfasts signifies the most intimate meal of the day and is reserved for the people closest to her. Eating together is associated with bonding and sharing, but it can also indicate different degrees of intimacy. Having to share food can be rather awkward in some circumstances.

8.6.2.1 Cultural reference

Nicola likes to try different regional cuisines while travelling. While some people might use art, music or architecture as their frame of reference, for Nicola the frame of reference is food. Eating is something that we all have in common, it is a universal experience. It is also something that differentiates us. When visiting foreign countries Nicola pays special attention to what, when and how people eat. She enjoys trying different dishes and local recipes. One can really get to know a certain culture through their food practices, she explains.

(p. 464; l. 256) “I really love eating foods of different types as well. One of my favourite things about travelling is eating different food. I get really excited about trying...”

(p. 464; l. 268) “My friend is Russian and she has been introducing me to a lot of Russian food and that has been really exciting. South American food was really fantastic. I think it is a like a way of getting to know a certain culture as well, someone’s culture can be seen in their food practices maybe.”

The food people eat as well as the customs related to food and eating form a fundamental part of their shared identity. Getting to know the cultural background to different food practices is something Nicola finds quite fascinating. Her own grandmother came from a

culture where having coffee and cake was a way of life and that heritage formed a part of her identity.

(p. 458; l. 25) “Yes, she was from [place name] and they have a lot of cake and they have a lot of coffee. I think for her that was a really big part of her culture was that coffee and cake is what you do.”

A habit of eating salad for breakfast is a part of her mother’s cultural identity. This is something that her mother’s partner still finds quite odd and bewildering. Nicola finds it interesting that some cultures make such a clear distinction between things that are eaten only for breakfast and not at any other time during the day.

(p. 468; l. 409) “I don’t know why we have this weird division where we don’t eat certain things for breakfast and we do eat them all the rest of the day. My parents are [nationality] and my mum just eats salad for breakfast, the salad from the night before and she will have that for breakfast. Her partner is like, “What are you doing? What is that?”

Then again, Nicola is much attuned to different food practices. In a way these seem to provide a window to the world of cultural diversity for her. Exploring the world through her taste buds is a form of travel for Nicola. What people eat helps construct who they are, and different foods and eating habits provide a frame of reference.

(p. 469; l. 462) “Also I pay attention to food, whereas some people really don’t pay attention to food. They might have travelled around the world, but just not have really cared that much what they were eating because that is not their frame of reference.”

8.6.2.2 *Degrees of intimacy*

Breakfast signifies the most intimate meal of the day for Nicola. Unless you have a really important job you are not expected to share your breakfast with just anyone, she observes. It is partly due to the intimacy of the context itself. It is very likely that you have spent the night in the same house and at breakfast time you are sharing the first coffee and toast sitting in your pyjamas. Everyone is at their most natural and most vulnerable first thing

in the morning. Being together and sharing food at that time is a sign of real intimacy and bonding for Nicola.

(p. 467; l. 384) “For example if you think about breakfast I don’t think I have ever had breakfast with somebody who I didn’t like. I would have brunch with friends or I share breakfast quite a lot with my housemates or with a partner. I think breakfast is one of those meals where it is associated with bonding.”

Int: “Breakfast is about bonding?”

Part: “Yes because you are sitting there sharing a cup of coffee with somebody that you love or you are sharing toast.”

Other meals of the day do not seem to imply the same degree of closeness. People often share their working lunches with colleagues they might not know very well, or like very much. People go to dinner with good friends and they go to dinner with people they barely know. However, the intimacy of breakfast is reserved for the closest and the dearest in Nicola’s life.

(p. 468; l. 399) “Yes, whereas you kind of have lunch and dinner with anyone really if you think about it. How many times have you gone out for dinner with people that you barely know? How many times have you had lunch at work with your colleagues who you barely know? It is just a different context I guess.”

Shared activity of preparing food together is another occasion for bonding. Doing something together, side by side, creates an atmosphere of intimacy. Nicola frequently prepares food or bakes at her friends’ place.

(p. 467; l. 365) “I bake quite a lot with friends, so the process of preparing food together I think is also bonding where you are doing something side by side.”

(p. 470; l. 484) “I think food is part of feeling at home. I think I could feel at home in lots of places. I am more than happy to go into somebody else’s kitchen and cook, that is not an issue.”

Since it is such a homely thing to do, cooking creates a feeling of home. For Nicola the “feeling of home”, as opposed to the “place home”, is where ever she is baking or preparing food. On the other hand, there has to already be a degree of intimacy for her to feel

comfortable enough to cook in somebody's kitchen. The homely feeling cooking creates and the closeness of doing something side by side with a friend give Nicola a sense of home and belonging.

(p. 470; l. 487) Int: "It is not really something that you would do just at home?"

Part: "No, but it is a feeling of home. It is not really a place home, but a feeling of home."

Int: "The feeling of home?"

Part: "Yes, of belonging somewhere. Again I think it is one of those intimacy things. I don't think I would be cooking in somebody's kitchen unless I knew them. Again it is related to bonding and doing stuff with someone."

Nicola observes that having two people in the same room can generate a degree of uncomfortable intensity unless they are engaged in another activity at the same time. Eating or drinking while having intimate conversations can lighten the atmosphere. Food becomes a digressional topic (and activity) one can retreat to when exchanges become too personal or an awkward silence creeps in.

(p. 467; l. 367) "If you have got two people in a room and you have got nothing else to do then it can be quite intense. Whereas if you are drinking tea or you are eating something you can have quite intimate conversations about personal things and the pauses in between aren't awkward because you are like, "Now I am chewing. Now I am drinking."

Being engaged in an activity which is essentially pleasant and comforting, like eating, can reduce distress of personal disclosures. It dilutes the heavy atmosphere and allows people to open up without feeling too exposed. Also, eating gives you something to do with your hands during awkward moments, Nicola rationalizes. As a result more intimate and revealing conversations can take place.

(p. 467; l. 372) "It minimises distress sometimes. I think you end up having some quite revealing, intimate and fun conversations that maybe you don't have if you are not..."

(p. 467; l. 376) "You are like, "Oh yes, my relationship is falling apart." Rather than like, "Yes, so..." Then it is like silence. You are just sitting there going, "What are they going to say?" It gives you something to do with your hands."

8.6.2.3 Bonding

Food and eating have an important social aspect for Nicola. She likes to eat out and enjoys meeting people either for a meal or a cup of coffee. Yet, Nicola likes eating at home or at somebody's place just as much. Eating and sharing food play a significant part in socializing and bonding with friends. Surroundings are not important.

(p. 459; l. 42) "I see food as a really social experience most of the time. I will meet people for lunch, I will meet people for dinner and I will meet people for coffee."

(p. 459; l. 45) "Sometimes that might be dinner out, but it could be dinner at home or dinner round at somebody's house where you are sharing food. That is quite important I think."

Sharing a cake with a friend as well as the process of choosing it together are important parts of bonding between them. With some of her closest friends the act of sharing food means literally eating half a portion and then swapping plates. By swapping plates you get two meals for the price of one and you get to try a lot of food, Nicola remarks.

(p. 472; l. 553) "I might go out with a friend and then I might have cake with her. I am aware at that time that I am not hungry, but we are having cake together because we are bonding or we halve a cake between us. Again it is that process of choosing a cake together is a bonding process because you have got that negotiation and compromise."

(p. 467; l. 380) "Yes, with some friends of mine we literally share food. We will go out for dinner, we are both vegetarian so we will eat half and then swap. You get two meals for the price of one, so you get to try a lot."

Nicola associates food with family bonds. Although her parents divorced when she was quite young, her father and his new partner, Nicola's step-mother, insisted that at least one meal is a dedicated family time. It was considered an important part of the day and the family would spend that time bonding over a meal and relaxed conversation. Nicola is very close to her father and her step-mother today. She believes that their meals together helped family cohesion and had a positive influence during her teenage years.

(p. 475; l. 675) “We all as a family have at least one meal where are all together. Usually that is going to be the evening meal, but some days maybe if my dad has a business meal out then we would go for lunch or we will have breakfast together. I guess there is a feeling of bonding, family and we don’t answer the phone during dinner.”

(p. 476; l. 698) “Yes, they met when I was 13 and they got married when I was 16 that was actually really important that there was somebody in my life who was really like, “Food is family time and that is important.” We bond and that is when we ask each other how our day was and have all of those conversations. I guess I associate food a lot with that really comfortable bonding and talking.”

Sharing food with someone creates something that would not be there otherwise, Nicola observes. As a child she had difficulties communicating with her grandfather since he could not speak the language. Even though they were not able to talk during mealtimes, sharing food created that feeling of a family bond and togetherness.

(p. 476; l. 704) “Even if you are not really talking the fact that you are sharing your food together creates something that wouldn’t be there otherwise. My grandfather only spoke Hebrew and Polish. I have a vague knowledge of Hebrew, but I am not great and I know no Polish whatsoever. We would sit and have dinner together, he wouldn’t say anything and I wouldn’t say anything.”

Int: “But you were together.”

Part: “But we were together and we were still eating together.”

Nicola had quite a different experience regarding family meals at her mother’s house. Nicola, her mother and her sister used to eat in front of the TV because they were essentially uncomfortable in each other’s company. Having meals together and having to talk to each other seemed quite a stressful proposition to all involved. Watching TV while eating provided a distraction and reduced the feelings of tension between them. Consequently, the boundaries were maintained and uncomfortable conversations never took place. The absence of family meals seems to reflect the strained relationship between the family members.

(p. 475; l. 680) “That is a really sharp contrast to what was happening when I was growing up with my mum and my sister at home. We would eat quite a lot in front of the telly and that was partly because as a family my mum, my sister and I were really

uncomfortable with each other. The idea of having meals together was actually pretty stressful.”

From time to time Nicola’s mother would have a partner who would insist on eating together as a family. This would make things even more awkward for Nicola. The fleeting nature of these relationships did not create adequate conditions for the level of closeness family meals imply.

(p. 475; l. 685) “Yes, it was like, “I don’t want to bond with you that much. We are good, we have our boundaries and we are fine.” If you are watching TV then you don’t have to talk to each other. You don’t have to explore anything. Occasionally she would have a partner who thought it was important and then we would all sit around the table and it would be awkward.”

8.6.3 Beliefs and attitudes

- Ethical stance
- Becoming a vegetarian
- Different views

Nicola believes that she is responsible for her food choices and she makes a conscious effort to make these choices ethically sound. She is committed to buying locally sourced seasonal foods whenever she can. Although vegetarianism was imposed on Nicola when she was 11 years old, she considers being a vegetarian her own choice now. Nicola grew into it over time. Although she likes trying out new recipes, Nicola is not a fan of showy foods or the latest food fads. When it comes to eating, people can have quite different views and Nicola’s motto is “all things in moderation”.

8.6.3.1 Ethical stance

The ethics of food production is something that Nicola takes very seriously. She tries to buy organic food from local farms where she can see the condition of the farmstead for herself. Nicola believes that she is ultimately responsible for her food choices and she tries to make these as ethically sound as possible.

(p. 463; l. 217) “When I buy eggs for example I buy free range organic eggs. If I can get local eggs from somewhere where I can see the conditions then that is great and apart from anything they taste so much better. I just think I should be responsible for my food choices. I quite like buying food in season and if I can then I will try and buy local food.”

Eating foods while they are in season is important for Nicola. She believes that foods in season have a lot more flavour since they have not been transported half way across the world. Also, having to wait most of the year for the limited season of certain fruits and vegetables increases the excitement of eating them.

(p. 463; l. 230) “For example with cherries and strawberries I only eat them when they are in season. That is really nice because it means that first of all the cherries taste really great. Cherries have a six-week cycle in the summer and then it means I get to wait for the rest of the year until the cherries come around and then it is really exciting to eat cherries again.”

Nicola realizes that living in Kent makes eating seasonal foods much easier since there a lot of little farms around. There is an abundance of apples, plums, cherries, strawberries and root vegetables to choose from. However, since more exotic fruits and vegetables are not grown in Kent, Nicola still has to rely on buying mass-produced food in supermarkets on occasion.

(p. 463; l. 224) “We are really fortunate in Kent because there is just so much here. There are so many little farms. We have plums, we have apples and we have got root vegetables in the winter. I think it was few years ago that I started trying to eat more in season. I don’t do it with everything because it is hard. I really like quite exotic things like sweet potato, which are never going to be grown in this country and avocado.”

8.6.3.2 *Becoming a vegetarian*

Nicola was introduced to vegetarianism at the age of 11 when her mother had a partner who was a vegetarian. Nicola's mother imposed vegetarianism on Nicola and her sister by refusing to cook meat. After the relationship ended, Nicola's mother went back to eating meat again.

(p. 463; l. 201) "Yes, initially what happened was my mum had got together with a partner who was vegetarian and she made my sister and I become vegetarian when I was about 11. She was like, "Right, that is it I am not cooking meat."

(p. 463; l. 206) "When she started eating meat again neither of us followed suit, so both of us are still vegetarian and my mum started eating meat a long time ago."

However, Nicola is still a vegetarian, as is her sister. She does not feel that eating meat or fish is morally right and had recently stopped eating gelatine too. Although vegetarianism was imposed on her at a young age, Nicola feels that becoming a vegetarian was a natural progression and that she grew into it over time.

(p. 463; l. 211) "I was like, "Actually yes, I don't feel right about eating meat." When I was living abroad I started to let go of eating fish. I probably haven't eaten fish for about 16 or 17 years and then a few years after that I stopped eating gelatine."

Nicola believes that being a vegetarian is not just a moral choice but a fundamentally different way of thinking about food as well. A more traditional concept of having meat and potatoes has to be replaced with a different model altogether. Thinking about how to blend the flavours of different vegetables and spices requires a more creative approach, Nicola rationalizes.

(p. 460; l. 84) "I think that is why a lot of people really struggle when they go from eating meat to being vegetarian because it is a different way of thinking about food. Especially in this country where you get a lot of, "I have got chicken, so now we need potatoes (Laughing)."

(p. 460; l. 87) "With vegetables you can't just be like, "I have got carrot and that is all I am doing." I have got several different things, how am I going to put that together and what flavours do I want today and what spices do I want to add and what texture do I want? I think being vegetarian has definitely helped the creative aspect of food."

8.6.3.3 *Different views*

All things in moderation is Nicola's motto in life. This attitude extends to her relationship with food, she explains. Nicola is not a fussy eater, and although happy to eat most [vegetarian] foods Nicola gets really excited about the prospects of eating really good food.

(p. 465; l. 287) "Yes, I think I am one of those all things in moderation people throughout the whole of my life anyway. I try not to work too hard and I try and get a balance with my personal life and my work life. It is the same with my food I guess. I don't have a problem really with bad food necessarily, but I really enjoy good food."

Nicola is aware that for some people eating is about sustenance. Her mother's relationship with food seems quite utilitarian in comparison, eating is something that has to be done. However, Nicola's relationship with food runs deeper and is a lot more complex. Eating and food are not just nourishment for her but a source of wonder, pleasure, and excitement as well.

(p. 466; l. 313) "No, not at all. I think for some people they literally eat because they need to eat and it is a sustenance thing. That is not the case in terms of how I think of things."

(p. 476; l. 732) "I eat things and am like, "Ahhh." My mum is just like, "Yum, yum, yum, okay done." I am like, "Wow, that has got caraway in it how exciting. I never knew you could put caraway with that, wow." She is like, "Will you just hurry up because we still have another course to get through."

When it comes to food Nicola does not pay too much attention to appearances. Presentation is nice but does not rate very high in the grand scheme of things. For her the taste of food is paramount. Whether the consommé is clear or not and what the soufflé looks like are superficial concerns in Nicola's opinion.

(p. 466; l. 322) "Presentation is nice, but I would rather it tasted good in the grand scheme of things. One of my old flatmates used to do a lot of French cooking and then a lot of it is about your consommé should be completely clear. I am just like, nobody has got time for that. As long as it tastes good I don't care how clear your consommé

is. I don't care what your soufflés look like, I don't care about any of it as long as it tastes good.”

Food fads and super foods of the moment do not impress Nicola either. Although her step-mother's cooking often revolves round the latest trend in healthy eating, Nicola is not convinced. She would rather opt for the tried-and-tested instead. Joining a fashionable dietary tribe does not seem an attractive proposition to her.

(p. 465; l. 278) “They pick and choose their food practices and I think there is a lot of that here too. You know that thing of this is the super food of the moment, there are all of those kinds of things.”

(p. 476; l. 724) “She does a lot of those healthy, “Now this year we are going to just eat fermented things because that is important.” The year before she used to drink lots of smoothies with algae in them. My dad and I would be like, “We are going to have toast like normal.”

8.6.4 Emotional eating

- Grounding
- Cravings
- Sugar and salt
- Mindfulness

Nicola's relationship with food is a complex one. She often relies on food and eating for the fulfilment of other needs. Nicola sometimes does not feel very connected to the environment or her own body and she tries to manage this with food. Eating, being fundamentally a bodily experience, helps Nicola to feel more grounded in her own body. Eating seasonal foods mirrors the change of seasons and helps her to feel more connected to the environment. Such a dependency on food is bound to result in recurrent cravings and a degree of emotional eating. Although Nicola practiced meditation for a long time, her

mindfulness practice did not encompass eating behaviours. Recent attempts to eat more mindfully have been effective as well as enjoyable.

8.6.4.1 Grounding

Nicola's work at the University keeps her indoors and out of natural light for the best part of the year. She does not spend much time outside and as a result does not feel very connected to her environment. Eating seasonal foods is a really nice way to get grounded in your environment, Nicola explains. There is a time for stews and there is a time for fruit. The changing foods and flavours reflect the passage of time and the change of seasons. This tangible connection between the surroundings and the food she is eating makes Nicola feel a lot more grounded in her environment.

(p. 464; l. 251) "I have got one of those jobs that I am not outside and I am not working the fields, I could quite easily just eat whatever. I live mostly in unnatural light because I get up earlier than the sun now and I go to bed after the sun has gone down. I think there is a certain amount of not feeling very connected and not feeling very grounded. I guess food is a nice way to ground you in your environment too."

(p. 464; l. 245) "There is a reason why I don't eat lots of stews in the summer and similarly I think with fruit as well you get a lot of really fantastic fruit. Then in the autumn you are starting to look at plums. You are getting the flavours changing as time goes on. I think for me that keeps me connected to my environment a little bit as well because I am really aware that..."

Nicola sometimes eats because it makes her feel more grounded in her body too. This is particularly likely to happen on the days when she feels a little bit 'spaced out' or disconnected. As a teenager Nicola did not have much awareness of her body. She would spend a lot of time living in her head, thinking. Now, when Nicola feels a bit scattered or disconnected from her body, she eats. Since essentially a bodily experience, eating is likely to make Nicola more aware of and more connected to her own body, thus helping her to feel more grounded.

(p. 474; l. 644) “I eat because it makes me feel more grounded, some days if I am a bit spacy then I eat to make me feel grounded.”

(p. 475; l. 659) “I think in my teenage years I didn’t have much awareness of my body and I was floaty somewhere in my head all the time thinking.”

8.6.4.2 *Cravings*

When pre-menstrual Nicola can sometimes get a little irritable or tearful. At these times she tends to crave chocolate, 90% dark cocoa in particular. Having a couple of squares of good quality chocolate will make her feel more settled and less irritable. Nicola believes that what she actually craves at that time is cocoa rather than the chocolate itself.

(p. 461; l. 138) “There will be days like if I am pre-menstrual then I really want chocolate. I don’t want Cadbury’s chocolate or Galaxy chocolate I want really dark cocoa, like 90%, really good quality. I only need a couple of squares, but it is just that thing of you know instantly.”

(p. 461; l. 149) “I think it makes me less grumpy. When I am pre-menstrual I tend to either snap a little bit or I will cry, so I get both. Some people are one or the other and I seem to get both and chocolate just seems to help. It has to be actual cocoa and I only need two squares of that.”

There are days when Nicola has strong cravings for certain foods or spices and there are days when she cannot face eating some foods. Nicola believes that the cravings she gets are a lot more intense than ordinary food fancies. Also, the cravings seem to change in correspondence to her moods and mental states.

(p. 462; l. 159) “I really get cravings for certain foods. It feels like a craving, it doesn’t feel like, “I just quite fancy avocado.” It is like, “Today I really need to go out and buy an avocado because that is what is happening.” Other days I am like, “I quite like avocado or maybe I could have this or maybe I could have that. Let’s see what is in cupboard.” I definitely have days when I am like, “No tomatoes today.”

When feeling a little fuzzy or unclear, she has a craving for spices like fennel, caraway, and cumin. On the other hand, when feeling down or lacking in focus Nicola will crave curry. Curry is equivalent to a hug in a bowl, Nicola explains. The associations between

eating curry and having good times with friends has an additional pick-me-up effect. It appears that the craved food item is consumed in an attempt to restore the feeling of internal balance and harmony in some way.

(p. 462; l. 176) “Some days when I am feeling a little bit fuzzy then things like fennel, caraway and cumin. I have days when I am like, “Get curry, I really want curry today.” Something a bit spicy.”

(p. 462; l. 180) “You know when you are not very concentrated, maybe I didn’t sleep well the night before. Maybe I am just feeling a bit down and curry is like a hug in a bowl. So many of my friends eat curry and are associated with curry for me where it has also got that added emotional extra where I am thinking about all the times I have eaten curry have probably been good times.”

8.6.4.3 *Sugar and salt*

Nicola’s food choices are often influenced by her stress levels and the way she feels. Nicola is aware that her tendency towards eating sugary foods is related to emotional eating. On the other hand, sugary foods do not necessarily make her feel better, to the contrary. Nicola often realizes that the sugar made her feel worse and regrets the choice.

(p. 461; l. 133) “Also what I have been doing, so how stressed out I am maybe affects my food choices. It is interesting because sometimes I will gravitate towards eating sugar and then afterwards I will be like, “Actually that was really the wrong thing and now I feel worse.”

(p. 472; l. 547) “I find that a lot of the foods I eat are sweet it is often a lot more of an emotional eating.”

Deserts are good in almost every culture because they are made for pleasure and not for sustenance. As the last course of a meal, desert is not eaten to satisfy hunger but to satisfy the senses. Consequently, deserts and sweet things are a lot more fun to eat, Nicola rationalizes. This might explain why Nicola reaches out for sugary foods when feeling stressed or despondent.

(p. 471; l. 536) “Deserts are one of those things that nearly every culture has really good deserts because they are decadent. Desert isn’t a food you eat for sustenance, it has to be...”

(p. 472; l. 577) “Yes, I think so. I guess there is a judgement about having more fun with sweet things maybe.”

For Nicola eating is not just a bodily experience, she has a strong emotional connection to food and eating. If she is making unhealthy choices regarding food, there is probably some kind of emotional reason behind it. Feeling lethargic, grumpy, or irritable serves as a prompt to eat and sugary or salty foods would be her usual go-to food choices.

(p. 472; l. 568) “I don’t know. I kind of think if I am eating junk food then I am probably grumpy, tetchy or pre-menstrual. There is probably something going on, there is usually some sort of emotional...”

(p. 472; l. 572) “I don’t like it, that real lethargic feeling maybe and I am like, okay and reach for a bag of crisps.”

(p. 475; l. 669) “It is not just the bodily experience, I think I definitely have emotional connections to eating. I am not one of those people who just eats because that is what needs to happen.”

8.6.4.4 *Mindfulness*

Recently Nicola decided to pay more attention to her eating behaviours. She realized that going straight to the fridge after coming home from work was a regular habit which did not have anything to do with feelings of hunger. In fact, most of the time she would not feel hungry until much later in the evening. Obviously, food was fulfilling some other need for her, Nicola rationalized.

(p. 473; l. 598) Yes, I was like, “Okay, that is interesting.” I would come in from work at 6:00 and go straight to the fridge. I caught myself in front of the fridge and I was like, “Am I actually hungry?” It was like, “Well, no.” It wasn’t until 7:30 or so before I even wanted anything to eat really. It was just this habit of coming in the door. I was like, “Okay, that is interesting. Why do I do that?” Then I had to start asking myself if I am not hungry right now then what is it that food is doing for me? There is some sort of fulfilment I am getting from that, so what do I need?

(p. 474; l. 641) I would be standing at the fridge and just going, “What is happening to me?”

Paying more attention to her eating habits caused Nicola to be more attentive to her bodily cues, particularly hunger and satiety. In the past she used to eat a whole tub of food without even realizing it. Now, paying attention to the way she is eating, Nicola can get away with half of that amount.

(p. 460; l. 115) “I think when I started paying more attention to how I ate then I started to really think. First of all I am full quicker than I think I am. If I am not paying attention I can eat a whole entire big tub of food and not think about it. When I start paying attention it is like, “Actually I could get away with eating half of this.”

In other words, focusing on her eating behaviours has had a dramatic effect on eating outcomes. Mindfulness also raised some uncomfortable questions for Nicola regarding the way she was using food and eating in the past. It made her reflect on how disconnected she has been from her body and its needs.

(p. 473; l. 587) “Then I started to really sit down with my body and be like, “Do I actually need anything right now?” I would be like, “Well no actually.” I discovered that I can actually just have three meals a day and it is fine and previously I had always thought that I couldn’t. I think there must have been some weird disconnect for quite a long time. Then I was like, “Oh, wow.”

Being more mindful of her eating habits and bodily cues was a positive experience for Nicola. Although she had been practising meditation for years and was mindful in other contexts, this never encompassed her eating behaviour. Now, Nicola thinks that eating is a really easy context to be mindful in since meals have their dedicated times. Despite occasional glitches, she finds that eating mindfully has been effective and quite enjoyable.

(p. 474; l. 653) “Yes, I have been practicing meditation for many years, so I guess I am used to being mindful about things in other contexts. It didn’t seem that far of a stretch to be mindful about my eating as well. It is actually a really easy context to be mindful in because you have got a designated separation between when I am eating and when I am working.”

(p. 474; l. 625) “It was like this really interesting experience and I was kind of like, “I really enjoyed that. I really enjoyed eating mindfully.” Then sometimes occasionally of course I still have my moments when I am totally mindless about things.”

8.6.5 Summary

Nicola's experience of food and eating, although versatile, can be challenging at times. Cooking plays an important role as it is as much a playtime as it is a way to de-stress. When travelling Nicola pays special attention to different foods and local cuisines since for her they epitomize people and their culture. Sharing food symbolises bonding and togetherness and it tends to be associated with intimacy between family members and good friends. Having to share food in stressful circumstances or with people she does not like can be challenging. The ethics of food production and eating seasonal foods that are locally produced are important to Nicola. However, since food and eating are used for the fulfilment of other needs, the existence of cravings and emotional eating denote a significant feature. At times Nicola feels disconnected from her body so she turns to food and eating as a way to re-connect. Stress and irritability serve as emotional prompts to eat and foods high in sugar or salt tend to be her usual choices. Recently, trying to eat more mindfully has resulted in a better awareness of her bodily cues as well as improved control over her eating behaviours.

8.7 Discussion

Interpretative phenomenological analysis is primarily an idiographic approach concerned with individual meanings. It investigates what makes individual interpretations unique and distinct from others (Langdrige, 2007). It is concerned with lived, personal experiences of the phenomenon rather than an objective account of it. It draws on the experiences of a relatively small number of participants, thus the findings are not representative of any particular group or generalizable to larger populations. The subjective accounts of the experience of eating, explored in this study, are diverse. Each story is richly imbued with themes and idiosyncrasies unique to the storyteller.

David's account of eating revolves around his earliest experiences of family dinners. Food is a powerful memory trigger and meals from childhood serve as stress relievers during times of adversity. Food and eating are primarily sensual experiences and senses are known as particularly effective triggers of emotional memories (Toffolo, Smeets, & Van Den Hout, 2012). Thus, David is able to access some of the happy memories while eating familiar meals from his childhood. Relaxation, togetherness, sharing, and intimacy are the necessary ingredients of a good meal and David finds them in a close circle of friends and family. Since hunger can be hard to register, particularly if he is stressed, too preoccupied or unwell, David forgets to eat. This does not seem unusual or surprising since research suggests that the eating habits of most people change with a possible increase or decrease in food consumption due to emotions, stress in particular (Macht, 2008). Close friends providing food during stressful times equates to being nurtured and David draws comfort from it. Eating is also seen as a social tool which can aid conversation by making difficult exchanges a little easier. It allows people to air different or even conflicting views while the act of sharing food maintains group cohesion and feelings of intimacy. As the literature on anthropology of food and eating suggests, eating is fundamentally a social event which fulfils many important social functions

such as maintenance of group unity and togetherness (Fox, 2003; Mintz & Du Bois, 2002). Hence smoothing over discordant views and feelings and maintenance of group cohesion is one of its primary social functions. However, David has some anxieties related to eating in social situations. Feelings of being trapped or judged can surface when he is eating surrounded by large groups of people. In these circumstances, sharing a meal is perceived as a stressful test of wits and table etiquette. Depending on the context, the close proximity of people at a dining table can be seen as intimate and unifying as well as nerve-wracking and threatening.

In Jackie's experiential account food permeates all aspects of life. The high importance given to food and cookery skills is passed through generations of female family members. On one hand, the abundance of food epitomizes joy and worldly pleasures. Offering and passing food across the table creates opportunities for bonding. Hands touching, light hearted chit-chat and enjoyment of food strengthen feelings of intimacy and togetherness. On the other hand, the issues with weight and sugar addiction represent a more challenging side of the same inheritance. The family script is a double-edged gift since literature suggests that dysregulated eating behaviours and body shape concerns are often passed directly from mother to daughter (Lewis, Katsikitis, & Mulgrew, 2015). Jackie is trying to control her food intake but finds her environment largely unsupportive. Being always surrounded by tempting foods, even when at work, is bound to be problematic for someone whose life is focused on food and eating. Cravings are persistent and opportunities for eating are everywhere. Food reward sensitivity coupled with obesogenic surroundings are bound to make controlling food intake particularly difficult (Davis et al., 2009; Singh, 2014). In addition, Jackie finds conflicting messages regarding what constitutes a healthy diet rather confusing. Contradictory views in the media concerning healthy nutrition lead to frequent changes in her diet as well as her weight. Conflicting messages regarding healthy eating are

abundant in contemporary society leading to general confusion and a lack of understanding regarding healthy food and eating styles (Madden & Chamberlain, 2004).

What makes Molly's account distinctive is its inherent duality. Molly internalized parental attitudes about food. Her father's notion of healthy eating and a belief that being slim is desirable and that being underweight has a positive side, is counter balanced with her mother's reliance on food to regulate emotions. Both attitudes coexist in Molly's daily relationship with food. Being a first-year undergraduate, she is for the first time away from home. Money is tight and Molly is trying to save by not eating lunches although she is underweight. By choosing not to connect the two issues, skipping meals and being below normal weight for her age and height, she maintains the behaviour. She also maintains her underweight status. There is a sense of pride and specialness attached to being underweight and this may have a considerable contributing influence. This is not surprising since according to recent findings there is a strong influence of mass media messages regarding body weight and shape and desire for thinness in young females (González et al., 2015). At the same time, when stressed Molly takes food up to her room and eats alone. This is a behaviour that Molly learned early on from her mother and although she does not approve of it nowadays, Molly finds that self-soothing with food is quite effective. Research shows that emotion regulation with food is often learned from a parent early on in childhood (Cullen, 2011; Lewis et al., 2015). As stress weakens her cognitive controls Molly tends to resort to eating alone in her room in order to feel better, just as she watched her mother do during childhood. Eating certain foods, like sugar and starch, improves her mood and she finds this comforting during stressful times (Angle et al., 2009).

Nicola's relationship with food is a deep and complex one. She uses food and eating as a point of reference. Getting to know different eating practices while traveling is her way of getting to know the world, while the ethical stance regarding food production and

vegetarianism articulates what Nicola believes to be right and true. According to study by Fox (2003) what we eat, as well as what we refuse to eat, became a powerful symbol of who we are in terms of ethnic, class and religious identifications. Thus for Nicola, different food practices are representations of the diverse world she lives in. Sharing mealtimes with friends and family demonstrates the level of closeness Nicola feels. Dinners can be shared with friends as well as acquaintances, but the intimacy of breakfast is reserved only for the closest relationships. However, having to share a meal, a symbol of intimacy, with people she does not want to bond with and would rather keep at a distance Nicola finds particularly awkward.

Eating is very often seen as a way to regulate emotions and mood states. Foods and spices are chosen for their mood enhancing/changing effect such as easing the feelings of sadness, grumpiness, or lethargy. The research evidence suggests adverse emotional states such as stress, anxiety and depressive moods serve as prompts for emotional eating (Angle et al., 2009; Buckroyd, 2011; de Lauzon et al., 2004). Nicola's relationship with her body is particularly interesting in a sense that she often feels disconnected from it. Eating, being primarily a bodily experience, helps her to reconnect and feel more grounded in her own body. Such a reliance on food and eating is bound to lead to weight problems. Practicing mindfulness is helping Nicola to control and offset some of her dependence on food and eating. This is line with the findings of two recent systematic reviews of mindfulness based interventions (Katterman, Kleinman, Hood, Nackers, & Corsica, 2014; O'Reilly, Cook, Spruijt-Metz, & Black, 2014) which suggest that mindful eating results in fewer occurrences of emotional eating as well as binge eating in individuals who are susceptible to this behaviour.

Although interpretative phenomenological analysis is first and foremost idiographic, some of the themes can reflect shared aspects of lived experience (Smith, Flowers, Osborn, & Yardley, 1997; Biggerstaff & Thompson, 2008). Despite the fact that the experiential

accounts of eating are very individual in their specifics there are areas of commonality between them. A number of complementary themes may have been represented to varying degrees in the participants' stories and infused with some highly individual features. Nevertheless, their overarching connotations have a high degree of commonality.

The common themes were selected first and foremost because they richly and profoundly epitomise the narrative in all accounts (Langdrige, 2007). The frequency of appearance was not a primary factor during the common theme selection process since the rate of the occurrence could be due to other reasons such as repetition caused by the lack of articulacy, etc. (Brocki, & Wearden, 2014). Moreover, the common themes were chosen because they are either directly or indirectly linked to the aspects of eating investigated during the systematic review and two laboratory experiments. As a result, the selected themes contribute to, as well as augment the over-all storyline on the subject of food-taste and food-pleasantness which seems closely related to sugar consumption, cravings, and emotional eating. As the "speed of eating" was not represented in the accounts of all participants, although of special interest to the project, it was not included in the list of common themes.

While interviews brought out a range of thought-provoking topics, the following four common themes were represented in all narratives: (1) *the meaning of eating* - it is associated with intimacy, bonding, giving and sharing between family members and close friends, and the relaxation, pleasure and enjoyment of food in the security close ties provide; (2) *anxieties* - all participants reported experiencing a degree of anxiety when eating in settings that are perceived as cold, unfriendly or threatening in some way; (3) *the concept of healthy eating* - all participants have some notion of healthy eating although this is evident primarily in weight control, and avoidance of sugar and junk food; (4) *emotional eating* - all participants reported using food as a way to self-soothe or improve/change the way they feel at times.

Table 8.2, depicted below, summarizes the common themes and shared aspects as well as notes the level of representation among the interviewees.

Table 8.2
Common themes and shared aspects

<i>The meaning of eating</i>	Intimacy, bonding and sharing associated with close friends and family	All participants
	Relaxation, pleasure and enjoyment of food	All participants
	Social event, eating in company of others is preferred	All participants
	The taste of food is paramount	All participants except David
	Social tool	David, Nicola
	Nurturing	Jackie, Nicola
<i>Anxieties</i>	Eating in large groups with unfamiliar people or in a cold, formal, and unfriendly atmosphere	All participants
<i>The concept of healthy eating</i>	Avoiding sugar and junk food	All participants
	Weight concerns	All participants except Nicola
	A degree of guilt or regret is experienced after eating unhealthy foods, sugar in particular	All participants
<i>Emotional eating</i>	Emotional cues to eat are irritability, stress and anxiety	All participants
	Chocolate, sweets, cakes and crisps are the usual food choices	All participants except David
	Cravings	All participants
	Eating alone	Jackie, Molly

8.7.1 The meaning of eating

8.7.1.1 Intimacy, bonding and sharing

Eating might be a necessity of survival but it is also very much a social occasion (Fox, 2003; Mintz & Du Bois, 2002). Meals are almost always eaten in the company of others and for all participants eating is associated with close friendships and the family unit. Having a meal symbolizes a time of togetherness, bonding, sharing and giving. The level of closeness implies trust and this creates an atmosphere of relaxation, comfort and security. Thus, food is the embodiment of affiliation and safety (Fox, 2003). One participant states that sharing a meal symbolizes his family unit “for me it’s my family unit, just sitting down and talking, just around the table.” (David), while for another it is a time of sharing and giving “very sharing, giving, everybody wanting to offer things to people across the table” (Jackie). In addition, the research coming from Yale suggests that shared eating experiences are amplified (Boothby, Clark, & Bargh, 2014). When shared, pleasant food-taste is experienced as even more pleasant while the unpleasant taste tends to be perceived as less pleasant. This indicates that comparatively tasty foods when eaten in the company of others, even if no communication is taking place, are likely to be perceived as tastier than when eaten alone (Boothby et al., 2014).

8.7.1.2 Relaxation and pleasure

Mealtimes represent a pleasant and relaxed time in the company of loved ones “we are all at the dinner table and there are loads of jokes, it is like a fun setting” (Molly). Another participant observed that eating together with the grandfather she could not understand created the feeling of a family bond “even if you are not really talking the fact that you are sharing your food together creates something that wouldn’t be there otherwise” (Nicola). In summary, for all participants eating symbolizes a relaxing and pleasant time, free

from stress and worry. It is a time-out from the trials and tribulations of daily life. Mealtimes provide ample opportunity for bonding, sharing, giving and togetherness while close ties (friends and family) insure the feelings of comfort and security.

8.7.1.3 Social event

Furthermore, all participants said that they prefer to eat in the company of other people. For one participant it was just as important to share in the same tastes as it is to share a meal “it’s massively important for me to share a meal, that we’re all eating the same food and we can all share in the same tastes.” (David); while another participant acknowledges that it is essential for her to eat in the company of other people, she would only snack when alone “I like eating with people. I don’t like eating on my own. I really can’t be bothered to eat on my own unless it’s just a snack.” (Jackie); one of the participants states that she generally does not mind being alone, but prefers to be with others while eating “Yes, I don’t like to eat alone. I like to be in a group of people at least when I am eating.” (Molly); while the final participant reinforces the social side of the eating experience by saying “I see food as a really social experience most of the time. I will meet people for lunch, I will meet people for dinner and I will meet people for coffee.” (Nicola). Findings suggest that all participants perceive eating as fundamentally a social occasion. Exchanging thoughts and ideas over a meal strengthens existing bonds and helps to reinforce the feeling of unity (Fox, 2003).

8.7.1.4 The taste of food is paramount

All participants (except David) stated that the taste of food is its most important and sought-after attribute. Eating delicious food provides moments of sensual pleasure and enjoyment (Singh, 2014). One of the participants believes that people can be made happy through the pleasant taste of the food they are eating “so it is a lot to do with taste and making

people happy, actually.” (Jackie); another participant admitted that she would get a bigger serving of the food if the food was tasty (Molly); while the third participant stated that the taste is what she values most in food “I would rather it tasted good in the grand scheme of things.” (Nicola). The taste of food is paramount. As the literature suggests (Braet et al., 2014; Davis et al., 2009; Macht, 2008), it seems likely that for most participants’ the day-to-day choice of food as well as the amount consumed are influenced by the pleasantness of the food taste to a large degree. Moreover, the research findings coming from Yale propose that food-taste might be the most multi-modal sensory experience. The sensory inputs such as sounds, smells and sights that occurred just before (or during) eating are integrated in the brain to influence our perception of food-taste and form an enhanced eating experience (Small, 2012). Hence, it seems plausible that music could be utilized to modify our eating experience and consequently change eating behaviour.

8.7.1.5 Social tool

Two participants noted that eating together helps to smooth the social exchange. It is easier to voice different or even conflicting opinions over a meal. Sharing in the same food maintains feelings of togetherness and intimacy (Fox, 2003; Mintz & Du Bois, 2002) helping to ease over any differences “I think it’s important for me as a social tool, it’s not important for me in terms of the taste of the food or my interest in the food, it’s much more” (David). Sharing food can also lighten the atmosphere and reduce distress of difficult personal disclosures “It minimizes distress sometimes. I think you end up having some quite revealing, intimate and fun conversations that maybe you don’t have if you are not...” (Nicola). Uncomfortable silences are filled with eating or comments about food diverting away from tension and heavy undertones thus making conversation more relaxed and potentially deeper and more revealing than it would have been otherwise.

8.7.1.6 *Nurturing*

Cooking is seen as an occasion for giving and the expression of generosity. Making food is a way to provide nourishment for others. One participant observed that bringing food along demonstrates involvement and symbolizes contribution to the group “I think it’s all about getting together and having that interaction of passing food, try this, do that and people also bringing food along that they’ve made and contributed so we’re all working together” (Jackie). Another noted that it is an act of giving “If I am with somebody else I want to give them things. I want to make them things, nourishing things.” (Nicola). Making food and providing nourishment for others symbolizes giving and nurturing at its deepest and most fundamental sense (Fox, 2003).

8.7.2 *Anxieties*

All participants reported a degree of anxiety or discomfort when having to share a meal in settings that do not seem relaxing and comfortable or appear to be unfriendly or threatening in some way. However, there are some specifics in the individual stories. For one participant anxiety is related to eating in *formal settings* “I do have that cold feeling coming over me of that formality. I don’t like it at all. I don’t like formal eating.” (Jackie), for another it relates to eating in *larger groups* of people “actually I quite often actively dislike the meal if I’m surrounded by a lot of people, even if I know them, because it’s too much for me.” (David) or with the *individuals they do not know* well enough “so I don’t know them as well. I don’t necessarily feel as comfortable” (Molly). One participant noted that it was really awkward having to share a meal when all she wanted was to *maintain her distance* “Yes, it was like, “I don’t want to bond with you that much. We are good, we have our boundaries and we are fine” (Nicola). Evidently, breaking bread together necessitates a level of

familiarity and trust, and sharing food in circumstances which fall short of either of these two requirements is seen as stressful by all participants.

8.7.3 The concept of healthy eating

8.7.3.1 Avoiding sugar and junk food

Another important theme present in all the stories was the awareness of healthy eating and its importance. Avoiding junk foods and reducing the consumption of sugar as well as the overall amount of food are features present in all accounts. However, individual diets, food regimes and the ways of coping appear to be highly individual. One participant stated that the available information regarding healthy eating is extremely confusing. However, she decided to take sugar and starches out of her diet while still eating high fat foods “I’m eating high fat, not masses amounts of high fat but I’m taking away that wheat and the rice and the starch, just taking it away.” (Jackie). A different participant decided to avoid junk food as well as control his calorie intake through exercise “I will actively eat less when I feel like I’m not doing enough sport, so I can keep the same weight.” (David). For a third participant healthy eating constitutes eating the main meal of the day in the morning “went on a health kick and now we do dinner in the morning” as well as plenty of vegetables, greens in particular (Molly). The last participant reported trying to practice mindfulness as a way to curb cravings and control her food intake in general (Nicola).

8.7.3.2 Weight concerns

Although findings suggest that all participants consider eating healthily an important subject, what constitutes healthy eating and what is the best diet/food regime to follow largely differs between individuals. The distinction between dieting and healthy eating seems to be somewhat unclear in all accounts. Concern over weight issues surfaced in most

narratives with one participants stating “None of my family are overweight, and so I see it as something abnormal to be anything but fit and lean. So any bit of extra fat I just don’t like at all” (David), another noted “I’ve realised, that you don’t really need that at all just through me trying to lose weight and cutting out sugar from my diet” (Jackie), while the third participant considered the benefits of being underweight “It is okay, it is not bad thing. It is better that I am underweight and able to put on weight as I grow up” (Molly). Reduced food intake and a number of different diets intended to control weight and body shape are often either confused or embroiled with the over-all idea of healthy eating which remains rather vague in all accounts. This is probably not surprizing as there is ample evidence that the message regarding healthy eating is muddled and contradictory at times (Madden & Chamberlain, 2004), while at the same time societal pressure to control weight and body shape continues unabated (González et al., 2015).

8.7.3.3 Guilt and regret

Most participants reported feeling a degree of guilt or regret after consuming foods that they regarded as either unhealthy or high in calories. Interestingly, the feelings of guilt as well as cravings are most often related to eating sugary foods. One participant stated that he does not get any pleasure out of eating chocolate, which he likes, because of the feelings of guilt that follows, “I do like it actually, I like it a lot, I don’t get any kick out of eating it because I feel guilty.” (David). Another participant reports that her guilty food might not be quite so bad because it is not sugary “That is my guilty food. It’s not sweet and it is my guilty food that makes it feel it’s not so bad because it’s not sweet.” (Jackie). A different participant notes that although she likes eating cakes she would often feel worse afterwards “I will gravitate towards eating sugar and then afterwards I will be like, ‘Actually that was really the wrong thing and now I feel worse.’” It seems that for most participants a consequence of

indulging in foods they consider unhealthy or high in calories, sugar in particular, is a degree of guilt afterwards.

8.7.4 Emotional eating

8.7.4.1 Emotional cues

All participants acknowledged that they sometimes resort to eating food in order to feel better. A number of emotional cues to eating are the same for all participants while others are specific to each individual. Elevated levels of stress, irritation and anxiety seem to serve as prompts to eat for all the interviewees as suggested in the literature investigating emotional eating (Angle et al., 2009; Buckroyd, 2011; de Lauzon et al., 2004). Furthermore, research coming from Yale suggests that stress increases the activity of amygdala, making the brain's responses to food stimuli almost equivalent to that of an obese person (Rudenga, Sinha, & Small, 2012). One participant reported that being stressed made him reach out for a familiar dish in order to draw comfort from eating it "Yes, I was feeling a bit stressed out the other day, and I just needed a bit of a pick me up, so just went back to a meal I knew." (David). Another participant reported a life-long reliance on sugar as a pick-me-up strategy when feeling exhausted or annoyed "Sugar was the bane of my life in the sense of if I was tired, fed-up, I'd go for sugar, something sugary" (Jackie). A different participant reported that whenever feeling stressed, annoyed or angry, she would use food to make herself feel better "It is just whenever I feel stressed, a bit annoyed or a bit angry I reach for food as a way to make myself to feel better." (Molly). The last participant admits that she resorts to eating junk food when she feels either irritable or annoyed "I kind of think if I am eating junk food then I am probably grumpy, tetchy or pre-menstrual." (Nicola).

8.7.4.2 The choice of food

All participants (except David) reported that their typical choice of food when eating to alleviate unpleasant emotional states would be chocolate, cake, sweets or crisps. Although there is a range of more individual choices, these food items seem to apply to most participants. They also represent the most usual food choices in emotional eating according to the literature (de Lauzon et al., 2004; Gibson, 2012; Macht, 2008). As mentioned before one of the participant reported a life-long reliance on sugar to ease unpleasant emotional states (Jackie); while another participant states that if she had to select foods to eat when feeling upset she would go for cake, crisps or sweets “If I had my own choice it would probably be cake, crisps or sweets probably.” (Molly). The third participant observes that although she has a range of foods to eat depending on her particular emotion or mental state, sweet things are the most likely choice when it comes to emotional eating “I find that a lot of the foods I eat are sweet it is often a lot more of an emotional eating” (Nicola).

8.7.4.3 Cravings

The existence of cravings represents a significant shared aspect of the eating experience among participants. Individual narratives vividly illustrate awareness of the existence of cravings and the daily efforts to control them. Interestingly, the craved food items are usually the ones individuals resort to eating when feeling down such as chocolate, cake, sweets and crisps. The findings of the study confirm that as the personal resources decrease through the effects of stress, or anxiety, or just tiredness, cognitive controls weaken and giving in to cravings becomes a lot more likely (Macht, 2008; Lattimore & Maxwell, 2004). Although most participants have their unique way of dealing with the temptation on day-to-day basis when adverse emotions reach a point difficult to tolerate cravings become a lot harder to resist, as documented in the literature on the effects of emotion on eating behaviours (Lattimore & Maxwell, 2004; Angle et al., 2009).

8.7.4.4 *Eating alone*

Eating alone during stressful times is another common aspect that surfaced during interviews. For one participant eating alone seems to be a way of self-soothing in times of distress “Then the food is like a blanket. I don’t need to fake being chatty to eat, I don’t have to pretend that I am okay and I don’t have to be okay to eat my food and just enjoy the food itself” (Molly). Withdrawing from the world and enjoying the food takes her mind away from the cause of distress until she can find a way to deal with it. Another participant states that eating alone is when she is most likely to give into her cravings “That would be possibly when the evil sugars in the past have come in” (Jackie) in the form of a quick treat or a pick-me-up on the go. In both cases eating alone is most likely to involve unhealthy food choices.

8.8 Conclusion

Interpretative phenomenological analysis was used to analyse four unstructured in-depth interviews on the subject of eating. Personal accounts of eating experiences explored in this study are rich as well as diverse. Individual interpretations of what food and eating means to them suggest that each participant has a unique and complex relationship with food. Symbolic representations and connotations given to food and eating are constructed over time and specific to each individual. Nevertheless, there are also certain aspects of commonality between them. Togetherness, bonding, security and relaxation that sharing food with friends and family implies are contrasted by feelings of anxiety and uneasiness when eating in settings that appear intimidating, cold, or overwhelming. Pleasant food taste seems to be the most sought-after food attribute and it often leads to increased consumption. Undesirable emotional states such as stress, irritability or anxiety frequently result in attempts to regulate emotions with food. Although food choices at times of distress are highly individual, food items that seem to be craved by all are chocolate, cakes, and crisps. All participants expressed

an awareness and desire to eat healthily, although there is no consensus on what eating healthily really means. Generally, there appears to be a lack of clear distinction between healthy nutrition and dieting to lose weight. The focus on weight issues and being slim often leads to bouts of dieting and food restriction which are inevitably linked to food cravings and weight regain. The prevailing notion that ideal body shape is slim, and that food intake may possibly be managed by frequent dieting and elimination of certain foods altogether might be just as detrimental for our health as unhealthy food choices (Mann et al., 2007).

Chapter 9

Discussion

9.0 Summary and contribution

The pervasiveness of overweight conditions presents one of the most serious health problems for the UK and the developed world (WHO, 2007). Although they have a wide range of contributors, obesity and overweight are fundamentally caused by the energy imbalance between calories taken through food and calories expended through activity. At the root of all overweight conditions is overeating (WHO, 2016), hence the looming obesity epidemic cannot be viewed separately from the issue of eating behaviours. Recommended treatments have been largely ineffective to date and even though the evidence shows that weight-loss is achievable, maintaining it over a period of time remains a challenge (Dombrowski et al., 2014). The probability of obese persons attaining normal weight or maintaining achieved weight loss are extremely low (Fildes et al., 2015). In fact, dieting may subsequently lead to a more substantial weight gain later on resulting in a weight status which exceeds the pre-dieting one (Mann et al., 2007).

The increased focus on prevention and interventions targeted at the individual level makes exploration of ideas from creative fields such as music and the arts an encouraging prospect. The possibility of using music to influence eating behaviours and subsequently eating outcomes directly and in an immediate manner remains largely unexplored.

The aim of this thesis was to provide a comprehensive investigation of the phenomenon of eating and the ability of music to modify it. A mixed methodology approach was utilized to investigate different aspects of “eating”, providing a deeper and more wide-ranging understanding of it. This thesis examined the influences of music on the perception of food-taste, food-pleasantness and the speed of mastication during two laboratory experiments. In

addition, it explored the phenomenon of “eating” as understood by the participants in an attempt to determine whether and how music may be applied best in the context of eating.

The first laboratory experiment (Chapter 6) examined the effect of taste-congruent music on the perception of taste and pleasantness ratings of two different food-items, cinder toffee (bitter-sweet tasting, high in sugar and salt) and shredded wheat (bland tasting, low in sugar, salt, and fat) during a replication-extension study. Results indicate these hypotheses were largely supported. Furthermore, although in the course of the experiment participants were presented with only two different food items (cinder toffee and shredded wheat), during the individual exit interviews more than a half of them thought they were given 3 or more different food items to taste. Thus, it appears that music had an impact on the perception of food taste to the extent that some participants perceived the same food item as having multiple flavors and distinct tastes.

These findings are broadly consistent with the literature on cross-modality between sensory channels of taste and sound identified in the systematic review (Chapter 4) which suggests that the elements of background music/soundscape such as pitch, timbre, volume, articulation, tempo, as well as musical style and performer can modify the perception of food-taste (Bronner et al., 2012; Crisinel & Spence, 2010b; Crisinel & Spence, 2011; Crisinel et al., 2012; Holt-Hansen, 1968; Rudmin & Cappelli, 1983; Ferber & Cabanac, 1987; Fiegel et al., 2014). The consequence of music induced change of food-taste is a change in food appraisal such as altered levels of food pleasantness and desirability (Crisinel et al., 2012; Ferber & Cabanac, 1987; Fiegel et al., 2014; Holt-Hansen, 1968). The findings of the current study give support to as well as extend previous literature on the effects of music on the perception of food-taste and desirability. By introducing a healthy but bland tasting food item - shredded wheat the current experiment offers the first empirical evidence that music may be effective in modifying the taste and pleasantness of foods that are low in sugar, salt and fat.

This could open up a new line of investigation regarding the application of music in the fields of health and well-being. There is an encouraging possibility that designer soundscapes could be utilized to affect eating behaviors and outcomes in a range of settings.

The use of music to improve the taste and palatability of low calorie diets (800-1600kcal per day) and above all very low calorie diets (800kcal or less per day) recommended to obese individuals (NICE, 2014) could offer support to the existing behavioral treatments. Music could also be utilized to promote healthy but sometimes unpalatable foods as well as healthy eating styles to children in a range of settings such as schools, clubs or sport centers. In contrast to the didactic and instructive approach, using applied music to convey this important message would be subtle as well as fun and enjoyable. In other words, applied music could give us an inexpensive and personalizable tool which, utilized in the background, could discretely modify the perception of food-taste and its palatability.

The second laboratory experiment (Chapter 7) investigated the effect of the speed of music on the rate of mastication. The hypothesis states that while slow music is playing in the background participants' rate of mastication measured in bites per minute would be significantly slower than when fast music is being played. The results provide support for this influence. In addition, the impact of music on the speed of eating appears to have been entirely subconscious since during the individual exit interviews most participants (94 out of 97) reported not being aware of tempo changes in the music.

The findings of the second study are largely congruent with the literature investigating the influence of music on the speed of eating and meal duration identified in the systematic review (Chapter 4) which suggest that people eat slower while slow music is being played in the background (Caldwell & Hibbert, 2002; Milliman, 1986; Roballey et al., 1985; Wansink & van Ittersum, 2012). However, while most reviewed studies assessed the speed of eating by

recording the beginning and the end of a mealtime during different music speed conditions (slow and fast), assuming that duration of a meal provides an indication of the speed of eating, the current study employed a more ecologically valid measure of eating speed e.g. the speed of mastication expressed in the number of bites per minute. Furthermore this is the first time the modifying effects of music tempo on speed of mastication were investigated in laboratory conditions keeping a wide range of confounding variables under control.

These results are encouraging as they suggest that using applied music as a means to control the speed of eating is possible and merits further investigation. Applied music in school dining halls could be a pleasurable way to develop healthier eating behaviours in children by making them calm and relaxed during mealtimes thus keeping uncontrolled eating at bay from an early age. Purposely selected music, played during mealtimes, could make the meals more enjoyable, and eating behaviour as well as food intake more controllable. Soundscapes intended to slow down the speed of eating, designed to suit individual tastes and needs, could provide a useful addition to the ongoing behavioural treatments for overweight and obese individuals as well as a valuable support for dieters at home.

The third, qualitative study explored the phenomenon of eating as it is understood and deliberated by participants (Chapter 8). Four in-depth interviews were conducted in order to tap into the meanings, connotations, and associations related to the experience of eating with their possible implications for health, as well as to ascertain whether and how music could be utilized in the context of eating. Particular attention (although not exclusive) was given to participants' disclosures related to the perception of food-taste, food-pleasantness, speed of eating, as well as emotional eating.

The findings suggest that experiential accounts of eating are largely idiosyncratic and distinctive in their particulars such as food choices, preferred eating times and the early

memories related to food and eating. However, further analyses identified a number of common themes on the subject of food and eating and related issues which are largely consistent with previous literature (Fox, 2003; Mintz & Du Bois, 2002; Singh, 2014; Curtis & Davis, 2014; Davis et al., 2009; Macht, 2008). The common themes were represented in all the narratives and are elaborated in some detail by all participants - the meaning of eating with its connotations of intimacy, bonding, and sharing between group members and pleasure and relaxation these provide; feelings of anxiety when eating in situations that are perceived as unfriendly or threatening; a desire to eat healthily which is primarily manifest in weight control and avoidance of sugar; and emotional eating as a way to self-soothe and alleviate negative moods.

All participants reported recognizing and being aware of the mental states which lead to emotional eating. This self-awareness creates the space for utilizing other emotion regulation strategies. The apparent urgency to intervene, which makes eating so convenient since food is always within easy reach in contemporary societies, renders some of the other emotion regulation strategies a lot less expedient. Friends are not always available for a chat and leaving the house to go for a walk or to the gym may not always be practical. However, in order to be effective, an emotion regulation strategy has to be accessible and within easy reach at the time when the need for it is experienced. This could make listening to music an advantageous choice. Since music is known to be an effective emotion regulator (Chin & Rickard, 2013; Huron, 2011; Saarikallio, 2011; van Goethem & Sloboda, 2011) and as it could be made easily available as well as adaptable to individual tastes and needs, its application in real life situations shows potential. However, it should be noted that not all emotion regulation strategies with music are equally helpful (Carlson et al., 2015). Discharge may not be as effective or may even represent a maladaptive listening strategy in response to negative emotions for some. This appears to be particularly the case with males, suggesting

that emotion regulation with music may be gender specific. Since male and female listeners also diverge in their music choices (Chamorro-Premuzic et al., 2010) as well as their responses to music (Nater et al., 2006) taking gender differences into account is paramount when selecting the music as well as the strategy employed. Generally, distraction and introspection seem to offer a more effective mood regulation strategy for both genders (Carlson et al., 2015).

The findings of the study (Chin & Rickard, 2013) which examined the relationship between music engagement and well-being outcomes suggest that the type of engagement with music and its motives determine the effect of the regulation strategy on the well-being of individuals. In other words, emotion regulation with music which is utilized for the purpose of cognitive reappraisal leads to more positive outcomes, while the types of engagement with music which are associated with expressive suppression may have less favourable results for the well-being of individuals. However the most suitable strategies as well as the most effective choice of music would be best selected with a help of a music therapist (Pelletier, 2004).

The findings of the qualitative study suggest that there are many instances in the lives of interviewees where listening to music could be utilized to alleviate negative feeling states and offset the need to rely on food to achieve the same affect. For example, listening to music while preparing and cooking food could be one way of easing the negative emotional load before the start of eating thus reducing the need to use food for the same purpose. Moreover, listening to music could be a pleasant diversion that takes the mind away from the source of irritation and, often mindless (Ogden et al., 2013), snacking. A selection of music pieces could be designed to target individual problems and needs while at the same time taking individual music preferences into account. Therapy with music aimed at eating behaviour change could be particularly effective in conjunction with other behavioural interventions.

According to the reviewed literature music as an addition to cognitive behavioral therapy is particularly well received as it offers additional support in crises (Hilliard, 2001).

Interviewees also stated that they experience food cravings. Most of them reported craving sugary food-items such as chocolate and cake, particularly when annoyed or upset. Humans always needed a certain amount of sugar for energy, yet sugar was difficult to come by throughout history. Although glucose can be obtained through breaking down carbohydrates, being able to get sugar directly is a lot more advantageous. Thus according to the anthropological perspective, nature has programmed us to seek out sugar by embedding a powerful motivator - craving (Fox, 2003; Mintz & Du Bois, 2002). Even though supplies of sugar have become plentiful in recent times, the motivation to seek sugar in the form of cravings persists. It might not be surprising that this behavior is even more pronounced in circumstances that are perceived as stressful or challenging and may potentially require additional energy output.

The reported cravings for sugary items are consistent with the reviewed literature on emotional eating behaviours (Haedt-Matt & Keel, 2011; Buckroyd, 2011; Fuller-Tyszkiewicz et al., 2014; Gibson, 2012). The experiential accounts provide ample evidence that participants are conscious of the cravings and that they make considerable efforts at controlling them during the course of day-to day living. As eating behaviors are fundamentally a result of continuing negotiations between contradictory needs such as a desire to eat healthily and a desire for certain foods, which the individual accounts so clearly illustrate, participants occasionally fail in their attempts to keep cravings at bay. This creates an opportunity for the utilization of taste-congruent music. While sweet-taste congruent music could be used to enhance the perception of sweetness of food-items as well as their pleasantness, bitter-congruent soundtracks may be used to reduce perceptions of sweetness as well as the desirability of sugary food-items. Both effects could be applied to benefit people

with cravings: (a) to increase the perception of bitterness and/or reduce the palatability of a craved but less healthy food-item and; (b) to increase the perception of sweetness and/or desirability of a healthy food-item.

Taken together the results of the two laboratory studies and the findings of the qualitative investigation provide some evidence that when music and food are presented together, music is able to influence eating behaviours (speed of mastication) and their outcomes (perception of food-taste and food-pleasantness). Although music and food traditionally come together during special occasions, such as birthday parties, engagement and wedding meals, leaving-dos or religious festivities, according to Pellegrino et al. (2015) listening to music is the rarest day-to-day eating scenario. Likewise, during the interviews in the current study only two participants mentioned listening to music as a part of their eating setup. This is possibly the result of a historical association of music with celebrations which implies listening to highly arousing music which is meant to compound the merriment, decrease inhibition and increase the stamina of the guests. Although this is a common scenario involving food and music there are others where music is intended to lower levels of arousal, anxiety and agitation. Research has shown utilizing soft and soothing soundtracks is equally effective in promoting relaxation and calm during mealtimes in dementia and Alzheimer's nursing homes as they are during romantic dinners (Chang et al., 2010; Ho et al., 2011; Ragneskog et al., 1997; Ragneskog et al., 2001; Whear et al., 2014). Nonetheless, in all of the above cases, although effective, music seems to be a prominent ingredient which might make it a little intrusive for a day-to-day application. After all people don't always feel like listening to music.

Creating a sound environment (i.e. background soundscape) would be a lot less invasive and while allowing for table conversation to take place it might not be any less effective. As a result, this could provide a suitable way to combine music and eating on a

more regular basis. The soundtracks used in both laboratory experiments were designer soundscapes. This means that they were created for the purpose of causing an effect rather than for their artistic value. Although the soundscapes might have been quite pleasing to the ear they were not designed to draw any more attention to themselves than a doodle on a wallpaper or an elaborate pattern on a carpet. Hence designer soundscapes represent an artificially created sound environment. Since auditory surroundings still remain the least controlled parts of our environment they offer an immense potential for utilization. Sound is compelling. Designer soundscapes could be created with the purpose to affect the levels of arousal, our moods and concentration, and consequently our perceptions and behaviors. By manipulating the sound environment in which meals are being consumed it might be possible to manipulate both, food taste and its desirability as well as the rate and amount of food consumption.

Applying sweet-congruent music/sound to eating environments could help in the development of healthy eating habits through an increase in perceived sweetness and/or pleasantness of bland tasting healthy foods which are low in salt, sugar and fat. This would be particularly beneficial in schools and youth camps where cultivating healthy eating habits in children is vitally important. In addition, this application of music could also make specific diets (e.g. very low-calorie diet) and eating regimes more acceptable due to its effect on food taste and pleasantness. Obese and overweight individual might benefit from using music as a part of a wider behavioural treatment or as a self-support aid at home.

Manipulating the desirability of commonly craved foods (e.g. cake, crisps, chocolate) by applying a bitter-taste congruent sound, thus making these foods appear less pleasant due to the incongruent effects of music, is another possible way of benefiting from the cross-modality between the sensory channels of taste and sound. Pairing up sugary food items with a bitter-taste congruent soundscape which is correlated with unpleasantness could be

potentially valuable in helping individuals, children and adults alike, to wean off the foods they commonly crave.

By modifying the tempo (pulse) of the background soundscape it might be possible to influence the levels of arousal and consequently the rate of mastication. This could help regulate the speed of eating as well as control overall food consumption in overweight and obese individuals who overeat as a consequence of eating too fast. In addition, selective and age appropriate background music could help create calm eating environments for children. This might help to cultivate healthy eating behaviours from an early age since uncontrolled eating represents one of the common pathways to overeating and overweight conditions.

As music is an intricate mixture of different elements such as mode, pitch, tempo, volume, articulation, and timbre that can be individually manipulated offering an infinite number of combinations (Bruner, 1990), creating a designer soundscape which addresses more than one problem might be a possibility. For example, by selecting a specific pitch, mode, tempo and articulation we might be able to design a soundscape that can influence the perception of food-taste and its pleasantness or the speed of eating and amount while at the same time giving a backdrop atmosphere to the eating environment. As the number of music components and their combinations is infinite, the number of possibilities music can give us is unlimited. Thus, designer music represents an untapped potential and an encouraging prospect to deal with some of the less healthy eating behaviors and is well worth further exploration.

9.1 Limitations and Future Research

This thesis presents a systematic review of the literature on eating behaviours and music as well as the findings of three studies. It extends prior work by providing novel insights into the effects of music on eating behaviours and outcomes which could potentially

find application in dealing with the issues of overeating and overweight conditions. Yet as in all research the thesis suffers from a range of limitations. Some of the more specific limitations for the two laboratory studies were discussed in the Chapters 6 and 7 respectively. This section acknowledges the limitations of the entire thesis project while offering some suggestions as well as implications for future research on music and eating behaviours.

Although the two laboratory studies reported some interesting and encouraging findings there are also a number of limitations. The experiments took place in the laboratory at the School of Psychology which provided control over a range of confounding variables. However, the cohort was an opportunistic-self-selected sample composed largely of psychology undergraduate students who came forward after seeing the study announcements placed on the Research Participation Scheme website, and subsequently the University-wide Research Participation Scheme website, as well as the university job centre. Although, this is a common way of recruiting for participation in PhD experiments, selection bias nevertheless limits generalizability of the findings.

The narrow age range of the participants in the two experiments, with predominantly young participants could have affected the outcomes of both experiments since music plays an important role in the life of teens and young adults (Juslin & Sloboda, 2011) and engagement with music tends to be relatively high at that age. It could be that the young adult participants react differently to music than may an older group of adults or a younger group of children. Investigating the effects of music on food-taste and pleasantness using a sample that has a wider age range or different age groups could be very informative since there is no evidence to show that taste-congruent music is equally effective throughout one's life span. Including older age participants could provide particularly valuable information since losing the acuteness of the senses, such as hearing, is a concomitant of old age (Schmall, 1991). This might have an effect on both the perception of food taste as well as sensitivity and responsiveness to sound.

As activity levels also change through the life span of an individual, there is a likely difference in the speed of mastication between different age groups as well in the tempo of music required to affect it.

The clear majority of participants in the first experiment were female, possibly due to the fact that there are a higher number of female students in the School of Psychology. Using multiple methods to recruit participants in the second experiment resulted in a more gender balanced sample for that study. Having limited access to one gender made it difficult to explore any possible gender differences in study one. Research suggest that males and females diverge in their eating behaviors (Conner et al., 2004; Rolls, Fedoroff, & Guthrie, 1991) as well as in their food choices (Wardle et al., 2004). As male and female listeners also diverge in their music preferences (Chamorro-Premuzic et al., 2010; Christenson & Peterson, 1988) and responses to music (Nater et al., 2006) investigating gender differences could be very informative. Studies with a higher number of male participants would open up the opportunity to investigate a possible influence of gender on the effectiveness of taste-congruent soundtracks to modify the perception of food taste and its pleasantness.

Since the second laboratory experiment contained a more gender-balanced sample it allowed for gender comparisons which brought out an interesting finding that males chew significantly faster than females under all music tempo conditions. These findings are congruent with the results of previous research on gender differences in mastication which suggest that men generally tend to eat at a faster rate and with more chewing power than women (Hill & McCutcheon, 1984; Park & Shin, 2015; Nagasawa, Yanbin, Tsuga & Abe, 1997). Although a significant difference was evident in the number of bites per minute between genders, both (males and females) were responsive to the influence of music on the speed of mastication in all music-tempo conditions. As the association between overweight and obesity and the personality trait of impulsivity together with uncontrolled eating appears

to be stronger in men (Bénard et al., 2017), applied music as a means to control or slow down the speed of eating might be particularly relevant for males. Exploring gender differences further, possibly in conjunction with age, could throw additional light on how aging affects the speed of mastication in different sexes and the potentially changing receptiveness to the effects of music over the life span.

As the sample in the experiments comprised predominantly white, British participants, exploring the effects of ethnicity was not possible. Replicating these studies with diverse ethnic groups would give us valuable insights into possible cultural differences. This could be particularly relevant since both food and music represent the embodiment of ethnicity and are culturally dependent (Yeao & North, 2010b). Despite the globalization of cultural products in recent years i.e. western pop chart music as well as film music, it is conceivable that what constitutes for example a sweet-congruent sound in one culture may differ for another ethnic group. This could have a considerable effect on the influence of music on the perception of food-taste and the subsequent hedonic ratings. The correlation observed in experiment one between the perceived sweetness and pleasantness of the food items might not be replicated in all ethnic groups. Investigating the effect of cultural differences in relation to taste-congruent sounds as well as the relationship between the degree of perceived sweetness and hedonic ratings could be particularly illuminating. It is also possible, although not anticipated, that the effects of different music tempi on the rate of mastication might be culturally dependent. However it would be valuable to explore this further since the type of music that affects the levels of arousal and consequently the speed of eating may differ between ethnic groups.

Furthermore, both, music preferences as well as food choices and eating behaviors are associated with socioeconomic status and levels of education. Research suggests that our food choices (Fox, 2003; Hemmingsson, 2014; Mintz & Du Bois, 2002) as well as music preferences (Rentfrow & Gosling, 2006) are symbolic representations of belonging to a group such as social

class which also implies educational levels. The current studies did not have a wide range of participants in terms education since the recruitment took place at the university campus. Furthermore, the information regarding socioeconomic background was not collected. Thus, replicating these studies with a more diverse sample or different societal groups would help illuminate whether and how socioeconomic status or education impact the influences of music on the perception of food-taste, its pleasantness and the speed of eating.

Both quantitative studies were laboratory experiments and although the setting allowed for a controlled environment which was advantageous at this stage of enquiry it did not resemble a real-life situation. In the first experiment the duration of each taste-congruent soundtrack was 60 seconds which does not represent the length of an average meal. Although the second experiment used a longer soundtrack (30 minutes), the eating activity was controlled by a time schedule embedded in Qualtrics which is not compatible with everyday living. In order to gain a more realistic assessment of the effectiveness and applicability of music on food taste, pleasantness and the speed of mastication, longer soundtracks without artificial timings or imposed restrictions on food quantity or quality would have to be created. Future research may then test the impact of these soundtracks in both laboratory settings and real-life conditions to ascertain their usefulness. It could be that the impact of music on food taste, pleasantness or speed is not lasting and that the effect decreases the longer an individual is exposed to the music. Alternatively, it could be that the music effect is cumulative so that the longer the meal lasts the greater the impact music has on food taste, its pleasantness as well as the speed of eating. However, it may be that the longer the meal lasts the bigger the effect of music on food pleasantness while its impact on food-taste starts to dwindle after a while. Furthermore, the rate of mastication may not result in the decreased food consumption as expected. Only future experiments which use adequately long soundtracks and do not impose limitations either on overall duration or food amount can answer these important questions.

The food samples used in the experiments were limited in their size, amount, and variety. In real life meals comprise a range of foodstuffs of various sizes, textures, viscosity and flavors. These foodstuffs are consumed during one meal, in different combinations of quantity, quality and order. Combining multiple foodstuffs during one test-meal might make identifying music that is effective more of a challenge. Results of the first experiment suggest that music had more of an impact on the perception of taste of one food item than the other. In case of shredded wheat, the effect of music was significant while for cinder toffee it was only bordering on significance. On the other hand, food item variability may not be particularly relevant when it comes to the effects of music on hedonic ratings. The findings of the current study suggest that the effect of music on the pleasantness ratings was significant for both, shredded wheat and cinder toffee. It is not anticipated that the difference in sizes, textures, viscosity and flavors would affect the impact of music tempo on the speed of mastication, although the average number of bites per minute is likely to vary depending on the inherent chewiness of different food-items as well as gender. Therefore, it would be helpful to test the effectiveness of taste-congruent soundtracks as well as music tempo soundtracks with a range of multiple food items before we can consider their efficacy and usefulness in real life situations and applicability on day-to-day meals.

The findings of the third study indicate that participants often eat in the presence of others and that conversations normally take place. It is unclear from the laboratory experiments what impact this might have on the relation between music and eating behaviors. Participating in conversation may make background music redundant and ineffective. Although this is an unlikely scenario at least when it comes to the influence of music tempi on the speed of eating. Research findings from the fields of music therapy (nursing homes) and marketing (restaurants) suggest that the subliminal effects of music on the speed of eating remain in spite of the surroundings and company of others. In the current study participants, although alone in the

experimental booth, were involved in a number of decoy tasks. This did not appear to affect their responsiveness to different music tempi. However, to which degree the speed of eating of each individual is determined by the people they are eating with, type of conversation they are engaged in, the effects of background music, and the complex interactions of all three would have to be investigated further. As the enquiry regarding the effects of music on the perception of taste is confined to the laboratory environments there are no findings regarding the possible influence of the surroundings and company of other people to date. Therefore, it is essential for future research to slowly build these additional factors into their experiments to determine: (a) what the impact of these multiple interactions is on the potential effect of music; (b) whether and to which degree music could be effective in different situations; and (c) how and in what ways music background could be adjusted in order to achieve a desired effect in a variety of settings.

The exploratory part of the analyses in the first and second experiment looked at possible covariates. To this effect the information necessary to calculate participants' BMI and total mood disturbance scores as well as scores on the three-factor eating behaviour inventory were collected. Possibly due to the homogeneity of a predominantly female, student sample, confounding variables under investigation were limited in their range and variance. Nevertheless, the exploratory analyses brought out some interesting and thought-provoking correlations which could be explored further in the future research.

Investigating the effects of music on eating behaviors and outcomes in individuals with elevated scores on the eating behavior inventories could be particularly important since dysregulated eating patterns represent one of the common pathways to overeating. High scores on cognitive restraint indicates the tendency of an individual to regularly limit food intake in order to control weight and body shape, elevated scores on uncontrolled eating points to a propensity to overeat due to the loss of control over food intake (Gade et al., 2014)

and oversensitivity to food cues while having a high score on emotional eating indicates a susceptibility to overeating during negative emotional states (Buckroyd, 2011). In the two laboratory experiments data were collected on these three types of eating behaviors. The results of the exploratory analyses reported a few intriguing correlations. Scores on uncontrolled eating were positively correlated with the pleasantness of cinder toffee (but not shredded wheat) under both taste-congruent music conditions (sweet and bitter), while the scores on emotional eating were positively correlated with the pleasantness of shredded wheat (but not cinder toffee) under both, sweet-taste and bitter-taste congruent music. Future investigations may want to consider if the apparent dissimilarity in effects of music is a result of fundamentally different drives for eating between uncontrolled and emotional eaters. As uncontrolled eating is primarily driven by the pleasantness of the taste and rewarding properties of food, cinder toffee which is very high in sugar might have been made even more interesting or “spiced up” by the addition of a musical background. However, since emotional eating is mainly driven by the need to alleviate negative feelings, the presence of both soundtracks might have provided enough emotional content and diversion to make the taste of shredded wheat appear more pleasant. Future research could investigate further and in some depth the impact of eating behaviors such as cognitive restraint, uncontrolled and emotional eating on the influence of music on perception of food-taste, its pleasantness and the speed of eating.

Furthermore, emotional eating is a common theme identified in the third, qualitative study in this thesis and the subject of a number of reviewed studies (Haedt-Matt & Keel, 2011; Buckroyd, 2011; Epel et al., 2001). To help determine if the emotional state of the participants was having an impact on the ability of music to influence the perception of food-taste, its pleasantness, or eating speed, data were collected on participants’ current emotional state. Although a positive correlation was found between total mood disturbance scores

(TMD) and ratings on pleasantness of cinder toffee under the sweet-congruent music condition, no other relationships were identified. This is surprising since according to the literature negative emotions represent the usual prompts to eat while sugary foods are a common food choice (Haedt-Matt & Keel, 2011; Buckroyd, 2011; Fuller-Tyszkiewicz et al., 2014; Gibson, 2012). Looking more closely at the data, one possible explanation for the lack of results could be that the variance of the TMD score in both experiments were relatively small. It appears that we did not have participants with a wide range of scores on either positive or negative emotional states, thus our tests were unable to determine if current emotional status played an important part. Research involving participants with a wider variance in emotional state scores, or those with more extreme scores on depression, anger and anxiety, as research indicates these emotional states often lead to unhealthy eating behaviors and food choices, could enhance our knowledge of the influence of music on eating behaviors of individuals that most frequently face difficulties with these issues.

The findings of the first study report that participants BMI was positively correlated with the pleasantness of cinder toffee under bitter-taste congruent music condition (but not the sweet-congruent music condition). This result is unexpected and it seems counterintuitive that higher hedonic ratings for cinder toffee under bitter-taste congruent music are associated with the higher BMI. It is not clear at this point why a higher BMI may be linked to the higher scores for pleasantness of cinder toffee under bitter, instead of sweet-congruent sound as the over-all results suggest. However, it should be noted that participants' BMI was calculated by the researcher using information on the weight and height reported by the participants and may not represent an accurate measure of their current weight status. Also the BMI range of the cohort, although within a normal range, was fairly limited over-all. Since this may have had an impact on the findings, future studies should consider participants with a wider range of BMI, including both, overweight and underweight individuals. This would shed some light on

whether and how BMI impacts the influence of music on food-pleasantness, and perhaps food-taste as well.

Future research may want to investigate further the possible impacts of mood states, EE, UE, CR, and participants BMI on the effectiveness of music to modify food taste, its pleasantness as well as the rate of mastication. These findings would provide a deeper and more comprehensive understanding of how music might work for these populations and whether it could be used to influence eating styles, habits and food choices of individuals that most frequently face issues with unhealthy food choices and eating behaviors.

The third qualitative study was based on interpretative phenomenological analyses (IPA). Since IPA is idiographic and primarily concerned with experiences of a relatively small number of people making generalisations beyond a particular sample are not a fundamental part of this method (Langdrige, 2007). Nevertheless, as some of the more common themes can reflect shared aspects of lived experience (Smith, Flowers, Osborn, & Yardley, 1997), through the careful examination of the subjective and the individual, the IPA can help us to illuminate the universal and more general. Even though all experiential accounts of eating in the current study are very individual in their specifics some of their overarching connotations have a high degree of commonality. Future research might find it useful to purposefully recruit from target populations such as school children, individuals with high scores on eating behaviours or mood inventories, or overweight and obese populations. The interpretative phenomenological analyses would be a suitable methodology to investigate in depth and in some detail the richness and specifics of their individual accounts. As it would help to uncover possible commonalities between individual participants it would also help to elucidate the common and the general in the entire group. A very broad interview protocol addressing the topics of eating and the potential contribution of a musical background during mealtimes, suitably adopted to the age group or the issue under

investigation, would make the accounts and interpretations all the more revealing and informative.

As this PhD journey illustrates, eating behaviours are notoriously difficult to study. Whether employing observational studies or laboratory experiments exploring these issues present investigators with a range of difficulties. In the current study a laboratory experiment was utilized in order to video participants eating behaviours as well as control for a variety of confounding variables. However, there were an array of unforeseen issues to consider. Some participants were continuously moving the swivel chair thus getting in and out of the video camera's field of vision, or blocking the view by holding the biscuit in front of their mouth, while others kept licking fingers, drinking water or scratching their nose while eating. This made clearly seeing the mouth difficult at times and counting the number of bites/chews challenging.

Future researchers may want to consider using electromyography (EMG). EMG is a type of electro-diagnostic device which has been used in previous studies to assess the rate of mastication and other eating-related behaviours and outcomes (Park & Shin, 2015). Although this may not be feasible on a PhD budget, EMG would allow investigators to measure simultaneously various aspects of mastication such as bite size and amount of food per bite, chewing power and chewing cycle per gram of food, total number of chews/bites as well as the overall meal duration. This would also considerably improve the accuracy of the findings. However, EMG as a laboratory based experiment, would not eliminate the possibility of a Hawthorne effect whereby some participants may try harder or behave differently due to the attention they are receiving from investigators during experiments.

Observational studies in real life situations are not likely to give us more definitive answers since the number of extraneous variables is limitless and observing eating behaviours (e.g. mastication) of individuals from any kind of distance is extremely challenging. This

poses a question whether and to what level of accuracy the phenomenon of eating is observable and quantifiable using the methods at our disposal. Harnessing different study designs (e.g. laboratory experiments, observational studies, self-reports) as well as different methodologies (qualitative and quantitative) to investigate different aspects of eating behaviours and outcomes might be the best way forward when addressing a subject of such profound complexity as peoples' eating behaviours.

9.2 Conclusion

Finally, in spite of a number of limitations this thesis offers new evidence and novel insights regarding the ability of music to affect eating behaviours and outcomes adding to the body of knowledge on the subject. The first study was a replication-extension of the original study investigating the effects of music on the perception of taste. Its findings provide cautious support for the results of the original study as well as providing new evidence to show that music is effective in modulating the perception of food-taste and pleasantness of a bland tasting, healthy food item - shredded wheat. The findings of the second study confirm that music is effective in modifying the speed of eating. To our knowledge this is the first laboratory experiment which investigates the effect of music on the speed of mastication measured in the number of bites per minute. The findings of the third study not only enriched and deepened our understanding of what eating means to people through the vast gamut of associations, memories and connotations attached to the individual experiences of eating but also provided insights as to where and how music might be utilized to modify eating behaviours (emotional eating, cravings) and eating outcomes (perception of food-taste, food-pleasantness, and sugar consumption).

The findings of the thesis could open up additional avenues for research. From what is known at this point, it appears that music could provide support to individuals attempting to

modify their eating behaviours. Through an imaginative use of music, children and adults alike might be able to improve the taste and pleasantness of healthier food choices, reduce the amount of sugar in their diets as well as gain greater control over the speed and possibly amount of food they consume. Addressing these issues could potentially improve health outcomes and help tackle problems associated with overweight and obesity. Although a lot more research is needed, this thesis provides an encouraging start to examining the potential of applied music as a means to support individuals who face challenges with their eating behaviours.

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Appendices

Appendix A

A.1 Systematic review protocol: Effect of music on eating behaviours and outcomes

Abstract

Background: There is a significant raise in obesity and overweight worldwide. Since they increase the risk of medical problems like heart and cardiovascular disease, type 2 diabetes, and several forms of cancer, obesity and overweight have a detrimental impact on individual lives and represent a financial burden for the society at large. Endorsed non-medical solutions, behavioural interventions, calorie controlled diets, and regular exercise, have been largely ineffective with recurrent cases of relapse and weight regain. Obesity-related overeating has a strong emotional component. Listening to music seems to be one of the most popular emotion regulation tactics people use to alleviate negative emotional states throughout their life-span. Music seems to be effective across a wide range of emotion regulation strategies such as: relaxation, distraction, venting, introspection and active coping. The aim of this systematic review is to investigate the effectiveness of different kinds of music to influence eating-related behaviours and outcomes.

Methods/Design: Electronic databases will be systematically searched using terms relevant to music and a range of eating-related behaviours and outcomes (obesity, adiposity, food, hunger, satiety, weight loss and etc.). References and citations of all eligible studies will be considered and authors of identified unpublished papers contacted personally.

Discussion: The findings of the systematic review will provide an overview of the literature on music and eating as well as inform design and development of the experimental studies intended to investigate the influence of music on eating behaviours and outcomes.

Background

Important characteristics

The incidents of obesity and overweight are on the increase worldwide. In the UK, obesity has risen from 13% in male and 16% in female adult population in 1993 to 24% in male and 26% in female population in 2011 (NICE, 2014). There is also a significant raise in obesity and overweight among children (Wang et al., 2011). During 2011 around 3 in 10 children aged between 2 and 15 were found to be overweight or obese (NICE, 2014).

According to recent figures one third of women in the EU are overweight and 20% are obese

(Iozzo et al., 2014). This is particularly worrying since foetal over-nutrition in obese and overweight mothers represents one of the developmental pathways to obesity (Iozzo et al., 2014).

Obesity and overweight are disorders of weight where excess body fat has accumulated to a degree which could endanger health (WHO, 2015). Although there are a number of definitions, the most widely used definition of obesity is by means of the Body Mass Index (BMI). According to this definition adults with a BMI of 25-29.9 are considered overweight while a BMI of 30 and over indicates obesity (WHO, 2015). The BMI in adults is calculated when the weight in kilograms is divided by the height in meters squared.

There is a wide range of biopsychosocial contributors to the obesity epidemic (Hamilton-West, 2011). Obesity (overweight) is a multifactorial condition. Some people are predisposed to gain weight for genetic reasons, metabolic dysfunction or due to medications they are taking (Ogden, 2011). Others lead sedentary life styles or have impaired mobility due to illness (WHO, 2015). Obese and overweight individuals often make poor food choices or have dysregulated eating patterns which are reinforced by poor emotion regulation skills (Buckroyd, 2011; Fuller-Tyszkiewicz et al., 2014); predisposing personality traits (Gade et al., 2014) or the presence of psychiatric disorders (Simon et al., 2006).

Relevance

Obesity and overweight have adverse impact on individual lives as well as on society at large (Wang et al., 2011). They increase the risk of medical problems like heart and cardiovascular disease, type 2 diabetes, and several forms of cancer (Wang et al., 2011). The consequences of obesity can result in reduced life-satisfaction and productivity, loss of income, problems in social relationships and shorter life expectancy (Carr & Friedman, 2005). Individuals who are obese in mid-life are 74% more likely to have dementia in later

life compared to those with normal weight (Whitmer et al., 2005). Some researchers challenge this view arguing that older people with higher BMI scores have a lower risk of dementia (Dahl et al., 2008). In addition, a recent systematic review (Flegal et al., 2013) did not find association between Obesity 1 (BMI of 30- 34.9) and higher mortality while overweight (BMI of 25-29.9) was associated with a lower all-cause mortality.

Direct and indirect cost of obesity and overweight are putting considerable strain on national health and supporting services (Dee et al., 2014). These individuals consume more prescription drugs, make more frequent doctor and hospital visits (Dee et al., 2014) and owing to the lack of mobility require more frequent house calls (Carr & Friedman, 2005; Wang et al., 2011). For example, in Canada the indirect cost of obesity in 2009 was 54% of the estimated total cost (direct and indirect) which is \$ 10.96 billion, while in Sweden and the US this figure reaches 58% and 59% respectively (Dee et al., 2014).

Table 1: The direct and indirect costs of overweight and obesity (Dee et al., 2014)

Study	Costs included direct	Cost included indirect	Type of study	Results direct	Results indirect	Results total (€ 2009)	Percentage of results that are indirect
Anis et al. 2010 [32], Canada	Hospital inpatient and outpatient visits, physician services, drug costs, health research and other health care	Morbidity due to both long and short-term disability	Prevalence based PAF	CA\$5.96 billion	CA\$5 billion	\$10.96 billion (€7.3 billion 2009)	54%
Konnopka et al. 2011 [36], Germany	Inpatient and outpatient treatment, rehabilitation and non-medical costs (administration, research etc)	Sickness absence, early retirement and mortality using human capital approach	Prevalence based PAF	€4.854 billion (2.1% of total healthcare costs for 2002)	€5.019 billion	€9.873 billion (€11.01 billion 2009)	51%
Schmid et al. 2004 [37], Switzerland	All healthcare costs for obesity and co-morbid conditions	Work absenteeism, early retirement and premature death relating to co-morbidities	Prevalence based PAF	N/A	N/A	CHF2.69 billion (€1.91 billion 2009)	N/A
Finkelstein et al. 2010 [35], US	All Medical costs	absenteeism and presenteeism	Cross-sectional	\$30.3 billion	\$42.8 billion	\$73.1 billion (€51.92 billion 2009)	59%
Borg et al. 2005 [33], Sweden	Hospital inpatient costs only	Lost productivity due to increased mortality	Longitudinal cohort	SEK Billion: 2.17	SEK Billion: 2.93	SEK billion: 5.1 (€0.54 billion 2009)	58%

In the UK, hospital cost of seven main diseases attributable to obesity in the year 2011-2012 was £1,338 million, which is a significant proportion of the total £6,334 million

spent on the same (NICE, 2013). In sum, direct and indirect costs of obesity and overweight represent a substantial financial burden for the national health and supporting services.

Table 2: The hospital costs of obesity related disease for 2011-2012 (NICE, 2013)

Disease area	All costs (£million)					Cost attributable to obesity (£m)
	Primary prescribing and pharma services	A & E attendance	Outpatients	Admissions	Total	
CHD	16%	829	301	499	1629	266
Diabetes	47%	866	55	101	1,025	482
Stroke	6%	32	461	483	985	59
Hypertension	36%	899		10	909	327
Osteoarthritis	12%	451	206	14	736	88
Breast cancer	11.4%	134	434	57	634	72
Kidney cancer	11.4%	80	239	48	385	44
Total					6,334	1,338

Rationale

I could identify no studies that have addressed the possibility of using music to influence/regulate dysregulated eating patterns in overweight or obese individuals and help them achieve and sustain weight loss. Most of the research regarding music and food consumption focuses on the use of music to help improve the sale of food products (advertising, supermarkets, etc.) or to increase food consumption and turnover in restaurants (Wansink & van Ittersum, 2012). However, there is ample evidence that music can be used to regulate/improve the moods and feelings of individuals (Saarikallio, 2011; van Goethem & Sloboda, 2011); influence/regulate the speed of eating (Roballey et al., 1985); and influence/alter perception of the food-tastes (Crisinel & Spence, 2012c; Crisinel et al., 2012).

Justification

Endorsed non-medical solutions (NICE, 2014) for obesity and overweight include behavioural interventions (recommended strategies are: self-monitoring, stimulus control,

goal setting, slowing rate of eating, social support, problem solving, assertiveness, cognitive restructuring, reinforcement of changes, relapse prevention and dealing with weight regain); controlled calorie intake (including low-calorie diets 800-1600kcal/day or very-low-calorie diets of 800kcal or less); and regular exercise (60-90 minutes of moderate activity per day) (NICE, 2014).

However, diets and eating regimes frequently fail when individuals face a stressful situation which surpasses their ability to cope (Buckroyd, 2011). Recent systematic review of long term maintenance of weight loss with non-surgical interventions in obese adults (Dombrowski et al., 2014) suggests that in majority of cases weight is regained within a twelve-month period. Prolonged or frequent periods of stress combined with a deficiency in emotion regulatory skills cause individuals to repeatedly fall back into dysregulated eating patterns (Buckroyd, 2011).

The problems obese and overweight individuals face dealing with adverse emotions caused by the stresses of day to day living (during and post-treatment) are frequently the cause of overeating or relapse and weight regain. Endorsed behavioural interventions for weight loss include strategies such as self-monitoring, stimulus control, goal setting, problem solving and cognitive restructuring (NICE, 2014) which rely heavily on cognitions and are as a result cognitively demanding. However, during the periods of emotional distress cognitive capacities tend to be depleted (Lattimore & Maxwell, 2004). Consequently, the periods of emotional distress are when most diets and eating regimes fail.

Listening to music is cognitively undemanding, pleasurable and instantly available. It also represents one of the most popular emotion regulation tactics people use across the life-span (Huron, 2011; Pelletier, 2004; Randall et al., 2014; Saarikallio, 2011; van Goethem & Sloboda, 2011). An “intervention with music” could make a valuable addition in support of any weight control programme or a useful self-aid (relapse prevention) instrument upon

completion of a weight control programme for obese and overweight individuals. In addition, an “intervention with music” could assist obese and overweight individuals in their attempts to slow down the rate of eating (reducing overall food consumption and the number of calories ingested). The use of background music while eating could improve the perception of food-taste and make adhering to recommended eating regimes such as, low-calorie diets (800-1600kcal/day) or very-low-calorie diets (800kcal or less) (NICE, 2014), easier and more pleasant.

Aims

The aims of this systematic review are to: 1) identify the extent to which different kinds of music have been used to influence eating-related behaviours and outcomes; 2) investigate the effectiveness of different kinds of music on influencing eating-related behaviours and outcomes; 3) undertake a narrative synthesis and summary of the outcomes.

Methods

This systematic review will be conducted following the Centre for Reviews and Dissemination (CRD) guidance for undertaking reviews in health care and the Economic and Social Research Council (ESRC) Research Methods Programme guidance on narrative synthesis (Popay et al., 2006; Rodgers et al., 2009).

Inclusion and exclusion criteria

Population

Studies will be suitable for inclusion in this review if the participants are adults (age 18 years and over). Since anorexia nervosa (AN) is an eating disorder characterized by intense fear of becoming fat even though seriously underweight (DSM-V, 2013), all studies

involving participants diagnosed with AN will be excluded. Furthermore, research suggests that there are structural differences in brain regions and the way music is processed between professional musicians and non-musicians (Hallam et al., 2011), therefore all studies involving professional musicians will be excluded.

Intervention

To be considered an intervention with music, the intervention should be based on listening to pre-selected and pre-recorded music. The music should be selected with an intention to influence an aspect of eating behaviour.

Comparators

A range of comparators will be considered: in controlled studies, control groups may receive a treatment as usual or an alternative treatment. Quasi-experimental studies, correlational studies or observational studies may have no comparator.

Outcomes

The outcomes of interest are measures of eating-related behaviours and outcomes. Eating-related behaviours and outcomes taken into consideration are: food-taste, food-texture; food variety; nutrition; calorie density; hunger; satiety; energy consumption; healthy eating; eating satisfaction; eating experience; speed of eating; eating frequency; compulsive eating; restrained eating; BMI; overweight; obesity; adiposity; weight status; weight loss; consumption of fruit and vegetables; meal duration; waist circumference; hip-waist ratio.

Study design

Owing to an expected small number of randomised controlled trials and given that the focus of this systematic review is narrative synthesis the following experimental study designs

will be included in the search and selection: randomised controlled trials, quasi-randomised trials, observational studies and correlational studies.

Other limiters

Studies which are eligible for inclusion must have an English translation available publicly. All theoretical studies and books will be excluded. Studies that utilize live music will be excluded. The interpretation and quality of live music performance are variable and therefore not suitable for this review. Furthermore, studies that use music therapy comprising active participation (improvising or playing a musical instrument) as a part of therapeutic process will be excluded. Only the empirical studies which use pre-recorded music, whether the music was selected by the patients/participants or practitioner/researcher, will be included.

Search strategy

The following electronic databases will be searched: EBSCO; Web of Science; Scopus; Medline (PubMed and NLM Gateway); CRD Database; PsycINFO and The Cochrane Library. Additional studies will be identified by searching the citations and references. In order to avoid publication bias all relevant studies will be considered. This will comprise published articles, conference abstracts or any unpublished research provided by contacted authors. The search strategy will include the terms: music and eat*; or food*; or kalori*; or energy consumption; or energy expenditure; or waist circumference; or obesity; or adiposity; or BMI; or hunger; or satiety; or vegetables; or fruit; or meal; or hip-waist ratio; or metabolism.

Study selection

The study selection will be performed in three stages. During the first stage an initial screening of titles, abstracts and key-words will identify potentially relevant papers within the inclusion criteria. In the second stage titles and abstracts of studies identified through electronic searching will be examined in order to find studies that are potentially eligible for inclusion. The aim of this process is to restrict the number of papers to be reviewed in full text. However, all papers that have data which are potentially relevant will be retained for the full text stage. In the third stage, all papers identified as relevant during the first and second stage will be read and reviewed in full. The number of studies at each stage and the reasons for any exclusion of papers at the full text stage will be recorded.

Quality assessment

The quality assessment will consider the following criteria: the degree to which the design and conduct of a study match the study objectives; description of what happened in the study and whether it can be replicated; process of allocating the participants into groups; sample size; blinding (i.e. participants or assessors) and outcomes (i.e. data and reporting). The quality assessment will be performed using the Critical Appraisal Skills Programme (CASP) tool. The Cochrane Collaboration's tool for assessing risk of bias will be used to assess bias.

Since this systematic review is likely to include studies across a range of disciplines (psychology, music, medicine and marketing) a big variance in participants, context, music, methodology, study design and outcomes is to be expected. Therefore, only the following selection of questions from CASP will be used to form a quality assessment checklist: 1) Did the study/trial address a clearly focused issue?; 2) Were the cohort/participants randomized or recruited in an acceptable way?; 3) Were all participants who entered the trial properly accounted for at its conclusion?; 4) Was the exposure accurately measured to minimize bias?;

5) Was the outcome accurately measured to minimize bias?; 6) Were the participants or study personnel/assessors “blind” to the treatment?; 7) How large was the treatment effect?; 8) How precise was the estimate of the treatment effect?; 9) What are the results of the study (bottom line)?; 10) How precise are the results (confidence intervals)?; 11) Can the results be applied in your context?

Data extraction

The data will be extracted using a standardised electronic data extraction form on Microsoft Excel. It will include publication details (title, author, year of publication, study design, country of origin); participants (number recruited, key characteristics, selection method); intervention context (location; individual or group-based intervention; who provided the intervention and whether any training was required); intervention details (duration and the number of sessions); selection of music used during the intervention (full list of music excerpts if available); results (errors, number analyzed, precision); and comments and conclusions (provided by the author and reviewer).

Data syntheses and analyses

Since a high level of heterogeneity is expected in terms of participants, studies and outcomes as well as methodology and statistics, conclusions will be drawn based on a narrative syntheses and summary of the findings. The “Guidance on the Conduct of Narrative Synthesis in Systematic Reviews” (Popay et al., 2006) will be followed throughout the process. It will comprise four stages: 1) developing a theoretical model of how the interventions work, why and for whom; 2) development of a preliminary synthesis; 3) exploring relationships in the data; and 4) assessing the robustness of the synthesis product. The recommended tools and techniques for each stage will be adhered to (Popay et al., 2006).

Text box 1: Four stages of Narrative Syntheses (Popay et al., 2006)

Main elements of synthesis	Effectiveness Reviews	Implementation Reviews
1. Developing a theoretical model of how the interventions work, why and for whom	Purpose: <ul style="list-style-type: none"> • To inform decisions about the review question and what types of studies to review • To contribute to the interpretation of the review's findings • To assess how widely applicable those findings may be 	Purpose: <ul style="list-style-type: none"> • To inform decisions about the review question and what types of studies to review • To contribute to the interpretation of the review's findings • To assess how widely applicable those findings may be
2. Developing a preliminary synthesis	Purpose: <ul style="list-style-type: none"> • To organise findings from included studies to describe patterns across the studies in terms of: <ul style="list-style-type: none"> ○ The direction of effects¹ ○ The size of effects 	Purpose: <ul style="list-style-type: none"> • To organise findings from included studies in order to: <ul style="list-style-type: none"> ○ Identify and list the facilitators and barriers to implementation reported ○ Explore the relationship between reported facilitators and barriers
3. Exploring relationships in the data	Purpose: <ul style="list-style-type: none"> • To consider the factors that might explain any differences in direction and size of effect across the included studies 	Purpose: <ul style="list-style-type: none"> • To consider the factors that might explain any differences in the facilitators and/or barriers to successful implementation across included studies • To understand how and why interventions have an effect
4. Assessing the robustness of the synthesis product	Purpose: <ul style="list-style-type: none"> • To provide an assessment of the strength of the evidence for: <ul style="list-style-type: none"> ○ Drawing conclusions about the likely size and direction of effect ○ Generalising conclusions on effect size to different population groups and/or contexts 	Purpose: <ul style="list-style-type: none"> • To provide an assessment of the strength of the evidence for drawing conclusions about the facilitators and/or barriers to implementation identified in the synthesis. Generalising the product of the synthesis to different population groups and/or contexts

Discussion

Currently there are no systematic reviews that investigate the influence of music on eating-related behaviours and outcomes. This systematic review could inform and underpin design and development of “music intervention” as: 1) an additional treatment in support of recommended diets/eating regimes for obese and overweight individuals; and 2) self-aid instrument aimed at relapse prevention upon completion of recommended diets/eating regimes for obese and overweight individuals.

A.2 Systematic review data extraction forms

Reference	Intervention	Setting/Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
<p>(Mandel, Davis, & Secic, 2013) USA</p> <p>Title:</p> <p>Effects of music therapy and music-assisted relaxation and imagery on health-related outcomes in diabetes education: a feasibility study</p>	<p>Compare the effects of music assisted relaxation on selected health outcomes of DSME with music-assisted relaxation via CD and DSME with MT (music therapy)</p> <p>Comparator:</p> <p>DSME (Diabetes Self-Management Education) without music</p>	<p>2 hospital sites in Ohio</p>	<p>Diabetic patients (type 1, 2 and pre-) enrolled in diabetes self-management training</p> <p>Exclusions:</p> <p>Gestational diabetes</p> <p>Dementia</p> <p>Severe hearing loss</p> <p>Prior participation in MT</p>	<p>199 diabetic patients aged 30-85</p>	<p>3-group parallel randomized control trial</p>	<ul style="list-style-type: none"> ✓ Randomized ✓ Power analyses ✓ Follow-up data collected ✓ Comparator ✓ Exclusion ○ 133 completed the study (no statistical power) 	<p>Blood pressure</p> <p>Glycosylated haemoglobin</p> <p>BMI</p> <p>Trait anxiety</p> <p>State anxiety</p> <p>Stress</p>	<p>Participants in DSME with music (CD and MT) had a significantly larger decrease in systolic blood pressure compared to participants in DSME alone</p> <p>DSME with MT showed significant changes from pre- to post- each session in systolic blood pressure, state anxiety and stress</p>	<p>CD music:</p> <p><i>Harmony of Mind and Body: A MARI Experience</i></p> <p>MT music:</p> <p><i>Music therapist played/performed examples of energizing (stimulative) and relaxing (sedative) music</i></p>
<p>(Cardi, Esposito, Clarke, Schifano, & Treasure, 2014)</p> <p>Title:</p> <p>The impact of induced positive mood on symptomatic behaviour in eating disorders: an experimental, AB/BA crossover design testing a multimodal presentation during a test-meal</p>	<p>Test the impact of a multimodal positive mood vodcast (pleasant images +background uplifting music + positive statements) on eating disorders symptoms</p> <p>Comparator:</p> <p>Neutral vodcast (blue background, neutral music and statements)</p>	<p>Institute of Psychiatry Eating Disorders Unit at King's College in London</p> <p>Experimental test-meal</p>	<p>19 anorexic females (AN) 23 bulimic females (BN) 36 females healthy controls (HC)</p> <p>Exclusions:</p> <p>AN and BN: no other mental illness apart from EDs, mood and anxiety disorders</p> <p>HC: no lifetime diagnoses of mental illness</p>	<p>78 females aged 18-55</p>	<p>AB/BA cross-over design</p>	<ul style="list-style-type: none"> ✓ Comparator ✓ Before and after measures ✓ Statistical analyses using SPSS 20.0 ○ Small size ○ Neutral mood induction procedure has not been validated within the EDs group 	<p>Mood</p> <p>Memory (words recall)</p> <p>Anxiety</p> <p>Attentional bias to food (pictures)</p> <p>Amount of smoothie consumed</p>	<p>Significant increase in positive affect for all groups (larger for EDs groups)</p> <p>Reduction in negative affect across groups after both video clips; this reached significance for BN only</p> <p>AN showed almost two-fold increase in food consumption during positive mood induction</p> <p>Reduction in attentional bias to food and anxiety in ED groups during positive vodcast; this reached significance for BN only</p> <p>No significant difference in word recall across groups and conditions</p>	<p>Music in the positive vodcast:</p> <p><i>Mozart's Toy symphony</i></p> <p>Music in the neutral vodcast:</p> <p><i>Holst's Planets (Neptune the Mystic)</i></p>

Reference	Intervention	Setting/Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Justice, 1994) Title: Music therapy interventions for people with eating disorders in an inpatient setting	Music therapy interventions for ANs and BNs in an inpatient setting	Inpatient	AN and BN		Theoretical	✓ Qualitative	Relaxation Self-expression leading to Self-acceptance Enjoyment	Healing Overcoming EDs	Music used in Music Therapy: "Rhosymedre" by V. Williams "Largo" from 3 rd and 5 th Piano concertos by L. v. Beethoven "Largo" from JS Bach Double Violin concerto "Adagio" form Cello concerto by Haydn "Prelude in C" by JS Bach "Air on G String" by JS Bach "Neverland" Suzanne Ciani Instrumentals by Enya
(Lejonclou† & Trondalen, 2009) Title: "I've started to move into my own body": Music therapy with women suffering from eating disorders	Individual music therapy Psychodynamic approach Relating experience through music to promote health	Specialized unit for eating disorders	1 anorexic female (AN) 1 bulimic female (BN)	2 females	Theoretical perspective Individual therapy	✓ Qualitative ✓ Music therapist was keeping a written log of each session with the patient	Dealing with alexithymia (finding words for emotions through the medium of music) Connecting body and mind Learning to relate to the "other" through music	Healing Overcoming EDs Learning to relate to self and others	Improvised music
(Hilliard, 2001) Title: The use of cognitive-behavioral music therapy in the treatment of women with eating disorders	Cognitive-Behavioural Music Therapy Program (CBMT)	Renfrew Center of Florida Women's residential treatment facility specialized in eating disorders	Female patients aged 14- 55		Theoretical overview	✓ Qualitative	Behavioural change Dealing with cognitive distortions (insight) Healthy coping skills	MT was well received MT works well under CB model CBMT was well attended MT gives extra support in crises	Drumming-anger expression (release) Singing-insight into the need for change Singing-empowerment

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Hwang, Chen, Yang, & Liu, 2012) Title: Waist circumference is associated with pitch pattern sequence score in older male adults	Investigating relationship between WC and central auditory dysfunction in adults	Volunteer helpers at a community hospital in Taiwan	Adults over 40 Exclusions: Musicians Early hearing impairment Pregnancy HRT Asymmetric SNHL	391 adults over 40 417 adults were randomly selected/ 26 excluded	Laboratory experiment	✓ Randomized to study ✓ Statistical analyses using STATA	Pitch Pattern Sequence Score (PPS)	Association between WC (central obesity) and decrease in central auditory function (PPS) particularly in males over 55	Sounds were delivered via earphones in double-wall sound treated booth (6 frequencies from 0.25 to 8 kHz)
(Demling, Tzschoppe, & Classen, 1970) Title: The effect of various types of music on the secretory function of the stomach	Investigating the effect of 3 types of music on the secretory function of the stomach over 60 experiments Control experiment: Examining gastric secretion over the same period without music	In a quiet room. Subjects were made to swallow a stomach tube and the contents were aspirated. The gastric secretion was collected in 15mins. samples	23 healthy volunteers, average age 25 Control group: 6 participants Exclusions: Gastric complaints	23 (15 took part in all 3 conditions) 3 music conditions	60 experiments involving 29 participants 3 music conditions	✓ Control group ✓ Exclusion criteria	Gastric secretion measures: Volume (ml) H+ion concentration Acid production	Significant reduction in the volume of secretion in all music conditions (when volume less than 90 dB) Significant reduction in the production of HCl in all music conditions (when volume less than 90 dB) In control group (without music) basal secretion remained constant	3 Music conditions: <i>21 experiments with beat music (topical pop songs)</i> <i>20 experiments with W. A. Mozart: Symphony No.36 in C major, KV 425 (Linzer) and Eine Kleine Nacht Music</i> <i>19 experiments with L.v. Beethoven: Symphony No.5 Op. 67</i>
(CIOCA,) Title: Type 2 Diabetes– Psychosomatic Disease Approachable Through Music Therapy	Investigating variations of glycaemia after listening to 2 types of music (Active joyful and Relaxing) on type 2 diabetic patients (DT2P)		Diabetic patients (type 2) Healthy controls	120 subjects 40 DT2P (experimental group) 40 HC (control gr) 40 DT2P (control gr)	3 group experimental design/2 types of music Experimental group (D2P+M) Control (D2P-M) Control (HC+M)	✓ 2 control groups ✓ 95% confidence interval ✓ Before and after measures	Levels of glycaemia	Significant reduction in the levels of glucose in DT2P after both types of music (active and relaxing) Healthy controls non-significant reduction in the levels of glucose after music condition Music contributes to the metabolic regulation	Active (joyful) music: <i>“Lohengrin” R.Wagner</i> <i>Shostakovich</i> <i>B. Bartok</i> <i>“Karelia” Sibelius</i> Relaxing (melancholic) music: <i>Mendelssohn op. 30</i> <i>“Melody” Shostakovich</i> <i>“Apre un reve” Faure</i> <i>“La Kalinda” Delliuss</i>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Yamasaki et al., 2012) Title: The impact of music on metabolism					Theoretical	Summary of findings regarding the effects of music in modulating metabolic responses	Levels of cortisol Levels of growth hormone (GH) Levels of adrenocorticotrophic hormone Levels of oxytocin Levels of epinephrine and norepinephrine Heart rate variability (HRV)	Regulation of HPA Regulation of SNS Regulation of the Immune system Regulation of gastric and intestinal motility Moderation of cancer-related gastrointestinal symptoms Increase of lipid metabolism and lactic acid clearance during exercise	Designer music (created to elicit a specific psychological or physiological response) had the most significant effect on caring, relaxation, clarity and vigour; decreasing tension, hostility, fatigue and negative mental states. New Age and Classical Music showed similar trends in inducing positive and negative mental states.
(Fullmer & Snell, 2014) Title: Reading or Listening to Relaxing Music Increases Resting Metabolic Rate during Indirect Calorimetry	Investigating metabolic rate during Indirect Calorimetry		Healthy subjects with stable weight aged 18-50 Exclusions: Caffeine Pregnant/ Lactating women Medications affecting metabolism	65 subjects 36 females 29 males	Randomized trial comparing 3 conditions: Resting Reading Listening to music	✓ Randomized ✓ Exclusion criteria	REE (resting metabolic rate)	Listening to relaxing music increased REE by 27.6 kcal/day (not significant compared to resting condition)	Relaxing music*
(Carlsson, Helgegren, & Slinde, 2005) Title: Resting energy expenditure is not influenced by classical music	Investigating whether the Resting Energy Expenditure (REE) is influenced by listening to classical music	Inside a ventilated hood (temperature 20-24C) Music provided through earphones		43 healthy volunteers were included 31 female 12 male 40 subjects completed the study	Randomized cross-over study 2 music conditions (via CDs): Calm Stressful	✓ Power calculation ✓ 3 drop-outs accounted for ✓ accounted for the confounding effect of music preference	REE (resting metabolic rate)	No statistically significant influence of either music condition on REE	Calm music: <i>“Gymnopedie” No1 and No3 by E. Satie</i> <i>“Air” JS Bach</i> Stressful music: <i>String Quartet No4 by B. Bartok</i> <i>“Fire Bird Infernal Dance” by I. Stravinsky</i> <i>“Dies Irae” 2nd mov. by HW Henze</i>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Stroebele & de Castro, 2006) Title: Listening to music while eating is related to increases in people's food intake and meal duration	Investigating the influence of listening to music while eating on food consumption in the natural environment	Georgia State University in Atlanta	78 undergrads: 63 females 15 males	78	Dietary intake was gathered using the dietary method over 7 consecutive days: Indicating whether the music was ON or OFF Participants rated the speed of music on a 7 point scale Participants rated the volume of music on a 7 point scale	<ul style="list-style-type: none"> ✓ Statistical analyses ○ Confounding factor of number of people present and meal duration was not accounted for ○ Small size 	<ul style="list-style-type: none"> Total meal energy intake Carbohydrates Fat Protein Drinks Meal duration Number of people present Time of day 	<ul style="list-style-type: none"> Music is associated with the increase in (any time of day): Food intake (carbohydrates, fat and protein) Meal duration* Number of people present* Music is an important mood inducing factor and a successful marketing tool 	
(North & Hargreaves, 1996) Title: Responses to Music in a Dining Area	Investigating the effects of music on responses to a specific listening environment during 4 music conditions	Cafeteria in a university student union building in East Midlands UK	285 students: Similar number of males and females	285 subjects	Testing was conducted over consecutive 2 days (11-2.30) during 4 music conditions: High-complexity New Age Moderate-complexity New Age Low-complexity New Age Moderate-complexity organ music Control condition: Silence	<ul style="list-style-type: none"> ✓ Statistical analyses ✓ Questionnaires ✓ Behavioural ✓ Control condition ○ 15 undergrads rated the complexity of 4 music conditions in a small pilot study 	<ul style="list-style-type: none"> Liking atmosphere in cafeteria Likelihood of returning to cafeteria Liking for music played in the cafeteria 	<ul style="list-style-type: none"> Significantly more people visited when moderate-complexity New Age music was playing then during other 4 conditions Complaints about music: 9 for high-complexity New Age music 4 for moderate-complexity Organ music 1 for low-complexity New Age music 0 moderate-complexity New Age music 	<ul style="list-style-type: none"> 4 Music Conditions: High-complexity New Age: “Ravinia/Vancouver” by J. Hassell “Relationships for melody instruments” by C. Barlow “Clarinet threads” by D. Smalley “Transition nr.2” by S. Kaske Moderate-complexity New Age: “After Ventos” by Enya “Fotzepolitic” by Cocteau Twins “Callas went away” by Enigma “Song for a whale” by Tangerine Dream Low-complexity New Age: “The sermon” by Recoil “Astral Voyager”TangerineDream “Tha” Aphex Twin “Theycch” by Fuse Moderate-complexity Organ: “Walkin’ my babe home” L.James “A nightingale sang..” R. Curtis “The best of the Mighty Marenghi Fairground Organ”

Reference	Intervention	Setting/Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(WANSINK & VAN ITTERSUM, 2012) Title: Fast Food Restaurant Lighting and Music can Reduce Calorie Intake and Increase Satisfaction	Investigating the effects of lighting and music on food consumption in two conditions	Hardee's fast food restaurant in Illinois	62 Lunch time consumers 33 Fast food condition 29 Fine dining condition	62 subjects	Randomized study comparing two groups Condition 1: Bright lights; bright colours; loud and fast music Condition 2: Soft lights; soft music; relaxed atmosphere	✓ Randomized ✓ Statistical analyses	Amount of food eaten Amount of calories ingested Meal duration Meal satisfaction	Consumers in Fine dining condition ate for 4.7% longer Consumers in Fine dining condition ordered more food but wasted more food too Consumers in Fine dining condition consumed 133 calories less than the consumers in Fast food condition Consumers in Fine dining condition rated their food as tasting better	
(Roballey et al., 1985) Title: The effect of music on eating behaviour	Investigating the effects of music tempo on the number of bites per minute and total time of a meal	Fairfield university cafeteria between 12-1.30pm over 16 days	11 subjects: 10 male 1 female Age ranging from 25-60	11 subjects	Experimental design; 3 music conditions: Slow-tempo music Fast-tempo music No music	✓ Blinded participation ✓ Each participant was observed under each condition	Average number of bites per minute Total time of the meal	Music significantly affected the eating speed No significant difference for the total time of the meal was observed	<i>Slow music</i> (56 beats per minute) <i>Fast music</i> (122 beats per minute) Volume was kept constant for both music conditions
(Milliman, 1986) Title: The Influence of Background Music on the Behaviour of Restaurant Patrons	Examines the effect of background music on the behaviour of restaurant customers	Medium-sized restaurant in Dallas, Texas	1088 customers analysed for length of meal 1392 itemized statements analysed for amount of drink and food	1088 subjects	Experimental design with controls Graduate student observers Held over 8 consecutive weekends	✓ Replicated randomized-block ✓ Blinded participation ✓ 227 randomly chosen dinners rated the tempo of music in a survey before the experiment	Total time of the meal Total amount of drink Total amount of food	During slow-music condition customers took significantly longer to finish their meal During slow-music condition customers consumed more drinks Total amount of food during slow vs. fast music condition was not significantly different	Only instrumental music was used: <i>Slow-tempo music</i> (72 beats per minute or less) <i>Fast-tempo music</i> (92 beats per minute or more) Volume of music was kept constant

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Yeoh & North, 2010) Title: The effects of musical fit on choice between two competing foods	2 experiments investigated the impact of “musical fit” on consumer choice between two competing food products	University Putra Malaysia Quiet room on campus Over 5 weeks between 11am and 2.30pm	Experiment 1 90 divided into 3 groups (30 each): 10 Malays (5M; 5 F) 10 Chinese (5M; 5 F) 10 Indians (5M; 5 F) Experiment 2 180 divided into 3 groups (60 each): 20 Malays (10M; 10 F) 20 Chinese (10M; 10 F) 20 Indians (10M; 10 F)	90 students took part in 1st experiment 180 took part in 2 nd experiment	Between subject design Experiment 1 3 music conditions: No music Western music Malay music Experiment 2 3 music conditions: No music Malay music Indian music	✓ Statistical analyses ✓ Control condition	Experiment 1 Choice of food between: Western (cupcakes) Malay (kuih bhalu) Reason for the choice of food Awareness of the type of music playing in the background Experiment 2 Choice of food between Malay (popiahs) Indian (samosas) Reason for the choice of food Awareness of the type of music playing in the background	Experiment 1 Strong preference for Malay food – when participants have a clear preference for one product over another there is no evidence of a consistent “musical fit” effect Experiment 2 Chinese participants (no Chinese music or food) chose Indian food when Indian music was played but Malay food when Malay music was played – evidence of a consistent “musical fit” when there is no strong preference for one product over another Potential limitations to the generality of cognitive priming by music	Experiment 1 <i>Western music</i> CD (101Classics) <i>Branderberg Concerto No3 in G by JS Bach</i> <i>Concerto Grosso No6 2nd movement by Handel</i> <i>Jesu, Joy of Man’s Desiring by JS Bach</i> <i>Malay music</i> CD (Muzik Tarian Malaysia): <i>Puteri Ledang</i> <i>Serampang Patai</i> <i>Bunga Bunga Di Taman</i> Experiment 2 <i>Malay music</i> CD (Muzik Tarian Malaysia): <i>Puteri Ledang</i> <i>Serampang Patai</i> <i>Bunga Bunga Di Taman</i> <i>Indian music</i> CD: <i>Dr N. Rajam-Raga Deshi</i> Track: <i>Raga Deshi</i>
(Yeoh & North, 2010) Title: The Effects of Musical Fit on Consumers’ Ability to Freely Recall Related Products	Investigated the possibility that music can raise the salience of the associated product and that this would manifest through itself through enhanced recall ability	University Putra Malaysia Over 3 weeks between 12pm and 4pm One-on-one session in a quiet room on campus	144 participants divided into 2 groups of 72 24 Malays (12M;12F) 24 Chinese (12M; 12F) 24 Indians (12M;12F)	144 students Mean age 21.67	Within subject mixed design 2 types of food 2 types of music 2 groups - 3 ethnicities	✓ Statistical analyses ○ Music was validated in a short pilot study	Effect of “musical fit” on product (food items) recall	Chinese participants (no Chinese music or food) had a strong tendency recall more Indian food items when Indian music was playing; but more Malay food items when Malay music was playing – evidence of the effect of “musical fit” on recall There was no effect of “musical fit” on recall among ethnically Indian and Malay participants	<i>Malay music</i> CD: (Muzik Tarian Malaysia) <i>Puteri Ledang</i> <i>Serampang Patai</i> <i>Bunga Bunga Di Taman</i> <i>Indian music</i> CD: <i>Dr N. Rajam-Raga Deshi</i> Track: <i>Raga Deshi</i> Headphones: AVF HM560 attached to a laptop

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Ragneskog & Kihlgren, 1997) Title: Music and other strategies to improve the care of agitated patients with dementia	Interviews with experienced nursing staff lasting 45 minutes each	Nursing home wards with 21-31 patients Collective residential units with 8-11 residents	17 participants: (age range between 27-56) 13 nursing staff from nursing homes 4 nursing staff from collective residential units	17 participant	Qualitative Interviews	<ul style="list-style-type: none"> ✓ Interviews were transcribed verbatim ✓ Meaningful units were identified ✓ Themes and patterns fully described 	Can music be used as a nursing intervention for this group of patients?	Reported positive experiences using selected music to instil calmness of agitated patients (especially during mealtimes) which results in a greater food intake	
(Hicks-Moore, 2005) Title: Relaxing music at mealtime in nursing homes: effects on agitated patients with dementia	Examined whether relaxing music played during mealtimes reduces the cumulative incidence of agitated behaviours in a group of elderly nursing home residents	Specialized Care Unit in Canada during evening meals over 4 week period	33 residents with dementia Age range between 70-101 70% female 30% male	33 initial subjects 30 of those completed the study	Quasi-experimental design 1 st week - no music 2 nd week - music 3 rd week – no music 4 th week - music	<ul style="list-style-type: none"> ✓ 3 drop outs were accounted for ✓ Pre-intervention data collection ✓ Measure instrument: modified Cohen-Mansfield Agitation Inventory CMAI 	Agitation displayed during the evening meal measured by CMAI and by observation	<p>Music was found to be effective in reducing the incidents of verbally agitated and physically non-aggressive behaviours</p> <p>During music weeks the atmosphere in the dining room was:</p> <p>More relaxed and harmonious</p> <p>More socializing between subjects</p> <p>Subjects often remained seated after the evening meal was over</p>	
(Ho et al., 2011) Title: The effects of researcher-composed music at mealtime on agitation in nursing home residents with dementia	Effects of music at mealtime on agitation of 22 subjects in a nursing home	Hospital-based nursing home located In Taiwan Over a period of 4 weeks	Exclusions: No hearing aid Resided in the nursing home for more than 3 months 65 or older Not bed bound CMAI score 35 or over	22 subjects Mean age: 77.27	Pretest-posttest research design	<ul style="list-style-type: none"> ✓ Analyses using SPSS 18.0 ✓ Measure instrument: Cohen-Mansfield Agitation Inventory (CMAI) ○ no comparator 	Agitation measured by CMAI	<p>Significant improvement in the global agitated behaviour scores</p> <p>The study recommends using music at mealtimes to reduce agitation</p> <p>Cumulative dose effect</p> <p>Short-term linger effect</p>	<p>Researcher-composed music:</p> <p>6 piano pieces (tempo 60-80; minor tonality; smooth rhythm; smooth melody lines)</p> <p>Played on a Panasonic RXES-29 CD player</p> <p>Volume 55-70dB</p>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Ragneskog, Asplund, Kihlgren, & Norberg, 2001) Title: Individualized music played for agitated patients with dementia: Analysis of video-recorded sessions	Psychogeriatric ward of a nursing home in Sweden		5 subjects diagnosed with severe dementia 4 Females 1 Male	5 subjects: age range 69-85	Quasi-experimental design	✓ Statistical analyses	Video-recording of changes in behaviour during meal-time	Individualized music is an effective nursing intervention to mitigate anxiety	
(Wong, Burford, Wyles, Mundy, & Sainsbury, 2008) Title: Evaluation of strategies to improve nutrition in people with dementia in an assessment unit	Evaluation of 3 strategies to improve nutrition in people with dementia 4 phases over 12 weeks 5 week gap between phases	A short stay assessment unit Average stay is 34days	Hospital inpatients with dementia	Phase 1: 23 Phase 2: 40 Phase 3: 7 Phase 4: 28	Observational phase followed by sequential interventions: Phase 1: Observation (control condition) Phase 2: grazing style of eating Phase 3: volunteers feeding the patients Phase 4: playing soothing music	✓ Statistical analyses	BMI Body weight Caloric intake score Appetite score	BMI changes during 4 phases: Phase 1: loss of 0.6kg/m2 Phase 2: gain of 0.3kg/m2 Phase 3: gain of 0.37/m2 Phase 4 : gain of 0.39kg/m2 Mid arm circumference increase: Phase 1: not available Phase 2: 0.04+0.065 Phase 3: 0.14+0.24 Phase 4: 0.09+0.44	Playing soothing music during all mealtimes
(Pinke, 2010) Title: Testing the Theory	Explores the relationship between food intake and music	Assisted Living Memory care community over 6 weeks	24 subjects benefited from this study although documentation was kept for only 12 subjects	12 average age 87	Observational study Within subject 24 meals over a period of 6 weeks were observed	✓ Qualitative	Food intake (as recorded by the care managers)	Music provided "a window of opportunity for care providers to increase caloric intake" Music created a calm environment Because of the positive results the music practice has been established in this institution	Traditional American folk melodies Popular classical compositions Traditional English and Irish folk melodies 13 th century English dance music

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Chang, Huang, Lin, & Lin, 2010; A. Crisinel et al., 2012) Title: The effect of a music programme during lunchtime on the problem behaviour of the older residents with dementia at an institution in Taiwan	Investigating the effect of background music during lunch time on problem behaviour		41 institution residents with dementia Average age 81.68	41 subjects	Quasi-experimental design with an eight-week time follow up Within subject	<ul style="list-style-type: none"> ✓ Blinded data collection ✓ Statistical analyses SPSS 12.0 	Chinese language Cohen-Mansfield Agitation Inventory (CMAI)	Significant improvement in physically and verbally aggressive behaviours Introducing music helped ease the work-load of nursing staff	Playing soothing music during lunch time
(Thomas & Smith, 2009) Title: The effect of music on caloric consumption among nursing home residents with dementia of the Alzheimer's type	Examined whether music played during meals would, by reducing agitation, would result in increased caloric consumption	Dining room from 12 – 1.30	12 residents from a 14-bed Alzheimer's Unit Age range from 76-92	12 subjects 11Female 1 Male	A time-series cross-over design Alternating weeks of no-music and music for 8 weeks	<ul style="list-style-type: none"> ✓ Quantitative analyses ○ Small sample size ○ Non-randomized 	Caloric intake Visual monitoring by a trained dietitian Consumed food was analysed for caloric intake using computerised Food Processor PLUS program	The average caloric intake increase by 20% during the music condition (from 667 to 797 calories)	<p>“Danny Boy” “Wild Irish Rose” “Swan Lake” “Blue Danube”</p> <p>Relaxed tempo and a more general “music style” were used</p> <p>Volume was set at approximately 60dB</p>
(A. S. Crisinel & Spence, 2010) Title: A sweet sound? Food names reveal implicit associations between taste and pitch	Two experiments investigating: 1) association between high pitched sounds and names of sweet food items and low pitched sounds and names of salty food items 2) relative strength of the association	Laboratory setting	Experiment 1: 28 undergrads. (20 female 8 male) Experiment 2: 28 undergrads. 21 female 8 male Age: 19-40 Exclusions: Impairments to the senses of smell, taste, hearing or cold	28 subjects	Within subject 1) IAT (Implicit Association Test) following Greenwald et al design (1998) 2) GNAT (go/no go association task) Nosek and Banaji, 2001	<ul style="list-style-type: none"> ✓ Statistical analyses ○ Non-randomized <p>Tastes were evoked by the names of food items</p>	RT (reaction times) Error rates Pleasantness ratings	Names of sweet and sour food items associated with high pitched sounds Association between the names of salty and bitter food items and low pitched notes in Experiment 1 but not in Experiment 2	<p>Auditory stimuli comes from an online musical-instrument samples database from the University of Iowa Electronic Music Studios</p> <p>High pitched sounds consisted of C6 (1046.5Hz) played on clarinet, piano, bassoon, and cello.</p> <p>Low pitched sounds consisted of D2 (73.4Hz) played on piano, bassoon, bass trombone and cello.</p> <p>Presented over closed-ear head phones at 70dB</p>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(A. Crisinel & Spence, 2009) Title: Implicit association between basic tastes and pitch	Investigates the association between high pitch sounds and sour tastes and low pitch sounds and bitter tastes	Laboratory setting	28 undergrads (14 male and 14 female) Age: 20-38 Exclusions: Impairments to the senses of smell, taste, hearing or common cold	28 subjects	Within subject IAT (Implicit Association Test) following Greenwald et al design (1998) 2 groups of participants performed the pairings in a counterbalanced order	<ul style="list-style-type: none"> ✓ Statistical analyses ✓ Individual differences in PTC sensitivity checked before ○ Non-randomized Tastes were evoked by the names of food items	RT (reaction times) Error rates	Names of sour food items associated with high pitched sounds Names of bitter food items associated with low pitched sounds	<p>Auditory stimuli comes from an online musical-instrument samples database from the University of Iowa Electronic Music Studios</p> <p>High pitched sounds consisted of C6 (1046.5Hz) played on clarinet, piano, bassoon, and cello.</p> <p>Low pitched sounds consisted of D2 (73.4Hz) played on piano, bassoon, bass trombone and cello.</p> <p>Presented over closed-ear head phones at 70dB</p>
(A. Crisinel & Spence, 2011) Title: Crossmodal associations between flavoured milk solutions and musical notes	Investigating association between flavoured milk solutions and the pitch and the class of instrument	Laboratory setting	22 participants (13female and 9 males) Age: 18-55 Controls: 12 participants (7 females and 5 males) Exclusions: Impairments to the senses of smell, taste, hearing or common cold	34 subjects	Between subject 4x4 experimental design (16 gustatory stimuli) presented in random order Controls tasted unflavoured milk samples	<ul style="list-style-type: none"> ✓ Statistical analyses ✓ Control group testing unflavoured milk solution of varying fat content 	Choice of 52 different sounds (pitch and instrument) for each milk solution Ratings on 9 point scale for: Pleasantness Intensity Complexity Sweetness Sourness Bitterness Saltiness Familiarity	Brass - unpleasant; high bitterness; medium sourness; low sweetness; fairly low saltiness Lemon and vanilla - brass Piano - pleasant; medium sweetness; low sourness; low bitterness; low saltiness High pitch - lemon; orange Low pitch - vanilla flavour Participants in control study were unable to detect any difference between milk of varying fat content	<p>Auditory stimuli comes from an online musical-instrument samples database from the University of Iowa Electronic Music Studios</p> <p>Notes ranging in pitch from C2 to C6 played by piano, woodwind, brass and strings (52 different sounds: 13 notes x 4 instruments)</p> <p>Presented over closed-ear head phones at 70dB</p>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(A. Crisinel & Spence, 2010) Title: As bitter as a trombone: Synesthetic correspondences in nonsynesthetes between tastes/flavors and musical notes	Explicit matching of sounds of varying pitch to a range of tastes/flavours	Laboratory setting	34 participants (20 females and 14 males) Age: 20-37 Second trial: A subset of 17 participants in Exclusions: Impairments to the senses of smell, taste, hearing or common cold	26 subjects	Within subject 12 gustatory stimuli were presented twice in random order (24 trials)	✓ Pilot experiment was conducted on 6 participants in order to approximately match the subjective intensity of 12 gustatory stimuli	Choice of 52 different sounds (pitch and instrument) matched to 12 gustatory stimuli Second trial: A subset of 16 different sounds Ratings on 9 point scale for: Pleasantness Intensity Complexity Sweetness Sourness Bitterness Saltiness Familiarity	Both, the pitch and instrument were matched to the same taste above chance level when presented for the second time Brass - caffeine; citric acid; orange flower Piano - sucrose; peppermint Woodwind - coffee High pitch - sweet; sour Low pitch - umami; bitter	Auditory stimuli comes from an online musical-instrument samples database from the University of Iowa Electronic Music Studios Notes ranging in pitch from C2 to C6 played by piano, woodwind, brass and strings (52 different sounds: 13 notes x 4 instruments) Second trial: A subset of 16 notes (C2; E3; G#4 and C6 were played by piano, woodwind, brass and strings) Presented over closed-ear headphones at 70dB
(A. Crisinel et al., 2012) Title: A bittersweet symphony: Systematically modulating the taste of food by changing the sonic properties of the soundtrack playing in the background	Investigating the consequence of manipulating the pitch of the background auditory stimulation on the taste of food	Laboratory setting (darkened experimental booth)	20 participants (12 females; 8 males) Age: 17-33 Pilot experiment: 31 participant Age: 23-36 Exclusions: Impairments to the senses of smell, taste, hearing or common cold	51 subjects	Within subject 4 identical pieces of cinder toffee, 2 with each soundscape, were presented in random order	✓ Pilot experiment was conducted to validate the sound tracks for bitter/sweet congruency	Participants rated each sample using three computer based line 9 point scales: Taste (bitter - sweet) Position (front - back of the mouth) Pleasantness	Cinder toffee was rated as being significantly more bitter when tasted while the "bitter" soundscape was played Cinder toffee was rated as being significantly more sweet when tasted while the "sweet" soundscape was played	Auditory stimuli was made by the Condiment Junkie based on Crisinel and Spence's (2010) results "Bitter soundscape" - low pitched notes played by brass instruments (pitched between F2 and C3) "Sweet soundscape" - high pitched notes played by the piano (abstractions of piano sound pitched between C4-C6)

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(Pellegrino et al., 2015) Title: Effects of background sound on consumers' sensory discriminatory ability among foods	Experiment 1 Investigating accustomed and preferential levels of background sound while eating across different demographics	community of north/west Arkansas	Experiment 1 274 volunteers aged 19-78 took part 244 completed (108 male 136 female) Mean age: 40	Exp. 1 244 subjects	Experiment 1 Within subject Survey (questionnaire 9 point Likert scale)	✓ Statistical software XLSTAT	Experiment 1 <i>Estimated average level of sound</i> during breakfast, lunch, snack and dinner during the previous week <i>Frequency of eating scenarios during the previous week:</i> Alone in silence Alone in front of TV Alone at computer/work Listening to music In a restaurant with others At home with others <i>The most preferred eating atmosphere:</i> In silence At a noisy restaurant At a quiet restaurant In front of TV While listening to music While having a conversation While using computer	Experiment 1 <i>Average sound level:</i> Breakfast – most silent Dinner- most loud <i>Most frequent eating scenario:</i> Breakfast – most often alone Lunch and dinner – with others Listening to music was significantly lower than any other eating scenarios <i>Preferred sound level:</i> Negative correlation between age and preferred sound level <i>Preferred eating scenario:</i> 58.8% while having a conversation 6.2% listening to music 3.7% like eating alone 0.4% like in a noisy restaurant	
	Experiment 2 Investigating whether the background sound affects the ability to discriminate between different foods and drinks		Experiment 2 58 volunteers (22 male and 36 female) Age: 20-69	Exp. 2 58 subjects	Randomized set of triangle designs ABB BAA AAB BBA ABA BAB		Ability to discriminate between 2 different potato chips and 2 different carbonated sodas while listening to: 1) Carbonation sound 2) Crisp-chewing sound 3) Classical music 4) Shadowing task 5) White noise	Potato chips differentiation rate: 1) 58.62% 2) 50.00% 3) 48.28% 4) 50.00% 5) 50.00% Carbonated soda differentiation rate: 1) 70.69% 2) 55.17% 3) 60.34% 4) 41.38% 5) 56.90%	

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(A. Crisinel & Spence, 2012b) Title: Assessing the appropriateness of 'synaesthetic' messaging on crisps packaging	Investigating the appropriateness of "syneasthetic" messaging on 7 different flavours of Walkers crisps	Laboratory setting	22 participants (14 female and 8 males) Age: 17-33	22 subjects	Within subject	<ul style="list-style-type: none"> ✓ Statistical analyses ○ Participants were not blinded ○ Small number 	Matching the taste of 7 different flavours of crisps to: 52 different sounds (13 pitches x 4 instruments) 10 colours 10 shapes (round and angular)	Association between flavour and pitch from low to high: BBQ Chicken Tomato Onion Chilli Cheddar Red curry Association between pleasantness and piano sound Association between unpleasantness and brass sound	Auditory stimuli comes from an online musical-instrument samples database from the University of Iowa Electronic Music Studios Notes ranging in pitch from C2 to C6 played by piano, woodwind, brass and strings (52 different sounds: 13 notes x 4 instruments)
(Ferber & Cabanac, 1987) Title: Influence of noise on gustatory affective ratings and preference for sweet or salt	Investigating the influence of noise on affective ratings for sweet and salt	Laboratory setting	10 male Mean age: 22.4 Exclusions: Metabolic illness Obesity Smoking	10 subjects	Within subject 5 sucrose and 5 sodium solutions were presented in random order ("sip and spit") under 4 auditory conditions	<ul style="list-style-type: none"> ✓ Statistical analyses ✓ Control condition 	Blood pressure and heart rate were monitored before and between the presentation of gustatory stimuli Gustatory pleasure ratings for salty and sweet stimuli Mixing own sucrose and salty solutions to taste	Sucrose had higher gustatory pleasure ratings with: Noise (90dB) Music (90dB)	4 auditory conditions: Low noise 70dB Loud noise 90dB Pleasant music (own choice) 90dB Silence Via headphones

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
<p>(Fiegel, Meullenet, Harrington, Humble, & Seo, 2014)</p> <p>Title:</p> <p>Background music genre can modulate flavour pleasantness and overall impression of food stimuli</p>	<p>Investigating</p> <p>1) whether music can alter food perception and acceptance</p> <p>2) whether this can vary as a function of emotional (chocolate) and non-emotional (bell pepper) foods and a source of performer</p>	<p>Constant experiment setting (20C)</p> <p>Individual sensory booths</p>	<p>99 volunteers</p> <p>Age: 18-30</p> <p>150 volunteers in the pilot test which assessed “emotionality” of foods</p> <p>Exclusions</p> <p>Diabetes Cancer Cardiovascular Renal disease Taste, smell and hearing impairment</p>	<p>249 subjects</p>	<p>Between subject design</p> <p>8 pairs of musical and food stimuli (4 music genres x 2 food stimuli) in monadic fashion (William Latin Square design)</p>	<ul style="list-style-type: none"> ✓ Taste spray, tuning fork test and olfactory function assessed beforehand ✓ Pilot test to assess “emotional foods” ✓ Warm up musical stimuli to minimise first-order-carry-over effect ✓ Pre-test to assess the overall mood and hunger ✓ SPSS 21.0 ○ Non randomized allocation to groups (SP and MP) 	<p>Ratings for emotional and non-emotional foods in 4 music conditions:</p> <p>Flavour intensity Pleasantness Texture impression Overall impression</p> <p>Ratings for music:</p> <p>Familiarity Arousal (stimulation) Pleasantness</p>	<p>Pleasantness ratings vary according to the genre of music played:</p> <p>When listening to Jazz the overall impression of the food was rated significantly higher than when listening to Hip-hop (emotional food only)</p> <p>*When listening to music by SP:</p> <p>Flavour pleasantness was significantly higher with jazz than Hip-hop</p> <p>Overall impression was significantly higher for Jazz, Classical and Rock than Hip-hop</p>	<p>Warm-up music stimuli: <i>Mozart 13 Variations in C K265</i></p> <p>Air on G string by JS Bach (adaptation by August Wilhelm) arranged in four different genres for either for SP (single performer) or MP (multiple performers) in D major at 75dB</p> <p><i>Classical</i> <i>Jazz</i> <i>Rock</i> <i>Hip-hop</i></p> <p>*difference in tempo:</p> <p><i>Classical</i> SP (82) MP (40) <i>Jazz</i> SP (102) MP (80) <i>Hip-hop</i> SP (100) MP (72) <i>Rock</i> SP (100) MP (90)</p>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(A. Crisinel & Spence, 2012a) Title: The impact of pleasantness ratings on cross-modal associations between food samples and musical notes	Investigating the role of pleasantness in the association between taste/flavour and musical notes (pitch and instrument)	Laboratory setting	Experiment 1: 54 participants (33 female and 21 male) Age: 26-36 Experiment 2: 38 participants (17 female and 21 male) Age: 26-36	92 subjects	Experiment 1: Within subject experiment Experiment 2: Between subject questionnaire		Experiment 1: Match the pitch of sound to the taste of : Dark chocolate Marzipan-filled chocolate Milk chocolate Ratings on 9 point scale for: Bitterness Sweetness Pleasantness Experiment 2: Chose appropriate adjective for high pitch (group 1) and low pitch (group 2) out of 11 pairs of antonyms	Pleasantness is not solely responsible for the association between taste/flavour and the pitch Pleasantness seems to be a driving force in the association between taste/flavour and the choice of instrument Only the choice of milk chocolate resulted in significant preference for piano sound Participants who rated dark chocolate as pleasant were more likely to choose piano, while participants who rated it as unpleasant were more likely to choose strings and woodwind instruments	Auditory stimuli comes from an online musical-instrument samples database from the University of Iowa Electronic Music Studios 4 scales (pitch increasing) corresponding to 4 instruments: piano, woodwind, brass and strings
(Zampini & Spence, 2004) Title: The role of auditory cues in modulating the perceived crispness and staleness of potato chips	Investigated whether the perception of the crispness and staleness of potato chips can be affected by modifying the sounds produced during the biting action	Laboratory setting	20 participants (6M; 14F) Age range: 18-34		Within subject with 3 factors fully crossed 18 conditions each presented 5 times		Three factors: Auditory Frequency Manipulation (high-frequencies attenuated, veridical feedback or high-frequencies amplified) Overall Sound Attenuation (0 dB, 20 dB or 40 dB) Response Scale (soft-crisp vs. fresh-stale)	The potato chips were perceived as being both crisper and fresher if: Overall sound level was increased High frequency sounds (in the range of 2 kHz 20 kHz) were selectively amplified	

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Holt-Hansen, 1968) Title: Taste and pitch	Investigating the “pitch fit” between the taste of 2 types of beer and pure tones	Laboratory setting Copenhagen University	16 subjects of which 3 took part in both experiments 4 Male 12 Female	16 subjects	Between subject Experimental design		Finding a point where the sound and taste are in perfect harmony “pitch of fit” Finding the location of harmony in the head: 1) sensations in the mouth, tongue, palate, throat, head, body, etc 2) special experience of the sample, i.e., it tastes best 3) sound- or sensation-like experiences in one or both ears.	“Pitch of fit”: Carlsberg Larger 510-520Hz Carlsberg Elephant Beer 640-670Hz Beer tastes best at the point of harmony – location of the harmony in the head: Back of the lower jaw Beneath the cheek bone near the ear	“Pitch of fit” was determined using: Audio-frequency oscillator for pitch and intensity Impulse shaper for rhythm (sound-pause pattern) Duration of sound
(Rudmin & Cappelli, 1983) Title: Tone-taste synesthesia: A replication	Investigating the “pitch fit” between the taste of 5 types food and beverage and pure tones	Laboratory setting McGill University	10 adults from the University	10 subjects	Holt-Hansen design		Finding a point where the sound and taste are in perfect harmony “pitch of fit”	“Pitch of fit” showed significant difference between items: Non-alcoholic beer 643Hz Carlsberg beer 693Hz Grapefruit juice 1016Hz Hard candy 1089Hz Dill pickle 1394Hz	“Pitch Of Fit” was determined using: Intensity Pulse Rate Duty Cycle*
(Bronner, Frieler, Bruhn, Hirt, & Piper, 2012) Title: What is the sound of citrus? Research on the correspondences between the perception of sound and flavour	Investigating perceptual connection between flavour and sound Preliminary study Participants judged the sound of 6 adjectives	Laboratory setting	Preliminary study 14participants (4 Female 10 Male) Age range: 22-26	Preliminary study 14 subjects	Experimental design Within subject		Evaluating the sound using the following adjectives: Sweet Sour Salty Bitter Spicy, hot Mild No flavour	The sounds elicited consistent and distinct flavour associations along the psychoacoustic property of sound - sharpness (high frequency of sound) Sour: sharp, bright Sweet: round, soft, warm	3 sound samples representing: Sour Sweet Sweet-sour 4 seconds long

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Bronner et al., 2012) Title: What is the sound of citrus? Research on the correspondences between the perception of sound and flavour (Bronner et al., 2012)	1st Experiment		1stExperiment 85 participants (55 M; 30 F) Age range: 14- over 65	85 subjects	Between subject 4 groups: 2 groups evaluate real drinks (1- orange; 2- vanilla) 2 groups evaluate imagined drinks (1- orange; 2- vanilla) Sound stimuli and questionnaire		Evaluate the flavour of orange and vanilla using 5 point scale on: High-low Dark-bright Acute-dull Light-heavy Cold-warm Quiet-loud Regular-random Complex-simple Angular-round Smooth-rough 6 further tasks where participants had to choose 3 sound samples that match their flavour stimuli best	Orange: <i>Timbre</i> Bright, fairly sharp and rough <i>Articulation</i> Staccato, accentuated, dynamic <i>Rhythm</i> Syncopated <i>Melody</i> Medium to large Intervals <i>Ambitus</i> Mid to large range <i>Tempo</i> Lively and fast Vanilla <i>Timbre</i> Soft, dull, not sharp or rough <i>Articulation</i> Legato, even, little dynamics <i>Rhythm</i> Even <i>Melody</i> Small intervals, consonant <i>Ambitus</i> Small range <i>Tempo</i> Rather slow	
	2nd Experiment		2ndExperiment 43 participants (27 M; 16 F) Age range: 14- over 65	43 subjects	The same design as in 1 st Experiment		Evaluate the flavour and the sound mood of orange, lemon, grapefruit and vanilla	The results from 2 nd Experiment basically replicated the results of 1 st Experiment. The best match for flavour/instrument: Vanilla – piano sound (81%) Orange – guitar sound (52%)	

Reference	Intervention	Setting/Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Simner, Cuskley, & Kirby, 2010) Title: What sound does that taste? Cross-modal mappings across gustation and audition	Investigating the cross modal correspondences between taste and sound (phonetic qualities of speech)								
(Woods et al., 2011) Title: Effect of background noise on food perception	Investigating the effect of background noise (no sound; quiet and loud background white noise)							Sweetness and saltiness significantly lower in loud condition Crunchiness intensified with background noise Liking for noise correlated with the liking for food	
Wang, Q. & Spence, C. (2015) Under review Title: Unravelling the bittersweet symphony: Assessing the influence of crossmodally congruent soundtracks on bitter and sweet taste evaluation of taste solutions and complex food	Evaluating samples of pure taste solutions (sweet, bitter, & bittersweet) as well as complex foodstuffs (70% & 85% cacao chocolates) while listening to “sweet”, or “bitter” soundtrack or control (silent) condition	Laboratory setting Oxford University	38 subjects (24 F, 14 M) age range: 18-47 Exclusions: Impairments to the senses of smell, taste, hearing or common cold		Within subject Rating given on a 1-100 scale (bitter - sweet) for 9 samples of pure taste solutions and 6 samples of chocolate Self-reported liking for sweetness and bitterness as covariates		Ratings given on a 1-100 scale while the soundtrack was still playing for: <ul style="list-style-type: none"> Sweetness Bitterness Pleasantness Chocolate had an additional rating for: <ul style="list-style-type: none"> Sourness 	<i>Sweet soundtrack</i> higher sweetness ratings for taste solutions and chocolates <i>Bitter soundtrack</i> lower sweetness ratings and higher bitterness ratings Suppressed sweet evaluation for chocolates Self-reported liking for sweetness and bitterness - no significant effect	“Bitter soundscape” - low pitched notes played by brass instruments (pitched between F2 and C3) “Sweet soundscape” – high pitched notes played by the piano (pitched between C4 and C6)

Reference	Intervention	Setting/Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
<p>Wang, Q., Woods, A., & Spence, C. (2015) <i>Under review</i> Title: “What’s your taste in music?” A comparison of the effectiveness of various soundscapes in evoking specific tastes</p>	<p>Experiment 1 100 participants listened to 24 soundtracks and chose the taste (sweet, sour, salty, or bitter) that best matched each sample.</p> <p>Experiment 2 50 participants rated their emotional responses to the same 24 soundtracks and imaginary sweet, sour, bitter and salty foods</p>	<p>Online</p> <p>Participants were recruited from the Amazon’s Mechanical Turk</p> <p>Programmed on the Xperiment experiment-design and hosting platform</p>	<p>Experiment 1 100 (51F; 49M) Age range: 21-62</p> <p>Experiment 2 50 (21F; 29M) Age range: 20-64</p>	150	<p>Within subject</p> <p>Rating scale 0-100</p>	<p>Online experiment</p> <p>Control experiment: 2 soundtracks were pre-tested on bitter-sweet scale</p> <p>Musical expertise assessed:</p> <ul style="list-style-type: none"> None Amateur Intermediate Advanced 	<p>Experiment 1 Listen to 24 soundtrack and give ratings on a 0-100 scale for:</p> <ul style="list-style-type: none"> Best taste match Degree of match <p>Experiment 2 Rate how pleasant and how energising/exciting each soundtrack is on scale 0-100:</p>	<p>Experiment 1 Best matches for tastes:</p> <ul style="list-style-type: none"> Deng for sweet (89%) Deng for salty (58%) Mesz – Tango for sour (58%) Condiment Junkie for bitter (42%) <p>Experiment 2 Pleasantness partly mediates the soundtrack-taste correspondence for bitterness and sweetness</p> <p>Arousal partly mediates the soundtrack-taste correspondence for sourness</p> <p>Saltiness does not appear to be mediated by pleasantness or arousal</p>	<p>24 RMS-equalised soundtracks were used (5 bitter, 5 salty, 7 sour, and 7 sweet).</p> <p>Atmospheric soundscapes 15 seconds each</p>
<p>(Divert et al., 2015) Title: Improving meal context in nursing homes. Impact of four strategies on food intake and meal pleasure</p>	<p>Impact of four contextual factors on food intake and meal enjoyment in nursing homes: 1.dish name 2.portion 3.condiment 4.surrounding (music)</p>	<p>3 nursing homes in France over 12 lunches (1 x week)</p>	<p>42 subjects (13M; 29F) Age range: 71-99 Exclusion: Food allergy Prescribed diet Severe cognitive impairment</p>	42	<p>Experimental design</p> <p>For each factor (dish name, portion, condiment and surrounding)a control condition was compared with 2 experimental conditions</p>	<p>Scale responses (hunger, meal enjoyment) were converted into scores</p> <p>The quantities consumed were converted into calorie intake</p> <p>SAS software</p> <p>Significance was set at 5%.</p>	<p>Participants rated their feeling of hunger on a 7-point scale</p> <p>Food intake was measured by weighing the plates before and after consumption</p> <p>Participants evaluated their enjoyment of the meal on a 7-point scale</p>	<p>No impact on food intake was observed during music condition</p> <p>Playing music during mealtime led to a decrease in food enjoyment but had no impact on meal enjoyment.</p>	<p>Residents were asked to choose from a list the music they wished to hear throughout the meal</p>

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Dinner music.2007)					Theoretical			Music improves dining area	
(Hooper, Carson, & Lindsay, 2012) Title: Effect of music on mealtime disruptions	Investigating the effect of music on anxiety driven mealtime disruption in people with learning difficulties	A sample of 30 adults with mild, moderate or severe learning disabilities were videotaped during mealtimes on two consecutive days	30 adults with learning disabilities	30	Within subject experimental design	Double-blind peer reviewed	Effect of calming background music delivered via headphones on anxiety-driven behaviours that disrupted mealtimes	Calming music had a positive effect on disruptive mealtime behaviours	Calming music delivered via headphones
(Van der Geer, Vink, Schols, & Slaets, 2009) Title: Music in the nursing home: hitting the right note! The provision of music to dementia patients with verbal and vocal agitation in Dutch nursing homes	Examines the type of music being offered in Dutch nursing homes to patients with both dementia and verbal and vocal agitation	Using random sampling, 20 nursing homes were selected	51 residents were discussed in the interviews (12M; 39F) Age range: 58-99	51	semi-structured interviews were conducted with 17 nursing home physicians and 20 carers		Frequency of music being offered Type of music being offered Level of correspondence between music offered and musical preference of the residents	During patient-centered care activities music was generally tailored to preference In the communal living area music was not tailored to preference Music was only infrequently offered to residents during meals	

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Watson & Green, 2006; Whear et al., 2014) Title: Feeding and dementia: a systematic literature review	Systematic review of the literature on interventions to promote oral nutritional intake of older people with dementia and feeding difficulty between 1993 and 2003.				Systematic review	there were no standardized interventions or outcomes across the studies and none reported the use of power analysis to decide on sample size		Music was the most common intervention Music is shown to be a promising line of enquiry for future research	
(Whear et al., 2014) Title: Effectiveness of Mealtimes Interventions on Behavior Symptoms of People With Dementia Living in Care Homes: A Systematic Review	Investigates mealtimes interventions on disruptive behaviour: Music Changes to food service Dinning environment alteration Group conversation				Systematic review			4 studies reported lingering or cumulative effect of music on agitated and aggressive behaviour	

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Massimiliano & Spence, 2008) Title: Assessing the Role of Sound in the Perception of Food and Drink	Reviewing the literature on the effect of music and other sound stimuli on taste perception and food choice				Review		Effect of food related sounds and background music on the perception of food taste and food choice	Increasing loudness of background music results in a significant increase in consumption of food and drink Increasing beats-per-minute of background music results in significant increase in consumption of both food and drink items Biting and chewing sounds affect the evaluation of crispness, freshness Mastication sounds affect the evaluation of moistness	
(Spence, 2012) Title: Auditory contributions to flavour perception and feeding behaviour	Reviews the research that has looked at the role of audition in both flavour perception and feeding behaviours in humans				Review		Multisensory integration approach to flavour perception Manipulating the sound of the food itself Food packaging sounds Sound of food and beverage preparation The influence of background music on eating/drinking behaviours	Research has demonstrated that all aspects of eating behaviour are affected by the music playing in the background: <ul style="list-style-type: none"> • Length of the meal • Amount of food consumed • Rate of food consumption • Amount people are prepared to pay for the meal 	
(Spence & Deroy, 2013) Title: On why music changes what (we think) we taste	This article proposes a number of possible explanations for sound/taste association phenomenon				Theoretical		Symbolic priming Crossmodal priming Influence of crossmodal correspondences on perception.	Possible further testing: Cross modal correspondences should be culture independent Change to certain low-level properties of music e.g. pitch should change perception of taste	

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(SPENCE & SHANKAR, 2010) Title: The Influence of Auditory Cues on the Perception Of, and Responses To, Food and Drink	Review of both laboratory-based research and real-world (ecological) studies of the effects of music and other auditory stimuli on people's food-related behaviors.				Review			Mechanisms involved 1.changing perception of time 2.changing the level of arousal 3.elicit emotional responses of pleasure and dominance 4.music can act as destruction 5.priming - bias a person to choose one food product over another 6. music may change the perception of taste/flavour	
Malloy, L. (2012?) Title: Appetite for life: what can help improve the mealtime experience	Reviews studies on mealtime experience for people with dementia in formal care settings				Review		Listening to music during mealtimes: Impact on the calorie intake and percentage of food eaten Correlation between the effect of music on the levels of agitation and food consumption	Positive findings in relation to both Levels of agitation Amount of food consumed	
(Chia-Chi Chang & Roberts, 2011) Title: Strategies for Feeding Patients with Dementia	Assessment of different feeding strategies for dementia patients				Review			One of the recommended strategies is to play soothing music in the dining area during mealtimes	

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Ragneskog, Bråne, Karlsson, & Kihlgren, 1996) Influence of Dinner Music on Food Intake and Symptoms Common in Dementia	Investigating the influence of 3 types of music on food intake and psychological symptoms common in dementia	Nursing-home psychogeriatric ward in Sweden	20 elderly Age range: 69-94 Mean age: 80 16 severe dementia 4 moderate dementia 20 staff Age range: 24-61 Mean age: 39	40	Within subject design during five periods: Without music (1w.) Soothing music (2w.) Swedish music from 1920 and 1930 (2w.) Pop music (2w.) Control period - no music (2w.) Questionnaire survey for the staff		Food intake (weighing plates before and after) Weighing the patients Psychological ratings (GBS scale) Patients pulse after the meal Noise level Questionnaire for the staff	GBS ratings: Significant improvement in irritability, fear-panic and depressed mood especially when soothing music was played The positive effect of music on emotional symptoms is sustained for 2 weeks after the music condition Food intake: Significant improvement in food intake especially during music conditions (pop and rock in particular) Staff served more food during music conditions (positive correlation between food served and food eaten) Noise levels and pulse: No significant changes (65 dB control period; 66 dB soothing and Swedish music condition; 76 dB pop/rock) Staff questionnaire: Staff suggested soothing, classical, harmonious, melodious, familiar, piano music as appropriate Disco, pop, rock, dance, loud, percussion, trumpet music was deemed inappropriate	Soothing music: Soft, melodious, relaxing, romantic, no sudden changes in volume and tempo, often strings Swedish music from 1920s and 1930s: Popular tunes in Tin Pan Alley style, original recordings Pop and Rock tunes: Popular international artists from 1980s Volume was adjusted when this was needed (?)

Reference	Intervention	Setting/ Context	Participants	Sample size	Study design	Quality/method	Outcome measures	Results	Music
(Carter, Wilson, Lawson, & Bulik, 1995) Title: Mood induction procedure: importance of individualising music	Evaluated the musical mood induction procedure amongst 12 bulimic and 12 control women							<p>No piece of music was rated highly by all participants</p> <p>Maximal ratings were provided by own choice music, however only 3 participants used own choice</p> <p>Individualizing music may help the effectiveness of MMIP</p>	<p>MMPI Music selection:</p> <p>Winter into Spring; Winston</p> <p>Concerto for two violins; JS Bach</p> <p>Same Old Lang Syne; Fogelberg</p> <p>Nothing compares to U; O'Connor</p> <p>Rainy Days and Mondays; Carpenter</p> <p>Symphony No 9 (Largo); Dvorak</p> <p>Swan of Tuonela; Sibelius</p> <p>Own choice music</p>

Appendix B

B.1 Questionnaire for Studies 1 and 2

Age _____

Gender: *Female* *Male*

Your height in cm/inches? _____

Your weight in kg/pounds? _____

How often do you listen to music?

Never *Rarely* *Sometimes* *Often* *Most of the time*

Have you had any musical training (instrument, voice)? *Yes* *No*

Are you currently on a diet in order to lose weight? *Yes* *No*

Three-Factor Eating Questionnaire TFEQ-R18 (Karlsson et al., 2000)

Below is a set of statements describing feelings or experiences you may have had, or are familiar with because you have had them for a long time. Please read each statement, and select from the multiple choice options the answer that indicates the frequency with which you find yourself feeling or experiencing what is being described in the statements below.

1. When I smell a delicious food, I find it very difficult to keep from eating, even if I have just finished eating a meal.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

2. I deliberately take small helpings as a means of controlling my weight.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False

- 4. Definitely False

3. When I feel anxious, I find myself eating.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

4. Sometimes when I start eating, I just can't seem to stop.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

5. Being with someone who is eating often makes me hungry enough to eat also.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

6. When I feel blue, I often overeat

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

7. When I see a real delicacy, I often get so hungry that I have to eat right away

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

8. I get so hungry that my stomach often seems like a bottomless pit.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

9. I am always hungry so it is hard for me to stop eating before I finish the food on my plate.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

10. When I feel lonely, I console myself by eating.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

11. I consciously hold back at meals in order not to weight gain.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

12. I do not eat some foods because they make me fat.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False
- 4. Definitely False

13. I am always hungry enough to eat at any time.

- 1. Definitely True
- 2. Mostly True
- 3. Mostly False

- 4. Definitely False

14. How often do you feel hungry?

- 1. Only at meal times
- 2. Sometimes between meals
- 3. Often between meals
- 4. Almost always

15. How frequently do you avoid “stocking up” on tempting foods?

- 1. Almost never
- 2. Seldom
- 3. Usually
- 4. Almost always

16. How likely are you to consciously eat less than you want?

- 1. Unlikely
- 2. Slightly likely
- 3. Moderately likely
- 4. Very likely

17. Do you go on eating binges though you are not hungry?

- 1. Never
- 2. Rarely
- 3. Sometimes
- 4. Least once a week

18. On a scale of 1 to 8, where 1 means no restraint in eating (eating whatever you want, whenever you want it) and 8 means total restraint (constantly limiting food intake and never “giving in”), what number would you give yourself?

The Profile of Mood States POMS-SF (Shacham, 1983)

Read each word/statement below, decide how you have been feeling, in respect to the word/statement, in the past week and today, and select the appropriate statement to indicate your feeling.

0 - Not at all 1 - A little 2 - Moderately 3 - Quite a Lot 4 - Extremely

1. Tense ____
2. Angry ____
3. Worn out ____
4. Unhappy ____
5. Lively ____
6. Confused ____
7. Peeved ____
8. Sad ____
9. Active ____
10. On edge ____
11. Grouchy ____
12. Blue ____
13. Energetic ____
14. Hopeless ____
15. Uneasy ____
16. Restless ____
17. Unable to concentrate ____
18. Fatigued ____
19. Annoyed ____
20. Discouraged ____
21. Resentful ____

22. Nervous ____
23. Miserable ____
24. Cheerful ____
25. Bitter ____
26. Exhausted ____
27. Anxious ____
28. Helpless ____
29. Weary ____
30. Bewildered ____
31. Furious ____
32. Full of pep ____
33. Worthless ____
34. Forgetful ____
35. Vigorous ____
36. Uncertain ____
37. Bashed ____

B.2 Study 1 Documents



School of Psychology

Keynes College

University of Kent

Canterbury, CT2 7NP

Study Information Sheet

Title of Project:	<input type="text" value="The perception of food-taste"/>	Ethics Approval Number:	<input type="text"/>
Investigator(s):	<input type="text" value="Vania Bajic"/>	Researcher Email:	<input type="text" value="Vb227@kent.ac.uk"/>

Aims of the Study:

I would like to invite you to participate in this project, which is concerned with evaluation of different food tastes. You will be asked to taste 8 food items (0.3g each) and give your ratings on a 9-point computer based scale. I will also try to find out a little bit more about your personal preferences and how these may affect the assessment of a particular food-item. The project is a part of my PhD course at the University of Kent and it is hoped that it could provide useful information regarding eating behaviours and outcomes.

Eligibility Requirements:

Applicants with food allergies/intolerance, diabetes or impairments to smell, taste, and hearing (including the common cold) are excluded. Eligible participants will be asked to abstain from eating food for two hours prior to the experiment.

What you will need to do and time commitment:

1. You will need to register for the study and will be awarded credits for participation
2. There will be one laboratory experiment, about an hour long. It consists of food tasting/rating and a questionnaire.
3. When the study is completed a summary of the findings will be produced. I will be more than happy to send it to you if you are interested.

Risks/Discomforts involved in participating:

There are no known risks or discomforts associated with this experiment. I will be there to assist you throughout the experiment and provide answers to any questions you might have.

Debriefing:

All participants will be debriefed upon completion of the data collection phase.

Right to withdraw:

You can withdraw from participation from the whole experiment or any part of it at any point without needing to justify your decision. You can also request for your data to be withdrawn at any time after participation in the study. In order to do this, please contact the investigator with your participant number, which you will find on the Debrief Form. Please be aware, however, that data may still be used in a collated form. Finally, if you are a student who is volunteering for course credits as part of an undergraduate module, please be advised that there will be no adverse consequences in relation to assessment for your degree if you decide to withdraw.

Confidentiality of your data:

If you agree to take part, your name will not be recorded on the questionnaires and the information will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project only. Researchers involved in the study will be unaware of any links between the identity and the data collected. Signed consent forms will be kept separately from all other data. All data will be held securely in password protected computer files and locked filing cabinets. No one outside of the research team will have access to the individual data.

Details of any payments/RPS credits (*must be approved by ethics committee*)

Remember that participation in this research study is completely voluntary. Even after you agree to participate and begin the study, you are still free to withdraw at any time and for any reason.

If you would like a copy of this consent form to keep, please ask the researcher. If you have any complaints or concerns about this research, you can direct these, in writing, to the Chair of the Psychology Research Ethics Committee by email at: psychethics@kent.ac.uk. Alternatively, you can contact us by post at: Ethics Committee Chair, School of Psychology, University of Kent, Canterbury, CT2 7NP.

RESEARCH INFORMED CONSENT FORM

Title of Project:	The perception of food-taste	Ethics Approval Number:	20153642
Investigator(s):	Vania Bajic	Researcher Email:	vb227@kent.ac.uk

Please read the following statements and, if you agree, initial the corresponding box to confirm agreement:

	Initials
I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	<input style="width: 80px; height: 40px;" type="text"/>
I understand that my participation is <u>voluntary</u> and that I am free to withdraw at any time without giving any reason.	<input style="width: 80px; height: 40px;" type="text"/>
I understand that my data will be treated confidentially and any publication resulting from this work will report only data that does not identify me.	<input style="width: 80px; height: 40px;" type="text"/>
I freely agree to participate in this study.	<input style="width: 80px; height: 40px;" type="text"/>

Signatures:

Name of participant (block capitals)	Date	Signature
Researcher (block capitals)	Date	Signature

If you would like a copy of this consent form to keep, please ask the researcher. If you have any complaints or concerns about this research, you can direct these, in writing, to the Chair of the Psychology Research Ethics Committee by email at: psychethics@kent.ac.uk. Alternatively, you can contact us by post at: Ethics Committee Chair, School of Psychology, University of Kent, Canterbury, CT2 7NP.

Debriefing for a study investigating the effects of music on the perception of food-taste

The aim of this study was to investigate the effects of music/soundscapes on the perception of food-taste. More specifically, the experiment was designed to examine whether and if so to which degree listening to a “sweet congruent soundscape” enhances the perception of sweetness, and listening to a “bitter congruent soundscape” enhances the perceived bitterness of a food item. In addition, it examined whether the effect of taste congruent soundscape influences the hedonic ratings of food items.

We used two taste congruent soundscapes (“bitter” and “sweet”). The “sweet congruent soundscape” consists of high pitched notes played on the piano (abstractions of piano sound pitched between C4 and C6). The “bitter congruent soundscape” consists of low pitched notes played on the brass instruments (pitched between F2 and C3). They were presented to you in a randomised order. You have tasted only two different food items (4 pieces of cinder toffee and 4 pieces of shredded wheat).

This experiment attempted to provide answers to the following questions: Can music/soundscapes be used to modify food taste e.g. as a type of “sonic seasoning” and to which degree? ; Does the effect of music on the perception of food-taste result in increased hedonic ratings of food items?

Thank you again for taking part in the experiment. The information you have given us made a valuable contribution to the research regarding the influences of music on eating behaviours and outcomes. If you have any questions or would like to discuss a particular part of the experiment further, please feel free to contact me.

Vania Bajic
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PhD Studentship
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Cornwallis George Allen Wing
E-mail: vb227@kent.ac.uk
University of Kent CT2 7NF

THANK YOU AGAIN FOR YOUR CO-OPERATION

B.3 Study 2 Documents



School of Psychology
Keynes College
University of Kent
Canterbury, CT2 7NP

Study Information Sheet

Title of Project:	The effect of music on evaluation of food-taste	Ethics Approval Number:	20163826
Investigator(s):	Vania Bajic	Researcher Email:	vb227@kent.ac.uk

Aims of the Study:

I would like to invite you to participate in this project, which investigates the effect of music on evaluation of food-taste. You will be asked to complete two music based tasks: listen to an instrumental music compilation and evaluate the taste and pleasantness of a previously agreed food item. You might be asked a few questions about your eating habits. This experiment will be video recorded.

Eligibility Requirements:

Applicants with food allergies/intolerance, diabetes, eating disorder or impairments to smell, taste, and hearing (including the common cold) are excluded.

Eligible participants will be asked to abstain from eating food for **two hours** prior to the experiment.

What you will need to do and time commitment:

1. You will need to register for the study and will be awarded credits for participation
2. There will be one laboratory experiment, about an hour long. It comprises food evaluation experiment and a questionnaire.
3. When the study is completed a summary of the findings will be produced. I will be more than happy to send it to you if you are interested.

Risks/Discomforts involved in participating:

There are no known risks or discomforts associated with this experiment. I will be there to assist you throughout the experiment and provide answers to any questions you might have.

Debriefing:

All participants will be debriefed upon completion of the data collection phase.

Right to withdraw:

You can withdraw from participation from the whole experiment or any part of it at any point without needing to justify your decision. You can also request for your data to be withdrawn at any time after participation in the study. In order to do this, please contact the investigator with your participant number, which you will find on the Debrief Form. Please be aware, however, that data may still be used in a collated form. Finally, if you are a student who is volunteering for course credits as part of an undergraduate module, please be advised that there will be no adverse consequences in relation to assessment for your degree if you decide to withdraw.

Confidentiality of your data:

If you agree to take part, your name will not be recorded on the questionnaires and the information will not be disclosed to other parties. Your responses to the questions will be used for the purpose of this project only. Researchers involved in the study will be unaware of any links between the identity and the data collected. Signed consent forms will be kept separately from all other data. All data including video recordings, will be held securely in password protected computer files and locked filing cabinets in the supervisor's office. No one outside of the research team will have access to the individual data. After a period of five years video-recordings will be wiped from the hard disk.

Details of any payments/RPS credits (*must be approved by ethics committee*)

Remember that participation in this research study is completely voluntary. Even after you agree to participate and begin the study, you are still free to withdraw at any time and for any reason.

If you would like a copy of this consent form to keep, please ask the researcher. If you have any complaints or concerns about this research, you can direct these, in writing, to the Chair of the Psychology Research Ethics Committee by email at: psychethics@kent.ac.uk. Alternatively, you can contact us by post at: Ethics Committee Chair, School of Psychology, University of Kent, Canterbury, CT2 7NP.

RESEARCH INFORMED CONSENT FORM

Title of Project:	The effect of music on the evaluation of food-taste	Ethics Approval Number:	20163826
Investigator(s):	Vania Bajic	Researcher Email:	vb227@kent.ac.uk

Please read the following statements and, if you agree, initial the corresponding box to confirm agreement:

	Initials
I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	<input style="width: 80px; height: 40px;" type="text"/>
I understand that my participation is <u>voluntary</u> and that I am free to withdraw at any time without giving any reason.	<input style="width: 80px; height: 40px;" type="text"/>
I understand that my data will be treated confidentially and any publication resulting from this work will report only data that does not identify me.	<input style="width: 80px; height: 40px;" type="text"/>
I freely agree to participate in this study.	<input style="width: 80px; height: 40px;" type="text"/>

Signatures:

Name of participant (block capitals)	Date	Signature
Researcher (block capitals)	Date	Signature

If you would like a copy of this consent form to keep, please ask the researcher. If you have any complaints or concerns about this research, you can direct these, in writing, to the Chair of the Psychology Research Ethics Committee by email at: psychethics@kent.ac.uk. Alternatively, you can contact us by post at: Ethics Committee Chair, School of Psychology, University of Kent, Canterbury, CT2 7NP.

Debriefing for a study investigating the effect of music on the rate of mastication

The aim of this study was to investigate the effects of the tempo of music on eating behaviour. More specifically, the experiment was designed to examine the effect of background music on the speed of eating e.g. rate of mastication measured in bites per minute.

This experiment was video-taped. Video recording was used by the researcher to calculate and establish the speed of mastication (in bites per minute).

This experiment attempted to provide answer to the following question: Can music be used to change/adjust the speed of mastication and therefore utilized to slow down the speed of eating.

Thank you again for taking part in the experiment. The information you have given us made a valuable contribution to the research regarding the influences of music on eating behaviours and outcomes. If you have any questions or would like to discuss a particular part of the experiment further, please feel free to contact me.

Vania Bajic
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University of Kent CT2 7NF

THANK YOU AGAIN FOR YOUR CO-OPERATION

Experiment 2 (Group A - FMS) – Time schedule

Time	Event	Duration
0:00	Music track starts	3 minutes of listening
3:00	START EATING pop-up	1 minute (pop-up disappears at 4:00)
5:00	Q1: Likert scale	1 minute (Likert disappears at 6:00)
7:00	VOICE: Mouse-click event	1 minute (mouse-click closes at 8:00)
8:00	Q2: Likert scale	1 minute (Likert disappears at 9:00)
9:20	STOP EATING pop-up	1 minute (pop-up disappears at 10:20)
12:20	START EATING pop-up	1 minute (pop-up disappears at 13:20)
14:20	Q3: Likert scale	1 minute (Likert disappears at 15:20)
16:00	VOICE: Mouse-click event	1 minute (mouse-click closes at 17:00)
17:00	Q4: Likert scale	1 minute (Likert disappears at 18:00)
18:30	STOP EATING pop-up	1 minute (pop-up disappears at 19:30)
21:30	START EATING pop-up	1 minute (pop-up disappears at 22:30)
23:30	Q5: Likert scale	1 minute (Likert disappears at 24:30)
25:20	VOICE: Mouse-click event	1 minute (mouse-click closes at 26:20)
26:20	Q6: Likert scale	1 minute (Likert disappears at 27:20)
29:58	STOP EATING pop-up	End of the music track

Experiment 2 (Group B - SMF) – Time schedule

Time	Event	Duration
0:00	Music track starts	3 minutes of listening
3:00	START EATING pop-up	1 minute (pop-up disappears at 4:00)
5:00	Q1: Likert scale	1 minute (Likert disappears at 6:00)
7:00	VOICE: Mouse-click event	1 minute (mouse-click closes at 8:00)
8:00	Q2: Likert scale	1 minute (Likert disappears at 9:00)
10:30	STOP EATING pop-up	1 minute (pop-up disappears at 11:30)
13:30	START EATING pop-up	1 minute (pop-up disappears at 14:30)
15:30	Q3: Likert scale	1 minute (Likert disappears at 16:30)
17:00	VOICE: Mouse-click event	1 minute (mouse-click closes at 18:00)
18:00	Q4: Likert scale	1 minute (Likert disappears at 19:00)
19:45	STOP EATING pop-up	1 minute (pop-up disappears at 20:45)
22:45	START EATING pop-up	1 minute (pop-up disappears at 23:45)
25:45	Q5: Likert scale	1 minute (Likert disappears at 26:45)
27:00	VOICE: Mouse-click event	1 minute (mouse-click closes at 28:00)
28:00	Q6: Likert scale	1 minute (Likert disappears at 29:00)
29:05	STOP EATING pop-up	End of the music track

Appendix C

C.1 Study 3 Documents



PARTICIPANT INFORMATION SHEET

Research project title: The experience of eating

Investigator: Vania Bajic

Email: vb227@kent.ac.uk **Tel:** 01227816435

What is the project's purpose?

This study is a part of my PhD Thesis and it comprises six voice-recorded interviews. The aim of this study is to attempt to understand in some depth the participants' individual experiences related to "eating".

What is my role in this?

During the interview we will aim to explore your personal experiences related to eating and the meanings you may give to these experiences. The interview will be conducted in a free-flowing and open manner. You will be encouraged to free-associate on the topic of eating the way **you** understand it.

What is the interviewer's role in this?

My role during the interview will be to facilitate your personal exploration of the subject of eating. I will not enter our discourse with any preconceived ideas; try to impose any structure or direction on our conversation; or make judgments.

Are there any risks/discomforts involved in participating?

There are no anticipated risks or discomforts associated with this interview. I will be there to assist you and provide answers to any questions you might have.

What happens next?

Firstly, you will be asked to provide some basic information such as: name, age, gender and personal status on the campus (student or member of staff). Following this, I will briefly introduce the subject of eating and ask for your permission to turn on the voice recorder. If you feel uncomfortable at any point during the interview you can ask for a break or halt the interview altogether.

Why have I been chosen?

You are over the age 18 and have volunteered to take part in this project

Debriefing:

I will debrief you at the end of the interview. If at any point you feel upset or embarrassed, you will be treated with sensitivity and understanding. If we touch upon difficult issues you wish to explore further, I will provide contact details for relevant support services.

What happens to the data?

All available data, including interview recordings, will be held securely in a password protected computer files and locked filing cabinets in the PhD office, Centre for Health Services Studies, Cornwallis George Allen Wing, University of Kent, CT2 7NF. No one outside of the research team will have access to the individual data. After a period of five years the interview recordings will be destroyed.

Is my anonymity protected?

Your anonymity will be protected at all times. No one outside of the research team will have access to your data. Signed consent forms will be stored separately from your data. Pseudonyms (false names) will be used in the Thesis and any reports submitted for publication. It will not be possible for anyone to identify you from these reports.

Do I have the right to withdraw?

Yes, you can withdraw from participation in the study at any point without needing to justify your decision. You can also request for your data to be withdrawn from analyses at any point prior to the submission date. In order to do this, please contact the investigator above with your unique identification number.

Will I be informed about the findings of the study?

A summary of findings will be available on request. Please, contact the investigator above.

CONSENT FORM

Title of project: The experience of eating

Name of investigator: Vania Bajic

E-mail: vb227@kent.ac.uk **Tel:** 01227816435

Participant Unique Identification Number _____

Please initial box

1. I confirm I have read and understand the information sheet dated _____ for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw from participation at any time. I understand that I can ask for my data to be withdrawn at any point prior to the submission date by contacting the investigator above.

3. I understand that my responses will be anonymised before analysis. I understand that any direct quotes will be anonymised and pseudonyms (false name) used in the Thesis and publication of any findings.

4. I agree to take part in the above research project.

Name of participant

Date

Signature

Investigator

Date

Signature

DEBRIEFING

Dear Participant,

Thank you for taking part in the study.

This interview will form a part of my PhD Thesis in which I develop and test the notion that listening to music can provide an alternative/additional treatment to support weight loss programs and special eating regimes. Your account of personal experience related to eating,

explored during the interview, will help make sense of, and understand in some depth a wide gamut of individual experiences related to “eating”.

If we have touched upon difficult or distressing issues that you might like to discuss further with someone, free counselling is available at Support, Health and Wellbeing, The University of Kent, Canterbury, Kent, CT2 7NZ, T: +44 (0)1227 823206 or (0)1634 888875.

Additionally, you may contact BEAT (Beat Eating Disorders): Helpline 0345 634 1414; Youthline 0345 634 7650

You may ask for your data to be withdrawn at any point prior to the submission date by contacting the investigator above and giving your unique identification number.

A summary of findings will be available on request.

Best wishes,

Vania

Vania Bajic

BMus (Hons), MSc Applied Psychology of Music, AFHEA, FISM

PhD Studentship

e-mail: vb227@kent.ac.uk

Centre for Health Services Studies

www.kent.ac.uk/chss

Cornwallis George Allen Wing, University of Kent, CT2 7NF

C.2 Participant 1 Interview Transcript

1 Int: Okay, if we could start now.

2 Part: It's not so much a memory, my first word was 'more', because as a kid I always wanted
3 more food, and so my mum has always said that was my very first word. From a very young
4 age I've never really remembered not liking any food, and have always wanted more. I
5 remember as a young older brother I used to make my younger brother's breakfast every
6 morning.

7 Int: How did that make you feel?

8 Part: Fine, it was more like an older brother thing that I had to do.

9 Int: Were you appreciated for it?

10 Part: Yes, I was, my mum was busy with my youngest brother when he was infantile, so I
11 was put in charge of making breakfast for my middle brother. I felt proud probably more than
12 anything else, I never really feel a sense of obligation towards it, it was just something I had
13 to do. That was a minor role I think, I was just used to doing it.

14 Do you want me to carry on going on?

15 Int: Yes, that's interesting because, would you make always the same thing, were you in
16 charge of the choice of foods for breakfast?

17 Part: No, so we've never- in my family breakfast is not a big thing, it's cereals, so it's usually
18 just Weetabix and another cereal on top like Shreddies or Frosties. So it would usually just be
19 thatbreakfast is something very quickly done, no time is taken towards it, it's something
20 that just has to be eaten. So no, there was no choice or thought process behind it, it was just
21 something that you need to do, I would just put something out for him, and that was it.

22 Intr: Okay,... and perhaps lunches and dinners were different?

23 Part: Yes, so lunches and dinners my mum would obviously- that was her job, it was just in
24 the mornings. I can't really remember first memories of them all, I guess the best thing I can
25 probably describe is how my family views breakfast, lunch and dinner. . So my family's
26 always up early and from a young age my brother and I were both choristers from quite a
27 young age, so we'd be getting up at 06:30 and leaving the house at 07:00. So breakfast was
28 very much a very, very rushed thing that had to be eaten just to make you last until lunch.

29 Then for a lot of our young life it was packed lunch, and it was just "snacky" food, just like a
30 sandwich, a packet of crisps which I still eat now. I'm not very adventurous when it comes to
31 that because I like routine, and thinking about food and thinking about different types of food
32 and all the different things I could have is just too stressful. I'd rather just have exactly the
33 same thing every day, even when it comes to lunch, because it's simply, for me, just
34 something that holds back a hunger.

35 Then my main meal is my supper, and it always has been with my family, because it's the
36 time that we always came together and it was always a nice meal. My mum would quite often
37 cook roasts or big cock au vin, things like that. So yes, lunch still even now is something I
38 quite- if I'm not hungry I just won't eat, it's very much a thing which isn't a sort of meal but
39 more of a snack I see it as. If I'm hungry I'll have it, if I'm not I'm not bothered and supper
40 will be the main meal once a day.

41 Int: So not all the meals are made equal?

42 Part: Not at all, yes supper is by far and away the most important meal of the day for me, it's
43 the thing even now I put the most time and effort into. It's what I try and relax around, so I'll
44 still carry on doing work if I'm having my lunch, or with breakfast I'll be rushing around
45 doing other things. With supper I sit down and I just shut off and I eat it, and I don't put
46 anything else on, it's time for me to relax.

47 Int: Could we explore that a little bit; time to relax is eating dinner? So how does that make
48 you feel, how does the meal contribute or not to you feeling relaxed?

49 Part: I'm not sure, I guess it's part of the whole thing about how I'm quite often very, very
50 busy, and then that time out originally with my family when we would all just sort of sit
51 down at the dinner table, work was forgotten, work was not allowed to be spoken of. It comes
52 down to that, so I still do that at home where I take just a breather from it all. So it's not so
53 much that the food makes me relaxed, it's more that I have a relaxed period where I can
54 enjoy not worrying about anything, and then the food is just an excuse.

55 Int: When you say 'at home now', do you mean at the campus?

56 Part: No I'm in town, I'm housemates with a few friends.

57 Int: The routine is still the same, the time to relax and enjoy the food?

58 Part: Yes, as much as possible if my university schedules allow it, but quite often- because I
59 do a lot of music here, so three or four nights a week I'll be on practice until 10:00 at night.
60 So I'll either have supper like pasta in a bowl, like a Tupperware box which I'll have about
61 7:00pm, but I'll still sit down on the sofa and relax. Otherwise I'll wait until I'm home and
62 I'll cook then.

63 Int: So you mainly cook for yourself for the main meal?

64 Part: Yes.

65 Int: Are all foods made equal, or some of them you prefer to others on certain situations?
66 What would you eat if you were not feeling well or if you're too busy? Is there a difference.

67 Part: Not generally, the tradition that I've always had is when I'm ill I have tuna and
68 sweetcorn sandwiches, but there's no reason behind that, it's just I think when I was home
69 and ill I just started eating them and now it's become a habit.

70 Int: When you say at home, at home with your parents?

71 Part: At home, home, so when I'd be missing school my mum would- that was just what it
72 was; tuna and sweetcorn sandwiches. That still continues today, so whenever I get ill it's like
73 I'll go and have a tuna and sweetcorn sandwich. In terms of supper, in terms of foods being
74 better than others, I think it just depends on how much time goes into it. So say I can just put
75 a pizza in the oven, I don't really think anything of that, but if I've taken time to make a nice
76 curry or a nice chilli, then...

77 Int: Does that depend on anything apart from time?

78 Part: No not really, emotionally no, it's just if I've got time to cook a nice meal then I will,
79 generally don't.

80 Int: So if you say that from day to day nothing really influences your choice of food but the
81 availability of time?

82 Part: Yes.

83 Int: Does anything influence the amount of food you eat?

84 Part: Yes, generally I don't eat much when I'm ill, I don't know why, just I don't. When I'm
85 feeling content and happy I'll eat quite a lot, just because I'm relaxed, but no, I have to keep-
86 I don't know why, when I'm ill food is not on the menu, I forget to eat basically. I forget to
87 eat quite a lot and I have to keep reminding myself to. A few Christmases back I got quite ill
88 and lost a lot of weight because I just stopped eating for a couple of weeks. My mum was too
89 busy to notice, and then suddenly put me on a massive protein diet to get my weight back up.

90 So basically just how I'm feeling, if I'm feeling well I'll eat a bit more, but if I'm feeling
91 under the weather I'll not eat anything.

92 Int: So you say you sometimes forget to eat?

93 Part: Yes.

94 Int: So does it mean you don't notice that you're hungry, or you notice but ignore it?

95 Part: I think a bit of both, it takes me quite a lot of hunger to go, "Okay I'm hungry, I should
96 probably eat." Quite often I'll only eat because it's the time to eat, if that makes sense, just
97 like, "I should probably eat now because it's lunch time. Generally, if I'm busy I won't notice
98 and I can carry on throughout the day, and I'll get to 9:00pm and I'll realise I haven't eaten
99 all day. It's just I don't really get hungry often. Quite often I'll come home and I'll realise
100 I've got nothing in the fridge and I haven't eaten all day, so my friend will cook me up
101 something quick.

102 Int: You get rescued.

103 Part: Yes, I get rescued. I don't know, hunger is odd with me, I don't know whether I've
104 learnt to ignore it, I don't know really.

105 Int: Okay, and can you tell me a little bit more, what is the difference for you in eating in the
106 company of people or in a family setting versus eating by yourself?

107 Part: I enjoy food a lot more when I eat it with other people, I think that's just generally
108 because I enjoy the company as well and enjoy the sharing of the food. When I eat it on my
109 own it's sort of, you're not sharing that taste and you're not sharing that same sort of sense-
110 just a sensual thing, it's all on you so there's nothing to share with other people, and so you
111 just eat it down relatively quickly even though, as I said before, myself I take time to relax,
112 but it's still not the same as if I eat with other people as friends.

113 Int: So you'd say that eating on your own and eating with other people differs in the pleasure
114 you get out of it as well as the duration of the meal?

115 Part: Yes, so my suppers at home-

116 Int: Could you expand on that a little bit?

117 Part: Yes, well it depends really, at my dad's a supper or a dinner will last typically about an
118 hour and a half to two hours. That doesn't mean we're eating the whole time, that just means
119 we're at the table talking, and we'll have three dishes in that time. At my mum's, my mum is
120 a lot more busy and so dinners will last maybe 30 minutes at most, When I'm on my own I
121 might eat for about nine minutes or something, and that's it, then I'm up and doing stuff.

122 So I think it just goes back to that idea of being relaxed and taking time out, so at my dad's
123 it's a long drawn out situation when you talk about things. My dad's got a rule that you can't
124 talk about work or school at the table, and that's another conversation.

125 Int: No, you can expand on that, that's interesting, so it's a sacred time?

126 Part: Yes, I think he and my mum talked about work too much at the table, and I don't think
127 they ever got a break from work. I think that's probably one of the reasons why things didn't
128 work out, so as he's trying to reshape himself that's one of his new rules, he never talks about
129 work around the table.

130 Int: What do you make of it, is that a sensible rule do you think?

131 Part: Well my dad is always a man of strict rules, so he'll make a rule and never budge from
132 it. I think maybe work should sometimes be talked about if it needs to be. I quite like it to be
133 honest because it just means you know as you step down from the table it doesn't matter
134 because you've just relaxed.

135 Int: It frees you.

136 Part: It free you, yes it frees you from your obligations just for that little bit. Once you get up
137 you might have to go back to the desk again, but it's fun I quite like it.

138 Int: Can you tell me a little bit about how eating at home, on the sofa in front of TV and for
139 example eating in a restaurant differs? Does it differ at all for you or is it all the same?

140 Part: At home with my family it's always at the dinner table, the table's always laid out and
141 it's all a big thing, so actually at home and the restaurant is more or less the same, the
142 manners are pretty much the same, it's all quite strict. Whereas at uni we don't even have a
143 dinner table, so we just eat on the sofa and have a chair in front of you. So that's the biggest
144 difference I think.

145 Int: How do you feel about that difference?

146 Part: I think a few years ago I would have found it very weird, but I've had a few girlfriends
147 along the way who their families just ate on the sofas. Which was weird at the time, but I sort
148 of accustomed to this idea that some people don't eat at the table. Now it's not so weird it's
149 just a different place to eat.

150 Int: It's okay, it doesn't affect the pleasure you get out of the meal or the duration of the
151 meal?

152 Part: No it doesn't really affect it at all, it's just different really. In terms of restaurant and
153 family home, there's not really much difference.

154 Int: What do you think the background to your meal; conversation, music, chatter in the
155 restaurant, how does the background surrounding a meal affect the quality of the meal or
156 duration of it? Does it affect it at all?

157 Part: Yes it does, I think if it's winter, it's a cold winter evening and you've got candles and
158 there's nice light music on in the background it will extend the time that you're sitting there
159 because it's more enjoyable just to sit there. If it's sort of like a hot day and the background
160 is- if it's a hot day and people want to be outside, then obviously the meal would be much
161 shorter.

162 So yes, I do think the background would change it. I think candles, making it feel a lot more
163 cosy, there's a Danish word Hygge, that sort of feeling which will extend the meal and
164 increase the enjoyment of the food. Because all of that compounded together, you feel more
165 at rest and you feel more part of the family unit, and then you can enjoy the food more.

166 Int: So that kind of thing is always in the company of other people, or maybe in the company
167 of very close people?

168 Part: Yes, but never on my own, no I would never bother making it all feel cosy just for
169 myself, because I'm not sharing it with anyone.

170 Int: So sharing of the food is important, can you expand on that a little bit?

171 Part: I don't know, it's massively important for me to share a meal, that we're all eating the
172 same food and we can all share in the same tastes. I think simply because my family always
173 has done it, we always every day sat down at the table and shared a meal. So when I'm not
174 sharing a meal it doesn't feel that special at all.

175 Int: So is there anything you could associate sharing a meal with? Any associations you could
176 have, sharing a meal is like sharing..?

177 Part: I don't know, for me it's my family unit, just sitting down and talking, just around the
178 table.

179 Int: Coming together?

180 Part: Yes, coming together as one unit, for years we were all fighting for ages, and it's recent
181 years we've all sort of grown up, including my parents.

182 Int: You're thinking about your brothers obviously, that you were fighting around the table?

183 Part: Yes, and increasingly we can talk for hours and hours about lots of different things, and
184 we're all very interesting in politics and music and so there's never a shortage of arguments,
185 but conversational. That's just what I love, I love talking and arguing, and around the others
186 is a lovely way to do it; with the family, where you can just trust in what each other is saying,
187 I think. I think that's the main thing.

188 Int: Do you think that food brings people together?

189 Part: Yes, I mean I've got a few friends who never, ever at with their families. When they're
190 at home they always bring their food up to their room, or they'll have different meals, or
191 they'll eat at different times. That just feels completely alien to me because the meal
192 definitely does bring the family together, it's the time that everyone just stops what they're

193 doing or stops worrying and you can grow as a family I think around the table. So many
194 things get talked about and it's inevitable, for my family it's where we always make
195 conversations if anything happened it's over a meal.

196 Int: When you eat on your own do you associate that with anything? Eating on your own?

197 Part: Not really, just sometimes I get lonely, but that's only on bad days. I will try to eat in
198 the same room with other people here, so when I'm sharing my house with my housemates I
199 will try and eat in the same room as them. Because I really don't like taking my food up to
200 my room and eating on my own, because that does make me feel a lot more isolated, I just
201 hate doing it, I much prefer eating in the company of others, even if they're not sharing my
202 food.

203 Int: So it's still some sort of togetherness, although not necessarily sharing the food.

204 Part: Yes, or round the table, at least I'm with other people whilst I'm eating, I think that's
205 the main thing, yes I think that is the main thing. I very, very rarely will eat up in my room
206 and be on my own.

207 Int: So would you say that eating is something very important to you? Obviously for staying
208 alive it is, but apart from that?

209 Part: I think it's important for me as a social tool, it's not important for me in terms of the
210 taste of the food or my interest in the food, it's much more-

211 Int: That's a very interesting observation.

212 Part: In the context I eat it and the way I eat it and who I eat it with it's important, but the
213 actual food itself is a minor thing. I could eat an awful meal but still really enjoy it if I'm with
214 other people.

215 Int: So do you think all foods are made equal, or there is a preference still, although I
216 understood that's not the most important thing for you?

217 Part: Foods I have familiarity with, old meals that I've always had with my family, so say my
218 mum's seafood pasta or my dad's rice. Certain foods like that I think, say when I go to a
219 restaurant when there's no emotional background to any of the dishes, I would only- I
220 wouldn't really class any food above the other. At home I definitely do, so if my mum makes
221 a new dish, it might be delicious, but it still wouldn't really equate to my favourite or things
222 that we've always had. I guess you associate memories with certain dishes.

223 Int: Yes, that's very interesting, could you expand a little bit on that familiarity of the food
224 you ate in your family, that thing and the importance of it for you?

225 Part: Okay, so my favourite meal is seafood pasta with a lot of pepper, and I've always had
226 that for my birthday. So I made it the other day at Uni and it made me feel happy simply
227 because of the memories I've got with it. I've got happy memories of sharing it with friends
228 and family because it was always my birthday. So I guess that's the most important one I can
229 think of, of a positive reaction when I have a certain food.

230 Int: It gives you that warm feeling.

231 Part: Yes.

232 Int: It is a special meal made for you. So did you make it for yourself the other day?

233 Part: Yes.

234 Int: Because you wanted to feel that?

235 Part: Yes, I was sort of- I don't know why I made it.

236 Int: Did you want to recreate the feeling?

237 Part: Yes, I was feeling a bit stressed out the other day, and I just needed a bit of a pick me
238 up, so just went back to a meal I knew.

239 Int: It made you feel special.

240 Part: Yes, so I'd feel a bit more at home, something that reminds me of home, something that
241 reminds me of my brothers.

242 Int: Did you achieve that do you think?

243 Part: Yes, I did, not to the same level as I would feel happy eating it with my family, but I
244 definitely did feel happier because I don't know if it sort of reminded me of different things.

245 Int: Like what things? Can you name the feelings?

246 Part: Just happiness really, laughter.

247 Int: Happiness is very broad isn't it?

248 Part: I know.

249 Int: So you were a bit stressed with work?

250 Part: I was stressed.

251 Int: Even stress is quite broad, stressed in what way, stressed under too much work or
252 stressed with being lonely?

253 Part: Work, and then a couple of things, I needed to conduct last night and I wasn't prepared
254 enough, and so it was probably nerves as well from that.

255 Int: A little bit of anxiety was it then?

256 Part: Yes, probably, I think that's probably correct, anxiety is probably the best word. I've
257 got distinct memories of laughing with my brothers around that meal and just making fun of
258 each other and just being a family.

259 Int: Having support, you felt supported?

260 Part: Maybe yes, I guess you might be right. So it just made me feel a bit more secure in
261 myself, and so it allowed me to take a step back, just for a little bit, I felt a bit better.

262 Int: It did work.

263 Part: Yes, and then...

264 Int: So it worked out in the end.

265 Part: Yes.

266 Int: Okay, so do you think that through that meal that you shared with your brothers you
267 actually had your brothers with you just for that moment while you ate it?

268 Part: No.

269 Int: It's just the recreating the feeling.

270 Part: Yes, recreating that feeling, or just you can relive the memories, it helps trigger
271 memories for me I guess, just like a memory made at a chicken barbeque will always bring
272 me back to a certain house that my dad had which had a stream going through it. He didn't
273 have an oven in the house when he moved in so we spent the whole summer barbequing. So
274 the certain chicken barbeque that he does, he's got a certain marinade sauce, it will always
275 bring me back to that house and when we built a bench and built a catapult and things like
276 that.

277 So it's certainly from that which I can associate memories with it.

278 Int: Certain dishes are tied to memories and maybe to people.

279 Part: Yes.

280 Int: As this particular dish is you, did your brothers have their own dish for their birthdays as
281 well?

282 Part: Yes, my brother always had steak and chips and my younger brother has never really
283 bothered about anything, he's never specified.

284 Int: So how would you call this type of a meal, would you say it's a comfort food for you,
285 because it brings that comforting feeling?

286 Part: Yes, I would say, it has to be a comfort food, the same as I would have to take comfort
287 from it, and I would ask for it at home when I'm feeling a bit down, I'd ask for my mum to
288 make it. So I guess it is a comfort food. I don't have comfort food like say people eat
289 chocolate or...

290 Int: How do you feel about chocolate?

291 Part: I don't eat it, I don't like it.

292 Int: I don't eat it no, I don't like it.

293 Part: I do like it actually, I like it a lot, I don't get any kick out of eating it because I feel
294 guilty.

295 Int: Is that- why do you feel guilty? Are there guilt foods?

296 Part: Yes, there's definitely guilty foods. (Laughing)

297 Int: Can you name a few? Obviously chocolate.

298 Part: Chocolate, sweets, crisps, biscuits, any sort of junk food, take away food.

299 Int: So how would you define junk food?

300 Part: Sugary.

301 Int: Crisps?

302 Part: Crisps are still packed full of salt and things that are not good for you. I was very aware
303 of my weight when I was younger.

304 Int: Why would that be?

305 Part: I don't know, apparently I was always thin, but I was- I still am very, very aware of any
306 sort of pound that I put on.

307 Int: Would you weigh yourself regularly? Because you wouldn't notice a pound in weight,
308 they're very small.

309 Part: Yes, I weigh myself and I'll also sort of just look at my stomach, but yes, I'm very
310 aware of how much I weigh and how I look.

311 Int: Do you think that weight is very important for people's looks? Do you think that's one of
312 the major-?

313 Part: Yes, it's very important to me.

314 Int: Why is it, do you have any idea why?

315 Part: No not really.

316 Int: Is anyone overweight in your family, or your friends?

317 Part: No, my family is all very, very fit and sporty. None of my family are overweight, and so
318 I see it as something abnormal to be anything but fit and lean. So any bit of extra fat I just
319 don't like at all.

320 Int: Do you connect that more to health than looks or both?

321 Part: Both, yes.

322 Int: In equal measures?

323 Part: Probably yes, health mainly I think. I mean I'll try not to judge other people by their
324 weight, but at the same time I can't help but do it. I will actively eat less when I feel like I'm
325 not doing enough sport, so I can keep the same weight. Then I don't feel I need to sort of
326 draw back on my life for eating less, so quite often I'll get confused by people who always
327 complain about their weight and then eat big meals and then don't go out and go running.
328 Because to me weight and looks is quite important, I don't understand why people would
329 prize food over their weight basically.

330 Int: Okay, fair enough, so you said that you can't help but judge people?

331 Part: Sometimes, yes.

332 Int: Why do you do that, what do you think when you see an overweight person, what kind of
333 a judgement do you pass?

334 Part: It makes me sound so awful.

335 Int: Don't worry about it.

336 Part: Generally, that they're lazy and they have no self-control basically.

337 Int: You mean lazy because they don't exercise?

338 Part: Not active enough to keep their weight down, and then self-control because I don't see
339 how you can put on that weight without eating more than you need.

340 Int: Tell me, do you think that sometimes utensils make a difference to the quality of meals?

341 Part: Pardon?

342 Int: Utensils.

343 Part: Yes, definitely.

344 Int: In what way?

345 Part: They need to be big and heavy, and I don't really know why, I really hate small cutlery.

346 Int: So takeaway-

347 Part: It increases my enjoyment if I have nice cutlery, and I'm not really sure why, I have no
348 idea why.

349 Int: So the way the meal is set out makes a difference to you?

350 Part: Yes, definitely.

351 Int: As you are a musician, does music make any difference, background music?

352 Part: Yes.

353 Int: Can you expand on that?

354 Part: Just, I always have music on, always, and so a meal should be no different. I say that,
355 my family will rarely play music during a meal, music is a special thing if we want to have it
356 on, and it will always be traditional jazz, traditional jazz or a bit of soft rock. For me, I love
357 having it on, and actually if I ever eat alone I'll always put music on because it makes me feel
358 less alone. So the layout of the meal and if there's music on will make a difference in how
359 much I enjoy the meal.

360 Int: The people you eat with, do they make a difference? I understood that you like eating in
361 company and sharing meals.

362 Part: Yes.

363 Int: There are all sorts of company.

364 Part: So like the company of strangers?

365 Int: Yes, the company of strangers, the company of your family, your girlfriend, is that
366 different?

367 Part: Yes, strangers will be, I think I'd enjoy it less by a long way, I'm not a- I struggle to
368 speak in large crowds or people I know, I'm much more of a close unit person. I can relax

369 around 2 or 3 strangers and really get to know them, but you multiply that by two or three, so
370 you've got 12 or even 10 I'd feel surrounded. Actually I quite often actively dislike the meal
371 if I'm surrounded by a lot of people, even if I know them, because it's too much for me.

372 Int: Overwhelming?

373 Part: Yes, I feel trapped.

374 Int: How does the meal feel?

375 Part: Unenjoyable, quite often in restaurants, so say somebody's having a birthday meal and
376 they're going to have 12 or 15 people, I'll go but I will actively dislike it because I feel I
377 can't cope with that many people very well, and certainly feeling like I can't walk off and
378 have a breather. Feeling locked in your seat and stuck around lots of people is not an
379 enjoyable experience for me.

380 In terms of eating in the close company of friends, I love it because you can completely relax,
381 it's just very, very funny and jovial. I don't feel trapped with a close group of friends because
382 you're not judging each other.

383 Int: It's much more intimate?

384 Part: Yes.

385 Int: It's more of a sharing....with strangers it's kind of enduring.

386 Part: Exactly, with strangers it's much more like a show of manners and a show of- like a
387 test, and the conversation has to be exciting and new and interesting.

388 Int: Too much effort in a way?

389 Part: Yes, way too much effort, but with friends you just don't have to bother, you could sit
390 there and not say anything and people would still love you being there. I've got a very close
391 knit group of friends back where I'm from, we often will go around to each other's houses
392 just for the evening and have a meal, which is great. That's what I love.

393 Int: Do you miss that now?

394 Part: Yes, I miss that a lot, I'm from deep country where there's not a hell of a lot of
395 excitement in terms of life growing up.

396 Int: So you create your own?

397 Part: Yes, so that's why my family's close, because we've always been close because there's
398 nothing to do, and that's why I've got a very, very close knit group of friends from the
399 surrounding villages. We'll go and, we're no more than a 10-minute drive away from any of
400 us, and we'll go and create our own enjoyment in each other's company. I think that's
401 probably why, because we're kind of just normal country people. Yes, close knit and intimate
402 is what I need to enjoy a meal to its fullest extent.

403 Int: That's mostly dinner rather than lunch?

404 Part: Definitely dinner, never lunch (Laughing)

405 Int: Crosstalk on the go (Laughing)

406 Part: Yes.

407 Int: Okay, is there anything else you would like to say?

408 Part: No not really, I think I've covered it all, I think that's pretty much it.

409 Int: Thank you very much.

C.3 Participant 1 - Interpretative Phenomenological Analyses

Interview extract	Descriptive summary	Interpretative summary
<p>Int: Okay, if we could start now.</p> <p>Part: It's not so much a memory, my first word was 'more', because as a kid I always wanted more food, and so my mum has always said that was my very first word. From a very young age I've never really remembered not liking any food, and have always wanted more. I remember as a young older brother I used to make my younger brother's breakfast every morning.</p> <p>Int: How did that make you feel?</p> <p>Part: Fine, it was more like an older brother thing that I had to do.</p> <p>Int: Were you appreciated for it?</p> <p>Part: Yes, I was, my mum was busy with my youngest brother when he was infantile, so I was put in charge of making breakfast for my middle brother. I felt proud probably more than anything else, I never really feel a sense of obligation towards it, it was just something I had to do. That was a minor role I think, I was just used to doing it.</p> <p>Do you want me to carry on going on?</p> <p>Int: Yes, that's interesting because, would you make always the same thing, were you in charge of the choice of foods for breakfast?</p> <p>Part: No, so we've never- in my family breakfast is not a big thing, it's cereals, so it's usually just Weetabix and another cereal on top like Shreddies or Frosties. So it would usually just be that and breakfast is something very quickly done, no time is taken towards it, it's something that just has to be eaten. So no, there was no choice or thought process behind it, it was just something that you need to do, I would just put something out for him, and that was it.</p> <p>Intr: Okay,... and perhaps lunches and dinners were different?</p> <p>Part: Yes, so lunches and dinners my mum would obviously- that was her job, it was just in the</p>	<p>Remembers liking food as a child and always wanting more (the first word was "more")</p> <p>Put in charge of younger brothers breakfast which was a minor role but made him feel proud</p> <p>Breakfast was mostly cereals, it was done quickly and without much thought to stave off the hunger until lunch</p> <p>Lunches and dinners were mum's job</p>	<p>Enjoys eating</p> <p>Breakfast has to be eaten although just a quick cereal</p>

<p>mornings. I can't really remember first memories of them all, I guess the best thing I can probably describe is how my family views breakfast, lunch and dinner. . So my family's always up early and from a young age my brother and I were both choristers from quite a young age, so we'd be getting up at 06:30 and leaving the house at 07:00. So breakfast was very much a very, very rushed thing that had to be eaten just to make you last until lunch.</p> <p>Then for a lot of our young life it was packed lunch, and it was just "snacky" food, just like a sandwich, a packet of crisps which I still eat now. I'm not very adventurous when it comes to that because I like routine, and thinking about food and thinking about different types of food and all the different things I could have is just too stressful. I'd rather just have exactly the same thing every day, even when it comes to lunch, because it's simply, for me, just something that holds back a hunger.</p> <p>Then my main meal is my supper, and it always has been with my family, because it's the time that we always came together and it was always a nice meal. My mum would quite often cook roasts or big cock au vin, things like that. So yes, lunch still even now is something I quite- if I'm not hungry I just won't eat, it's very much a thing which isn't a sort of meal but more of a snack I see it as. If I'm hungry I'll have it, if I'm not I'm not bothered and supper will be the main meal once a day.</p> <p>Int: So not all the meals are made equal?</p> <p>Part: Not at all, yes supper is by far and away the most important meal of the day for me, it's the thing even now I put the most time and effort into. It's what I try and relax around, so I'll still carry on doing work if I'm having my lunch, or with breakfast I'll be rushing around doing other things. With supper I sit down and I just shut off and I eat it, and I don't put anything else on, it's time for me to relax.</p> <p>Int: Could we explore that a little bit; time to relax is eating dinner? So how does that make you feel, how does the meal contribute or not to you feeling relaxed?</p> <p>Part: I'm not sure, I guess it's part of the whole thing about how I'm quite often very, very busy, and then that time out originally with my family when</p>	<p>Packed lunch with "snacky" foods which he eats today.</p> <p>Likes routine, having choices can be stressful, eats the same thing for lunch every day</p> <p>If not hungry he will skip lunch and carry on working.</p> <p>Main meal of the day was supper, always something nice eaten together with the family</p> <p>Supper is the most important meal of the day and most time and effort is put in it</p> <p>Time to stop, shut off, relax and eat</p>	<p>Lunch is a "snaky food"; sometimes skipped</p> <p>Supper is important, worth time and effort, always a cooked meal</p>
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<p>we would all just sort of sit down at the dinner table, work was forgotten, work was not allowed to be spoken of. It comes down to that, so I still do that at home where I take just a breather from it all. So it's not so much that the food makes me relaxed, it's more that I have a relaxed period where I can enjoy not worrying about anything, and then the food is just an excuse.</p> <p>Int: When you say 'at home now', do you mean at the campus?</p> <p>Part: No I'm in town, I'm housemates with a few friends.</p> <p>Int: The routine is still the same, the time to relax and enjoy the food?</p> <p>Part: Yes, as much as possible if my university schedules allow it, but quite often- because I do a lot of music here, so three or four nights a week I'll be on practice until 10:00 at night. So I'll either have supper like pasta in a bowl, like a Tupperware box which I'll have about 7:00pm, but I'll still sit down on the sofa and relax. Otherwise I'll wait until I'm home and I'll cook then.</p> <p>Int: So you mainly cook for yourself for the main meal?</p> <p>Part: Yes.</p> <p>Int: Are all foods made equal, or some of them you prefer to others on certain situations? What would you eat of you were not feeling well or if you're too busy? Is there a difference.</p> <p>Part: Not generally, the tradition that I've always had is when I'm ill I have tuna and sweetcorn sandwiches, but there's no reason behind that, it's just I think when I was home and ill I just started eating them and now it's become a habit.</p> <p>Int: When you say at home, at home with your parents?</p> <p>Part: At home, home, so when I'd be missing school my mum would- that was just what it was; tuna and sweetcorn sandwiches. That still continues today, so whenever I get ill it's like I'll go and have a tuna and sweetcorn sandwich. In terms of supper, in terms of foods being better than others, I think it just depends on how much time goes into it. So say I can just put a pizza in the oven, I don't really think</p>	<p>It was a relaxing time with the family, work was not allowed to be spoken of.</p> <p>Take a breather from it all, meal time is a relaxed period and food is just an excuse</p> <p>Very busy with university schedules but tries to follow the same routine of sitting down and relaxing for the supper</p> <p>Mainly cooks the supper</p> <p>Eats tuna and sweetcorn sandwiches when ill, mum used to make that when he was off school ill</p> <p>The choice of food for supper depends on how</p>	<p>Supper is a time out from obligations, family time, food is just an excuse</p> <p>When ill, goes back to the food he eat as a child</p>
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<p>anything of that, but if I've taken time to make a nice curry or a nice chilli, then...</p> <p>Int: Does that depend on anything apart from time?</p> <p>Part: No not really, emotionally no, it's just if I've got time to cook a nice meal then I will, generally don't.</p> <p>Int: So if you say that from day to day nothing really influences your choice of food but the availability of time?</p> <p>Part: Yes.</p> <p>Int: Does anything influence the amount of food you eat?</p> <p>Part: Yes, generally I don't eat much when I'm ill, I don't know why, just I don't. When I'm feeling content and happy I'll eat quite a lot, just because I'm relaxed, but no, I have to keep- I don't know why, when I'm ill food is not on the menu, I forget to eat basically. I forget to eat quite a lot and I have to keep reminding myself to. A few Christmases back I got quite ill and lost a lot of weight because I just stopped eating for a couple of weeks. My mum was too busy to notice, and then suddenly put me on a massive protein diet to get my weight back up.</p> <p>So basically just how I'm feeling, if I'm feeling well I'll eat a bit more, but if I'm feeling under the weather I'll not eat anything.</p> <p>Int: So you say you sometimes forget to eat?</p> <p>Part: Yes.</p> <p>Int: So does it mean you don't notice that you're hungry, or you notice but ignore it?</p> <p>Part: I think a bit of both, it takes me quite a lot of hunger to go, "Okay I'm hungry, I should probably eat." Quite often I'll only eat because it's the time to eat, if that makes sense, just like, "I should probably eat now because it's lunch time. Generally, if I'm busy I won't notice and I can carry on throughout the day, and I'll get to 9:00pm and I'll realise I haven't eaten all day. It's just I don't really get hungry often. Quite often I'll come home and I'll realise I've got nothing in the fridge and I haven't eaten all day, so my friend will cook me up something quick.</p>	<p>much time he has available</p> <p>If he has enough time to cook a nice meal he will do it</p> <p>Doesn't eat much when ill but eats quite a lot when contented and happy</p> <p>When ill a few years back he forgot to eat and lost a lot of weight</p> <p>It takes him quite a lot to register hunger so he often eats because it is time to eat</p> <p>If busy he will carry on without realizing that he hasn't eaten all day or that the fridge is empty but friends will cook up something</p>	<p>Eats a lot when happy but very little when ill</p> <p>Hunger is difficult to register, follows time cues instead</p>
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<p>Int: You get rescued. (Laughing)</p> <p>Part: Yes, I get rescued. I don't know, hunger is odd with me, I don't know whether I've learnt to ignore it, I don't know really.</p> <p>Int: Okay, and can you tell me a little bit more, what is the difference for you in eating in the company of people or in a family setting versus eating by yourself?</p> <p>Part: I enjoy food a lot more when I eat it with other people, I think that's just generally because I enjoy the company as well and enjoy the sharing of the food. When I eat it on my own it's sort of, you're not sharing that taste and you're not sharing that same sort of sense- just a sensual thing, it's all on you so there's nothing to share with other people, and so you just eat it down relatively quickly even though, as I said before, myself I take time to relax, but it's still not the same as if I eat with other people as friends.</p> <p>Int: So you'd say that eating on your own and eating with other people differs in the pleasure you get out of it as well as the duration of the meal?</p> <p>Part: Yes, so my suppers at home-</p> <p>Int: Could you expand on that a little bit?</p> <p>Part: Yes, well it depends really, at my dad's a supper or a dinner will last typically about an hour and a half to two hours. That doesn't mean we're eating the whole time, that just means we're at the table talking, and we'll have three dishes in that time. At my mum's, my mum is a lot more busy and so dinners will last maybe 30 minutes at most, When I'm on my own I might eat for about nine minutes or something, and that's it, then I'm up and doing stuff.</p> <p>So I think it just goes back to that idea of being relaxed and taking time out, so at my dad's it's a long drawn out situation when you talk about things. My dad's got a rule that you can't talk about work or school at the table, and that's another conversation.</p> <p>Int: No, you can expand on that, that's interesting, so it's a sacred time?</p> <p>Part: Yes, I think he and my mum talked about work too much at the table, and I don't think they ever got</p>	<p>Wonders if he learned to ignore hunger</p> <p>Prefers to eat in company and share the taste of food with other people, eating alone is not the same</p> <p>Different duration of the supper with dad, mum or alone</p> <p>Dinners at dad's are long drawn situations when you talk about things apart from work or school</p>	<p>Learnt to ignore hunger cues</p> <p>Food is better when consumed in company</p> <p>Meal is a shared sensual experience</p> <p>Supper is a time to talk about things other than work</p>
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<p>a break from work. I think that's probably one of the reasons why things didn't work out, so as he's trying to reshape himself that's one of his new rules, he never talks about work around the table.</p> <p>Int: What do you make of it, is that a sensible rule do you think?</p> <p>Part: Well my dad is always a man of strict rules, so he'll make a rule and never budge from it. I think maybe work should sometimes be talked about if it needs to be. I quite like it to be honest because it just means you know as you step down from the table it doesn't matter because you've just relaxed.</p> <p>Int: It frees you.</p> <p>Part: It free you, yes it frees you from your obligations just for that little bit. Once you get up you might have to go back to the desk again, but it's fun I quite like it.</p> <p>Int: Can you tell me a little bit about how eating at home, on the sofa in front of TV and for example eating in a restaurant differs? Does it differ at all for you or is it all the same?</p> <p>Part: At home with my family it's always at the dinner table, the table's always laid out and it's all a big thing, so actually at home and the restaurant is more or less the same, the manners are pretty much the same, it's all quite strict. Whereas at uni we don't even have a dinner table, so we just eat on the sofa and have a chair in front of you. So that's the biggest difference I think.</p> <p>Int: How do you feel about that difference?</p> <p>Part: I think a few years ago I would have found it very weird, but I've had a few girlfriends along the way who their families just ate on the sofas. Which was weird at the time, but I sort of accustomed to this idea that some people don't eat at the table. Now it's not so weird it's just a different place to eat.</p> <p>Int: It's okay, it doesn't affect the pleasure you get out of the meal or the duration of the meal?</p> <p>Part: No it doesn't really affect it at all, it's just different really. In terms of restaurant and family home, there's not really much difference.</p> <p>Int: What do you think the background to your meal; conversation, music, chatter in the restaurant, how</p>	<p>He thinks that mum and dad talked too much about work and that is one of the reasons things didn't work out</p> <p>He quite likes the rule that one should not talk about work at the table, perhaps not strictly implemented</p> <p>He likes that a meal time frees one from work obligations for a while</p> <p>Eating at home and at restaurants is similar in terms of manners and the table setting</p> <p>He eats on the sofa at Uni which is a novel experience</p> <p>Got accustomed to the idea of eating on the sofa, just another place to eat</p>	
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<p>does the background surrounding a meal affect the quality of the meal or duration of it? Does it affect it at all?</p> <p>Part: Yes it does, I think if it's winter, it's a cold winter evening and you've got candles and there's nice light music on in the background it will extend the time that you're sitting there because it's more enjoyable just to sit there. If it's sort of like a hot day and the background is- if it's a hot day and people want to be outside, then obviously the meal would be much shorter.</p> <p>So yes, I do think the background would change it. I think candles, making it feel a lot more cosy, there's a Danish word Hygge, that sort of feeling which will extend the meal and increase the enjoyment of the food. Because all of that compounded together, you feel more at rest and you feel more part of the family unit, and then you can enjoy the food more.</p> <p>Int: So that kind of thing is always in the company of other people, or maybe in the company of very close people?</p> <p>Part: Yes, but never on my own, no I would never bother making it all feel cosy just for myself, because I'm not sharing it with anyone.</p> <p>Int: So sharing of the food is important, can you expand on that a little bit?</p> <p>Part: I don't know, it's massively important for me to share a meal, that we're all eating the same food and we can all share in the same tastes. I think simply because my family always has done it, we always every day sat down at the table and shared a meal. So when I'm not sharing a meal it doesn't feel that special at all.</p> <p>Int: So is there anything you could associate sharing a meal with? Any associations you could have, sharing a meal is like sharing..?</p> <p>Part: I don't know, for me it's my family unit, just sitting down and talking, just around the table.</p> <p>Int: Coming together?</p> <p>Part: Yes, coming together as one unit, for years we were all fighting for ages, and it's recent years we've all sort of grown up, including my parents.</p>	<p>Candles on the table and light music in the background will extend the time of the meal because it is more enjoyable and cosy.</p> <p>With all that compounded together you feel more at rest and more a part of the family unit</p> <p>He would never make the meal feel cosy just for himself</p> <p>Sharing of the meal and sharing in the same tastes is extremely important</p> <p>He associates sharing a meal with his family, it is coming together as one unit</p>	<p>Cosy meal settings compound enjoyment of the food (Hygge)</p> <p>A meal has to be shared to feel special</p> <p>Associates sharing a meal with the family unit coming together</p>
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<p>Int: You're thinking about your brothers obviously, that you were fighting around the table?</p> <p>Part: Yes, and increasingly we can talk for hours and hours about lots of different things, and we're all very interesting in politics and music and so there's never a shortage of arguments, but conversational. That's just what I love, I love talking and arguing, and around the others is a lovely way to do it; with the family, where you can just trust in what each other is saying, I think. I think that's the main thing.</p> <p>Int: Do you think that food brings people together?</p> <p>Part: Yes, I mean I've got a few friends who never, ever at with their families. When they're at home they always bring their food up to their room, or they'll have different meals, or they'll eat at different times. That just feels completely alien to me because the meal definitely does bring the family together, it's the time that everyone just stops what they're doing or stops worrying and you can grow as a family I think around the table. So many things get talked about and it's inevitable, for my family it's where we always make conversations if anything happened it's over a meal.</p> <p>Int: When you eat on your own do you associate that with anything? Eating on your own?</p> <p>Part: Not really, just sometimes I get lonely, but that's only on bad days. I will try to eat in the same room with other people here, so when I'm sharing my house with my housemates I will try and eat in the same room as them. Because I really don't like taking my food up to my room and eating on my own, because that does make me feel a lot more isolated, I just hate doing it, I much prefer eating in the company of others, even if they're not sharing my food.</p> <p>Int: So it's still some sort of togetherness, although not necessarily sharing the food.</p> <p>Part: Yes, or round the table, at least I'm with other people whilst I'm eating, I think that's the main thing, yes I think that is the main thing. I very, very rarely will eat up in my room and be on my own.</p> <p>Int: So would you say that eating is something very important to you? Obviously for staying alive it is, but apart from that?</p>	<p>After a turbulent time the family can enjoy talking for hours about topic of interest trusting in what each other is saying</p> <p>Meal brings a family together, you can grow as a family round the table</p> <p>Eating on his own can feel lonely so he tries to eat in the same room with other people</p>	<p>You grow as a family having meal-time conversations round the table</p> <p>Eating alone feels lonely and isolated</p>
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<p>Part: I think it's important for me as a social tool, it's not important for me in terms of the taste of the food or my interest in the food, it's much more-</p> <p>Int: That's a very interesting observation.</p> <p>Part: In the context I eat it and the way I eat it and who I eat it with it's important, but the actual food itself is a minor thing. I could eat an awful meal but still really enjoy it if I'm with other people.</p> <p>Int: So do you think all foods are made equal, or there is a preference still, although I understood that's not the most important thing for you?</p> <p>Part: Foods I have familiarity with, old meals that I've always had with my family, so say my mum's seafood pasta or my dad's rice. Certain foods like that I think, say when I go to a restaurant when there's no emotional background to any of the dishes, I would only- I wouldn't really class any food above the other. At home I definitely do, so if my mum makes a new dish, it might be delicious, but it still wouldn't really equate to my favourite or things that we've always had. I guess you associate memories with certain dishes.</p> <p>Int: Yes, that's very interesting, could you expand a little bit on that familiarity of the food you ate in your family, that thing and the importance of it for you?</p> <p>Part: Okay, so my favourite meal is seafood pasta with a lot of pepper, and I've always had that for my birthday. So I made it the other day at Uni and it made me feel happy simply because of the memories I've got with it. I've got happy memories of sharing it with friends and family because it was always my birthday. So I guess that's the most important one I can think of, of a positive reaction when I have a certain food.</p> <p>Int: It gives you that warm feeling.</p> <p>Part: Yes.</p> <p>Int: It is a special meal made for you. So did you make it for yourself the other day?</p> <p>Part: Yes.</p> <p>Int: Because you wanted to feel that?</p>	<p>Eating is very important as a social tool, not in terms of food taste</p> <p>The context of the meal is important, the way he eats and who he eats with</p> <p>Familiar foods, foods with emotional background have a special place</p> <p>Associates memories with certain dishes</p> <p>Favourite meal is seafood pasta which mum made for his birthdays</p> <p>Brings happy memories</p>	<p>Eating is an important social tool</p> <p>Context of a meal is more important than the food</p> <p>Favours familiar foods with emotional background</p> <p>Food can bring happy memories</p>
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<p>Part: Yes, I was sort of- I don't know why I made it.</p> <p>Int: Did you want to recreate the feeling?</p> <p>Part: Yes, I was feeling a bit stressed out the other day, and I just needed a bit of a pick me up, so just went back to a meal I knew.</p> <p>Int: It made you feel special.</p> <p>Part: Yes, so I'd feel a bit more at home, something that reminds me of home, something that reminds me of my brothers.</p> <p>Int: Did you achieve that do you think?</p> <p>Part: Yes, I did, not to the same level as I would feel happy eating it with my family, but I definitely did feel happier because I don't know if it sort of reminded me of different things.</p> <p>Int: Like what things? Can you name the feelings?</p> <p>Part: Just happiness really, laughter.</p> <p>Int: Happiness is very broad isn't it?</p> <p>Part: I know.</p> <p>Int: So you were a bit stressed with work?</p> <p>Part: I was stressed.</p> <p>Int: Even stress is quite broad, stressed in what way, stressed under too much work or stressed with being lonely?</p> <p>Part: Work, and then a couple of things, I needed to conduct last night and I wasn't prepared enough, and so it was probably nerves as well from that.</p> <p>Int: A little bit of anxiety was it then?</p> <p>Part: Yes, probably, I think that's probably correct, anxiety is probably the best word. I've got distinct memories of laughing with my brothers around that meal and just making fun of each other and just being a family.</p> <p>Int: Having support, you felt supported?</p> <p>Part: Maybe yes, I guess you might be right. So it just made me feel a bit more secure in myself, and so it allowed me to take a step back, just for a little bit, I felt a bit better.</p>	<p>He made seafood pasta when he needed a bit of pick me up</p> <p>Reminded him of home and his brothers</p> <p>He felt happier eating it</p> <p>He was under prepared and felt a bit of anxiety</p> <p>Meal brought memories of laughing with his brothers</p>	<p>Food can alleviate stress or anxiety by evoking happy memories</p>
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<p>Int: It did work.</p> <p>Part: Yes, and then...</p> <p>Int: So it worked out in the end.</p> <p>Part: Yes.</p> <p>Int: Okay, so do you think that through that meal that you shared with your brothers you actually had your brothers with you just for that moment while you ate it?</p> <p>Part: No.</p> <p>Int: It's just the recreating the feeling.</p> <p>Part: Yes, recreating that feeling, or just you can relive the memories, it helps trigger memories for me I guess, just like a memory made at a chicken barbeque will always bring me back to a certain house that my dad had which had a stream going through it. He didn't have an oven in the house when he moved in so we spent the whole summer barbequing. So the certain chicken barbeque that he does, he's got a certain marinade sauce, it will always bring me back to that house and when we built a bench and built a catapult and things like that.</p> <p>So it's certainly from that which I can associate memories with it.</p> <p>Int: Certain dishes are tied to memories and maybe to people.</p> <p>Part: Yes.</p> <p>Int: As this particular dish is you, did your brothers have their own dish for their birthdays as well?</p> <p>Part: Yes, my brother always had steak and chips and my younger brother has never really bothered about anything, he's never specified.</p> <p>Int: So how would you call this type of a meal, would you say it's a comfort food for you, because it brings that comforting feeling?</p> <p>Part: Yes, I would say, it has to be a comfort food, the same as I would have to take comfort from it, and I would ask for it at home when I'm feeling a bit down, I'd ask for my mum to make it. So I guess it</p>	<p>He felt more secure and able to take a step back</p> <p>Certain meals help trigger memories and recreate the feeling</p>	<p>Meals can trigger memories</p>
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<p>is a comfort food. I don't have comfort food like say people eat chocolate or...</p> <p>Int: How do you feel about chocolate?</p> <p>Part: I don't eat it, I don't like it.</p> <p>Int: I don't eat it no, I don't like it.</p> <p>Part: I do like it actually, I like it a lot, I don't get any kick out of eating it because I feel guilty.</p> <p>Int: Is that- why do you feel guilty? Are there guilt foods?</p> <p>Part: Yes, there's definitely guilty foods.(Laughing)</p> <p>Int: Can you name a few? Obviously chocolate.</p> <p>Part: Chocolate, sweets, crisps, biscuits, any sort of junk food, take away food.</p> <p>Int: So how would you define junk food?</p> <p>Part: Sugary.</p> <p>Int: Crisps?</p> <p>Part: Crisps are still packed full of salt and things that are not good for you. I was very aware of my weight when I was younger.</p> <p>Int: Why would that be?</p> <p>Part: I don't know, apparently I was always thin, but I was- I still am very, very aware of any sort of pound that I put on.</p> <p>Int: Would you weigh yourself regularly? Because you wouldn't notice a pound in weight, they're very small.</p> <p>Part: Yes, I weigh myself and I'll also sort of just look at my stomach, but yes, I'm very aware of how much I weigh and how I look.</p> <p>Int: Do you think that weight is very important for people's looks? Do you think that's one of the major-?</p> <p>Part: Yes, it's very important to me.</p> <p>Int: Why is it, do you have any idea why?</p> <p>Part: No not really.</p>	<p>He considers foods that comfort through recreating positive feelings to be comfort foods</p> <p>He likes chocolate but does not get a kick out of eating it because of guilt</p> <p>Junk foods are guilty foods</p> <p>Junk foods are full of salt, sugar and things that aren't good for you</p> <p>He was always aware of his weight, although slim</p> <p>Weighs regularly, very aware of his weight and looks</p>	<p>Comfort foods help recreate positive feelings</p> <p>"Guilty foods" are foods you like although they are not good for you</p> <p>Weight and looks are very important</p>
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<p>Int: Is anyone overweight in your family, or your friends?</p> <p>Part: No, my family is all very, very fit and sporty. None of my family are overweight, and so I see it as something abnormal to be anything but fit and lean. So any bit of extra fat I just don't like at all.</p> <p>Int: Do you connect that more to health than looks or both?</p> <p>Part: Both, yes.</p> <p>Int: In equal measures?</p> <p>Part: Probably yes, health mainly I think. I mean I'll try not to judge other people by their weight, but at the same time I can't help but do it. I will actively eat less when I feel like I'm not doing enough sport, so I can keep the same weight. Then I don't feel I need to sort of draw back on my life for eating less, so quite often I'll get confused by people who always complain about their weight and then eat big meals and then don't go out and go running. Because to me weight and looks is quite important, I don't understand why people would prize food over their weight basically.</p> <p>Int: Okay, fair enough, so you said that you can't help but judge people?</p> <p>Part: Sometimes, yes.</p> <p>Int: Why do you do that, what do you think when you see an overweight person, what kind of a judgement do you pass?</p> <p>Part: It makes me sound so awful.</p> <p>Int: Don't worry about it.</p> <p>Part: Generally, that they're lazy and they have no self-control basically.</p> <p>Int: You mean lazy because they don't exercise?</p> <p>Part: Not active enough to keep their weight down, and then self-control because I don't see how you can put on that weight without eating more than you need.</p> <p>Int: Tell me, do you think that sometimes utensils make a difference to the quality of meals?</p> <p>Part: Pardon?</p>	<p>Comes from a family that is fit and sporty, sees anything less than that as abnormal</p> <p>He associates weight with both, health and looks but more with health</p> <p>Can't help but judge people by their weight</p> <p>Can't understand why some people prize food over their weight</p> <p>Tends to think that overweight people are lazy and have no self-control</p>	<p>Associates weight with health and looks</p> <p>Judging others by their weight</p> <p>Overweight people are lazy and have no self-control</p>
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<p>Int: Utensils.</p> <p>Part: Yes, definitely.</p> <p>Int: In what way?</p> <p>Part: They need to be big and heavy, and I don't really know why, I really hate small cutlery.</p> <p>Int: So takeaway-</p> <p>Part: It increases my enjoyment if I have nice cutlery, and I'm not really sure why, I have no idea why.</p> <p>Int: So the way the meal is set out makes a difference to you?</p> <p>Part: Yes, definitely.</p> <p>Int: As you are a musician, does music make any difference, background music?</p> <p>Part: Yes.</p> <p>Int: Can you expand on that?</p> <p>Part: Just, I always have music on, always, and so a meal should be no different. I say that, my family will rarely play music during a meal, music is a special thing if we want to have it on, and it will always be traditional jazz, traditional jazz or a bit of soft rock. For me, I love having it on, and actually if I ever eat alone I'll always put music on because it makes me feel less alone. So the layout of the meal and if there's music on will make a difference in how much I enjoy the meal.</p> <p>Int: The people you eat with, do they make a difference? I understood that you like eating in company and sharing meals.</p> <p>Part: Yes.</p> <p>Int: There are all sorts of company.</p> <p>Part: So like the company of strangers?</p> <p>Int: Yes, the company of strangers, the company of your family, your girlfriend, is that different?</p> <p>Part: Yes, strangers will be, I think I'd enjoy it less by a long way, I'm not a- I struggle to speak in large crowds or people I know, I'm much more of a close unit person. I can relax around 2 or 3 strangers and really get to know them, but you multiply that by</p>	<p>He thinks that utensils are important for the overall enjoyment of the meal, likes big and heavy cutlery</p> <p>He likes having the music on during the meal especially if he eats alone, music makes him feel less alone</p>	<p>The layout of the meal and music will contribute to overall enjoyment</p>
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C.4 Participant 1: Reflective Diary

12th December

Context: Transcribing

My first impression was that David really likes his food, as a child he always asked for more. Although he is prepared to invest time and effort in cooking a nice meal he often forgets to eat altogether. When he is preoccupied with other things or unwell David forgets all about food and eating. I wonder whether hunger cues are difficult to register? Perhaps he learned to ignore them, David speculates. However, when he is happy and contented David eats quite a lot. The amount of food eaten seems to vary depending on how David feels at the time.

13th December

Context: Transcribing

Different meals throughout the day given different levels of importance and amount of allocated time. Breakfast is fuss free, necessary but a rushed meal. Mostly a variety of cereal. Lunch is snack type food, sometimes eaten while working and sometimes not eaten at all. David likes to keep lunch always the same. He likes routine, making choices can be stressful. Supper time is cherished, preparing as well as eating it takes time and is worth the effort. Supper signifies a break from any work or worry. This includes not talking about work at the table. Diner time is a relaxing time spend in conversation with the rest of the family "So it's not so much that the food makes me relaxed, it's more that I have a relaxed period where I can enjoy not worrying about anything, and then the food is just an excuse".

14th December

Context: Reading

When ill, David always eats tuna and sweet corn sandwiches. This is what he was always given by his mother when feeling unwell. Now days David makes a conscious effort to eat sweet corn sandwiches when ill. He believes that eating the same food when unwell had become a sort of tradition through habit. Although David likes his routine, I wonder whether eating the same food he was given as a child when ill is a result of a habit entirely? Another point here. When ill David forgets to eat and this seems to happen quite regularly. Whether this is because he loses interest in food when feeling under the weather or hunger cues are a lot more difficult to register, David has to keep reminding himself to eat. A few Christmases back he was very ill and stopped eating for a couple of weeks. David lost quite a bit of weight before his mother noticed it and put him on a substantial protein diet in order to get his weight back up.

16th December

Context: Re-reading

Hunger cues seem difficult to register in general “It’s just I don’t really get hungry often”. David thinks that it would take a lot of hunger before he realizes that he is hungry and should have something to eat. David prefers to follow meal-time cues instead. David will often eat just because it is that time of the day. Not being attentive to hunger cues explains, at least partially, how David can go through the whole day without any food just because he has forgotten all about it. This of course is likely to happen more frequently when he is otherwise preoccupied or under the weather.

16th December

Context: Re-reading

David likes to eat in the company of other people. Sharing the sensual experience and the same tastes is important for him. Although he will always try to have a stress free and relaxed diners, the meals he is sharing with friends will take a lot longer. David will eat relatively quickly if he is eating alone. Interestingly David’s parents seem to have very different table rules regarding meal length. Diners at his mother’s place would last thirty minutes at the most while at his father’s diners are about an hour and a half to two hours long drawn out situations with a strict - no talk about work - rule. His parents talked too much about work and that is probably one of the reasons things did not work out between them, David rationalizes. Overall he prefers his dad’s rules, perhaps not so strictly implemented. Supper time temporarily frees him from his obligations and David likes that.

17th December

Context: Re-reading

At David familial home diners were always eaten at the fully laid out table. Great care was taken over it. The setting and manners were pretty strict and vary similar to eating in a restaurant. It was quite a surprize for David to learn that some people regularly eat their meals siting on the sofa. Since there is no table in his student accommodation, David has to eat meals sitting on the sofa, with his plate on a chair. He does not find this set up as strange as he used to any more - sofa is just another place to eat.

18th December

Context: Re-reading

Setting of a meal and the background sound and lighting have a special significance for David. Candles and light music playing in the background contribute to the enjoyment of a meal. Because of the pleasure people are likely to extend the duration of a sitting. The cosiness of the setting makes David more relaxed and a meal more enjoyable. All of that, compounded together, makes him feel more a part of the family unit. Feeling a part of a family unit very important for David. He would never bother trying to make a meal cosy just for himself.

18th December

Context: Attempt at identifying sub-themes

David associates sharing a meal with being a part of a family unit. Mealtimes signify the family coming together as one unit, just eating and talking. After some turbulent times for his family, everyone is back to enjoying mealtimes together and talking about music and politics for hours. David likes debating and arguing, particularly with people he can trust like his family. In addition, David believes that family can grow together round the table since many important issues get to be discussed.

19th December

Context: Attempt at identifying sub-themes

David will always make an effort to at least eat in the same room with other people, although they might not be sharing the same food. Eating alone would make him feel a lot more isolated, so he rarely opts to eat in his room. For David eating is a lot more than enjoying in the taste of food, it is an important social tool. The context of the meal, how he is eating and who he is eating with are all vital ingredients. David thinks that he could really enjoy an awful meal depending on who he is sharing it with. Good company is essential.

20th December

Context: Attempt at identifying sub-themes

Old meals, foods he is familiar with, in fact any dish with an emotional background for David, he rates above the rest. He associates memories with certain dishes. David's favourite is sea food pasta that he always had for his birthdays. This meal brings about happy memories of friends and family David shared it with. It also brings about the warm feeling associated with the occasion. Chicken barbeque he used to have at his father's house will always evoke vivid memories of that house and the summer they spend building a bench and a catapult in the garden. Certain meals help recreate the feelings and help him relive the memories. Food seems to be a potent memory trigger for David.

21st December

Context: Attempt at identifying sub-themes

Not long ago David was feeling a bit stressed and underprepared for his class. Not really knowing why at the time, he decided to make a seafood pasta for himself. Eating it made him feel a lot happier and closer to home and his brothers. Memories of his family, triggered by the food, made him feel a lot more secure in himself. Reliving happier memories allowed David to take a needed step back and gather strength. Eating his favourite birthday meal made him feel a lot better. Seafood pasta seems to be one of comfort foods for David. He used to ask his mother to make it for him whenever he was feeling down back home. Since he takes comfort from it, seafood pasta must be his comfort food, David rationalizes.

21st December

Context: Attempt at identifying sub-themes

Although David likes chocolate a lot, he does not eat it. He does not get any pleasure from eating it because eating chocolate makes him feel guilty. There are other “guilty foods” David tries to avoid like sweets, crisps, biscuits, or any sort of junk food. He believes that “guilty foods” are foods full of things that are not good for him like salt, sugar or fat. This of course does not mean that they are not tasty at the same time. However the pleasure David gets from eating these foods seems to get annulled by the amount of guilt he is likely to feel at the same time. Guilt seems to serve as a buffer against eating unhealthy foods for him.

22nd December

Context: Attempt at identifying sub-themes

David has always been very concerned with his weight and looks. He tends to weigh himself regularly and is aware of any changes to his weight. The reason for this is that all his family has always been fit and lean and being anything else would seem abnormal, David rationalizes. Although he tries not to judge other people, David finds it hard to understand why anyone would value food over their weight. Generally, he thinks that overweight people are lazy and lacking in self-control. They must be eating more food than they really need and they are probably too lazy to exercise in order to offset the calories consumed.

22nd December

Context: Attempt at identifying sub-themes

The setting of the meal would affect the enjoyment of the meal for David. Attention to detail, like the choice of cutlery or traditional jazz playing in the background enhance the pleasure. The number of people present is hugely important too. David does not like being surrounded by lots of people, he tends to feel overwhelmed and trapped. Having to be interesting and clever in front of strangers is too much effort and can feel like having a test at times. Eating in the company of close friends or his family is what David prefers. Being able to completely relax in the knowledge that he is not being judged makes a meal a lot more enjoyable for David.

Date: 5th January

Context: Attempt at clustering

One of the prominent themes in David’s experiential account of eating is his attitude to food and eating. Hunger is difficult to register, particularly when he is busy or unwell. On the other hand, David tends to eat quite a lot when happy and relaxed. Familiar foods with emotional background equate comfort food.

- Hunger is ignored or difficult to register

- Forgets to eat when ill or busy
- Eats quite a lot when happy and content
- Favours familiar foods with emotional background when ill or stressed

Date: 6th January

Context: Attempt at clustering

The meaning of food for David is primarily as a social tool. Food facilitates social intercourse and makes the conversation flow in more relaxed manner. It is also a potent memory trigger, food can evoke memories of events, people and places as well as the feelings associated.

- Social tool (eating is an important social tool, food is less important)
- Memory trigger (food can bring about memories of events and people)
- Stress reliever (food can alleviate stress or anxiety by evoking happy memories)
- Guilt undermines pleasure (feelings of guilt about eating certain foods e.g. chocolate detracts from the enjoyment of it)

Date: 8th January

Context: Attempt at clustering

David has always been concerned about his weight. All his family are slim and fit and he finds that being anything else would be unacceptable. David associates his weight with both, health and looks.

- Weight was important since childhood
- Associates weight with health and looks
- Can't help but judge others by their weight
- Perceives overweight people as lazy and lacking in self-control

Date: 9th January

Context: Attempt at clustering

Family dinners represent a family unit for David. Time spent in relaxed conversation over a meal reinforce already existing ties and help the family grow as one unit.

- Relaxation (time out from obligations)
- Family time (coming together as a unit)

- Growing as a family (issues get to be discussed)
- Sharing a sensual experience (sharing in the same tastes)

Date: 10th January

Context: Attempt at clustering

Setting of a meal is very important for David. Depending on the surroundings, his feelings range from relaxation and intimacy to the feelings of anxiety of someone being trapped in a difficult spot. Music and candles can enhance the cosy atmosphere and consequently pleasure derived from a meal.

- Enjoyment, relaxation and sharing (meals in intimate and close knit company of friends and family)
- Being evaluated (eating in the company of strangers)
- Being trapped (eating in a large company of people)
- Feelings of loneliness and isolation (eating on his own)
- Hygge (cosy atmosphere e.g. candles, music, compounds the enjoyment of food and feelings of relaxation and intimacy)

Date: 11th January

Context: Attempt at clustering

David's experiential account of eating revolves round four main themes (eating attitudes, the functions of food and eating, meaning of different contexts and the importance of family dinners). Family dinners and underlying connotations associated with them carry a lot of significance for David. Heart is where the home is, and although he is a third year student now, David's eating attitudes as well as the functions food and eating provide are largely related to the family meals back home.

A powerful memory trigger for David, food brings about memories of people and places as well as the feelings associated with them. The power of food to recall positive feelings can be used as a source of comfort during difficult times. Favourite meals from childhood and dishes with emotional background is what David craves when feeling stressed or under pressure.

His family gives high importance to being slim, fit, and lean, and to David being anything but that is undesirable. He manages his weight through exercise and controlled food intake. A degree of guilt is experienced when eating certain foods, like chocolate, and this seems to serve as deterrent for David. Very distinct mealtimes and their underlying connotations mirror family attitudes and the meanings given to food and eating in general.

C.5 Participant 2: Interview Transcript

1 Int: We could start, maybe, with your first experiences of food and eating.

2 Part: After you met us in the Gulbenkian, I had a think about it and, as we were there, I was
3 thinking about it and the first experiences are varied in the sense that it was a very disciplined
4 experience to eating that I experienced in family life, which was very strict, sitting around a
5 table, sitting upright, having to eat everything on your plate, hold your knife and fork
6 correctly and it was incredibly Victorian and very formal in the family life.

7 On the other side, I have a [place name] side to my family and visiting grandparents, they
8 would always have huge big tea parties and trolleys that used to squeak as they brought them
9 into the room because it was laden with tea party food. That was a big family event but it
10 was much more relaxed and a happier event, really. There was quite a big contrast to the
11 different places that I would eat.

12 Grandparents on the [place name] side would be big teas, trifles and things like that and then
13 the [place name] side grandparents would be formal around the table but relaxed and then
14 home would be where we sat around a table, very strict and very formal. I had those quite
15 varied different eating experiences and I can still smell and hear the sounds in the different
16 rooms that I...

17 Int: That's very interesting. Could you explore your personal feelings in relation to each
18 setting? How did that make you feel? For example, that strict..?

19 Part: The strict side, I always felt it was a very cold dining room that we were in and it was a
20 miserable experience. I'd be left at the dining room table when everyone had gone and be left
21 with a plate of food that I hadn't eaten and then my sister would run into the room and scoff
22 everything on my plate and run out of the room and leave me with my empty plate so my
23 parents would let me down from the table.

24 Int: Were you a slow eater or was it the meal?

25 Part: I just didn't want some of the food on the plate and, of course, the rule was that you had
26 to eat everything on your plate. It sticks with me today, that rule, I would say. I have to be
27 careful that I haven't got too much on my plate because I know that I have to eat everything
28 on the plate.

29 Int: Did it feel like a punishment if you had to finish off your plate?

30 Part: Yes. It was definitely a punishment. You weren't able to have any pudding or anything
31 nice afterwards until you'd eaten that. It was very strict.

32 Int: I guess there were chore foods that you had to eat and then there were fun foods that were
33 coming afterwards?

34 Part: Yes. Absolutely. The reward foods was the sugar and the food that I didn't like might
35 have been something like dark cabbage or something like that or something that seemed
36 indigestible to a young child.

37 Int: How would that compare to the lovely trolley laden with trifles and all the things you
38 said?

39 Part: It was quite different and it was very cosy, very warm and with lots of people circled
40 around the table all in admiration of the creaking table laden with lots of goodies, along with
41 things like the old-fashioned celery sticks that people used to have on the table with cheese. It
42 was very traditional sort of food that they would put on and it's very much part of the [place
43 name] culture, I think, is to over-elaborate and over-feed people because it's not right for
44 people to come for a small tea. You have to feel welcoming and give them a big tea. I can
45 feel the room. I can smell the room.

46 Int: How do you feel when you explore those memories?

47 Part: I think they're wonderful memories because they're wonderful memories that I tried to
48 replicate when I had a daughter with that feeling of wonderful things on the table and cosy
49 around the table. It was lovely. Of course, what was most amusing, really, was my
50 grandmother with one of these old-fashioned trolleys with wheels coming into the dining
51 room where we were all sitting round with the wheels squeaking.

52 Int: The sound of good things coming.

53 Part: It was that thing that was very good, actually.

54 Int: How was the atmosphere at the table?

55 Part: Very much more relaxed. More chat and talk and passing food to everybody and very
56 much more family-orientated, I would say.

57 Int: If I, maybe, say more of togetherness, sharing a meal rather than having to go through a
58 meal?

59 Part: Exactly that, I would say. Very sharing, giving, everybody wanting to offer things to
60 people across the table and hands everywhere across the table, offering rather than taking.

61 Int: It was a time of giving as well, as you said, offering rather than taking.

62 Part: Definitely. Yes.

63 Int: You have good memories of that?

64 Part: Yes. I think those are very good memories. I know my sister has very similar memories
65 of the strictness and silence in the room as well that we used to have and, even to this day,
66 she can't bear to eat with there being silence in the room. She has to have something, music
67 or something, going on in the room at the time. We both have not such great memories of
68 those eating experiences.

69 Int: Not great but similar?

70 Part: Very similar. I don't know whether she remembers my grandmother with the table and
71 the squeaky things. I suppose the other grandmother was more formal but, again, you could
72 smell the room. It was still formal at a table but much more relaxed and she would be in the
73 kitchen baking often. She would be making her pastry and things like that. That was nice to
74 be able to sit and watch her making the food and then we'd all be eating it later. Those are
75 good memories, actually, of food making.

76 My mother, although she had this very strict approach, my parents did, she was very much a
77 cordon bleu cook and would love to entertain but it was very stressful entertaining, very
78 stressful, because everything had to be perfection. It was very much around perfection. It
79 wasn't that relaxed farmyard kitchen. I would go to friends' houses who might live on a farm
80 and they would have a very much a farmyard kitchen approach to relaxed eating whereas my
81 mother was very much cordon bleu strict and how it should be.

82 She was very much caught up in that era where people were very concerned about the things
83 they should do, the way they should. It was a very middle class approach, I think, that my
84 mother and father were very locked into in those 60s and 70s. They were the wild 60s and
85 70s. They were the restricted conservative people.

86 Int: It was also a skill that she wanted to maintain?

87 Part: She was incredibly skilled at cooking and that has fed its way through to my sister and I
88 and we enjoy cooking too.

89 Int: Can you tell me more about that? How does all this translate into your cooking and
90 feeding your family today maybe?

91 Part: I suppose she was very good in the kitchen, although she was a very fiery temper, she
92 would teach us how to do certain things. When she was out of the kitchen, she would allow
93 us to go in there to experiment on our own so we could play around with doing anything we
94 wanted in the kitchen. She wasn't worried about that at all as long as she wasn't in there. All
95 those things that we've learned, it was very creative.

96 When I was starting to cook, I enjoyed baking and cooking generally. When my daughter was
97 born, when she was very little, we've got photographs of her in my kitchen with my mother
98 teaching her to make pastry standing on a stool and she was only about that height and yet
99 she was already being taught how to bake and cook. She was in full concentration. That was
100 great because she's now working at the university and 25 years old. She's a cook and she can
101 create things as well. It's very much through my mother, the cooking, baking, creating foods
102 has fed through.

103 Int: I would like to try and explore this tie between creativity and cooking. For you, that is,
104 actually, expression of your creativity.

105 Part: Yes, it's very relaxing as well. It's something very... It will take your mind away
106 completely. My background is creative rather than in estates, strangely enough. My
107 background was creative.

108 Int: Do you mind if I ask what *is* your background?

109 Part: I was trained as a jeweller with precious metals and I took my degree in Three
110 Dimensional Design in the Birmingham jewellery quarter. I was a manufacturing jeweller.

111 Int: Working with your hands to create a thing of beauty?

112 Part: Yes. I had a jewellery business in [place name]. That's how life started with me.
113 Strangely enough, the three-dimensional things I deal with now are much bigger but still
114 three-dimensional. It is a creative path.

115 Int: Would you say food you make has to be beautiful as well or it's more to do with taste?
116 How do you express yourself?

117 Part: I think it does have to be taste. I'm not as good at presentation as others so it is a lot to
118 do with taste and making people happy, actually.

119 Int: It's to do with the mood as well, the mood you create with your food?

120 Part: Yes. I don't actually particularly enjoy cooking for myself but I do enjoy cooking for
121 others and making people happy through what they're eating.

122 Int: Through your food?

123 Part: Yes.

124 Int: How does that translate to your own eating?

125 Part: Funnily enough, it doesn't really translate to my own eating in the sense that I like to
126 make nice flavours and make other people happy but, if it was just me eating on my own, I
127 wouldn't bother to cook. I wouldn't care, really, what I was going to eat. I would just snack
128 on something. It is about the participation with other people that's really important, I think.

129 Int: It's that sharing that you remember from your [place name] side of the family?

130 Part: Yes, I think it's about the sharing, that giving and making other people happy and
131 having that relaxed environment. I really like that.

132 Int: Do you think that all meals are made equal? How do they relate? Breakfast, lunch,
133 dinner, how would you describe them in your life?

134 Part: Tricky. Are they made equal? It's funny because I do think we have been programmed
135 that you have to have your breakfast and lunch and main meal and, in actual fact, more
136 recently I've realised, that you don't really need that at all just through me trying to lose
137 weight and cutting out sugar from my diet. Sugar was the bane of my life in the sense of if I
138 was tired, fed-up, I'd go for sugar, something sugary and, of course, I now realise that it's
139 probably the worst possible thing you could do because it makes you hungry to want to have
140 something else.

141 I would have always said I would have to have breakfast because, again, I would have had to
142 have sat at home and had breakfast. I was always brought up to have breakfast but, actually, I
143 don't need breakfast. I probably need brunch/lunch more than anything else. As the afternoon
144 goes on I don't want so much food in the evening either.

145 If that was me, that's the way I'd work. I'd probably want something in the middle of the day
146 in reality but working isn't conducive sometimes to eating something sensible in the middle
147 of the day, apart from when we're at the Gulbenkian and we're having our feta cheese salads.
148 My balance of eating has changed slightly recently.

149 Int: You done it on purpose, consciously?

150 Part: Yes. It's very much that one side of my family has diabetes in the family and I'm very
151 aware that my body tends towards that side of the family and looks like that side of the
152 family.

153 Int: Which side is that?

154 Part: My father's side, the [place name] side, strangely enough. It's not the sweet sugary
155 [place name] one. The [place name] side has this diabetic side so I have to be quite careful
156 and just cutting out sugar has a massive impact on me because I was, obviously, so addicted
157 to it.

158 Int: Can you explore that a bit? Did it affect your mood or energy levels?

159 Part: Amazing really, it affected everything. My mood, I couldn't think straight. I couldn't
160 concentrate, I couldn't hold anything in my head and I was thinking, "Gosh, I'm having
161 memory loss as well". It took about a good ten days to, actually, go through this process and
162 come out the other side and suddenly woke up thinking, "Gosh, I've got a clear head, I'm
163 okay, I can deal with this".

164 I realised then the impact that sugar does have on me because I did feel a lot better and I've
165 always been brought up to eat very low-fat foods. I was given Ryvita for my lunches when I
166 was a teenager and things like that. I've completely gone the other way and I eat full-fat
167 foods, full-fat milk and full-fat yoghurt.

168 Int: Is that now, at the moment?

169 Part: Now, at the moment, and I'm not hungry all the time. Instantly I'm not hungry all the
170 time. It means that I've lost a stone in weight.

171 Int: By going back to full-fat produce?

172 Part: Yes.

173 Int: It's interesting. It's something that sustains you longer.

174 Part: It sustains me longer. I was always thinking about food and now I don't. It really is
175 quite a massive difference. I'm not thinking when my next food because it, actually, sustains
176 me. Cutting out wheat and rice. Wheat is unbelievable. People used to say to me, "Have
177 porridge in the morning, it will keep you going all day". I would have porridge in the
178 morning and, by the time I got to work, I would be starving hungry and yet I have two
179 tablespoons of full-fat Greek yoghurt and a few nuts and that's it.

180 Int: It keeps you a lot longer.

181 Part: It keeps me going forever, yes.

182 Int: You know that relationship with sugar that you used to have, do you think it's related in
183 any way to your happy memories with sugar? Desert was always, in some way, a reward?

184 Part: I think sugar has always been a reward throughout and I think, even when we were
185 doing our exams, and mum, again, was very strict, staying in our rooms to do our revision,
186 my mother would bring up a cup of tea and a little Mars bar or something. It was always the
187 sugar reward.

188 It's probably the worst the thing you could, actually, do because it then makes you sleepy,
189 doesn't it? The little reward was the sugar and we've always had that. I think she now

190 realises, she's in her 80s. I was talking to her about cutting out sugar and she's cut out sugar
191 herself now and she can feel that difference as well. She struggles with that.

192 Int: She can feel the benefit?

193 Part: She can feel the benefit to it. It is an evil thing, sugar. It still catches me out here.

194 Int: It happens occasionally, no one is perfect but do you associate this intake of sugar now
195 with particularly stressful days?

196 Part: Yes, it can be. I'm really controlled now with... The university is terrible. For every
197 meeting you go to, you have tea, coffee, and biscuits. I'm completely immune to those now.
198 I'm not at all interested in the biscuits. If somebody comes in with birthday cake, it's very
199 difficult to say no.

200 Int: You give in to temptation, it's not that you go out actively seeking the reward?

201 Part: No, I give in to temptation occasionally. I have to reign myself back in because I don't
202 want that addiction to grab hold of me again.

203 Int: You're feeling better on the whole than when you were on a sugar diet?

204 Part: Absolutely. Yes.

205 Int: Could you explore the benefits a little bit?

206 Part: The benefits are, I think, I was starting to become concerned about the certain age
207 that I am now where you suddenly feel that you can't remember everything like that. I could
208 go to a meeting and come out and remember everything. I just wasn't remembering things as
209 well as I used to and thinking, "Golly, I'm getting past it, what am I going to do?" Actually,
210 taking the sugar out of my diet has changed that completely.

211 I can't really explain why but, when I've read about it, it is one of the things that people
212 notice, the clarity of the mind. It all becomes quite clear and thank God. When you're
213 working, it's devastating to think that you're starting to lose your memory. It works for me
214 and it's been much easier. I just haven't missed it. Apart from those odd temptations, now my
215 taste buds have been weaned away from it.

216 Int: Does that reflect in your cooking for others, because you, obviously, like to feed people
217 and make them happy?

218 Part: Yes. I think it does because I'm moving away from baking, anything to do with flour
219 and things like that, I'm removing that. I'm still exploring what I've got to replace it with
220 because it's nice to be able to give things to some people and feel that it's a treat at the end of
221 a meal or something like that. Yes, cheese is great but a lot of people expect something else.
222 I'm still exploring what different things I can give to people, which doesn't involve refined
223 sugars, at least. I'm thinking of other sorts of sugars.

224 Int: What do you feel are good replacements?

225 Part: I haven't got a really good replacement yet. It's a bit of struggle, to be quite honest. I'm
226 just looking at things like using almond flour and coconut flour and dates.

227 Int: Instead of sugar?

228 Part: Instead of sugar. Anything that's not refined. I think I do miss bread because I used to
229 like baking bread. My sister and I went on several courses for baking bread and, of course,
230 now I can't. She knows I can't. I might look at spelt flour or something that's less refined than
231 we're used to. I think all those refined things.

232 It's quite difficult to reverse everything that you've been programmed and taught over your
233 lifetime to try and make it seem normal. You don't have to think, usually, you can just start
234 working on making things but when you're doing something completely new and constantly
235 having to read or check how do you do this.

236 Int: It's also not so easily available sometimes. You have to seek it out.

237 Part: It's not. You have to seek it out and that is quite difficult. I suppose if I was in London,
238 you get a fuller breadth of what you could do. Yes, I'll get there. What other food-related
239 things do you need?

240 Int: Maybe exploring the difference eating on your own, eating in the company of people that
241 you don't know so well and eating with friends or family. What difference does that make to
242 you or to the meal that you're sharing?

243 Part: Eating with friends and family is really relaxed and nice. I like eating with people. I
244 don't like eating on my own. I really can't be bothered to eat on my own unless it's just a
245 snack. That would be possibly when the evil sugars in the past have come in. It's probably
246 that I wouldn't make anything, I'd just have some chocolate and a cup of tea instead of
247 having proper food.

248 Int: You would have that by yourself?

249 Part: On my own.

250 Int: That wouldn't be a meal,... that would be just a little..?

251 Part: No, that would be my meal. Because I'm not that keen on cooking by myself or for
252 myself so I wouldn't be able to make a great effort to making a soup and chopping up all the
253 vegetables and blending it all just for me. I'd just think, "Oh, it's just me". I'd grab a snack
254 and have a cup of tea, which is not particularly good. Eating with people I don't know...

255 Int: More formal.

256 Part: It does feel more formal and I do have that cold feeling coming over me of that
257 formality. I don't like it at all. I don't like formal eating. It's nice for things to look beautiful
258 and pretty on a table and I really do like that but I don't like unpleasant formal eating. I like
259 to have it relaxed and formal. If I was to go to a restaurant that was formal, there are
260 restaurants that are formal and unpleasant, which would be like...

261 Int: Could you explore that? What would qualify?

262 Part: I think there's a coldness.

263 Int: In their décor or just the way people behave around you?

264 Part: In their manner, I think. I think a really nice formal restaurant is where the maître d' is
265 really warm and friendly to everybody and puts everybody at ease and you can all enjoy the

266 beautiful décor as well as the environment and company. If it's a cold environment, you just
267 think, "That ruins it, really". Cold in atmosphere, not cold in food. For me, I don't mind
268 formal eating but I do like an atmosphere that is warm and friendly.

269 Int: To reflect on the meal you're having and enjoy what you derive from it?

270 Part: Absolutely. Warmth and friendship, I think is really important.

271 Int: You like to share that meal?

272 Part: Yes. Definitely.

273 Int: How does the surrounding affect the enjoyment of the meal? The atmosphere of it is very
274 important but a beautiful setting, eating in nature, sitting on the sofa in front of TV, does that
275 make a difference?

276 Part: It does make a difference. Sitting on the sofa in front of the TV isn't really a nice place
277 to eat, really. I much prefer when it is around the table or even on the beach with my friends
278 that I swim with, we would quite often all bring food down to the beach. We're all cold-water
279 swimmers so we bring flasks of hot tea and food and we'll sit with our woolly hats on after
280 we've been swimming in the sea and just talk and share food.

281 It doesn't have to be around the table, although it's nice when it's around the table too, but I
282 think it's all about getting together and having that interaction of passing food, try this, do
283 that and people also bringing food along that they've made and contributed so we're all
284 working together.

285 Int: Do you have any foods for particular occasions? I think you already told me about sugar
286 as a treat in your childhood and later on but do you have any other guilty foods that you go to
287 when you're not feeling great? Comfort food?

288 Part: Yes, sausage rolls. That is my guilty food. It's not sweet and it is my guilty food that
289 makes it feel it's not so bad because it's not sweet. It is my guilty food. It's what I would go
290 for if I was really feeling really tired.

291 Int: It's a pick-me-up?

292 Part: It is, yes. Feeling really tired and even not very hungry but just tired.

293 Int: Is it a treat in a different way from sugary foods or is it pretty much the same?

294 Part: Yes. I think it's the same. It just seems to make it feel better because it's not sweet.

295 Int: You feel guilty?

296 Part: Yes. I think so. Sausage rolls, it's very odd that I have this thing about sausage rolls. I
297 can go into the supermarket and I can feel quite tired and I have to, "No, I mustn't". I used to
298 work, when I was a student, in a bakery and make sausage rolls and pasties so I can make
299 them in their masses. I sometimes do for events that we have here.

300 Int: You do?

301 Part: Yes. I can still equally go into a supermarket and I mustn't look at the sausage rolls
302 because it's a terrible weakness.

303 Int: So you developed that when you were working in a bakery, it wasn't something from far
304 back in your childhood?

305 Part: I was probably in my teenage years I started working in the bakery as a summer job I
306 used to have. We didn't used to eat a lot of the sausage rolls, actually. We were allowed one
307 with our cup of tea break and that was it every day. It wasn't as if it was something that I ate
308 a lot of and I didn't as a student, it's an adult thing that's come about and I think it's more
309 noticeable now that I've got rid of the sugar that that is my weakness.

310 Int: The next one down?

311 Part: It is. You've got to stop going for those. Everything else is fine but you're still
312 hankering after those.

313 Int: Do you have I'm sure you do what are your experiences of feeding your
314 daughter? How does feeding somebody close to you feel?

315 Part: I suspect that in some ways you learn things about sugar and things like that as you go.
316 She used to be an incredible eater. She used to eat a lot and I used to make her food. I worked
317 full-time from when she was very young so she used to have a child-minder. She used to have
318 the same food that I used to make everyday for the child-minder to feed her and then she
319 went to the nursery. We've always had food in the evening that I've cooked and she's always
320 eaten everything.

321 Other people used to have very picky children and very picky foods and things but she was
322 always really amazing. She'd try everything. She was, obviously, helping me cook from a
323 very young age and my mother was teaching her from a very young age about how to cook so
324 she's grown up with a very broad palate of foods that she will eat.

325 She has the same sugar thing that I have and it is something that I talk to her about to try and
326 avoid the sugars because I think we were still brought up as sugar as treat from... My parents
327 would take her out and cover my holidays and look after her. Inevitably, there would be
328 sugary treats happening all the time. I think, in the same way that my mother did that to me,
329 there's no doubt that happened with my mother and her granddaughter as well. Children's
330 parties as well were all sugar-ridden and horrendous.

331 Int: They affect it. They calm everyone down.

332 Part: I used to try and do things like cut up big chunks of melon so, at least, although it was
333 sweet it was still fruit and it was something different and try and do a lot more savoury foods
334 than when she had all these birthday parties. I did try and do many more savoury foods than
335 others. She would still go to other people's parties and come back with masses of sweets. I
336 would try to avoid too many sweets in the goody bags and things like that.

337 It's very difficult. You are fighting a losing battle when they go to school. I insisted that she
338 had school lunches because what she wanted, as an alternative, is sandwiches, crisps and
339 chocolate like her friends had. I said, "I'm not going down that route". I knew that she would
340 just eat the crisps and chocolate and it was just sandwiches, she wouldn't have much healthy
341 food.

342 Because I was working, it was important that I knew that she had a decent meal so that if she
343 was too tired by the time she got home that she might only have something small but at least I

344 knew that she had something hot and proper in the day. I suppose that's the approach that I
345 took I felt that her main meal in the daytime, even though it wasn't me cooking it, was really
346 important. Yes, she has the sugar thing and she has the [place name] side of the family. She
347 knows more now and people are much more aware of things like that now, which is great.

348 Int: Do you think that's helping, all this talk about food and healthy eating?

349 Part: I think the difficulty is the fact that there's so much confusion from what the
350 government and the NHS say you should do and that's very much the low-fat diet. When I
351 read something else and I try something else, this other way of eating and it's clearly working
352 and I've been to the doctor and had my cholesterol checked and it's all fine. I'm eating high
353 fat, not masses amounts of high fat but I'm taking away that wheat and the rice and the starch,
354 just taking it away.

355 I don't need it in my diet and I'm getting used to not having it in my diet, I don't miss it at all.
356 Of course, there are all the diets that the NHS are promoting still have all this in it. There's
357 great confusion there in what's right health-wise with professionals promoting a completely
358 different diet than I would be on now. I'll stick to what I'm doing at the moment, I think.

359 Int: It seems to be working for you.

360 Part: Yes. It does.

361 Int: I think maybe, finally, I would like to ask you whether you could associate eating with
362 any other experience in life?

363 Part: I suppose eating crosses all sorts of areas in life. I'm looking at the beach hut in the
364 photograph there, the second one in is my beach hut and that's where we would have family
365 meals. I'd come from work, from here, and my mother would have my little daughter, when
366 she was little, and she would have cooked a big casserole and we would heat it up and we'd
367 sit and have meals.

368 Everything in my life has been associated around those meal times down at the beach, eating
369 with my friends down at the beach, eating with my family at the beach. Quite pleasurable
370 times as well. I do associate food with pleasure. It's integrated throughout my life, really.

371 Int: It permeates all different aspects of life?

372 Part: It really does.

373 Int: You said earlier on, creativity and pleasure.

374 Part: Absolutely.

375 Int: Making it...

376 Part: Sharing it as well

377 Int: Sharing. It has a social aspect.

378 Part: Making things for other people. Before I go down for a swim, I'd make something and
379 bring it with me and we'd go from there.

380 Int: Would you like to say anything else?

381 Part: No, I think that covers it, actually.

382 Int: That's really brilliant. Thank you very much. I think that's great.

C.6 Participant 2: Interpretative Phenomenological Analysis

Interview extract	Descriptive summary	Interpretative summary
<p>Int: We could start, maybe, with your first experiences of food and eating.</p> <p>Part: After you met us in the Gulbenkian, I had a think about it and, as we were there, I was thinking about it and the first experiences are varied in the sense that it was a very disciplined experience to eating that I experienced in family life, which was very strict, sitting around a table, sitting upright, having to eat everything on your plate, hold your knife and fork correctly and it was incredibly Victorian and very formal in the family life. On the other side, I have a [place name] side to my family and visiting grandparents, they would always have huge big tea parties and trolleys that used to squeak as they brought them into the room because it was laden with tea party food. That was a big family event but it was much more relaxed and a happier event, really. There was quite a big contrast to the different places that I would eat.</p> <p>Grandparents on the [place name] side would be big teas, trifles and things like that and then the [place name] side grandparents would be formal around the table but relaxed and then home would be where we sat around a table, very strict and very formal. I had those quite varied different eating experiences and I can still smell and hear the sounds in the different rooms that I...</p> <p>Int: That's very interesting. Could you explore your personal feelings in relation to each setting? How did that make you feel? For example, that strict..?</p> <p>Part: The strict side, I always felt it was a very cold dining room that we were in and it was a miserable experience. I'd be left at the dining room table when everyone had gone and be left with a plate of food that I hadn't eaten and then my sister would run into the room and scoff everything on my plate and run out of the room and leave me with my empty plate so my parents would let me down from the table.</p> <p>Int: Were you a slow eater or was it the meal?</p> <p>Part: I just didn't want some of the food on the plate and, of course, the rule was that you had to eat</p>	<p>Two opposing sides to the eating experience:</p> <p>Cold, formal, strict and silent; had to eat everything on the plate</p> <p>Happy, relaxed, big tea parties at grandparents</p> <p>Eating at home was a miserable experience, could not leave the table until everything on the plate was eaten</p>	<p>Early eating experiences are contradictory</p> <p>Eating at the family home was strict and miserable</p>

<p>everything on your plate. It sticks with me today, that rule, I would say. I have to be careful that I haven't got too much on my plate because I know that I have to eat everything on the plate.</p> <p>Int: Did it feel like a punishment if you had to finish off your plate?</p> <p>Part: Yes. It was definitely a punishment. You weren't able to have any pudding or anything nice afterwards until you'd eaten that. It was very strict.</p> <p>Int: I guess there were chore foods that you had to eat and then there were fun foods that were coming afterwards?</p> <p>Part: Yes. Absolutely. The reward foods was the sugar and the food that I didn't like might have been something like dark cabbage or something like that or something that seemed indigestible to a young child.</p> <p>Int: How would that compare to the lovely trolley laden with trifles and all the things you said?</p> <p>Part: It was quite different and it was very cosy, very warm and with lots of people circled around the table all in admiration of the creaking table laden with lots of goodies, along with things like the old-fashioned celery sticks that people used to have on the table with cheese. It was very traditional sort of food that they would put on and it's very much part of the [place name] culture, I think, is to over-elaborate and over-feed people because it's not right for people to come for a small tea. You have to feel welcoming and give them a big tea. I can feel the room. I can smell the room.</p> <p>Int: How do you feel when you explore those memories?</p> <p>Part: I think they're wonderful memories because they're wonderful memories that I tried to replicate when I had a daughter with that feeling of wonderful things on the table and cosy around the table. It was lovely. Of course, what was most amusing, really, was my grandmother with one of these old-fashioned trolleys with wheels coming into the dining room where we were all sitting round with the wheels squeaking.</p> <p>Int: The sound of good things coming.</p> <p>Part: It was that thing that was very good, actually.</p>	<p>She now feels that she needs to finish everything on the plate</p> <p>Food was used as punishment ...</p> <p>...and reward</p> <p>People circled around the table in admiration of the food</p> <p>Tendency to over-elaborate and over-feed people</p> <p>Can still feel and smell that room</p> <p>Wonderful memories that she tried to replicate with her daughter</p>	<p>Early discipline of having to eat everything on the plate carried over into the adulthood</p> <p>Food is both, reward and punishment</p> <p>The abundance of food is admired</p> <p>Over-feeding as a sign of positive regard</p> <p>Replicating the memory of "wonderful things on the table"</p>
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<p>Int: How was the atmosphere at the table?</p> <p>Part: Very much more relaxed. More chat and talk and passing food to everybody and very much more family-orientated, I would say.</p> <p>Int: If I, maybe, say more of togetherness, sharing a meal rather than having to go through a meal?</p> <p>Part: Exactly that, I would say. Very sharing, giving, everybody wanting to offer things to people across the table and hands everywhere across the table, offering rather than taking.</p> <p>Int: It was a time of giving as well, as you said, offering rather than taking.</p> <p>Part: Definitely. Yes.</p> <p>Int: You have good memories of that?</p> <p>Part: Yes. I think those are very good memories. I know my sister has very similar memories of the strictness and silence in the room as well that we used to have and, even to this day, she can't bear to eat with there being silence in the room. She has to have something, music or something, going on in the room at the time. We both have not such great memories of those eating experiences.</p> <p>Int: Not great but similar?</p> <p>Part: Very similar. I don't know whether she remembers my grandmother with the table and the squeaky things. I suppose the other grandmother was more formal but, again, you could smell the room. It was still formal at a table but much more relaxed and she would be in the kitchen baking often. She would be making her pastry and things like that. That was nice to be able to sit and watch her making the food and then we'd all be eating it later. Those are good memories, actually, of food making.</p> <p>My mother, although she had this very strict approach, my parents did, she was very much a cordon bleu cook and would love to entertain but it was very stressful entertaining, very stressful, because everything had to be perfection. It was very much around perfection. It wasn't that relaxed farmyard kitchen. I would go to friends' houses who might live on a farm and they would have a very much a farmyard kitchen approach to relaxed eating whereas my mother was very much cordon bleu strict and how it should be.</p>	<p>Family-orientated and relaxed, chatting and talking while passing food to everybody</p> <p>Sharing and giving - offering rather than taking</p> <p>Sister has similar memories of strictness and silence at the family table</p> <p>It was nice to be able to watch gran make food, nice memories of food making</p>	<p>Sharing the good things in life</p> <p>Offering the gifts of food as a sign of friendship</p> <p>Sister's memories of family eating is similar</p> <p>Nice memories of food making</p>
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<p>She was very much caught up in that era where people were very concerned about the things they should do, the way they should. It was a very middle class approach, I think, that my mother and father were very locked into in those 60s and 70s. They were the wild 60s and 70s. They were the restricted conservative people.</p> <p>Int: It was also a skill that she wanted to maintain?</p> <p>Part: She was incredibly skilled at cooking and that has fed its way through to my sister and I and we enjoy cooking too.</p> <p>Int: Can you tell me more about that? How does all this translate into your cooking and feeding your family today maybe?</p> <p>Part: I suppose she was very good in the kitchen, although she was a very fiery temper, she would teach us how to do certain things. When she was out of the kitchen, she would allow us to go in there to experiment on our own so we could play around with doing anything we wanted in the kitchen. She wasn't worried about that at all as long as she wasn't in there. All those things that we've learned, it was very creative.</p> <p>When I was starting to cook, I enjoyed baking and cooking generally. When my daughter was born, when she was very little, we've got photographs of her in my kitchen with my mother teaching her to make pastry standing on a stool and she was only about that height and yet she was already being taught how to bake and cook. She was in full concentration. That was great because she's now working at the university and 25 years old. She's a cook and she can create things as well. It's very much through my mother, the cooking, baking, creating foods has fed through.</p> <p>Int: I would like to try and explore this tie between creativity and cooking. For you, that is, actually, expression of your creativity.</p> <p>Part: Yes, it's very relaxing as well. It's something very... It will take your mind away completely. My background is creative rather than in estates, strangely enough. My background was creative.</p> <p>Int: Do you mind if I ask what <i>is</i> your background?</p> <p>Part: I was trained as a jeweller with precious metals and I took my degree in Three Dimensional Design in the Birmingham jewellery quarter. I was a manufacturing jeweller.</p>	<p>Entertaining at the family home was very stressful, everything had to be perfect</p> <p>Parents caught up in the middle class aspirations</p> <p>Mother very skilled at cooking, both sisters enjoy cooking</p> <p>Sisters were allowed to experiment in the kitchen as children</p> <p>It was a creative experience</p> <p>Daughter was introduced to cooking early and is a good cook too</p>	<p>Mother's need for perfection made entertaining too stressful</p> <p>Mother and both daughters are v skilled at cooking</p> <p>Experimenting in the kitchen was a creative experience</p> <p>Daughter is also a good cook</p>
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<p>Int: Working with your hands to create a thing of beauty?</p> <p>Part: Yes. I had a jewellery business in [place name]. That's how life started with me. Strangely enough, the three-dimensional things I deal with now are much bigger but still three-dimensional. It is a creative path.</p> <p>Int: Would you say food you make has to be beautiful as well or it's more to do with taste? How do you express yourself?</p> <p>Part: I think it does have to be taste. I'm not as good at presentation as others so it is a lot to do with taste and making people happy, actually.</p> <p>Int: It's to do with mood as well, the mood you create with your food?</p> <p>Part: Yes. I don't actually particularly enjoy cooking for myself but I do enjoy cooking for others and making people happy through what they're eating.</p> <p>Int: Through your food?</p> <p>Part: Yes.</p> <p>Int: How does that translate to your own eating?</p> <p>Part: Funnily enough, it doesn't really translate to my own eating in the sense that I like to make nice flavours and make other people happy but, if it was just me eating on my own, I wouldn't bother to cook. I wouldn't care, really, what I was going to eat. I would just snack on something. It is about the participation with other people that's really important, I think.</p> <p>Int: It's that sharing that you remember from your [place name] side of the family?</p> <p>Part: Yes, I think it's about the sharing, that giving and making other people happy and having that relaxed environment. I really like that.</p> <p>Int: Do you think that all meals are made equal? How do they relate? Breakfast, lunch, dinner, how would you describe them in your life?</p> <p>Part: Tricky. Are they made equal? It's funny because I do think we have been programmed that</p>	<p>Cooking is creative, it takes your mind away completely</p> <p>Trained in a creative profession</p> <p>It is about taste and making people happy through what they are eating</p> <p>Would not bother cooking for herself, it is about the participation with other people</p>	<p>Escapism through cooking</p> <p>Making people happy through food</p> <p>Prefers to snack when alone</p>
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<p>you have to have your breakfast and lunch and main meal and, in actual fact, more recently I've realised, that you don't really need that at all just through me trying to lose weight and cutting out sugar from my diet. Sugar was the bane of my life in the sense of if I was tired, fed-up, I'd go for sugar, something sugary and, of course, I now realise that it's probably the worst possible thing you could do because it makes you hungry to want to have something else.</p> <p>I would have always said I would have to have breakfast because, again, I would have had to have sat at home and had breakfast. I was always brought up to have breakfast but, actually, I don't need breakfast. I probably need brunch/lunch more than anything else. As the afternoon goes on I don't want so much food in the evening either.</p> <p>If that was me, that's the way I'd work. I'd probably want something in the middle of the day in reality but working isn't conducive sometimes to eating something sensible in the middle of the day, apart from when we're at the Gulbenkian and we're having our feta cheese salads. My balance of eating has changed slightly recently.</p> <p>Int: You've done it on purpose, consciously?</p> <p>Part: Yes. It's very much that one side of my family has diabetes in the family and I'm very aware that my body tends towards that side of the family and looks like that side of the family.</p> <p>Int: Which side is that?</p> <p>Part: My father's side, the [place name] side, strangely enough. It's not the sweet sugary [place name] one. The [place name] side has this diabetic side so I have to be quite careful and just cutting out sugar has a massive impact on me because I was, obviously, so addicted to it.</p> <p>Int: Can you explore that a bit? Did it affect your mood or energy levels?</p> <p>Part: Amazing really, it affected everything. My mood, I couldn't think straight. I couldn't concentrate, I couldn't hold anything in my head and I was thinking, "Gosh, I'm having memory loss as well". It took about a good ten days to, actually, go through this process and come out the other side and suddenly woke up thinking, "Gosh, I've got a clear head, I'm okay, I can deal with this". I realised then the impact that sugar does have on me because I did feel a lot better and I've always been brought up to eat very low-fat foods. I was</p>	<p>It is about sharing, giving and making other people happy</p> <p>Three meals a day might not be the best way for her</p> <p>Trying to lose weight and cut out sugar</p> <p>Sugar makes you want to eat more</p> <p>Don't need breakfast</p> <p>Brunch-lunch is most important</p> <p>Doesn't want so much in the evening</p> <p>Working hours are not conducive to this way of eating</p> <p>Worried about diabetes which runs in the family</p>	<p>Being on a diet makes one question life-long eating habits</p> <p>Traditional mealtimes do not coincide with hunger cues</p> <p>Struggles with sugar addiction</p>
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<p>given Ryvita for my lunches when I was a teenager and things like that. I've completely gone the other way and I eat full-fat foods, full-fat milk and full-fat yoghurt.</p> <p>Int: Is that now, at the moment?</p> <p>Part: Now, at the moment, and I'm not hungry all the time. Instantly I'm not hungry all the time. It means that I've lost a stone in weight.</p> <p>Int: By going back to full-fat produce?</p> <p>Part: Yes.</p> <p>Int: It's interesting. It's something that sustains you longer.</p> <p>Part: It sustains me longer. I was always thinking about food and now I don't. It really is quite a massive difference. I'm not thinking when my next food because it, actually, sustains me. Cutting out wheat and rice. Wheat is unbelievable. People used to say to me, "Have porridge in the morning, it will keep you going all day". I would have porridge in the morning and, by the time I got to work, I would be starving hungry and yet I have two tablespoons of full-fat Greek yoghurt and a few nuts and that's it.</p> <p>Int: It keeps you a lot longer.</p> <p>Part: It keeps me going forever, yes.</p> <p>Int: You know that relationship with sugar that you used to have, do you think it's related in any way to your happy memories with sugar? Desert was always, in some way, a reward?</p> <p>Part: I think sugar has always been a reward throughout and I think, even when we were doing our exams, and mum, again, was very strict, staying in our rooms to do our revision, my mother would bring up a cup of tea and a little Mars bar or something. It was always the sugar reward. It's probably the worst the thing you could, actually, do because it then makes you sleepy, doesn't it? The little reward was the sugar and we've always had that. I think she now realises, she's in her 80s. I was talking to her about cutting out sugar and she's cut out sugar herself now and she can feel that difference as well. She struggles with that.</p> <p>Int: She can feel the benefit?</p>	<p>Sugar addiction</p> <p>Trying to get weaned off sugar was difficult, it affected everything: mood, thinking, concentration, memory</p> <p>"Clear head" after coming out the other side</p> <p>Although brought up on a low fat diet, eats full-fat now</p> <p>Full-fat foods sustain her longer</p> <p>Cutting out wheat and rice made a massive difference</p> <p>Sugar has always been a reward</p> <p>Mother cut out sugar too, can feel the difference but struggles with it</p>	<p>"Clear head" is the main benefit of quitting sugar</p> <p>Eating full-fat sustains her for longer</p>
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<p>Part: She can feel the benefit to it. It is an evil thing, sugar. It still catches me out here.</p> <p>Int: It happens occasionally, no one is perfect but do you associate this intake of sugar now with particularly stressful days?</p> <p>Part: Yes, it can be. I'm really controlled now with... The university is terrible. For every meeting you go to, you have tea, coffee, and biscuits. I'm completely immune to those now. I'm not at all interested in the biscuits. If somebody comes in with birthday cake, it's very difficult to say no.</p> <p>Int: You give in to temptation, it's not that you go out actively seeking the reward?</p> <p>Part: No, I give in to temptation occasionally. I have to reign myself back in because I don't want that addiction to grab hold of me again.</p> <p>Int: You're feeling better on the whole than when you were on a sugar diet?</p> <p>Part: Absolutely. Yes.</p> <p>Int: Could you explore the benefits a little bit?</p> <p>Part: The benefits are, I think, I was starting to become concerned about the certain age that I am now where you suddenly feel that you can't remember everything like that. I could go to a meeting and come out and remember everything. I just wasn't remembering things as well as I used to and thinking, "Golly, I'm getting past it, what am I going to do?" Actually, taking the sugar out of my diet has changed that completely. I can't really explain why but, when I've read about it, it is one of the things that people notice, the clarity of the mind. It all becomes quite clear and thank God. When you're working, it's devastating to think that you're starting to lose your memory. It works for me and it's been much easier. I just haven't missed it. Apart from those odd temptations, now my taste buds have been weaned away from it.</p> <p>Int: Does that reflect in your cooking for others, because you, obviously, like to feed people and make them happy?</p> <p>Part: Yes. I think it does because I'm moving away from baking, anything to do with flour and things like that, I'm removing that. I'm still exploring what</p>	<p>Work environment is not helping – for every meeting you have tea, coffee and biscuits</p> <p>People bring in birthday cakes</p> <p>Gives in to temptation occasionally</p> <p>“Clarity of mind” is the main benefit after quitting sugar</p> <p>Moving away from baking for others</p>	<p>Sugar is a treat and a reward</p> <p>Work environment is sugar ridden</p> <p>Replacing sugary foods as a treat is difficult</p>
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<p>I've got to replace it with because it's nice to be able to give things to some people and feel that it's a treat at the end of a meal or something like that. Yes, cheese is great but a lot of people expect something else. I'm still exploring what different things I can give to people, which doesn't involve refined sugars, at least. I'm thinking of other sorts of sugars.</p> <p>Int: What do you feel are good replacements?</p> <p>Part: I haven't got a really good replacement yet. It's a bit of struggle, to be quite honest. I'm just looking at things like using almond flour and coconut flour and dates.</p> <p>Int: Instead of sugar?</p> <p>Part: Instead of sugar. Anything that's not refined. I think I do miss bread because I used to like baking bread. My sister and I went on several courses for baking bread and, of course, now I can't. She knows I can't. I might look at spelt flour or something that's less refined than we're used to. I think all those refined things.</p> <p>It's quite difficult to reverse everything that you've been programmed and taught over your lifetime to try and make it seem normal. You don't have to think, usually, you can just start working on making things but when you're doing something completely new and constantly having to read or check how do you do this.</p> <p>Int: It's also not so easily available sometimes. You have to seek it out.</p> <p>Part: It's not. You have to seek it out and that is quite difficult. I suppose if I was in London, you get a fuller breadth of what you could do. Yes, I'll get there. What other food-related things do you need?</p> <p>Int: Maybe exploring the difference eating on your own, eating in the company of people that you don't know so well and eating with friends or family. What difference does that make to you or to the meal that you're sharing?</p> <p>Part: Eating with friends and family is really relaxed and nice. I like eating with people. I don't like eating on my own. I really can't be bothered to eat on my own unless it's just a snack. That would be possibly when the evil sugars in the past have come in. It's probably that I wouldn't make anything, I'd just have some chocolate and a cup of tea instead of having proper food.</p>	<p>Exploring what she could give people as a treat which doesn't involve sugar</p> <p>Finding a replacement is a bit of a struggle</p> <p>It is difficult to reverse everything that you've been taught over your lifetime</p> <p>Likes eating with other people, if on her own would rather have a cup of tea and chocolate</p>	<p>Life-long habits are difficult to erase</p>
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<p>Int: You would have that by yourself?</p> <p>Part: On my own.</p> <p>Int: That wouldn't be a meal... that would be just a little..?</p> <p>Part: No, that would be my meal. Because I'm not that keen on cooking by myself or for myself so I wouldn't be able to make a great effort to making a soup and chopping up all the vegetables and blending it all just for me. I'd just think, "Oh, it's just me". I'd grab a snack and have a cup of tea, which is not particularly good. Eating with people I don't know...</p> <p>Int: More formal?</p> <p>Part: It does feel more formal and I do have that cold feeling coming over me of that formality. I don't like it at all. I don't like formal eating. It's nice for things to look beautiful and pretty on a table and I really do like that but I don't like unpleasant formal eating. I like to have it relaxed and formal. If I was to go to a restaurant that was formal, there are restaurants that are formal and unpleasant, which would be like...</p> <p>Int: Could you explore that? What would qualify?</p> <p>Part: I think there's a coldness.</p> <p>Int: In their décor or just the way people behave around you?</p> <p>Part: In their manner, I think. I think a really nice formal restaurant is where the maître d' is really warm and friendly to everybody and puts everybody at ease and you can all enjoy the beautiful décor as well as the environment and company. If it's a cold environment, you just think, "That ruins it, really". Cold in atmosphere, not cold in food. For me, I don't mind formal eating but I do like an atmosphere that is warm and friendly.</p> <p>Int: To reflect on the meal you're having and enjoy what you derive from it?</p> <p>Part: Absolutely. Warmth and friendship, I think is really important.</p> <p>Int: You like to share that meal?</p> <p>Part: Yes. Definitely.</p>	<p>Cold feeling coming over at the mention of formal eating, doesn't like it</p> <p>Cold atmosphere ruins a meal</p> <p>Atmosphere of warmth and friendship is important for the enjoyment of a meal</p>	
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<p>Int: How does the surrounding affect the enjoyment of the meal? The atmosphere of it is very important but a beautiful setting, eating in nature, sitting on the sofa in front of TV, does that make a difference?</p> <p>Part: It does make a difference. Sitting on the sofa in front of the TV isn't really a nice place to eat, really. I much prefer when it is around the table or even on the beach with my friends that I swim with, we would quite often all bring food down to the beach. We're all cold-water swimmers so we bring flasks of hot tea and food and we'll sit with our woolly hats on after we've been swimming in the sea and just talk and share food.</p> <p>It doesn't have to be around the table, although it's nice when it's around the table too, but I think it's all about getting together and having that interaction of passing food, try this, do that and people also bringing food along that they've made and contributed so we're all working together.</p> <p>Int: Do you have any foods for particular occasions? I think you already told me about sugar as a treat in your childhood and later on but do you have any other guilty foods that you go to when you're not feeling great? Comfort food?</p> <p>Part: Yes, sausage rolls. That is my guilty food. It's not sweet and it is my guilty food that makes it feel it's not so bad because it's not sweet. It is my guilty food. It's what I would go for if I was really feeling really tired.</p> <p>Int: It's a pick-me-up?</p> <p>Part: It is, yes. Feeling really tired and even not very hungry but just tired.</p> <p>Int: Is it a treat in a different way from sugary foods or is it pretty much the same?</p> <p>Part: Yes. I think it's the same. It just seems to make it feel better because it's not sweet.</p> <p>Int: You feel guilty?</p> <p>Part: Yes. I think so. Sausage rolls, it's very odd that I have this thing about sausage rolls. I can go into the supermarket and I can feel quite tired and I have to, "No, I mustn't". I used to work, when I was a student, in a bakery and make sausage rolls and pasties so I can make them in their masses. I sometimes do for events that we have here.</p>	<p>Getting together and having that interaction of passing food</p> <p>Sausage rolls replaced sugar as guilty foods</p> <p>Eaten when feeling tired</p> <p>Sausage rolls are a terrible weakness now</p>	<p>Interaction of passing food facilitates togetherness</p> <p>Sausage rolls replaced sugar</p> <p>Craving sausage rolls now</p>
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<p>mother did that to me, there's no doubt that happened with my mother and her granddaughter as well. Children's parties as well were all sugar-ridden and horrendous.</p> <p>Int: They affect it. They calm everyone down.</p> <p>Part: I used to try and do things like cut up big chunks of melon so, at least, although it was sweet it was still fruit and it was something different and try and do a lot more savoury foods than when she had all these birthday parties. I did try and do many more savoury foods than others. She would still go to other people's parties and come back with masses of sweets. I would try to avoid too many sweets in the goody bags and things like that. It's very difficult. You are fighting a losing battle when they go to school. I insisted that she had school lunches because what she wanted, as an alternative, is sandwiches, crisps and chocolate like her friends had. I said, "I'm not going down that route". I knew that she would just eat the crisps and chocolate and it was just sandwiches, she wouldn't have much healthy food.</p> <p>Because I was working, it was important that I knew that she had a decent meal so that if she was too tired by the time she got home that she might only have something small but at least I knew that she had something hot and proper in the day. I suppose that's the approach that I took I felt that her main meal in the daytime, even though it wasn't me cooking it, was really important. Yes, she has the sugar thing and she has the [place name] side of the family. She knows more now and people are much more aware of things like that now, which is great.</p> <p>Int: Do you think that's helping, all this talk about food and healthy eating?</p> <p>Part: I think the difficulty is the fact that there's so much confusion from what the government and the NHS say you should do and that's very much the low-fat diet. When I read something else and I try something else, this other way of eating and it's clearly working and I've been to the doctor and had my cholesterol checked and it's all fine. I'm eating high fat, not masses amounts of high fat but I'm taking away that wheat and the rice and the starch, just taking it away.</p> <p>I don't need it in my diet and I'm getting used to not having it in my diet, I don't miss it at all. Of course, there are all the diets that the NHS are promoting still have all this in it. There's great confusion there in what's right health-wise with professionals promoting a completely different diet than I would</p>	<p>You are fighting a losing battle while children are at school</p> <p>Feels that NHS advice on low-fat diet isn't working</p> <p>Diet of high fat but no starch or sugar is working for her</p> <p>Great confusion in what is right health wise</p>	<p>Children's environment is sugar ridden</p> <p>NHS recommendation re low-fat foods are questioned</p> <p>Confusing messages re healthy eating</p>
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<p>be on now. I'll stick to what I'm doing at the moment, I think.</p> <p>Int: It seems to be working for you.</p> <p>Part: Yes. It does.</p> <p>Int: I think maybe, finally, I would like to ask you whether you could associate eating with any other experience in life?</p> <p>Part: I suppose eating crosses all sorts of areas in life. I'm looking at the beach hut in the photograph there, the second one in is my beach hut and that's where we would have family meals. I'd come from work, from here, and my mother would have my little daughter, when she was little, and she would have cooked a big casserole and we would heat it up and we'd sit and have meals. Everything in my life has been associated around those meal times down at the beach, eating with my friends down at the beach, eating with my family at the beach. Quite pleasurable times as well. I do associate food with pleasure. It's integrated throughout my life, really.</p> <p>Int: It permeates all different aspects of life?</p> <p>Part: It really does.</p> <p>Int: You said earlier on, creativity and pleasure.</p> <p>Part: Absolutely.</p> <p>Int: Making it...</p> <p>Part: Sharing it as well</p> <p>Int: Sharing. It has a social aspect.</p> <p>Part: Making things for other people. Before I go down for a swim, I'd make something and bring it with me and we'd go from there.</p> <p>Int: Would you like to say anything else?</p> <p>Part: No, I think that covers it, actually.</p> <p>Int: That's really brilliant. Thank you very much. I think that's great.</p>	<p>Eating crosses all sorts of areas in life</p> <p>Associates food with pleasure</p> <p>Associates making food with creativity and giving</p> <p>Associates eating with sharing and togetherness</p>	<p>Eating permeates all aspects of life</p> <p>Associates food with pleasure, creativity and giving</p> <p>Associates eating with togetherness</p>
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C.7 Participant 2: Reflective Diary

Date: 2nd November

Context: Transcribing

My first and overwhelming impression during the interview with Participant 2, was the tension arising out of contradictory experiences with food. The childhood memories very vividly portray duality between relaxed, warm and friendly eating atmosphere at the grandparents' house "huge big tea parties and trolleys that used to squeak as they brought them into the room because it was laden with tea party food. That was a big family event but it was much more relaxed and a happier event, really" and the stern and silent coldness of the familial table "very disciplined experience to eating that I experienced in family life, which was very strict, sitting around a table, sitting upright, having to eat everything on your plate, hold your knife and fork correctly and it was incredibly Victorian and very formal in the family life". This tension is further compounded by the use of food as punishment "It was definitely a punishment. You weren't able to have any pudding or anything nice afterwards until you'd eaten that". Only after everything on the plate was eaten, thus punishment carried through, reward would come in the form of a desert "Yes. Absolutely. The reward foods was the sugar".

Date: 3rd November

Context: Reading

This contradiction carries on throughout most of her adult life. On one hand food is seen as "wonderful things on the table" to be shared and enjoyed with friends and family in a warm and relaxed atmosphere. It is a way to make people happy. "I do enjoy cooking for others and making people happy through what they're eating." The idea that people can be made happy through what they are eating is interesting - can you eat your way to happiness? For the Participant 2 making food provides an escape from reality "Cooking takes your mind away completely" since it is creative and fully absorbing. On the other hand struggles with weight issues and sugar addiction "Sugar was the bane of my life in the sense of if I was tired, fed-up, I'd go for sugar" throughout her life paint a picture of a more challenging relationship with food. "...cutting out sugar has a massive impact on me because I was, obviously, so addicted to it". This strain is compounded by the worries about diabetes which runs in the family. The pleasure she gets from eating is tainted with guilt and worries about health. However the need to treat herself with food hasn't gone away - sausage rolls replaced sugary treats "I mustn't look at the sausage rolls because it's a terrible weakness" This is particularly the case when feeling tired. It is not surprising since tiredness makes the need for an energy boost high while resistance to temptation low. At least sausage rolls are not sugary, she rationalizes. "Yes, sausage rolls. That is my guilty food. It's not sweet and it is my guilty food that makes it feel it's not so bad because it's not sweet." It has also been extremely hard to find a replacement for sugary treats to give to others "I haven't got a really good replacement yet. It's a bit of struggle, to be quite honest".

Date: 4th November

Context: Re-reading

I could sense how difficult it is for her to alter the lifelong habits regarding sugary treats and the food intake in general. Although she acknowledges the benefits of sugar free diet, mainly as a restored “clarity of mind” something is not quite right. It seems that the effort required does not quite match the satisfaction gotten out of it. Even when the change is accomplished, something doesn’t feel right or normal. “It’s quite difficult to reverse everything that you’ve been programmed and taught over your lifetime to try and make it seem normal.” I found it interesting that Participant 2 considers replacing some foods with alternative foods, but never with something else altogether. Does all happiness have to be ingested?

Date: 5th November

Context: Re-reading

Eating and food seem to hold a place of high importance and permeate all aspects of life “I suppose eating crosses all sorts of areas in life”. Eating is associated with pleasure “I do associate food with pleasure. It’s integrated throughout my life, really”. This would make food intake extremely hard to control. Interestingly, she does not like eating alone and would not make an effort to cook for herself “if it was just me eating on my own, I wouldn’t bother to cook. I wouldn’t care, really, what I was going to eat.” I’m noticing here that “eating alone” (chocolate, sausage rolls) contradicts the general picture of pleasurable eating. Does it serve a different purpose? It seems more like a quick pick-me-up on the go. Eating alone is most likely to involve “guilty foods”.

Date: 7th November

Context: Re-reading

She finds available information regarding healthy eating quite contradictory and confusing “...there’s so much confusion from what the government and the NHS say you should do and that’s very much the low-fat diet”. She feels that a limited amount of full fat foods works better for her as long as she keeps away from sugar and starch (wheat and rice). “... and I’m not hungry all the time. Instantly I’m not hungry all the time. It means that I’ve lost a stone in weight”. I sense that finding a diet which works is a life long struggle. Dieting seems effortful and quite challenging since cravings persist while temptation is all around “It is an evil thing, sugar. It still catches me out here”. She needs to remain vigilant at all times and keep her resolve. This is difficult since it requires a lot of energy.

Date: 8th November

Context: Attempt at identifying sub-themes

Reward and punishment theme is prominent: reward is delicious food, punishment - not being able to eat it (albeit for different reasons at different stages in life). I feel that a relaxed and happy atmosphere of sharing at the grandparents would not have as much of an impact

without the contrast of the strict and formal dining at home. The anticipation and gratification of a pudding is felt even keener when faced with the threat of not being allowed to eat it. The cravings are more intense when on a diet, the pull of temptation seems to be ever-present.

Eating behaviours seem to oscillate between the joyful participation in sharing food with others and the search for that perfect diet which can offset the calorie intake. I wonder whether perfect diets exist. Perhaps the most difficult thing to deal with is the importance allocated to food and eating in the first place. Association between eating and relaxation, togetherness and pleasure makes finding a replacement particularly difficult.

Date: 9th November

Context: Attempt at identifying sub-themes

Some anxiety regarding formal eating that stems back to the cold formality and strict discipline around the familial table. "... I do have that cold feeling coming over me of that formality. I don't like it at all. I don't like formal eating." This anxiety around formal eating was reinforced by mother's perfectionistic tendencies "... she was very much a cordon bleu cook and would love to entertain but it was very stressful entertaining, very stressful, because everything had to be perfection." Another point here. She feels that she must finish everything on the plate and has to be very careful not to put too much food on the plate "I have to be careful that I haven't got too much on my plate because I know that I have to eat everything on the plate."

Date: 11th November

Context: Attempt at identifying sub-themes

I have decided to listen to the voice recording rather than re-read the transcript today. Prosody is so important, without it a significant proportion of the meaning may be lost. Listening to her voice reminded me of how light-hearted our conversation really was. Instances of laughter accompanied her joyful recollection. These are very pleasant memories. Whenever she talked about enjoyable eating experiences from childhood her voice was ringing "it was very cosy, very warm and with lots of people circled around the table all in admiration of the creaking table laden with lots of goodies" She was not just remembering, she was reliving these memories. "I can feel the room. I can smell the room." All that admiration of wonderful abundance displayed on the table had a great impact on her as a child. Sharing that bounty with the nearest and dearest is a sign of affection and a cause for celebration. Food seems to be a symbol of both - abundance and affiliation.

Date: 12th November

Context: Attempt at identifying sub-themes

Eating environment as a part of a challenge to healthy/controlled food consumption is a significant theme here. She feels that the environment is not particularly supportive of sugar

free eating or healthy eating in general. Starting with children's parties which are full of sugary foods "Children's parties as well were all sugar-ridden and horrendous." and foster the association of sugary treats with having a good time. "You are fighting a losing battle when they go to school." This association regarding sugar as a special treat is further reinforced by giving sugary foods as reward "...staying in our rooms to do our revision, my mother would bring up a cup of tea and a little Mars bar or something" for good behaviour or achievement. The emerging behaviour pattern seems to be: I was given sugar as a treat/reward in childhood, therefore I give myself sugar as a treat/reward in adulthood.

The already existing link between sugar and treat/reward, is rather difficult to ignore since the work environment seems to be adding to this picture. "The university is terrible. For every meeting you go to, you have tea, coffee, and biscuits." People bring in birthday cakes to share and treat colleagues but it can be too much of a temptation for her at times. "If somebody comes in with birthday cake, it's very difficult to say no." Although commensality of eating and drinking together helps bonding at work place, these seem to consist of mainly sugary foods. I can see how challenging it must be for her to partake while trying to stick to the new eating regime at the same time.

Date: 13th November

Context: Attempt at identifying sub-themes

Another issue here is the one related to discrepancy between traditional meal times and hunger cues. She feels that although this is how she used to eat until recently, following traditional mealtimes does not suit her. "I was always brought up to have breakfast but, actually, I don't need breakfast. I probably need brunch/lunch more than anything else." She would rather have her main meal in the middle of the day than in the evening but working hours are not conducive of that. "I don't want so much food in the evening either." I wonder whether not being able to eat a substantial meal in the middle of the day, when she feels most hungry, results in more cravings and a higher consumption of snacks?

Date: 15th November

Context: Attempt at identifying sub-themes

Family legacy seems to be another prominent theme here. The significance of food and the associated feelings of warmth and relaxation "wonderful memories that I tried to replicate when I had a daughter with that feeling of wonderful things on the table" as well as the cookery skill are passed down through the generations. Mother was a very skilful cook "She was incredibly skilled at cooking and that has fed its way through to my sister and I and we enjoy cooking too." The daughter is a very competent and creative cook too. "She's a cook and she can create things as well. It's very much through my mother, the cooking, baking, creating foods has fed through."

Date: 16th November

Context: Attempt at identifying sub-themes

However it seems that the same weakness for sugar has fed through the generations as well “She [daughter] has the same sugar thing that I have and it is something that I talk to her about” I can sense that she is concerned about the sugar addiction and tries to offer a positive guidance. “I did try and do many more savoury foods than others. She would still go to other people’s parties and come back with masses of sweets.” Although she made an effort to steer away from sugary treats, her daughter was encouraged to eat masses of sweets through her environment. “You are fighting a losing battle” she rationalises. I wonder how much of her own weakness for sugar had been passed on inadvertently?

Date: 19th November

Context: Attempt at clustering

I listened to the voice recording again in order to make sense of the preliminary interpretations and attempt to cluster meanings into themes. One of the most prominent group of themes, although sometimes contradictory, reflect different aspects of Participant’s engagement with food and eating.

- Joyful participation
- Anxiety over formal eating and portion size
- Dieting efforts and persistence of cravings
- Eating alone as invitation to guilty foods

Another important cluster relays the effect different environments have on the experience of food and its influence on the issuing eating behaviour.

- Sugar treats/rewards in childhood
- Challenges to following a sugar free diet here on the campus
- Enjoyment of eating in a relaxed and friendly company vs. unpleasant coldness of formal eating
- Traditional mealtimes do not coincide with hunger cues

The wider associations and symbolic meaning of food and eating forms another constellation of themes reflecting deeper connotations food/eating represents for her.

- Food is a symbol of abundance and affiliation
- Inherent tension in the use of food as reward and punishment
- Food and eating offer possibility for escapism

Familial heritage seems to be another group of important themes related to eating and food that has been passed on through the generations.

- Admiration of cookery skills
- High importance allocated to food and eating
- Weakness for sugar

Date: 21st November

Context: Attempt at identifying main themes

Most of the above mentioned sub-themes fit into four significant themes: 1) eating behaviours comprising joyful participation, some anxiety over formal eating and portion size, dieting efforts and persistence of cravings, eating alone as invitation to guilty foods, and hunger cues; 2) meaning of the environment covering sugar treats/rewards in childhood, the challenges to following a sugar free diet here on the campus, enjoyment of eating in a relaxed and friendly company vs. unpleasant coldness of formal eating, and difficulties in keeping up with traditional mealtimes; 3) meaning of food/eating encompassing food as a symbol of abundance and affiliation, inherent tension in the use of food as reward and punishment; the possibility of escapism through food; 4) family legacy including the admiration and importance of cookery skills and food in general, as well as the weakness for sugar.

C.8 Participant 3: Interview Transcript

1 Int: Okay, we can start now. Can you tell me a little bit more about your eating experiences?

2 You can start wherever you like.

3 Part: Growing up we kind of did the normal thing where you have cereal in the morning and
4 then a cooked meal in the afternoon. My mum stopped working when she had my youngest
5 brother. For the [longest 0:00:26] time she was a stay at home mum so she would do all the
6 cooking. Then she started working when we were going to secondary school. My dad took
7 over as being the main cook of the house, his food is slightly better, he is better at cooking.
8 Then he went on a health kick and now we do dinner in the morning. We have pasta,
9 sausages and vegetarian and we have that all in the morning and then in the evening we will
10 have something lighter like chips or salad and fish. He has changed the way that we eat.

11 Int: How do you feel about this?

12 Part: I found it a bit weird at first, but then I got used to it. Then coming here and not having
13 that is a bit weird.

14 Int: How does that compare living on the campus to your breakfast?

15 Part: It is more like a hotel breakfast where we have beans and hash browns and stuff. You
16 can have cereal and whatnot as opposed to having pasta and stuff. It is very different. Dinner
17 we have a heavy dinner. Nowadays I try not to eat lunch because lunch isn't free and at the
18 moment I am trying to save as much money as I can. I am having small snacks throughout the
19 day to keep myself going until we get to dinner. Now dinner is a much heavier meal than it
20 used to be and I think my body is still getting used to it.

21 Int: How do you feel after eating such a heavy meal in the evening?

22 Part: Okay, it makes me a bit tired but I am getting used to it. I am working on it.

23 Int: How are you coping with not having a proper lunch with having to snack throughout the
24 day?

25 Part: It is hard.

26 Int: Do you get hungry?

27 Part: Yes, an hour after breakfast I am like, "I am dying." It is great, I am working my way
28 through it. I am drinking a lot more water like I used to just to try and fill the void before
29 dinner. Working on it.

30 Int: Working on it. When do you normally have your breakfast, is it quite early?

31 Part: We have to go between 8:00 and 9:30, but my friends usually go at 8:00.

32 Int: So breakfast and supper are organised on the campus?

33 Part: Yes.

34 Int: You have to fend for yourself for lunch. As far as I can understand you are trying to save
35 money. It is expensive to eat that third meal for you, so you are trying to skip it and snack
36 throughout the day to last until dinner.

37 Part: Yes.

38 Int: Does it affect your performance do you think the fact that you are sometimes hungry?

39 Part: I can't tell yet. I think sometimes it makes me sleepier for my lectures, but I can't tell if
40 that is the lack of food or just the lecture itself. Sometimes I feel myself getting tired or a tiny
41 bit irritated at which point I will go to Essentials and get a packet of crisps or a packet of
42 sweets. Usually when I am very irritated I go straight for sugar, probably not healthy.

43 Int: So you feel that sometimes hunger makes you irritable.

44 Part: Yes.

45 Int: Then you go for sugar, does sugar change the way you feel?

46 Part: It makes me feel better, but I think that is just my mind as opposed to it actually making
47 me feel better.

48 Int: In what ways does it make you feel better?

49 Part: I don't know. I think it just picks my energy up a bit so I am not feeling as down as I
50 was before. I am used to stress eat sweets. When I did my GCSEs I used to stress eat, I was
51 good at stress eating. I am trying not to stress eat, but it is a habit that keeps coming back. I
52 think it was something I watched my mum do when I was younger.

53 Int: Can you tell me a bit more about stress eating, how would you describe that?

54 Part: It is just whenever I feel stressed, a bit annoyed or a bit angry I reach for food as a way
55 to make myself to feel better.

56 Int: Do you reach out for particular foods or any food?

57 Part: Now it is any food. It used to just be pear drops, pear drops used to be my thing.

58 Int: I don't know what these are?

59 Part: They are like a pear shaped boiled sweet covered in sugar. I used to have those all the
60 time and then the corner shop stopped selling them, so I realised it didn't make sense for me
61 to keep eating the same sweet.

62 Int: It was that particular sweet that you would go to when you felt stressed?

63 Part: Yes.

64 Int: Did it help?

65 Part: I think so.

66 Int: In what way, could you explore those feelings before and after?

67 Part: I would feel irritated and stuff before. I would have to leave my house to walk to the
68 corner shop and on the walk there I would get fresh air and whatnot. Then I had the sweets, I
69 ate the sweets, they taste so nice and it made me feel slightly better.

70 Int: Would that last? Would that improved feeling last or was it just a momentary relief?

71 Part: It would last for an hour maybe and by then I would have to reach for a different snack,
72 it would be dinner time or I would be busy studying by then.

73 Int: You say that your mum does that.

74 Part: Yes.

75 Int: Could you explore that a little bit for me?

76 Part: My mum works as a school teacher, so she is very stressed all the time. Usually when
77 she comes back from work after she has said hi to everybody and stuff she will sit in her bed
78 and she will have a packet of crisps or a packet of Skittles. She will sit there and she will be
79 on eBay or watch whatever show she wants to watch and it is to calm herself down after the
80 day. I guess watching her do that I am like, "it seems to work for her, maybe it will for me."

81 Int: And it did?

82 Part: Yes.

83 Int: Up to a point. You say are trying to control that a little bit more now.

84 Part: Yes. (Laughter) I am trying not to. I am a very frugal person, so it does cost money to
85 keep buying sweets. Also health and trying to keep my face clear and stuff. I shouldn't eat so
86 many sweets, so then I will try and eat other things. For my exams this year I was eating
87 celery instead of sweets.

88 Int: Could you tell me a little bit about that, does celery do it?

89 Part: Yes, sort of. I don't know, I like celery a lot. It is a weird food, but I really like it
90 especially with the chickpea hummus. When I was revising I would make myself go to celery
91 instead of going to something sweet.

92 Int: With hummus or just celery?

93 Part: It depends, if there was hummus and if the hummus was in date because my family has
94 a habit of just leaving hummus and then it is not in date so you can't eat it. I try to do it with
95 hummus most of the time, but once in a while it will just be the celery by itself.

96 Int: That also helped with feelings of stress?

97 Part: Yes.

98 Int: What do you think it is that helps, which part of the eating? Is it the taste, is it just
99 distraction or is it the chewing itself? What do you think brings that momentary relief from
100 stressful situations?

101 Part: I don't know. I think maybe with the sweets it was the taste. I think with the celery it
102 could be definitely be that it was just distracting me for a minute and giving me time to clear
103 my head whilst eating. I don't know, I think it is more of a distraction than anything else.

104 Int: It is kind of a time out.

105 Part: Yes.

106 Int: Would you like to add anything to it?

107 Part: To stress eating?

108 Int: Yes, it is always very interesting. A lot of people eat in stressful situations. It is very
109 interesting to explore those motivations and outcomes.

110 Part: Maybe it is just that I like food.

111 Int: You like food?

112 Part: I like food a lot. I am a bit picky, but when I like food I like food. When I have place
113 that I know does good food or it is a Saturday and somebody has cooked and I know they can
114 cook I get really excited.

115 Int: So you look forward to your meals if they are good?

116 Part: Yes.

117 Int: Could you explore your family meals a bit for me. How does eating with family maybe
118 compare to eating on a campus with friends or maybe eating by yourself? Is that all the same
119 or does it differ in some ways?

120 Part: It is different. I think my family is the kind of family where we always like to try and
121 eat together. We are all at the dinner table and there are loads of jokes, it is like a fun setting.
122 It is still nice eating on campus, but it is not my family if that makes sense.

123 Int: What is the difference? It is similar, but there is something different as well the level of...

124 Part: It is just I don't know them as well. We only met four weeks ago, so I don't know them
125 as well. I don't necessarily feel as comfortable as I do with my family.

126 Int: So not as comfortable.

127 Part: Yes, whereas with my family they know me and they have to deal with me. Everybody
128 is really relaxed and enjoying themselves. When it comes to Christmas everybody is usually
129 around my house and the food is great, so I eat. We try and eat breakfast and then we know
130 that everybody is going to come around 2:00, 3:00 or 4:00-ish. We even eat later, we have a
131 late lunch or early dinner and then usually I will have seconds. Everybody is around and it is
132 very calm and very relaxed in my family. We love to make jokes and embarrass people. We
133 love being together, so when we eat everybody is happy. The food is good food and we have
134 a great time. On campus it is a bit weird, but I think I will get used to it over the time.

135 Int: What else contributes to your family meals, the setting, the choice of food, the
136 conversation or music in the background, what makes it so special? Apart from the people
137 obviously.

138 Part: It is kind of a combination of everything. I think usually when we eat together it is good
139 food. Depending on what day it is usually we will have music in the background or
140 sometimes everybody will just be watching things on their iPads and stuff. It is the fact that
141 we are together, we are like a close family so it is nice being together. Even if we aren't
142 necessarily talking to each other it is nice to be together.

143 Int: To share the space and to share the experience?

144 Part: Yes, it is nice. I like it.

145 Int: How does that compare to eating on your own? Do you sometimes have to eat on your
146 own here?

147 Part: Yes, sometimes I do on the rare times that I have lunch.

148 Int: How does that feel?

149 Part: I don't know, it is alright. I don't mind, it is still food and I love food. I think I am
150 finding out that I am quite content being by myself. I am quite happy sitting by myself and
151 just eating. I will watch whatever show I am watching or listen to music. I am quite content
152 eating by myself. It doesn't compare to eating out with other people, but there is less energy
153 when I am eating by myself around me, if that makes sense.

154 Int: It does. I noticed that when you eat on your own you either watch a show or listen to
155 music. It is never just food there is always...

156 Part: There is something, yes.

157 Int: In the background. How does that make you feel, entertained, less alone or is it habit?

158 Part: I think it is partly a habit. I watch quite a lot of series and I am trying to squeeze them in
159 with attempting to be social and having to go out to eat and go out to do different clubs and
160 different societies. I am trying to balance everything. I feel like if I am just sitting down
161 eating and I am not watching something or I am not occupying myself in some other way that
162 I am wasting time.

163 Int: I see, so a good use of time.

164 Part: Yes.

165 Int: So lunch is something that you can do on the go while you are doing something else.

166 Part: Yes.

167 Int: Does the same apply to dinner to your main meal of the day, would you still occupy
168 yourself with other things?

169 Part: I think so. I think because dinner wasn't such a big deal in my house whereas it is here
170 because you know I am not really eating a lot. I still feel if I was just eating by myself I
171 would just be wasting that time. I don't know.

172 Int: Interesting, so meals do not differ that much in the way you treat them and what you eat.
173 There is a difference between your breakfast at home and breakfast here.

174 Part: Yes.

175 Int: But there is not a huge difference in other ways. How do you feel about different foods,
176 are all foods made equal?

177 Part: No. (Laughter) I don't know. I have a thing for fruit, I loved my fruit. Then I realised I
178 have a bit of a sweet tooth. I do like cake, but I try not to eat it. I say a lot to my family, "I am
179 not a cake person." Every time we get together there is always cake and I can't eat the cake,
180 but I like my fruits. Then there is Caribbean people's staples like your rice and macaroni and
181 cheese and your ___[0:16:57]. I love a big cooked meal, it is gorgeous and ___ for example, I

182 love those together. You kind of learn to put up with other foods that are around like your
183 pasta and your rice, plain rice and plain pasta with tomato sauce. You learn to put up with
184 everything else, but to me the Caribbean food and then my fruit are the best foods to eat.

185 Int: So your favourite foods are Caribbean foods that you were brought up on and then fruit.

186 Part: Yes.

187 Int: Then put up with food that are plain starches, anything else?

188 Part: Other vegetables, I like a few vegetables. I am coming round to them because my dad is
189 like, “You need to eat your greens.” He is very persistent about you eating vegetables, so I
190 am learning to like kale that is coming round into a favourite. I like spinach, it is better in a
191 sandwich than it is by itself, but I am learning to like it. Most other vegetables I just put up
192 with, I know I have to eat them so I go for it.

193 Int: When you say, “I am learning to like it.” Can you expand on that a bit, how do you learn
194 to like something?

195 Part: You get yourself used to how it tastes, you get it into your mind that this is what you
196 have to eat. When you see it this is something you should try, you should put it on your plate
197 and try and eat it. It is good for you, it is healthy and it benefits you so then you are
198 attempting to get yourself used to the idea of liking it and having to eat it.

199 Int: Does it work?

200 Part: Most of the time, it works for a lot of vegetables. I find it helps to get used to [Cross
201 talk].

202 Int: But sometimes it doesn’t work. Can you think of the times when making an effort to like
203 something actually didn’t work?

204 Part: Yes, I guess with Brussel sprouts.

205 Int: So you made an effort?

206 Part: I tried, I really tried.

207 Int: Tried hard.

208 Part: It sounds very stereotypical but I can’t do it. I can do broccoli and you can put cheese or
209 salt on it to make it better, but Brussel sprouts are no.

210 Int: Would you say that if you tried to like something most of the time it works, but maybe
211 not every time so you just have to live with that and make good choices?

212 Part: Yes.

213 Int: You are obviously health conscious, you try to eat healthy foods. Is there any thought of
214 weight as well or is it just to do with health issues?

215 Part: I think my main health thing stems from my parents. They tried to eat healthily and then
216 my dad gained a load of weight just before I was born or a bit before I was born. He has been
217 trying to lose it, he was losing it but in a healthy way. He changed everybody’s eating habits
218 because he was like, “I don’t want you to have to be the way that I was and then now be

219 struggling. I just want you to stay slim.” I am a bit underweight, a few kilograms
220 underweight.

221 Int: Were you always that way or is this something recent?

222 Part: I don’t know. I only figured it out last year or the year before. The Wii would always
223 tell me I was underweight, but the Wii is a bit weird with weight because some people are
224 just chubby and it calls them fat. I didn’t think it was anything and then when I figured out I
225 was actually underweight I was like, [she makes a surprised face] I didn’t think I was.” But
226 then I am quite short for my age. My dad was like, “It doesn’t matter.” I am only a few
227 kilograms underweight, so he was like, “Don’t try and put on any more weight, just let it
228 happen.”

229 Int: Naturally?

230 Part: Yes, I don’t know.

231 Int: How do you feel about knowing you are slightly underweight and still skipping lunch?

232 Part: I don’t know. The two things don’t really correlate, I don’t know.

233 Int: Oh?

234 Part: They are two separate things. I am underweight, but also lunch is not free. I am not
235 shockingly underweight, it doesn’t disturb my health. I am still fine in terms of my health and
236 wellbeing. It is like one of those things that is the back of... It is just because you said it and I
237 was like, “Oh yes, this might be useful.” I don’t know, for me the two things don’t connect.
238 They should, but they don’t. I don’t mind being underweight. It is one of those things about
239 me that I get to tell people like when they find out I am black and I don’t eat chicken they are
240 like, “Oh my god, what is wrong with you?”

241 Int: Do you think it is something that makes you interesting or different?

242 Part: Yes, it is just one of those things.

243 Int: Can you expand on that? It is something about you that makes you different from others
244 or [Cross talk] a little bit?

245 Part: Yes, I don’t look underweight. If you say it people are like, “Really? No way.” Maybe
246 one day I will eat myself back to a normal weight, I don’t know. It is not a conscious thing, I
247 don’t think about it a lot. Especially now school is more important and music is more
248 important.

249 Int: When you say you don’t think much about it, you don’t think much about your weight
250 because school and music are more important and you don’t like to dwell on it.

251 Part: Yes, it was something that disturbed me at first. He would expect me to worry, so he
252 was like, “It is okay, it is not bad thing.” It is better that I am underweight and able to put on
253 weight as I grow up. I am probably going to be this height for the rest of my life. If I stay a
254 bit underweight now so that later when I have given birth I am not freaking out about my
255 weight. It is better to be underweight than to be overweight and be freaking out about my
256 health, but that is fine, it is okay.

257 Int: Can you tell me about other things that might influence the duration of a meal? Some
258 meals take a short time and some meals take a longer time, is there anything you know of that
259 influences the length of the meal you are going to have?

260 Part: I guess who I am eating with. If I am eating with somebody who eats slowly I don't
261 have to try and eat as quickly to finish the meal.

262 Int: To keep up?

263 Part: I get to savour my food. If I eat with somebody who eats very quickly then you feel a bit
264 under pressure to not be the slow eater.

265 Int: Would you say that you are naturally a slow eater?

266 Part: I have been told I am slow, but I don't believe it. Everybody says I am slow.

267 Int: You try to follow suit and keep up with the company around you?

268 Part: Yes, but if the food is really good then I will just take my time and I don't mind if I am
269 the last person left. It is okay, they will wait for me probably.

270 Int: Does anything that you know affect the amount of food you might eat during the course
271 of your sitting? Would you always eat the same amount from day to day or would it differ
272 depending on various circumstances?

273 Part: I think it depends on the quality of the food. If I know it is good food I will probably
274 take more.

275 Int: Why?

276 Part: Because I want more. If it is good food I want to experience as much of it as I can.

277 Int: Is it the taste that drives it or good food in terms of nutritional value?

278 Part: The taste.

279 Int: The taste drives it.

280 Par: For example at home if somebody cooks in a pot and there are five of us, so you have to
281 do the math. You can only have a certain amount of food so that everybody else can have a
282 lot of food as well if that makes sense. You have to share it out evenly between the five of
283 you.

284 Int: So there is a consideration for others.

285 Part: Yes, whereas at uni that is not really a problem because it is like a buffet and you can
286 have as much of it as you want. Then it becomes your choice.

287 Int: So you can monitor yourself better here because you can help yourself to the buffet. You
288 eat as much as you want and that varies from time to time. You think it varies according to
289 the taste more than anything else.

290 Part: Yes.

291 Int: Do you think sometimes it depends on other things like your mood?

292 Part: I don't know. I haven't really been upset here when I am going to eat, but I feel like if I
293 was I might eat a bit more.

294 Int: Can you explore that?

295 Part: I think I am that kind of person that if I am upset I am going to eat more food. It is like
296 the whole stress eating thing where food is a nice distraction and comfort for me. I think if I
297 was that upset I would get more food or I would get a takeaway. They have little takeaway
298 boxes for us. If I was really upset I would get a takeaway and then just go up to my room to
299 eat.

300 Int: That is interesting. When you are upset and you want to eat to comfort yourself would
301 you go for particular foods? You mentioned takeaway, this is the first time you have
302 mentioned takeaway. Is that a particular takeaway or it is just the fact that you can take it to
303 your room?

304 Part: Yes, it is the same food but just in a little takeaway box.

305 Int: Why would you opt for a takeaway if you were upset?

306 Part: If I was upset because I am the kind of person who is usually chatty and upbeat if I felt
307 upset I wouldn't want to be around people.

308 Int: You don't want to be seen.

309 Part: Yes, I don't want everybody to ask me what is wrong and how I am feeling and stuff. I
310 would just want to eat alone by myself for a bit. I think that is generally how I tend to deal
311 with being upset. I need a minute to deal with it by myself before I can be in a group of
312 people.

313 Int: Face the world?

314 Part: Yes.

315 Int: That is interesting...when you feel upset. I am just trying to see whether I understood you
316 correctly. You feel upset and you don't want to face the world, but you want to have the food
317 as a takeaway. The same kind of food as you would eat with your friends but as a takeaway in
318 your room on your own to make you feel better.

319 Part: Yes.

320 Int: Can we explore the make me feel better process, so you are upset, you have got a
321 takeaway and you are eating it in what way is it making you feel better? Can we explore
322 those feelings a little bit and the whole process from, "I am not that well." To, "I am getting
323 better."

324 Part: I think when I get upset I need a minute to myself. If I got upset just before dinner I
325 would need to have that moment to myself before I could put it in the back of my mind. Then
326 the food is like a blanket. I don't need to fake being chatty to eat, I don't have to pretend that
327 I am okay and I don't have to be okay to eat my food and just enjoy the food itself.

328 Int: That is very interesting, although you are upset you still get enjoyment out of food?

329 Part: Yes, it is a good distraction from everything that is going on and it is a good reward
330 [Cross talk].

331 Int: Yes, I get you. You comfort yourself by rewarding yourself with something you like.

332 Part: Yes.

333 Int: Have I understood you correctly?

334 Part: Yes.

335 Int: And it is easily accessible and relatively would you say inexpensive?

336 Part: Yes.

337 Int: Is there anything else that you could associate with it? Is there anything that you could
338 reward yourself with or comfort yourself with instead of food? Anything that could be..?

339 Part: If I ever find anything I will let you know, but food is the best. (Laughter) I don't have
340 anything else really that I can reward myself with I don't think. It is like food is the main
341 thing.

342 Int: It is the main reward.

343 Part: Yes, I can't give myself money. There is no other type of reward for me that would
344 work I don't think. I am more about the food than anything.

345 Int: Could you reward yourself with a nice movie, would that be..? Yes, I can see it is a no,
346 but can you tell me why? Why one wouldn't substitute the other?

347 Part: I don't know. Maybe it wouldn't give me the same kind of comfort and excitement that
348 food would as a means of... It requires a lot of attention, you have to watch the movie and
349 then if you don't get it or if it is not funny you have got to.....and then it is not funny, it is a
350 waste of time. Even if the food isn't that great it is still food, it is still feeding you and it
351 probably still tastes relatively decent, so it still a type of reward to eat. Whereas a movie it is
352 a bit hit and miss.

353 Int: It is hit and miss. How about effort, is the level of effort important that you need to put
354 into it to get a reward?

355 Part: Yes, I think I am that kind of person where especially action movies ones with
356 complicated storylines it is a lot of effort. If you don't watch it in the cinema and you are
357 trying to watch it at home it doesn't make as much sense. To eat even if you are watching
358 something in the background then the food is the main reward. I think with a movie or a TV
359 show I could watch that anyway, so it is not really a type of reward for me. Whereas with
360 food because you are not eating 24/7 and you are not eating a lot, you only eat three times or
361 four if you are that hungry. It is still a reward if you are upset and you are feeding yourself.

362 Int: I understand. If you had a choice of food when you are upset what would you choose to
363 eat? You are free to choose. (Laughter)

364 Part: I don't know.

365 Int: Are there foods you would gravitate more towards in these situations?

366 Part: I guess starchy things. Things like chips and pasta and really, so many things. So with
367 already sweeter things as opposed to savoury, more like cake and sweets as opposed to food
368 that you would eat as a meal. I think for here it would depend on what food was available.
369 Here how your meals work is just whatever is there is what you have to eat. If I had my own
370 choice it would probably be cake, crisps or sweets probably.

371 Int: You say that the best reward when you are not feeling that great is food with very little
372 nutritional value, why do you think that is? Why do you think we feel like that?

373 Part: I don't know.

374 Int: Were you given those things as a reward as a kid or is it something you developed later
375 on by yourself?

376 Part: Sort of. When you had your packed lunch you would have your sandwich and then
377 maybe a packet of crisps and fruit. We didn't really eat sweets a lot or go to McDonald's a lot
378 as children. Even now we don't really eat a lot of sweets as a family and we don't go to
379 McDonald's a lot. Maybe it is because I didn't really have it now that it works as a reward. If
380 it was something that I had already been having I wouldn't have seen it as much of a reward
381 after a long day.

382 Int: Do you think that maybe craving contributes to the effectiveness of the reward? You say
383 you didn't need it, you need to have broccoli either and.... (Laughter) It is interesting isn't
384 it? I can understand your point, but then when I ask myself what about Brussel sprouts?

385 Part: I think we had a lot of vegetables growing up. My family was like, "We are going to be
386 the healthy family." We had a lot of vegetables on everything. They don't really work as a
387 reward as much. I eat celery, but I have to ask someone to get it for us because it is not one of
388 the things that is easy on the shopping list. It is kind of just something that my dad and I ate.
389 My dad has this habit of he will buy three packets. He will eat two and then he will forget
390 that one is there and then it kind of goes off so Mum throws it out. It is like the repeating
391 cycles, so he stopped buying celery. When I want celery I have to be like, "Can somebody
392 buy that for me on the way home please? Somebody buy it on the way home from work."

393 Int: It is something that you don't eat on a regular basis.

394 Part: Yes, it was more of a reward than the other foods in my house, but it is not the first
395 thing I would go to. It is still more like sweets and...

396 Int: Sugary stuff.

397 Part: Yes.

398 Int: So what is it about sugar then that makes it such a powerful reward?

399 Part: I don't know. I remember we didn't have much of it growing up. Now it works as a
400 reward because I am not used to having a lot of sugar. Then also generally eating sweets
401 makes me feel better. I don't know if that is a genuine thing or not.

402 Int: In what way?

403 Part: It is like a timeout thing, so when my dad was in hospital at this time last year. He was
404 in for about a month and a bit and because my dad was the one who feeds us the most and

405 stuff then it was on me to make sure my brothers ate because my mum worked long hours.
406 She wouldn't be home until 6:00 or 7:00 and by then we would have needed to eat, so it kind
407 of fell on me. During that time I got really used to having sweets as a kind of just a minute to
408 myself. My brothers are big people, as in they are tall and they need more food because they
409 are growing, they go to sports also the time and they are always hungry. I used sweets as a
410 coping mechanism to deal with the stress of having to feed them as well as trying to do my
411 A-levels.

412 Int: You had a lot on your plate.

413 Part: Yes, so I think sweets almost worked....

414 Int: So you go back to them because they work?

415 Part: Yes, even though I shouldn't and I feel bad sometimes when I do it. You have moments
416 of very stressful times and using sweets to cope with it always seems to work every time.

417 Int: Perhaps we could just explore a little bit more eating on your own and eating in the
418 company of others. Would you eat on your own only when you are upset?

419 Part: Yes, I don't like to eat alone. I like to be in a group of people at least when I am eating.
420 The rest of the time I can be by myself and be fine, but I think food especially because where we
421 eat is such a social setting and if you are eating by yourself it would be a bit weird. You could
422 hear everything going on around you and you would feel left out. I like to eat with my group
423 of friends, I always try and make sure I am eating with them.

424 Int: With others.

425 Part: Yes, that is what I like.

426 Int: Except when you are feeling down.

427 Part: Except when I don't want to be around anybody at which point I will get my food and
428 go.

429 Int: But you will still eat, you will opt for a takeaway and eat it in your room.

430 Part: Yes.

431 Int: Very interesting. Is there anything else you would like to say?

432 Part: No. I don't know. I like food, I really like food. I think I am glad that we had such a
433 healthy... I think the stress eating isn't healthy, but the rest of it the way that we used to eat
434 and form our diets I am glad that we had a healthy look into it as opposed to a lot of other
435 people who don't eat very well.

436 Int: Do you think they would find it more difficult to cope with stressful situations and trying
437 to stay off takeaways and sugary foods, that they have more of a job to resist than you do?

438 Part: I don't know. I don't think they would have that mind-set where they say, "This food
439 isn't good for me, so I am not going to eat it." If you were used to always having chips or
440 beans on toast, if that was your thing and that is what you have always had and you have
441 never had vegetables then it is easier for you to turn to that when you are stressed or upset. I
442 guess for me it is a few steps to get to where I am like [Cross talk 0:43:30].

443 Int: It is harder to reach out for unhealthy food.

444 Part: Yes, I have to be very stressed or upset to go for it.

445 Int: You have to reach a certain level before you actually break the rules.

446 Part: Yes. It is so weird because we can't cook for ourselves and that was the main issue
447 when they gave me my accommodation. My dad was like, "How will you eat your
448 vegetables, how will you do this? You need to make sure you are cooking vegetables....
449 vegetarian. You need to make sure you are doing this and you are doing that and you are
450 having enough." I can't do a lot of those things because I am not cooking for myself. Our
451 kitchens don't have ovens. It is a bit weird to have to adjust back to the normal way of eating,
452 it is weird.

453 Int: Yes, you are still working on it.

454 Part: Yes.

455 Int: What do you miss the most, what is the hardest of all? Is it making your own choices or
456 is it not having the meals set out the way your father used to do it?

457 Part: I think it is the variety of breakfast. I think with my dad he would cook what was there.
458 One day it might be pasta and sausages, one day it might be spaghetti and schnitzels or rice.
459 He changed it up.

460 Int: It was a full meal.

461 Part: Yes, whereas with breakfast here it is the same thing every morning. So you are getting
462 tired of having to have the hash browns and the beans. You can have variety, but because I
463 know I am not going to eat lunch I always have two breakfasts. I have the beans and hash
464 browns and then I will have cereal or something. So then to try and vary on that, but then
465 they don't have other cereals that I like, they don't have other fruit I can eat or I don't like the
466 yoghurt. Do you know what I mean? It is hard to find variety there because it is always the
467 same thing. It is weird adjusting to not having any other choice.

468 Int: For breakfast?

469 Part: Yes.

470 Int: What about dinner is that...?

471 Part: Dinner varies, there is like a three week or a month rotation. I don't know, I can't tell. I
472 don't have the same thing. Sometimes I have had the same thing twice and then and then
473 other times I haven't had the same thing twice. I don't mind, there is a good variation in
474 general in terms of.....

475 Int: You can have vegetables, your father will be pleased.

476 Part: They always do steamed carrots, I don't mind steamed carrots. They do sweetcorn and
477 green peas, but I don't like green peas. I don't mind them but after a while they get really
478 annoying. They do the same types of vegetables with every meal but there are no salads or
479 raw vegetables. If there was loads of salad I would just eat the salad and I would be fine with
480 that. Then only one day a week maybe where there is some form of salad. That is a bit weird

481 not having the vegetables that I am used to, it is a weird adjustment to make. I feel like there
482 should be something green on my plate. When I look down there is only whatever the main
483 meal was and then a bit of chips and then a bit of the carrots. I am like, “There should be
484 something green on my plate.” It is weird not having vegetables like that.

485 Int: Would you say not such a great choice of veggies for supper?

486 Part: Yes, hopefully they will get better or I could just buy salad. I won't, ___[0:47:28] buy
487 salad and bring it but that doesn't make any sense.

488 Int: Maybe you could make salads in your room because you really don't need cooking
489 facilities to make salads.

490 Part: Yes, that is true. I might do that. It is so weird not having any form of a leaf. That is
491 what I need just a form of leaf like rocket or the leaves that are a bit spicy I wouldn't mind,
492 but there are just none.

493 Int: You miss that a lot like salad and green vegetables?

494 Part: Yes, but in terms of the main meal they always have a good variation for dinner. Even if
495 it is not that nice you appreciate it is not what you had yesterday. Sometimes they get it right
496 and then sometimes they don't. When they get it wrong you just stick with your chips and
497 have some ice cream and just pray that you make it to the next morning and then it is fine.

498 Int: You are getting used to it. You have only been here a month, so it is all new.

499 Part: Yes.

500 Int: Is there anything else you would like to say about eating or different foods? Do you think
501 we have covered more or less everything you can think of?

502 Part: Yes, I think....

503 Int: Thank you very much, I really enjoyed it.

C.9 Participant 3: Interpretative Phenomenological Analysis

Interview extract	Descriptive summary	Interpretative summary
<p>Int: Okay, we can start now. Can you tell me a little bit more about your eating experiences? You can start wherever you like.</p> <p>Part: Growing up we kind of did the normal thing where you have cereal in the morning and then a cooked meal in the afternoon. My mum stopped working when she had my youngest brother. For the time she was a stay at home mum so she would do all the cooking. Then she started working when we were going to secondary school. My dad took over as being the main cook of the house, his food is slightly better, he is better at cooking. Then he went on a health kick and now we do dinner in the morning. We have pasta, sausages and vegetarian and we have that all in the morning and then in the evening we will have something lighter like chips or salad and fish. He has changed the way that we eat.</p> <p>Int: How do you feel about this?</p> <p>Part: I found it a bit weird at first, but then I got used to it. Then coming here and not having that is a bit weird.</p> <p>Int: How does that compare living on the campus to your breakfast?</p> <p>Part: It is more like a hotel breakfast where we have beans and hash browns and stuff. You can have cereal and whatnot as opposed to having pasta and stuff. It is very different. Dinner we have a heavy dinner. Nowadays I try not to eat lunch because lunch isn't free and at the moment I am trying to save as much money as I can. I am having small snacks throughout the day to keep myself going until we get to dinner. Now dinner is a much heavier meal than it used to be and I think my body is still getting used to it.</p> <p>Int: How do you feel after eating such a heavy meal in the evening?</p> <p>Part: Okay, it makes me a bit tired but I am getting used to it. I am working on it.</p>	<p>While mum was the main cook family followed the normal meal times</p> <p>When dad took over breakfast became the main meal of the day</p> <p>She got used to the new eating regime after a while</p> <p>Back to traditional meals at the campus - hotel type breakfast and heavy dinners</p> <p>Can't afford lunch, so she snacks throughout the day instead</p> <p>Heavy meal in the evening makes her tired</p>	<p>Dad's concerns over healthy eating changed the way family eat</p> <p>Meals on the campus are difficult to get used to</p> <p>Saving up is more important than eating lunch</p>

<p>Part: I don't know. I think it just picks my energy up a bit so I am not feeling as down as I was before. I am used to stress eat sweets. When I did my GCSEs I used to stress eat, I was good at stress eating. I am trying not to stress eat, but it is a habit that keeps coming back. I think it was something I watched my mum do when I was younger.</p> <p>Int: Can you tell me a bit more about stress eating, how would you describe that?</p> <p>Part: It is just whenever I feel stressed, a bit annoyed or a bit angry I reach for food as a way to make myself to feel better.</p> <p>Int: Do you reach out for particular foods or any food?</p> <p>Part: Now it is any food. It used to just be pear drops, pear drops used to be my thing.</p> <p>Int: I don't know what they are?</p> <p>Part: They are like a pear shaped boiled sweet covered in sugar. I used to have those all the time and then the corner shop stopped selling them, so I realised it didn't make sense for me to keep eating the same sweet.</p> <p>Int: It was that particular sweet that you would go to when you felt stressed?</p> <p>Part: Yes.</p> <p>Int: Does it help?</p> <p>Part: I think so.</p> <p>Int: In what way, could you explore those feelings before and after?</p> <p>Part: I would feel irritated and stuff before. I would have to leave my house to walk to the corner shop and on the walk there I would get fresh air and whatnot. Then I had the sweets, I ate the sweets, they taste so nice and it made me feel slightly better.</p> <p>Int: Would that last? Would that improved feeling last or was it just a momentary relief?</p>	<p>Sugar picks up her energy and she feels better for a while She has a habit of stress eating</p> <p>When feeling stressed, annoyed or angry she reaches for food to feel better</p> <p>In the past stress relieving food were pear drops, now it is any food</p> <p>Nice tasting sweets would make her feel better for an hour or so, then she would need to reach for another snack</p>	<p>Sugar is a pick-me-up</p> <p>"Stress eating" habit keeps coming back</p> <p>Stress, irritation and anger are emotional cues to eat</p> <p>Relieving stress started with eating pear drops but had transferred to food in general</p> <p>Sweet taste is pleasant and makes her feel better</p>
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<p>Part: It would last for an hour maybe and by then I would have to reach for a different snack, it would be dinner time or I would be busy studying by then.</p> <p>Int: You say that your mum does that.</p> <p>Part: Yes.</p> <p>Int: Could you explore that a little bit for me?</p> <p>Part: My mum works as a school teacher, so she is very stressed all the time. Usually when she comes back from work after she has said hi to everybody and stuff she will sit in her bed and she will have a packet of crisps or a packet of Skittles. She will sit there and she will be on eBay or watch whatever show she wants to watch and it is to calm herself down after the day. I guess watching her do that I am like, "it seems to work for her, maybe it will work for me."</p> <p>Int: And it did?</p> <p>Part: Yes.</p> <p>Int: Up to a point. You say are trying to control that a little bit more now.</p> <p>Part: Yes. (Laughter) I am trying not to. I am a very frugal person, so it does cost money to keep buying sweets. Also health and trying to keep my face clear and stuff. I shouldn't eat so many sweets, so then I will try and eat other things. For my exams this year I was eating celery instead of sweets.</p> <p>Int: Could you tell me a little bit about that, does celery do it?</p> <p>Part: Yes, sort of. I don't know, I like celery a lot. It is a weird food, but I really like it especially with the chickpea hummus. When I was revising I would make myself go to celery instead of going to something sweet.</p> <p>Int: With hummus or just celery?</p> <p>Part: It depends, if there was hummus and if the hummus was in date because my family has a habit of just leaving hummus and then it is not in date so you can't eat it. I try to do it with hummus most of the time, but once in a while it will just be the celery by itself.</p> <p>Int: That also helped with feelings of stress?</p>	<p>Mum is a stress eater, she used to calm herself down with food after work</p> <p>She thought that if stress eating strategy works for mum, it might work for her too</p> <p>Since it costs money to buy sweets, it is unhealthy and sugar causes her skin to break, she tried to eat celery instead during exam period</p> <p>Most of the time she eat celery with hummus</p>	<p>Relief would last for about an hour</p> <p>Mother is an emotional eater</p> <p>Eating as a stress relieving strategy is learned</p> <p>Sugar may be replaced with healthier foods with some success</p>
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<p>Part: Yes.</p> <p>Int: What do you think it is that helps, which part of the eating? Is it the taste, is it just distraction or is it the chewing itself? What do you think brings that momentary relief from stressful situations?</p> <p>Part: I don't know. I think maybe with the sweets it was the taste. I think with the celery it could be definitely be that it was just distracting me for a minute and giving me time to clear my head whilst eating. I don't know, I think it is more of a distraction than anything else.</p> <p>Int: It is kind of a time out.</p> <p>Part: Yes.</p> <p>Int: Would you like to add anything to it?</p> <p>Part: To stress eating?</p> <p>Int: Yes, it is always very interesting. A lot of people eat in stressful situations. It is very interesting to explore those motivations and outcomes.</p> <p>Part: Maybe it is just that I like food.</p> <p>Int: You like food?</p> <p>Part: I like food a lot. I am a bit picky, but when I like food I like food. When I have place that I know does good food or it is a Saturday and somebody has cooked and I know they can cook I get really excited.</p> <p>Int: So you look forward to your meals if they are good?</p> <p>Part: Yes.</p> <p>Int: Could you explore your family meals a bit for me. How does eating with family maybe compare to eating on a campus with friends or maybe eating by yourself? Is that all the same or does it differ in some ways?</p> <p>Part: It is different. I think my family is the kind of family where we always like to try and eat together. We are all at the dinner table and there are loads of jokes, it is like a fun setting. It is still nice eating on campus, but it is not my family if that makes sense.</p> <p>Int: What is the difference? It is similar, but there is something different as well the level of...</p>	<p>She thinks that sweets relieve stress through the taste, while celery mainly through diversion</p> <p>Eating is "time out" from a stressful situation</p> <p>She likes food and gets excited about the prospect of a good meal</p> <p>Familial table is a fun setting, they always try to eat together</p> <p>She is new on the campus, does not feel</p>	<p>Temporary relief with food is obtained through diversion and sensual pleasure</p> <p>Escapism through eating</p> <p>Likes food and looks forward to a good meal</p> <p>Family meals are fun</p> <p>She is getting used to the new people and the university setting</p>
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<p>Part: It is just I don't know them as well. We only met four weeks ago, so I don't know them as well. I don't necessarily feel as comfortable as I do with my family.</p> <p>Int: So not as comfortable.</p> <p>Part: Yes, whereas with my family they know me and they have to deal with me. Everybody is really relaxed and enjoying themselves. When it comes to Christmas everybody is usually around my house and the food is great, so I eat. We try and eat breakfast and then we know that everybody is going to come around 2:00, 3:00 or 4:00-ish. We even eat later, we have a late lunch or early dinner and then usually I will have seconds. Everybody is around and it is very calm and very relaxed in my family. We love to make jokes and embarrass people. We love being together, so when we eat everybody is happy. The food is good food and we have a great time. On campus it is a bit weird, but I think I will get used to it over the time.</p> <p>Int: What else contributes to your family meals, the setting, the choice of food, the conversation or music in the background, what makes it so special? Apart from the people obviously.</p> <p>Part: It is kind of a combination of everything. I think usually when we eat together it is good food. Depending on what day it is usually we will have music in the background or sometimes everybody will just be watching things on their iPads and stuff. It is the fact that we are together, we are like a close family so it is nice being together. Even if we aren't necessarily talking to each other it is nice to be together.</p> <p>Int: To share the space and to share the experience?</p> <p>Part: Yes, it is nice. I like it.</p> <p>Int: How does that compare to eating on your own? Do you sometimes have to eat on your own here?</p> <p>Part: Yes, sometimes I do on the rare times that I have lunch.</p> <p>Int: How does that feel?</p> <p>Part: I don't know, it is alright. I don't mind, it is still food and I love food. I think I am finding out that I am quite content being by myself. I am quite happy sitting by myself and just eating. I will watch</p>	<p>entirely comfortable with people yet</p> <p>Her family knows her and they have to deal with her</p> <p>Family likes being together, when they eat everyone is happy and they have a great time</p> <p>Combination of good food and togetherness makes family meals special</p> <p>Being together, sharing the space and experience although not necessarily talking to each other</p> <p>Contented eating by herself although eating in the company of other people is preferred</p>	<p>Being accepted is important</p> <p>All family members are happy when eating</p> <p>Food and togetherness make a meal special</p> <p>Being together matters, talking is not essential</p> <p>Contented to eat alone</p>
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<p>whatever show I am watching or listen to music. I am quite content eating by myself. It doesn't compare to eating out with other people, but there is less energy when I am eating by myself around me, if that makes sense.</p> <p>Int: It does. I noticed that when you eat on your own you either watch a show or listen to music. It is never just food there is always...</p> <p>Part: There is something, yes.</p> <p>Int: In the background. How does that make you feel? Entertained, less alone, or is it a habit?</p> <p>Part: I think it is partly a habit. I watch quite a lot of series and I am trying to squeeze them in with attempting to be social and having to go out to eat and go out to do different clubs and different societies. I am trying to balance everything. I feel like if I am just sitting down eating and I am not watching something or I am not occupying myself in some other way that I am wasting time.</p> <p>Int: I see, so a good use of time?</p> <p>Part: Yes.</p> <p>Int: So lunch is something that you can do on the go while you are doing something else.</p> <p>Part: Yes.</p> <p>Int: Does the same apply to dinner to your main meal of the day, would you still occupy yourself with other things?</p> <p>Part: I think so. I think because dinner wasn't such a big deal in my house whereas it is here because you know I am not really eating a lot. I still feel if I was just eating by myself I would just be wasting that time. I don't know.</p> <p>Int: Interesting, so meals do not differ that much in the way you treat them and what you eat. There is a difference between your breakfast at home and breakfast here.</p> <p>Part: Yes.</p> <p>Int: But there is not a huge difference in other ways. How do you feel about different foods, are all foods made equal?</p>	<p>When eating alone she is normally engaged in another activity, feels that just sitting and eating is wasting time</p> <p>She realizes that she has a sweet tooth, but tries to stay away from eating cake</p>	<p>Just sitting and eating is not a good use of time</p> <p>Makes conscious effort to resist sugar</p>
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<p>Part: No. (Laughter) I don't know. I have a thing for fruit, I loved my fruit. Then I realised I have a bit of a sweet tooth. I do like cake, but I try not to eat it. I say a lot to my family, "I am not a cake person." Every time we get together there is always cake and I can't eat the cake, but I like my fruits. Then there is Caribbean people's staples like your rice and macaroni and cheese and your ... I love a big cooked meal, it is gorgeous and for example, I love those together. You kind of learn to put up with other foods that are around like your pasta and your rice, plain rice and plain pasta with tomato sauce. You learn to put up with everything else, but to me the Caribbean food and then my fruit are the best foods to eat.</p>	<p>Favourites are Caribbean food and fruit but she learned to "put up" with everything else</p>	<p>Home foods are the best foods</p>
<p>Int: So your favourite foods are Caribbean foods that you were brought up on and then fruit.</p>		
<p>Part: Yes.</p>		
<p>Int: Then put up with food that are plain starches, anything else?</p>	<p>Learned to like most vegetables and to put up with the rest</p>	<p>One can learn to like less appealing foods</p>
<p>Part: Other vegetables, I like a few vegetables. I am coming round to them because my dad is like, "You need to eat your greens." He is very persistent about you eating vegetables, so I am learning to like kale that is coming round into a favourite. I like spinach, it is better in a sandwich than it is by itself, but I am learning to like it. Most other vegetables I just put up with, I know I have to eat them so I go for it.</p>		
<p>Int: When you say, "I am learning to like it." Can you expand on that a bit, how do you learn to like something?</p>	<p>She learns to like foods by having a positive mind set and getting used to the taste</p>	<p>Positive mind set helps to get used to the taste</p>
<p>Part: You get yourself used to how it tastes, you get it into your mind that this is what you have to eat. When you see it this is something you should try, you should put it on your plate and try and eat it. It is good for you, it is healthy and it benefits you so then you are attempting to get yourself used to the idea of liking it and having to eat it.</p>		
<p>Int: Does it work?</p>		
<p>Part: Most of the time, it works for a lot of vegetables. I find it helps to get used to eating them.</p>		
<p>Int: But sometimes it doesn't work. Can you think of the times when making an effort to like something actually didn't work?</p>	<p>"Learning to like" works most of the time, just not all of the time</p>	<p>Strategy is successful most of the time but not always</p>
<p>Part: Yes, I guess with Brussel sprouts.</p>		

<p>Int: So you made an effort?</p> <p>Part: I tried, I really tried.</p> <p>Int: Tried hard (Laughter)</p> <p>Part: It sounds very stereotypical but I can't do it. I can do broccoli and you can put cheese or salt on it to make it better, but Brussel sprouts are - no.</p> <p>Int: Would you say that if you tried to like something most of the time it works, but maybe not every time so you just have to live with that and make good choices?</p> <p>Part: Yes.</p> <p>Int: You are obviously health conscious, you try to eat healthy foods. Is there any thought of weight as well or is it just to do with health issues?</p> <p>Part: I think my main health thing stems from my parents. They tried to eat healthily and then my dad gained a load of weight just before I was born or a bit before I was born. He has been trying to lose it, he was losing it but in a healthy way. He changed everybody's eating habits because he was like, "I don't want you to have to be the way that I was and then now be struggling. I just want you to stay slim." I am a bit underweight, a few kilograms underweight.</p> <p>Int: Were you always that way or is this something recent?</p> <p>Part: I don't know. I only figured it out last year or the year before. The Wii would always tell me I was underweight, but the Wii is a bit weird with weight because some people are just chubby and it calls them fat. I didn't think it was anything and then when I figured out I was actually underweight I was like, "really?" I didn't think I was." But then I am quite short for my age. My dad was like, "It doesn't matter." I am only a few kilograms underweight, so he was like, "Don't try and put on any more weight, just let it happen."</p> <p>Int: Naturally?</p> <p>Part: Yes, I don't know.</p> <p>Int: How do you feel about knowing you are slightly underweight and still skipping lunch?</p>	<p>Brussel sprouts are no</p> <p>She believes that healthy eating habits stem from her parents, particularly her father</p> <p>Her father had (has?) problems with weight</p> <p>She is a bit underweight herself</p> <p>Father advised her not put on any more weight, she should let it happen</p> <p>Being underweight and skipping lunch regularly do not seem to connect in her mind</p>	<p>Occasionally she can't accept the taste</p> <p>Healthy eating habits are learned at home</p> <p>Father had (has?) weight issues</p> <p>She is underweight</p> <p>Father's advice is not to gain weight intentionally</p> <p>Weight issues and missing lunch do not link up</p>
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<p>Part: I don't know. The two things don't really correlate, I don't know.</p> <p>Int: Oh? (Surprise)</p> <p>Part: They are two separate things. I am underweight, but also lunch is not free. I am not shockingly underweight, it doesn't disturb my health. I am still fine in terms of my health and wellbeing. It is like one of those things that is the back of... It is just because you said it and I was like, "Oh yes, this might be useful." I don't know, for me the two things don't connect. They should, but they don't. I don't mind being underweight. It is one of those things about me that I get to tell people like when they find out I am black and I don't eat chicken they are like, "Oh my god, what is wrong with you?"</p> <p>Int: Do you think it is something that makes you interesting or different?</p> <p>Part: Yes, it is just one of those things.</p> <p>Int: Can you expand on that? It is something about you that makes you different from others a little bit?</p> <p>Part: Yes, I don't look underweight. If you say it people are like, "Really? No way." Maybe one day I will eat myself back to a normal weight, I don't know. It is not a conscious thing, I don't think about it a lot. Especially now school is more important and music is more important.</p> <p>Int: When you say you don't think much about it, you don't think much about your weight because school and music are more important and you don't like to dwell on it.</p> <p>Part: Yes, it was something that disturbed me at first. He would expect me to worry, so he was like, "It is okay, it is not bad thing." It is better that I am underweight and able to put on weight as I grow up. I am probably going to be this height for the rest of my life. If I stay a bit underweight now so that later when I have given birth I am not freaking out about my weight. It is better to be underweight than to be overweight and be freaking out about my health, but that is fine, it is okay.</p> <p>Int: Can you tell me about other things that might influence the duration of a meal? Some meals take a short time and some meals take a longer time, is there anything you know of that influences the length of the meal you are going to have?</p>	<p>Concerns over money outweigh other concerns: I am underweight, but also lunch is not free</p> <p>Also being underweight adds to the image of being different and interesting</p> <p>Overall she does not think too much about it, school and music take precedence</p> <p>She believes that being underweight is better than overweight. Being overweight has health implications.</p> <p>Although a slow eater, she tries to keep up with the company</p>	<p>Concerns over money outweigh concerns over weight</p> <p>Being underweight contributes to personal image</p> <p>She does not think about being underweight a lot</p> <p>Being underweight is not necessarily bad</p> <p>Being overweight is bad because of health implications</p> <p>Speed of eating is determined by the company</p>
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<p>Part: I guess who I am eating with. If I am eating with somebody who eats slowly I don't have to try and eat as quickly to finish the meal.</p> <p>Int: To keep up?</p> <p>Part: I get to savour my food. If I eat with somebody who eats very quickly then you feel a bit under pressure to not be the slow eater.</p> <p>Int: Would you say that you are naturally a slow eater?</p> <p>Part: I have been told I am slow, but I don't believe that I am. Everybody says I am slow.</p> <p>Int: You try to follow suit and keep up with the company around you?</p> <p>Part: Yes, but if the food is really good then I will just take my time and I don't mind if I am the last person left. It is okay, they will wait for me probably.</p> <p>Int: Does anything that you know affect the amount of food you might eat during the course of your sitting? Would you always eat the same amount from day to day or would it differ depending on various circumstances?</p> <p>Part: I think it depends on the quality of the food. If I know it is good food I will probably take more.</p> <p>Int: Why?</p> <p>Part: Because I want more. If it is good food I want to experience as much of it as I can.</p> <p>Int: Is it the taste that drives it or good food in terms of nutritional value?</p> <p>Part: The taste.</p> <p>Int: The taste drives it.</p> <p>Par: For example at home if somebody cooks in a pot and there are five of us, so you have to do the math. You can only have a certain amount of food so that everybody else can have a lot of food as well if that makes sense. You have to share it out evenly between the five of you.</p> <p>Int: So there is a consideration for others.</p>	<p>She is a slow eater but would do her best to keep up with the company</p> <p>Unless the food is really good when she doesn't mind being the last person left.</p> <p>If she likes the taste of food she will eat more in order to experience as much of it as possible.</p> <p>Concerns over having to share the food evenly between the family members limited consumption at home</p> <p>At the campus, having a buffet means that you are free to choose how much you want to eat. The</p>	<p>She is naturally a slow eater</p> <p>If the food is good she doesn't mind finishing last</p> <p>Amount of food eaten depends on the taste</p> <p>She eats more to extend the experience of sensual pleasure</p> <p>Amount of food eaten at home depended on availability</p> <p>Amount of food eaten at the campus depends on the taste</p>
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<p>Part: Yes, whereas at uni that is not really a problem because it is like a buffet and you can have as much of it as you want. Then it becomes your choice.</p> <p>Int: So you can monitor yourself better here because you can help yourself to the buffet. You eat as much as you want and that varies from time to time. You think it varies according to the taste more than anything else.</p> <p>Part: Yes.</p> <p>Int: Do you think sometimes it depends on other things like your mood?</p> <p>Part: I don't know. I haven't really been upset here when I am going to eat, but I feel like if I was I might eat a bit more.</p> <p>Int: Can you explore that?</p> <p>Part: I think I am that kind of person that if I am upset I am going to eat more food. It is like the whole stress eating thing where food is a nice distraction and comfort for me. I think if I was that upset I would get more food or I would get a takeaway. They have little takeaway boxes for us. If I was really upset I would get a takeaway and then just go up to my room to eat.</p> <p>Int: That is interesting. When you are upset and you want to eat to comfort yourself would you go for particular foods? You mentioned takeaway, this is the first time you have mentioned takeaway. Is that a particular takeaway or it is just the fact that you can take it to your room?</p> <p>Part: Yes, it is the same food but just in a little takeaway box.</p> <p>Int: Why would you opt for a takeaway if you were upset?</p> <p>Part: If I was upset because I am the kind of person who is usually chatty and upbeat if I felt upset I wouldn't want to be around people.</p> <p>Int: You don't want to be seen.</p> <p>Part: Yes, I don't want everybody to ask me what is wrong and how I am feeling and stuff. I would just want to eat alone by myself for a bit. I think that is generally how I tend to deal with being upset. I</p>	<p>amount eaten is determined largely by the taste of the food</p> <p>If upset she is likely to eat more food. Food seems to be a pleasant distraction and a source of comfort</p> <p>When upset does not like to be around people until she can "face " the world again</p> <p>Would prefer to eat alone in the room</p>	<p>Emotional eating – food is used as both distraction and comfort</p> <p>When upset prefers eating alone</p>
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<p>need a minute to deal with it by myself before I can be in a group of people.</p> <p>Int: Face the world?</p> <p>Part: Yes.</p> <p>Int: That is interesting...when you feel upset. I am just trying to see whether I understood you correctly. You feel upset and you don't want to face the world, but you want to have the food as a takeaway. The same kind of food as you would eat with your friends but as a takeaway in your room on your own to make you feel better.</p> <p>Part: Yes.</p> <p>Int: Can we explore the make me feel better process, so you are upset, you have got a takeaway and you are eating it - in what way is it making you feel better? Can we explore those feelings a little bit and the whole process from, "I am not all that well." To, "I am getting better."</p> <p>Part: I think when I get upset I need a minute to myself. If I got upset just before dinner I would need to have that moment to myself before I could put it in the back of my mind. Then the food is like a blanket. I don't need to fake being chatty to eat, I don't have to pretend that I am okay and I don't have to be okay to eat my food and just enjoy the food itself.</p> <p>Int: That is very interesting, although you are upset you still get enjoyment out of food?</p> <p>Part: Yes, it is a good distraction from everything that is going on and it is a good reward.</p> <p>Int: Yes, I get you. You comfort yourself by rewarding yourself with something you like.</p> <p>Part: Yes.</p> <p>Int: Have I understood you correctly?</p> <p>Part: Yes.</p> <p>Int: And it is easily accessible and relatively would you say inexpensive?</p> <p>Part: Yes.</p> <p>Int: Is there anything else that you could associate with it? Is there anything that you could reward</p>	<p>When upset food serves like a blanket. She does not have to fake being chatty or pretend to be able to enjoy the food itself</p> <p>Food is a good distraction and a good reward</p> <p>She does not have anything else that could be a satisfying reward, food is the main thing</p>	<p>When upset food serves like a blanket, no need for pretence</p> <p>Food is used as distraction and reward</p> <p>Food is the main reward for her</p>
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<p>yourself with or comfort yourself with instead of food? Anything that could be..?</p> <p>Part: If I ever find anything I will let you know, but food is the best. (Laughter) I don't have anything else really that I can reward myself with I don't think. It is like food is the main thing. Int: It is the main reward.</p> <p>Part: Yes, I can't give myself money. There is no other type of reward for me that would work I don't think. I am more about the food than anything.</p> <p>Int: Could you reward yourself with a nice movie, would that be..? Yes, I can see it is a no, but can you tell me why? Why one wouldn't substitute the other?</p> <p>Part: I don't know. Maybe it wouldn't give me the same kind of comfort and excitement that food would as a means of... It requires a lot of attention, you have to watch the movie and then if you don't get it or if it is not funny you have got to get another one and then it is not funny, it is a waste of time. Even if the food isn't that great it is still food, it is still feeding you and it probably still tastes relatively decent, so it still a type of reward to eat. Whereas a movie it is a bit hit and miss.</p> <p>Int: It is hit and miss. How about effort, is the level of effort important that you need to put into it to get a reward?</p> <p>Part: Yes, I think I am that kind of person where especially action movies ones with complicated storylines it is a lot of effort. If you don't watch it in the cinema and you are trying to watch it at home it doesn't make as much sense. To eat even if you are watching something in the background then the food is the main reward. I think with a movie or a TV show I could watch that anyway, so it is not really a type of reward for me. Whereas with food because you are not eating 24/7 and you are not eating a lot, you only eat three times or four if you are that hungry. It is still a reward if you are upset and you are feeding yourself.</p> <p>Int: I understand. If you had a choice of food when you are upset what would you choose to eat? You are free to choose. (Laughter)</p> <p>Part: I don't know.</p> <p>Int: Are there foods you would gravitate more towards in these situations?</p>	<p>Nothing else would give the same kind of comfort and excitement as food does</p> <p>Reward should not take too much effort</p> <p>Even if upset can still enjoy the reward of food</p> <p>Foods to eat when upset are chips, pasta and really sweet things like cake</p>	<p>Nothing gives her the same kind of comfort and excitement as food</p> <p>Eating is enjoyable and doesn't require effort</p> <p>When upset she gravitates towards starchy foods</p>
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<p>Int: It is something that you don't eat on a regular basis.</p> <p>Part: Yes, it was more of a reward than the other foods in my house, but it is not the first thing I would go to. It is still more like sweets and...</p> <p>Int: Sugary stuff.</p> <p>Part: Yes.</p> <p>Int: So what is it about sugar then that makes it such a powerful reward?</p> <p>Part: I don't know. I remember we didn't have much of it growing up. Now it works as a reward because I am not used to having a lot of sugar. Then also generally eating sweets makes me feel better. I don't know if that is a genuine thing or not.</p> <p>Int: In what way?</p> <p>Part: It is like a timeout thing, so when my dad was in hospital at this time last year. He was in for about a month and a bit and because my dad was the one who feeds us the most and stuff then it was on me to make sure my brothers ate because my mum worked long hours. She wouldn't be home until 6:00 or 7:00 and by then we would have needed to eat, so it kind of fell on me. During that time I got really used to having sweets as a kind of just a minute to myself. My brothers are big people, as in they are tall and they need more food because they are growing, they go to sports all the time and they are always hungry. I used sweets as a coping mechanism to deal with the stress of having to feed them as well as trying to do my A-levels.</p> <p>Int: You had a lot on your plate.</p> <p>Part: Yes, so I think sweets almost worked (Laughter).</p> <p>Int: So you go back to them because they work?</p> <p>Part: Yes, even though I shouldn't and I feel bad sometimes when I do it. You have moments of very stressful times and using sweets to cope with it always seems to work every time.</p> <p>Int: Perhaps we could just explore a little bit more eating on your own and eating in the company of others. Would you eat on your own only when you are upset?</p>	<p>the foods one eats regularly</p> <p>Overall sugary foods are the best reward, she didn't eat a lot of them as a kid</p> <p>Eating sweets make her feel better</p> <p>She used sweets as a coping mechanism to deal with the stress of having to cook for her brothers in the middle of her of A levels while her father was in hospital</p> <p>Using sweets to cope with hard times seems to work for her every time</p> <p>She does not like eating alone, except when upset</p>	<p>Reward foods are eaten rarely</p> <p>Sugar is the most satisfying reward</p> <p>Sugar makes you feel better</p> <p>She used sugar as a coping mechanism in crises</p> <p>Using sugar to cope with stress works every time</p> <p>She likes eating alone only when stressed</p>
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<p>Part: Yes, I don't like to eat alone. I like to be in a group of people at least when I am eating. The rest of the time I can be by myself and be fine, but I think food especially because where we eat is such a social setting and if you are eating by yourself it would be a bit weird. You could hear everything going on around you and you would feel left out. I like to eat with my group of friends, I always try and make sure I am eating with them.</p> <p>Int: With others.</p> <p>Part: Yes, that is what I like.</p> <p>Int: Except when you are feeling down.</p> <p>Part: Except when I don't want to be around anybody at which point I will get my food and go.</p> <p>Int: But you will still eat, you will opt for a takeaway and eat it in your room.</p> <p>Part: Yes.</p> <p>Int: Very interesting. Is there anything else you would like to say?</p> <p>Part: No. I don't know. I like food, I really like food. I think I am glad that we had such a healthy... I think the stress eating isn't healthy, but the rest of it the way that we used to eat and form our diets I am glad that we had a healthy look into it as opposed to a lot of other people who don't eat very well.</p> <p>Int: Do you think they would find it more difficult to cope with stressful situations and trying to stay off takeaways and sugary foods, that they have more of a job to resist than you do?</p> <p>Part: I don't know. I don't think they would have that mind-set where they say, "This food isn't good for me, so I am not going to eat it." If you were used to always having chips or beans on toast, if that was your thing and that is what you have always had and you have never had vegetables then it is easier for you to turn to that when you are stressed or upset. I guess for me it is a few steps to get to where I am like....</p> <p>Int: It is harder to reach out for unhealthy food.</p> <p>Part: Yes, I have to be very stressed or upset to go for it.</p>	<p>She is aware that the stress eating is not healthy but believes that the rest of her eating habits are good compared to other people</p> <p>People with bad eating habits would not have a mind set to where they resist foods that are not good for them</p> <p>On the other hand she has to be quite upset to resort to eating for comfort</p>	<p>Acknowledges that stress eating is not healthy</p> <p>Considers her eating habits healthy overall</p> <p>She has to be quite upset to resort to emotional eating</p>
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<p>Int: You have to reach a certain level before you actually break the rules.</p> <p>Part: Yes. It is so weird because we can't cook for ourselves and that was the main issue when they gave me my accommodation. My dad was like, "How will you eat your vegetables, how will you do this? You need to make sure you are cooking vegetables, I am vegetarian. You need to make sure you are doing this and you are doing that and you are having enough." I can't do a lot of those things because I am not cooking for myself. Our kitchens don't have ovens. It is a bit weird to have to adjust back to the normal way of eating, it is weird.</p> <p>Int: Yes, you are still working on it.</p> <p>Part: Yes.</p> <p>Int: What do you miss the most, what is the hardest of all? Is it making your own choices or is it not having the meals set out the way your father used to do it?</p> <p>Part: I think it is the variety of breakfast. I think with my dad he would cook what was there. One day it might be pasta and sausages, one day it might be spaghetti and schnitzels or rice. He changed it up.</p> <p>Int: It was a full meal.</p> <p>Part: Yes, whereas with breakfast here it is the same thing every morning. So you are getting tired of having to have the hash browns and the beans. You can have variety, but because I know I am not going to eat lunch I always have two breakfasts. I have the beans and hash browns and then I will have cereal or something. So then to try and vary on that, but then they don't have other cereals that I like, they don't have other fruit I can eat or I don't like the yoghurt. Do you know what I mean? It is hard to find variety there because it is always the same thing. It is weird adjusting to not having any other choice.</p> <p>Int: For breakfast?</p> <p>Part: Yes.</p> <p>Int: What about dinner, is it any better?</p> <p>Part: Dinner varies, there is like a three week or a month rotation. I don't know, I can't tell. I don't have the same thing. Sometimes I have had the</p>	<p>Father was concerned whether she will eat enough vegetables on the campus</p> <p>She misses the varied breakfast at home</p> <p>Dinners are quite varied but do not contain enough green vegetables or salad</p>	<p>Breakfast on the campus is limited</p> <p>There is a lack of green and leafy vegetables</p>
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<p>same thing twice and then and then other times I haven't had the same thing twice. I don't mind, there is a good variation in general in terms of food choice.</p> <p>Int: You can have vegetables, your father will be pleased.</p> <p>Part: They always do steamed carrots, I don't mind steamed carrots. They do sweetcorn and green peas, but I don't like green peas. I don't mind them but after a while they get really annoying. They do the same types of vegetables with every meal but there are no salads or raw vegetables. If there was loads of salad I would just eat the salad and I would be fine with that. Then only one day a week maybe where there is some form of salad. That is a bit weird not having the vegetables that I am used to, it is a weird adjustment to make. I feel like there should be something green on my plate. When I look down there is only whatever the main meal was and then a bit of chips and then a bit of the carr</p> <p>Int: Thank you very much, I really enjoyed it.</p> <p>ots. I am like, "There should be something green on my plate." It is weird not having vegetables like that.</p> <p>Int: Would you say not such a great choice of veggies for supper?</p> <p>Part: Yes, hopefully they will get better or I could just buy salad. I won't ...buy salad and bring it but that doesn't make any sense.</p> <p>Int: Maybe you could make salads in your room because you really don't need cooking facilities to make salads.</p> <p>Part: Yes, that is true. I might do that. It is so weird not having any form of a leaf. That is what I need just a form of leaf like rocket or the leaves that are a bit spicy I wouldn't mind, but there are just none.</p> <p>Int: You miss that a lot like salad and green vegetables?</p> <p>Part: Yes, but in terms of the main meal they always have a good variation for dinner. Even if it is not that nice you appreciate it is not what you had yesterday. Sometimes they get it right and then sometimes they don't. When they get it wrong you just stick with your chips and have some ice cream and just pray that you make it to the next morning and then it is fine.</p>	<p>She feels that there should be something green on the plate, a form of a leaf</p> <p>When dinner isn't good she has some chips and ice cream hoping to last until breakfast</p>	<p>If dinner is not good she opts for chips and ice cream instead</p>
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<p>Int: You are getting used to it. You have only been here a month, so it is all new.</p> <p>Part: Yes.</p> <p>Int: Is there anything else you would like to say about eating or different foods? Do you think we have covered more or less everything you can think of?</p> <p>Part: Yes, I think....</p>		
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C.10 Participant 3: Reflective Diary

25th November

Context: Transcribing

The first thing I noticed while transcribing the interview was the frequent use of terms like healthy eating and vegetables. Participant 3 seems to be very concerned with healthy eating habits and believes that she was given a good start regarding healthy eating at the family home. This was especially the case when her father became the main cook in the family and “went on a health kick”. Breakfast became the main meal of the day “now we do dinner in the morning” comprising a variety of foods like sausages, pasta and vegetables. The evening meal was “something lighter like chips or salad and fish”. Although this was strange at first, she managed to get used to the new eating regime. Molly’s father had issues with being overweight and I wonder to what extent his fears and experiences are a driving force behind this new eating regime?

26th November

Context: Transcribing

Due to father’s encouragement “You need to eat your greens” she made an effort to learn to like less appealing vegetables “I am learning to like kale that is coming round into a favourite. I like spinach, it is better in a sandwich than it is by itself, but I am learning to like it.” The way she describes “learning to like” is interesting. She is willing and fully cooperates with the process “It is good for you, it is healthy and it benefits you so then you are attempting to get yourself used to the idea of liking it and having to eat it.” Although “learning to like” works for her most of the time, it does not work every time. Sometimes her taste buds need a little help to get used to certain tastes “I can do broccoli and you can put cheese or salt on it to make it better” but sometimes foods remain unpalatable in spite of her best efforts “... but Brussel sprouts are no.” She accepts the limitations of her strategy but tries to make good choices regarding food whenever she can. Molly’s father is a person she trusts absolutely, he has a great deal of influence on her. Another point here. Although she is aware of having a weakness for sugary foods she makes an effort to conceal it “I do like cake, but I try not to eat it. I say a lot to my family, “I am not a cake person.” Negating the fact that she likes cake in front of others, thus discouraging offers, helps her stay in control of her cravings. This strategy seems to work well for her.

28th November

Context: Reading

There are some contradictory elements to her attempts at healthy eating. Since lunch is not a free meal for students on the campus she chooses not to eat it in order to save money. “Nowadays I try not to eat lunch because lunch isn’t free and at the moment I am trying to save as much money as I can.” This choice seems quite surprising considering that healthy eating was such a prominent theme in our conversation. Particularly since she is fully aware

that the lack of food makes her sleepy during lectures and a little irritable at times. “Yes, an hour after breakfast I am like, “I am dying.” In order to cope with hunger she resorts to frequent snacking on chocolate bars and crisps “I am having small snacks throughout the day to keep myself going” and drinking plenty of water “I am drinking a lot more water like I used to just to try and fill the void before dinner”. “Usually when I am very irritated I go straight for sugar” which energises her and makes her feel better so she does not feel “as down as I was before”. However the positive effect of a sugar boost lasts for about an hour before she needs to have another snack. Molly is not entirely sure whether “feeling better” after consuming sugar is actual or just in her mind. Healthier snacks are available on the campus and I wonder whether the choice of chocolate bars or crisps is entirely financially motivated? Also, if Molly continues to skip lunch regularly she is likely to become reliant on sugar as an energy boost in the middle of the day.

30th November

Context: Re-reading

This is not the first time that Participant 3 resorted to sugar/food in order to alleviate unpleasant feelings. Emotional eating which she refers to as “stress eating” seems to be a coping strategy learned at home, from her mother. Mother used to get really stressed at work and used food to quieten down after a busy day. She would “sit in her bed and she will have a packet of crisps or a packet of Skittles” in order “to calm herself down after the day.” Participant 3 rationalises “it seems to work for her, maybe it will work for me.” In the beginning, she recollects, it would be a particular type of a sweet “It used to just be pear drops, pear drops used to be my thing” she would resort to eating when upset. However over time stress relieving had transferred to food and eating in general “Now it is any food”. Although Participant 3 is aware that “stress eating” is not healthy for her and she tries to keep it at bay “it is a habit that keeps coming back”. Problems with “stress eating” always coexisted with her healthy eating habits in a dynamic, give-and-take relationship. I wonder how much the stress of new environment and the challenges laying ahead contribute to her snacking habit on the campus?

1st December

Context: Re-reading

Exploring the drives and outcomes of emotional eating further yielded some interesting insights “...whenever I feel stressed, a bit annoyed or a bit angry I reach for food as a way to make myself to feel better.” Adverse feelings provide emotional cues to eat and food makes her feel better. Eating creates an opportunity for a “time out” through a pleasant distraction and comfort it provides. “It is like the whole stress eating thing where food is a nice distraction and comfort for me.” Certain foods seem to be a lot more effective in alleviating stress than others. “If I had my own choice it would probably be cake, crisps or sweets probably.” In addition, “stress eating” tends to increase the amount of food she is likely to eat “I think I am that kind of person that if I am upset I am going to eat more food.” She is

inclined to consume larger quantities of high calorie foods (chips and cakes) when distressed. Since food provides comfort as well as distraction from unpleasant states, Molly will eat more food in order to extend the time of a needed relief.

2nd December

Context: Attempt at identifying sub-themes

Another point here. Although she normally likes to eat in the company of other people, when upset she prefers to eat alone. "I would just want to eat alone by myself for a bit." Molly does not like to face the world in times of weakness. She does not like to be asked how she is feeling and to have to explain what is wrong or pretend to be fine. When upset Molly prefers to "lick her wounds" alone. Here at the campus she would opt for a take away which she would then eat alone in her bedroom. No need for pretence or polite conversation, just diversion and comfort of food. "Then the food is like a blanket. I don't need to fake being chatty to eat, I don't have to pretend that I am okay and I don't have to be okay to eat my food and just enjoy the food itself." Participant 3 can not think of a reward that could be at the same time as exciting, as comforting and as satisfying as food. It is the main reward for her. "I don't have anything else really that I can reward myself with I don't think. It is like food is the main thing" The pleasure, distraction and comfort of food, relatively inexpensive and easily available, tends to be her first choice relief when distressed.

4th December

Context: Attempt at identifying sub-themes

There are some attempts to try and replace sugary foods with healthier options like celery. These efforts are motivated by both financial worries "I am a very frugal person, so it does cost money to keep buying sweets" as well as health concerns "Also health and trying to keep my face clear". Eating celery substituted sweets and did work for her as a stress reliever during the exam period. However she is aware of some differences between the effects of different foods "I think maybe with the sweets it was the taste" while celery "was just distracting me for a minute and giving me time to clear my head" whilst eating. It seems that sweet treats provided an opportunity for a "time out" through both pleasure and distraction while celery is just a distraction. This of course would make sugar more effective. Could this make sugar a lot more addictive too? "I guess starchy things. Things like chips and pasta and really, so many things. So with already sweeter things as opposed to savoury, more like cake and sweets as opposed to food that you would eat as a meal. If I had my own choice it would probably be cake, crisps or sweets probably."

5th December

Context: Attempt at identifying sub-themes

Eating on the campus is a very different experience to eating at home in terms of food, setting and the company. Eating at home was a stress-free experience in the familiar surroundings, the food Molly's father used to cook was healthy and company of family members was

comfortable. Eating in the new setting of the campus and with people she barely knows is not such a relaxed experience. The food is very different and the lack of salads and greens on the dinner menu is something Molly really struggles with. Hotel-type breakfast, always the same, is not as varied as she used to have at home and Molly finds the repetition tiresome. I feel that the change in the eating context will inevitably change Molly's eating behaviours and their outcomes. It remains to be seen whether the healthy eating habits she learned at home will withstand the stress of the new environment and to which degree Molly will rely on food in order to regulate emotions.

Date: 7h December

Context: Attempt at clustering

Financial concerns outweigh any other concerns at this point. Molly has embarked on a new chapter in life and she is managing her finances for the first time. Molly decided not to have lunch on regular basis in order to save money. As a result she has to deal with feeling hungry most days.

- I am underweight, but also lunch is not free
- Saving up is more important than eating lunch
- Using snacks and water to stave off hunger
- Hunger makes her sleepy and irritable
- Craves sugar when feeling irritable

Molly is also a few kilograms underweight. She does not like to think about her weight, especially not in the context of not eating lunch in order to save money. Molly speculates that perhaps being underweight at her age will help her not to become overweight later in life.

- Being underweight and skipping lunch do not connect in her mind
- Being underweight contributes to the personal image
- She does not think about being underweight a lot
- Being underweight is not necessarily a bad thing
- Being overweight is bad because of health implications
- Father's advice is not to gain weight intentionally

Date: 8h December

Context: Attempt at clustering

Molly believes that she was given healthy eating habits at home. In spite of “stress eating” which becomes an issue during difficult times, Molly believes that her eating habits are healthy overall.

- Dad’s concerns over healthy eating changed the way family eat (breakfast became the main meal of the day)
- Makes conscious effort to resist sugar
- One can learn to like less appealing foods
- Strategy is successful most of the time but not always (occasionally she can’t accept the taste)
- Healthy eating habits are learned at home
- Considers her eating habits healthy overall
- She has to be quite upset to resort to emotional eating
- Sugar, as stress reliever, may be replaced with healthier foods with some success

The healthy eating habits coexist with the emotional eating in a dynamic, give-and-take relationship.

- When upset prefers eating alone
- She uses sugar as a coping mechanism in crises
- Sugar makes you feel better, it is the most satisfying reward
- Cake, crisps or sweets are foods to go to when upset
- When upset she gravitates towards starchy foods
- Nothing gives her the same kind of comfort and excitement as food
- When upset food serves like a blanket, no need for pretence
- She uses food as both distraction and comfort
- Temporary relief with food is obtained through diversion and sensual pleasure
- Mother is an emotional eater, eating as a stress relieving strategy is learned
- Stress, irritation and anger are emotional cues to eat
- Relieving stress started with eating pear drops but had transferred to food in general, relief would last for about an hour when she needs something again

Date: 9th December

Context: Attempt at clustering

Molly is a new student on the campus. Living in a different environment has caused some changes in her eating behaviours and outcomes.

- Likes food and looks forward to a good meal
- All family members are happy when eating, family meals are fun
- Food and togetherness make a meal special, talking is not essential
- Contented to eat alone at the campus, although prefers company
- Just sitting and eating is not a good use of time, engages in another activity
- Speed of eating is determined by the company
- If the food is good doesn't mind finishing last, savouring the taste
- Amount of food eaten depends on the taste (she eats more to extend the experience of sensual pleasure)
- Amount of food eaten at home depended on availability
- Amount of food eaten at the campus depends on the taste
- Breakfast on the campus is of a limited variety
- There is a lack of green and leafy vegetables at dinner time
- Home foods are the best foods

Date: 10th December

Context: Attempt at clustering

Molly's experiential account of eating comprises four main themes: financial concerns, eating environment, healthy eating habits and emotional eating. First year undergraduate, Molly embarked on a new chapter in life and this resulted in a number of changes related to food and eating. Since she came to the University Molly's surroundings had radically changed. Eating on the campus is very different from eating at home in terms of food as well as the company. This had some effect on the speed of Molly's eating as well as the amount of food she is likely to consume on a day-to-day basis.

Molly's healthy eating habits, comprising eating the main meal of the day in the morning, plenty of vegetables, greens in particular, and avoiding sugar used to serve as a buffer against emotional eating in the past. Now, they are being tested against the new circumstances and financial constraints. Challenges of the new environment and lifestyle are putting pressure on Molly and the issues with emotional eating are surfacing again. Problems with "stress eating"

always coexisted with her healthy eating habits in a dynamic, give-and-take relationship. Demands of the new environment and lifestyle are bound to stress this relationship even further.

- “Stress eating”
- New and demanding circumstances
- Give-and-take relationship between healthy eating habits and emotional eating

C.11 Participant 4: Interview Transcript

1 Int: Okay, so we can start now. You can start from whatever experience of eating you want or
2 whatever memory of eating you can think of.

3 Part: I am trying to think. I know that neither my mum nor my dad particularly like cooking.
4 My mum used to cook when we were younger and that got less and less as we got older. She
5 was a working mum and she didn't really have the time, but I also think she didn't really
6 enjoy it. Even now she tends to prefer to take her guests out for dinner rather than cook them
7 dinner at home. I don't think she has that association of enjoying cooking. My grandma
8 didn't necessarily enjoy cooking, but she cooked the whole of her life. She would cook
9 dinner for my grandpa every day.

10 Int: Was she a housewife?

11 Part: Yes, I think having more time made a difference. I think also the historical era made a
12 difference because obviously when we were young my mum already had quiches that you
13 could just throw in the over, whereas I guess my grandma didn't have that. My grandma used
14 to make cake and then when my grandpa was entertaining people she would have several
15 different types of cake that she would serve and it was always made at home. There were
16 particular cakes that were her speciality cakes that I associate with her and eating with her.

17 She used to really love going out for coffee and I think I inherited a lot of those traits from
18 her. We used to go out for coffee together. When I was little, I didn't really like coffee then I
19 would have a fruit juice and we would have a slice of cake together. It was interesting
20 because she was diabetic, so she wouldn't necessarily eat a lot of the cake herself but she
21 would make it for other people. She would always make me have cake. She would always be
22 like, "No, have desert." I think she saw our time together as a treat, it was extra to what I
23 would normally be having at home. It was her way of connecting with me.

24 Int: Treating you?

25 Part: Yes, she was from [place name] and they have a lot of cake and they have a lot of
26 coffee. I think for her that was a really big part of her culture was that coffee and cake is what
27 you do. I think I only received one family heirloom recipe from her, but it was one that is
28 really specific to her. I only ever tend to make it when I miss her, she has been dead two or
29 three years. When I miss her then I make her cake basically.

30 Int: Is that your way of connecting with her now?

31 Part: Yes, I think it is also a way of connecting with my childhood when she was still alive. It
32 is a kind of nostalgic action I guess.

33 Int: That is very interesting.

34 Part: Yes, I bake quite a lot myself. It is interesting because growing up I didn't watch my
35 mum bake. I wasn't one of those kids who used to stand by the stove while she was making
36 dinner because she didn't really do that kind of stuff. She doesn't really enjoy baking, it is not
37 something she does. I don't think my sister particularly enjoys cooking, I think her partner is
38 the one who cooks in their relationship.

39 My step-mum is the one who cooks with my dad. My dad does a few things, he helps in the
40 kitchen but I don't think he is very creative with his cooking or that it is something he enjoys.
41 I think he likes food, but not necessarily cooking. I quite like cooking and I specifically like

42 having dinner with people. I see food as a really social experience most of the time. I will
43 meet people for lunch, I will meet people for dinner and I will meet people for coffee.

44 Int: And you will cook for them?

45 Part: I will often cook for them. Sometimes that might be dinner out, but it could be dinner at
46 home or dinner round at somebody's house where you are sharing food. That is quite
47 important I think.

48 Int: Sharing food is important?

49 Part: Yes.

50 Int: Could we explore that a little bit?

51 Part: Yes, sure. It is interesting because I am not sure where it came from. I think I am also
52 generally quite creative. I like making food and then giving it to people. I will make jam and
53 then give it to people as presents.

54 Int: Is that like a gift of love, a gift of appreciation and something more personal than a
55 bought gift?

56 Part: Yes, it is partly a creative thing in me that I quite like doing stuff. Then it means once I
57 have done that I have that. That is a thing that I have got and I can give it to other people. I
58 think it is both, it is like an expression of my creativity and it is also a sharing of what I am
59 doing. A friend of mine has a vegetable patch and she grows her own vegetables. If she has
60 got leftovers then she will often give me some and I will make chutney. I quite like the idea
61 of... I get quite creative with taste and flavour and I really enjoy that.

62 I really enjoy baking and I really enjoy having certain boundaries set and then having to think
63 about it. One of my friends for a while really suffered with wheat and then I had to think
64 about all the cakes I could make that didn't have any wheat in them and how do you get
65 around that boundary. My flatmate's daughter has a dairy intolerance, so that was really fun
66 looking up ways of making her deserts that she could have without any dairy because when
67 she goes out to eat there are hardly any options.

68 She came to visit and I got to plan a whole entire meal around having no dairy in anything. It
69 was quite exciting, it was nice to have a certain boundary and knowing that people are going
70 to enjoy it at the end made it a more worthwhile project than just me sitting around the place
71 going, "Okay, I could make some jam." If I could make some jam for this person and then
72 that means I got to tailor it to whoever I am making it for.

73 Int: It is not just creativity for you, but it is also problem solving because you address these
74 issue like dairy intolerance and a wheat intolerance. Trying to find your way around that and
75 remain creative.

76 Part: Yes, I quite like that. I think because I have been vegetarian for a long time I am used to
77 looking at recipes and substituting things. I might start from a recipe and then by the end it
78 will look totally different because, "Right, that is beef. I guess I could substitute that with
79 lentils." You get this really nice feel for what different things do in food.

80 There is also a thing about flavour when you are a vegetarian because I think a lot of meat
81 dishes you get meat and then you get the accompaniments around meat. That doesn't really
82 happen with vegetarian cooking, so you will get more of a range of what you are eating, how
83 they all meld together, what flavours you want to bring out and what spices you are using. I
84 think that is why a lot of people really struggle when they go from eating meat to being
85 vegetarian because it is a different way of thinking about food. Especially in this country
86 where you get a lot of, "I have got chicken, so now we need potatoes (Laughing)."

87 Part: Or I have got beef so then I have this and this. With vegetables you can't just be like, "I
88 have got carrot and that is all I am doing." I have got several different things, how am I going
89 to put that together and what flavours do I want today and what spices do I want to add and
90 what texture do I want? I think being vegetarian has definitely helped the creative aspect of
91 food.

92 I think I do really enjoy eating with other people. Even in our house we are a bunch of
93 professionals who live together, there are four of us. We always have dinner on a Sunday, we
94 have at least once a week when we all get together and cook and we each cook once a month.
95 It is really nice because we all get together. That is over dinner, it is not like we get together
96 and go to the pub once a month we get together and have dinner.

97 Int: At home?

98 Part: Yes. I probably cook better meals when I am cooking for other people than I would just
99 for myself. I think sometimes if it is just me it is like, "I can have toast." That is fine, I like
100 toast. If I am with somebody else I want to give them things. I want to make them things,
101 nourishing things. It gives me a chance to connect with the food I am eating rather than just
102 grabbing something on the go.

103 Int: Connecting with the food you are eating, could we explore that? That is very interesting.

104 Part: Yes.

105 Int: There is a lot of mindless eating, but how do you connect? What is the difference in the
106 experience of mindless eating and really connecting with the food you are eating?

107 Part: It just completely transforms the whole experience of what you are eating. When you
108 start paying attention to what you are eating you kind of notice the flavour and the texture.
109 You notice whether it is made well or not. I have my moments when I am eating something
110 because it is convenient and I know that is why I am eating it. It is quick, easy and I can
111 throw it in the microwave and that is it. On the whole as soon as you start paying attention
112 you are like, "Wow, this tastes really..." I can taste the chemicals or I can taste the food
113 colouring. I can taste a lot of things when I am eating and paying attention. Maybe if I am
114 just mindlessly eating I am like, "I just need to grab this."

115 I think when I started paying more attention to how I ate then I started to really think. First of
116 all I am full quicker than I think I am. If I am not paying attention I can eat a whole entire big
117 tub of food and not think about it. When I start paying attention it is like, "Actually I could
118 get away with eating half of this." That would save me money on my food because I would
119 literally be eating half the amount of food if I paid attention for half an hour to what I am
120 eating rather than just grabbing it and going. There is an aspect of noticing what your body is

121 doing in response to food in terms of how full you are. Also how nourishing it feels and what
122 I want. It will be like, “Today I really want sweet potato or beetroot.”

123 Int: Let’s stay here, what would influence that?

124 Part: What I really want that day?

125 Int: Yes. Is it your mood or is it what you have got in the cupboard?

126 Part: I think it is a bit of everything, sometimes it is the mood I am in. Sometimes it is the
127 weather, now that the weather is a bit colder I definitely eat different things than in the
128 summer. I really want stews, soups and...

129 Int: Stodgy things? Warm and stodgy?

130 Part: Yes, something really warm and a bit soft and squishy like roasted things. I generally
131 tend to eat more warm foods than colds food anyway. Even in the summer I am not a big fan
132 of salad and things like that often. Sometimes when it is really hot the last thing you want is a
133 roast. Whereas now that is autumn that is going to make a difference. Also what I have been
134 doing, so how stressed out I am maybe affects my food choices. It is interesting because
135 sometimes I will gravitate towards eating sugar and then afterwards I will be like, “Actually
136 that was really the wrong thing and now I feel worse.”

137 I am kind of learning. I think as I got into my 30s I really started learning there are definitely
138 things that even though I think I am craving I am really not. There will be days like if I am
139 pre-menstrual then I really want chocolate. I don’t want Cadbury’s chocolate or Galaxy
140 chocolate I want really dark cocoa, like 90%, really good quality. I only need a couple of
141 squares, but it is just that thing of you know instantly.

142 Int: What does it do for you?

143 Part: What does it do?

144 Int: Is it a mood thing or a reward thing?

145 Part: I think it is a mood thing. I don’t tend to use food as a reward very often, which I know
146 is quite rare in our culture.

147 Int: How would those few pieces of good quality chocolate alter your mood on those days?
148 We all know what those days are like.

149 Part: I think it makes me less grumpy. When I am pre-menstrual I tend to either snap a little
150 bit or I will cry, so I get both. Some people are one or the other and I seem to get both and
151 chocolate just seems to help. It has to be actual cocoa and I only need two squares of that. If I
152 have a chocolate bar that is more milk really and sugar then I could eat three of them and it is
153 not going to have the same. It is not about the sugar that is not what I am craving at that time
154 it is definitely something about the cocoa. That took me a long time to realise as well and
155 then I spent less money on chocolate, so that was nice.

156 Int: That is good. You were a bit grumpy before chocolate and then afterwards do you feel
157 calmer or happier?

158 Part: Yes, just a bit more settled. I am like, “I can cope with the day now. It is okay.” I really
159 get cravings for certain foods. It feels like a craving, it doesn’t feel like, “I just quite fancy
160 avocado.” It is like, “Today I really need to go out and buy an avocado because that is what is
161 happening.” Other days I am like, “I quite like avocado or maybe I could have this or maybe I
162 could have that. Let’s see what is in cupboard.” I definitely have days when I am like, “No
163 tomatoes today.”

164 Int: There has to be a right day for that right food?

165 Part: Yes, it is not an obsessive thing. If I go out to a friend’s house for dinner and they serve
166 me something with tomatoes I am not going to be like, “That is it, I just can’t eat what you
167 have given me.” I would probably maybe do that with meat because that is something that I
168 never eat, I never eat meat or fish. With vegetables I have days where I prefer one thing over
169 another, but sometimes you...

170 Int: Do you have foods that you crave more often than others?

171 Part: Sweet potato and beetroot. I love roast potatoes, but I don’t really crave them. I really
172 enjoy them when I have them and sometimes I think, “That would be nice today. I never have
173 days where potato is the only thing that I eat. I have some days when I really want particular
174 spices.

175 Int: That is interesting.

176 Part: Some days when I am feeling a little bit fuzzy then things like fennel, caraway and
177 cumin. I have days when I am like, “Get curry, I really want curry today.” Something a bit
178 spicy.

179 Int: When you say fuzzy what does that mean?

180 Part: You know when you are not very concentrated, maybe I didn’t sleep well the night
181 before. Maybe I am just feeling a bit down and curry is like a hug in a bowl. So many of my
182 friends eat curry and are associated with curry for me where it has also got that added
183 emotional extra where I am thinking about all the times I have eaten curry have probably
184 been good times. It is that added emotional context. A lot of it will also be the impact that I
185 have got on my bodily system.

186 Also making curry is a really nice process because it is very loosely termed in terms of what
187 you need to throw in there, it is not a really specific recipe. I can see what I have got at home
188 and I can be like, “I have run out of turmeric, but I have got onion seeds. I have run out of
189 curry leaves, but I have got ginger.” It is quite nice and you get to be quite creative with it
190 when you are making it. I almost never fail to want ginger, ginger is always a thing.
191 Cinnamon is always a good idea. I quite like cardamom, but that is quite a specific flavour
192 and I know a lot of other people don’t like cardamom. That is definitely something that I
193 moderate, if I am just making something for myself then I throw it in.

194 Int: So spices are important?

195 Part: Yes.

196 Int: Do you think more so because you are a vegetarian?

197 Part: I think so, I don't know.

198 Int: How did that come about?

199 Part: Being vegetarian?

200 Int: Yes, is that a moral...?

201 Part: Yes, initially what happened was my mum had got together with a partner who was
202 vegetarian and she made my sister and I become vegetarian when I was about 11. She was
203 like, "Right, that is it I am not cooking meat." We were like, "Okay, whatever." Then I think
204 when she started eating meat again... I was 11 at that stage and in the years that followed
205 both my sister and I realised that as an ethical choice it was pretty sound anyway.

206 When she started eating meat again neither of us followed suit, so both of us are still
207 vegetarian and my mum started eating meat a long time ago. I think I maybe thought about it
208 when I was 15 and was like, "Do I still want to carry on being vegetarian is this what I really
209 want to do?" That was when I really made a decision rather than just I was in the habit.

210 Int: It was your decision and not your mother's.

211 Part: I was like, "Actually yes, I don't feel right about eating meat." When I was living
212 abroad I started to let go of eating fish. I probably haven't eaten fish for about 16 or 17 years
213 and then a few years after that I stopped eating gelatine. I was kind of thinking, "That is
214 really ridiculous that I don't eat meat and fish, but then I am still eating things with bits of
215 bone in them." It just felt like a natural progression. I don't think I am going to become vegan
216 any time soon, but it is something that I think about is the ethics of food production.

217 When I buy eggs for example I buy free range organic eggs. If I can get local eggs from
218 somewhere where I can see the conditions then that is great and apart from anything they
219 taste so much better. I just think I should be responsible for my food choices. I quite like
220 buying food in season and if I can then I will try and buy local food. Again I feel like it tastes
221 a lot better, it hasn't transported half way across the world and so you don't have that delay,
222 there is still a lot of flavour there. I think if I am not responsible for my food decisions then
223 who is going be.

224 We are really fortunate in Kent because there is just so much here. There are so many little
225 farms. We have plums, we have apples and we have got root vegetables in the winter. I think
226 it was few years ago that I started to trying to eat more in season. I don't do it with everything
227 because it is hard. I really like quite exotic things like sweet potato, which are never going to
228 be grown in this country and avocado. It is one of those things obviously where you have to
229 be quite careful, but if I can get it local then I will.

230 For example with cherries and strawberries I only eat them when they are in season. That is
231 really nice because it means that first of all the cherries taste really great. Cherries have a six
232 week cycle in the summer and then it means I get to wait for the rest of the year until the
233 cherries come round and then it is really exciting to eat cherries again.

234 Int: Looking forward to that time?

235 Part: Yes and I always associate cherries with that summer time. There are certain things that
236 I might do, I might pickle things or make jam, which then obviously means I can eat things

237 for most of the year. It is just really nice to be able to go out and be like, “It is cherry season.”
238 It is really exciting and it is a flavour that I haven’t had for a while, so it is quite exciting. If I
239 could eat cherries all year round then it just wouldn’t have the same...

240 Int: So it contributes to the pleasure that you get out of eating them at that particular time of
241 the year knowing that it is just short lasting and you have to make the best out of it.

242 Part: Yes, I also think that is around the time that is what my body really wants too. My body
243 doesn’t want cherries in the winter time, my body wants potatoes, cabbage and carrots.

244 Int: Something warming?

245 Part: There is a reason why I don’t eat lots of stews in the summer and similarly I think with
246 fruit as well you get a lot of really fantastic fruit. Then in the autumn you are starting to look
247 at plums. You are getting the flavours changing as time goes on. I think for me that keeps me
248 connected to my environment a little bit as well because I am really aware that...

249 Int: Does it make you feel a bit more real that you are in tune with seasons around you and
250 with the natural world?

251 Part: I have got one of those jobs that I am not outside and I am not working the fields, I
252 could quite easily just eat whatever. I live mostly in unnatural light because I get up earlier
253 than the sun now and I go to bed after the sun has gone down. I think there is a certain
254 amount of not feeling very connected and not feeling very grounded. I guess food is a nice
255 way to ground you in your environment too.

256 I really love eating foods of different types as well. One of my favourite things about
257 travelling is eating different food. I get really excited about trying... When I went to Poland
258 for the first time it was really exciting because I genuinely wasn’t expecting there to be as
259 much vegetarian stuff. I was so happy and I totally loved it. I have an Eastern European
260 background in my family make-up, so I was like, “This feels exactly like what I want to be
261 eating. I will have pierogi and borscht.” It just made me so happy.

262 Int: Did you go in winter?

263 Part: I think I went maybe about May. It was in the tail end of...

264 Int: Winter food?

265 Part: Yes. I was really genuinely surprised because I had heard a lot of things about Germany
266 and Poland not having much vegetarian food. Actually Germany was great and Poland was
267 great. My friend is Russian and she has been introducing me to a lot of Russian food and that
268 has been really exciting. South American food was really fantastic. I think it is a like a way of
269 getting to know a certain culture as well, someone’s culture can be seen in their food
270 practices maybe.

271 Int: Yes, that is an interesting thought. How do you think that connects the culture, the way
272 people eat and the food, obviously it depends on the climate and what they grow in the
273 region.

274 Part: Yes, it depends on what they grow.

275 Int: Their relationship with food?

276 Part: A lot of my family are in the States. It is really weird visiting the States because they
277 have got a really peculiar attitude towards food. They are not very grounded in their food
278 choices and they have a real history of mixing lots of different types of immigrants. They
279 pick and choose their food practices and I think there is a lot of that here too. You know that
280 thing of this is the super food of the moment, there are all of those kinds of things.

281 Int: How do you feel about that, is that irritating because of the...?

282 Part: I kind of feel like it is a bit weird. It is a bit like, "Really?"

283 Int: "Is that what we are supposed to eat?"

284 Part: Yes, I don't feel the need to sprinkle goji berries everywhere. I don't mind it.

285 Int: It will run out of fashion very soon.

286

287 Part: Yes, I think I am one of those all things in moderation people throughout the whole of
288 my life anyway. I try not to work too hard and I try and get a balance with my personal life
289 and my work life. It is the same with my food I guess. I don't have a problem really with bad
290 food necessarily, but I really enjoy good food. One of my flatmates when he cooks a Sunday
291 dinner he gets really nervous because he is really meaty and I am quite clearly not. He is like,
292 "No, I can accommodate you that is fine." It means that he starts to worry about it the week
293 before.

294 Int: He has to think?

295 Part: "Oh God, what am I going to make?" I know I am vegetarian, but that is the only issue I
296 have. I am not allergic to anything, but also I do like everything. I am pretty happy to eat
297 whatever you put in front of me as long it has no meat in it. If you want to make me beans on
298 toast I can eat beans on toast, I quite like beans on toast actually so it is not an issue. He is
299 like, "Oh okay." He gets really nervous about it and it really surprises me. I guess it is
300 because some people really are fussy about food and they can't imagine liking everything. I
301 am quite happy to drink bad coffee, but when there is good coffee then I am like, "Wow, this
302 is really good." I think it is maybe just that...

303 Int: You are quite laid back about it?

304 Part: Yes.

305 Int: But you appreciate good stuff when you get it?

306 Part: Yes, definitely. You know if somebody is too busy to cook me something decent that is
307 fine, I appreciate that people are busy. If somebody doesn't really know what they are doing
308 with meat substitutes, he uses a lot of meat substitutes and I think it is because he cooks meat
309 so then he will be like, "I will just find some vegetarian sausages. I will just find a vegetarian
310 equivalent of mince." Obviously I would be like, "Maybe I could put lentils or maybe I could
311 do this or that."

312 Int: He is not as creative would you say?

313 Part: No, not at all. I think for some people they literally eat because they need to eat and it is
314 a sustenance thing. That is not the case in terms of how I think of things. Obviously I am
315 aware that other people have different ideas about food and that is fine. It is quite nice
316 sometimes to see what somebody else comes up with because maybe if you give them the
317 same set of foodstuffs they are going to come up with something totally different from what I
318 would have done with it. That is always really exciting because it is like, “Wow, I could do it
319 that way. Oh, if I put cream over it and then put it in the oven. Okay, that is exciting.” I am
320 also not into showy food for the sake of it.

321 Int: Presentation, is that what you mean? Presentation is not very important.

322 Part: Presentation is nice, but I would rather it tasted good in the grand scheme of things. One
323 of my old flatmates used to do a lot of French cooking and then a lot of it is about your
324 consommé should be completely clear. I am just like, nobody has got time for that. As long as
325 it tastes good I don't care how clear your consommé is. I don't care what your soufflés look
326 like, I don't care about any of it as long as it tastes good.

327 Int: So taste is paramount.

328 Part: Yes. If it is well presented then I will really appreciate that somebody has gone to an
329 effort to do that. If I go to somewhere and it is really well presented, but it doesn't taste good
330 or they haven't been very creative with it then I am like, “Well I don't know what you want
331 me to say. It is nice, but I could arrange things nicely on a plate as well.” If I am really paying
332 for a meal then I want it to be great, good quality ingredients. It doesn't have to be amazingly
333 innovative, just some level of being a really good quality meal.

334 Int: What would you describe a good quality meal as?

335 Part: I think taste is one thing.

336 Int: Does that mean creative use of spices, playing with textures or having fresh produce?

337 Part: I think fresh food would definitely be a factor because I can taste if the food isn't fresh.
338 It doesn't necessarily have to be creative use of spices in the sense that it is really out there
339 and they are doing things that nobody did before. Sometimes you are doing things that
340 nobody did before because it is a bad idea and there is a reason why people haven't done that
341 before. Sometimes it is quite nice to be a little bit surprising.

342 I think sometimes you can really taste if the person who has created the food has really
343 enjoyed that, enjoyed the process of coming up with that menu. You go to a restaurant and
344 you see a really exciting menu and it is because the chef has sat down and gone, “Do you
345 know what, this is really exciting guys let's do this thing. Let's put saffron in the custard.” I
346 don't know, whatever you are doing. I think that sometimes it is a question of the kind of
347 atmosphere around the food. I know that sounds really vague and a bit weird.

348 I think sometimes you can taste if there has been attention that has been given to that. Maybe
349 even sometimes they have broken a few rules, but it tastes really good because it really
350 works. Somebody has got a really good instinct as to how those things go together. They are
351 tastes you wouldn't expect, but they somehow magically create an effect that you weren't
352 expecting.

353 Int: Interesting, so food can excite you, it can surprise you and it can comfort you. Anything
354 else? It can make you creative because you are a cook as well.

355 Part: Sometimes it is just about comforting. It is about solid, I know what I am doing and I
356 am not experimenting today. I know exactly what I need, this is what I need and that is it. I
357 think I really like the social aspect of things as well, maybe that bonding.

358 Int: If we can explore that bonding. How do you think that bonding happens through sharing
359 the food, tastes or conversation?

360 Part: I think all of those things. It depends who you are having food with because some
361 people it is going to be centred around the food. Some people are very foodie and they have
362 conversations that are about the food. For some people even if it is not about the food itself it
363 is like... I guess I meet my friends for dinner quite a lot. I cook with my friends sometimes
364 too. My friend makes sushi regularly and she is like, "Come round, we can make sushi
365 together." I bake quite a lot with friends, so the process of preparing food together I think is
366 also bonding where you are doing something side by side.

367 If you have got two people in a room and you have got nothing else to do then it can be quite
368 intense. Whereas if you are drinking tea or you are eating something you can have quite
369 intimate conversations about personal things and the pauses in between aren't awkward
370 because you are like, "Now I am chewing. Now I am drinking."

371 Int: That is quite interesting.

372 Part: It minimises distress sometimes. I think you end up having some quite revealing,
373 intimate and fun conversations that maybe you don't have if you are not....

374 Int: That is so interesting. They don't feel so heavy because there is that sharing of food that
375 goes on all the time, so disclosures don't feel so important.

376 Part: You are like, "Oh yes, my relationship is falling apart." Rather than like, "Yes, so..."
377 Then it is like silence. You are just sitting there going, "What are they going to say?" It gives
378 you something to do with your hands.

379 Int: It doesn't feel awkward?

380 Part: Yes, with some friends of mine we literally share food. We will go out for dinner, we
381 are both vegetarian so we will eat half and then swap. You get two meals for the price of one,
382 so you get to try a lot. Maybe it is a little bit different if you are on business lunches, it is a
383 little bit less personal maybe. I think I would just be having lunch with people over business.
384 For example if you think about breakfast I don't think I have ever had breakfast with
385 somebody who I didn't like. I would have brunch with friends or I share breakfast quite a lot
386 with my housemates or with a partner. I think breakfast is one of those meals where it is
387 associated with bonding.

388 Int: Breakfast is about bonding?

389 Part: Yes because you are sitting there sharing a cup of coffee with somebody that you love
390 or you are sharing toast.

391 Int: But it does imply that you live in the same house.

392 Part: Yes or if you arranging to meet people for brunch or something then this is somebody
393 that I really care about. It might be on a weekend, so weekend breakfasts are glorious. There
394 are some brilliant breakfast foods out there. Some of my friends know that I really love
395 breakfast, so they will often meet me for breakfast and it is great. It is like a really nice... I
396 think it is just the time I associate for people that I really love or people I really get along
397 with.

398 Int: Would you say breakfast was the most intimate meal?

399 Part: Yes, whereas you kind of have lunch and dinner with anyone really if you think about it.
400 How many times have you gone out for dinner with people that you barely know? How many
401 times have you had lunch at work with your colleagues who you barely know? It is just a
402 different context I guess. I am quite a big fan of breakfast. I know that is really weird, I am
403 not sure how many people say that.

404 Int: So not all meals are made equal, some of them are more important?

405 Part: Yes, I guess culturally there is a difference. Maybe some people go to breakfast
406 meetings, but I don't have a really high-powered job so I don't need to share my breakfast
407 with everybody.

408 Int: You can have your breakfast in your pyjamas with the people you know really well.

409 Part: Yes, exactly. I also think I really like breakfast foods. I don't know why we have this
410 weird division where we don't eat certain things for breakfast and we do eat them all the rest
411 of the day. My parents are Israeli and my mum just eats salad for breakfast, the salad from the
412 night before and she will have that for breakfast. Her partner is like, "What are you doing?
413 What is that?" I will have curry for breakfast if I have got curry left over. Toast and pancakes
414 are really fun, they are a really social breakfast. My step-mum and I used to make granola
415 together, so that was always really fun having that for breakfast.

416 It was interesting because my old flatmate used to drink smoothies for breakfast and I found
417 it really weird. It was like, "Does that really fill you up?" I think the thing about smoothies is
418 maybe it fills them up, but I think the psychological context of drinking a smoothie for
419 breakfast for me just wouldn't do anything because I haven't eaten.

420 Int: They are liquid?

421 Part: Yes, I haven't eaten anything. Then I am happy to eat soup, so who knows. I guess you
422 eat soup with a spoon whereas with a smoothie you literally drink it, so it feels...

423 Int: And soup is probably warm?

424 Part: Soup is warm and smoothies are cold. There is something about it being an actual eating
425 thing.

426 Int: You did mention you preferred warm foods, I recall that.

427 Part: Yes.

428 Int: Why is that?

429 Part: I don't know. I have always run a little bit on the cold side, so I am always a little bit
430 cold anyway.

431 Int: So it warms you up?

432 Part: Yes and it is comforting. I think warm things are quite comforting.

433 Int: Like a hug?

434 Part: Yes or I quite like snuggling with a blanket just randomly. I will sit in the living room
435 and just put the blanket around me. I remember my flatmate the other day came in and was
436 just like, "I can put the heating on if you are cold." I was like, "No, I am not cold. I just like
437 snuggling." He was like, "Huh." He is from a really different cultural background from me.
438 He looks at me a lot with complete surprise and bewilderment. A lot of the things I say to him
439 on life in general I think are concerning.

440 Int: Really?

441 Part: Yes, it is like, "Okay."

442 Int: But these exchanges are interesting as well in the food you make. I know you dine every
443 Sunday together, is the food he makes very different from your food?

444 Part: Yes, he is a lot more conventional.

445 Int: A more conventional background do you think overall?

446 Part: He will make curry or Thai curry or something. It is not like he doesn't use any other
447 cultural references in his food making, but the Thai curry that he makes will be either a green
448 Thai curry or a red Thai curry. The curry that he makes will be something quite normal
449 within a British context like tikka masala or something, something quite known. In a way he
450 does like food from other cultures, but from my perspective...

451 Int: He plays safe?

452 Part: Yes, gosh. I could eat curry nearly every day and there are so many different types of
453 curry.

454 Int: It will always be slightly different?

455 Part: Yes, when I lived in Bradford when I was doing my master's they just had so much
456 curry, it was so cheap and predominantly northern Indian, but not necessarily always. There
457 were a lot of Pakistani curries and Kashmiri curries and stuff. You would also get the
458 southern Indian curries. I find it a bit strange when people are like, "I was really adventurous,
459 I made a curry." I am like, "What curry did you make?" They are like, "I just made curry."
460 "Oh, okay."

461 Interviewer: That is not adventurous?

462 Part: Yes because it is just a different food reference for them and for me. Also I pay
463 attention to food, whereas some people really don't pay attention to food. They might have
464 travelled around the world, but just not have really cared that much what they were eating
465 because that is not their frame of reference. They might have been looking at art or
466 something, talking to people or looking at architecture and for them maybe they would be

467 able to tell the difference between places from that perspective. Whereas I am like I went to
468 Poland and they put vodka in tea. I don't know, whatever. I went to Chile and their national
469 dish is like a prawn cake.

470 Int: So that awareness of food is always with you?

471 Part: Yes.

472 Int: Do you have any food associations, do you associate eating with any other experience?
473 Obviously it is to do with bonding, sharing, giving and creativity.

474 Part: Yes, it is interesting because the rest of my family are not big on cooking. They all
475 enjoy eating to some extent. I don't entirely know where I got that from that I really enjoy
476 making jam, I enjoy making bread and I enjoy baking.

477 Int: The whole process?

478 Part: Yes, I think it is a bit of stress relief as well because it is quite nice to cook, "Okay, I
479 will make some cake."

480 Int: It is relaxing?

481 Part: Yes, it is a really easy going.

482 Int: It is also a homely thing to do. It is a thing you do at home, you cook in your own kitchen
483 so it is a relaxing time about your home. You like staying at home do you?

484 Part: Yes and no. If I have had a really stressful day it is nice to come home. I think food is
485 part of feeling at home. I think I could feel at home in lots of places. I am more than happy to
486 go into somebody else's kitchen and cook, that is not an issue.

487 Int: It is not really something that you would do just at home?

488 Part: No, but it is a feeling of home. It is not really a place home, but a feeling of home.

489 Int: The feeling of home?

490 Part: Yes, of belonging somewhere. Again I think it is one of those intimacy things. I don't
491 think I would be cooking in somebody's kitchen unless I knew them. Again it is related to
492 bonding and doing stuff with someone.

493 Int: Who is close, someone close?

494 Part: Yes, although I have hosted banquets and stuff before when I was fundraising for an
495 organisation. We used to do a four course banquet every year. I guess there is an aspect there
496 of a slightly different approach to food.

497 Int: What do you think of formal eating?

498 Part: What is that?

499 Int: Formal eating and entertaining.

500 Part: I used to cook for 12 to 20 people, so it doesn't bother me. It doesn't faze me, I know
501 some people get really terrified in the kitchen when you have to cook for six people and then
502 they just go crazy and it is really stressful. I don't find it stressful to cook for six, cooking for

503 six is the same as cooking for two it is just more ingredients. I am usually quite organised in
504 terms of timing and stuff. Occasionally it all goes horribly wrong and then you just have to
505 go, “Okay, well I guess that is where we are at today.”

506 Most of the time I guess because I am relatively organised and I clean up as I go along it is
507 not like I... I don't think I get that stressed out when I am cooking. One of the people who
508 was helping me chef for a banquet was like, “You are the most relaxed chef I have ever met
509 in my life.” I think it is partly because I am really good at getting all the preparation stuff
510 done and it just makes things a lot easier.

511 Int: How many people did you cook for, it was a big party?

512 Part: Yes, it was several years running we used to host a banquet, so I would cook for 20
513 people. It would be four courses for 20 people, but there were three options for desert so
514 technically I guess there were seven courses. I would get to draft a menu, so every year we
515 had a different theme. One year was tropical, another year was African and another year was
516 South American and that was really fun.

517 Then I got to sit down and think about all the flavours and the textures that were happening in
518 every course, how they went with each other and then what ingredients I was using. For
519 tropical nearly everything has sweet potato or coconut in it. I was like, “I have to try to find
520 some recipes so it balances out.” That was really fun actually. I think constructing the menu
521 was one of my favourite things.

522 Int: Again this thing of problem solving comes back.

523 Part: Yes and that really nice experience because it was for a purpose and it was like, “Wow,
524 I can really take my time over this.”

525 Int: It is a bit of a challenge as well?

526 Part: Yes, really thinking about what flavours would I really want to go with each other. “Am
527 I going to have rice with that or couscous?” Just that really nice, “What texture do I want in
528 this?” It sounds like I am being really analytical, but a lot of that is done intuitively for me.
529 Afterwards I can sit down and say, “Yes, I was thinking this, this and this.” At the time it is
530 not like I am sitting there all day just being like, “The pros of using coconut in this...”
531 Occasionally I might have a decision I need to make between two things. Most of the time it
532 is like, “Yes, these flavours. That is where I want to go.”

533 We also had to create non-alcoholic cocktails for that too, so that was really fun. I got to
534 experiment a bit again with flavours for that. Then three different deserts and that was always
535 really fun because then I got to look at, “What deserts does this culture have?” There is
536 always something. Deserts are one of those things that nearly every culture has really good
537 deserts because they are decadent. Desert isn't a food you eat for sustenance, it has to be...

538 Int: Yes, this is an interesting issue. How do savoury and sweet foods differ in the way they
539 affect you or times of when you would resort to either savoury comfort food or sweet
540 comforts, is that different?

541 Part: Yes.

542 Int: Do you have particular moods that would direct you towards savoury or towards sweet?

543 Part: It is really interesting because since I started being a bit more mindful of eating I
544 realised that I really don't need to have a snack in between meals. My body actually doesn't
545 need it, I am not hungry at that time. Initially I started thinking I would go to the fridge and
546 then I would have to stop and be like, "Do I actually really want to eat something right now
547 or is it something else this food is doing for me?" I find that a lot of the foods I eat are sweet
548 it is often a lot more of an emotional eating.

549 There are certain activities that I associate with certain foods, so you have popcorn when you
550 watch a movie or go to the cinema. I really like popcorn and I occasionally have it outside of
551 the cinema, but not very often. It is not one of those things that I think, "You know what I am
552 going to make some popcorn now." It is kind of a context specific food.

553 I might go out with a friend and then I might have cake with her. I am aware at that time that
554 I am not hungry, but we are having cake together because we are bonding or we halve a cake
555 between us. Again it is that process of choosing a cake together is a bonding process because
556 you have got that negotiation and compromise. They might suggest something that I wouldn't
557 have thought of, which is great. I started maybe a few months ago trying to be a bit more
558 mindful of what I eat and that has changed my relationship I think with deserts versus
559 savoury.

560 Int: Shall we explore that a bit? There are moods when you go for sweet things and you are
561 aware that you don't really need to eat you need something else altogether.

562 Part: That is an emotional thing, yes.

563 Int: Emotional eating is related to sweet choices?

564 Part: Sometimes it could be related to crisps or salt.

565 Int: Salt or sugar?

566 Part: Yes.

567 Int: Is there any difference in the mood that would take you towards sugar or towards salt?

568 Part: I don't know. I kind of think if I am eating junk food then I am probably grumpy, tetchy
569 or pre-menstrual. There is probably something going on, there is usually some sort of
570 emotional...

571 Int: Reason?

572 Part: I don't like it, that real lethargic feeling maybe and I am like, okay and reach for a bag
573 of crisps. I think there is an emphasis on sweet things as being more of a sharing item maybe.
574 I don't know, maybe I would eat crisps with my friends. If I was going round to somebodies
575 house for dinner or something then I would be more likely to take a desert maybe as gift.

576 Int: Than something savoury?

577 Part: Yes, I think so. I guess there is a judgement about having more fun with sweet things
578 maybe.

579 Int: More of a treat?

580 Part: Yes, more of a treat I guess. I don't seem to eat things as a reward. That doesn't seem to
581 be... I was getting more mindful of why am I eating. I don't think I ever caught myself
582 thinking, "I have had a really good day and I have been really productive, so that means I can
583 now have a muffin." That never really seemed to be... I think I would just eat a muffin or not
584 eat a muffin and it was kind of for other reasons maybe.

585 I kind of noticed I had got into this habit of maybe thinking I was going to get hungry at
586 about 11:00. At 11:00 if I had coffee then I would always have cake. Then I started to really
587 sit down with my body and be like, "Do I actually need anything right now?" I would be like,
588 "Well no actually." I discovered that I can actually just have three meals a day and it is fine
589 and previously I had always thought that I couldn't. I think there must have been some weird
590 disconnect for quite a long time. Then I was like, "Oh, wow."

591 Int: Am I correct in thinking that you are more aware of your hunger cues now rather than...?

592 Part: Yes and how full I get as well. There was this one day where I was having a little
593 rebellion, it was quite early on and I was having this little rebellion and I was like, "Well I am
594 going to eat that anyway because I don't care. I can eat what I want. I am a grown up and I
595 can make this decision." I ate something at that time and I was like, "Actually now I just feel
596 full and a bit lethargic." It wasn't even fun.

597 Int: But it is good to have that experience and come to that conclusion.

598 Part: Yes, I was like, "Okay, that is interesting." I would come in from work at 6:00 and go
599 straight to the fridge. I caught myself in front of the fridge and I was like, "Am I actually
600 hungry?" It was like, "Well, no." It wasn't until 7:30 or so before I even wanted anything to
601 eat really. It was just this habit of coming in the door. I was like, "Okay, that is interesting.
602 Why do I do that?" Then I had to start asking myself if I am not hungry right now then what
603 is it that food is doing for me? There is some sort of fulfilment I am getting from that, so
604 what do I need?

605 Actually it turned out to be loads of different things. There was one day when I was kind of
606 like, "You know what I want to go for a walk." One day I was, "Actually you know what I
607 want to do, I want to just sit and watch TV." In my mind watching TV is linked to maybe
608 consuming snacks and then I had to disassociate that and be like, "I am not hungry and I can
609 perfectly watch TV without snacks, it is fine." It was a habit that had somehow got
610 intertwined. I was like, "Okay, that is interesting."

611 I started trying to not look at my phone during breakfast. I could have a conversation with
612 somebody, but if there was no one else in the room then I would be like, "I am going to try
613 for a week not to look at my phone over breakfast. I am not checking the news, I am not
614 looking at Facebook, I am not looking at anything I am just eating my food and that is all I
615 am doing." It hasn't altered how much food I eat because I have two slices of toast with jam,
616 marmite, cheese or whatever. I really noticed that I eat slower and I haven't just sped through
617 that in 10 minutes. I eat slower and I can really taste the rhubarb in the jam. I can see how
618 much sugar, "I put a lot of sugar in that jam and next time I am going to reduce the amount of
619 sugar in the jam because it would be nice to have a bit more of an edge." It was just one of
620 those things where I was like, "Wow okay, that is interesting."

621 I think I started really noticing the texture of my bread. I would be drinking miso soup and it
622 would be like I could taste the saltiness in that and I could taste the beetroot in that pickle. I
623 can feel the difference between the pickle, the mustard and the bread when I was eating.

624 Yes, it was a whole different experience. It was like, “Wow, I should pay more attention
625 when I eat things.” Somebody has gone to time and effort of constructing that for me. It was
626 like this really interesting experience and I was kind of like, “I really enjoyed that. I really
627 enjoyed eating mindfully.” Then sometimes occasionally of course I still have my moments
628 when I am totally mindless about things.

629 Int: Would you say that if you eat mindfully you eat slower and you eat less?

630 Part: Yes.

631 Int: Can you have mindful eating in the company of other people?

632 Part: Yes.

633 Int: So you can still do that in the company of others?

634 Part: Yes. I do think the social aspect of eating is really important for me. I wouldn't want to
635 just sit in silence completely because part of eating in a group for me is that bonding
636 experience. I think you can still focus on what somebody else is saying and still be tasting the
637 food in your mouth. Obviously it is going to be a slightly diluted experience. If I am listening
638 to them I am probably eating slower anyway because I am listening.

639 Int: Exactly, yes.

640 Part: It was a really interesting experience of having to take stock and be like, “What do I use
641 food for now?” You have to face up to whatever is going on with you. I would be standing at
642 the fridge and just going, “What is happening to me?” I would be like I eat when I watch TV
643 because I am bored. That means that I need to either find something else on TV or switch the
644 TV off and go and do something else. Maybe I eat sometimes because I feel lonely. I eat
645 because it makes me feel more grounded, some days if I am a bit spacy then I eat to make me
646 feel grounded. It is like, why don't I do some meditation instead because that is going to be
647 thing that really brings me back into my body.

648 Int: That is interesting eating and bodily experience. Sometimes it brings you back to your
649 body? Eating is a bodily function, I guess sometimes one eats for that reason.

650 Part: Yes, I think so. I think if you asked most people I am not sure how aware they would be
651 of it.

652 Int: Is that what you feel? Did I understand correctly?

653 Part: Yes, I have been practicing meditation for many years, so I guess I am used to being
654 mindful about things in other contexts. It didn't seem that far of a stretch to be mindful about
655 my eating as well. It is actually a really easy context to be mindful in because you have got a
656 designated separation between when I am eating and when I am working. I definitely think
657 that maybe because of my mindfulness practice I notice a lot more about my sensations than I
658 would otherwise. If I didn't meditate I think I would still be...

659 I think in my teenage years I didn't have much awareness of my body and I was floaty
660 somewhere in my head all the time thinking. When I started to really practice meditation one
661 of the things you do is you focus on your breath that is one type of meditation.

662 Int: It brings you back to your body?

663 Part: That is a bodily experience that is what you are doing at that time and you become
664 aware of how you are feeling. Do I feel heavy? Do I feel gunky? Do I feel clear? Do I feel
665 light? Do I feel spacious? How am I feeling? What is my body doing at this point in time?
666 Am I congested? Have I got period pains? Is it really that my back is hurting or am I actually
667 just cold and hunching in a certain way?

668 I think that really helps in terms of then thinking about mindfulness. Obviously when I am
669 eating I can feel how that is affecting the rest of my body. It is not just the bodily experience,
670 I think I definitely have emotional connections to eating. I am not one of those people who
671 just eats because that is what needs to happen.

672 Int: What are your emotional connections, could you explore them? The memories of your
673 grandma.

674 Part: Yes, I think comforting. My step-mum and my dad have this thing where we all as a
675 family when I visit... They try and do this without me as well. We all as a family have at
676 least one meal where are all together. Usually that is going to be the evening meal, but some
677 days maybe if my dad has a business meal out then we would go for lunch or we will have
678 breakfast together. I guess there is a feeling of bonding, family and we don't answer the
679 phone during dinner.

680 That is a really sharp contrast to what was happening when I was growing up with my mum
681 and my sister at home. We would eat quite a lot in front of the telly and that was partly
682 because as a family my mum, my sister and I were really uncomfortable with each other. The
683 idea of having meals together was actually pretty stressful.

684 Int: Too close?

685 Part: Yes, it was like, "I don't want to bond with you that much. We are good, we have our
686 boundaries and we are fine." If you are watching TV then you don't have to talk to each
687 other. You don't have to explore anything. Occasionally she would have a partner who
688 thought it was important and then we would all sit around the table and it would be awkward.
689 I quite like the experience with my dad and my step-mum of having that...

690 Int: Together time.

691 Part: Together time where you don't answer the phone and you don't focus on anyone else.
692 This is what we are doing.

693 Int: And it is not awkward?

694 Part: No, I get on really well with my dad so that has never been an issue. We are more
695 similar to each other as well in many ways.

696 Int: It makes it easier.

697 Part: He and my step-mum have been married for 20 years, so it is not a transient...

698 Int: New thing.

699 Part: Yes, they met when I was 13 and they got married when I was 16 that was actually
700 really important that there was somebody in my life who was really like, “Food is family time
701 and that is important.” We bond and that is when we ask each other how our day was and
702 have all of those conversations. I guess I associate food a lot with that really comfortable
703 bonding and talking.

704 Even if you are not really talking the fact that you are sharing your food together creates
705 something that wouldn’t be there otherwise. My grandfather only spoke Hebrew and Polish. I
706 have a vague knowledge of Hebrew, but I am not great and I know no Polish whatsoever. We
707 would sit and have dinner together, he wouldn’t say anything and I wouldn’t say anything.

708 Int: But you were together.

709 Part: But we were together and we were still eating together.

710 Int: On the same....

711 Part: It was still family, it was still a bonding moment I guess. There are certain foods I eat
712 when I think about my grandma. There are certain foods I eat when I think about other
713 members of the family. My step-mum does this really great eggplant parmigiana. She also
714 does [dish name], she spent many years in Yugoslavia as it was then. Whenever I eat that I
715 think of her. When I go over there she always make it because she knows I like it. She makes
716 it anyway, I think it is one of her favourite dishes to make. She is very much like, “Oh yes, I
717 know you like this.”

718 Int: She makes it for you?

719 Part: Now when I make it for myself, which I don’t do very often. When I do it reminds me
720 of her because that is one of the things that we bond over.

721 Int: It is her gift to you, gift of love?

722 Part: Yes and she cooks a lot, she quite enjoys cooking. I also think that for her cooking is
723 also a health issue. She likes to make sure that all of her food is organic. She does a lot of
724 those healthy, “Now this year we are going to just eat fermented things because that is
725 important.” The year before she used to drink lots of smoothies with algae in them. My dad
726 and I would be like, “We are going to have toast like normal. I am good with that.” Things
727 like porridge I associate with winter because it is really wintery. I only have porridge for
728 breakfast in the winter when it is nice and heavy and it is going to last me a long time. I guess
729 I do have specific memories regarding food. I am definitely much more of a foodie than
730 anyone else in this family.

731 Int: You are more of a cook.

732 Part: (Laughing) Yes, I am definitely more of a cook. I eat things and am like, “Ahhh.” My
733 mum is just like, “Yum, yum, yum, okay done.” I am like, “Wow, that has got caraway in it
734 how exciting. I never knew you could put caraway with that, wow.” She is like, “Will you
735 just hurry up because we still have another course to get through.” I think my mum’s current
736 partner really likes cooking, so now the quality of the food has gone up significantly.

737 Int: It is improving.

738 Part: She used to always take me out for dinner and now it is okay because her partner cooks
739 us dinner.

740 Int: So you can stay at home and eat.

741 Part: When I go and visit her place, they live together in North London. My mum is really not
742 that much of a cook. She used to cook for guests when we were young, but it was definitely
743 one of those show things. Guests would come round and then she would cook all of this
744 beautiful food. That just didn't happen the rest of the time. Whereas I think I just really enjoy
745 cooking.

746 Int: Do you cook every day?

747 Part: Not necessarily every day, I am quite happy to eat leftovers. If I make too much, which
748 I usually do, then I can freeze some up and have some for lunch or dinner the next day.

749 Int: It does save time.

750 Part: It does save time, yes. I quite like things like soups where you can just chop things up,
751 put things in a pan and leave them cooking on the hob for 45 minutes or whatever until they
752 are mushy. Soup is easy. I like a lot of things that are really easy, but impressive to eat. That
753 is where spices come in because you can just chop stuff up, throw it in a pan, put it in the
754 oven and roast it. As soon as you put a few spices on it then everything changes. I don't
755 know, a friend of mine used to roast things like olives and chickpeas, so I do quite a lot of
756 that in with the roast potatoes and onions.

757 Int: Roasted olives?

758 Part: Yes, black olives roasted. That was another thing where I was like, "Wow, that is really
759 cool."

760 Int: Olives from a jar?

761 Part: Yes. I was just like, "Wow, that is amazing." Obviously the chick peas have to be
762 cooked beforehand if you are roasting them, you can get jars of cooked chickpeas. Maybe I
763 would have potato, sweet potato, onion, peppers, so the usual things. Then put some black
764 olives, maybe some mixed herbs and maybe some cumin. Occasionally cardamom depending
765 what I have got in there and throw it in the oven and that is it, you have got a meal. That
766 could be four days' worth of food, but it is still really good quality.

767 Int: Food is pleasure?

768 Part: Yes, I think it is like play time. Flavours, textures and colours. I get to play with things,
769 I get to stick my hands in them and make them messy, chop things up and squish things
770 together. Making bread is a lot of fun. If you are quite tense making bread is ideal because
771 you get to hit things, squish them and hit them. Whereas if you are doing pastry it is really
772 complicated and really reacts to your mood. Many of my cakes I have made with pasty have
773 just been ruined because I am in a bad mood.

774 It is a thing, it is an actual real life thing. I spoke to one of my friends who is a chef and it is
775 true. It is actually a thing that you shouldn't make anything regarding pastry when you are in

776 a bad mood. I was like, "I was having this problem." She was like, "That is really well-
777 known amongst pastry chefs." I tend to end up doing a lot of birthday cakes and stuff because
778 there is only so much cake you legitimately really need to have. If I do make cake then I am
779 happy to bring it round to people's houses. Sometimes it is just the process of making cake
780 that I am really enjoying and then I have to somehow eat it all. There is only so much cake
781 that you can legitimately eat without becoming diabetic or being the size of a house. There is
782 a certain amount of tempering how often I make cake.

783 I really enjoy the creativity behind cooking. You are basically playing. You get to do
784 something with your hands and there is a real texture. It is also immediately consumable,
785 which I think a lot of art... I paint and I knit and stuff and then afterwards you are stuck with
786 a painting and some knitting.

787 Int: There are only so many walls as well.

788 Part: Yes, you are like, "What do I do with it?" At least if I make food then that is
789 consumable and then I can do it all again when I want to do it all again. A lot of my family
790 they are like, "You know we have so much stuff, we really don't need any more stuff." If I
791 give them things for Christmas like jars of jam and chutney they can eat and then it is done.

792 Int: So you can bring it next year again?

793 Part: It is not stuff that is hanging about the house. "We already have five of your paintings,
794 we are good." I can bring them chutney again and it is fine because they will eat it and then it
795 is done.

796 Int: It is a beautiful gift.

797 Part: Yes, I think there is a certain amount of that aspect as well of creative outlet that then
798 doesn't accumulate lots of stuff. Jam was really interesting because the first couple of times I
799 made jam it was just horrendous. Loads of things had gone wrong with my jam and it is
800 really fun. It is a real learning process and it is something I can get stuck into and I can really
801 think about what flavours I want. Then I also have to think about the context of that and the
802 engineering problem of, "How is that going to gel? If I put those things together does that
803 affect the boiling point?" It is a lot more technical than just cooking a meal. In a way that was
804 quite nice because that is a slight engineering problem.

805 Int: Problem solving, there is a lot of that.

806 Part: Yes you get to the point where you see things and you are like, "I could do persimmon
807 jam." You are in the supermarket and you are like, "Mangos, what would I need to make
808 mango chutney?" You also start to get a real feel for if cakes have been homemade or not
809 because you can taste it.

810 Int: Yes, to extend the shelf life you have to use a lot of stuff that doesn't belong.

811 Part: Yes and they are a lot fluffier generally speaking, there is a lot more air in standard
812 cakes. In your homemade cakes obviously they are going to taste totally different because
813 they don't have a lot of that preservative. I quite like shop bought cakes, I don't have a
814 problem with it. I can just tell when somebody has made their cake. We were at an event one
815 day and this lady was like, "I think somebody made these cakes." Both my flatmate and I
816 were like, "No."

817 Int: "These are bought."

818 Part: "These are not homemade cakes." They were like, "How do you know?" I am like,
819 "Because this does not taste like a homemade cake." I don't have a problem with that, but
820 you can taste it. I had a lot of fun making things different colours and making stripy cakes.

821 Int: With food colouring?

822 Part: Sometimes, sometimes it is more with vegetables and stuff because different fruits are
823 going to give you a different colour. You can get edible glitter and stuff, there are a lot of fun
824 things out there if you make cake.

825 Int: So it is a real playtime for you.

826 Part: Yes, definitely. Especially if I am making a birthday cake for somebody it is like now I
827 can get the glitter out. I am not a really big fan of icing. I kind of feel like my cake should
828 taste good enough without icing. That has always been my general assumption. If you have to
829 put a lot of icing on your cakes it probably means the cake itself doesn't taste that good.

830 Int: You are covering up something.

831 Part: Yes, occasionally there is icing just to play with that is fun. I tend towards creative stuff
832 anyway I guess it is a really nice way of being creative, but not having lots of stuff lying
833 about afterwards.

834 Int: Lots of clutter, yes. Anything else?

835 Part: No, I think you have got a lot to transcribe now. (Laughter)

836 Int: That is great thank you, just great.

837 Part: I could talk about food all day honestly....

C.12 Participant 4: Interpretative Phenomenological Analysis

Interview extract	Descriptive summary	Interpretative summary
<p>Int: Okay, so we can start now. You can start from whatever experience of eating you want or whatever memory of eating you can think of.</p> <p>Part: I am trying to think. I know that neither my mum nor my dad particularly like cooking. My mum used to cook when we were younger and that got less and less as we got older. She was a working mum and she didn't really have the time, but I also think she didn't really enjoy it. Even now she tends to prefer to take her guests out for dinner rather than cook them dinner at home. I don't think she has that association of enjoying cooking. My grandma didn't necessarily enjoy cooking, but she cooked the whole of her life. She would cook dinner for my grandpa every day.</p> <p>Int: Was she a housewife?</p> <p>Part: Yes, I think having more time made a difference. I think also the historical era made a difference because obviously when we were young my mum already had quiches that you could just throw in the over, whereas I guess my grandma didn't have that. My grandma used to make cake and then when my grandpa was entertaining people she would have several different types of cake that she would serve and it was always made at home. There were particular cakes that were her speciality cakes that I associate with her and eating with her. She used to really love going out for coffee and I think I inherited a lot of those traits from her. We used to go out for coffee together. When I was little, I didn't really like coffee then I would have a fruit juice and we would have a slice of cake together. It was interesting because she was diabetic, so she wouldn't necessarily eat a lot of the cake herself but she would make it for other people. She would always make me have cake. She would always be like, "No, have desert." I think she saw our time together as a treat, it was extra to what I would normally be having at home. It was her way of connecting with me.</p> <p>Int: Treating you?</p> <p>Part: Yes, she was from Vienna and they have a lot of cake and they have a lot of coffee. I think for her</p>	<p>Parents did not enjoy cooking a lot</p> <p>Grandma cooked every day for grandpa, being a housewife and female in particular historical era made all the difference</p> <p>Grandma had her own speciality cakes that she baked regularly</p> <p>Grandma loved going out for coffee and that was their special time together</p> <p>Having a desert characterized their time together as a treat and a way of connecting</p>	<p>Parents did not enjoy cooking</p> <p>Grandma cooked every day</p> <p>Grandma baked regularly</p> <p>Going out for coffee was a treat</p> <p>Having cake with grandma was a time for bonding</p>

<p>that was a really big part of her culture was that coffee and cake is what you do. I think I only received one family heirloom recipe from her, but it was one that is really specific to her. I only ever tend to make it when I miss her, she has been dead two or three years. When I miss her then I make her cake basically.</p> <p>Int: Is that your way of connecting with her now?</p> <p>Part: Yes, I think it is also a way of connecting with my childhood when she was still alive. It is a kind of nostalgic action I guess.</p> <p>Int: That is very interesting.</p> <p>Part: Yes, I bake quite a lot myself. It is interesting because growing up I didn't watch my mum bake. I wasn't one of those kids who used to stand by the stove while she was making dinner because she didn't really do that kind of stuff. She doesn't really enjoy baking, it is not something she does. I don't think my sister particularly enjoys cooking, I think her partner is the one who cooks in their relationship. My step-mum is the one who cooks with my dad. My dad does a few things, he helps in the kitchen but I don't think he is very creative with his cooking or that it is something he enjoys. I think he likes food, but not necessarily cooking. I quite like cooking and I specifically like having dinner with people. I see food as a really social experience most of the time. I will meet people for lunch, I will meet people for dinner and I will meet people for coffee.</p> <p>Int: And you will cook for them?</p> <p>Part: I will often cook for them. Sometimes that might be dinner out, but it could be dinner at home or dinner round at somebody's house where you are sharing food. That is quite important I think.</p> <p>Int: Sharing food is important?</p> <p>Part: Yes.</p> <p>Int: Could we explore that a little bit?</p> <p>Part: Yes, sure. It is interesting because I am not sure where it came from. I think I am also generally quite creative. I like making food and then giving it to people. I will make jam and then give it to people as presents.</p> <p>Int: Is that like a gift of love, a gift of appreciation and something more personal than a bought gift?</p>	<p>She got one heirloom recipe from grandma and will bake this particular cake whenever she misses her</p> <p>The cake connects her with her grandma as well as her childhood</p> <p>Enjoys cooking and sees food as a social experience</p> <p>Sharing food is important</p> <p>She likes making food and then giving it to people</p> <p>It is both, an expression of creativity and sharing</p>	<p>Nicola will make her grandma's cake whenever she misses her</p> <p>Way of connecting with grandma and childhood Nostalgia</p> <p>Eating and sharing food is a social experience</p> <p>Enjoys both, making and sharing of the food</p>
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<p>Part: Yes, it is partly a creative thing in me that I quite like doing stuff. Then it means once I have done that I have that. That is a thing that I have got and I can give it to other people. I think it is both, it is like an expression of my creativity and it is also a sharing of what I am doing. A friend of mine has a vegetable patch and she grows her own vegetables. If she has got leftovers then she will often give me some and I will make chutney. I quite like the idea of... I get quite creative with taste and flavour and I really enjoy that.</p> <p>I really enjoy baking and I really enjoy having certain boundaries set and then having to think about it. One of my friends for a while really suffered with wheat and then I had to think about all the cakes I could make that didn't have any wheat in them and how do you get around that boundary. My flatmate's daughter has a dairy intolerance, so that was really fun looking up ways of making her deserts that she could have without any dairy because when she goes out to eat there are hardly any options. She came to visit and I got to plan a whole entire meal around having no dairy in anything. It was quite exciting, it was nice to have a certain boundary and knowing that people are going to enjoy it at the end made it a more worthwhile project than just me sitting around the place going, "Okay, I could make some jam." If I could make some jam for this person and then that means I got to tailor it to whoever I am making it for.</p> <p>Int: It is not just creativity for you, but it is also problem solving because you address these issue like dairy intolerance and a wheat intolerance. Trying to find your way around that and remain creative.</p> <p>Part: Yes, I quite like that. I think because I have been vegetarian for a long time I am used to looking at recipes and substituting things. I might start from a recipe and then by the end it will look totally different because, "Right, that is beef. I guess I could substitute that with lentils." You get this really nice feel for what different things do in food.</p> <p>There is also a thing about flavour when you are a vegetarian because I think a lot of meat dishes you get meat and then you get the accompaniments around meat. That doesn't really happen with vegetarian cooking, so you will get more of a range of what you are eating, how they all meld together, what flavours you want to bring out and what spices you are using. I think that is why a lot of people really struggle when they go from eating meat to being vegetarian because it is a different way of thinking about food. Especially in this country where</p>	<p>the product of that creativity</p> <p>She likes the problem solving in trying to make tasty cakes for wheat intolerant or dairy intolerant people, it makes the task more exciting</p> <p>Being vegetarian enabled her to think in terms of substituting things</p> <p>Being vegetarian is a different way of thinking about food</p>	<p>Enjoys the challenge of problem solving and being creative with ingredients</p> <p>Vegetarians often learn to substitute meat</p> <p>Being vegetarian is a different way of thinking</p>
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<p>you get a lot of, “I have got chicken, so now we need potatoes (Laughing).”</p> <p>Part: Or I have got beef so then I have this and this. With vegetables you can’t just be like, “I have got carrot and that is all I am doing.” I have got several different things, how am I going to put that together and what flavours do I want today and what spices do I want to add and what texture do I want? I think being vegetarian has definitely helped the creative aspect of food.</p> <p>I think I do really enjoy eating with other people. Even in our house we are a bunch of professionals who live together, there are four of us. We always have dinner on a Sunday, we have at least once a week when we all get together and cook and we each cook once a month. It is really nice because we all get together. That is over dinner, it is not like we get together and go to the pub once a month we get together and have dinner.</p> <p>Int: At home?</p> <p>Part: Yes. I probably cook better meals when I am cooking for other people than I would just for myself. I think sometimes if it is just me it is like, “I can have toast.” That is fine, I like toast. If I am with somebody else I want to give them things. I want to make them things, nourishing things. It gives me a chance to connect with the food I am eating rather than just grabbing something on the go.</p> <p>Int: Connecting with the food you are eating, could we explore that? That is very interesting.</p> <p>Part: Yes.</p> <p>Int: There is a lot of mindless eating, but how do you connect? What is the difference in the experience of mindless eating and really connecting with the food you are eating?</p> <p>Part: It just completely transforms the whole experience of what you are eating. When you start paying attention to what you are eating you kind of notice the flavour and the texture. You notice whether it is made well or not. I have my moments when I am eating something because it is convenient and I know that is why I am eating it. It is quick, easy and I can throw it in the microwave and that is it. On the whole as soon as you start paying attention you are like, “Wow, this tastes really...” I can taste the chemicals or I can taste the food colouring. I can taste a lot of things when I am eating and paying</p>	<p>Being vegetarian helped creative aspect of food</p> <p>Four professionals living in the same household cooking together and for each other on regular basis</p> <p>She cooks better for others, then she would for herself alone</p> <p>She wants to make them and to give them nourishing things</p> <p>It provides her with an opportunity to connect to food</p> <p>Connecting with food is paying attention and noticing different flavours and textures</p> <p>Mindless eating is about just grabbing food on the go</p>	<p>Being vegetarian helped creative aspect of food</p> <p>Cooking together and cooking for each other</p> <p>She cooks better for others</p> <p>Making and giving nourishment</p> <p>Connecting with food</p> <p>Connecting is paying attention and noticing</p> <p>Mindful vs. mindless eating</p>
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<p>attention. Maybe if I am just mindlessly eating I am like, "I just need to grab this."</p> <p>I think when I started paying more attention to how I ate then I started to really think. First of all I am full quicker than I think I am. If I am not paying attention I can eat a whole entire big tub of food and not think about it. When I start paying attention it is like, "Actually I could get away with eating half of this." That would save me money on my food because I would literally be eating half the amount of food if I paid attention for half an hour to what I am eating rather than just grabbing it and going. There is an aspect of noticing what your body is doing in response to food in terms of how full you are. Also how nourishing it feels and what I want. It will be like, "Today I really want sweet potato or beetroot."</p> <p>Int: Let's stay here, what would influence that?</p> <p>Part: What I really want that day?</p> <p>Int: Yes. Is it your mood or is it what you have got in the cupboard?</p> <p>Part: I think it is a bit of everything, sometimes it is the mood I am in. Sometimes it is the weather, now that the weather is a bit colder I definitely eat different things than in the summer. I really want stews, soups and...</p> <p>Int: Stodgy things? Warm and stodgy?</p> <p>Part: Yes, something really warm and a bit soft and squishy like roasted things. I generally tend to eat more warm foods than colds food anyway. Even in the summer I am not a big fan of salad and things like that often. Sometimes when it is really hot the last thing you want is a roast. Whereas now that is autumn that is going to make a difference. Also what I have been doing, so how stressed out I am maybe affects my food choices. It is interesting because sometimes I will gravitate towards eating sugar and then afterwards I will be like, "Actually that was really the wrong thing and now I feel worse." I am kind of learning. I think as I got into my 30s I really started learning there are definitely things that even though I think I am craving I am really not. There will be days like if I am pre-menstrual then I really want chocolate. I don't want Cadbury's chocolate or Galaxy chocolate I want really dark cocoa, like 90%, really good quality. I only need a couple of squares, but it is just that thing of you know instantly.</p> <p>Int: What does it do for you?</p>	<p>Mindful eating results in slower eating and reduced consumption of food</p> <p>Awareness of bodily cues accompanies mindful eating</p> <p>The choice of food is influenced by the mood, the weather and by what is in the cupboard</p> <p>What she has been doing and the levels of stress she is feeling will affect the choice of food</p> <p>She craves a couple of squares of dark chocolate when premenstrual</p>	<p>Awareness of bodily cues</p> <p>Influences on food choice are many and varied</p> <p>Craves dark chocolate when pre-menstrual</p>
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<p>Part: What does it do?</p> <p>Int: Is it a mood thing or a reward thing?</p> <p>Part: I think it is a mood thing. I don't tend to use food as a reward very often, which I know is quite rare in our culture.</p> <p>Int: How would those few pieces of good quality chocolate alter your mood on those days? We all know what those days are like.</p> <p>Part: I think it makes me less grumpy. When I am pre-menstrual I tend to either snap a little bit or I will cry, so I get both. Some people are one or the other and I seem to get both and chocolate just seems to help. It has to be actual cocoa and I only need two squares of that. If I have a chocolate bar that is more milk really and sugar then I could eat three of them and it is not going to have the same. It is not about the sugar that is not what I am craving at that time it is definitely something about the cocoa. That took me a long time to realise as well and then I spent less money on chocolate, so that was nice.</p> <p>Int: That is good. You were a bit grumpy before chocolate and then afterwards do you feel calmer or happier?</p> <p>Part: Yes, just a bit more settled. I am like, "I can cope with the day now. It is okay." I really get cravings for certain foods. It feels like a craving, it doesn't feel like, "I just quite fancy avocado." It is like, "Today I really need to go out and buy an avocado because that is what is happening." Other days I am like, "I quite like avocado or maybe I could have this or maybe I could have that. Let's see what is in cupboard." I definitely have days when I am like, "No tomatoes today."</p> <p>Int: There has to be a right day for that right food?</p> <p>Part: Yes, it is not an obsessive thing. If I go out to a friend's house for dinner and they serve me something with tomatoes I am not going to be like, "That is it, I just can't eat what you have given me." I would probably maybe do that with meat because that is something that I never eat, I never eat meat or fish. With vegetables I have days where I prefer one thing over another, but sometimes you...</p> <p>Int: Do you have foods that you crave more often than others?</p>	<p>Chocolate would make her feel less grumpy and more settled</p> <p>It is not the sugar but the cocoa that she craves</p> <p>She gets cravings for certain food on certain days</p> <p>There are foods that she will not feel like eating on certain days</p>	<p>Eating chocolate makes her feel more settled</p> <p>Craving is for cocoa not sugar?</p> <p>There are good and bad days for eating certain foods</p>
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<p>Part: Sweet potato and beetroot. I love roast potatoes, but I don't really crave them. I really enjoy them when I have them and sometimes I think, "That would be nice today. I never have days where potato is the only thing that I eat. I have some days when I really want particular spices.</p> <p>Int: That is interesting.</p> <p>Part: Some days when I am feeling a little bit fuzzy then things like fennel, caraway and cumin. I have days when I am like, "Get curry, I really want curry today." Something a bit spicy.</p> <p>Int: When you say fuzzy what does that mean?</p> <p>Part: You know when you are not very concentrated, maybe I didn't sleep well the night before. Maybe I am just feeling a bit down and curry is like a hug in a bowl. So many of my friends eat curry and are associated with curry for me where it has also got that added emotional extra where I am thinking about all the times I have eaten curry have probably been good times. It is that added emotional context. A lot of it will also be the impact that I have got on my bodily system.</p> <p>Also making curry is a really nice process because it is very loosely termed in terms of what you need to throw in there, it is not a really specific recipe. I can see what I have got at home and I can be like, "I have run out of turmeric, but I have got onion seeds. I have run out of curry leaves, but I have got ginger." It is quite nice and you get to be quite creative with it when you are making it. I almost never fail to want ginger, ginger is always a thing. Cinnamon is always a good idea. I quite like cardamom, but that is quite a specific flavour and I know a lot of other people don't like cardamom. That is definitely something that I moderate, if I am just making something for myself then I throw it in.</p> <p>Int: So spices are important?</p> <p>Part: Yes.</p> <p>Int: Do you think more so because you are a vegetarian?</p> <p>Part: I think so, I don't know.</p> <p>Int: How did that come about?</p> <p>Part: Being vegetarian?</p> <p>Int: Yes, is that a moral choice?</p>	<p>She also craves particular spices</p> <p>When fuzzy she feels like fennel, caraway, and cumin</p> <p>Having a curry is like having a hug in a bowl. She associates curry with friends and with having good times.</p> <p>Also, making it is an enjoyable process.</p> <p>She became vegetarian when her mother had a partner who was vegetarian and refused to cook meat</p>	<p>Craving for spices</p> <p>Spices can clear fuzzy head</p> <p>Curry is a hug in bowl Associations with friends and good times</p> <p>Preparing curry is an enjoyable process</p> <p>Became vegetarian at 11 when her mum had a partner who was vegetarian</p>
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<p>Part: Yes, initially what happened was my mum had got together with a partner who was vegetarian and she made my sister and I become vegetarian when I was about 11. She was like, “Right, that is it I am not cooking meat.” We were like, “Okay, whatever.” Then I think when she started eating meat again... I was 11 at that stage and in the years that followed both my sister and I realised that as an ethical choice it was pretty sound anyway.</p> <p>When she started eating meat again neither of us followed suit, so both of us are still vegetarian and my mum started eating meat a long time ago. I think I maybe thought about it when I was 15 and was like, “Do I still want to carry on being vegetarian is this what I really want to do?” That was when I really made a decision rather than just I was in the habit.</p> <p>Int: It was your decision and not your mother’s.</p> <p>Part: I was like, “Actually yes, I don’t feel right about eating meat.” When I was living abroad I started to let go of eating fish. I probably haven’t eaten fish for about 16 or 17 years and then a few years after that I stopped eating gelatine. I was kind of thinking, “That is really ridiculous that I don’t eat meat and fish, but then I am still eating things with bits of bone in them.” It just felt like a natural progression. I don’t think I am going to become vegan any time soon, but it is something that I think about is the ethics of food production.</p> <p>When I buy eggs for example I buy free range organic eggs. If I can get local eggs from somewhere where I can see the conditions then that is great and apart from anything they taste so much better. I just think I should be responsible for my food choices. I quite like buying food in season and if I can then I will try and buy local food. Again I feel like it tastes a lot better, it hasn’t transported half way across the world and so you don’t have that delay, there is still a lot of flavour there. I think if I am not responsible for my food decisions then who is going be.</p> <p>We are really fortunate in Kent because there is just so much here. There are so many little farms. We have plums, we have apples and we have got root vegetables in the winter. I think it was few years ago that I started to trying to eat more in season. I don’t do it with everything because it is hard. I really like quite exotic things like sweet potato, which are never going to be grown in this country and avocado. It is one of those things obviously where you have to be quite careful, but if I can get it local then I will.</p> <p>For example with cherries and strawberries I only eat them when they are in season. That is really nice because it means that first of all the cherries taste</p>	<p>As an ethical choice it made a lot of sense and she stuck to it long after her mother split up with her boyfriend</p> <p>It feels like a natural progression to her and at present she doesn’t eat fish and gelatine as well</p> <p>She likes to eat seasonal foods locally sourced</p> <p>She considers herself fortunate since Kent has so many little farms</p>	<p>Remaining vegetarian was a personal choice</p> <p>Becoming vegetarian was a natural progression</p> <p>No fish or gelatine</p> <p>Seasonal, locally sourced produce is preferred</p>
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<p>really great. Cherries have a six week cycle in the summer and then it means I get to wait for the rest of the year until the cherries come round and then it is really exciting to eat cherries again.</p> <p>Int: Looking forward to that time?</p> <p>Part: Yes and I always associate cherries with that summer time. There are certain things that I might do, I might pickle things or make jam, which then obviously means I can eat things for most of the year. It is just really nice to be able to go out and be like, “It is cherry season.” It is really exciting and it is a flavour that I haven’t had for a while, so it is quite exciting. If I could eat cherries all year round then it just wouldn’t have the same...</p> <p>Int: So it contributes to the pleasure that you get to be eating them at that particular time of the year knowing that it is just short lasting and you have to make the best out of it.</p> <p>Part: Yes, I also think that is around the time that is what my body really wants too. My body doesn’t want cherries in the winter time, my body wants potatoes, cabbage and carrots.</p> <p>Int: Something warming?</p> <p>Part: There is a reason why I don’t eat lots of stews in the summer and similarly I think with fruit as well you get a lot of really fantastic fruit. Then in the autumn you are starting to look at plums. You are getting the flavours changing as time goes on. I think for me that keeps me connected to my environment a little bit as well because I am really aware that...</p> <p>Int: Does it make you feel a bit more real that you are in tune with seasons around you and with the natural world?</p> <p>Part: I have got one of those jobs that I am not outside and I am not working the fields, I could quite easily just eat whatever. I live mostly in unnatural light because I get up earlier than the sun now and I go to bed after the sun has gone down. I think there is a certain amount of not feeling very connected and not feeling very grounded. I guess food is a nice way to ground you in your environment too.</p> <p>I really love eating foods of different types as well. One of my favourite things about travelling is eating different food. I get really excited about trying... When I went to Poland for the first time it was really exciting because I genuinely wasn’t expecting there to be as much vegetarian stuff. I was so happy and I</p>	<p>It adds to her excitement to eat the food only when in season.</p> <p>Also, she believes that her body craves the foods that are in season</p> <p>Changing the flavours with the changing seasons keeps her connected to the environment</p> <p>Food is a nice way to ground you in your environment</p> <p>One of her favourite things about travelling is trying local foods</p>	<p>Eating food in season adds to the excitement</p> <p>Her body craves foods in season</p> <p>Way of connecting to and grounding in the environment</p> <p>Travelling is about tasting different cuisines</p>
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<p>Part: Yes, I think I am one of those all things in moderation people throughout the whole of my life anyway. I try not to work too hard and I try and get a balance with my personal life and my work life. It is the same with my food I guess. I don't have a problem really with bad food necessarily, but I really enjoy good food. One of my flatmates when he cooks a Sunday dinner he gets really nervous because he is really meaty and I am quite clearly not. He is like, "No, I can accommodate you that is fine." It means that he starts to worry about it the week before.</p> <p>Int: He has to think?</p> <p>Part: "Oh God, what am I going to make?" I know I am vegetarian, but that is the only issue I have. I am not allergic to anything, but also I do like everything. I am pretty happy to eat whatever you put in front of me as long it has no meat in it. If you want to make me beans on toast I can eat beans on toast, I quite like beans on toast actually so it is not an issue. He is like, "Oh okay." He gets really nervous about it and it really surprises me. I guess it is because some people really are fussy about food and they can't imagine liking everything. I am quite happy to drink bad coffee, but when there is good coffee then I am like, "Wow, this is really good." I think it is maybe just that...</p> <p>Int: You are quite laid back about it?</p> <p>Part: Yes.</p> <p>Int: But you appreciate good stuff when you get it?</p> <p>Part: Yes, definitely. You know if somebody is too busy to cook me something decent that is fine, I appreciate that people are busy. If somebody doesn't really know what they are doing with meat substitutes, he uses a lot of meat substitutes and I think it is because he cooks meat so then he will be like, "I will just find some vegetarian sausages. I will just find a vegetarian equivalent of mince." Obviously I would be like, "Maybe I could put lentils or maybe I could do this or that."</p> <p>Int: He is not as creative would you say?</p> <p>Part: No, not at all. I think for some people they literally eat because they need to eat and it is a sustenance thing. That is not the case in terms of how I think of things. Obviously I am aware that other people have different ideas about food and that is fine. It is quite nice sometimes to see what somebody</p>	<p>Moderation is the key with everything including food</p> <p>She is quite happy to eat most foods but really appreciates good food</p> <p>Some people eat for sustenance, for her it means a lot more</p>	<p>Moderation is her motto</p> <p>She is quite happy to eat most foods but really appreciates good food</p> <p>Food is a lot more than just sustenance for her</p>
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<p>enjoyed the process of coming up with that menu. You go to a restaurant and you see a really exciting menu and it is because the chef has sat down and gone, “Do you know what, this is really exciting guys let’s do this thing. Let’s put saffron in the custard.” I don’t know, whatever you are doing. I think that sometimes it is a question of the kind of atmosphere around the food. I know that sounds really vague and a bit weird.</p> <p>I think sometimes you can taste if there has been attention that has been given to that. Maybe even sometimes they have broken a few rules, but it tastes really good because it really works. Somebody has got a really good instinct as to how those things go together. They are tastes you wouldn’t expect, but they somehow magically create an effect that you weren’t expecting.</p> <p>Int: Interesting, so food can excite you, it can surprise you and it can comfort you. Anything else? It can make you creative because you are a cook as well.</p> <p>Part: Sometimes it is just about comforting. It is about solid, I know what I am doing and I am not experimenting today. I know exactly what I need, this is what I need and that is it. I think I really like the social aspect of things as well, maybe that bonding.</p> <p>Int: If we can explore that bonding. How do you think that bonding happens through sharing the food, tastes or conversation?</p> <p>Part: I think all of those things. It depends who you are having food with because some people it is going to be centred around the food. Some people are very foodie and they have conversations that are about the food. For some people even if it is not about the food itself it is like... I guess I meet my friends for dinner quite a lot. I cook with my friends sometimes too. My friend makes sushi regularly and she is like, “Come round, we can make sushi together.” I bake quite a lot with friends, so the process of preparing food together I think is also bonding where you are doing something side by side.</p> <p>If you have got two people in a room and you have got nothing else to do then it can be quite intense. Whereas if you are drinking tea or you are eating something you can have quite intimate conversations about personal things and the pauses in between aren’t awkward because you are like, “Now I am chewing. Now I am drinking.”</p> <p>Int: That is quite interesting.</p>	<p>Sometimes food is just about comfort</p> <p>Social aspect of eating is in bonding it facilitates</p> <p>Process of preparing food together provides an occasion for bonding, doing something side by side</p> <p>Eating and food can dilute the intensity of intimate conversations</p>	<p>Food can be comforting</p> <p>Eating facilitates bonding with others</p> <p>Cooking together is also an occasion for bonding</p> <p>Eating dilutes the intensity of intimate conversations</p>
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<p>Part: It minimises distress sometimes. I think you end up having some quite revealing, intimate and fun conversations that maybe you don't have if you are not....</p> <p>Int: That is so interesting. They don't feel so heavy because there is that sharing of food that goes on all the time, so disclosures don't feel so important.</p> <p>Part: You are like, "Oh yes, my relationship is falling apart." Rather than like, "Yes, so..." Then it is like silence. You are just sitting there going, "What are they going to say?" It gives you something to do with your hands.</p> <p>Int: It doesn't feel awkward?</p> <p>Part: Yes, with some friends of mine we literally share food. We will go out for dinner, we are both vegetarian so we will eat half and then swap. You get two meals for the price of one, so you get to try a lot. Maybe it is a little bit different if you are on business lunches, it is a little bit less personal maybe. I think I would just be having lunch with people over business. For example if you think about breakfast I don't think I have ever had breakfast with somebody who I didn't like. I would have brunch with friends or I share breakfast quite a lot with my housemates or with a partner. I think breakfast is one of those meals where it is associated with bonding.</p> <p>Int: Bonding over breakfast.</p> <p>Part: Yes because you are sitting there sharing a cup of coffee with somebody that you love or you are sharing toast.</p> <p>Int: But it does imply that you live in the same house?</p> <p>Part: Yes or if you arranging to meet people for brunch or something then this is somebody that I really care about. It might be on a weekend, so weekend breakfasts are glorious. There are some brilliant breakfast foods out there. Some of my friends know that I really love breakfast, so they will often meet me for breakfast and it is great. It is like a really nice... I think it is just the time I associate for people that I really love or people I really get along with.</p> <p>Int: Would you say breakfast was the most intimate meal?</p>	<p>It minimizes distress so you can have more revealing conversations then you would have otherwise</p> <p>You never have breakfast with someone you don't like. She associates breakfast with bonding.</p> <p>Weekend breakfast are reserved for the people she really cares about</p>	<p>Eating minimizes distress of intimate disclosures</p> <p>Associates breakfast with bonding, intimacy of context</p> <p>Breakfasts are reserved for people you love</p>
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<p>Part: Yes, whereas you kind of have lunch and dinner with anyone really if you think about it. How many times have you gone out for dinner with people that you barely know? How many times have you had lunch at work with your colleagues who you barely know? It is just a different context I guess. I am quite a big fan of breakfast. I know that is really weird, I am not sure how many people say that.</p> <p>Int: So not all meals are made equal, some of them are more important?</p> <p>Part: Yes, I guess culturally there is a difference. Maybe some people go to breakfast meetings, but I don't have a really high-powered job so I don't need to share my breakfast with everybody.</p> <p>Int: You can have your breakfast in your pyjamas with the people you know really well.</p> <p>Part: Yes, exactly. I also think I really like breakfast foods. I don't know why we have this weird division where we don't eat certain things for breakfast and we do eat them all the rest of the day. My parents are Israeli and my mum just eats salad for breakfast, the salad from the night before and she will have that for breakfast. Her partner is like, "What are you doing? What is that?" I will have curry for breakfast if I have got curry left over. Toast and pancakes are really fun, they are a really social breakfast. My step-mum and I used to make granola together, so that was always really fun having that for breakfast. It was interesting because my old flatmate used to drink smoothies for breakfast and I found it really weird. It was like, "Does that really fill you up?" I think the thing about smoothies is maybe it fills them up, but I think the psychological context of drinking a smoothie for breakfast for me just wouldn't do anything because I haven't eaten.</p> <p>Int: They are liquid?</p> <p>Part: Yes, I haven't eaten anything. Then I am happy to eat soup, so who knows. I guess you eat soup with a spoon whereas with a smoothie you literally drink it, so it feels...</p> <p>Int: And soup is probably warm?</p> <p>Part: Soup is warm and smoothies are cold. There is something about it being an actual eating thing.</p> <p>Int: You did mention you preferred warm foods, I recall that.</p>	<p>The importance of context: she can have lunch or dinner with people she hardly knows but breakfast is not shared with everybody</p> <p>She also likes breakfast foods</p> <p>Smoothie for breakfast would not be satisfying because it's not "eating"</p>	<p>The context of breakfast implies closeness and intimacy</p> <p>She likes breakfast foods</p> <p>Significance of "eating" a meal as opposed to "drinking" a meal</p>
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<p>Part: Yes and no. If I have had a really stressful day it is nice to come home. I think food is part of feeling at home. I think I could feel at home in lots of places. I am more than happy to go into somebody else's kitchen and cook, that is not an issue.</p> <p>Int: It is not really something that you would do just at home?</p> <p>Part: No, but it is a feeling of home. It is not really a place home, but a feeling of home. Yes, of belonging somewhere. Again I think it is one of those intimacy things. I don't think I would be cooking in somebody's kitchen unless I knew them. Again it is related to bonding and doing stuff with someone.</p> <p>Int: Who is close, someone close?</p> <p>Part: Yes, although I have hosted banquets and stuff before when I was fundraising for an organisation. We used to do a four course banquet every year. I guess there is an aspect there of a slightly different approach to food.</p> <p>Int: What do you think of formal eating?</p> <p>Part: What is that?</p> <p>Int: Formal eating and entertaining.</p> <p>Part: I used to cook for 12 to 20 people, so it doesn't bother me. It doesn't faze me, I know some people get really terrified in the kitchen when you have to cook for six people and then they just go crazy and it is really stressful. I don't find it stressful to cook for six, cooking for six is the same as cooking for two it is just more ingredients. I am usually quite organised in terms of timing and stuff. Occasionally it all goes horribly wrong and then you just have to go, "Okay, well I guess that is where we are at today." Most of the time I guess because I am relatively organised and I clean up as I go along it is not like I... I don't think I get that stressed out when I am cooking. One of the people who was helping me chef for a banquet was like, "You are the most relaxed chef I have ever met in my life." I think it is partly because I am really good at getting all the preparation stuff done and it just makes things a lot easier.</p> <p>Int: How many people did you cook for, it was a big party?</p> <p>Part: Yes, it was several years running we used to host a banquet, so I would cook for 20 people. It</p>	<p>Food is part of feeling at home</p> <p>It is not a place home, but a feeling of home. It is about belonging somewhere and intimacy.</p> <p>You would not cook in somebody's kitchen unless you knew them really well.</p>	<p>Food is part of feeling at home</p> <p>Food creates the feelings of belonging and intimacy</p> <p>Cooking in someone's place is a sign of belonging and intimacy</p>
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<p>would be four courses for 20 people, but there were three options for desert so technically I guess there were seven courses. I would get to draft a menu, so every year we had a different theme. One year was tropical, another year was African and another year was South American and that was really fun. Then I got to sit down and think about all the flavours and the textures that were happening in every course, how they went with each other and then what ingredients I was using. For tropical nearly everything has sweet potato or coconut in it. I was like, “I have to try to find some recipes so it balances out.” That was really fun actually. I think constructing the menu was one of my favourite things.</p> <p>Int: Again this thing of problem solving comes back.</p> <p>Part: Yes and that really nice experience because it was for a purpose and it was like, “Wow, I can really take my time over this.”</p> <p>Int: It is a bit of a challenge as well?</p> <p>Part: Yes, really thinking about what flavours would I really want to go with each other. “Am I going to have rice with that or couscous?” Just that really nice, “What texture do I want in this?” It sounds like I am being really analytical, but a lot of that is done intuitively for me. Afterwards I can sit down and say, “Yes, I was thinking this, this and this.” At the time it is not like I am sitting there all day just being like, “The pros of using coconut in this...” Occasionally I might have a decision I need to make between two things. Most of the time it is like, “Yes, these flavours. That is where I want to go.”</p> <p>We also had to create non-alcoholic cocktails for that too, so that was really fun. I got to experiment a bit again with flavours for that. Then three different deserts and that was always really fun because then I got to look at, “What deserts does this culture have?” There is always something. Deserts are one of those things that nearly every culture has really good deserts because they are decadent. Desert isn’t a food you eat for sustenance, it has to be...</p> <p>Int: Yes, this is an interesting issue. How do savoury and sweet foods differ in the way they affect you or times of when you would resort to either savoury comfort food or sweet comforts, is that different?</p> <p>Part: Yes.</p> <p>Int: Do you have particular moods that would direct you towards savoury or towards sweet?</p>	<p>She used to host banquets in the past</p> <p>It was an enjoyable experience</p> <p>Combining flavours and textures</p> <p>Deserts are about decadence not sustenance. They are good in every culture</p>	<p>Deserts are about decadence not sustenance in every culture</p>
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<p>no.” It wasn’t until 7:30 or so before I even wanted anything to eat really. It was just this habit of coming in the door. I was like, “Okay, that is interesting. Why do I do that?” Then I had to start asking myself if I am not hungry right now then what is it that food is doing for me? There is some sort of fulfilment I am getting from that, so what do I need? Actually it turned out to be loads of different things. There was one day when I was kind of like, “You know what I want to go for a walk.” One day I was, “Actually you know what I want to do, I want to just sit and watch TV.” In my mind watching TV is linked to maybe consuming snacks and then I had to disassociate that and be like, “I am not hungry and I can perfectly watch TV without snacks, it is fine.” It was a habit that had somehow got intertwined. I was like, “Okay, that is interesting.”</p> <p>I started trying to not look at my phone during breakfast. I could have a conversation with somebody, but if there was no one else in the room then I would be like, “I am going to try for a week not to look at my phone over breakfast. I am not checking the news, I am not looking at Facebook, I am not looking at anything I am just eating my food and that is all I am doing.” It hasn’t altered how much food I eat because I have two slices of toast with jam, marmite, cheese or whatever. I really noticed that I eat slower and I haven’t just sped through that in 10 minutes. I eat slower and I can really taste the rhubarb in the jam. I can see how much sugar, “I put a lot of sugar in that jam and next time I am going to reduce the amount of sugar in the jam because it would be nice to have a bit more of an edge.” It was just one of those things where I was like, “Wow okay, that is interesting.”</p> <p>I think I started really noticing the texture of my bread. I would be drinking miso soup and it would be like I could taste the saltiness in that and I could taste the beetroot in that pickle. I can feel the difference between the pickle, the mustard and the bread when I was eating.</p> <p>Int: It was a different experience?</p> <p>Part: Yes, it was a whole different experience. It was like, “Wow, I should pay more attention when I eat things.” Somebody has gone to time and effort of constructing that for me. It was like this really interesting experience and I was kind of like, “I really enjoyed that. I really enjoyed eating mindfully.” Then sometimes occasionally of course I still have my moments when I am totally mindless about things.</p>	<p>straight for the fridge whether she was feeling hungry or not</p> <p>A range of different needs was being fulfilled by the food</p> <p>A habit of watching TV was intertwined with snacking</p> <p>Mindful eating helped get rid of some bad habits</p> <p>She finds paying attention to food and eating mindfully is very enjoyable</p>	<p>Opening the fridge signifies the end of a working day</p> <p>Variety of personal needs come to the fore and get to be fulfilled with food</p> <p>Being mindful of your underlying needs helps</p> <p>Eating mindfully is enjoyable</p>
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<p>Int: Would you say that if you eat mindfully you eat slower and you eat less?</p> <p>Part: Yes.</p> <p>Int: Can you have mindful eating in the company of other people?</p> <p>Part: Yes.</p> <p>Int: So you can still do that?</p> <p>Part: Yes. I do think the social aspect of eating is really important for me. I wouldn't want to just sit in silence completely because part of eating in a group for me is that bonding experience. I think you can still focus on what somebody else is saying and still be tasting the food in your mouth. Obviously it is going to be a slightly diluted experience. If I am listening to them I am probably eating slower anyway because I am listening.</p> <p>Int: Exactly, yes.</p> <p>Part: It was a really interesting experience of having to take stock and be like, "What do I use food for now?" You have to face up to whatever is going on with you. I would be standing at the fridge and just going, "What is happening to me?" I would be like I eat when I watch TV because I am bored. That means that I need to either find something else on TV or switch the TV off and go and do something else. Maybe I eat sometimes because I feel lonely. I eat because it makes me feel more grounded, some days if I am a bit spacy then I eat to make me feel grounded. It is like, why don't I do some meditation instead because that is going to be thing that really brings me back into my body.</p> <p>Int: That is interesting eating and bodily experience. Sometimes it brings you back to your body, eating can be grounding. I guess sometimes one eats for that reason.</p> <p>Part: Yes, I think so. I think if you asked most people I am not sure how aware they would be of it.</p> <p>Int: Is that what you feel? Did I understand correctly?</p> <p>Part: Yes, I have been practicing meditation for many years, so I guess I am used to being mindful about things in other contexts. It didn't seem that far of a stretch to be mindful about my eating as well. It is actually a really easy context to be mindful in</p>	<p>Eating mindfully in the company of others is possible, although diluted experience</p> <p>Eating when feeling lonely, bored or spaced-out</p> <p>Eating is an easy context to be mindful in since it has a designated time</p>	<p>Mindful eating is diluted in social situations</p> <p>Loneliness, boredom and spaced-out feeling are prompts to eat</p> <p>Eating is and easy context to practice mindfulness</p>
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<p>because you have got a designated separation between when I am eating and when I am working. I definitely think that maybe because of my mindfulness practice I notice a lot more about my sensations than I would otherwise. If I didn't meditate I think I would still be...</p> <p>I think in my teenage years I didn't have much awareness of my body and I was floaty somewhere in my head all the time thinking. When I started to really practice meditation one of the things you do is you focus on your breath that is one type of meditation.</p> <p>Int: It brings you back to your body.</p> <p>Part: That is a bodily experience that is what you are doing at that time and you become aware of how you are feeling. Do I feel heavy? Do I feel gunky? Do I feel clear? Do I feel light? Do I feel spacious? How am I feeling? What is my body doing at this point in time? Am I congested? Have I got period pains? Is it really that my back is hurting or am I actually just cold and hunching in a certain way?</p> <p>I think that really helps in terms of then thinking about mindfulness. Obviously when I am eating I can feel how that is affecting the rest of my body. It is not just the bodily experience, I think I definitely have emotional connections to eating. I am not one of those people who just eats because that is what needs to happen.</p> <p>Int: What are your emotional connections, could you explore them? The memories of your grandma.</p> <p>Part: Yes, I think comforting. My step-mum and my dad have this thing where we eat all as a family when I visit... They try and do this without me as well. We all as a family have at least one meal where are all together. Usually that is going to be the evening meal, but some days maybe if my dad has a business meal out then we would go for lunch or we will have breakfast together. I guess there is a feeling of bonding, family and we don't answer the phone during dinner.</p> <p>That is a really sharp contrast to what was happening when I was growing up with my mum and my sister at home. We would eat quite a lot in front of the telly and that was partly because as a family my mum, my sister and I were really uncomfortable with each other. The idea of having meals together was actually pretty stressful.</p> <p>Int: Too close?</p>	<p>As a teen she did not have a lot of awareness of her body</p> <p>She eats when watching TV because she is bored</p> <p>Sometimes she eats because she feels lonely</p> <p>She eats because she is a little spaced out</p> <p>Emotional connection to eating</p> <p>She always liked eating family dinners with her father and step-mum. There is a feeling of bonding.</p> <p>With her mother and sister she used to eat in front TV. Partly this was because they were</p>	<p>Lacking awareness of her body as a teen</p> <p>Family dinners are occasions for bonding</p> <p>Family dinners can be stressful if members are uncomfortable with each other</p>
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<p>Part: Yes, it was like, “I don’t want to bond with you that much. We are good, we have our boundaries and we are fine.” If you are watching TV then you don’t have to talk to each other. You don’t have to explore anything. Occasionally she would have a partner who thought it was important and then we would all sit around the table and it would be awkward. I quite like the experience with my dad and my step-mum of having that...</p> <p>Int: Together time.</p> <p>Part: Together time where you don’t answer the phone and you don’t focus on anyone else. This is what we are doing.</p> <p>Int: And it is not awkward?</p> <p>Part: No, I get on really well with my dad so that has never been an issue. We are more similar to each other as well in many ways.</p> <p>Int: It makes it easier.</p> <p>Part: He and my step-mum have been married for 20 years, so it is not a transient...</p> <p>Int: New thing.</p> <p>Part: Yes, they met when I was 13 and they got married when I was 16 that was actually really important that there was somebody in my life who was really like, “Food is family time and that is important.” We bond and that is when we ask each other how our day was and have all of those conversations. I guess I associate food a lot with that really comfortable bonding and talking. Even if you are not really talking the fact that you are sharing your food together creates something that wouldn’t be there otherwise. My grandfather only spoke Hebrew and Polish. I have a vague knowledge of Hebrew, but I am not great and I know no Polish whatsoever. We would sit and have dinner together, he wouldn’t say anything and I wouldn’t say anything.</p> <p>Int: But you were together still?</p> <p>Part: But we were together and we were still eating together. It was still family, it was still a bonding moment I guess. There are certain foods I eat when I think about my grandma. There are certain foods I eat when I think about other members of the family. My step-mum does this really great eggplant parmigiana. She also does..., she spent many years</p>	<p>uncomfortable with each other so the idea of having meals together was stressful. Discomfort was even more pronounced when mum had a partner who would insist on eating together</p> <p>She gets on really well with dad so it eating together was never awkward</p> <p>She liked the idea of food time being family time with her dad and step-mum</p> <p>Sharing food creates something that would not be there otherwise even if you cannot talk to each other</p>	<p>Discomfort is even greater when temporary partners insist on family dinners</p> <p>Even if there is no talking, sharing a meal creates the feelings of togetherness</p>
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<p>in Yugoslavia as it was then. Whenever I eat that I think of her. When I go over there she always make it because she knows I like it. She makes it anyway, I think it is one of her favourite dishes to make. She is very much like, “Oh yes, I know you like this.”</p> <p>Int: She makes it for you?</p> <p>Part: Now when I make it for myself, which I don’t do very often. When I do it reminds me of her because that is one of the things that we bond over.</p> <p>Int: It is her gift to you, gift of love?</p> <p>Part: Yes and she cooks a lot, she quite enjoys cooking. I also think that for her cooking is also a health issue. She likes to make sure that all of her food is organic. She does a lot of those healthy, “Now this year we are going to just eat fermented things because that is important.” The year before she used to drink lots of smoothies with algae in them. My dad and I would be like, “We are going to have toast like normal. I am good with that.” Things like porridge I associate with winter because it is really wintery. I only have porridge for breakfast in the winter when it is nice and heavy and it is going to last me a long time. I guess I do have specific memories regarding food. I am definitely much more of a foodie than anyone else in this family.</p> <p>Int: You are more of a cook.</p> <p>Part: (Laughing) Yes, I am definitely more of a cook. I eat things and am like, “Ahhh.” My mum is just like, “Yum, yum, yum, okay done.” I am like, “Wow, that has got caraway in it how exciting. I never knew you could put caraway with that, wow.” She is like, “Will you just hurry up because we still have another course to get through.” I think my mum’s current partner really likes cooking, so now the quality of the food has gone up significantly.</p> <p>Int: It is improving (Laughing)</p> <p>Part: She used to always take me out for dinner and now it is okay because her partner cooks us dinner.</p> <p>Int: So you can stay at home and eat.</p> <p>Part: When I go and visit her place, they live together in North London. My mum is really not that much of a cook. She used to cook for guests when we were young, but it was definitely one of those show things. Guests would come round and then she would cook all of this beautiful food. That just didn’t happen the</p>	<p>Whenever she makes her step-mum’s dish, she is thinks of her</p> <p>She has specific memories regarding food</p> <p>Different relationship with food</p>	<p>Signature dishes serve as mementos</p> <p>Specific memories and associations re food</p> <p>Attitudes differ</p>
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<p>rest of the time. Whereas I think I just really enjoy cooking.</p> <p>Int: Do you cook every day?</p> <p>Part: Not necessarily every day, I am quite happy to eat leftovers. If I make too much, which I usually do, then I can freeze some up and have some for lunch or dinner the next day.</p> <p>Int: It does save time.</p> <p>Part: It does save time, yes. I quite like things like soups where you can just chop things up, put things in a pan and leave them cooking on the hob for 45 minutes or whatever until they are mushy. Soup is easy. I like a lot of things that are really easy, but impressive to eat. That is where spices come in because you can just chop stuff up, throw it in a pan, put it in the oven and roast it. As soon as you put a few spices on it then everything changes. I don't know, a friend of mine used to roast things like olives and chickpeas, so I do quite a lot of that in with the roast potatoes and onions.</p> <p>Int: Roasted olives?</p> <p>Part: Yes, black olives roasted. That was another thing where I was like, "Wow, that is really cool."</p> <p>Int: Olives from a jar?</p> <p>Part: Yes. I was just like, "Wow, that is amazing." Obviously the chick peas have to be cooked beforehand if you are roasting them, you can get jars of cooked chickpeas. Maybe I would have potato, sweet potato, onion, peppers, so the usual things. Then put some black olives, maybe some mixed herbs and maybe some cumin. Occasionally cardamom depending what I have got in there and throw it in the oven and that is it, you have got a meal. That could be four days' worth of food, but it is still really good quality.</p> <p>Int: Food is pleasure?</p> <p>Part: Yes, I think it is like play time. Flavours, textures and colours. I get to play with things, I get to stick my hands in them and make them messy, chop things up and squish things together. Making bread is a lot of fun. If you are quite tense making bread is ideal because you get to hit things, squish them and hit them. Whereas if you are doing pastry it is really complicated and really reacts to your mood. Many of</p>	<p>Cooking is like play time, flavours, textures and colours. If she is tense making bread helps</p> <p>She tends to make a lot of birthday cakes because she can make it and give it away</p>	<p>Cooking is seen as playtime</p> <p>Creative and stress relieving</p>
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<p>my cakes I have made with pasty have just been ruined because I am in a bad mood.</p> <p>Int: It's a mood thing</p> <p>Part: It is a thing, it is an actual real life thing. I spoke to one of my friends who is a chef and it is true. It is actually a thing that you shouldn't make anything regarding pastry when you are in a bad mood. I was like, "I was having this problem." She was like, "That is really well-known amongst pastry chefs." I tend to end up doing a lot of birthday cakes and stuff because there is only so much cake you legitimately really need to have. If I do make cake then I am happy to bring it round to people's houses. Sometimes it is just the process of making cake that I am really enjoying and then I have to somewhere to eat it all. There is only so much cake that you can legitimately eat without becoming diabetic or being the size of a house. There is a certain amount of tempering how often I make cake.</p> <p>I really enjoy the creativity behind cooking. You are basically playing. You get to do something with your hands and there is a real texture. It is also immediately consumable, which I think a lot of art... I paint and I knit and stuff and then afterwards you are stuck with a painting and some knitting.</p> <p>Int: There are only so many walls as well.</p> <p>Part: Yes, you are like, "What do I do with it?" At least if I make food then that is consumable and then I can do it all again when I want to do it all again. A lot of my family they are like, "You know we have so much stuff, we really don't need any more stuff." If I give them things for Christmas like jars of jam and chutney they can eat and then it is done.</p> <p>Int: So you can bring it next year again?</p> <p>Part: It is not stuff that is hanging about the house. "We already have five of your paintings, we are good." I can bring them chutney again and it is fine because they will eat it and then it is done.</p> <p>Int: It is a beautiful gift.</p> <p>Part: Yes, I think there is a certain amount of that aspect as well of creative outlet that then doesn't accumulate lots of stuff. Jam was really interesting because the first couple of times I made jam it was just horrendous. Loads of things had gone wrong with my jam and it is really fun. It is a real learning process and it is something I can get stuck into and I can really think about what flavours I want. Then I</p>	<p>Enjoys creativity behind cooking</p> <p>Food is a produce of creativity that is consumable, it does not accumulate stuff</p> <p>Making jam is fun, solving technical problems adds to the enjoyment</p> <p>Cooking equates play time and it's a lot of fun</p> <p>It can also be therapeutic, like making bread</p>	<p>Cooking is a creative outlet that doesn't accumulate a lots of stuff</p> <p>Cooking is fun and therapeutic play time</p>
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<p>also have to think about the context of that and the engineering problem of, “How is that going to gel? If I put those things together does that affect the boiling point?” It is a lot more technical than just cooking a meal. In a way that was quite nice because that is a slight engineering problem.</p> <p>Int: Problem solving, there is a lot of that.</p> <p>Part: Yes you get to the point where you see things and you are like, “I could do persimmon jam.” You are in the supermarket and you are like, “Mangos, what would I need to make mango chutney?” You also start to get a real feel for if cakes have been homemade or not because you can taste it.</p> <p>Int: Yes, to extend the shelf life you have to use a lot of stuff that doesn’t belong.</p> <p>Part: Yes and they are a lot fluffier generally speaking, there is a lot more air in standard cakes. In your homemade cakes obviously they are going to taste totally different because they don’t have a lot of that preservative. I quite like shop bought cakes, I don’t have a problem with it. I can just tell when somebody has made their cake. We were at an event one day and this lady was like, “I think somebody made these cakes.” Both my flatmate and I were like, “No.”</p> <p>Int: “These are bought.”</p> <p>Part: “These are not homemade cakes.” They were like, “How do you know?” I am like, “Because this does not taste like a homemade cake.” I don’t have a problem with that, but you can taste it. I had a lot of fun making things different colours and making stripy cakes.</p> <p>Int: With food colouring?</p> <p>Part: Sometimes, sometimes it is more with vegetables and stuff because different fruits are going to give you a different colour. You can get edible glitter and stuff, there are a lot of fun things out there if you make cake.</p> <p>Int: So it is a real playtime for you.</p> <p>Part: Yes, definitely. Especially if I am making a birthday cake for somebody it is like now I can get the glitter out. I am not a really big fan of icing. I kind of feel like my cake should taste good enough without icing. That has always been my general assumption. If you have to put a lot of icing on your</p>	<p>She likes making birthday cakes for others since there is only so much cake she can eat herself</p> <p>She enjoys the creativity behind cooking and the fact that it is also immediately consumable</p> <p>Cooking is a creative outlet that doesn’t accumulate a lot of stuff</p>	<p>Birthday cakes are made to be given away</p>
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<p>cakes it probably means the cake itself doesn't taste that good.</p> <p>Int: You are covering up something.</p> <p>Part: Yes, occasionally there is icing just to play with that is fun. I tend towards creative stuff anyway I guess it is a really nice way of being creative, but not having lots of stuff lying about afterwards.</p> <p>Int: Lots of clutter, yes. Anything else?</p> <p>Part: No, I think you have got a lot to transcribe now. (Laughter)</p> <p>Int: That is great thank you, just great.</p> <p>Part: I could talk about food all day honestly....</p>	<p>It is a learning process and a challenge</p>	<p>It is a learning process and a challenge</p>
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C.13 Participant 4: Reflective Diary

Date: 14th January

Context: Transcribing

As a child Nicola enjoyed going out for coffee and cakes with her Viennese grandmother. It was a treat for Nicola as well as a bonding time for the two of them. Grandma used to bake a lot at home too. Some of the cakes she made were her particular speciality. Nicola was given one of the cake recipes as heirloom by her grandmother. Whenever she misses her grandma, who died a few years ago, Nicola bakes this particular cake. In this way she connects with her grandma as well as her childhood. There is an element of nostalgia in this act. Baking the cake is a way of bringing back the past and people in it.

Date: 15th January

Context: Transcribing

Although neither of her parents enjoyed to cooking, Nicola likes it quite a lot. She particularly enjoys having dinners with people. Eating has a strong social aspect for her. Making the food and then eating it with others is a shared experience. It is also expression of her creativity and problem solving ability. She likes to be presented with a challenge such as wheat or dairy intolerance. Making a cake without any wheat or dairy requires looking up for substitutes and being creative with solutions, but never forgetting about the taste. Nicola believes that being vegetarian helps her to think about food in a more creative way. Being vegetarian is thinking about food differently, she sums up.

Date: 16th January

Context: Reading

Nicola shares a house with four other professionals. They have dinner together on Sundays, and often cook either together or for each other. Nicola believes that she cooks a lot better when she cooks for other people. As far as she is concerned Nicola could have just beans on toast, she would not bother to make an elaborate dish just for herself. Nicola wants to make and give things to others, especially nourishing things. That also gives her a chance to connect with the food she is eating. For Nicola connecting with the food means paying attention to it and noticing different flavours and textures.

Date: 17th January

Context: Re-reading

Mindful eating stands in contrast to the mindless eating of a grab-and-go type. Mindful eating does not mean just better awareness of the food but better awareness of bodily cues as well. Enhanced awareness of what the body is doing in response to food, like hunger and satiety. It also includes the alertness to the possibility that the registered bodily cues may have nothing

to do with food or eating but could be related to something else altogether. Mindful eating, in Nicola's case, generally leads to slower eating as well as a reduced consumption of food.

Date: 19th January

Context: Re-reading

Nicola is vegetarian and she does not eat fish or gelatine either. She first became vegetarian at age 11, when her mother refused to cook meat since her partner was vegetarian. Long after this relationship ended and her mother returned to cooking and eating meat, Nicola is still vegetarian. In her opinion not eating meat makes a sound ethical choice. Also, being vegetarian makes her more creative with food since straight forward recipes consisting of meat and potato are not applicable. Vegetarians learn how to substitute meat and use spices to make their meals more varied and interesting. Nicola believes that being vegetarian is a different way of thinking about food.

Date: 20th January

Context: Re-reading

Nicola's daily choices related to food and eating are influenced by many things e.g. how stressed she is or which kind of a day she had. Often her mood or the weather will decide the menu. In cold weather, warm, soft and squishy food is a lot more appealing than a cold salad. When pre-menstrual Nicola craves dark chocolate. It makes her less grumpy and more settled. Nicola believes what she actually craves at that time is not the sugar but cocoa. Generally, there are days when she craves certain foods and spices and there are days when she really does not want them.

Date: 21th January

Context: Attempt at identifying sub-themes

Food is important for Nicola and she believes that she should make responsible choices. The ethics of food production is a significant issue here. Nicola will try to buy seasonal food that is locally produced whenever she can. This food tastes better, Nicola believes, since it hasn't been shipped half way across the world. There are so many little farms around Kent which make this easier. There is also a degree of excitement when eating only seasonal foods since these are the flavours you haven't had for a while. Nicola believes that her body naturally craves the food in season, her body is tuned to eating cherries in the summer, and potato and cabbage during the winter months. Changing foods with the seasons keeps her connected to and grounded in the environment. However, Nicola is not too keen on trends and "foods of the moment". Everything in moderation is her motto. Nicola is quite happy to eat most foods (bar meat), even bad foods, but she really appreciates having a good meal. Good quality meal epitomizes taste, fresh produce and an element of surprise for Nicola. Presentation is nice but not all that important in the big scheme of things.

Date: 22nd January

Context: Attempt at identifying sub-themes

The social aspect of eating is the bonding that sharing of food facilitates. Cooking together or preparing a meal side by side, creates ample opportunity for connecting too. Conversation flows easier over a meal. Distraction of food and physical aspect of eating help dilute the intensity that sometimes accompanies intimate conversations, making them a lot less awkward. Being simultaneously engaged in another activity, like eating, can minimize distress of personal disclosures making these more relaxed and less stressful for participants. As a result, you may have more revealing conversation than you would have otherwise. Cooking together, side by side, also creates ample opportunity for connecting.

Date: 23rd January

Context: Attempt at identifying sub-themes

Nicola believes that breakfast is the most intimate meal. She never shares breakfast with people that she doesn't love, or at least like. The context of breakfast suggest that people spend the previous night in the same household which would imply that they are either related or very close otherwise. The informal dress, like pyjama or dressing gown, which is often a part of breakfast scenario insures the lack of any formality of posturing. We presenting our true face to the people round the table. Therefore, breakfast is reserved for the people closest to us. Nicola also quite likes the breakfast foods and arranges to have weekend branches with her closest friend on regular basis. Coming from a different cultural background, she questions why we eat such specific foods for breakfast only. Nicola's mum eats salad for breakfast, while Nicola is quite happy to have a leftover curry in the morning. However, having toast and pancakes makes for a very social breakfast, as well as making granola which she used to do with her step mother. Nicola is happy to eat a wide variety of foods for breakfast. However she found her flatmate having smoothies for breakfast quite strange. Smoothie for breakfast would not be as satisfying because it's not "eating". There is something about it being an actual eating thing, Nicola rationalizes.

Date: 24th January

Context: Attempt at identifying sub-themes

Nicola likes to travel and when she does, she pays a lot of attention to the local food. She believes that you can get to know different cultures through their food practices. For some people a frame of reference when travelling might be the architecture of the place or the art, but for Nicola the point of reference is their regional food and cuisine. For a few year she hosted a banquet for 20 people, which was an enjoyable challenge for Nicola. She experimented with tropical, South American and African dishes which was kind of "travelling" through food.

Date: 25th January

Context: Attempt at identifying sub-themes

Nicola believes that deserts are good in every culture because they are about decadence rather than sustenance. People have more fun eating sweet things. They also more often share them with friends e.g. taking a cake with you when visiting. On the other hand eating sweet things is quite often related to emotional eating. Sometimes crisps and salt can be related to emotional eating. In order to eat junk food Nicola has to be either grumpy, irritable, lethargic or pre-menstrual. She had for a long time a habit of coming back from work and going straight for the fridge door. This signified the end of working day and the beginning of private time. Fridge was holding the passage to the time of relaxation. This went on until Nicola asked “what kind of fulfilment am I getting from that?” The range of needs she was substituting with food was wide like re-energizing after work with food rather than going for a walk, eating snack while watching TV because the programme was far too boring otherwise. Sometimes she eats because she feels lonely. There are times when she eats because she is a little spaced out and she needs grounding.

Date: 26th January

Context: Attempt at identifying sub-themes

Nicola had quite contradictory experiences related to family dinners. Family dinners at her father’s place were enjoyable occasions. Her father and step-mother made an effort to have a dedicated family time over a meal, usually dinner, which facilitated bonding between family members. Phone would not be answered at that time and Nicola’s step-mother would often make her signature dish that Nicola really likes. On the other hand, Nicola and her sister would always have dinners in front of TV at their mother’s place. They were not entirely comfortable with each other and the idea of having meals together seemed to stressful. Bonding over a meal equated to being too close for comfort. Nicola needed to preserve her own boundaries and did not really want to get any closer. Discomfort would be even greater when her mother would have a partner who insisted on eating together. Having a transiting person impose new table rules must have felt particularly uncomfortable. However, in spite of her conflicting experiences, Nicola likes the idea of family members sharing a main meal as dedicated family time. Even though she could not speak to her grandfather because of language constraints, sharing a meal together created between them something that would not have been there otherwise. It created the feeling of kinship and family.

Date: 27th January

Context: Attempt at identifying sub-themes

Nicola observes that people tend to have very different attitude regarding food and eating. You can get to know individuals as well as culture through their food practices. Conventional people are likely to have a conventional approach to food and eating, Nicola rationalizes. For some, eating is just about sustenance. Her mother’s utilitarian attitude is well summed up in

the sentence “Yum, yum, yum, okay done.” However, for Nicola the relationship with food seems to be a lot more complex and a lot more emotive.

Date: 28th January

Context: Attempt at identifying sub-themes

Cooking is seen as a creative playtime. It is fun as well as stress relieving. Instead of a more permanent medium, food is used to create textures, colours and flavours. Nicola enjoys getting messy and using her hands to chop, squish and hit things while making food. She also likes the problem solving which is inherent in executing more complicated recipes. Cooking is appreciated as a creative outlet which does not accumulate stuff. Different foods, cakes and jams can be made and enjoyed during the process of creating, and then passed on as a gift. This allows for more food to be made and enjoyed without generating excessive amounts of clutter.

Date: 29th January

Context: Attempt at clustering

Cooking is an important outlet for Nicola. It allows her to be creative while she is relaxing through play at the same time. Problem solving is another significant aspect which she finds engaging. Gifting people is an added bonus which helps her not to accumulate clutter.

- Playtime and stress relief
- Problem solving
- Creating and giving

Food and eating represent a point of reference for Nicola. Her whole life revolves around making food for herself or for others. She meets people for lunch and for dinner. Often she shares breakfast with friends, especially on Sundays – but only really close friends. Breakfast is reserved for only intimate friends.

- Cultural reference
- Levels of intimacy
- Bonding
- Keepsake

Date: 4h February

Context: Attempt at clustering

Nicola has some issues with emotional eating. She often select foods to eat according to her emotional needs. Food to make her more grounded, or less grumpy or less lethargic. Overeating can easily creep in if one is so reliant on food. Cravings are a frequent occurrence.

- Grounding

- Cravings
- Sugar and salt
- Mindfulness

Date: 8h February

Context: Attempt at clustering

Ethical stance regarding food production and vegetarianism is an important theme. Nicola will always try to buy local produce for two reasons: a) it is fresh since it has not been transported across the world; and b) she feels that it is really important to support the local community. Likewise, being vegetarian makes a lot of sense to her (although it was initially imposed) since it is a morally right thing to do.

- Ethical stance
- Becoming a vegetarian
- Different views