The role of perception of the world as a dangerous place in sexual offending against children: Examining the conceptualisation of the Dangerous World Implicit Theory

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Declaration

I declare that this thesis is my own work carried out under the normal terms of supervision.

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Publications

Empirical work from this thesis has been published in the following journal:

- Chapter Two (Studies 1[1] & 2) has been published as: Ildeniz, G., & Ó Ciardha, C. (2019). A dangerous world implicit theory: Examining overlap with other criminogenic constructs. *Journal of Sexual Aggression,* doi: 10.1080/13552600.2019.1695003

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- Ildeniz, G., & Ó Ciardha, C. (2019, April). *Is this a Dangerous World belief or Hostile Attribution Bias?* Poster presentation at the pre-conference as part of Jane L. Wood's Inauguration as Professor, University of Kent, Canterbury, UK.

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[1] Please note that Study 1 is a product of my research project as part of my MSc in Forensic Psychology at the University of Kent, UK, during 2014-2015.

- Ildeniz, G., Crispim, A. C., & Ó Ciardha, C. (2018, October). *Development of Dangerous World Implicit Theory Scale: Preliminary Results.* Poster presentation at 37th Annual Research and Treatment Conference of Association of the Treatment of Sexual Abusers (ATSA), Vancouver, British Columbia, Canada.

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- Ildeniz, G., & Ó Ciardha, C. (2018, September). *Development of Dangerous World Implicit Theory Scale: Preliminary Results.* Poster presentation at Offending Behaviour Treatment Programmes: Where do we go from here? Impact Event at the University of Kent, Canterbury, UK.

- Ildeniz, G., & Ó Ciardha, C. (2018, September). *Is this a Dangerous World belief or Hostile Attribution Bias?* Poster presentation at Offending Behaviour Treatment Programmes: Where do we go from here? Impact Event at the University of Kent, Canterbury, UK.

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Abstract

The *implicit theories* theory has been one of the most influential single-factor theories explaining the role of cognitive distortions in sexual offending against children (Dangerfield, Ildeniz, & Ó Ciardha, 2020; Ward, 2000; Ward, Polaschek, & Beech, 2006). The dangerous world implicit theory is one of the most consistently hypothesised implicit theories across different offender groups (e.g., Beech, Fisher, & Ward, 2005; Ó Ciardha & Gannon, 2012; Ward & Keenan, 1999). It refers to the core belief that the world is a dangerous place in which other people are perceived as threatening, abusive and rejecting (Ward & Keenan, 1999). Ward and Keenan proposed two versions of this theory based on the beliefs that: (1) one needs to fight back in order to achieve control over others' threatening and abusive behaviour, and (2) unlike adults who are perceived as threatening, children are seen as safe and dependable; capable of understanding one's needs and sexual desires as well as willing to gratify them. The primary goal of this thesis is to unpack and examine the conceptualisation of the dangerous world implicit theory by Ward and Keenan (1999). A series of six studies (both quantitative and qualitative) were conducted, examining the potential sub-constructs within the dangerous world implicit theory, the similarities between those and other psychological constructs in the wider literature as well as the development and the role of the dangerous world implicit theory in sexual offending against children. Overall, results suggested that the concept of dangerous world implicit theory is multi-dimensional and some of the dimensions may be developed as a result of early adverse experiences in life. The proposed multi-dimensional model in this thesis offers a unique alternative framework for understanding the concept of a dangerous world implicit theory.

Keywords: *dangerous world implicit theory, sexual offending against children, adverse childhood experiences*

CHAPTER ONE [2]

The Theoretical Background of the Dangerous World Implicit Theory

Chapter Overview

The dangerous world implicit theory is one of the key implicit theories proposed by Ward and Keenan (1999). According to Ward (2000), cognitive distortions held by individuals who sexually abuse children emerge from underlying beliefs in relation to the world and their victims. Ward (2000) refers to these underlying beliefs as *implicit theories*. According to Ward (2000), implicit theories function like scientific theories, in which individuals construct and hold these theories in order to understand, predict, explain and interpret aspects of their world, including other people's behaviours.

According to Ward and Keenan's (1999) conceptualisation, the dangerous world implicit theory is based on the core belief that the world is a dangerous and threatening place in which other people are perceived as abusive, rejecting, and out for themselves. Ward and Keenan (1999) hypothesised two versions of this core belief where the world is seen as dangerous. In the first version, individuals who believe that the world is a dangerous place and people are untrustworthy, also believe that it is necessary to fight back and seek retribution against others (women and/or children, in particular). In the second version, adults are seen as untrustworthy whereas, unlike the first version of the theory, children are seen as reliable, safe and loving. The second version also contains the belief that children can understand adults' sexual desires and can satisfy them (Ward & Keenan, 1999).

In this chapter, I review the relevant literature on the cognition of individuals who sexually abuse children, focusing on the dangerous world implicit theory. I also review the

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[2] This chapter has incorporated material from the introduction of the published paper: Ildeniz, G., & Ó Ciardha, C. (2019). A dangerous world implicit theory: Examining overlap with other criminogenic constructs. *Journal of Sexual Aggression,* doi: 10.1080/13552600.2019.1695003

theoretical background of some of the psychological constructs which may be related to the

cognition of individuals who sexually abuse children such as, emotional congruence with

children (Finkelhor, 1984). Following the theoretical explanations of the psychological

constructs under examination in this thesis, I present the methodological considerations and

statistical techniques used in this thesis. I then present the aims and the structure of this thesis

at the end.

Socio-Cognitive Framework of Sexual Offending Against Children

Child sexual abuse is a widespread public health issue (Association for the Treatment

of Sexual Abuse [ATSA], 2011) which is usually perceived as repugnant by society

(Thakker, Ward, & Navathe, 2007). In response, and as a result of decades of theory

development, the sexual offending literature contains several theories attempting to explain

sexual offending behaviour against children (e.g., Finkelhor, 1984; Marshall & Marshall,

2017; also see Dangerfield et al., 2020; Ward et al., 2006). A great deal of these theories

involved a cognitive element (e.g., Abel, Becker, & Cunningham-Rathner 1984; Mann &

Beech, 2003; Ward, 2000; Ward & Keenan, 1999). Simply put, most of the theories

explaining child sexual abuse behaviour have attempted to provide explanations of what

those individuals were thinking as an explanatory factor for their actions (Gannon & Wood,

2007). This approach asserts that the thinking of individuals who sexually offend must be

deviant or offence-supportive (Gannon, Polaschek, & Ward, 2005; Gannon, Ward, Beech, &

Fisher, 2007). Moreover, the cognition of individuals who sexually abuse children has

consistently been regarded as an aetiological factor which needs to be addressed; by

challenging or restructuring in order to achieve rehabilitation (e.g., Hudson, Wales, & Ward,

1998; Marshall, Marshall, Serran, & Fernandez, 2006; Ó Ciardha & Gannon, 2011). In turn,

the treatment of individuals who sexually offend against children has involved components

where the offence-supportive or deviant cognitions are to be altered (Fernandez, Shingler, &

Marshall, 2006; Marshall & Laws, 2003). In line with this cognition focused approach, cognitive-behavioural approaches have been the forefront of sexual offending treatment techniques (Dean, Mann, Milner, & Maruna, 2007; Marshall & Marshall, 2017; Murphy, 1990); where changing behaviour (i.e., sexual offending) is achieved by addressing the relevant cognitions which create the outcome behaviour (Mann & Barnett, 2017). Therefore, it is important to examine cognition related to sexual offending in order to advance the conceptualisation of theoretical propositions and our understanding of their role in sexual offending behaviour against children.

"Social cognition is the study of how people make sense of other people and themselves" (Fiske & Taylor, 2013, p. 1). The study of social cognition is concerned with understanding cognitive processes and behaviour in relation to social interactions. In other words, social cognition encompasses several cognitive structures and processes that attempt to explain how individuals experience their world; how they perceive and interpret their social world (Augoustinos & Walker, 1995; Fiske & Taylor, 2013). Augoustinos and Walker (1995) highlighted the broad, vague, and inconsistent descriptions of many psychological concepts referred to or researched in social cognition. In order to aid understanding of the different psychological constructs that are examined in this thesis, I use the definitions for each concept offered by Augoustinos and Walker (1995).

According to Augoustinos and Walker (1995), *attitudes* can be defined as the way an object is categorised and evaluated by an individual. Attitudes are probably one of the most frequently researched concepts in social psychology and they can be a way of expressing negative or positive thoughts in relation to the perceived object (e.g., for distinction between cognitive distortions and attitudes toward sexual aggression, see Pedneault, Hermann, & Nunes, 2020). On the other hand, a *schema* is defined as a mental structure that the knowledge about the world is stored; which in turn shapes people's expectations in relation to

the world as well as to other people and the social situations that occur in that perceived

world. Finally, *attributions* refer to providing explanations or causes to life events, as part of

our day-to-day functioning. Although there have been differing theories of attribution, people

interpret immediate social situations and provide causal explanations for them based on

multiple factors including, the information available, their intuitions, and schemas

(Augoustinos & Walker, 1995).

Cognitive Distortions

The term *cognitive distortions* was first used within the context of sexual offending

against children by Abel et al. (1984). At the time, Abel et al. (1984) argued the reason for

some men seeking out sexual activities with children is mainly due to their sexual attraction.

According to Abel and his colleagues, young males respond with sexual arousal to a wide

range of stimuli at an early age. Through socialisation, they learn to inhibit their sexual

arousal to certain stimuli which are considered as inappropriate by the society. As males

grow up, some become aware that their sexual interests may be at odd with societal norms,

and cope with the resulting dissonance by developing cognitions to support their own

preferences. They refer to these offense-supportive thoughts and beliefs (i.e., cognitions) as

cognitive distortions (Abel et al., 1984; Thakker et al., 2007). Some examples of the

cognitive distortions given by Abel et al. (1984) include: "*A child who does not physically*

resist my sexual advances really wants to have sex with me" (p. 98), "*When a child asks an*

adult a question about sex it means the child wants to see the adult's sex organs or have sex

with the adult", or "*My relationship with my daughter or son or other child is enhanced by*

my having sex with them" (p. 100).

More recently, cognitive distortions in sexual offending have been described as

beliefs or attitudes that contradict accepted social norms which are related to the onset and

persistence of offending (Ó Ciardha & Ward, 2013). Although the concept of cognitive

distortions in the sexual offending literature is argued to be problematically broad and to offer

an incomplete explanation of offender cognition (Gannon & Polaschek, 2006; Ó Ciardha &

Ward, 2013), these limitations do not remove the necessity to understand the role of distorted

thinking and maladaptive beliefs in sexual offending behaviour (Ward, Hudson, Johnston, &

Marshall, 1997).

The Implicit Theories Theory of Cognitive Distortions

Taking the understanding of distorted thinking of individuals who sexually abuse

children one step further than the concept of cognitive distortions, the *implicit theories* theory

has been influential in organising a range of different cognitive distortions into themes

(Ward, 2000; Ward & Keenan, 1999; Ward, Polaschek, & Beech, 2006). Across two articles,

Ward and Keenan (1999) and Ward (2000) presented the implicit theories theory of cognitive

distortions. These implicit theories are seen as causal theories underpinning the apparent

distortions expressed by individuals who commit sexual offences against children (Ward &

Keenan, 1999).

Ward (2000) explained implicit theories as types of *schema*. The term schema is the

most used term by social psychologists referring to mental constructs such as, concepts,

knowledge structures, behavioural scripts, beliefs, or theories (Kunda, 1999; see Ward,

2000). Ward (2000) argued that the term schema is limited in its conceptual development as it

refers to several mental constructs such as, categories, beliefs, theories, scripts or concepts.

Instead, he suggested to use the term *implicit theories* rather than schema when he provided

the implicit theories perspective on how distorted cognitions operate: how they are

developed, structured, and represented mentally, the reasons for these implicit theories bias

the interpretation of social or interpersonal situations, and how this results in distorted

cognitions and expressions.

Ward (2000) suggested that implicit theories "function like scientific theories and are used to explain empirical regularities (e.g., other people's actions) and to make predictions about the world" (p. 492). In other words, individuals develop and organise their knowledge from an early age which aids understanding of the world (Ward, 2000). Ward (2000) suggested that beliefs manifest in implicit theories which contain sets of ideas organised as a result of social information in memory. According to Ward (2000), the implicit theories held by individuals who commit sexual offences against children involve these individuals' perception, belief, and interpretation of the actions and desires of the victims (Ward & Keenan, 1999). Ward (2000) hypothesised that the implicit theories—which result in expressed cognitive distortions—manifest at different levels. He explained that the most general beliefs include assumptions about the world and the nature of people. The middle-level beliefs involve beliefs regarding categories of entities, such as women or children. The beliefs at the lower level include assumptions about particular victims (Ward, 2000).

The five key implicit theories introduced by Ward and Keenan (1999) were *entitlement, uncontrollability, nature of harm, children as sexual beings* and *dangerous world.* The *entitlement* implicit theory refers to the belief that some people are superior to others. According to Ward and Keenan (1999) individuals holding this implicit theory believe that they are entitled to have their sexual needs met and receive special consideration. In this implicit theory the beliefs and desires of the victim are dismissed and those of the individual who sexually offend against children are seen as superior and more important. As a result, an individual holding the entitlement implicit theory believes that they have the right to have sex whenever and with whomever they want to. Moreover, the child is expected to give permission to such sexual engagement and even to enjoy the experience (Ward & Keenan, 1999). Some example expressions of this implicit theory included: "*People do what I tell*

them and that includes sex" or "*I deserve a special treat and she will make me feel better*" (p. 829).

According to Ward and Keenan (1999) the *uncontrollability* implicit theory refers to the belief that "the world is essentially uncontrollable" (p. 830) as well as the emotions and the sexual feelings. This implicit theory involves the belief that sexual urges cannot be controlled by the individual holding this implicit theory and thus, they are not seen as responsible for their actions. The responsibility of such sexual behaviours is actually directed at the victim (i.e., the child) or the blame may be attributed to the lack of control when factors such as stress and alcohol or drug intoxication are present (Ward & Keenan, 1999). Some example statements of this implicit theory included "*I can't control myself, so I'm not responsible*" or "*Some people are not 'true' child molesters—they are just out of control and made a mistake*" (Ward & Keenan, 1999, p. 831).

The *nature of harm* implicit theory as conceptualised by Ward and Keenan (1999) is based on two beliefs. The first involves the belief that there are different degrees of harm and the level of harm caused is determined by different factors. These factors, for example, include the degree of physical force used. According to this belief, if the sexual abuse involves the use of physical force whilst the victim is conscious, then the child is perceived as being harmed. On the other hand, if the child was asleep and was not physically harmed by the use of force, then the child is believed to be less seriously affected by the offence. In other words, individuals holding this implicit theory believe that if the sexual abuse of the child could have been more harmful, for example, by the use of physical force, then, any less physically harmful behaviour is seen as acceptable.

According to Ward and Keenan (1999), the second belief within the nature of harm implicit theory is based on the perception of the sexual activity as inherently beneficial and unlikely to result in harm. This belief comes from the assumption that human beings are

sexual in nature and sexual experiences are part of fundamental needs. Therefore, children cannot be harmed by sex with an adult because it is natural and beneficial. Some examples of this implicit theory were "*We are only touching, this isn't really sex*", "*The only way I could harm a child when having sex with her is to use physical force to get what I want*", or "*This won't hurt or affect her in any way*" (Ward & Keenan, 1999, p. 832).

The *children as sexual beings* implicit theory as hypothesised by Ward and Keenan (1999) is based on the belief that people are sexual beings and therefore, desire and seek pleasure. This assumption also applies to children, who are perceived as capable of desiring and enjoying sex. The children as sexual beings implicit theory involves beliefs that children have the knowledge and the capacity to make informed decisions in relation to sex. This belief assumes that children have sexual feelings and preferences and it is natural and beneficial to express their sexuality. Some examples of the children as sexual beings implicit theory included "*The child wanted sex*", "*A child can make her own decision as to whether to have sex with an adult or not*", "*Children are curious about sex and enjoy it*" (p. 828).

The *dangerous world implicit theory* as conceptualised by Ward and Keenan (1999) revolves around the perception of the world as a dangerous place. According to this implicit theory, the world is a dangerous and threatening place in which people are abusive and out for themselves. Ward and Keenan (1999) hypothesised two versions of this implicit theory. Both versions are based on the same core belief where the world is seen as dangerous and threatening.

The first version of the dangerous world implicit theory involves the belief that it is necessary to fight back and/or punish people in this dangerous world. Individuals holding this belief may punish women or children by sexually abusing them if they are perceived as threats and in order to achieve dominance and control over them. According to Ward and Keenan (1999), this implicit theory focuses on the malevolent intentions of other people and

the individuals who hold the first version of the dangerous world implicit theory perceives

themselves as capable of fighting back or retaliating in order to strengthen their position.

Some examples of the first version of the dangerous world implicit theory include "*I did it to

get revenge on her and her mother*", "*She had no right to question my authority*", or "*It was

my way of punishing and controlling her*" (Ward & Keenan, 1999, p. 829).

The second version of the dangerous world implicit theory is also based on the core

belief that the world is a dangerous and threatening place (Ward & Keenan, 1999). However,

unlike the first version, the second version of this theory focuses on the reliability of children.

In other words, similar to the first version, in this second version of the dangerous world

implicit theory, the adults are perceived as untrustworthy and rejecting. In contrast to the

perceived threat from other adults, children are seen as safe, accepting, and dependable

(Ward & Keenan, 1999). Individuals holding this second version of the dangerous world

implicit theory (Ward & Keenan, 1999) believe that children are more loving and caring and

can be trusted. These individuals believe that children can meet their expectation to be loved

and cared for. This belief also includes perceiving children as capable of understanding the

adult's sexual needs and desires and are happy to satisfy those. Another distinction from the

first version of the dangerous world implicit theory is that individuals holding the second

version believe that they are incapable of fighting back and retaliating against the malevolent

adults in order to achieve dominance over them. Examples of holding the second version of

the dangerous world implicit theory included statements such as, "*Children can give adults

more acceptance and love than other adults*", "*You can't trust adults*", "*Kids really know

how to love you*", "*Sex between children and adults is very loving*", and "*Some kids like sex

with adults because it makes them feel wanted and loved*" (Ward & Keenan, 1999, p. 830).

Rationale of the Thesis

The main focus of this thesis is the examination of the conceptualisation of the dangerous world implicit theory (Ward & Keenan, 1999) from two aspects: 1) examining its multi-dimensional structure, and 2) examining the conceptual similarities between the concept of a dangerous world implicit theory and other psychological constructs that are relevant in sexual and violent offending literature including hostile attribution bias (Dodge, 1980; 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984), as well as another of the five implicit theories—the children as sexual beings implicit theory—Ward and Keenan (1999) hypothesised.

The implicit theories theory (Ward, 2000) is one of the most influential single-factor theories attempting to explain cognitive factors in the aetiology of sexual offending against children. There have been a number of studies empirically testing the implicit theories among individuals who sexually offend against children as well as community samples (e.g., Gannon, 2006; Gannon, Wright, Beech, & Williams, 2006; Keown, Gannon, & Ward, 2008, 2010; Marziano, Ward, Beech, & Pattison, 2006; Mihailides, Devilly, & Ward, 2004). Furthermore, other researchers have applied a Wardian implicit theory framework to the conceptualisation of social cognition in individuals who have committed a variety of offences, including rape, violent offences, domestic violence, and firesetting (see Ó Ciardha & Ward, 2013). However, not all research investigating the implicit theories included an examination of the dangerous world implicit theory (e.g., Keown & Gannon, 2008), suggesting a gap in the empirical literature.

In this thesis, I particularly focus on the conceptualisation of the dangerous world implicit theory as it is one of the most consistently hypothesised implicit theories among different offender groups (see Beech et al., 2005; Beech, Parrett, Ward, & Fisher, 2009; Dempsey & Day, 2011; Gannon, Hoare, Rose, & Parrett, 2012; Ó Ciardha & Gannon, 2012;

Polaschek & Ward, 2002; Ward & Keenan, 1999). Firstly, I identify the conceptualisation of the dangerous world implicit theory by Ward and Keenan (1999). Secondly, I identify the variables or specify dimensions of the dangerous world implicit theory, which I argue divert from Ward and Keenan's conceptualisation. Thirdly, I develop measurement tools in order to operationalise the concept of the dangerous world implicit theory. Finally, I test whether the variables or the dimensions I identified would fit as a model. Therefore, this thesis examines the conceptualisation of the dangerous world implicit theory by identifying and testing for its underlying dimensions and incorporates the operationalisation of the construct by linking the abstract concept to indicators (Check & Schutt, 2017).

The dangerous world implicit theory is found to be underrepresented within current psychometric tools assessing cognitive distortions, or offence-supportive cognitions (Gannon, Keown, & Rose, 2009; Keown et al., 2010). In addition, the dangerous world implicit theory has usually been treated as a single construct (e.g., Keown et al., 2008), despite being conceptualised as two versions by Ward and Keenan (1999). As an exception to the treatment of the dangerous world implicit theory as a single construct or the lack of attention to the concept altogether in the majority of the literature, Howitt and Sheldon (2007) developed the 39-item Children and Sexual Activities (C&SA) questionnaire assessing the five key implicit theories as hypothesised by Ward and Keenan (1999). The aim of the C&SA questionnaire was to compare cognitive distortions between individuals who committed contact and online sexual offences against children. Six of the 39 items were developed to represent the *dangerous world* implicit theory, where the authors examined the construct with two sub-scales: *world is hostile* and *children as reliable* (Howitt & Sheldon, 2007, p. 475). Howitt and Sheldon's (2007) C&SA inventory showed that the dangerous world implicit theory as conceptualised by Ward and Keenan (1999) could be assessed using an item-based Likert-type scale. Their findings suggested that contact offenders endorsed dangerous world implicit

theory more than individuals who committed contact and online sexual offences against children, although the difference was marginal. In addition, dangerous world implicit theory– and the children are reliable sub-scale, in particular–was one of the most agreed implicit theory across all offenders (Howitt & Sheldon, 2007).

Despite the suitability of C&SA questionnaire for the use of assessing cognitive distortions of the individuals who commit online sexual offences against children, it was not suitable for the purposes of this thesis. The C&SA questionnaire has not been validated (Bale, 2017) and their sample size was small due to the use of a forensic population (Howitt & Sheldon, 2007; Merdian, Curtis, Thakker, Wilson, & Boer, 2014). More importantly, in this thesis, I argue that the dangerous world implicit theory involves multiple dimensions, beyond the two versions conceptualised by Ward and Keenan (1999). Therefore, it was not possible to examine the potential multi-dimensions embedded in the dangerous world implicit theory by using only the two sub-constructs developed by Howitt and Sheldon (2007).

Kruglanski (2001), writing about the discipline of social psychology, lamented both the tendency to *rediscover the wheel*, referring to the "failure to notice commonalities across time" (p. 873) and *fragmentation*, referring to the "failure to notice commonalities across domains" (p. 873). These, argued Kruglanski, were negative consequences of an overly focused approach to theory within social psychology, at the expense of high-level theorising. Recently, Ó Ciardha (2017) similarly drew attention to potential confusion that researchers and practitioners may face within the literature on offender social cognition. In attempting to understand the causes of a particular offending behaviour, there is a risk that researchers are developing research strands and terminology around psychological constructs that ignore cognate phenomena in other literatures (jangle fallacy; Kelley, 1927). In other words, researchers working on predictors of sexual offending, for example, may miss the same constructs—differently labelled—in the aggression or general social cognition literatures.

Looking at psychological phenomena through different lenses and at different levels of explanation can form part of an *integrative pluralistic* approach (see Ward, 2014). However, I argue that for disciplines and sub disciplines to integrate effectively, there first needs to be an understanding of the overlap between psychological phenomena of interest. In this thesis, I examine how the hypothetical construct of a dangerous world implicit theory (Ward & Keenan, 1999) may overlap with other psychological and potentially criminogenic constructs.

There has been a number of research studies examining the implicit theories (e.g., Gannon, 2006) as well as applying the Wardian framework of implicit theories to other offending groups (e.g., Polaschek & Ward, 2002). However, there has been insufficient examination of the possible relationship between implicit theories and similar psychological constructs implicated by parallel literatures investigating other antisocial behaviours such as violent offences and sexual offences against women. For example, individuals who commit violent offences are more likely to interpret social situations in a hostile way which can lead to their offending (Lim, Day, & Casey, 2011), while individuals who commit or are likely to commit sexual offences against women are often found to have hostile attitudes towards women (e.g., Abbey & McAuslan, 2004; Abrams, Viki, Masser, & Bohner, 2003; Masser, Viki & Power, 2006; Stander, Thomsen, Merrill, & Milner, 2017). Both of these constructs appear to share definitional similarities with Ward and Keenan's (1999) *dangerous world* implicit theory.

As part of examining the potential similarities between the dangerous world implicit theory and other psychological constructs such as, hostile attribution bias (Dodge, 1980; 2006) or hostile sexism (Glick & Fiske, 1996), I examine the similarity between the dangerous world implicit theory and another of the five implicit theories—children as sexual beings implicit theory—as Ward and Keenan (1999) hypothesised. Even though it has been

suggested that the five key implicit theories are "coherent and consist of a number of interlocking beliefs" (Ward, 2000, p.504), research seeking evidence for different implicit theories (e.g., Marziano et al. 2006; Paquette, Cortoni, Proulx, & Longpre, 2014) risks implying that these constructs are independent and distinct from each other. The potential conceptual similarities among these key implicit theories have not been examined in the literature. In this thesis, along with hostile attribution bias, hostile sexism, and emotional congruence with children, I examine whether the conceptualisations of these two implicit theories (i.e., dangerous world and children as sexual beings) contain relatively similar beliefs. I argue that there are considerable similarities between believing that children can understand adults' sexual desires and are willing to satisfy them—as conceptualised in the second version of the dangerous world implicit theory—and thinking that children are capable of making informed decisions about sexuality—as conceptualised in the children as sexual beings implicit theory.

Hostile Attribution Bias

Hostile attribution bias refers to a biased interpretation of others' actions in ambiguous social situations in a hostile way (Dodge, 1980; 2006; Nasby, Hayden, & DePaulo, 1980). According to Crick and Dodge's (1994) social-information processing model, individuals go through several steps whilst perceiving and interpreting situations in their social world. The way individuals interpret the world and others' actions around them strongly determines their reactions to situations. During the encoding and interpretation stages of the social-information processing, individuals focus on particular cues within their perceived situation, where encoding and interpretation takes place. In either stage of information processing, some individuals interpret their social situations in a biased way (Wilkowski & Robinson, 2008).

There is robust empirical support for hostile attribution bias, which shows that aggressive individuals are more likely to attribute hostile intent to behaviours in their social environment (e.g., Copello & Tata, 1990). This is due to their biased perceptions, even if the actual intent is benign or the situation is ambiguous (de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002; Dodge, 1980; Yeager, Miu, Powers, & Dweck, 2013). Empirical studies show similar results in child populations (de Castro et al. 2002; Dodge, 1980), and in adult male offenders (Lim et al., 2011; Schönenberg & Jusyte, 2014). On the other hand, the literature on hostile attribution bias among individuals who sexually abuse children is scarce.

There are only a couple of studies examining hostile attribution bias and sexually abusive behaviour (Flores, 1999; Thomas & Weston, 2019). Although the hostile attribution bias measure used was not a previously established scale, Flores (1999) examined the role of hostile attribution bias in sexually coercive behaviour against adults, using a psychology undergraduate sample. However, their results did not indicate any significant associations between hostile attribution bias and sexually coercive behaviour. On the other hand, Thomas and Weston (2019) investigated the associations between hostile attribution bias and intimate partner violence among university students, using a vignette-based and established hostile attribution measure by Coccaro, Noblett, and McCloskey (2009). Their findings suggested positive associations between hostile attribution bias and different forms of intimate partner violence such as, physical and sexual abuse as well as threatening behaviour (Thomas & Weston, 2019).

The majority of research in the literature did not specifically examine the biased interpretion of others' intentions as hostile (Wegrzyn, Westphal, & Kissler, 2017), rather has focused on examining biased perception and recognition of facial emotions among clinical or forensic populations (e.g., Gery, Miljkovitch, Berthoz, & Soussignan, 2009; Kuin, Masthoff, Munafò, & Penton-Voak, 2017). More importantly, the sexual offending population was not

always treated independently from other violent offender groups (Kuin et al., 2017). Hostile

attribution bias is a more established concept in aggression literature but not in sexual

offending against children literature. However, it has been argued that dangerous world

implicit theory may be based on a similar concept to hostile attribution bias (Ó Ciardha,

2017). In this thesis, I examine the relationship between the concept of the dangerous world

implicit theory (Ward & Keenan, 1999) and hostile attribution bias (Dodge, 2006). I argue

that believing the world is a dangerous place and that people are likely to behave in a

rejecting manner is similar to *hostile attribution bias*, which is a biased interpretation of

others' actions in ambiguous social situations in a hostile way (Yeager et al., 2013).

Hostile Sexism

Hostile sexism is generally described as an antipathy (Abrams et al., 2003), or

negative and hostile attitudes towards women (Glick & Fiske, 1996), usually in the form of

sexist prejudice (Pedersen & Strömwall, 2013). Hostile sexism has been extensively studied

in the sexual violence against women literature (e.g., Abrams et al., 2003; Glick et al., 2000;

Masser et al., 2006; Yamawaki, 2007). Hostile sexism is usually associated with sexual

violence against women (Abrams et al., 2003) including sexual harassment (Begany &

Milburn, 2002), psychological intimate partner violence (Juarros-Basterretxea, Overall,

Herrero, & Rodríguez-Díaz, 2019), and cyberbullying (Martinez-Pecino & Durán, 2016).

Individuals with hostile sexist attitudes fear and have anger towards women as they believe

women use their sexuality to take advantage of male power (Yamawaki, 2007). Individuals

who are sexually aggressive and hold hostile sexist beliefs think that women are dishonest

and unreliable when expressing sexual interest because they would like to manipulate men.

Therefore, individuals with highly sexist attitudes believe women are not worthy of trust and

respect (Malamuth & Brown, 1994).

Research into the role of hostile sexism in sexual offending against women suggested that hostile sexism is positively associated with the acquaintance rape proclivity (Abrams et al., 2003; Masser et al., 2006), is a mediator of authoritarianism and sexual harassment proclivity (Begany & Milburn, 2002), and a predictor of psychological intimate partner violence through endorsement of positive attitudes towards partner abuse (Juarros-Basterretxea et al., 2019). Research also showed that individuals having hostile sexist attitudes towards women minimised the seriousness of rape and excused the perpetrator of stranger-rape (Yamawaki, 2007).

The hostile perception of women's intentions and behaviours appears to emerge within the parallel literature on rape-related cognition (Polaschek & Gannon, 2004; Polaschek & Ward, 2002). The implicit theories developed specifically for the group of offenders who sexually offend against women consisted of underlying hostile or negative beliefs towards women. These implicit theories were labelled as *women are unknowable* (Polaschek & Ward, 2002), representing the perception of women's behaviours as mysterious, or relabelled by Polaschek and Gannon (2004) as *women are dangerous,* which represented the perceived hostility behind women's behaviours.

Although research investigating the role of hostile sexism in sexual offending against adult women is robust, there has been almost no attention dedicated to investigating the role of hostile attitudes towards women in sexually offending behaviour against children. The focus has always been on the role of hostile perceptions of women's intentions, attitudes and/or behaviours by men, but not on the role of men's hostile perceptions of women in relation to their sexually abusive behaviour against children. This has been the focus in the literature despite several theorists mentioning the associations between hostile sexism and other psychological constructs; such as, insecure attachments linked with sexual offending against children (Marshall & Marshall, 2017). The role of hostile sexism in sexual offending

against children has not been investigated despite the existing theoretical frameworks (Ward,

Hudson, Marshall, & Siegert, 1995) or empirical evidence between hostile sexism and other

psychological constructs (e.g., emotional loneliness, intimacy deficits; Marshall, 1989) that

were also found to be related to sexual offending against women (Marshall & Hambley,

1996) and sexual offending against children (Fisher, Beech, & Browne, 1999; Garlick,

Marshall, & Thornton, 1996), or both (Garlick et al., 1996; Proulx, McKibben, & Lusignan,

1996; see also Ward et al., 2006).

In this thesis, I examine the concept of dangerous world implicit theory (Ward &

Keenan, 1999) as part of distorted thinking among individuals who sexually abuse children

and its association with hostile sexism, which is previously linked to emotional loneliness and

intimacy deficits as relevant factors in sexual offending against children (Fisher et al., 1999;

Garlick et al., 1996). According to Ward and Keenan (1999), individuals holding the first

version of the dangerous world implicit theory believe that they may punish women (or

children) with sexual abuse, if they are perceived as threats to their authority, so that they can

achieve control over them. Not only does the conceptualisation of the first version of the

dangerous world implicit theory includes women (as well as children) as potential victims,

the examples of expressing this belief given by Ward and Keenan (1999) also involve

negative and hostile attitudes towards women (e.g., "*I did it to get revenge on her and her

mother*", "*She had no right to question my authority*", p. 829). I argue that believing that

women have malevolent intentions and are threatening offenders' authority as conceptualised

in the dangerous world implicit theory is essentially similar to hostile sexism where women

are seen as dishonest, manipulative, and unreliable.

Emotional Congruence with Children

Emotional congruence with children has been regarded as a theoretically relevant

psychological construct in relation to sexually offending behaviour against children (e.g.,

Finnkelhor, 1984; Ward & Beech, 2006). Finkelhor (1984) hypothesised emotional congruence with children and its role in sexual offending against children in his Precondition Model. Finkelhor's (1984) Precondition Model was the first multifactorial theory attempting to explain child sexual abuse. In his theory, Finkelhor proposed that individuals who commit sexual offences against children can be grouped separately based on their motivation to sexually abuse. Two of these motivations for individuals who sexually offend against children are *emotional congruence* and *blockage*.

Emotional congruence with children is usually defined as cognitive and emotional overidentification with children (Finkelhor, 1984; McPhail, Hermann, & Fernandez, 2014; Wilson, 1999). Some researchers recognised the complex structure of the concept of emotional congruence with children (Paquette & McPhail, 2020; Wilson, 1999). According to Finkelhor, emotional congruence refers to perceiving children as emotionally satisfying, where interactions—including sexual interactions—with children can meet the individual's emotional needs (Ward et al., 2006). In other words, the individual's needs and the characteristics of the children are perceived to be congruent or matching (Araji & Finkelhor, 1985; Finkelhor, Cuevas, & Drawbridge, 2017). Finkelhor (1984) further suggested that these individuals desire to feel safe and be at an emotionally equal level with children. Individuals who commit sexual offences against children may seek relationships with children because they find it difficult to emotionally relate to adults and easier to relate to children. In the concept of emotional congruence, adults are perceived as threatening and likely to be rejecting (Finkelhor, 1984; Ward et al., 2006).

Finkelhor (1984) notes that emotional congruence with children is not likely to operate completely independently of blockage. The *blockage* mechanism is introduced as the idea of "normally functioning men" (Ward et al., 2006, p. 23)—as being non deviant in their sexual interest—are unable to have their sexual and emotional needs to be satisfied in

adaptive ways i.e. with adults (Finkelhor & Araji, 1986), due to stressful experiences (Ward et al., 2006). The disruptions in healthy, adaptive relationships with adults can be due to developmental blockages, such as fear of intimacy, or situational blockages, such as marital or relationship problems. As a result, they turn to engage in sexual activities with children in order to meet their emotional or sexual needs (Finkelhor, 1984; Ward et al., 2006)

Similar explanations of child sexual abuse were also introduced in the literature (e.g., Marshall, 1989; Ward, et al., 1995a). According to Marshall (1989), the ability to achieve intimacy in relationships with others is necessary in order to have positive and meaningful emotional as well as sexual connections. Achieving intimacy in relationships would also result in prosocial behaviours, in general. On the other hand, lack of intimacy would be associated with emotional loneliness in some adults and a combination with other factors may result in seeking sexual relationships with children (Beech & Mitchell, 2017; Ward et al., 2006). Ward et al. (1995a) also introduced a framework of sexual offending against children incorporating the role of attachment and intimacy. According to this theoretical framework, insecure attachment styles and intimacy deficits in conjunction with cognitive distortions, may interfere with developing and maintaining healthy adult relationships (Ward et al., 1995a), and in turn, resulting in emotional isolation from adults and sexually abusing children (Finkelhor et al., 2017).

Previous research indicated that emotional congruence with children is a risk factor for sexually reoffending against children (Hanson & Morton-Bourgon, 2005; Mann, Hanson, & Thornton, 2010). Fisher et al. (1999) investigated the levels of emotional congruence with children between individuals who sexually offended against children and a nonoffending group. Their findings indicated that individuals who sexually offended against children had lower levels of emotional congruence with children compared to the nonoffending group. However, the extrafamilial subcategory of the offender group reported significantly more

emotional congruence with children (Fisher et al., 1999). A more recent meta-analysis showed that emotional congruence with children is a moderate predictor of sexual reoffending against children (McPhail, Hermann, & Nunes, 2013). McPhail et al.'s (2013) meta-analysis also showed that emotional congruence with children did not discriminate between individuals who sexually offended against children and individuals who non-sexually offended. Instead, emotional congruence with children was at higher levels among individuals who sexually offended against extrafamilial males compared to individuals who sexually offended against intrafamilial victims. McPhail et al. (2014) also examined the emotional congruence with children within the blockage theoretical framework and their findings suggested associations between the emotional congruence with children and emotional loneliness and/or social rejection.

In this thesis, I examine the relationship between the concept of emotional congruence with children, where children are seen as emotionally more relatable and satisfying (Finkelhor, 1984) and the dangerous world implicit theory (Ward & Keenan, 1999), where children are seen as safer and more dependable than adults. Both of these concepts have been found to be relevant to sexual offending behaviour against children (McPhail et al., 2013; Ó Ciardha & Gannon, 2011) and a potential similarity between the two has been recognised (Ó Ciardha, 2017) however, the relationship between the two has not been empirically investigated. I argue that feeling related to children on an emotional and cognitive level is similar to believing that children are more dependable than adults and can provide love as conceptualised in the second version of the dangerous world implicit theory.

Adverse Childhood Experiences (ACEs)

According to Ward (2000; Ward & Keenan, 1999), the distorted cognitions (i.e., implicit theories) of individuals who sexually offend against children develop as a consequence of developmental experiences which occur in the early years of childhood.

These early developmental experiences involve child sexual abuse victimisation, or any other abusive or violent treatment by adults (Ward, Keenan, & Hudson, 2000). Ward (2000) argued that implicit theories are constructed and shaped starting from early years as a result of striving to explain regularities in the child's own environment. In later years through adolescence and adulthood, these implicit theories are argued to develop into maladaptive cognitions that may represent the perception of the world by the individuals as they have experienced it since their childhood (Ward, 2000).

Similar to child sexual abuse (ATSA, 2011), the ACEs are also perceived as a public health issue, globally (e.g., Bellis et al., 2014a; Bellis et al., 2014b; Bellis, Hughes, Leckenby, Perkins, & Lowey, 2014c; Bellis, Lowey, Leckenby, Hughes, & Harrison, 2013). Adverse Childhood Experiences (ACEs) are known as the potentially traumatic adversities during childhood; between the ages of 0 and 17 (Centers for Disease Control and Prevention [CDC], 2020). These events include exposure to child sexual, verbal or physical abuse, neglect, or experiencing family dysfunction such as domestic violence, parental separation, household members with alcohol or drug addiction, poor mental health or imprisonment (Bellis et al., 2014c). The long-term negative impact on health as a consequence of ACEs is well established in the literature, which also suggested a cyclic outcome (e.g., Bellis et al., 2013).

Recently, research into understanding individuals who sexually offend against children has started to focus on the role of ACEs in the development of sexually abusive behaviour. Previous research showed that individuals who sexually offended against children reported more childhood physical, emotional and sexual abuse as well as neglect (Abbiati et al., 2014) than the community males (Levenson, Willis, & Prescott, 2014). Whilst it is recognised that a history of child sexual abuse, on its own, cannot explain sexual offending behaviour (Hanson & Slater, 1988; Seto, 2018), research showed that childhood sexual abuse

increases the likelihood of sexual offending (e.g., DeLisi, Koloski, Vaughn, Caudill, & Trulson, 2014).

Grady, Levenson, and Bolder (2016) proposed an aetiological model of ACE to sexual offending suggesting that exposure to ACE is associated with the development of insecure attachment systems and the development of criminogenic needs that contribute to sexually abusive behaviour. The terms *criminogenic needs*, *stable dynamic risk factors* (Hanson & Harris, 2000; Thornton, 2002), and *causal psychological risk factors* (Beech & Ward, 2004) are usually used interchangeably (Hanson & Morton-Bourgon, 2005). According to Thornton (2002), the dynamic risk factors for sexual offending can be grouped in four domains. One of these dynamic risk factor domains is holding offence supportive cognitions (Beech & Ward, 2004; Thornton, 2002). Thornton (2002) described distorted attitudes as beliefs regarding offences or victims which were used to justify sexually offensive acts.

There is a gap in sexual offending against children literature, where potential associations between ACEs and holding a dangerous world implicit theory as an offence supportive cognition have not been investigated. According to Grady et al.'s (2016) proposed model, ACEs can lead to the development of insecure attachment models, which in turn leads to psychological or social deficits (i.e., criminogenic needs). The criminogenic needs represent risk factors associated with sexual offending; therefore, the presence of the criminogenic needs will increase the risk of sexually offending behaviour. In this thesis, I also examine the relationship between ACEs and the development of holding a dangerous world implicit theory as one form of criminogenic needs, as well as the relationship between these two concepts and any past experience of or proclivity to sexually abusive behaviour against children. This examination gives insight into the hypothesised antecedents leading to development of holding distorted thinking, such as dangerous world implicit theory (Ward &

Keenan, 1999) and the underlying mechanism of sexually abusive behaviour against children (Grady et al., 2016).

Methodological and Statistical Considerations

Community Samples

In this thesis, the majority of data comes from community samples, except from a single-case-study which consists of a qualitative, semi-structured interview with an ex-convict of multiple sexual offences against children (see Chapter Six). Ward and Keenan (1999) specifically addressed the possibility that their hypothesised implicit theories may *not* be exclusive to individuals who sexually offend against children. According to Ward and Keenan (1999), nonoffending individuals can also hold the hypothesised implicit theories without sexually abusing children. They argued that the implicit theories may be essential, but not adequate factors on their own to cause child sexual abuse incident. Ward and Keenan (1999) argued that child sexual abuse rather involves an interaction of several factors such as, deviant sexual interests, deficits in social skills, or insecure attachment styles as well as maladaptive cognitions, such as dangerous world implicit theory as the main focus of this thesis (Dangerfield et al., 2020).

According to the most recent report on child sexual abuse in England and Wales (Office for National Statistics, 2020), the majority of adults who experienced sexual abuse during childhood did not disclose about their experiences. The same pattern can also be seen for victimisation of children and the rates of unreported incidences (e.g., Children's Commissioner, 2015; Ministry of Justice, Home Office, & The Office for National Statistics, 2013). As a result, many child sexual abuse incidents remain hidden and the perpetrators unapprehended. Constructs like Ward and Keenan's (1999) implicit theories are likely to exist in the community, among non-offending individuals, at least in less extreme levels of endorsement. Therefore, the existence of these constructs, theoretically, would allow

examination of the relationship between constructs without necessarily needing to be able to predict an offending outcome.

Use of Psychometrics

In this thesis, I specifically utilise advanced approaches such as, Exploratory Factor Analysis, Confirmatory Factor Analysis, as well as Structural Equation Modelling in some of the chapters (Chapters Three, Four, and Five) when examining the concept of dangerous world implicit theory as conceptualised by Ward and Keenan (1999). Factor analysis is a statistical technique, usually applied to examine whether and which variables form united clusters, which indicate underlying constructs for correlations among those variables (Tabachnick & Fidell, 2013). The most common use of factor analysis in psychology is scale development (Brown, 2015; Tabachnick & Fidell, 2013). However, the rationale for use of factor analysis is twofold: while this statistical technique allows researchers to determine how a test or a scale can be scored, factor analysis is also used to explore and verify the number of underlying dimensions of the construct that is intended to be measured and the pattern of items used to measure that construct (Brown, 2015).

A psychological construct is equal to a theoretical concept (Brown, 2015). In social sciences, measurement tools are used to assess constructs that are not directly observable and measures used, instead, represent these constructs (Kevin, 2015). When research examines relationships between constructs, it is the relationship between latent variables instead of observed variables, and therefore, the conclusions drawn are from these underlying latent constructs. Therefore, it is important to consider both the accuracy of a measure that intends to represent a construct with observed variables (i.e., measurement model; Brown, 2015) and to take into account of this measurement tool including random measurement error when relationships between latent constructs are examined (Bollen, 1989; Kline, 2016). One statistical approach that enables us to comprehensively examine relationships among

psychological constructs (i.e., latent variables), whilst taking into account the measurement

model of each construct, is Structural Equation Modeling (SEM; Hoyle, 1995; Kevin, 2015).

In the literature of sexual offending against children, the examination of psychological

constructs among community or forensic populations is common and this has greatly helped

improve the current knowledge and understanding of the psychological mechanisms

underlying child sexual abuse behaviour. However, those psychological constructs have not

always been examined psychometrically, using advanced statistical software (e.g., Mplus),

where the underlying dimensions of constructs that are not directly observable can be tested

using a latent structure (Brown, 2015).

My aim is to both unpack and examine the concept of dangerous world implicit theory

and psychometrically test an item-based measure I developed for this construct by relying on

the advanced statistical techniques, such as factor analysis and SEM. By unpacking the

concept of the dangerous world implicit theory, I examine the theoretical definition as well as

its associations with cognate psychological constructs, such as hostile attribution bias

(Dodge, 1980), hostile sexism (Glick & Fiske, 1996), emotional congruence with children

(Finkelhor, 194), and children as sexual beings implicit theories (Ward & Keenan, 1999), by

taking into account the measurement of each construct (Kline, 2016). In addition, I

investigate the theoretically-driven causal hypothesis involving ACEs and holding a

dangerous world implicit theory by using SEM (Mueller & Hancock, 2008). Therefore, the

statistical methodologies used in this thesis is beyond examining the relationships among

constructs, but also incorporate the conceptualisation and the operationalisations of the

discussed constructs. In other words, the advanced statistical methods I use in this thesis

enables me to examine the relationships between the constructs under investigation by

simultaneously assessing the quality of the measurement tools.

The Structure of this Thesis

The broad aim of the current thesis is to examine the theoretical conceptualisation of the dangerous world implicit theory as hypothesised by Ward and Keenan (1999). The first empirical chapter (Chapter Two) describes breaking down the two-version dangerous world implicit theory as conceptualised by Ward and Keenan (1999) into four concepts and examines their similarity with four other psychological constructs including hostile attribution bias (Yeager et al., 2013), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984; Wilson, 1999), and the implicit theory of children as sexual beings (Ward & Keenan, 1999). Over two studies, I examine the potential similarities between the dangerous world implicit theory and the four psychological constructs in order to better understand whether some aspects of the dangerous world implicit theory could be explained with well-known and empirically supported constructs from the wider literature. The first study in Chapter Two involves an online survey where participants from both genders were recruited through snowballing techniques. In order to assess holding a dangerous world implicit theory, four vignettes are developed for this study. The second study in Chapter Two examines the same research question but with a slightly different method and an independent, male-only sample.

Considering that the construct validity of the vignettes used over two studies in Chapter Two are not established, in Chapter Three, I develop an alternative measurement tool and explore the conceptualisation of the dangerous world implicit theory. Unlike the vignettes used in Chapter Two, I develop an item-based measure in Chapter Three and explore the factor structure of the dangerous world implicit theory. Building on this, in chapter Four, I carry out further factor analyses using an independent sample in order to confirm the four-factor multidimensional structure of the dangerous world implicit theory. In addition, I examine the associations of the sub-constructs of the dangerous world implicit

theory with the four other psychological constructs examined in Chapter Two (i.e., hostile attribution bias, hostile sexism, emotional congruence with children, and children as sexual beings implicit theory), using the item-based scale.

In Chapter Five, I examine the underlying mechanism of the development of sexual offending behaviour against children. I explore the role of ACEs (Felitti et al., 1998) in the development of dangerous world implicit theory using the item-based scale developed in Chapters Three and Four. In Chapter Five, I also explore the predictive role of holding a dangerous world implicit theory in lifetime incidence of sexual offending behaviour and in proclivity to sexually offend against children, over two time points.

In the final empirical chapter (Chapter Six), using a single-case study, I examine the qualitative presentation of holding a dangerous world implicit theory with an individual who had a history of committing multiple sexual offences against children. Building on the arguments presented throughout the empirical chapters, I compare the theoretical conceptualisation of a two-version dangerous world implicit theory by Ward and Keenan (1999) with an alternative multi-dimensional model of dangerous world implicit theory proposed in this thesis. Finally, in Chapter Seven, I provide a summary of the key findings of the studies and the limitations. I also discuss the theoretical and practical implications of the findings as a result of the studies presented in this thesis. I propose an alternative theoretical framework that can be seen as a combination of both my arguments (which some are empirically examined in this thesis) and Ward and Keenan's (1999) theoretical conceptualisation of the dangerous world implicit theory. I end the chapter with the identified gaps for future research avenues.

CHAPTER TWO[3]

A Dangerous World Implicit Theory: Examining Overlap with Other Criminogenic Constructs

Chapter Overview

In the previous chapter, I presented the theoretical background of the concept of dangerous world implicit theory by Ward and Keenan (1999). I identified the gaps in the literature and presented the rationale of this thesis. In this chapter, I examine the concept of dangerous world implicit theory by unpacking it into four parts. In order to empirically examine the dangerous world implicit theory, I develop four vignettes which aim to measure the endorsement of dangerous world implicit theory beliefs and examine its conceptual similarity with four other psychological constructs from the wider literature. Over two online studies, I examine the possible overlap between the dangerous world implicit theory and four other constructs: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (McPhail et al., 2014), and a 'children as sexual beings' implicit theory (Ward & Keenan, 1999).

Introduction

The dangerous world implicit theory refers to the belief that the world is a dangerous place in which other people tend to behave in an abusive and rejecting way (Ward & Keenan, 1999). Ward and Keenan (1999) proposed two versions of this implicit theory. The first involves the belief that it is a necessity to defend oneself by punishing other people who seem to have malevolent intentions to harm for their own interest. Offenders with this belief think that it is acceptable to sexually abuse women or children in order to maintain dominance, if

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[3] This chapter is broadly the same as the published article: Ildeniz, G., & Ó Ciardha, C. (2019). A dangerous world implicit theory: Examining overlap with other criminogenic constructs. *Journal of Sexual Aggression,* doi: 10.1080/13552600.2019.1695003. The introduction was truncated to avoid too much overlap with the previous chapter.

their authority is threatened.

I argue that believing the world is a dangerous place and that people are likely to behave in a rejecting manner is similar to *hostile attribution bias*, which is a biased interpretation of others' actions in ambiguous social situations in a hostile way (Yeager et al., 2013). I also argue that the first version of dangerous world implicit theory may overlap with the construct of *hostile sexism*, which refers to negative attitudes towards women (Glick & Fiske, 1996).

In addition to the similarities between the first version of the dangerous world implicit theory and the two psychological constructs, hostile attribution bias and hostile sexism, I also examine the second version of the dangerous world implicit theory. Added to the perception of the world as threatening, the second version of the dangerous world implicit theory by Ward and Keenan (1999) focuses on the belief that adults are untrustworthy, rejecting, and behave in a manner that takes advantage of men who are believed to be innocent, such as themselves. Unlike the first version, children are seen as more accepting and dependable than adults. It is also believed that children are capable of love and affection. I argue that feeling related to children on an emotional and cognitive level, which is known as the *emotional congruence with children* (Finkelhor, 1984; Mann et al., 2010; McPhail et al., 2013; McPhail et al., 2014; Wilson, 1999) is similar to believing that children are more dependable than adults and can provide love as conceptualised in the second version of the dangerous world implicit theory.

In addition to the perception of adults as untrustworthy while children are dependable, the second version of the dangerous world implicit theory also involves the perception that children are capable of understanding the offender's needs and sexual desires and are willing to gratify them. I argue that another of the five key implicit theories by Ward and Keenan

(1999), the *children as sexual beings* implicit theory, is similarly based on the perception of children as sexual agents.

According to the implicit theories theory, an individual holding a children as sexual beings implicit theory, may interpret everyday behaviour, such as a child sitting on an adult's lap as revealing sexual intent (Ward, 2000). Those holding this implicit theory may see children as having sexual needs and desires, resulting in sexualised behaviour, inconsistent with the child's actual sexual development. Children are also thought to be capable of making informed decisions about their sexual preferences, as well as when, how, and with whom they have sexual experiences (Ward & Keenan, 1999). In this chapter, I argue that the conceptualisations of these two implicit theories (i.e., dangerous world and children as sexual beings) contain relatively similar beliefs. In other words, I argue that there are considerable similarities between believing that children can understand adults' sexual desires and are willing to satisfy them—as conceptualised in the second version of the dangerous world implicit theory—and thinking that children are capable of making informed decisions about sexuality—as conceptualised in the children as sexual beings implicit theory.

As suggested by Ó Ciardha (2017) and as I have identified above, Ward and Keenan's (1999) conceptualisation of dangerous world implicit theory may involve a combination of several other constructs such as, hostile attribution bias, emotional congruence with children, and others. The aim of the two studies in this chapter was to examine if the constructs hostile attribution bias, hostile sexism, emotional congruence with children, and children as sexual beings significantly overlap with Ward and Keenan's (1999) conceptualisation of the dangerous world implicit theory.

Study 1

The goal of the first study was to examine the associations between the dangerous world implicit theory and four other constructs: (a) hostile attribution bias, (b) hostile sexism,

(c) emotional congruence with children, and (d) children as sexual beings implicit theory, adopting a within-subjects design. I hypothesised that the first version of dangerous world implicit theory would be associated with the concept of a (a) hostile attribution bias and (b) hostile sexism. The second version of the dangerous world implicit theory was hypothesised to be associated not only with (a) hostile attribution bias and (b) hostile sexism, but also with (c) emotional congruence with children and (d) children as sexual beings implicit theory.

Method

Measures

Dangerous World Vignettes. I created four vignettes; dangerous world 1 part A and part B, Dangerous World 2 part A and part B, based on the dangerous world implicit theory (Ward & Keenan, 1999). These vignettes were developed to map closely onto the explicit description of the dangerous world implicit theory in Ward and Keenan's paper, thus ensuring face validity. Each vignette consists of a protagonist and his beliefs relevant to the two versions of the dangerous world implicit theory. Dangerous world 1, part A describes the belief that it is necessary to fight back in order to dominate or punish other people and is as below:

> Tom thinks the world is a dangerous place. He believes that other people always put their own interests first. They're normally willing to be abusive or to reject him to promote their own interests. Tom believes that it is often necessary to fight back in order to show other people who's boss. This might involve punishing individuals who do him harm and to make sure he always comes out on top. Tom is ready to strike back when necessary and he regularly asserts his dominance over others.

Dangerous world 1, part B consists of the perception of women as threats to the authority of men and in need for retribution, and is as follows:

Tom has some specific views about women and children. If women or children

threaten Tom or need to be disciplined, he has no problem giving them what is

coming to them. Tom sometimes feels he has to teach the women in his life a lesson

to put them in their place, especially if they question his authority or the authority of

other men.

Dangerous world 2, part A involves perceiving adults as unreliable while children are

viewed as reliable. In dangerous world 2, part B, children are depicted as loving and capable

of understanding and fulfilling adult sexual desires (see Appendix I).

For each vignette, participants were asked two questions. The first measures how

strongly individuals could identify with the protagonist, (e.g., "Can you identify with Tom?")

and was rated on a 5-point Likert-type scale from 1 (*No, I don't think like Tom at all*) to 5

(*Yes, I see the world as Tom does*). The second asked how often they find themselves

thinking like the protagonist in the vignettes (e.g., "Do you ever find yourself thinking like

Tom?"). This item was also rated on a 5-point Likert-type scale from 1 (*never*) to 5 (*always*);

see Appendix I. The mean scores for each version of the dangerous world were computed by

averaging item scores from each vignette and then averaging the scores from part A and B of

the two versions of the dangerous world implicit theory vignettes. In this study, the alpha

coefficients were acceptable for the dangerous world vignettes 1 and 2 (i.e., $\alpha = .71$ and α

$= .65$, respectively).

The Hostile Interpretations Questionnaire (HIQ). The HIQ (Simourd & Mamuza,

2002) measures the overall level of hostile interpretations, based on the social information

processing model. The HIQ measures the tendency to interpret ambiguous social situations as

provocative or in hostile ways. The scale consists of seven ambiguous social situation

vignettes, each posing four questions regarding the interpretations of these situations (e.g.,

"Rate how likely you think it is that his brothers and sisters are asking Chris all these

questions because they are suspicious of him", "Rate how likely you think it is that his friends are always trying to get Chris pissed off"). Participants rated items on a 5-point Likert-type scale from 1 (*extremely unlikely*) to 5 (*extremely likely*; see Appendix II). The total HIQ score is an overall measure of hostility, and represents the individual's inclination to interpret neutral social situations in hostile ways. Higher scores on the scale indicate higher hostile attributions to ambiguous social situations. Internal consistency was $\alpha = .86$ for the total HIQ score (see Simourd & Mamuza, 2000) and found to be acceptable in this study, $\alpha = .78$.

The Hostile Sexism Questionnaire (HS). The HS is a subscale of The Ambivalent Sexism Inventory (Glick & Fiske, 1996). The questionnaire is an 11-item measure, assessing the level of hostile attitudes towards women (e.g. "Women seek to gain power by getting control over men"). Respondents provided a rating on a 6-point Likert scale from 0 (*disagree strongly*) to 5 (*agree strongly*; see Appendix III). The mean of the item scores were calculated to obtain the overall scores. Higher scores on the scale indicate higher hostile attitudes towards women. The HS showed high internal reliability with $\alpha = .82$, consistent with the literature in which has been found to range from $\alpha = .80$ to $\alpha = .92$ (see Glick & Fiske, 1996; Masser et al., 2006).

Children and Sex Emotional Congruence Scale. This is a 15-item questionnaire (Waldron et al., 2006), measuring the belief that an individual can emotionally identify with children and can have mutually satisfying relationships with children (e.g., "I prefer to spend my time with children"), originally from the Sex Offender Assessment Pack (Beckett, Beech, & Fisher, 1996). Items were rated on a 5-point Likert-type scale from 0 (*very untrue*) to 4 (*very true*; see Appendix IV). Item scores were summed to obtain overall scores that could range between 0 and 60. Higher scores on the scale indicate higher emotional congruence with children. This scale showed excellent reliability in this study, $\alpha = .91$, consistent with

previous studies which reported high internal consistency with $\alpha = .90$ (Fisher, Beech, &

Browne, 1998).

The Cognitive Distortions Scale (CDS). The CDS (Gannon, 2006), consists of 12-

items adapted by Gannon (2006) which were originally from the Opinions Questionnaire

(Offending Behaviour Programmes Unit, 2000). The CDS measures the level that individuals

perceive children as sexual agents (e.g., "Many children are sexually seductive toward

adults"). Participants responded to each item on a 5-point Likert-type scale from 0 (*strongly*

disagree) to 4 (*strongly agree*; see Appendix V). Item scores were summed to obtain total

scores that could range between 0 and 56. Higher scores on the scale indicate more agreement

with distorted beliefs related to children. This scale showed good internal reliability, $\alpha = .83$.

Sample

A total of 188 people consented to take part, while 106 participants completed the

whole study. I included 113 responses in the analyses. Of these 113 responses, 7 participants

did not fully complete the survey but had answered the dangerous world vignettes and at least

one other questionnaire. Eligibility criteria required individuals to be 18 years of age or

above, and not to be a psychology graduate. Undergraduate psychology students were

allowed to participate in this study. Participants included 49 males and 64 females, recruited

through snowballing techniques. The mean age of the participants was 24.44 years (*SD* =

4.75). The vast majority of participants[4] (81%) were Cypriots[5] who had Turkish or Greek as

their native language. The rest of the participants were from a wide range of nationalities

including Turkish, British, Greek, and several others. The most common self-reported level

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[4] This was as a result of the success of snowballing recruitment methods using my social
network.
[5] Cyprus is a divided island in the Mediterranean Sea. There are two main communities
residing on the island; Turkish Cypriots in the north side of the island, speaking Turkish as
their first language and Greek Cypriots in the south side, speaking Greek as their mother
tongue.

of fluency in English was fluent (n =71) or advanced (n =27) although, there were

participants with intermediate (n =14) and basic (n =1) level of English; see Table 1 for

sample demographics.

Table 1

Study 1: Sample Demographics

Demographic Categories	(*N*=113)	Percent
Nationality	Cypriot	81
	British	7
	Turkish	5
	Greek	2
	French	2
	Other	4
Gender	Male	43
	Female	57
Age	19-23	55
	24-28	33
	29-32	8
	33-47	5
Level of English	Fluent	63
	Advanced	24
	Intermediate	12
	Basic	1

Procedure

The School of Psychology Research Ethics Committee at the University of Kent reviewed and approved this study prior to data collection (Ethics ID: 20154076). I sent a secure web link to prospective participants, enabling them to complete the online survey in Qualtrics. All participants received the information regarding the survey and the consent form before participation. Following this, each participant created a unique participant code maintaining anonymity and completed a demographics questionnaire. Qualtrics presented the questionnaires in a random order. Once all the questionnaires were completed, the debrief form was presented (see Appendix VI).

Results and Discussion

First, I examined the relationship patterns between variables. The means (*SD*) of variables and correlations among them are presented in Table 2. Analysis of data using Pearson's *r* indicated that there were small correlations between dangerous world 1 and hostile attribution bias and hostile sexism. Individuals who interpreted ambiguous situations in a hostile way and had more hostile attitudes towards women were also more likely to endorse the beliefs in dangerous world 1. However, there was no significant correlation between hostile attribution bias and dangerous world 2 (*p* = .901). Since both versions of the dangerous world belief were based on the core belief that the world is a dangerous and threatening place, not finding an association between biased interpretation of social situations and dangerous world 2 was surprising.

On the other hand, there was a small correlation between dangerous world 2 and emotional congruence with children. Individuals who endorsed dangerous world 2 were more likely to relate themselves to children on an emotional and cognitive level. In addition, there was a moderate correlation between dangerous world 2 and children as sexual beings implicit

theory. Individuals who endorsed dangerous world 2 also endorsed the perception of children as sexual beings, as expected.

In order to investigate if (a) hostile attribution bias, (b) hostile sexism, (c) emotional congruence with children, and (d) children as sexual beings implicit theory significantly predicted the dangerous world implicit theory, multiple regression analysis was used (see Table 3). The regression model with hostile attribution bias and hostile sexism overall resulted in significant prediction of dangerous world 1, $F (2, 104) = 3.73$, $p = .027$. Though significant, the two predictors explained only 6.7% of the variance in dangerous world 1. Inspection of beta values and associated significance indicated that hostile sexism as a predictor of dangerous world 1 was approaching significance ($p = .070$). However, hostile attribution bias was not a significant predictor of holding a belief of the world as a dangerous and threatening place where it is a necessity to defend oneself by punishing people who seem to have intent to harm you ($p = .107$).

In a second multiple regression analysis, I examined whether the four constructs were significant predictors of dangerous world 2. The regression model with the four constructs was significant, $F (4, 101) = 9.25$, $p < .001$, accounting for the 26.8% of the variance in dangerous world 2. Inspection of beta values indicated that emotional congruence with children ($p = .043$) and children as sexual beings implicit theory ($p < .001$) were significant predictors of dangerous world 2 as expected. However, hostile attribution bias ($p = .218$) and hostile sexism ($p = .106$) were not[6].

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[6] Gender was not a significant predictor of dangerous world 1 and dangerous world 2 scores, and neither were there significant gender differences between dangerous world 1 and dangerous world 2 scores.

Table 2

Study 1: Means, Standard Deviations, and Pearson's Correlations Among Variables

Variable	Mean (SD)	HS	EC	CSBIT	DW1	DW2	DW1a	DW1b	DW2a	DW2b	DW
1 HAB	83.68 (11.48)	.20*	.29**	.11	.21*	.01	.16	.19	.04	-.06	.14
2 HS	2.10 (.90)		.12	.25**	.21*	.24*	.14	.22*	.18	.19*	.28**
3 EC	39.06 (12.91)			.21*	.14	.24*	.09	.16	.17	.22*	.23*
4 CSBIT	19.42 (6.12)				.10	.46***	-.01	.21*	.41***	.24*	.33***
5 DW1	1.82 (.60)					.28**	.88***	.73***	.22*	.21*	.82***
6 DW2	1.68 (.55)						.21*	.26**	.91***	.53***	.78***
7 DW1a	2.35 (.87)							.31**	.20*	.08	.70***
8 DW1b	1.29 (.60)								.16	.29**	.63***
9 DW2a	2.23 (.93)									.12	.68***
10 DW2b	1.14 (.47)										.45***
11 DW	1.75 (.46)										

Note. HAB = hostile attribution bias, $N = 109$; HS = hostile sexism, $N = 111$; EC = emotional congruence with children, $N = 110$; CSBIT = children as sexual beings implicit theory, $N = 109$; DW1 = dangerous world 1, $N = 113$; DW 2 = dangerous world 2, $N = 113$; DW1a = dangerous world 1 part A, $N = 113$; DW1b = dangerous world 1 part B, $N = 113$; DW2a = dangerous world 2 part A, $N = 113$; DW2b = dangerous world 2 part B, $N = 113$; DW = dangerous world total score, $N = 113$.

* $p<.05$, ** $p<.01$, *** $p<.001$

Table 3

Study 1: Multiple Regression Analysis of HAB, HS, EC and CSBIT as Predictors of Dangerous World 1 and Dangerous World 2

Predictors of DW1	β	t	p
HAB	.16	1.63	.107
HS	.18	1.83	.070
Predictors of DW2	β	t	p
HAB	-.11	-1.24	.218
HS	.15	1.63	.106
EC	.19	2.05	.043
CSBIT	.41	4.58	.000

Note. $N = 107$ and $N = 106$, respectively. HAB = hostile attribution bias; HS = hostile sexism; EC = emotional congruence with children; CSBIT = children as sexual beings implicit theory; DW = dangerous world total score; DW1 = dangerous world 1; DW2 = dangerous world 2.

Overall, the results from the correlation analyses were in line with the predictions (see Table 2) that the four constructs were significantly related to holding either or both versions of the dangerous world belief, except for the hostile attribution bias, which was not significantly related to dangerous world 2. However, the results from the multiple regression analysis were not as predictive as expected. Despite my expectation that dangerous world 1 would overlap with hostile attribution bias and hostile sexism, only hostile sexism was approaching significance in explaining dangerous world 1. Regarding the findings for dangerous world 2, the results were as expected for emotional congruence with children and children as sexual beings implicit theory partly explaining dangerous world 2. Again, I did not find evidence of hostile attribution bias overlapping with dangerous world 2.

Rationale for Study 2

In study 1, I expected to find evidence of hostile attribution bias at least partly accounting for the belief that the world is a dangerous place in which people are likely to behave in an abusive and rejecting manner. As the results of the first study did not support this conclusion, it was essential to further examine the association between hostile attribution bias and dangerous world. By doing so, I also wanted to address several limitations in the first study. The majority of the participants were Cypriots who had English as a second language. As the nature of the study required a good level of English to comprehend the vignettes consisting of ambiguous situations, further research with native English speakers was warranted. Furthermore, the phrasing of some response options in the original HIQ is confusing. While I faithfully reproduced the scale from Simourd & Mamuza, (2002), participants fed back their confusion on completion of the study.

The design of the second study was the same as the first one. The measures used were also the same as in the first study except for the measure of hostile attribution bias. I believed that a more recent measure of hostile attribution bias would both eliminate the confusion and give a clearer picture overall in relation to its association with the dangerous world.

Method

Measures

Social Emotional Information Processing Questionnaire (SEIP-Q). The SEIP-Q (Coccaro, Fanning, & Lee, 2016) is a vignette-based, self-report questionnaire recently developed to assess five components in social emotional information processing; attribution, emotional response, response valuation, outcome expectancy, response efficacy, and response enactment. The SEIP-Q consists of eight written vignettes. Each scenario depicts socially ambiguous situations where "Person B" directs an adverse action at "Person A". The participants are asked to identify with Person A and to what extent they agree with each of

several attributional statements about Person B's action. These include: (a) two hostile

attributional (HA) statements (e.g., "This person wanted to expose my secret", "This person

wanted me to feel stupid for asking her to keep my secret"); (b) an instrumental attributional

statement (e.g., "This person wanted to impress other people") and (c) a benign attributional

statement (e.g., "This person forgot that this was an important secret for me"). These

attributional variables are followed by two questions about negative emotional response to

the situation (e.g., "How likely is that you would be angry if this happened to you?").

Participants responded to each item on a 4-point Likert-type scale from 0 (*not at all

likely*) to 3 (*very likely*). The later stages of the SEIP-Q include response valuation and

decision-making variables. To address the research questions in this study, I only included

hostile attributional (HA) statements in the analyses. The internal consistency for HA was

good in the current study, $\alpha = .88$, which was identical to alpha reported in previous literature

(Coccaro et al. 2016).

Sample

A total of 128 responses were recorded in an online survey. Participants were

recruited from the *Prolific* online participant recruitment platform. Criteria for participation

were to be 18 years old or over, UK-resident, English speaking males. I inserted three

attention checks within different parts of the questionnaire and I excluded responses from

participants who had failed two or more of these attention checks. There were 123 responses

included in the analyses as five of the participants had failed two or more attention checks.

All participants identified their gender as Male. The mean age of the participants was 34.28

years ($SD = 12.25$). Almost all participants reported that their English was fluent ($N = 121$,

98.4%), only one (0.8%) participant reported basic and one (0.8%) participant reported

intermediate level of English. The breakdown of self-reported nationality by the participants

are presented in Table 4.

Table 4

Study 2: Participants self-reported nationality

Nationality	Percent ($N = 123$)
British[7]	73.98
English	16.26
Welsh	0.81
Scottish	2.44
Northern Irish	0.81
British and New Zealand	0.81
British and German	0.81
Brunei	0.81
Dutch	0.81
Polish	0.81
Singaporean	1.63

Procedure

The School of Psychology Research Ethics Committee reviewed and approved the replication study prior to data collection (Ethics ID: 201614793174284035). The online survey was designed in Qualtrics and linked to Prolific for participant recruitment. The procedure of presenting the information regarding the survey, the consent form, and the debrief form was the same as in Study 1 (see Appendix VII). Qualtrics presented the questionnaires in a random order.

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[7] Participants who identified their nationality as British, British (UK), United Kingdom, or White British were coded as British.

Results and Discussion

I ran the same analyses as in the first study to examine the relationship patterns between variables. The means (*SD*) of variables and correlations among them are presented in Table 5. Consistent with the first study, I found small to moderate correlations between dangerous world 1 and both hostile attribution bias and hostile sexism. Similar to the findings in Study 1, individuals who interpreted ambiguous situations in a hostile way and who had more hostile attitudes towards women were also more likely to endorse the beliefs in dangerous world 1. In line with the findings in Study 1, there was no significant correlation between hostile attribution bias and dangerous world 2 ($p = .240$). On the other hand, and in line with the first study, results showed small significant correlations between dangerous world 2 and both emotional congruence and children as sexual beings implicit theory. Individuals who appeared to relate to children on an emotional and cognitive level and who endorsed the belief that children are sexual beings also endorsed dangerous world 2 as, expected.

Table 5

Study 2: Means, Standard Deviations, and Pearson's Correlations Among Variables

Variable	Mean (SD)	HS	EC	CSBIT	DW1	DW2	DW1a	DW1b	DW2a	DW2b	DW
1 HAB	1.07 (.46)	.39***	.15	.14	.31**	.11	.31**	.21*	.15	-.04	.25**
2 HS	1.98 (1.13)		.17	.23*	.41***	.31***	.47***	.20*	.35***	.07	.42***
3 EC	14.68 (13.19)			.32***	.06	.23**	.06	.03	.32***	-.06	.16
4 CSBIT	6.55 (5.58)				.32***	.25**	.26**	.29**	.27**	.09	.33***
5 DW1	1.78 (.66)					.50***	.91***	.82***	.41***	.44***	.89***
6 DW2	1.43 (.55)						.38***	.52***	.93***	.64***	.84***
7 DW1a	2.24 (.87)							.50***	.34***	.28**	.77***
8 DW1b	1.33 (.65)								.39***	.52***	.79***
9 DW2a	1.78 (.90)									.30**	.75***
10 DW2b	1.09 (.43)										.61***
11 DW	1.61 (.53)										

Note. $N = 123$. HAB = hostile attribution bias; HS = hostile sexism; EC = emotional congruence with children; CSBIT = children as sexual beings implicit theory; DW1 = dangerous world 1; DW 2 = dangerous world 2; DW1a = dangerous world 1 part A; DW1b = dangerous world 1 part B; DW2a = dangerous world 2 part A; DW2b = dangerous world 2 part B; DW = dangerous world total score.

* $p<.05$, ** $p<.01$, *** $p<.001$

Next, I used multiple regression analysis to test if (a) hostile attribution bias, (b) hostile sexism, (c) emotional congruence with children and (d) children as sexual beings implicit theory significantly predicted participants' ratings of both versions of dangerous world in the second study (see Table 6). The first regression model with hostile attribution bias and hostile sexism was significant, $F (2, 120) = 14.23$, $p < .001$, accounting for 19.2% of the variance in dangerous world 1. In contrast to Study 1, hostile sexism was a significant predictor ($p < .001$) of dangerous world 1 and hostile attribution approaching significance ($p = .055$).

In the second multiple regression analysis, I examined if the four constructs were significant predictors of dangerous world 2. The overall model was significant, $F (4, 118) = 5.21$, $p = .001$. The results showed that the four constructs explained 15% of the variance in dangerous world 2. Neither emotional congruence ($p = .108$) nor children as sexual beings implicit theory ($p = .104$) were significant predictors of dangerous world 2 when controlling for the other predictors. Similarly hostile attribution bias did not predict the dangerous world 2 ($p = .670$). In this model, only hostile sexism was related to the endorsement of beliefs in dangerous world 2 ($\beta = .27$, $p = .006$) when the other variables were controlled for. This was both contrary to my expectations and inconsistent with the results from the first study. Therefore, I further investigated their relationship with a model where only emotional congruence with children and children as sexual beings implicit theory were examined as predictors of dangerous world 2. Although the overall model explained a small amount of variance (9%) of dangerous world 2, it resulted in a significant prediction of the second version of dangerous world belief, $F (2, 120) = 5.90$, $p = .004$. In this post-hoc analysis, children as sexual beings implicit theory was a significant ($p = .034$) predictor of dangerous world 2, while emotional congruence with children was approaching significance ($p = .066$).

Table 6

Study 2: Multiple Regression Analysis of HAB, HS, EC and CSBIT as Predictors of Dangerous World 1 and Dangerous World 2

Predictors of DW1	β	t	p
HAB	.17	1.94	.055
HS	.34	3.83	.000
Predictors of DW2	β	t	p
HAB	-.04	-.43	.670
HS	.27	2.83	.006
EC	.15	1.62	.108
CSBIT	.15	1.64	.104
Predictors of DW2	β	t	p
EC	.17	1.86	.066
CSBIT	.20	2.14	.034

Note. $N = 123$. HAB = hostile attribution bias; HS = hostile sexism; EC = emotional congruence with children; CSBIT = children as sexual beings implicit theory; DW = dangerous world total score; DW1 = dangerous world 1; DW2 = dangerous world 2.

Chapter Discussion

The aim of this chapter was to examine the associations between the dangerous world implicit theory and four other cognitive constructs: (a) hostile attribution bias, (b) hostile sexism, (c) emotional congruence with children, and (d) children as sexual beings implicit theory. Evidence from the literature indicates that individuals who commit aggressive offences are more likely to interpret social situations and others' intent in a hostile way (Dodge, 1980; Lim et al., 2011; Yeager et al., 2013). Results over two studies indicated that individuals who were more likely to believe that the world is a dangerous and threatening place were also likely to interpret ambiguous social situations in a hostile way, as expected. However, I could not find any significant relationship between hostile attribution bias and dangerous world 2, which was surprising as I argued that the biased perception of the world and others as dangerous and untrustworthy would be central to both versions of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999).

In the literature, offenders holding hostile sexist attitudes see women as manipulative and in need of punishment (Malamuth, & Brown, 1994). Research also shows that holding hostile sexist attitudes is associated with higher proclivity of rape (e.g., Abrams et al., 2003; Masser et al., 2006; Romeo-Sánchez, Durán, Carretero-Dios, Megías, & Moya, 2010). Findings from the two studies show that responses indicating hostile sexist attitudes were positively associated with the dangerous world measures, which incorporate beliefs that it is necessary to discipline women if their authority is threatened and beliefs that adults are not trustworthy compared to children.

In addition, findings from the two studies indicated that higher emotional and cognitive association with children was associated with dangerous world 2, which includes beliefs around seeing children as reliable and accepting. The findings also suggested that people who are more likely to interpret children as sexual beings may also be more likely to

see children as willing to please their sexual desires. From the literature, we know that

emotional congruence (Mann et al., 2010; McPhail et al., 2013) and children as sexual beings

implicit theory (Marziano et al., 2006) were associated with sexual offending against

children. Thus, these associations between emotional congruence with children, children as

sexual beings and the dangerous world implicit theory were in line with my expectations.

The results from the multiple regression analyses varied over two studies. Contrary to

my hypothesis, results from the two studies, using two different hostile attribution bias

measures, suggest a lack of a robust relationship between the current measure of dangerous

world and hostile attributions. This finding was particularly unexpected. One explanation

may be that dangerous world implicit theory and hostile attribution bias may not be sharing

substantial conceptual similarity which is opposite to my hypothesis. Another explanation

may be that, despite conceptual similarities between the dangerous world implicit theory and

hostile attribution bias, the measurement items were not tapping effectively into their

respective constructs. On the other hand, findings for hostile sexism were indicating a

stronger message. The results suggest that hostile sexism was partially overlapping with parts

of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999).

The regression results where I examined the predictors of dangerous world 2 were

inconclusive and inconsistent between the two studies. While emotional congruence with

children and children as sexual beings implicit theory were significant predictors of

dangerous world 2 in Study 1, they were not in Study 2. However, a further post-hoc analysis

suggested that children as sexual beings implicit theory was significantly related to dangerous

world 2 (and emotional congruence was approaching significance) once hostile sexism and

hostile attribution bias were removed from the analysis. This suggests that emotional

congruence and children as sexual beings implicit theory predict the second version of the

dangerous world belief only when not controlling for hostile attribution bias and hostile sexism, since hostile sexism accounted for the majority of the variance in dangerous world 2.

Conclusions and Future Directions

Within the sexual offending literature, the implicit theories theory (Ward, 2000; Ward & Keenan, 1999) was an impressive attempt to apply a social cognitive framework to an aetiological understanding of sexual offending against children (Gannon & Polaschek, 2006; Ó Ciardha & Ward, 2013). Consequently, many researchers have concentrated efforts into investigating the empirical evidence for distinct psychological constructs mapping onto Ward and Keenan's (1999) five implicit theories (e.g., Gannon, et al., 2006; Keown et al., 2008, 2010; Marziano et al. 2006; Paquette et al., 2014). I argue that this might have resulted in underestimating the conceptual similarities between the five implicit theories. Moreover, researchers have drawn heavily on the implicit theories as conceptualised by Ward and Keenan (1999) to propose further theories or models (e.g., the integrated model of risk and aetiology; Beech & Ward, 2004; an integrated theory of sexual offending; Ward & Beech, 2006) or design rehabilitation models (e.g., an implicit theory approach to challenge cognitive distortions; Drake, Ward, Nathan, & Lee, 2001; the good lives model of treatment; Ward & Gannon, 2006; Ward, Mann & Gannon, 2007). However, they have done so in the absence of a large evidence base supporting the hypothesised conceptualisation of these cognitive constructs (Gannon & Polaschek, 2006; Keown et al., 2010).

While I acknowledge that the similarities (i.e., shared variance) between the dangerous world implicit theory and other constructs were relatively low, these results still indicate that multiple constructs (e.g., hostile sexism, children as sexual beings implicit theory) are *partly* overlapping with Ward and Keenan's (1999) conceptualisation of the dangerous world implicit theory. I argue that the dangerous world implicit theory itself may be alternatively conceptualised as reflecting the co-occurrence of potentially criminogenic

constructs in individuals who sexually abuse children. If this argument is supported by

additional research, it may encourage practitioners who use the implicit theories theory to

guide case formulation (see Ward & Gannon, 2006), to examine whether it is possible to

parse an apparent dangerous world implicit theory into constructs that appear to better reflect

their client's offence-supportive thinking. In other words, rather than assessing a client for the

presence or absence of a dangerous world implicit theory, a practitioner might consider

whether psychological constructs such as hostile sexism, emotional congruence with children,

or the children as sexual beings implicit theory, provide an alternative framework through

which to understand that individual's treatment needs.

Interestingly, despite hostile sexism being found to share a substantial amount of

variance with both versions of the dangerous world implicit theory in current studies, hostile

sexism has not been a primary focus of research when examining psychological constructs in

relation to sexual offending against children—but rather has been mostly associated with rape

(e.g., Abrams et al., 2003; Masser et al., 2006; Romeo-Sánchez et al., 2010). Future research

should, therefore, seek to understand the similarities between the conceptualisation of hostile

sexism and the dangerous world implicit theory, as well as the role of hostile sexism in sexual

offending against children; if there is one.

In addition to these, although gender was not a significant determinant of participants'

responses to the dangerous world implicit theory vignettes in Study 1, it should be noted that

the dangerous world vignettes were not tailored differently for males and females in the first

study. Therefore, future research with females could consider using female characters in the

vignettes in order to be in line with conceptual suggestions in the literature (see Gannon et al.,

2012). Given the two studies included community samples only, these findings need to be

replicated and further examined using forensic populations.

One of the core hypotheses in the current studies was the conceptual similarity between the dangerous world implicit theory and hostile attribution bias, in particular, was not supported. Therefore, future research should investigate the distinction between dangerous world belief and hostile attribution bias and further explore why hostile attribution bias does not appear to substantially overlap with the dangerous world implicit theory, despite conceptual similarities between the two constructs. When working on the dangerous world implicit theory, it is necessary to develop evidence of the validity of the tools used to measure the construct. Establishing construct validity is an iterative process, but the current lack of this evidence base means that poor construct validity as an explanation of the counter-hypothetical findings cannot be ruled out.

Chapter Summary

In this chapter, I examined the conceptual similarities between the dangerous world implicit theory and four psychological constructs: hostile attribution bias, hostile sexism, emotional congruence with children, and children as sexual beings implicit theory. I developed four vignettes in order to depict the content of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). The results suggested that parts of the dangerous world implicit theory shared some similarity with hostile sexism, emotional congruence with children, and the implicit theory of children as sexual beings. However, over two studies, there was very limited evidence to support my hypothesis of a conceptual similarity between hostile attribution bias and the dangerous world implicit theory. In the next chapter, I adopted a different approach to measure holding dangerous world implicit theory by developing an item-based tool and continued examining the conceptualisation of the dangerous world implicit theory.

CHAPTER THREE

Exploring the Conceptualisation of the Dangerous World Implicit Theory:

Exploratory Factor Analysis

Chapter Overview

In the previous chapter, I argued that the dangerous world implicit theory may be conceptually similar to other psychological constructs including hostile attribution bias, hostile sexism, emotional congruence with children, and the implicit theory of children as sexual beings. However, results indicated that only three of the constructs (i.e., hostile sexism, emotional congruence with children, and the children as sexual beings implicit theory) under examination showed *some* shared variance with the dangerous world implicit theory. In the previous two studies, I used vignettes to measure the endorsement of a dangerous world implicit theory, which were not previously validated. In this chapter, in line with my arguments in relation to the conceptualisation of the dangerous world implicit theory, I developed an alternative tool—an item-based dangerous world implicit theory scale—as an initial step to eliminate potential limitations around the validity of the measurement tool used, and continue examining the conceptualisation of this theory with a different approach (i.e., factor analysis).

Introduction

The majority of the research investigating the implicit theories held by individuals who commit sexual offences against children were conducted qualitatively, using semi-structured interviews (e.g., Marziano et al., 2006; Paquette et al., 2014). The lack of empirical studies using indirect measures has been highlighted by several authors (e.g., Gannon et al., 2006; Gannon & Polaschek, 2006). As a result, Keown and colleagues (2008) attempted to measure the dangerous world implicit theory—as well as other implicit theories—using more implicit tasks. Where research has included indirect measures, some have focused only on

certain implicit theories such as, *children as sexual beings* (e.g., Keown & Gannon, 2008; Mihailides et al., 2004), or on implicit theories hypothesised to be held by other offender groups, such as individuals who commit sexual offences against women (e.g., Blake & Gannon, 2010). However, they did not always examine the dangerous world implicit theory of individuals who sexually abuse children, as conceptualised by Ward and Keenan (1999). When research included explicit measures, like questionnaires, the examination of dangerous world implicit theory was excluded from the analyses (Keown et al., 2010). This was justified by offender populations other than individuals who sexually abuse children also holding perceptions of the world as a hostile place (Beck, 1999) and the underrepresented status of the dangerous world implicit theory within the scales used (e.g., MOLEST; Bumby, 1996; Gannon et al., 2009).

Unlike the majority of research into the implicit theories, Gannon and colleagues (2009) examined six questionnaires of *cognitive distortions* by coding the items for each questionnaire against Ward and Keenan's (1999) five implicit theories. Their findings were crucial for the recognition of the gap in the literature; considering the construct validity of measures that have been used along with the assumption that they measure 'cognitive distortions' (e.g., Feelgood, Cortoni, & Thompson, 2005). Gannon and her colleagues examined four established offence-supportive belief questionnaires including the Multiphasic Sex Inventory (MSI; Nichols & Molinder, 1984, as cited in Gannon et al., 2009), the Abel and Becker Cognition Scale (ABCS; Abel, Gore, Holland, Becker, & Rathner, 1989), the Hanson Sex Attitude Questionnaire (Hanson, Gizzarelli, & Scott, 1994), and the MOLEST Scale (Bumby, 1996) as well as two unpublished measures: the Offences Against Children Scale from the Questionnaire on Attitudes Consistent With Sexual Offending (QACSO; Lindsay, Whiteield, & Carson, 2007, as cited in Gannon et al., 2009) and the Children and Sex Questionnaire (Beckett, 1987, as cited in Gannon et al., 2009). In their examination, 167

questionnaire items in all six measures were coded into one implicit theory as described by

Ward and Keenan (1999).

According to Gannon et al.'s (2009) findings, *uncontrollability*, *entitlement*, and

dangerous world implicit theories—which were referred to as nonsexual offence-specific

implicit theories—were underrepresented on existing measures. For example, the dangerous

world implicit theory was one of the least common classifications with only 8% ($n = 15$)

representation across the measures. Moreover, a large proportion of items did not fit into the

conceptualisations of the existing implicit theories. These findings indicated that available

measures did not involve an adequate assessment of holding a dangerous world implicit

theory, suggesting a lack of measurement tools that assess the endorsement of a dangerous

world implicit theory (Ward & Keenan, 1999).

In another mixed-method study design, Keown and colleagues (2010) used

interviews, questionnaires, as well as an experimental task (i.e., Rapid Serial Visual

Presentation-Modified; RSVP-M) in order to compare the evidence of implicit theories using

different approaches. Although the authors adapted the RSVP-M measure to tap into the five

implicit theories as proposed by Ward and Keenan (1999), the dangerous world implicit

theory was excluded from both the questionnaire and RSVP-M analyses due to (a) the

perception of the world as a dangerous and hostile place also by offender groups other than

individuals who commit sexual offences against children and (b) Gannon et al.'s (2009)

findings that dangerous world implicit theory was not adequately represented on existing

questionnaires. This exclusion of the dangerous world implicit theory by other researchers

(Keown et al., 2010) strongly suggested a deficit of the assessment of the dangerous world

implicit theory within the available measurement tools.

One exception to the lack of available psychometric tools assessing the dangerous

world implicit theory is an item-based inventory developed by Howitt and Sheldon (2007), as

part of their exploratory research into similarities of cognitive distortions expressed by individuals who committed contact and online sexual offences against children. According to their findings, individuals who committed contact offences only against children endorsed more statements on their dangerous world scale, albeit only approaching significance (p = .07). Howitt and Sheldon (2007) developed their dangerous world scale with two sub-scales: *the world is hostile* and *children are reliable* subscales, representing the two versions of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). This did not adequately depict the multi-faceted description of the dangerous world implicit theory I argued and examined using four vignettes in the previous chapter (see Chapter Two). Each dangerous world implicit subscale had three items in Howitt and Sheldon's (2007) C&SA questionnaire. I argue that the items developed by Howitt and Sheldon (2007) are limited in the variety of aspects of the concept of a dangerous world implicit theory they represent. In addition, the usual recommendation for a factor which represents an underlying psychological construct is to have more than three items, so that the factor can be a robust representation of the construct (Brown, 2015; Yong & Pearce, 2013). Therefore, if the dangerous world implicit theory is multi-faceted—particularly with more than two dimensions as hypothesised by Ward and Keenan (1999)—then, six items for a multi-dimensional construct would not be psychometrically adequate (Brown, 2015).

     The dangerous world implicit theory is one of the most commonly hypothesised implicit theories, and despite conceptual variations among them, it is hypothesised to be held by several different offender groups (see Beech et al., 2005; Beech et al., 2009; Dempsey & Day, 2011; Ó Ciardha & Gannon, 2012; Polaschek & Ward, 2002; Ward & Keenan, 1999). Overall, the dangerous world implicit theory is underrepresented within current psychometric assessments of offence-supportive beliefs (Gannon et al., 2009; Keown et al., 2010). As a result, there has been inadequate examination of the dangerous world implicit theory in the

literature. The available published material which assessed the endorsement of dangerous

world implicit theory is limited in its scope (i.e., Howitt & Sheldon, 2007), making it

inadequate for the purposes of this thesis, which is to examine the dimensions of the concept

of holding a dangerous world implicit theory as conceptualised by Ward and Keenan (1999).

Therefore, in order to investigate the underlying construct of the dangerous world implicit

theory, there was a need to develop a new tool.

I previously developed a vignette-based explicit measure of the dangerous world

implicit theory (Chapter Two). There were advantages as well as disadvantages to this

approach. Vignette-based measures encourage participants to imagine a particular situation or

context depicted in the scenarios. Therefore, they are more likely to enable the participants to

mentally place themselves in the context of the concept being measured as it has been

suggested that imagining actions activates brain parts associated with the actual behaviour

(Jeannerod & Frak, 1999). However, they are lengthy, more time-consuming, and can also

result in respondent fatigue (Evans et al., 2015; Kelly, 2009; Kim, 2012; Wallander, 2009).

Therefore, using vignette-based measures may not be preferable when data collection method

is online surveys consisted of questionnaire batteries. Instead, item-based, shorter measures

can be more useful when time or financial resources are limited (Kost & da Rosa, 2018). In

addition to these, the counter-hypothetical findings in the previous chapter where dangerous

world implicit theory vignettes were used, highlighted the need to evaluate construct validity

of any tools used to measure the concept of dangerous world implicit theory whilst examining

the conceptual similarities with cognate constructs such as hostile attribution bias, or

emotional congruence with children.

According to Ward and Keenan's (1999) conceptualisation, the core belief of the

dangerous world implicit theory is that the world is a dangerous and threatening place where

people are perceived as rejecting and abusive in order to put their own needs above the needs

of others. Ward and Keenan hypothesised two manifestations of this implicit theory. The first version involves the belief that defending oneself to achieve dominance and control over others is a necessity. It includes believing in the punishment or seeking for retribution for others' threatening behaviour, in order to have a stronger position than those who appear as inflicting harm. As Ward and Keenan argued, this version of the dangerous world implicit theory focuses on the beliefs and desires of other people which indicate malign intentions. As a response to these individuals with malevolent intentions, this implicit theory involves viewing oneself as capable of retaliating and/or punishing women or children in order to maintain dominance over others (Ward & Keenan, 1999). The first version of dangerous world implicit theory also involves holding negative and blaming attitude towards women, which can be seen from the examples of holding this implicit theory by Ward and Keenan (1999): "*She had no right to question my authority*", "*I did it to get revenge on her and her mother*" (p.829).

The second version of the dangerous world implicit theory is based on the same core belief that the world is a dangerous and threatening place. However, unlike the first version where everyone is seen as untrustworthy and the individual holding this implicit theory feels the need to fight back to control other people, the main focus in the second version is the perception of children as more reliable, dependable and more trustworthy as opposed to adults. The perception of people as refusing, insulting, rejecting, and untrustworthy applies particularly to adults in the second version. On the other hand, children are seen as more accepting, caring, and loving. Unlike adults—whose intentions are seen as malevolent—children are perceived as prioritising the needs of the person holding the implicit theory and not rejecting or exploitative. The second version of the dangerous world implicit theory also consists of the expectation that children can understand the holder's needs to be loved and cared for. In addition to these, children are perceived as being able to understand the

individual's sexual desires and are willing to satisfy them. In contrast to the first version of this implicit theory, this version does not involve perceiving oneself as capable of punishing or retaliating against other adults, or asserting dominance over them.

Based on Ward and Keenan's (1999) conceptualisation of the dangerous world implicit theory with two versions, I argue that this concept is likely to be multi-dimensional. Although Ward and Keenan's conceptualisation essentially suggested two versions of this theory, I argue that not only should it be multi-dimensional, but the concept of dangerous world implicit theory may consist of four dimensions. I hypothesise that the first dimension involves the perception of the world and other people as dangerous. This dimension would represent the perception of people as untrustworthy, rejecting, and with an intention to dominate and hurt others. As a result of this interpretation of others' actions, one would feel capable of retribution or retaliation in order to maintain control over others who are perceived as dangerous or threatening. I argue that this dimension is similar to the concept of hostile attribution bias (Dodge, 1980; 2006) in which people with hostile attribution bias interpret the world and others' actions in a hostile way. I also argue that the first version of the dangerous world implicit theory—as conceptualised by Ward and Keenan (1999)—involves negative attitudes or negative perception of women as untrustworthy alongside the perception of other adults and the world as a dangerous and threatening place. I argue that a second dimension of the dangerous world implicit theory would include negative attitudes towards women. This dimension would represent the untrustworthiness of women as their intention is interpreted as manipulative and is similar to hostile sexism (Glick & Fiske, 1996) which refers to negative and hostile attitudes towards women.

In line with Ward and Keenan's second version of the dangerous world implicit theory where children are seen as trustworthy as opposed to adults, the third dimension I argue represents the perception of children as reliable and dependable beings. I hypothesise

that this dimension represents the view of children as accepting, caring, and loving,. This dimension would be similar to the emotional congruence with children (Finkelhor, 1984) construct which refers to cognitive and emotional association with children.

Lastly, I argue that the fourth dimension of the dangerous world implicit theory consists of viewing children in a sexualised way. I argue that this fourth dimension would represent the perception of children as sexual agents, where they are not only capable of understanding one's needs and sexual desires but are also happy to gratify them. This dimension would be similar to the children as sexual beings implicit theory (Ward & Keenan, 1999) referring to the perception of children as potential sexual agents.

In this study, a list of items involving statements that aimed to represent holding a dangerous world view as conceptualised by Ward and Keenan (1999) is developed. I based my item development strictly on the description of the implicit theory as two versions, and drew on descriptions and examples of the two versions offered by Ward and Keenan (1999). This was due to three reasons, which also identifies the aims of this chapter: (1) I wanted to unpack the concept of dangerous world implicit theory exactly as it has been defined; without changing or modifying its conceptualisation by Ward and Keenan (1999), (2) based on the conceptualisation by Ward and Keenan, I wanted to test whether the concept of a dangerous world implicit theory involved multiple dimensions and whether these dimensions would have a good model fit from a psychometric perspective, and (3) I wished to develop an item-based tool to test if the dangerous world implicit theory construct as conceptualised by Ward and Keenan (1999) could be measured in a reliable and valid way. It should be noted that this study is an initial step of scale development as an outcome of examining the concept of dangerous world implicit theory using psychometric tools. However, developing a 'perfect

scale' that would be used in clinical assessment is not a priority. Although the factor analyses

presented are thorough, they are still an exploratory[8] step of scale development.

In this chapter, I use several different analytic techniques including, Exploratory

Factor Analysis, Exploratory Factor Analysis with Target Rotation, and Confirmatory Factor

Analysis when analysing the data (Brown, 2015). Factor Analysis is commonly used to

understand and assess a theory of underlying structure of a concept (Tabachnick & Fidell,

2013). Re-running the same analysis is in the nature of factor analytic approach, until a

measure with adequate items forming both psychometrically strong and conceptually

meaningful factors representing the concept measured are obtained (Tabachnick & Fidell,

2013). Therefore, it is an iterative approach (Tay & Jebb, 2017), where decisions in relation

to performing the analysis need to be made by the researcher (Fabrigar, Wegener,

MacCallum, & Strahan 1999). Factor analysis is based on mathematical procedures and each

type is grounded in different principles and mathematical equations (see Asparouhov &

Muthén, 2009). It is also recommended to use different types of factor analysis for different

purposes, for sound applications of each in research practices (Browne, 2001; Fabrigar et al.,

1999). Although, a discussion around the mathematical background of factor analysis is

beyond the scope of this thesis, in the following sections, I explain and justify the rationale

behind using each factor analytic approach in this chapter, based on the psychometrics

literature.

Method

Sample

Participants were recruited from Prolific. Initially, the study was piloted with 10

participants in order to go through the procedures to be used in the study and to identify any

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[8] The next step of scale development, Confirmatory Factor Analysis and Structural Equation
Modelling, is presented in the following chapter based on the findings in this chapter.

flaws in the procedure before full data collection using limited available funds. In the pilot, I

applied a number of pre-screen items in order to have a sample of participants who are over

the age of 18, could speak fluent English, were UK-residents, and who identified their gender

as male. Following the pilot, an additional pre-screen item was applied whereby participants

needed a 95% study approval rate on Prolific in order to capture potential participants who

participated in previous research studies and that their participation had been approved 95%

of the time by previous researchers, ensuring high quality data. Additionally, individuals who

already took part in the pilot phase were prevented from completing the survey again. A total

of 406 responses were recorded in Qualtrics. Three responses were excluded from the data

analyses: two from participants who chose to withdraw from the study and one from a

participant who completed the survey a second time following a technical fault. I therefore

excluded his second set of responses. After examining the data further, I excluded three more

responses from the data: One participant responded with identical ratings to all items (i.e.,

straightlining; Zhang & Conrad, 2014), another participant responded only with extreme ends

of the scale options, resulting in a recurrent outlier in the data, and the third participant was

both a recurrent outlier in their responses to the items and there was very low standard

deviation in their responses in comparison to the rest of the sample. As a result, there were a

total of 400 responses included in the analyses.

Measures

      Dangerous World Implicit Theory Scale. Thirty-two items were created by sticking

strictly to the conceptualisation of the dangerous world implicit theory (Ward & Keenan,

1999). The items were developed based on the definitions and the example statements in

Ward and Keenan's (1999) paper that could be turned into items. Fourteen of the thirty-two

items described the content within the first version of the dangerous world implicit theory

(e.g., "The world is a hostile and dangerous place", "It's often necessary to fight back in

order to show other people who's boss") and the other eighteen items were developed to depict the content of the second version of the dangerous world implicit theory (e.g., "Children are much more dependable than adults", "Sex between children and adults is very loving"). Seven of these items were developed to describe content (i.e. beliefs or attitudes) contradictory to the ones conceptualised in Ward and Keenan's dangerous world implicit theory (e.g., "Most people are welcoming and accepting", "I trust children and adults about the same"), and were, therefore, designed to be reverse coded. Participants responded to each item on a 5-point Likert-type scale from 0 *(strongly disagree)* to 4 *(strongly agree*; see Appendix IX).

Procedure

The School of Psychology Ethics Committee reviewed and approved this study prior to data collection (Ethics ID: 201815206042754955). A short online survey in Qualtrics was designed. All participants were presented with information regarding the survey and asked for their consent before participation. After completing a demographics questionnaire, participants were presented with the dangerous world implicit theory items in random order. All participants were debriefed at the end of the survey, including participants that did not meet inclusion criteria.

Results

Demographics

As a result of the pre-screening criteria on Prolific, all participants were male (N=400). The mean age of the participants was 38.32 years ($SD = 12.39$). The majority of participants identified their ethnicity as Caucasian (91.8%). The rest of the participants reported that they belonged to a mixed ethnic background (3.5%), South Asian (1.8%), African (1.3%), Caribbean (0.5%) and other (1%) ethnic background. One participant (0.3%) preferred not to state his ethnicity.

Missing Data

There were four missing values in the data, which was negligible. However, in order to conduct parallel analysis as a supplementary criterion when deciding the number of factors to be extracted (see below), a complete data set was required. Therefore, I adopted *hot deck imputation*[9] as recommended by Myers (2011) in cases where the number of missing values are so low. Hot deck imputation replaces missing values from donor participants who responded in the same way to non-missing variables (Myers, 2011).

Data Analysis

As both Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) were parts of the next step of this line of research (see Chapter Four) and due to the availability of more advanced options for Exploratory Factor Analysis, I chose to use Mplus version 8 for the majority of the analyses. For correlations, scree test, and parallel analysis, I used SPSS Version 25. The descriptive statistics of the 32 dangerous world implicit theory items are presented in Table 7. The initial examination of the correlation matrix showed that 6 items (i.e., dw5, dw14, dw18, dw22, dw24, and dw26) had correlations below .3 (see Tables 8-11). Although it is suggested to consider excluding items that have many correlations below .3 (Field, 2009), no items were excluded solely based on the low correlations in order to fully explore the relationships between items and the underlying factors as a result of the factor analysis results.

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[9] Little's Missing Completely at Random (MCAR) Test was significant χ^2 (92) = 138.80, p = .001, indicating that the values were not missing completely at random (MCAR). However, researchers have noticed the difficulty or impracticality of meeting the MCAR assumption (Bennett, 2001; Myers, 2011). In cases where the number of missing values are between 1-5% of data, regardless of whether the type of the missing data is missing completely at random (MCAR), missing at random (MAR), or not missing at random (NMAR), hot deck imputation as a practical solution for missing values is recommended (Myers, 2011; Roth, 1994).

Determining how many factors are to be retained requires balancing the need for parsimony against the need for plausibility and is usually subjective (Fabrigar et al., 1999). Kaiser's method of factor extraction in factor analysis has been consistently criticised in the literature (Costello & Osborne, 2005; Fabrigar et al., 1999; Jolliffe, 2002; Velicer & Jackson, 1990). Applying Kaiser's (1960) criterion—which is the default in SPSS—suggests retaining all factors with eigenvalues greater than 1.0 and usually results with over-extraction (Velicer & Jackson, 1990). Fabrigar et al., (1999) recommended relying on multiple criteria when deciding on the number of factors to be included in a model. The use of scree test and parallel analysis as well as goodness-of-fit indices are recommended in the literature (Brown, 2015; Fabrigar et al., 1999; Ford, MacCallum, & Tait, 1986). The scree plot suggested the extraction of 3, 4, or 6 factors and parallel analysis[10] suggested retaining 4 factors (see Figure 1).

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[10] Parallel Analysis is not available for categorical variables therefore, the variables were treated as continuous in this case, using MLR estimation and Geomin rotation (Muthén & Muthén, 1998-2017).

Table 7

Descriptive Statistics of 32 Dangerous World Implicit Theory Items

| Items | Central Tendency | | | | | Percentiles | | | Skewness | Kurtosis |
| | Dispersion | | | | | | | | | |
	Mean	Median	SD	Min	Max	25th	50th	75th		
dw1. The world is a hostile and dangerous place.	2.40	2	1.03	0	4	2	2	3	-.089	-.782
dw2. People are generally abusive and out for themselves.	1.39	1	.97	0	4	1	1	2	.826	.417
dw3. Most people are welcoming and accepting.	2.39	2	.85	0	4	2	2	3	-.236	-.098
dw4. It's often necessary to fight back in order to show other people who's boss.	1.62	2	.98	0	4	1	2	2	.195	-.445
dw5. If someone does me harm, it's better to "turn the other cheek".	1.83	2	1.03	0	4	1	2	3	.312	-.500
dw6. I'm always ready to strike back when necessary.	1.53	1	1.03	0	4	1	1	2	.337	-.360
dw7. I regularly assert my dominance and control over others.	0.62	0	.81	0	4	0	0	1	1.513	2.530
dw8. Other people generally want to dominate or hurt me.	0.84	1	.85	0	4	0	1	1	1.254	2.068
dw9. Women are trustworthy.	2.48	2	.97	0	4	2	2	3	-.275	-.083
dw10. I have no problem disciplining women or children if they have it coming.	0.87	1	.97	0	4	0	1	1	1.021	.370
dw11. If a woman questions a man's authority, she should be put in her place.	0.35	0	.59	0	3	0	0	1	1.799	3.471
dw12. If the women in my life question me, I'll find a way of controlling or punishing them.	0.32	0	.60	0	4	0	0	1	2.375	7.318
dw13. Women have no right to question a man's authority.	0.33	0	.67	0	4	0	0	1	2.620	8.492

Table 7 continued

dw14. Even if a woman intended to manipulate me, I wouldn't harm her.	2.95	3	1.11	0	4	2	3	4	-.854	-.084
dw15. The world is welcoming and nonthreatening.	1.35	1	.96	0	4	1	1	2	.465	-.142
dw16. Children are much more dependable than adults.	1.30	1	1.05	0	4	1	1	2	.778	.152
dw17. Many people are untrustworthy and rejecting.	1.76	2	.98	0	4	1	2	2	.384	-.267
dw18. People like me are blameless but others take advantage of us.	1.29	1	.92	0	4	1	1	2	.590	.222
dw19. Adults are more rejecting and abusive than children.	2.50	3	1.03	0	4	2	3	3	-.368	-.316
dw20. I feel powerless against threatening or rejecting adults.	1.10	1	.87	0	4	1	1	1	.943	1.194
dw21. Children are more accepting than adults.	2.40	3	1.04	0	4	2	3	3	-.357	-.434
dw22. I trust children and adults about the same.	1.57	1	.98	0	4	1	1	2	.639	-.110
dw23. Children are more caring and loving than adults.	1.91	2	.95	0	4	1	2	3	.174	-.367
dw24. Children will put my needs above their own.	0.93	1	.84	0	4	0	1	1	.810	.553
dw25. I feel that children will never reject me.	1.24	1	.93	0	4	1	1	2	.560	.110
dw26. Adults are more accepting than children.	1.23	1	.84	0	4	1	1	2	.840	.966
dw27. You can't trust adults.	1.43	1	.94	0	4	1	1	2	.739	.437
dw28. I feel that children really know how to love me.	1.36	1	1.01	0	4	1	1	2	.458	-.162
dw29. Children are innocent and want to please adults.	2.21	2	1.01	0	4	2	2	3	-.317	-.191
dw30. Under certain circumstances, children can benefit from sex with an adult.	0.10	0	.41	0	4	0	0	0	5.149	32.684
dw31. Even young children can understand my sexual desires and are happy to satisfy me.	0.08	0	.37	0	4	0	0	0	6.332	47.636
dw32. Some kids like sex with adults because it makes them feel wanted and loved.	0.49	0	.88	0	4	0	0	1	1.932	3.307

Note. N = 400.

Table 8

Communalities (Pearson's Correlations) Among 32 Dangerous World Implicit Theory Items

Item	dw2	dw3	dw4	dw5	dw6	dw7	dw8	dw9	dw10	dw11	dw12	dw13	dw14	dw15	dw16	dw17	dw18	dw19	dw20	dw21	dw22	dw23	dw24	dw25	dw26	dw27	dw28	dw29	dw30	dw31	dw32
dw1	.440**	-.21**	.15**	-.11*	.18**	.04	.30**	-.20**	.11*	.14**	.11*	.12*	.03	-.50**	.07	.44**	.18**	.16**	.11*	-.001	-.16**	.15**	-.01	-.10*	-.04	.37**	.02	-.03	.05	-.01	.03
dw2		-.38**	.21**	-.10*	.26**	.14**	.34**	-.35**	.14**	.26**	.26**	.15**	-.07	-.32**	.01	.49**	.29**	.11*	.14**	-.002	-.19**	.11*	.07	-.01	-.03	.45**	.06	-.05	.07	.04	.14**
dw3			-.09	.14**	-.07	.01	-.21**	.41**	-.06	-.12*	-.04	-.07	.12*	.37**	.13*	-.37**	-.04	.09	-.13**	.09	.25**	.09	.03	.14**	.12*	-.37**	.18**	.17**	-.06	-.09	-.12*
dw4				-.16**	.53**	.29**	.15**	-.19**	.33**	.22**	.21**	.19**	-.18**	-.04	.03	.22**	.23**	.07	.01	-.04	-.07	.11*	.12*	.07	.12*	.15**	.11**	.04	.25**	.19**	.29**
dw5					-.25**	-.04	.03	.16**	-.05	-.11*	-.02	.04	.22**	.13**	-.02	-.06	.05	.01	.02	.04	.01	.02	.01	.07	-.02	-.03	.03	.11*	-.03	.01	-.05
dw6						.29**	.12*	-.13**	.28**	.30**	.18**	.16**	-.11*	-.06	.003	.13**	.11*	.08	-.10	-.05	.08	.09	.07	.09	.14**	.06	.07	.08	.12*	.21**	
dw7							.10	-.04	.29**	.32**	.34**	.19**	-.18**	.14**	.17**	.11*	.09	-.04	.02	-.05	.04	.15**	.20**	.09	.09	.09	.12*	.03	.23**	.19**	.18**
dw8								-.20**	.06	.20**	.21**	.17**	-.11*	-.26**	-.01	.30**	.22**	.01	.31**	-.03	-.10*	-.01	.09	-.10*	-.11*	.43**	.002	-.05	.18**	-.002	.15**
dw9									-.12*	-.21**	-.15**	-.16**	.23**	.29**	-.01	-.33**	-.10*	.04	-.13*	.004	.26**	-.02	.05	.12*	.11*	-.32**	.13**	.08	-.09	-.04	-.16**
dw10										.32**	.26**	.17**	-.24**	-.01	.14**	.04	.18**	.02	-.03	-.004	-.07	.10*	.10*	.14**	.03	.11*	.24**	.06	.29**	.19**	.22**
dw11											.46**	.49**	-.22**	-.01	.05	.08	.14**	-.03	.10*	-.08	-.03	.02	.18**	.07	.06	.12*	.08	-.05	.26**	.19**	.19**
dw12												.39**	-.22**	.08	.16**	.14**	.16**	-.06	.13**	-.06	-.06	.08	.18**	.13*	.08	.08	.15**	-.06	.22**	.17**	.18**
dw13													-.16**	-.04	.03	.03	.10	-.09	.09	-.10*	-.10	-.01	.14**	.07	.06	.07	.11*	.03	.28**	.23**	.16**
dw14														.06	.07	-.003	.01	.06	.10*	-.02	.04	-.003	-.02	.02	.12*	-.13**	-.07	-.04			
dw15															.01	-.34**	-.04	-.03	-.10	-.01	.22**	.03	.03	.18**	.15**	-.35**	.14**	.07	-.01	-.10*	.03
dw16																.06	.05	.19**	.07	.29**	.10*	.38**	.21**	.12*	-.06	.10*	.23**	.17**	.10*	.08	-.05
dw17																	.20**	.14**	.21**	.05	-.15**	.07	.05	-.10*	-.10	.46**	-.05	-.07	.07	-.01	.16**
dw18																		.10	.17**	.04	-.01	.09	.14**	.19**	.14**	.12*	.17**	.11*	.17**	.06	.24**
dw19																			.02	.37**	-.03	.30**	.05	.12*	-.08	.13**	.16**	.24**	-.03	-.01	.03
dw20																				.04	-.001	.03	.03	-.10	.03	.22**	.02	.002	.14**	-.02	.09
dw21																					.03	.36**	.14**	.17**	-.28**	.07	.19**	.35**	-.001	-.04	.01
dw22																						.02	.01	.05	.08	-.24**	.09	-.002	-.04	-.04	-.02
dw23																							.28**	.28**	-.05	.11*	.37**	.25**	.11*	.01	.10
dw24																								.18**	.01	.01	.21**	.08	.13**	.10	.10*
dw25																									.17**	-.08	.39**	.23**	.10*	.11	.06
dw26																										-.17**	.01	.002	.09	.11*	.17**
dw27																											-.02	.05	.07	-.01	.11*
dw28																												.21**	.15**	.07	.09
dw29																													.02	.02	.02
dw30																														.56**	.40**
dw31																															.30**
dw32																															

Note. N=400. dw = dangerous world implicit theory items. Numbers represent the order of items as originally developed (see Appendix IX).

Tables 8-10 present quartered sections of this table with a bigger font size.

* *p*<.05, ** *p*<.01

Table 9

Table 8 Quartered 1: Communalities (Pearson's Correlations) Across dw1-dw15 and dw2-dw16

Item	dw2	dw3	dw4	dw5	dw6	dw7	dw8	dw9	dw10	dw11	dw12	dw13	dw14	dw15	dw16
dw1	.440**	-.21**	.15**	-.11*	.18**	.04	.30**	-.20**	.11*	.14**	.11*	.12*	.03	-.50**	.07
dw2		-.38**	.21**	-.10*	.26**	.14**	.34**	-.35**	.14**	.26**	.26**	.15**	-.07	-.32**	.01
dw3			-.09	.14**	-.07	.01	-.21**	.41**	-.06	-.12*	-.04	-.07	.12*	.37**	.13*
dw4				-.16**	.53**	.29**	.15**	-.19**	.33**	.22**	.21**	.19**	-.18**	-.04	.03
dw5					-.25**	-.04	.03	.16**	-.05	-.11*	-.02	.04	.22**	.13**	-.02
dw6						.29**	.12*	-.13**	.28**	.30**	.18**	.16**	-.11*	-.06	.003
dw7							.10	-.04	.29**	.32**	.34**	.19**	-.18**	.14**	.17**
dw8								-.20**	.06	.20**	.21**	.17**	-.11*	-.26**	-.01
dw9									-.12*	-.21**	-.15**	-.16**	.23**	.29**	-.01
dw10										.32**	.26**	.17**	-.24**	-.01	.14**
dw11											.46**	.49**	-.22**	-.01	.05
dw12												.39**	-.22**	.08	.16**
dw13													-.16**	-.04	.03
dw14														.06	.07
dw15															.01

Note. N=400. dw = dangerous world implicit theory items. Numbers represent the order of items as originally developed (see Appendix IX).
* *p*<.05, ***p*<.01

Table 10

Table 8 Quartered 2: Communalities (Pearson's Correlations) Across dw1-dw15 and dw17-dw32

Item	dw17	dw18	dw19	dw20	dw21	dw22	dw23	dw24	dw25	dw26	dw27	dw28	dw29	dw30	dw31	dw32
dw1	.44**	.18**	.16**	.11*	-.001	-.16**	.15**	-.01	-.10*	-.04	.37**	.02	-.03	.05	-.01	.03
dw2	.49**	.29**	.11*	.14**	-.002	-.19**	.11*	.07	-.01	-.03	.45**	.06	-.05	.07	.04	.14**
dw3	-.37**	-.04	.09	-.13**	.09	.25**	.09	.03	.14**	.12*	-.37**	.18**	.17**	-.06	-.09	-.12*
dw4	.22**	.23**	.07	.01	-.04	-.07	.11*	.12*	.07	.12*	.15**	.11*	.04	.25**	.19**	.29**
dw5	-.06	.05	.01	.02	.04	.01	.02	.01	.07	-.02	-.03	.03	.11*	-.03	.01	-.05
dw6	.13**	.11*	.08	-.10	-.05	-.05	.08	.09	.07	.09	.14**	.06	.07	.08	.12*	.21**
dw7	.11*	.09	-.04	.02	-.05	.04	.15**	.20**	.09	.09	.09	.12*	.03	.23**	.19**	.18**
dw8	.30**	.22**	.01	.31**	-.03	-.10*	-.01	.09	-.10*	-.11*	.43**	.002	-.05	.18**	-.002	.15**
dw9	-.33**	-.10*	.04	-.13*	.004	.26**	-.02	.05	.12*	.11*	-.32**	.13**	.08	-.09	-.04	-.16**
dw10	.04	.18**	.02	-.03	-.004	-.07	.10*	.10*	.14**	.03	.11*	.24**	.06	.29**	.19**	.22**
dw11	.08	.14**	-.03	.10*	-.08	-.03	.02	.18**	.07	.06	.12*	.08	-.05	.26**	.19**	.19**
dw12	.14**	.16**	-.06	.13**	-.06	-.06	.08	.18**	.13*	.08	.08	.15**	-.06	.22**	.17**	.18**
dw13	.03	.10	-.09	.09	-.10*	-.10	-.01	.14**	.07	.06	.07	.11*	.03	.28**	.23**	.16**
dw14	-.003	.01	.06	.01	.08	.10*	.07	-.02	.04	-.003	-.02	.02	.12*	-.13**	-.07	-.04
dw15	-.34**	-.04	-.03	-.10	-.01	.22**	.03	.03	.18**	.15**	-.35**	.14**	.07	-.01	-.10*	.03

Note. N=400. dw = dangerous world implicit theory items. Numbers represent the order of items as originally developed (see Appendix IX).
* *p*<.05, ***p*<.01

Table 11

Table 8 Quartered 3: Communalities (Pearson's Correlations) Across dw16-dw31 and dw17-dw32

Item	dw17	dw18	dw19	dw20	dw21	dw22	dw23	dw24	dw25	dw26	dw27	dw28	dw29	dw30	dw31	dw32
dw16	.06	.05	.19**	.07	.29**	.10*	.38**	.21**	.12*	-.06	.10*	.23**	.17**	.10*	.08	-.05
dw17		.20**	.14**	.21**	.05	-.15**	.07	.05	-.10*	-.10	.46**	-.05	-.07	.07	-.01	.16**
dw18			.10	.17**	.04	-.01	.09	.14**	.19**	.14**	.12*	.17**	.11*	.17**	.06	.24**
dw19				.02	.37**	-.03	.30**	.05	.12*	-.08	.13**	.16**	.24**	-.03	-.01	.03
dw20					.04	-.001	.03	.03	-.10	.03	.22**	.02	.002	.14**	-.02	.09
dw21						.03	.36**	.14**	.17**	-.28**	.07	.19**	.35**	-.001	-.04	.01
dw22							.02	.01	.05	.08	-.24**	.09	-.002	-.04	-.04	-.02
dw23								.28**	.28**	-.05	.11*	.37**	.25**	.11*	.01	.10
dw24									.18**	.01	.01	.21**	.08	.13**	.10	.10*
dw25										.17**	-.08	.39**	.23**	.10*	.11	.06
dw26											-.17**	.01	.002	.09	.11*	.17**
dw27												-.02	.05	.07	-.01	.11*
dw28													.21**	.15**	.07	.09
dw29														.02	.02	.02
dw30															.56**	.40**
dw31																.30**

Note. N=400. dw = dangerous world implicit theory items. Numbers represent the order of items as originally developed (see Appendix IX).
* *p*<.05, ** *p*<.01
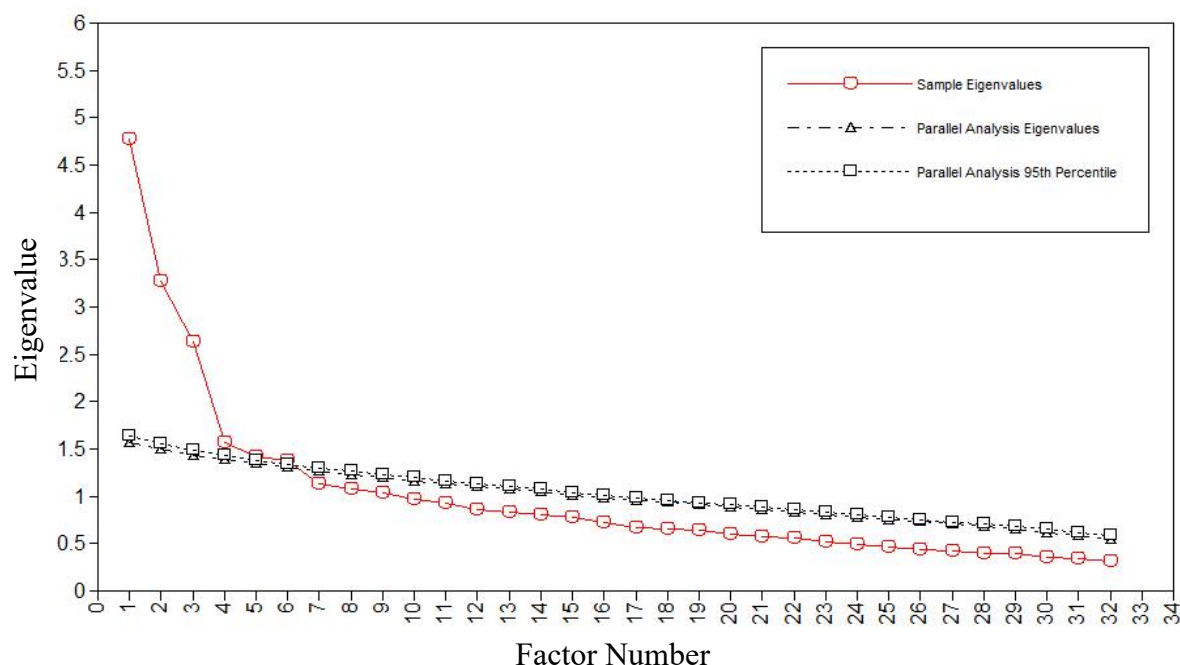
Figure 1. Scree Test and Parallel Analysis Plots

Estimation and Rotation Method[11]

The variables in this study were ordinal (i.e., Likert-type scale items) and there were

some non-normally distributed items. Therefore, I used *robust weighted least squares*

(*WLSMV* in Mplus) as the estimator. The estimor refers to the method of calculating

estimates in a model (Kline, 2016). The WLSMV is specially designed for ordinal data and

makes no distributional assumptions regarding the observed variables (Brown, 2015; Li,

2015). An oblique rotation was chosen as the factors were assumed to be correlated, and

Geomin was used as the rotation method. Geomin is a rotation technique that aims to

minimise row (i.e., variable) complexity in order to provide an interpretable pattern matrix

whilst allowing for complex factors (Sass & Schmitt, 2010). In other words, Geomin aims to

produce a pattern matrix that minimises cross-loadings across indicators (items). Choosing

factor solutions with smaller cross-loadings and larger correlations between factors is

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[11] For a short discussion on alternative estimation and rotation methods that could be used, please see Appendix VIII.

recommended in the literature. Doing so enables researchers to identify if correlations between factors are too large and thus, either to create a second-order factor or to drop one of the factors (Sass & Schmitt, 2010). Therefore, WLSMV and Geomin were adopted as the estimation and rotation methods.

Exploratory Factor Analysis (EFA)

I ran an EFA in Mplus, extracting 1 to 6 factors (Mplus syntax titled *EFA 1*, see Appendix XI). A summary of model fit comparison extracting 1-6 factors can be found in Table 12. The most common suggested number of factors to be extracted as a result of the multiple criteria (i.e., scree plot and parallel analysis) was four. This was a consistent finding with my hypothesis that the dangerous world implicit theory consists of four dimensions. Therefore, a four-factor model was examined in this chapter. The factor loadings of the first four-factor EFA model are presented in Table 13. I considered items to load substantially on a factor if they had a loading of .32 or greater, as suggested by Tabachnick and Fidell (2007). I excluded two items; dw14 and dw26, which did not load strongly on any of the factors and re-ran the EFA (Mplus syntax titled *EFA* 2, see Appendix XI). Re-running factor analysis is a common approach, particularly when items are dropped at any stage (Brown, 2015). The factor loadings of the four-factor EFA 2 model are presented in Table 14. Throughout this chapter, the pattern matrix is presented as it yielded the simplest structure after rotation.

Table 12

Summary of Model Fit Results for EFA Models with 1-6 Factor Extraction

	Models					
	1 Factor	**2 Factors**	**3 Factors**	**4 Factors**	**5 Factors**	**6 Factors**
χ^2	2573.064	1664.440	875.471	709.882	600.476	501.402
df	464	433	403	374	346	319
p-value	< .001	< .001	< .001	< .001	< .001	< .001
RMSEA	0.107	0.084	0.054	0.047	0.043	0.038
RMSEA CI 90%	0.103-0.111	0.080-0.089	0.049-0.059	0.042-0.053	0.037-0.049	0.031-0.044
CFI	0.524	0.722	0.893	0.924	0.943	0.959
TLI	0.491	0.682	0.869	0.899	0.918	0.936
SRMR	0.136	0.097	0.064	0.056	0.049	0.043

Note. $N = 400$. *df* = degrees of freedom. RMSEA = Root Mean Square Error of Approximation (≤ 0.06). RSMEA CI 90% = RMSEA 90% Confidence Interval. CFI = Comparative Fit Index (≥ 0.90). TLI = Tucker-Lewis Index (≥ 0.90). SRMR = Standardized Root Mean Square Residual (≤ 0.05).

Table 13

EFA 1: factor loadings of 32 dangerous world implicit theory items

Scale items	HW	EC	RET/CSB	RET
dw1. The world is a hostile and dangerous place.	**.646***	.093*	-.095	.149*
dw2. People are generally abusive and out for themselves.	**.637***	.035	.143*	.148*
dw3. Most people are welcoming and accepting.	**-.594***	.278*	-.061	.014
dw4. It's often necessary to fight back in order to show other people who's boss.	.065	.023	.246*	**.567***
dw5. If someone does me harm, it's better to "turn the other cheek".	-.081	.133*	.092	**-.355***
dw6. I'm always ready to strike back when necessary.	.031	-.005	.070	**.780***
dw7. I regularly assert my dominance and control over others.	-.116*	.060	**.501***	.282*
dw8. Other people generally want to dominate or hurt me.	**.499***	-.050	**.322***	-.140*
dw9. Women are trustworthy.	**-.501***	.159*	-.142*	-.076
dw10. I have no problem disciplining women or children if they have it coming.	-.038	.112*	**.420***	.311*
dw11. If a woman questions a man's authority, she should be put in her place.	.063	-.105	**.736***	.159
dw12. If the women in my life question me, I'll find a way of controlling or punishing them.	.017	.007	**.700***	.134
dw13. Women have no right to question a man's authority.	.059	-.100	**.746***	-.018
dw14. Even if a woman intended to manipulate me, I wouldn't harm her.	-.020	.214*	-.267*	-.197*
dw15. The world is welcoming and nonthreatening.	**-.701***	.083	.197*	-.019
dw16. Children are much more dependable than adults.	.009	**.498***	.143*	-.056
dw17. Many people are untrustworthy and rejecting.	**.679***	.055	.010	.053

Table 13 continued

dw18. People like me are blameless but others take advantage of us.	.141*	.181*	**.356***	-.005
dw19. Adults are more rejecting and abusive than children.	.167*	**.512***	-.200*	.114
dw20. I feel powerless against threatening or rejecting adults.	.299*	.037	**.324***	**-.320***
dw21. Children are more accepting than adults.	.132*	**.663***	-.174*	-.083
dw22. I trust children and adults about the same.	**-.340***	.103*	.027	-.052
dw23. Children are more caring and loving than adults.	.045	**.678***	.066	.062
dw24. Children will put my needs above their own.	-.044	.300*	**.343***	-.026
dw25. I feel that children will never reject me.	-.265	**.439***	.278*	.008
dw26. Adults are more accepting than children.	-.309*	-.166*	.289*	.097
dw27. You can't trust adults.	**.697***	.088	.076	-.036
dw28. I feel that children really know how to love me.	-.183*	**.527***	.300*	.040
dw29. Children are innocent and want to please adults.	-.075	**.494***	-.018	.020
dw30. Under certain circumstances, children can benefit from sex with an adult.	.043	.035	**.896***	-.090
dw31. Even young children can understand my sexual desires and are happy to satisfy me.	-.010	-.059	**.809***	.002
dw32. Some kids like sex with adults because it makes them feel wanted and loved.	.038	.021	**.509***	.112

Note. $N = 400$. HW = hostile world; EC = emotional congruence; RET/CSB = retribution/children as sexual beings; RET = retribution. Factor loadings of .32 or higher to any of the four factors are in bold including cross-loadings. The two scale items in bold did not load onto any of the factors above the cut-off point.

* $p < .05$

Table 14

EFA 2: Standardised Factor Loadings of 30 Dangerous World Implicit Theory Items After Exclusion, Sorted By Size

Scale items	HW	EC	RET/CSB	RET
dw15. The world is welcoming and nonthreatening.	-.708			
dw27. You can't trust adults.	.696			
dw17. Many people are untrustworthy and rejecting.	.692			
dw1. The world is a hostile and dangerous place.	.662			
dw2. People are generally abusive and out for themselves.	.650			
dw3. Most people are welcoming and accepting.	-.594			
dw9. Women are trustworthy.	-.502			
dw8. Other people generally want to dominate or hurt me.	.496			
dw22. I trust children and adults about the same.	-.338			
dw23. Children are more caring and loving than adults.		.688		
dw21. Children are more accepting than adults.		.640		
dw19. Adults are more rejecting and abusive than children.		.531		
dw28. I feel that children really know how to love me.		.527		
dw16. Children are much more dependable than adults.		.500		
dw29. Children are innocent and want to please adults.		.495		
dw25. I feel that children will never reject me.		.444		

Table 14 continued

dw30. Under certain circumstances, children can benefit from sex with an adult.	.890	
dw31. Even young children can understand my sexual desires and are happy to satisfy me.	.806	
dw13. Women have no right to question a man's authority.	.746	
dw11. If a woman questions a man's authority, she should be put in her place.	.741	
dw12. If the women in my life question me, I'll find a way of controlling or punishing them.	.701	
dw32. Some kids like sex with adults because it makes them feel wanted and loved.	.504	
dw7. I regularly assert my dominance and control over others.	.501	
dw10. I have no problem disciplining women or children if they have it coming.	.427	
dw24. Children will put my needs above their own.	.338	
dw18. People like me are blameless but others take advantage of us.	.332	
dw6. I'm always ready to strike back when necessary.		.809
dw4. It's often necessary to fight back, in order to show other people who's boss.		.557
dw5. If someone does me harm, it's better to "turn the other cheek".		-.330
dw20. I feel powerless against threatening or rejecting adults.		-.325

Note. $N = 400$. HW = hostile world; EC = emotional congruence; RET/CSB = retribution/children as sexual beings; RET = retribution. No significant cross-loadings higher than .32 were identified.

The chi-square test for the four-factor EFA 2 model suggested rejecting the model, χ^2 (321) = 589.74, $p < .001$. The chi-square is a classic and traditionally reported fit index embedded in SEM however, relying solely on chi-square as a model fit index is not common due to several limitations. One of these well-known limitations is the sensitivity to sample size where solutions with large sample sizes usually produce significant chi-square, resulting in the rejection of the model (Brown, 2015; Hoyle, 1995; 2012). In addition, chi-square value is affected by the non-normal distribution of variables (see Hoyle, 1995; 2012). In applied research, the model fit evaluation instead depends more on fit indices other than the chi-square, such as Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI; Brown, 2015; West, Taylor, & Wu, 2012).

Despite the significant chi-square in this study, several other fit indices indicated good or acceptable fit: RMSEA = .046 (90% CI = 0.040 - 0.052), CFI = .938, TLI = .916, SRMR = .054. Hu and Bentler (1998, 1999) recommended cut-off points of RMSEA values to be close to .06 or below, CFI and TLI values to be close to .95 or higher, and SRMR values to be close to .08 or below for reasonably good fit. Browne and Cudeck (1992) further suggested RMSEA values less than .08 indicate adequate fit while values less than .05 suggest good model fit. MacCallum, Browne and Sugawara (1996) also detailed that the upper limit of 90% confidence interval of the RMSEA should be below .08. Bentler (1990) suggested that CFI and TLI values within the range of .90 and .95 shows acceptable model fit. Based on these recommended cut-off points for the fit indices, the second four-factor EFA model indicated a good fit in this study.

Identified Factors

As a result of the four-factor solution with 30 dangerous world implicit theory items in EFA 2 (see Table 14), I named the four factors as: (1) *hostile world,* (2) *emotional*

congruence, (3) *retribution/children as sexual beings, and* (4) *retribution.* The first factor, *hostile world,* included nine items of which four were reverse coded items. The content of this factor represented the perception of the world and other people (including adults and/or women) as threatening, untrustworthy, hostile, unwelcoming, and abusive. The second factor, *emotional congruence,* included seven items. The content of this factor represented the perception of children as accepting, caring, innocent, loving, and dependable. In most cases (i.e., items) this perception was present in comparison to adults.

Unlike the first two factors, the third and fourth factors were conceptually overlapping. In other words, some items which were expected to load onto a fourth factor as a separate dimension, loaded on the third factor. Whilst this could be explained by both factors depicting socially undesirable, stigmatising attitudes where community participants are expected to respond in a certain way, this overlap was not conceptually meaningful.

The third factor which I named *retribution/children as sexual beings*, involved 10 items. Six[12] of these 10 items (i.e., dw7, dw10, dw11, dw12, dw13, and dw18) represented the idea of seeking retribution for others'—or specifically women's—behaviour, who question the authority of the individual, by asserting dominance and control, by disciplining, or by punishing. This concept of *retribution* also involved the perception of entitlement to such reactions. Three (i.e., items dw30, dw31, and dw32) of the 10 items loading on the third factor (i.e. *retribution/children as sexual beings*) were expected to represent the concept of perceiving *children as sexual beings* as conceptualised in the dangerous world implicit theory by Ward and Keenan (1999). This concept of children as sexual beings represents the perception that children are able to understand the individual's sexual desires and are willing to satisfy them. In addition, children are capable of enjoying and benefiting from sexual engagement. I expected these three items to represent the concept of *children as sexual*

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[12] Item dw24 represented the perception of children as reliable.

beings independent from the rest of the items. This was not the case and, instead, those three *children as sexual beings* items loaded onto the factor representing the content of *retribution.*

Lastly, the fourth factor, *retribution,* contained four items of which two were reverse coded. These four items loading on the fourth factor were conceptually similar to the six items under the third— *retribution/children as sexual beings* —factor, representing the concept of *retribution*. Whilst, the six items under the *retribution* factor did not specifically form one coherent concept with the three items that depicted endorsement of sexual engagement with children, it is possible that they all loaded on the same factor due to all statements representing socially stigmatising attitudes or beliefs. For example, "*Under certain circumstances, children can benefit from sex with an adult*" and "*If a woman questions a man's authority, she should be put in her place*" are conceptually different and yet, involved attitudes that were never acceptable (in relation to children and sex) or no longer acceptable (in relation to women's place) in society. Therefore, it is a plausible explanation that the majority of participants strongly disagreed with both statements. From a statistical point of view, this indicated that participants responded to these items in similar ways, but did not necessarily mean that they are conceptually similar. As Tabachnick and Fidell (2013) explained, the items loading on the same factor as a result of the factor analysis has to be meaningful.

Factor correlations are presented in Table 15. There were small significant correlations between factors *retribution/children as sexual beings* and *hostile world*, between factors *retribution* and *hostile world*, and between factors *retribution* and *retribution/children as sexual beings*. *Emotional congruence* factor did not correlate with any of the factors.

Table 15

EFA 2: Factor Correlations

	HW	EC	RET/CSB	RET
HW		.004	.22*	. 20*
EC			.06	.10
RET/CSB				.27*
RET				

Note. $N = 400$. HW = hostile world; EC = emotional congruence; RET/CSB = retribution/children as sexual beings; RET = retribution.

* $p < .05$

Exploratory Factor Analysis with Target Rotation

The findings from the four-factor EFA 2 model suggested that the pool of dangerous world implicit theory items statistically clustered around four factors, as identified and explained above. However, the conceptual meaningfulness of these factors was as important as the number of common factors identified (Ford et al., 1986). In this case, the two factors *retribution* and *retribution/children as sexual beings* consisted of some items which were expected to be conceptually similar and some which were expected to be different. Exploratory factor analysis with target rotation offers a solution in complex factor patterns to specify the factor loadings of items to target factors, albeit does this rather in a flexible way (Asparouhov & Muthén, 2009; Browne, 2001). In other words, the items are targeted to load on to specific factors, allowing for cross-loadings whilst simultaneously testing for the overall model fit.

Following the findings from the EFA 2, I wanted to test the psychometric properties of the hypothesised four-factor model by *rotating to a partially specified target* (Asparouhov & Muthén, 2009). In an EFA, there is no hypothesis regarding the number of factors and the

items loading on them (Jöreskog, 1969). It is the least restricted factor analysis regarding the

relationship between the factors and the factor loadings (Fabrigar et al., 1999). On the other

hand, CFA involves a specific hypothesis indicating the number of factors and which factors

would include which items (Brown, 2015; Jöreskog, 1969). As a less known rotation

technique, *target rotation* can be seen conceptually as "in between the mechanical approach

of EFA rotation and the hypothesis-driven CFA model specification" (Asparouhov &

Muthén, 2009, p.409).

In CFA models, the target loading values are *fixed* to zero, which are forced to have a

value of zero factor loading, specified in advance (Browne, 2001). In target rotation, target

loading values are also *specified* as zeros, representing preferred restrictions for each item

(Asparouhov & Muthén, 2009). However, unlike in the CFA, the targets are *not fixed* to zero

instead, they are "only made as close to the specified zeros as possible" (Browne, 2001,

p.125). In other words, in target rotation, target loading values are aimed to be estimated as

close to zero as possible, but are not fixed to zero. Zero targets resulting in larger values can

be a consequence of not providing good fit within the model (Asparouhov & Muthén, 2009).

In this chapter, by using target rotation, I wanted to examine the model fit and the

factor loadings by specifying target loadings to zero, particularly for the items under two

factors: factor three; *retribution/children as sexual beings*, and factor four; *retribution*. As I

explained above, the items loading on the retribution/children as sexual beings factor

conceptually represented two different themes. The majority of the items under the

retribution/children as sexual beings factor represented the concept of retribution. These

items were conceptually similar with the items under the retribution factor. These

combinations of conceptually different items represent the complexity of the factors within

the dangerous world implicit theory, using the items I developed as indicators of the common

factor. Target rotation can be seen as a method which offers exploration when complex factor

patterns are involved, like in this case (Browne, 2001). Using target rotation, I wanted to test

and examine the model fit (a) if the conceptually similar items under two separate factors

could be combined, and (b) if the conceptually different items could be separated. In other

words, I wanted to test (a) if all items representing the concept of retribution could be—

flexibly—specified to be under one factor (instead of two separate factors) and (b) if the

items representing the concept of children as sexual beings could be a standalone factor. This

technique is also referred to as providing "...partial knowledge as to what the factor pattern

should be" (Browne, 2001, p. 124) by the researcher and testing the model fit of this targeted

factor pattern.

First, I specified the target factor loadings of the four retribution factor items (i.e.,

items dw6, dw4, dw5, and dw20) onto any other three factors apart from the

retribution/children as sexual beings factor to be as close to zero as possible; aiming to

combine the retribution factor items with the items representing the concept of retribution

under the retribution/children as sexual beings factor. Second, I specified target factor

loadings of the three children as sexual beings items (i.e., items dw30, dw31, and dw32) on

all three factors to be as close to zero as possible, allowing those items only to load on a

separate factor. The hypothesised distribution of four-factor dangerous world implicit theory

items in EFA with target rotation can be seen in Appendix XIII. I used WLSMV estimator

and an oblique target rotation. The model specifications can be seen in Mplus syntax titled

EFA with target rotation (see Appendix XI).

Goodness-of-fit indices in EFA with target rotation were very similar to the four-

factor EFA 2 model with 30 items presented above, χ^2 (321) = 589.73, p < .001, RMSEA =

.046 (90% CI = 0.040 - 0.052), CFI = .938, TLI = .916, which indicated acceptable fit. The

factor loadings of 30 dangerous world implicit theory items on four factors as a result of EFA

with target rotation are presented in Table 16 and factor correlations are presented in Table

17. The three *children as sexual beings* items, *dw30* and *dw31* in particular, loaded strongly on the fourth factor separate from the combined *retribution* factor despite the cross-loadings, suggesting that these items could load onto a separate standalone factor.

A similar pattern was also visible among some of the *retribution* items (i.e., items dw6, dw11, dw12, dw13) cross-loading on the fourth *children as sexual beings* factor despite specifying their target loadings as zero. Item *dw20* had several cross-loadings across three factors suggesting that this item was not really differentiating between factors. Therefore, a poor performance for this item in the future analysis was also expected. Three items (i.e., items dw5, dw18, and dw24) did not load onto any of the four factors higher than .32. I excluded these poorly performing three items which were not loading on any of the four factors and continued modelling data to understand best model for the next study presented in Chapter Four. As a result of these analyses, I renamed the identified factors to ease descriptions for the rest of the chapter: (1) *hostile world*, (2) *emotional congruence*, (3) *retribution*, and (4) *children as sexual beings*.

Table 16

EFA with Target Rotation: Standardised Factor Loadings of 30 Dangerous World Implicit Theory Items On Four Factors

Scale items	HW	EC	RET	CSB
dw1. The world is a hostile and dangerous place.	**.666***	.123*	.064	-.190*
dw2. People are generally abusive and out for themselves.	**.666***	.069	.177*	-.012
dw3. Most people are welcoming and accepting.	**-.603***	.255*	.013	-.064
dw4. It's often necessary to fight back in order to show other people who's boss.	.098*	.029	**.707***	-.161*
dw5. If someone does me harm, it's better to "turn the other cheek".	-.094	.115*	<u>-.307*</u>	.259*
dw6. I'm always ready to strike back when necessary.	.050	-.017	**.899***	**-.434***
dw7. I regularly assert my dominance and control over others.	-.082	.074	**.528***	.186*
dw8. Other people generally want to dominate or hurt me.	**.515***	-.023	-.023	.295*
dw9. Women are trustworthy.	**-.515***	.127*	-.106*	-.064
dw10. I have no problem disciplining women or children if they have it coming.	-.017	.120*	**.523***	.110*
dw11. If a woman questions a man's authority, she should be put in her place.	.093	-.097	**.533***	**.423***
dw12. If the women in my life question me, I'll find a way of controlling or punishing them.	.051	.028	**.466***	**.413***
dw13. Women have no right to question a man's authority.	.085	-.090	**.347***	**.532***
dw15. The world is welcoming and nonthreathening.	**-.704***	.054	.122*	.162*
dw16. Children are much more dependable than adults.	.017	**.507***	-.024	.101
dw17. Many people are untrustworthy and rejecting.	**.699***	.087*	.009	-.049

Table 16 continued

dw18. People like me are blameless but others take advantage of us.	.178*	.200*	<u>.142*</u>	.219*
dw19. Adults are more rejecting and abusive than children.	.173*	**.531***	-.024	-.257*
dw20. I feel powerless against threatening or rejecting adults.	**.326***	.068	-.221*	**.397***
dw21. Children are more accepting than adults.	.092*	**.642***	-.193*	-.104
dw22. I trust children and adults about the same.	**-.341***	.089	-.023	.045
dw23. Children are more caring and loving than adults.	.060	**.694***	.046	-.040
dw24. Children will put my needs above their own.	-.027	<u>.307*</u>	.121	.235*
dw25. I feel that children will never reject me.	-.237*	**.444***	.125*	.153*
dw27. You can't trust adults.	**.706***	.114*	-.047	.053
dw28. I feel that children really know how to love me.	-.167	**.531***	.167*	.152*
dw29. Children are innocent and want to please adults.	-.072	**.493***	-.006	-.064
dw30. Under certain circumstances, children can benefit from sex with an adult.	.094	.055	**.322***	**.674***
dw31. Even young children can understand my sexual desires and are happy to satisfy me.	.038	-.047	**.392***	**.563***
dw32. Some kids like sex with adults because it makes them feel wanted and loved.	.076	.028	**.365***	<u>.279*</u>

Note. $N = 400$. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings. Factor loadings of .32 or higher to any of the four factors are in bold. Cross-loadings are identified by the red circles. The three scale items in bold were not loading to any of the factors above the cut-off point and their expected factor loading for the specified factor is underlined.

* $p<.05$

Table 17

EFA with Target Rotation: Factor Correlations

	HW	EC	RET	CSB
HW		-.02	.26*	. 12*
EC			.14*	.07
RET				.40*
CSB				

Note. N = 400. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings.

* *p*<.05

Elaborating a Model for the Confirmatory Study

After exploring the data using different EFA approaches, I estimated a Confirmatory Factor Analysis (CFA) model to understand how the data behaved in a more restricted model. It is not uncommon that researchers use CFA procedures for exploratory purposes. When CFA procedures are used instead of EFA, the model is usually rejected and a series of modifications are carried out by the researchers in order to improve it (Browne, 2001). This is mainly due to the mathematical assumptions behind the CFA (Brown, 2015). The CFA is a more restrictive model estimation than EFA and EFA with target rotation, and where cross-loadings are specified as zero (Asparouhov & Muthén, 2009). It is important to understand that such approach did not imply a confirmatory study. The motivation for the procedure is to understand if the resulting EFA model held in a more restricted model (i.e., CFA, Brown, 2015), allowing for modifications prior to the second, confirmatory study.

I ran a CFA with the hypothesised four-factor model as I previously specified in the EFA with target rotation, with the remaining 27 items. The WLSMV was used as the estimator. The overall model fit of this first CFA model with 27 items was not as good as the

four-factor solution in EFA 2. Goodness-of-fit indices indicated rejection of this model, χ^2

$(318) = 904.558$, $p < .001$, RMSEA = .068 (90% CI = 0.063 - 0.073), CFI = .861, TLI = .846.

According to Browne and Cudek's (1992) recommended cut-off points, only the RMSEA

value could be interpreted as an indication of adequate fit. Model specifications with all

measurement error are as random[13] can be seen in the Mplus syntax titled *CFA 1* (see

Appendix XI). Further details about the first CFA model including the model diagram (Figure

17), standardised factor loadings (Table 39), and the factor correlations (Table 40) can be

seen in Appendix XII.

Modification index is another aspect of evaluating the estimated model by examining

the specific relationships among parameters (Brown, 2015). When model fit indices indicate

a poor fit, examination of modification indices help identify the source of poor model fit.

Therefore, I used this approach to determine the source of the poor model fit as a result of the

first CFA model. The computed modification indices can show item cross-loadings or error

covariances (Brown, 2015). The modification indices were computed for each item that was

fixed to zero. After careful inspection of modification indices in the Mplus output, there were

possible correlations identified between items *dw4* and *dw6* as well as between *dw15* and

both *dw1* and *dw7*. The error measurement covariates between items represented unexplained

variance by the latent factor which is attributed to an external common reason. One reason for

the error covariance is the *method effects* which refers to the covariance introduced as a result

of the measurement approach. Method effects usually occur in questionnaires which contain

combinations of positively or negatively worded similar items (Brown, 2015). The suggested

error covariances in this model was likely to be due to the similar phrasing of these items.

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[13] The underlying assumption of this specification is that the observed relationship between indicators loading on the same factor is due entirely to the shared influence of the latent dimension (i.e., factor). Thus, if the influence of the factor is partialed out, the intercorrelations between the indicators are specified to be zero (Brown, 2015).

Following the same guidelines for item exclusion applied since the beginning of this

chapter (Tabachnick & Fidell, 2007), I excluded item *dw20*, which did not load substantially

on the *retribution* factor and re-run the CFA. The model specifications can be seen in Mplus

syntax titled *CFA 2* (see Appendix XI). The model diagram is presented in Figure 2. The

model fit in CFA 2 with 26 items did improve from the first CFA; however, as expected, the

goodness-of-fit indices were worse than the indices for the second EFA (EFA 2) model, χ^2

(293) = 798.602, $p < .001$, RMSEA = .066 (90% CI = 0.060 - 0.071), CFI = .878, TLI = .864.

In EFA, relationships between items are freely estimated. In CFA, the model is restricted

thus, it is expected to have a less good model fit in CFA in comparison to EFA (Browne,

2001). The standardised factor loadings are also presented in Table 18 and the correlations

between four factors are presented in Table 19. There were high correlations between factors

retribution and *children as sexual beings.* High covariance was expected as the items under

these two factors tended to merge in EFA. However, from a statistical point of view, this may

indicate that these two factors are highly related in spite of the apparent conceptual

differences.
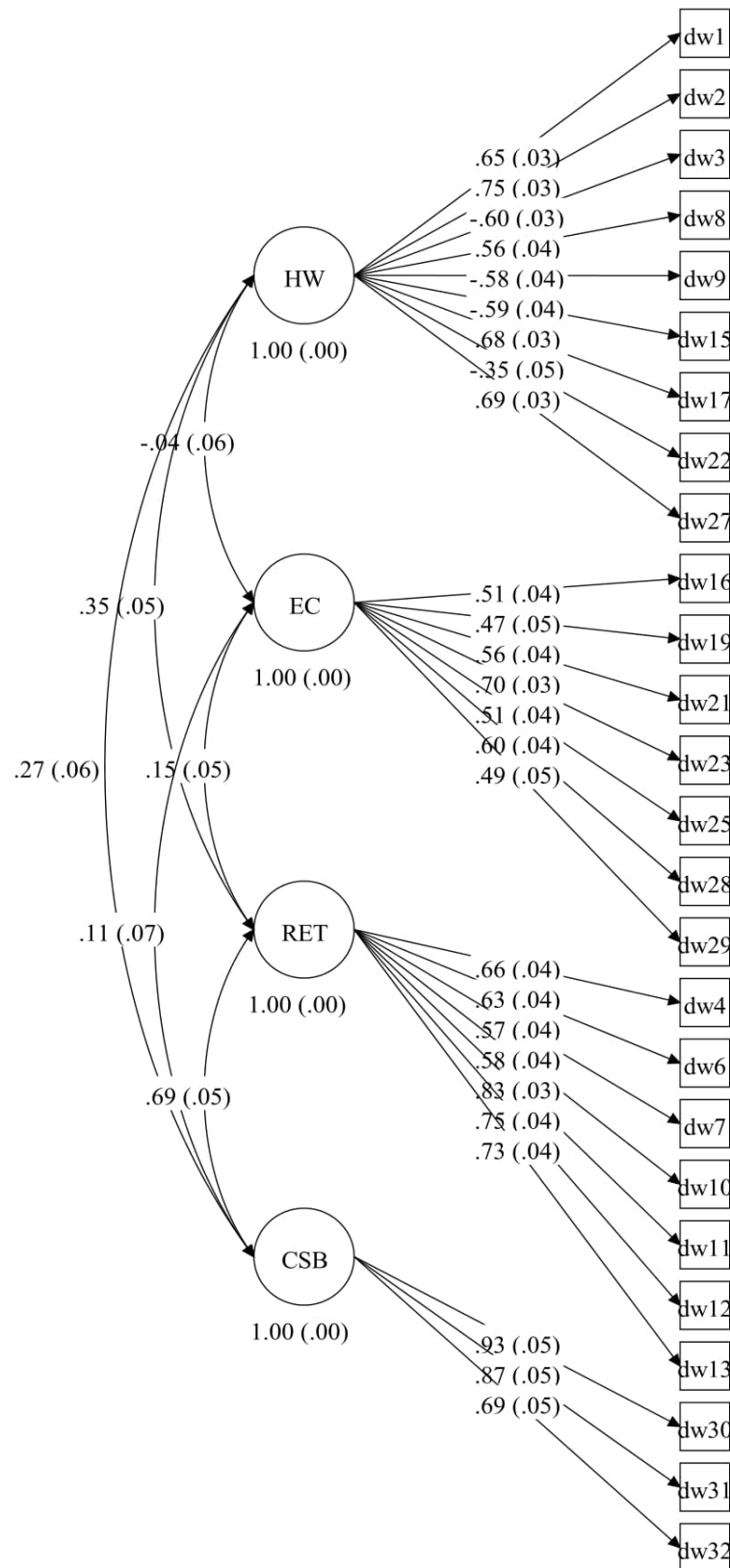
Figure 2. Four-Factor CFA Model 2

HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings

Table 18

CFA 2: Standardised Factor Loadings of 26 Dangerous World Implicit Theory Items, Sorted By Size

Scale items	HW	EC	RET	CSB
dw2. People are generally abusive and out for themselves.	.746			
dw27. You can't trust adults.	.695			
dw17. Many people are untrustworthy and rejecting.	.683			
dw1. The world is a hostile and dangerous place.	.647			
dw3. Most people are welcoming and accepting.	-.603			
dw15. The world is welcoming and nonthreatening.	-.591			
dw9. Women are trustworthy.	-.579			
dw8. Other people generally want to dominate or hurt me.	.564			
dw22. I trust children and adults about the same.	-.353			
dw23. Children are more caring and loving than adults.		.704		
dw28. I feel that children really know how to love me.		.602		
dw21. Children are more accepting than adults.		.563		
dw25. I feel that children will never reject me.		.509		
dw16. Children are much more dependable than adults.		.506		
dw29. Children are innocent and want to please adults.		.490		
dw19. Adults are more rejecting and abusive than children.		.469		
dw11. If a woman questions a man's authority, she should be put in her place.			.828	
dw12. If the women in my life question me, I'll find a way of controlling or punishing them.			.747	
dw13. Women have no right to question a man's authority.			.731	
dw4. It's often necessary to fight back, in order to show other people who's boss.			.662	
dw6. I'm always ready to strike back when necessary.			.626	
dw10. I have no problem disciplining women or children if they have it coming.			.578	
dw7. I regularly assert my dominance and control over others.			.575	
dw30. Under certain circumstances, children can benefit from sex with an adult.				.929
dw31. Even young children can understand my sexual desires and are happy to satisfy me.				.870
dw32. Some kids like sex with adults because it makes them feel wanted and loved.				.693

Note. $N = 400$. HW = dangerous world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings.

* $p<.05$

Table 19

CFA 2: Factor Correlations

	HW	EC	RET	CSB
HW		-.04	.35*	. 27*
EC			.15*	.11
RET				.69*
CSB				

Note. $N = 400$. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings.

* $p<.05$

Internal Consistency of Factor Items

As a result of the second four-factor CFA model, nine items in the first factor, *hostile world*, showed good reliability of $\alpha = .805$; seven items in the second factor, *emotional congruence*, showed acceptable reliability of $\alpha = .706$; and seven items in the third factor, *retribution*, showed acceptable reliability of $\alpha = .729$. However, the reliability of the three items in the fourth factor, *children as sexual beings*, was poor, $\alpha = .566$. The Cronbach's alpha is affected by the length of a scale (Streiner, 2003; Tavakol & Dennick, 2011). Therefore, the low value of α is likely to be due to the low number of items in the *children as sexual beings* factor.

Chapter Discussion

This chapter had three aims: (1) to unpack and explore the conceptualisation of the dangerous world implicit theory, (2) to test the multi-dimensionality of the dangerous world implicit theory involving four underlying common factors, and (3) to develop and item-based tool that taps into the dangerous world implicit theory, as conceptualised by Ward & Keenan (1999). In this section, I discuss the findings of this study both from a scale development and

a theoretical aspect in relation to the conceptual examination of the dangerous world implicit theory.

Scale Development

This chapter aimed to unpack and psychometrically examine the conceptualisation of the dangerous world implicit theory as a multi-dimensional construct using factor analysis. To do so, 32 items were developed in order to depict the content of the dangerous world implicit theory. The item development was strictly based on the dangerous world implicit theory as originally articulated by Ward and Keenan (1999). The items were developed to represent the two versions of the dangerous world implicit theory; however, the aim was to examine the content of the multi-dimensional structure of the dangerous world implicit theory as four constructs. In line with the hypothesised concept of the dangerous world implicit theory with four dimensions, multiple criteria (i.e., scree test and parallel analysis) suggested extracting four factors. Therefore, a four-factor model of dangerous world implicit theory was examined and the four-factor structure also showed a better fit compared to a two-factor model (see Table 12).

As a result of examining the four-factor CFA 2 model of dangerous world implicit theory, I labelled these four factors as *hostile world*, *emotional congruence*, *retribution*, and *children as sexual beings.* Initially, however, the EFA results revealed a four-factor model where the items expected to represent the content of a *children as sexual beings* implicit theory loaded on the same factor in which the majority of the items represented the concept of *retribution*. By using EFA with target rotation, I attempted to distinguish items developed to represent the concept of *children as sexual beings* implicit theory from the *retribution* dimension. As expected, there were some cross-loadings of these items between the two factors.

The overall goodness-of-fit indices for both the EFA and the EFA with target rotation models indicated a good model fit for the four-factor model of the dangerous world implicit theory. This suggested that the dangerous world implicit theory can be explained by four dimensions—or common factors—underlying the pool of dangerous world implicit theory items developed in this study. As a further step, this hypothesised four-factor structure of dangerous world implicit theory was modelled in a more parsimonious framework, using CFA. The overall model fit as a result of the CFA was not as good as the models estimated using EFA and the EFA with target rotation, which is expected due to higher level of restrictions in CFA (Asparouhov & Muthén, 2009; Brown, 2015; Browne, 2001). This CFA analysis was purely for exploratory reasons and needs to be replicated with an independent sample (Brown, 2015; see Chapter Four).

Conceptualisation of the Dangerous World Implicit Theory

A second aim of this chapter was to examine the theoretical conceptualisation of the dangerous world implicit theory as a multi-dimensional construct. In the beginning, I argued that the four dimensions of the dangerous world implicit theory (Ward & Keenan, 1999) include (1) seeing the world as a dangerous place thus, having a need to seek retribution, (2) seeing women as untrustworthy, (3) seeing children as reliable, and (4) seeing children as sexual beings. However, as of the four-factor CFA 2 model of the dangerous world implicit theory, the four concepts depicted by the four factors were different from my initial hypothesis. I labelled the four factors as: (1) hostile world, (2) emotional congruence, (3) retribution, and (4) children as sexual beings.

The first factor represented the perception of the world and other people—including women—as dangerous, hostile, and threatening. The second factor represented the perception of children as accepting, reliable, and loving. The third factor represented the idea of seeking retribution in return to others'—or specifically women's—behaviours, who question the

authority of the individual, by asserting dominance and control, or by punishing. The fourth factor represented the perception of the children as sexual beings, who understand the individual's sexual desires and are willing to satisfy them. Inconsistent with my initial hypothesis, the findings suggested that seeing the world as a dangerous and hostile place is a separate dimension from having the need to fight back in order to maintain control over others who are perceived as threatening (i.e., retribution).

Based on these findings, the biased perception of the world as a dangerous and hostile place involved seeing others—including women—as threatening and untrustworthy. Furthermore, having an intention to fight back to maintain control over other, threatening people—including women—represented the concept of *retribution* as an underlying latent construct, separate from the hostile perception of the world. These findings suggested that there was not enough evidence to conclude that the dangerous world implicit theory has a dimension that could be meaningfully labelled as *hostile sexism* as defined by Glick and Fiske (1996), despite the fact that some of the dangerous world implicit theory items depicted negative attitudes against women.

Previously, Polaschek, Calvert and Gannon (2008) have examined the offence-supportive cognitions of individuals who committed violence offences. One of the implicit theories Polaschek et al. (2009) identified in their sample was called *beat or be beaten*. Although the beat or be beaten implicit theory does not share the same label as the dangerous world implicit theory, the concept may be similar. According to Polaschek et al. (2009) there are two sub-types of the beat or be beaten implicit theory: self-enhancement and self-preservation. Both sub-types of the implicit theory involve the need for violent behaviour in order to achieve or maintain status and autonomy in a violent world. According to Polaschek and her colleagues, individuals holding this implicit theory also view others, particularly

other men, as predominantly hostile. This concept of beat or be beaten implicit theory is similar to perceiving the world as a dangerous place.

The self-preservation sub-type of beat or be beaten implicit theory is described as related to the hostile attribution bias (Epps & Kendall, 1995; Polaschek et al., 2009). According to Polaschek et al. (2009), individuals holding the self-preservation sub-type of beat or be beaten implicit theory do not trust other people and believe that they are exploited and victimised by other people. Therefore, individuals holding this implicit theory feel that it is necessary to act violently to protect themselves. This concept may be similar to the retribution dimension within the dangerous world implicit theory identified in this study.

The findings in this study suggested that the dangerous world implicit theory involved four dimensions, beyond the two versions conceptualised by Ward and Keenan (1999). Furthermore, the findings appeared to indicate that the biased perception of the world as threatening and dangerous involved the hostile perception of both the world and other people. The perception of other people as hostile or threatening did not differentiate based on gender. The findings suggested that one of the dangerous world implicit theory dimensions involved perception of the world as hostile—including women in that world—which may be similar to the beat or be beaten implicit theory as identified by Polaschek et al. (2009) among individuals who commit violent offences. In addition, another of the dangerous world implicit theory dimensions based on the findings in this study involved the endorsement of retribution by punishing in return to perceived intentions of other people as threatening, which may be similar to the self-preservation sub-type of the beat or be beaten implicit theory conceptualised to be held by individuals who commit violent offences (Polaschek et al., 2009).

Limitations

The current study had a number of limitations. There are different views among psychometricians or researchers who work in scale development on the minimum number of items required for one factor (Brown, 2015; Fabrigar et al., 1999). It is usually recommended that a factor has at least three (Tabachnick & Fidell, 2007; Yong & Pearce, 2013) or four (Fabrigar et al., 1999) variables. Initially, I developed only three items to represent the features of the dangerous world implicit theory description by Ward and Keenan (1999), that specifically related to sexual ontact with children or the sexual behaviour of children. One limitation of this study is the inadequate number of items developed targeting these features of the dangerous world implicit theory.

Considering the recommendations and the criticisms of having three or less indicators for one factor in the literature (Yong & Pearce, 2013), the three items which conceptually represented the children as sexual beings factor this study may not form a standalone factor with strong psychometrical evidence. Whilst the number of items developed to represent this dimension of the dangerous world implicit theory in this study is less than psychometrically recommended, this does not necessarily indicate dropping this factor. The second version of Ward and Keenan's (1999) conceptualisation of the dangerous world implicit theory includes the belief that "[Children] can understand the offender's sexual desires and are happy to satisfy him" (p. 830). In addition, an example of holding the second version of the dangerous world implicit theory offered by Ward and Keenan (1999) represents believing that children enjoy sex: "Some kids like sex with adults because it makes them feel wanted and loved" (p. 830). I argue that this example of holding dangerous world implicit theory is conceptually similar with examples of holding a children as sexual beings implicit theory (e.g., "Children are curious about sex and enjoy it", p. 828) offered by Ward and Keenan (1999). Therefore,

there was a need to have more than three items in the children as sexual beings factor in order to test the psychometrical evidence for this latent construct.

Another issue in relation to the children as sexual beings items in particular was that the item responses were positively skewed (see Table 7). Due to the nature of the concept of children as sexual beings implicit theory, the items depict socially undesirable and stigmatising attitudes towards children involving sexuality. Therefore, the children as sexual beings factor with three items did not have substantial variance, indicating a strong need to not only increase the number of items in this factor but also to have some items that are easier to endorse in order to have a more normal distribution of responses to the items in this factor.

Finally, the scale options for the dangerous world implicit theory items were designed to be from 0 (*strongly disagree*) to 4 (*strongly agree*) where the mid-point of the scale was 2 (*somewhat agree;* see Appendix IX). This could be argued to force the participants to either disagree or agree with the statements presented. Therefore, it was necessary to have a neutral mid-point option (i.e. *neither agree nor disagree*) in the scale (Friedman & Amoo, 1999) in the confirmatory study with an independent sample.

Chapter Summary

In this chapter, a number of factor analytic approaches indicated a multi-factorial structure of the dangerous world implicit theory. The results indicated that a four-factor model fits better than a two-factor model of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). The four factors identified in this chapter were: (1) hostile world, (2) emotional congruence, (3) retribution, and (4) children as sexual beings. Unlike what I initially hypothesised, findings in this study showed that the perception of the world as a threatening place and the need for retribution in order to gain control over others were two separate latent constructs. Moreover, the dangerous world implicit theory did not include a standalone dimension that represented a meaningful conceptualisation of hostile

attitudes towards women (i.e., *hostile sexism*; Glick & Fiske, 1996). Instead, the retribution factor included items depicting relevant negative attitudes particularly against women and the need to fight back and discipline both women and other people in general.

There were some limitations of the fourth; *children as sexual beings* factor. There were only three items in *children as sexual beings* factor, which is argued to be inadequate (Brown, 2015; Fabrigar et al., 1999). Therefore, the need to develop more items representing *children as sexual beings* factor as part of the confirmatory study was identified. Due to the stigmatising nature of the concept of seeing children as sexual beings, the item responses in this study was positively skewed. Therefore, the development of new items for the *children as sexual beings* factor would benefit from choosing items that are easier to endorse in order to achieve a relatively more normal distribution. Lastly, it was identified that the scale options in the current study were unbalanced and needed improvement by using a neutral mid-point (e.g., *neither agree or disagree*) for a more balanced rating scale (Friedman & Amoo, 1999).

CHAPTER FOUR

Examining Overlap with Other Criminogenic Constructs using Dangerous World

Implicit Theory Scale: Construct Validation

Chapter Overview

In the previous chapter I explored the multi-dimensional structure of the dangerous world implicit theory, using 32 items developed from Ward and Keenan's (1999) description of the dangerous world implicit theory. I examined a four-factor model of the dangerous world implicit theory following the scree plot and parallel analysis results. Based on the EFA as well as EFA with target rotation and a CFA, I identified four factors[14] as (1) *hostile world*, (2) *retribution*, (3) *emotional congruence* and (4) *children as sexual beings.* While the first three factors each had several substantially and significantly loading items, the fourth factor—children as sexual beings—only had three items, which is not usually recommended in the literature (Fabrigar et al., 1999; Yong & Pearce, 2013).

In this chapter, I develop new items representing the children as sexual beings factor based on the description by Ward and Keenan (1999) and cross-validate the four-factor model of the dangerous world implicit theory with an independent sample. I also examine the convergent validity of the confirmed four-factor model of the dangerous world implicit theory by examining the relationship between the sub-scales and established measures of the four other psychological constructs: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984; McPhail et al., 2014), and the children as sexual beings implicit theory (Ward & Keenan, 1999). This is similar to examining the association between these constructs and the concept

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[14] Please note that I changed the order of four factors in this chapter in order to aid the understanding of the theoretical propositions (I swapped the order of retribution and emotional congruence factors so that it is easier to follow further arguments and analyses).

of a dangerous world implicit theory as I did in Chapter Two, but using different sample,

tools, and analytical techniques.

Introduction

The dangerous world implicit theory has usually been excluded from data analyses in

available research in the literature (e.g., Keown et al., 2010) and was found to be

underrepresented within the available measurement tools (Gannon et al., 2009). Despite these

shortcomings, it is one of the most commonly hypothesised implicit theories across different

offender groups (see Beech et al., 2005). The available published material which assessed the

endorsement of the dangerous world implicit theory, like in Howitt and Sheldon's (2007)

C&SA questionnaire, is limited in its scope. In order to address these limitations as well as to

explore the conceptualisation of the dangerous world implicit theory, I used exploratory

factor analytic approaches in the previous chapter (Chapter Three). The findings indicated a

four-factor, multi-dimensional structure of the concept of the dangerous world implicit

theory.

In Chapter Three, although several of the items depicted stigmatising attitudes, the

three items developed for depicting the content of seeing children as sexual beings as part of

the dangerous world implicit theory were highly stigmatising, in particular. Thus, it was

possible that participants found it particularly difficult to endorse these items. In addition, in

order to obtain a factor structure where sub-constructs have robust measurement models, it

was necessary to add more items within the children as sexual beings factor (Fabrigar et al.,

1999; Tabachnick & Fidell, 2007; Yong & Pearce, 2013). I specifically did not drop this

factor as that would result in dismissing aspects of the conceptualisation of the dangerous

world implicit theory as articulated by Ward and Keenan (1999). Therefore, in this chapter, I

develop additional items for the children as sexual beings factor and carry out a series of CFA

in order to confirm the four-factor structure of dangerous world implicit theory (Tabachnick & Fidell, 2013).

As I previously argued in Chapter Two, the sub-constructs of the dangerous world implicit theory appear similar to four psychological constructs: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (McPhail et al., 2014), and the children as sexual beings implicit theory (Ward & Keenan, 1999). I examine the relationship between sub-constructs of the dangerous world implicit theory and the four constructs in order to (1) better understand the conceptualisation of the dangerous world implicit theory as four sub-constructs, and (2) to examine the similarities between the concept of a dangerous world implicit theory and the four constructs, establishing convergent validity (Messick, 1994).

The hostile world dimension of the dangerous world implicit theory represented the perception of the world and other people—including adults and/or women—as untrustworthy, threatening, rejecting, and hostile. Individuals endorsing the items in this factor see the world as abusive and unwelcoming. Hostile attribution bias is known as the biased perception of others' behaviour in ambiguous or even in benign social situations (Yeager et al., 2013). According to Dodge (2006), hostile attribution bias refers to individuals interpreting the world and others' actions in a hostile way, attributing hostility to others' intentions. In this study, I argue that the *hostile world* sub-construct of the dangerous world implicit theory is similar to *hostile attribution bias*.

The retribution dimension of the dangerous world implicit theory represented the tendency to fight back and seek retribution for others'—or specifically women's—threatening behaviour, such as questioning the authority of the individual, by asserting dominance and control, by disciplining, or by punishing. The retribution sub-construct involved the perception of entitlement to react with retaliation in return to others' perceived

hostile intentions and actions. Hostile sexism is known as the antipathy (Abrams et al., 2003),

or negative and hostile attitudes towards women (Glick & Fiske, 1996). Hostile sexism

involves the negative and prejudiced interpretation of women's behaviours as well as

intentions. In the previous chapter, the results indicated that there was not enough evidence

for a sub-construct of the dangerous world implicit theory that was conceptually meaningful

to be labelled as hostile sexism. However, I still examined the associations between these two

constructs because a) some items under the retribution sub-construct depicted negative

attitudes against women, and b) to examine their relationship using an item-based tool instead

of vignettes, for the continuity with the first two studies in Chapter Two. I argue that the

retribution sub-construct of the dangerous world implicit theory may share similarities with

the concept of hostile sexism because some of the dangerous world implicit theory items

under retribution sub-construct depicted negative attitudes against women (e.g., "*Women

have no right to question a man's authority*").

The emotional congruence sub-construct of the dangerous world implicit theory

represented the perception of children as caring, loving, accepting, and dependable. It

involved a more positive perception of children compared to adults. The concept of emotional

congruence with children as defined in the literature (Finkelhor, 1984; McPhail et al., 2013)

refers to cognitive and emotional association with children, where relationships with children

are perceived as more satisfying than adults (Finkelhor, 1984). The concept of emotional

congruence with children involves the perception of adults as threatening (Ward et al., 2006)

whereas, children are perceived as emotionally safer (Finkelhor, 1984). In this study, I argue

that the emotional congruence sub-construct of the dangerous world implicit theory is

conceptually similar with the emotional congruence with children as defined in the sexual

offending against children literature (Araji & Finkelhor, 1985; Finkelhor, 1984; Finkelhor et

al., 2017; McPhail et al., 2013).

The children as sexual beings dimension of the dangerous world implicit theory represented the perception of children as sexual agents in which they are seen as capable of understanding an adult's sexual desires and happy to gratify them (Ward & Keenan, 1999). This dangerous world implicit theory sub-construct involved perceiving children as individuals who like sex with adults and find it loving. The implicit theory of children as sexual beings as hypothesised by Ward and Keenan (1999) involves beliefs and assumptions that all individuals including children naturally—have the right to—express their sexuality and sexual desires. The children as sexual beings implicit theory also includes the belief that children have the capacity to make informed decisions in relation to sexual engagement and therefore, sexual activities with children are perceived as harmless (Ward & Keenan, 1999). In this study, I argue that the children as sexual beings dimension of the dangerous world implicit theory conceptually overlapped with the implicit theory of children as sexual beings, where both were hypothesised by Ward and Keenan (1999) as two separate implicit theories held by individuals who sexually abuse children.

The conceptual examination of the dangerous world implicit theory and the other four constructs in this chapter is similar to the examination in the second chapter using dangerous world implicit theory vignettes over two studies. Different from the Chapter Two, in this chapter, the same conceptual examination was carried out with the item-based dangerous world implicit theory scale, a different sample, and by using Structural Equation Modelling (SEM) in Mplus. These differences are particularly important because using a different tool than the vignettes would help examine whether lack of evidence indicating any substantial similarity between the concept of the dangerous world implicit theory and hostile attribution bias was due to the measurement tool. In addition, using an item-based tool instead of vignettes can be a shorter way of assessing people's endorsement of a construct, minimising fatigue (Evans et al., 2015; Kelly, 2009). Finally, the sample in this study is exclusively male,

and I used advanced modelling techniques in order to assess the psychometrical properties of the tool as recommended practice in applied research (Brown, 2015; Klein, 2016).

The SEM is a statistical approach which has received much attention in social science research (Hoyle, 1995). It is a comprehensive statistical technique which incorporates both the measurement model of a latent construct which is not directly observable and the relationships among latent constructs (Brown, 2015). "The SEM models hypothesize how sets of variables define constructs and how these constructs are related to each other" (Schumacker & Lomax, 2016, p. 1). In other words, SEM tests for associations between latent constructs by simultaneously incorporating the relationships between the latent constructs and their observed indicators, or items (Brown, 2015). This means that unlike statistical techniques calculated in traditional ways (e.g., in SPSS), where the sum scores or mean scores of constructs are used when examining their relationship with other variables, in SEM, relationships among constructs are examined as a whole model, which takes into account each item's relationship with the underlying construct as well as the construct's relationship with others.

In this chapter, I aim to examine two areas. First, I aim to confirm the four-factor model of dangerous world implicit theory as argued in this thesis, with an independent sample. Second, I aim to examine the relationship between the four sub-constructs of the dangerous world implicit theory and the four other psychological constructs: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984; Waldron et al., 2006), and the implicit theory of children as sexual beings (Ward & Keenan, 1999).

Method

Sample

Participants were recruited from Prolific and the criteria for participation were to be 18 years old or over, UK-resident, English speaking individuals describing themselves as males; including males or trans males, and individuals who identified their sexual orientation as heterosexual, homosexual or bisexual. Individuals who identified themselves as asexual were not eligible to participate. I used these criteria to filter eligible participants on Prolific. I also asked the same demographics questions after filtering potential participants in order to ensure that the participants still met the criteria to participate in the study. If any of the potential participants did not meet the criteria after answering the demographics, they were eliminated from the study with their participation being terminated and debriefed explaining the reason. In order to ensure an independent sample, individuals who participated in the exploratory study described in the previous chapter (Chapter Three) were precluded from participating in this study[15]. A total of 726 responses were recorded in Qualtrics. The data of fourteen individuals were excluded. Out of these 14, 12 individuals did not progress beyond the demographic items, one individual completed the study but their responses showed almost no variability (i.e., straightlining; Zhang & Conrad, 2014), and one individual completed with an implausible completion time[16]. A total of $N = 712$ responses included in the analyses with no missing values.

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[15] Participants who took part in another study outside of this thesis investigating the prevalence of sexual interest in children among participants in the crowdsourcing sites were also excluded from accessing and participating in the current study, in order to obtain a completely independent community male sample.

[16] Participant completed survey in 2 minutes and 27 seconds, which is unrealistic for more than six measures.

Measures

Dangerous World Implicit Theory Scale. My examination of the factor structure of the dangerous world implicit theory items in Chapter Three resulted in the reduction of the original pool of items from 32 to 26. These 26 items each loaded substantially and significantly on one of the four factors: hostile world, retribution, emotional congruence, children as sexual beings. In order to improve the psychometric properties of the children as sexual beings factor, I developed 10 new items in this study. As in the exploratory study in Chapter Three, the content of the new items developed in this study focused only to depict the element of perceiving children as sexual beings, who can understand and meet the needs of the individual, as conceptualised in the dangerous world implicit theory by Ward and Keenan (1999).

One of the items developed was taken from the examples of cognitive distortions generated by the dangerous world implicit theory as suggested by Ward and Keenan ("*Sex between children and adults is very loving*"; 1999, p.830). Another of the new items was taken from the examples of children as sexual beings implicit theory as articulated by Ward and Keenan ("*Touching a child sexually can be a way of showing love and affection*"; 1999, p. 828) because it conceptually resembled the perception that sexual activities between adults and children was an act of love, which was also similarly articulated by Ward and Keenan (1999) as part of the dangerous world implicit theory. Two items were developed as a result of changing and adapting some of the children as sexual being implicit theory examples in Ward and Keenan's (1999) paper (e.g., "*Some young children are much more adult like than other children*", "*She is very mature for her age*", and "*We love each other, so this is okay*") to present scale items similar to perception of children as sexual beings as conceptualised within the dangerous world implicit theory ("*Some kids are very mature for their age*", "*If an adult and a child love each other, sex between them is okay*"). My intention was not to

include the same examples that were given by Ward and Keenan (1999) for the implicit

theory of children as sexual beings, but it was rather unavoidable that some examples of the

children as sexual beings implicit theory given by Ward and Keenan resembled the features

of the dangerous world implicit theory in relation to the perception of sexual engagement

with children. For example, believing that sexual engagement with children is okay because it

involves love—as articulated in children as sexual beings implicit theory—and perceiving

sex between children and adults is very loving—as articulated in the dangerous world

implicit theory—does not seem conceptually different, even though they were both proposed

under the two independent implicit theories by Ward and Keenan (1999).

In addition, three reverse worded items were developed describing the attitudes

opposite to approving or agreeing with the sexual interactions with children (e.g., "*Sex

between children and adults is not appropriate*", "*Children don't know a lot about sex

because they are very young*"). Therefore, they were designed to be reverse coded. Three

other items were developed independently from other examples which still depicted the

perception of children as sexual beings element of the dangerous world implicit theory (e.g.,

"*Adults typically deny that children have sexual desires, because it makes them

uncomfortable*", "*Children sometimes try to seduce grown-ups*"). Participants responded to

each item on a 5-point Likert-type scale from 0 *(strongly disagree)* to 4 *(strongly agree)*. Full

details of the new items developed can be found in Appendix XIV and the full list of

dangerous world implicit theory items included in this study can be found in Appendix XV.

Social Information-Processing – Attribution Bias Questionnaire (SIP-ABQ). The

SIP-ABQ (Coccaro et al., 2009) is a vignette-based, self-report questionnaire developed to

assess attribution of hostility and emotional response to socially ambiguous situations based

on social information processing (SIP; Crick & Dodge, 1994). The SIP-ABQ is an older

version of the Social Emotional Information Processing Questionnaire (SEIP-Q; Coccaro et

al., 2016) used in the second study in Chapter Two (see Appendix VIII). The scenarios and the associated items assessing the level of hostile attribution is essentially the same as the older version (Coccaro et al., 2009). The older version has less dimensions and is therefore shorter and simpler to describe. There is no difference in the hostile attribution items between the two versions. Therefore, I adopted the older version; SIP-ABQ (Coccaro et al., 2009) in this study.

The SIP-ABQ consisted of eight written vignettes. Each scenario depicts a socially ambiguous situation in which an adverse action directed at the protagonist who the participants were asked to identify with. Each vignette was then followed by four attributional statements assessing: (a) direct hostile intent (e.g., "This person wanted to physically hurt me"), (b) indirect hostile intent (e.g., "This person wanted to me to look bad"), as well as instrumental non-hostile intent and neutral or benign intent. To address our research questions, I only presented hostile attributional (HA) statements (i.e., direct hostile intent and indirect hostile intent) in the current study. Participants responded to each item on a 4-point Likert-type scale from 0 (*not at all likely*) to 3 (*very likely*; see Appendix XVI).

The Hostile Sexism Questionnaire (HS). The HS is a subscale of The Ambivalent Sexism Inventory (Glick & Fiske, 1996). This is the same tool used in Chapter Two in order to measure hostile sexism. The HS is an 11-item questionnaire, assessing the level of hostile attitudes towards women (e.g. "Most women interpret innocent remarks or acts as being sexist"). Respondents provided a rating on a 6-point Likert scale from 0 (*disagree strongly*) to 5 (*agree strongly*; see Appendix III).

Children and Sex Emotional Congruence Scale. This is a 15-item questionnaire (Waldron et al., 2006), originally from the Sex Offender Assessment Pack (Beckett, Beech, & Fisher, 1996). This is the same tool used in Chapter Two in order to measure emotional congruence with children. This measure assessed the level of emotional congruence with

children which refers to the belief that an individual can emotionally identify with children and can have mutually satisfying relationships with children (e.g., "I am better than most people at getting along with children"). Items were rated on a 5-point Likert-type scale from 0 (*very untrue*) to 4 (*very true*; see Appendix IV).

The Cognitive Distortions Scale (CDS). The CDS (Gannon, 2006), consists of 12-items adapted by Gannon (2006) which were originally from the Opinions Questionnaire (Offending Behaviour Programmes Unit, 2000). This is the same tool used in Chapter Two in order to measure distorted perception of children as sexual beings (i.e., children as sexual beings implicit theory, Ward & Keenan, 1999). The CDS measured the level that individuals perceive children as sexual agents (e.g., "Some children are mature enough to enjoy a good sex joke with adults"). Participants responded to each item on a 5-point Likert-type scale from 0 (*strongly disagree*) to 4 (*strongly agree*; see Appendix V).

Procedure

The School of Psychology Ethics Committee reviewed and approved this study (Ethics ID: 201915507400375593). Participants were presented with the information regarding the survey and the consent form before participation. After completing a demographics questionnaire, participants were randomly presented with the five measures[17] described above. The dangerous world implicit theory items were presented randomly. All participants were debriefed at the end of the survey.

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[17] Participants were also presented with a measure of Adverse Childhood Experiences (ACE) prior to the five measures described, and a past problematic sexual behaviour and two proclivity measures for sexual offending against children prior to a self-evaluation of social desirability measure, for the purposes of a two-wave study presented in the next chapter (Chapter Five). Therefore, these measures are not included in this chapter.

Results

Demographics

According to the demographic information, 99.6% of the participants were male (N = 712) while 0.4% participants reported their gender as trans male/trans man (N = 3). The mean age of the participants was 34.81 (SD = 12.65) ranging from 18-71. All participants were UK residents (N = 712). The majority of participants identified their ethnicity as Caucasian (88.9%). The rest of the participants reported that they belonged to South Asian (3.4%), Mixed (1.8%), African (1.7%), East Asian (1.7%), Middle Eastern (0.6%), Caribbean (0.6%), Latino/Hispanic (0.1%) and other (0.4%) ethnic background. Six participants (0.8%) preferred not to say their ethnicity. Majority of the participants reported that they were fluent in English (88.5%, N = 630) and 11.5% of the participants reported being fluent in both English and at least one other language (N = 82).

Confirmatory Factor Analysis (CFA) for Dangerous World Implicit Theory Scale

One of the aims of this chapter was to confirm the four-factor model of the dangerous world implicit theory as suggested by prior exploratory analyses in Chapter Three. Following from the results in the previous chapter as well as incorporating the additional items developed to represent the children as sexual beings factor within the dangerous world implicit theory, I ran a four-factor CFA model for the dangerous world implicit theory items. The model specifications for the first model with all measurement errors as random can be seen in the Mplus syntax titled *DWIT CFA 1* (see Appendix XVII). This initial model diagram is presented in Figure 3. The chi-square and goodness-of-fit information indicated poor fit, χ^2 (588) = 1930.57, p < .001, RMSEA = .057 (90% CI = 0.054 – 0.059), CFI = .844, TLI = .833.

Factor loadings of items onto the specified factors are presented in Table 20. Item

dw16[18] did not load strongly onto the specified factor. As explained in the previous chapter, the modification index is an additional list of information provided in the Mplus output, which is useful in evaluating the estimated model fit and identify the source of poor model fit (Brown, 2015). The modification indices represent item cross-loadings or correlations among error variances (Brown, 2015). For the first four-factor model of dangerous world implicit theory, the modification indices showed that item dw8 had high associations with two other factors, indicating cross-loading and creating a poor fit for the model. Item dw29 was also highly associated with the emotional congruence factor. Although it was conceptually meaningful, items measuring only one dimension was preferred[19]. In addition, the modification indices indicated that items dw4 and dw6 and also, items dw20 and dw21 were correlated. This was likely to be due to *method effects* as both pairs of items were similarly worded (Brown, 2015). Method effects usually occur in questionnaires where a combination of positively or negatively worded similar items are used (Brown, 2015).

I excluded items dw16, dw8 and dw29, allowed the two pairs of items (items dw4 and dw6; items dw20 and dw21) to have correlated errors (Brown, 2015) and re-run the CFA. The model specifications for this second model can be seen in the Mplus syntax titled *DWIT CFA2* (see Appendix XVII). The second model diagram is presented in Figure 4 and item factor loadings are presented in Table 21. The model fit still had poor fit, χ^2 (487) = 1381.73, p < .001, RMSEA = .051 (90% CI = 0.048 – 0.054), CFI = .889, TLI = .880. The modification indices suggested poor fit (e.g., high correlations with other factors) among items dw7, dw5 and dw32.

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[18] Please note that the dangerous world implicit theory items were numbered differently after deletion of poor items in the previous chapter and the addition of new items in this chapter (see Appendix XIII).

[19] Allowing cross-loading of dw29 on both emotional congruence and children as sexual beings factors resulted in factor loading of less than .32 on the children as sexual beings factor and loading just over the cut-off point on the emotional congruence factor. Therefore, it did not improve the measurement models of either sub-construct.
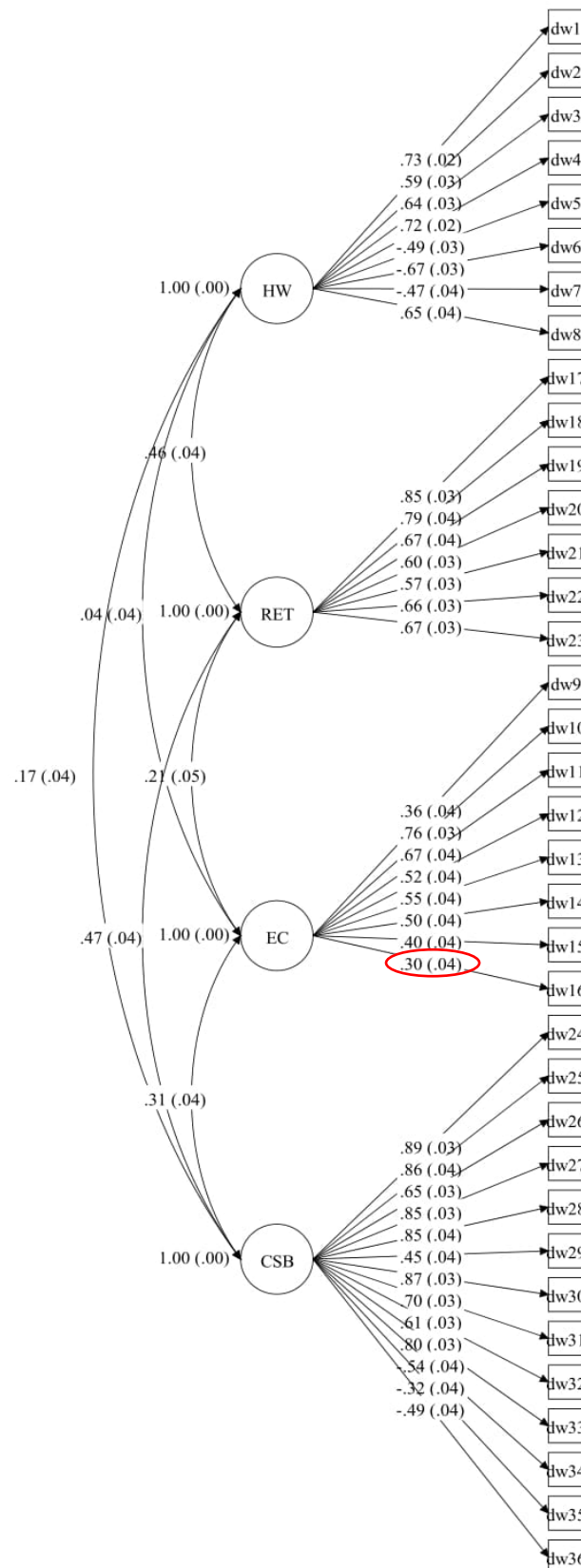
Figure 3. Four-Factor Dangerous World Implicit Theory CFA Model 1 with 36 Items. HW = hostile world; EC = emotional congruence; RET= retribution; CSB = children as sexual beings. Item dw16 identified by the red circle was not loading strongly to the specified factor (EC) above the cut-off point of .32.

Table 20

CFA 1: Standardised Factor Loadings of 36 Dangerous World Implicit Theory Items

Scale items	HW	EC	RET	CSB
dw1. People are generally abusive and out for themselves.	.726			
dw2. You can't trust adults.	.587			
dw3. Many people are untrustworthy and rejecting.	.638			
dw4. The world is a hostile and dangerous place.	.718			
dw5. Most people are welcoming and accepting.	-.494			
dw6. The world is welcoming and nonthreatening.	-.673			
dw7. Women are trustworthy.	-.475			
dw8. Other people generally want to dominate or hurt me.	.648			
dw9. I trust children and adults about the same.		.360		
dw10. Children are more caring and loving than adults.		.759		
dw11. I feel that children really know how to love me.		.668		
dw12. Children are more accepting than adults.		.518		
dw13. I feel that children will never reject me.		.547		
dw14. Children are much more dependable than adults.		.496		
dw15. Children are innocent and want to please adults.		.403		
dw16. Adults are more rejecting and abusive than children.		**.298**		
dw17. If a woman questions a man's authority, she should be put in her place.			.855	

Table 20 continued

dw18. If the women in my life question me, I'll find a way of controlling or punishing them.	.785
dw19. Women have no right to question a man's authority.	.666
dw20. It's often necessary to fight back, in order to show other people who's boss.	.596
dw21. I'm always ready to strike back when necessary.	.571
dw22. I have no problem disciplining women or children if they have it coming.	.656
dw23. I regularly assert my dominance and control over others.	.669
dw24. Under certain circumstances, children can benefit from sex with an adult.	.894
dw25. Even young children can understand my sexual desires and are happy to satisfy me.	.858
dw26. Some kids like sex with adults because it makes them feel wanted and loved.	.650
dw27. Sex between children and adults is very loving.	.849
dw28. Touching a child sexually can be a way of showing love and affection.	.848
dw29. Some kids are very mature for their age.	.450
dw30. If an adult and a child love each other, sex between them is okay.	.866
dw31. Children sometimes try to seduce grown-ups.	.696
dw32. Adults typically deny that children have sexual desires, because it makes them uncomfortable.	.614
dw33. In some circumstances, a child could consent to a romantic relationship with an adult.	.802
dw34. Sex between children and adults is not appropriate.	-.538
dw35. Children don't know a lot about sex because they are very young.	-.320
dw36. Sex is not something kids would enjoy.	-.488

Note. $N = 712$. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings. The scale item dw16 in bold was not loading to the specified factor above the cut-off point.
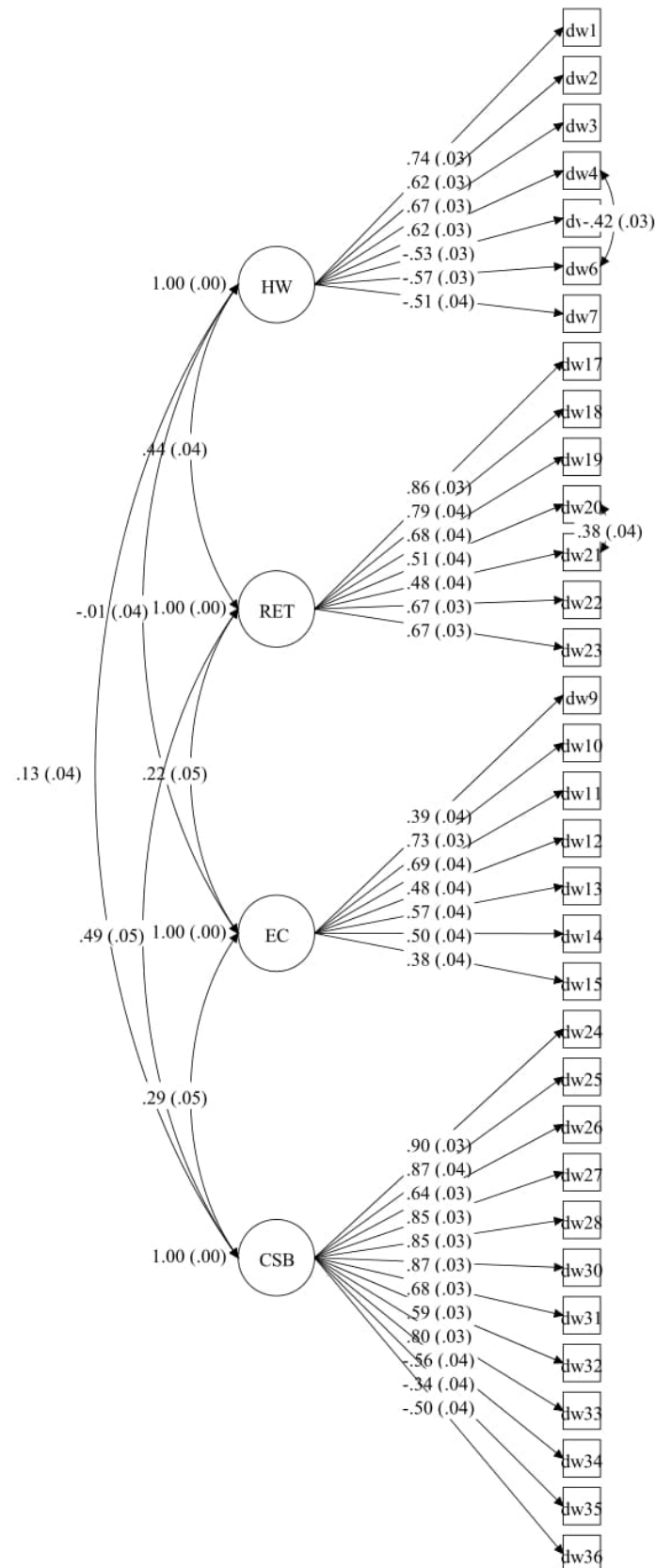
Figure 4. Four-Factor Dangerous World Implicit Theory CFA Model 2 with 33 Items. HW = hostile world; EC = emotional congruence with children; RET= retribution; CSB = children as sexual beings.

Table 21

CFA2: Standardised Factor Loadings of 33 Dangerous World Implicit Theory Items

Scale items	HW	EC	RET	CSB
dw1. People are generally abusive and out for themselves.	.737			
dw2. You can't trust adults.	.619			
dw3. Many people are untrustworthy and rejecting.	.671			
dw4. The world is a hostile and dangerous place.	.622			
dw5. Most people are welcoming and accepting.	-.529			
dw6. The world is welcoming and nonthreatening.	-.574			
dw7. Women are trustworthy.	-.508			
dw9. I trust children and adults about the same.		.390		
dw10. Children are more caring and loving than adults.		.730		
dw11. I feel that children really know how to love me.		.691		
dw12. Children are more accepting than adults.		.477		
dw13. I feel that children will never reject me.		.570		
dw14. Children are much more dependable than adults.		.497		
dw15. Children are innocent and want to please adults.		.376		
dw17. If a woman questions a man's authority, she should be put in her place.			.864	
dw18. If the women in my life question me, I'll find a way of controlling or punishing them.			.791	
dw19. Women have no right to question a man's authority.			.676	

Table 21 continued

dw20. It's often necessary to fight back, in order to show other people who's boss.	.509	
dw21. I'm always ready to strike back when necessary.	.481	
dw22. I have no problem disciplining women or children if they have it coming.	.668	
dw23. I regularly assert my dominance and control over others.	.674	
dw24. Under certain circumstances, children can benefit from sex with an adult.		.895
dw25. Even young children can understand my sexual desires and are happy to satisfy me.		.866
dw26. Some kids like sex with adults because it makes them feel wanted and loved.		.644
dw27. Sex between children and adults is very loving.		.853
dw28. Touching a child sexually can be a way of showing love and affection.		.853
dw30. If an adult and a child love each other, sex between them is okay.		.873
dw31. Children sometimes try to seduce grown-ups.		.684
dw32. Adults typically deny that children have sexual desires, because it makes them uncomfortable.		.591
dw33. In some circumstances, a child could consent to a romantic relationship with an adult.		.801
dw34. Sex between children and adults is not appropriate.		-.564
dw35. Children don't know a lot about sex because they are very young.		-.342
dw36. Sex is not something kids would enjoy.		-.504

Note. $N = 712$. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings.

Therefore, I revised the model by excluding these three items. The model specifications for the third model can be seen in the Mplus syntax titled *DWIT CFA3* (see Appendix XVII). The third model diagram is presented in Figure 5 and item factor loadings are presented in Table 22. The model fit was acceptable, χ^2 (397) = 995.91, p < .001, RMSEA = .046 (90% CI = 0.042 – 0.050), CFI = .918, TLI = .910. The RMSEA value indicated a good model fit (Browne & Cudeck, 1992) and the CFI and TLI vales indicated acceptable model fit (Bentler, 1990; see Chapter Three for details of recommended cut-off points). Although modification indices suggested that further improvements to this scale could be done (e.g., excluding reverse coded items, further correlating measurement errors), this third CFA model is used as the final measurement model of the dangerous world implicit theory in further analysis following its acceptable goodness-of-fit.
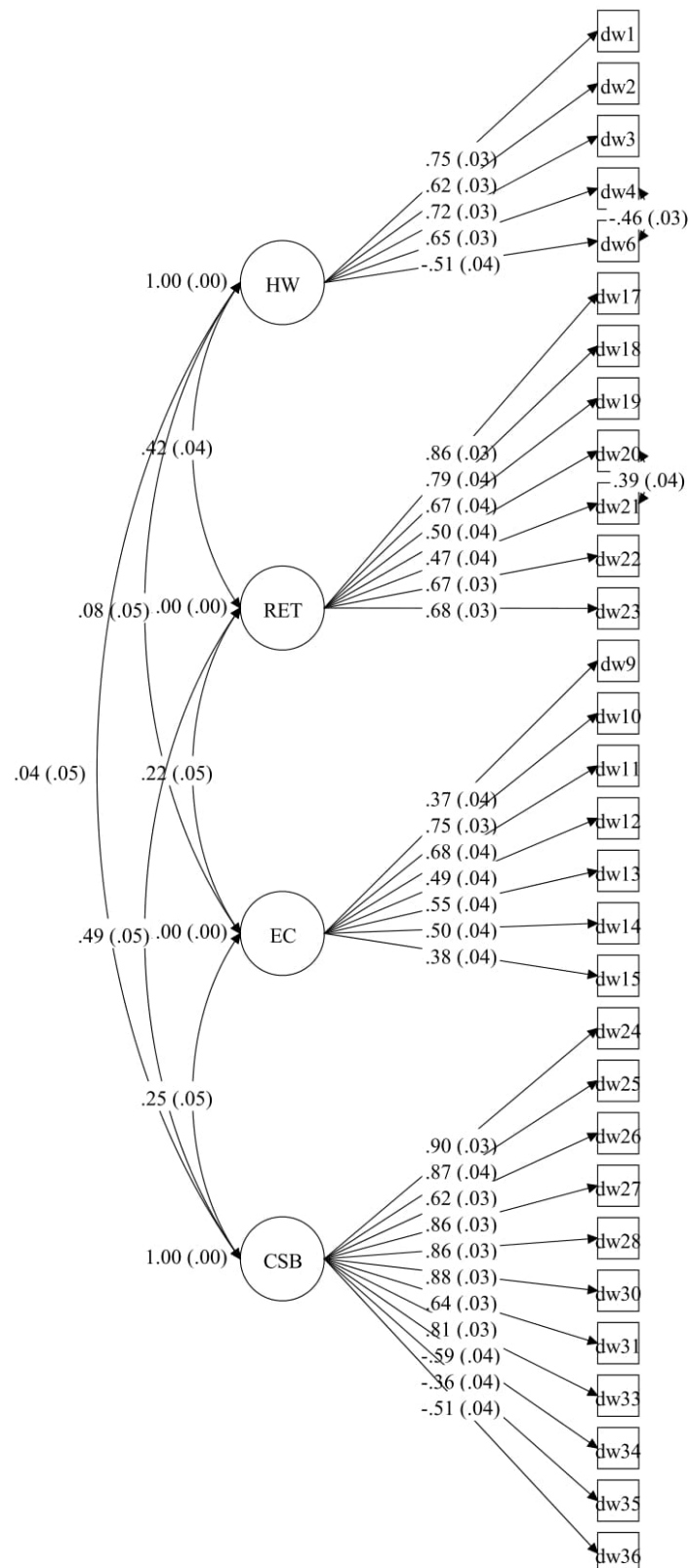
Figure 5. Four-Factor Dangeorus World Implicit Theory CFA Model 3 with 30 Items. HW = hostile world; EC = emotional congruence with children; RET= retribution; CSB = children as sexual beings.

Table 22

CFA 3: Standardised Factor Loadings of 30 Dangerous World Implicit Theory Items

Scale items	HW	EC	RET	CSB
dw1. People are generally abusive and out for themselves.	.752			
dw2. You can't trust adults.	.618			
dw3. Many people are untrustworthy and rejecting.	.723			
dw4. The world is a hostile and dangerous place.	.646			
dw6. The world is welcoming and nonthreatening.	-.510			
dw9. I trust children and adults about the same.		.373		
dw10. Children are more caring and loving than adults.		.754		
dw11. I feel that children really know how to love me.		.679		
dw12. Children are more accepting than adults.		.488		
dw13. I feel that children will never reject me.		.551		
dw14. Children are much more dependable than adults.		.496		
dw15. Children are innocent and want to please adults.		.384		
dw17. If a woman questions a man's authority, she should be put in her place.			.865	
dw18. If the women in my life question me, I'll find a way of controlling or punishing them.			.793	
dw19. Women have no right to question a man's authority.			.673	
dw20. It's often necessary to fight back, in order to show other people who's boss.			.498	
dw21. I'm always ready to strike back when necessary.			.474	

Table 22 continued

dw22. I have no problem disciplining women or children if they have it coming.	.672	
dw23. I regularly assert my dominance and control over others.	.679	
dw24. Under certain circumstances, children can benefit from sex with an adult.		.897
dw25. Even young children can understand my sexual desires and are happy to satisfy me.		.871
dw26. Some kids like sex with adults because it makes them feel wanted and loved.		.623
dw27. Sex between children and adults is very loving.		.861
dw28. Touching a child sexually can be a way of showing love and affection.		.864
dw30. If an adult and a child love each other, sex between them is okay.		.880
dw31. Children sometimes try to seduce grown-ups.		.643
dw33. In some circumstances, a child could consent to a romantic relationship with an adult.		.815
dw34. Sex between children and adults is not appropriate.		-.595
dw35. Children don't know a lot about sex because they are very young.		-.364
dw36. Sex is not something kids would enjoy.		-.513

Note. $N = 712$. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings.

Measurement Models of Four Psychological Constructs

After confirming the four-factor dangerous world implicit theory model, I moved on to testing the psychometrical properties of the measurement models for each of the four other psychological constructs I aim to examine: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (McPhail et al., 2014) and children as sexual beings implicit theory (Ward & Keenan, 1999). One of the major strengths of using Structural Equation Modelling (SEM) in the development of measurement tools is the ability to estimate both a measurement and a structural model. The structural model involves the relationships among latent variables (i.e., constructs) such as the relationship between hostile attribution bias and hostile world sub-construct of the dangerous world implicit theory. The measurement model, on the other hand, shows how that latent variable, for example, hostile attribution bias, is measured (Kevin, 2015). Testing for the validity of the measurement models for each latent variable prior to evaluating the structural model has also been suggested as an important preliminary step in SEM (Byrne, 2012). However, I did not modify any of the previously established scales (except from hostile attribution bias, see below) regardless of the goodness of model fit in order to see their relationship with the dangerous world implicit scale as they are used in the literature.

Hostile Attribution Bias. I ran a one-factor CFA in order to fit 16 hostile attribution items in the SIP-ABQ (Coccaro et al., 2009). Initial model specifications with all measurement errors as random can be seen in the Mplus syntax titled *HAB CFA1* (see Appendix XVII). The initial model diagram is presented in Figure 6 and item factor loadings are presented in Table 23. The goodness-of-fit information indicated very poor fit, χ^2 (104) = 1910.56, $p < .001$, RMSEA = .156 (90% CI = 0.150 – 0.162), CFI = .792, TLI = .760.
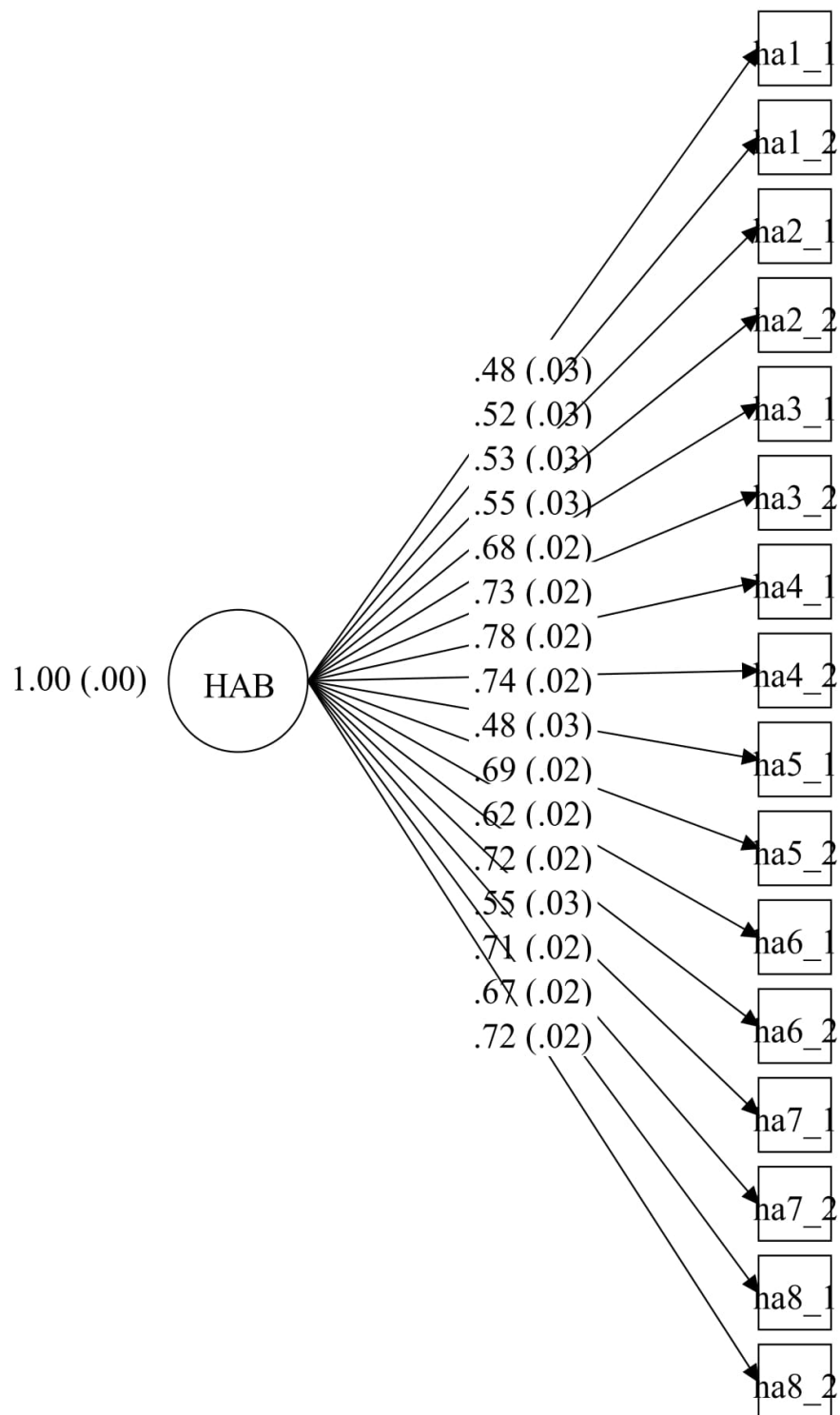
Figure 6. One-factor Hostile Attribution Bias (HAB) CFA Model 1 with 16 Items

Table 23

CFA 1: Standardised Factor Loadings of 16 Hostile Attribution Bias Items

Scale items	
ha1_1. My friend wanted to expose my secret.	.477
ha1_2. My friend wanted me to feel stupid for asking to keep my secret.	.521
ha2_1. My karate classmate wanted to physically hurt me.	.525
ha2_2. My karate classmate wanted to make me look "bad".	.551
ha3_1. This person wanted to make me wait longer to get my coffee.	.684
ha3_2. This person wanted me to feel unimportant.	.730
ha4_1. My co-worker wanted to burn me with the hot coffee.	.776
ha4_2. My co-worker wanted to make me look "bad" to the customer.	.745
ha5_1. My friend doesn't want to be with me.	.480
ha5_2. My friend wanted me to feel unimportant.	.686
ha6_1. My co-worker wanted to exclude me.	.619
ha6_2. My co-worker wanted me to feel bad.	.723
ha7_1. The club members wanted to ignore me.	.552
ha7_2. The club members wanted me to feel unimportant.	.707
ha8_1. This person wanted to damage my car.	.670
ha8_2. This person wanted me to feel unimportant.	.725

In this first CFA model, all items loaded strongly on one factor. However, modification indices showed highly correlated errors among almost all pairs of items for each scenario. The correlations between error measurements were so high, which indicated a shared method variance among each pair of items. The method variance (or method effects) refers to the covariance between indicators which is caused by the measurement approach rather than the underlying latent construct (Brown, 2015).

Parceling is a technique used in SEM where aggregated scores of individual items are created as parcel(s). These parcel(s) are then used as indicators of the target latent construct instead of individual items, creating simpler structures (Matsunaga, 2008; Little, Rhemtulla, Gibson, Schoemann, 2013; Williams & O'Boyle, 2008). As Matsunaga (2008) suggested, "… [item] *parceling* is particularly useful when the given data are not optimal in the light of the assumptions invoked for SEM such as multivariate normality and uncorrelated errors" (p. 276).

Matsunaga (2008) also drew particular attention to cases where using item parcelling would be appropriate. Before parcelling, Matsunaga (2008) recommends evaluating scale dimensionality by using CFA in order to fit a one-factor model to the scale under examination, like I did above. When the initial CFA model does not fit well and there are noticeably large modification index values, one possibility is that the correlated items share something unique other than the factor. However, in such case, it is important that the correlated items do not form a multi-dimensional construct:

> Identification of …[such] case requires…demonstrating that the subset of items pointed to by modification index do not form a conceptually meaningful cluster in light of relevant theories but are attributable to certain method factors such as wording similarity, negative wording, and social desirability, among others. In those instances, parcelling data to remove such undesirable and theoretically irrelevant noises is warranted (p. 281).

For the hostile attribution bias measure, I created *parcels* of items for each scenario. In the scale scoring guidelines by Coccaro and his colleagues, hostile attribution scores were obtained by calculating the mean score of all 16 items. These 16 items were equivalent to two items per scenario, for 8 scenarios in total. Since the correlated errors were between the two items for each scenario, I argued that such subset of items did not form a conceptually meaningful cluster. The subset of items rather represents similarly worded items for each scenario. Therefore, creating parcels would not misrepresent the concept of hostile attribution. Instead, it would eliminate the unnecessary noise and misfit of data in the measurement model (Matsunaga, 2008).

The model diagram with hostile attribution bias items in 8 parcels and their factor loadings are presented in Figure 7. The model specifications can be seen in the Mplus syntax titled *HAB CFA2* (see Appendix XVII). One-factor hostile attribution model with 8 hostile attribution bias parcels as indicators showed a better fit of the data $\chi^2 (20) = 203.80$, $p < .001$,

RMSEA = .114 (90% CI = 0.100 – 0.128), CFI = .945, TLI = .923. The CFI and TLI values

improved and indicated acceptable to reasonably good model fit (Bentler, 1990; Hu &

Bentler, 1998, 1999).
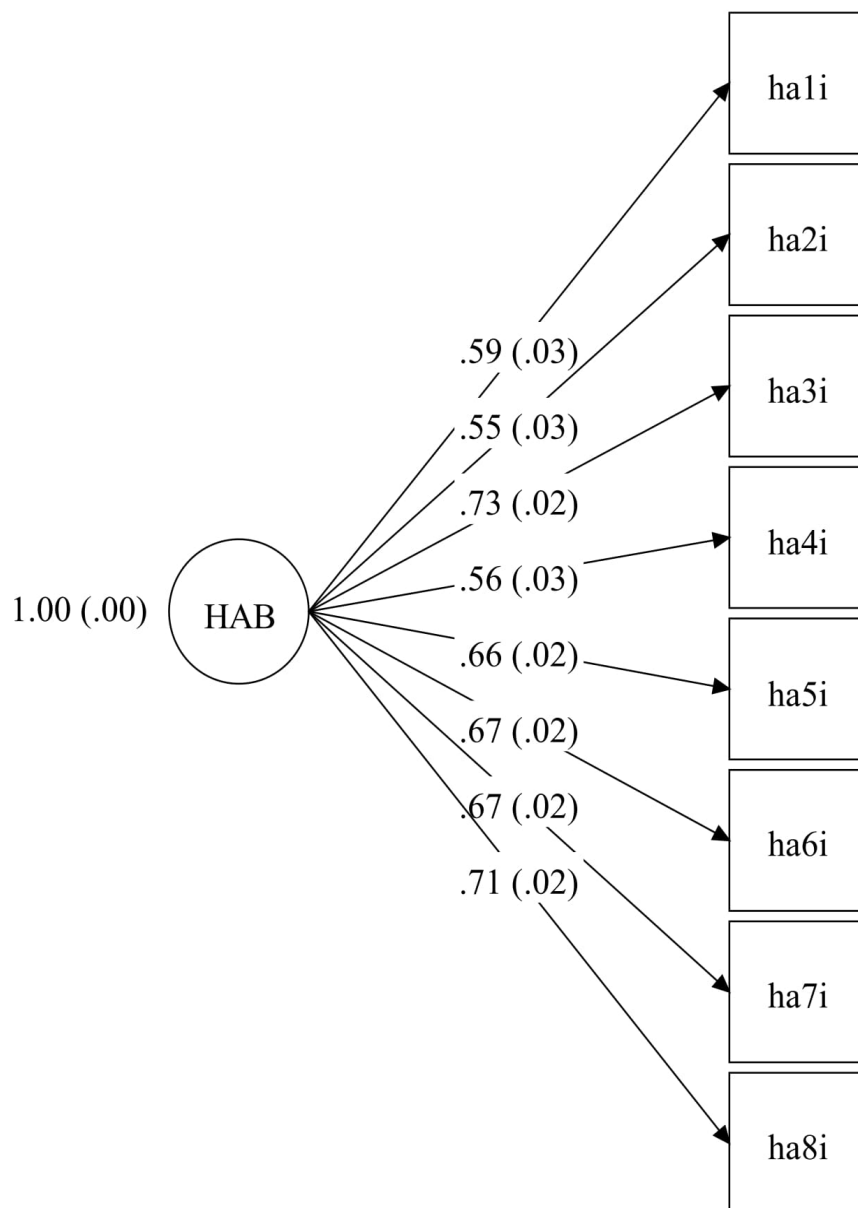
Figure 7. One-Factor Hostile Attribution Bias (HAB) CFA Model 2 with 8 Parcels as
Indicators.

Hostile Sexism. I ran a one-factor CFA in order to fit 11 hostile sexism items. Model specifications with all measurement errors as random can be seen in the Mplus syntax titled *HS CFA* (see Appendix XVII). The model diagram is presented in Figure 8. The CFI and TLI values indicated an acceptable model fit of the estimated one-factor hostile sexism with 11 items, χ^2 (44) = 997.94, p < .001, RMSEA = .174 (90% CI = 0.165 – 0.184), CFI = .933, TLI = .917. Item factor loadings can be seen in Table 24. Only one item (i.e. item hs10) did not load strongly on the factor. The modification indices also suggested high correlations between measurement errors (unique variances) of items hs2 and hs3 as well as items hs4 and hs11. It is likely that the correlated errors were due to items being very similar to each other, in other words, due to method effects as a consequence of common assessment methods such as questionnaires (Brown, 2015). In contrast to the first model of hostile attribution bias without parcelling, the overall model fit for hostile sexism was acceptable. Therefore, I did not revise this measurement model as I aimed to examine the relationship between dangerous world implicit theory and the measurement tools of the concepts as they were established in the literature (Glick & Fiske, 1996).
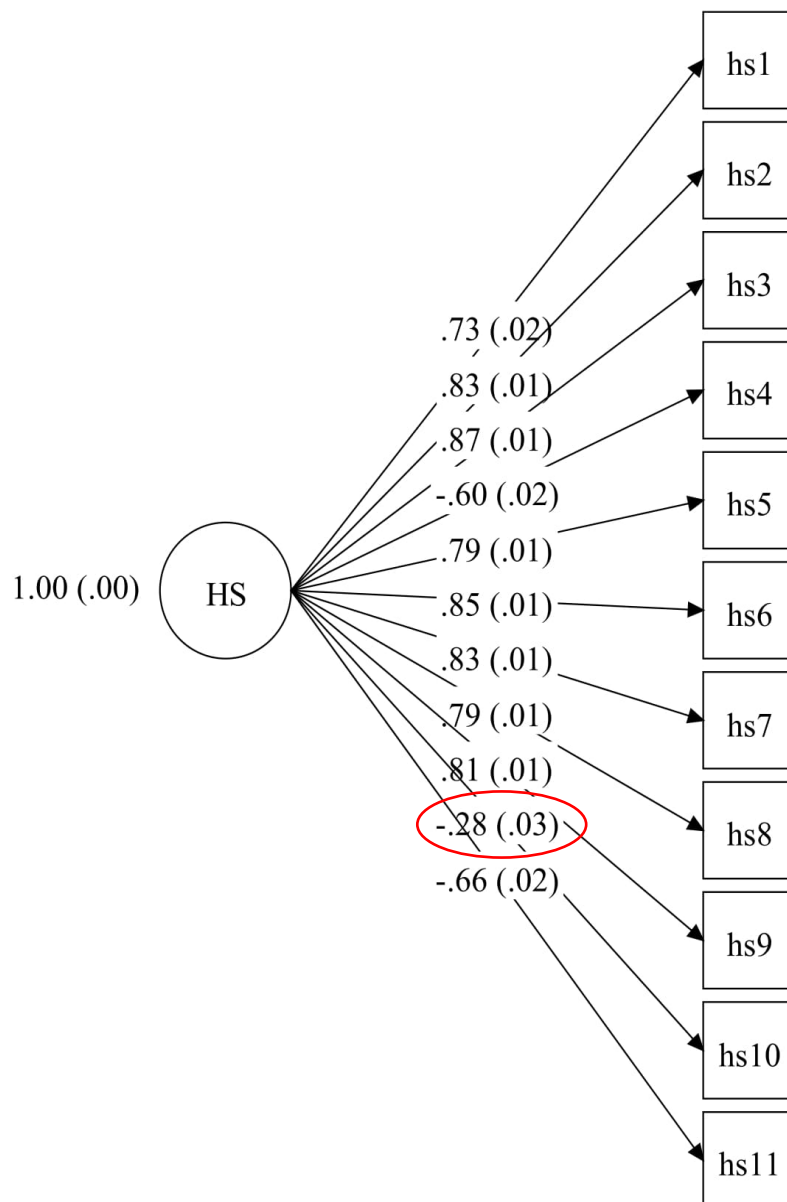
Figure 8. One-Factor Hostile Sexism (HS) CFA Model 1 with 11 Items. Item hs10 identified by the red circle was not loading strongly to the factor above the cut-off point of .32.

Table 24

CFA: Standardised Factor Loadings of 11 Hostile Sexism Items

Scale items	
hs1. Many women are actually seeking special favors, such as hiring policies that favour them over men, under the guise of asking for "equality."	.734
hs2. Most women interpret innocent remarks or acts as being sexist.	.829
hs3. Women are too easily offended.	.871
hs4. Feminists are not seeking for women to have more power than men.	-.603
hs5. Most women fail to appreciate fully all that men do for them.	.787
hs6. Women seek to gain power by getting control over men.	.851
hs7. Women exaggerate problems they have at work.	.833
hs8. Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.	.794
hs9. When women lose to men in a fair competition, they typically complain about being discriminated against.	.808
hs10. There are actually very few women who get a kick out of teasing men by seeming sexually available and then refusing male advances.	-.283
hs11. Feminists are making entirely reasonable demands of men.	-.659

Emotional Congruence with Children. Waldron et al. (2006) suggested that the

Children and Sex Emotional Congruence Scale (Beckett et al., 1996) consists of three factors

instead of a unidimensional solution. Their findings suggested that there are three factors

representing different aspects of believing that an individual can have reciprocal emotionally

satisfying relationships with children: *positive affect from children*, *special relationships with*

children, and *preference for relationships with children* (Waldron et al., 2006). Although

their analytic approach has been criticised in the literature (McPhail et al., 2018; Paquette &

McPhail, 2020), their findings still indicated that emotional congruence with children is a

multidimensional construct. The multidimensionality of the emotional congruence with

children construct is also further supported with recent empirical studies using different

scales (Paquette & McPhail, 2020). Therefore, I also treated emotional congruence with

children construct as multidimensional, with three factors in this study.

Based on Waldron et al.'s (2006) findings in the literature, I ran a 3-factor CFA in

order to fit 15 emotional congruence with children items. Initial model specifications with all

measurement errors as random can be seen in the Mplus syntax titled *ECwC CFA* (see

Appendix XVII). The initial model diagram is presented in Figure 9. The model fit indices

showed acceptable goodness-of-fit, χ^2 (87) = 1085.82, p < .001, RMSEA = .127 (90% CI =

0.120 – 0.134), CFI = .938, TLI = .925. Item factor loadings are presented in Table 25.
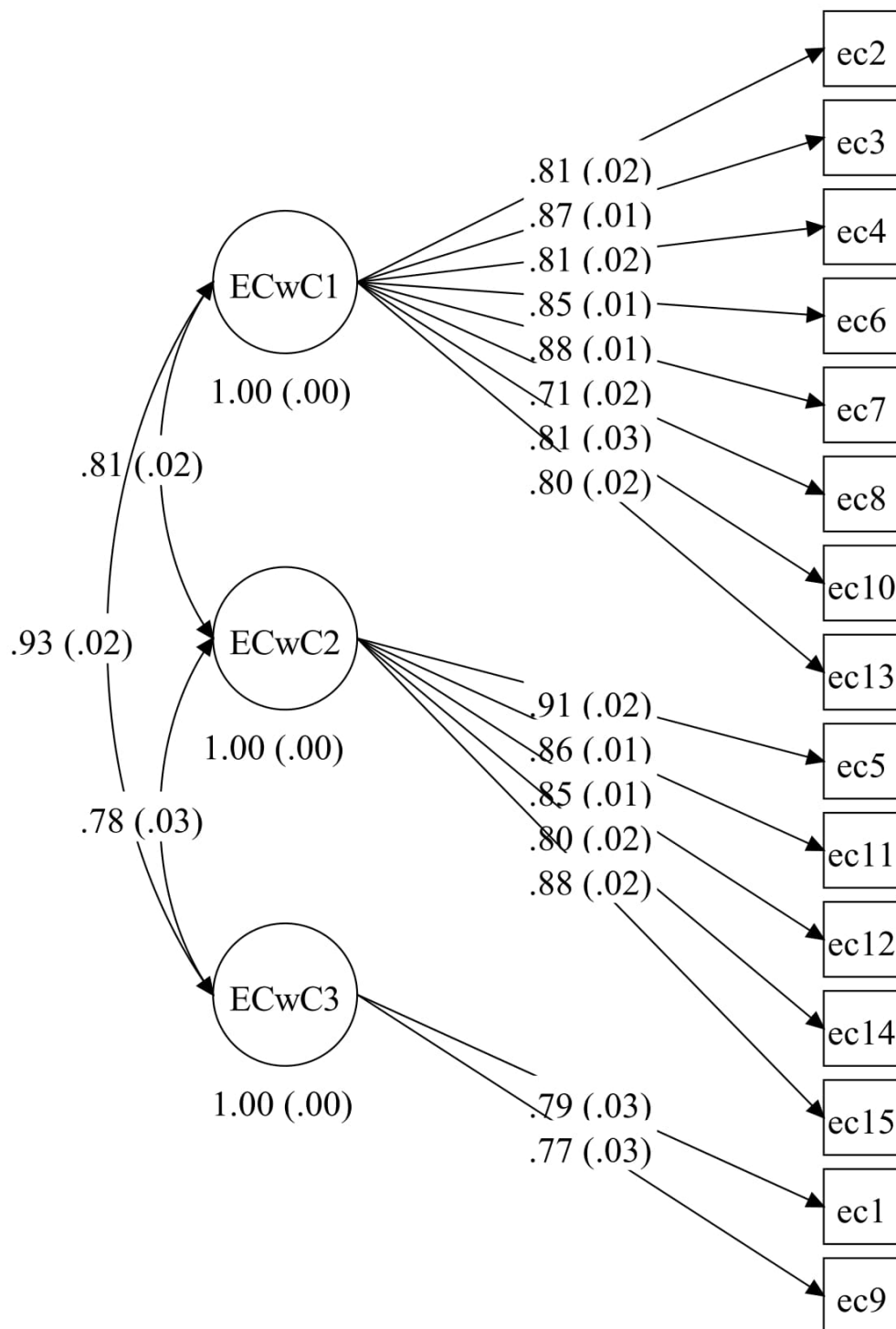
Figure 9. Three-Factor Emotional Congruence with Children CFA Model with 15 Items.

ECwC1 = positive affect from children, ECwC2 = special relationships with children,

ECwC3 = preference for relationships with children (Waldron et al., 2006).

Table 24

CFA: Standardised Factor Loadings of 15 Emotional Congruence with Children Items

Scale items	ECwC1	ECwC2	ECwC3
ec2. I have loved a child at first sight.	.809		
ec3. Thinking about children makes me feel good.	.869		
ec4. I know when children are interested in me.	.807		
ec6. Children stop me feeling lonely.	.853		
ec7. Children are special for me.	.880		
ec8. Children remind me of myself.	.707		
ec10. Sometimes I meet a child who has special feelings about me.	.809		
ec13. When I feel low, children cheer me up.	.802		
ec5. Sometimes, children look at me in a special way.		.907	
ec11. I am better than most people at understanding children.		.865	
ec12. I am better than most people at getting along with children.		.854	
ec14. Some children prefer to be with me than with their parents.		.799	
ec15. Children seem to seek me out.		.875	
ec1. I prefer to spend my time with children.			.793
ec9. I feel more comfortable with children than with adults.			.772

Note. *N* = 712. ECwC1 = positive affect from children, ECwC2 = special relationships with children, ECwC3 = preference for relationships with children (Waldron et al., 2006).

While all items strongly loaded on the respective factors, modification indices showed correlations between measurement errors of items ec11 and ec12. These items can be argued to be similar, thus correlating as a result of method effects (Brown, 2015). In addition, modification indices suggested cross-loading of the item ec5 on another factor (i.e., ECwC1). Similar to the hostile sexism measurement model, I did not revise this measurement model in order to examine the relationships between the emotional congruence sub-construct of the dangerous world implicit theory and the concept of emotional congruence with children as it exists in the literature (Waldron et al., 2006).

Children as Sexual Beings Implicit Theory. Twelve items used by Gannon (2006) to represent children as sexual beings implicit theory as conceptualised by Ward and Keenan (1999) were modelled in a one-factor CFA. Model specifications with all measurement errors as random can be seen in the Mplus syntax titled *CSBIT CFA* (see Appendix XVII). The model diagram is presented in Figure 10. The model fit was acceptable, χ^2 (54) = 395.98, $p <$ .001, RMSEA = .094 (90% CI = 0.086 – 0.103), CFI = .943, TLI = .930. All twelve items were strongly loading on one factor (see Table 26). Examining modification indices suggested highly correlated measurement errors between items csb2 and csb3. These two items were similarly worded, depicting similar content. Similar to hostile sexism and emotional congruence with children scales, I did not revise the measurement model of the children as sexual beings implicit theory as a latent construct and used it as it was used in the literature (Gannon, 2006).
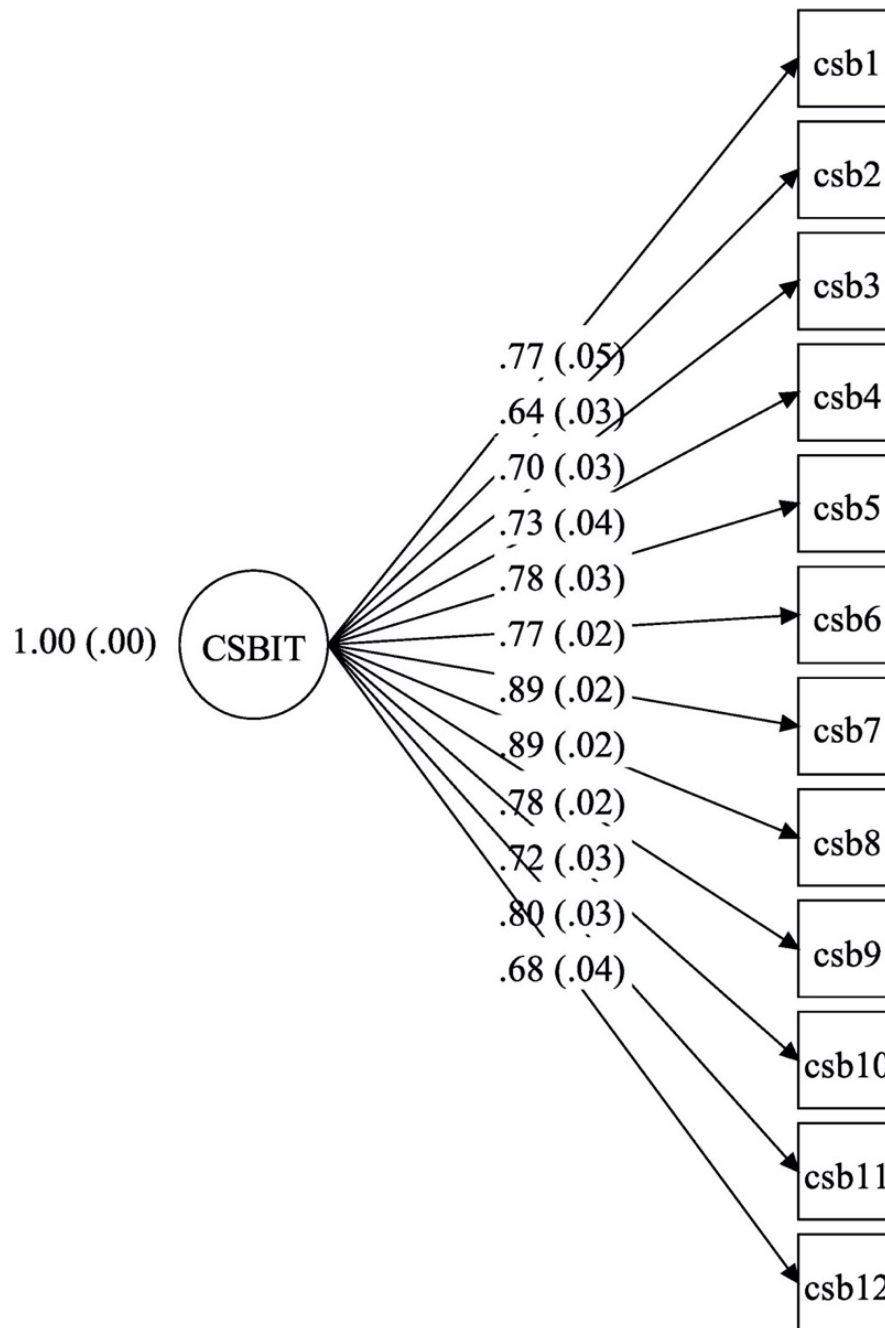
Figure 10. One-Factor Children as Sexual Beings Implicit Theory (CSBIT) CFA Model with 12 Items.

Table 26

CFA: Standardised Factor Loadings of 12 Children as Sexual Beings Implicit Theory Items

Scale items	
csb1. Having sex with a child is not really all that bad because it doesn't really harm the child.	.766
csb2. People underestimate how much children know about sex.	.641
csb3. Some children know more about sex than adults.	.700
csb4. If an adult has sex with a child who enjoys it and seems to want it, it shouldn't be considered a crime.	.730
csb5. Men who have sex with children are usually led into it by the child.	.783
csb6. Many children are sexually seductive toward adults.	.769
csb7. Most children actually enjoy sex with an adults so long as the man is nice to them.	.888
csb8. Most sexual contact between adults and children does not cause any harm.	.889
csb9. Some children are mature enough to enjoy a good sex joke with adults.	.776
csb10. Children are not as innocent as most people think.	.718
csb11. Children who sit in a way that is revealing are suggesting sex.	.795
csb12. An 8-year-old child can enjoy a good sex joke.	.679

Structural Equation Modelling (SEM)

The measurement models for the eight latent constructs (four-factor dangerous world implicit theory, one-factor hostile attribution bias, one-factor hostile sexism, three-factor emotional congruence with children, and one-factor children as sexual beings implicit theory) were included in a full SEM. There were four exogenous variables: (1) hostile attribution bias, (2) hostile sexism, (3) emotional congruence with children, and (4) children as sexual beings implicit theory were treated as predictors of four dangerous world implicit theory factors: (1) hostile world, (2) retribution, (3) emotional congruence, (4) children as sexual beings. The model specifications can be seen in the Mplus syntax titled *Full SEM* (see Appendix XVII). The estimation of this model yielded an acceptable fit, χ^2 (2745) = 5482.78, $p < .001$, RMSEA = .037 (90% CI = 0.036 – 0.039), CFI = .916, TLI = .913. The model diagram is presented in Figure 11.
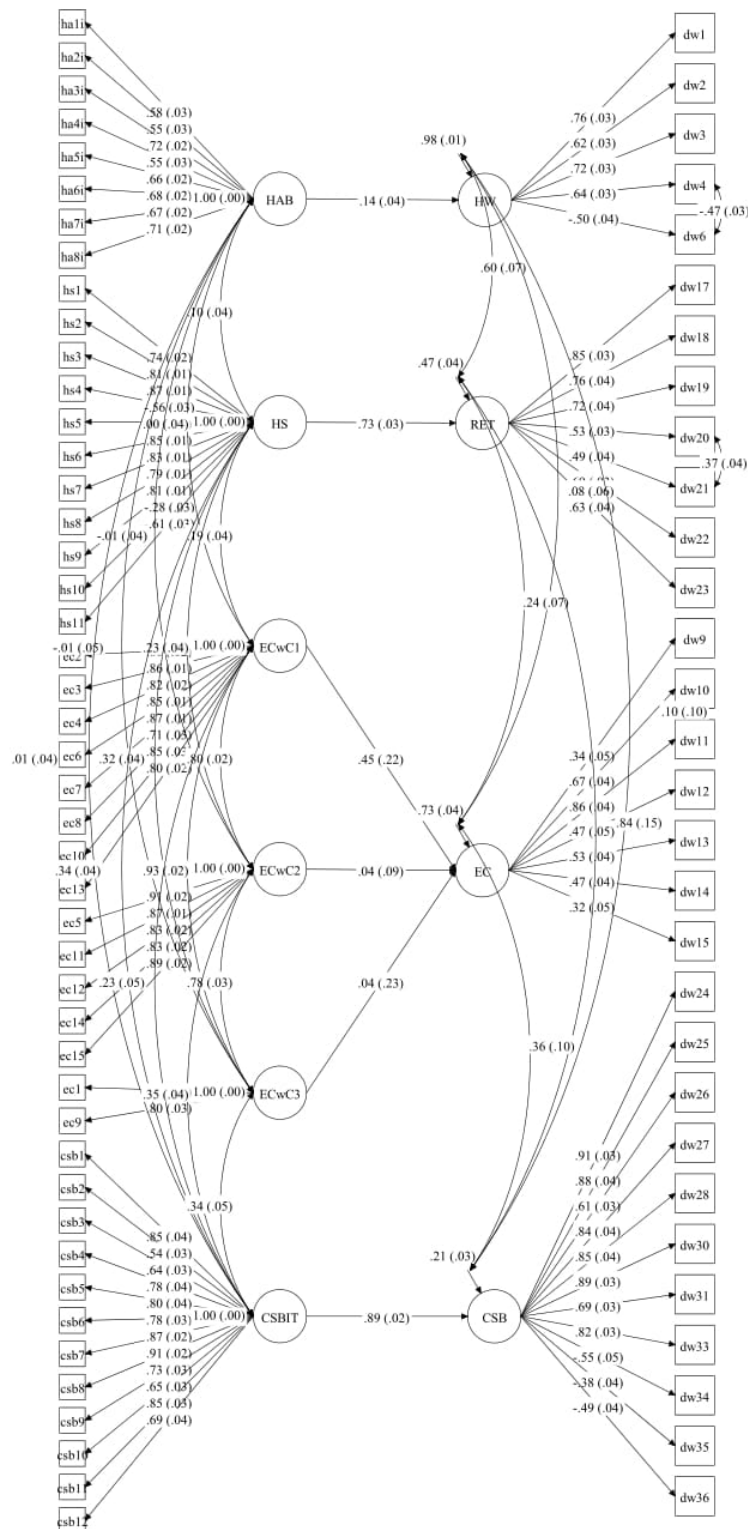
Figure 11. Full SEM Model with Four Dangerous World Implicit Theory Factors. HW = hostile world, RET = retribution, EC = emotional congruence, CSB = children as sexual beings, HAB = hostile attribution bias, HS = hostile sexism, ECwC1 = positive affect from children, ECwC2 = special relationships with children, ECwC3 = preference for relationships with children, CSBIT = children as sexual beings implicit theory.

The correlations among dangerous world implicit theory sub-constructs are presented in Table 27. There was a significantly large correlation between hostile world and retribution factors of the dangerous world implicit theory. Similarly, retribution and children as sexual beings factors of the dangerous world implicit theory were correlating highly and significantly. There were small to medium correlations between emotional congruence and retribution factors as well as children as sexual beings and emotional congruence factors of the dangerous world implicit theory.

Table 27

Full SEM: Correlations Among Four DWIT Latent Variables

	HW	RET	EC	CSB
HW		.60*	.08	. 10
RET			.23*	.84*
EC				.31*
CSB				

Note. N = 712. DWIT = dangerous world implicit theory, HW = hostile world, RET = retribution, EC = emotional congruence with children, CSB = children as sexual beings.
* p<.05

The correlations among the four constructs (i.e. hostile attribution bias, hostile sexism, emotional congruence with children and children as sexual beings implicit theory) are presented in Table 28. There was a small correlation between emotional congruence with children and hostile sexism. Similarly, there were medium size correlations between children as sexual beings implicit theory and hostile sexism as well as children as sexual beings implicit theory and emotional congruence with children.

Table 28

Full SEM: Correlations Among Four Exogenous Latent Variables

	HAB	HS	ECwC	CSBIT
HAB		.10*	-.00	. 02
HS			.23*	.34*
ECwC				.30*
CSBIT				

Note. N = 712. HAB = hostile attribution bias, HS = hostile sexism, ECwC = emotional congruence with children, CSBIT = children as sexual beings implicit theory.

* *p<.05*

Results from the hypothesised full SEM model showed that there was a significant association between hostile attribution bias and hostile world however, the shared variance was low (β = .14, p = .002). Hostile attribution bias explained only 2% of the variance in hostile world factor of the dangerous world implicit theory. Hostile sexism was significantly associated with retribution (β = .73, p <.001) and it explained 53% of the variance in retribution sub-construct of the dangerous world implicit theory. Only one of the three emotional congruence with children factors (referred to as positive affect from children in Waldron et al.'s [2006] paper) was significantly associated with the emotional congruence sub-construct of the dangerous world implicit theory (β = .45, p = .041). The two other emotional congruence with children factors (referred to as special relationships with children and preference for relationships with children in Waldron et al.'s [2006] paper) were not significantly related to the emotional congruence sub-construct of the dangerous world implicit theory (β = .04, p = .638 and β = .04, p = .849, respectively). The three emotional congruence with children factors together explained 27% of the emotional congruence sub-construct of the dangerous world implicit theory. Lastly, children as sexual beings implicit theory was significantly associated with children as sexual beings sub-construct of the

dangerous world implicit theory ($\beta = .89$, $p < .001$) and it explained 79% of the variance in children as sexual beings factor. The significant regression paths among latent variables are presented in Figure 12.
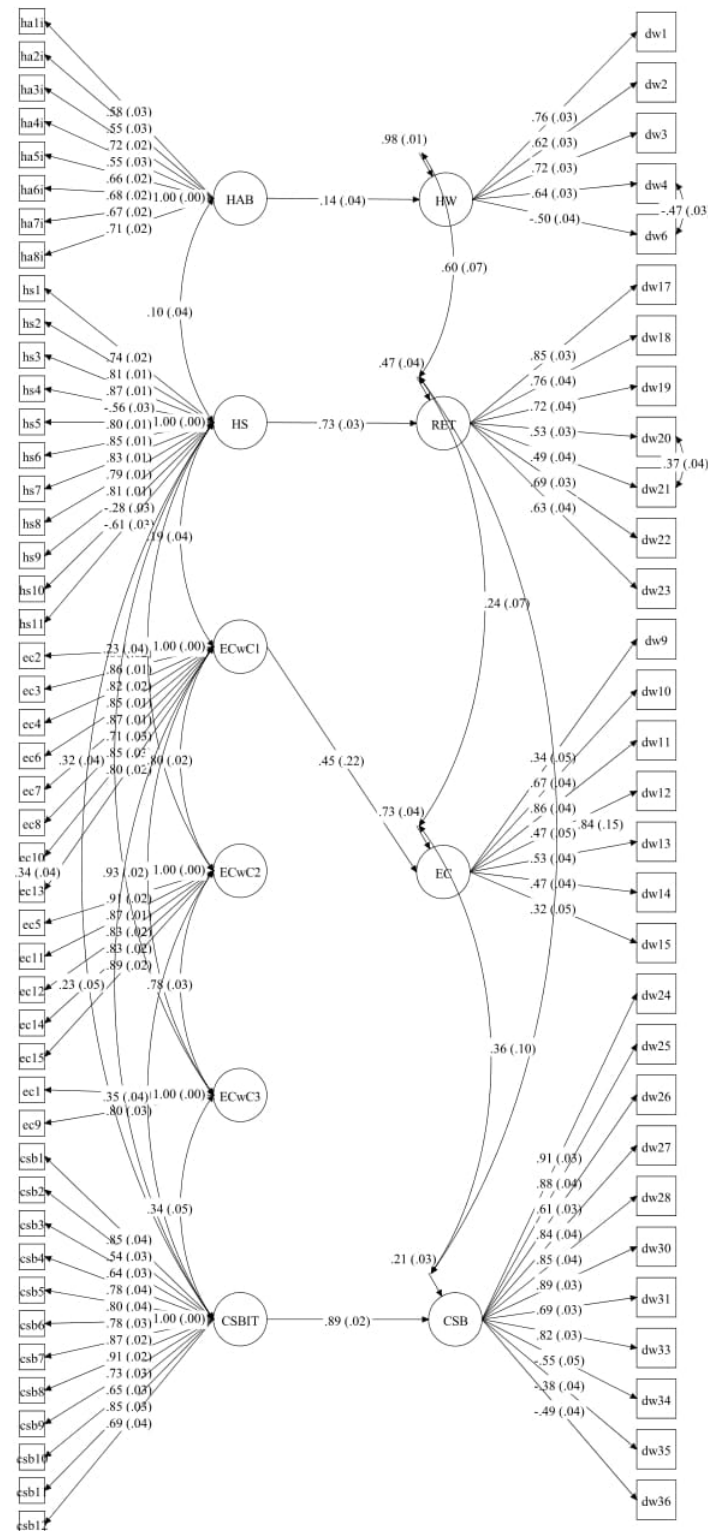
Figure 12. Full SEM Model with Significant Paths Only. HW = hostile world, RET = retribution, EC = emotional congruence, CSB = children as sexual beings, HAB = hostile attribution bias, HS = hostile sexism, ECwC1 = positive affect from children, ECwC2 = special relationships with children, ECwC3 = preference for relationships with children, CSBIT = children as sexual beings implicit theory.

Chapter Discussion

In this chapter, I aimed to examine the dangerous world implicit theory from two aspects: to confirm the four-four factor model of dangerous world implicit theory scale based on the exploratory findings in Chapter Three, and to examine the associations between the four sub-constructs of the dangerous world implicit theory (i.e., hostile world, retribution, emotional congruence, and children as sexual beings) and the four other theoretically similar psychological constructs: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984; Waldron et al., 2006), and the implicit theory of children as sexual beings (Ward & Keenan, 1999).

Dangerous World Implicit Theory Scale Validity

One of the aims of this study was to confirm the four-factor model of the dangerous world implicit theory I hypothesised. After revisions, the results from the third CFA model indicated an acceptable model fit for the four-factor dangerous world implicit theory. The development of additional items for the children as sexual beings sub-construct of the dangerous world implicit theory strengthened the factor with several items loading strongly and significantly on the expected factor. The shared variance between the children as sexual beings factor of the dangerous world implicit theory and children as sexual beings implicit theory was particularly high, indicating convergent validity of the children as sexual beings sub-construct of the dangerous world implicit theory. In addition to this, the shared variance between emotional congruence factor of the dangerous world implicit theory and *positive affect from children* factor of the emotional congruence with children (Waldron et al., 2006) showed considerable similarities between the two measurement tools. Hostile sexism (Glick & Fiske, 1996) and the retribution factor of the dangerous world implicit theory also had substantial shared variance. However, the results from this study—consistent with the results from the two studies using dangerous world vignettes in Chapter Two—did not suggest a

substantial association between the hostile world sub-construct of the dangerous world implicit theory and the hostile attribution bias (Coccaro et al., 2009; Dodge, 1980, 2006). This finding indicated that there was not adequate evidence for any similarity between the hostile world sub-construct of the dangerous world implicit theory and the hostile attribution bias, as I argued in this thesis.

The item-based dangerous world implicit theory scale could be improved from several aspects. One could be the removal of reverse worded items. The utility and effectiveness of reverse worded items in questionnaires have been disputed in the literature (e.g., Lindwall et al., 2012; Rodebaugh, Woods, & Heimberg, 2007; Roszkowski & Soven, 2010; Sonderen, Sonderman, & Coyne, 2013). Although the hypothesised four-factor model of the dangerous world implicit theory showed acceptable fit following three revisions, the reverse worded items still created misfit of the data as a result of method effects (Brown, 2015). Therefore, removing reverse coded items from the dangerous world implicit theory scale should be considered in future research.

Another aspect that could be considered for improving the dangerous world implicit theory scale is the factor loadings of the respective items for the emotional congruence factor. The emotional congruence sub-construct of the dangerous world implicit theory had three items (i.e., items dw9, dw12, and dw15) that were not loading as strongly as the rest of the dangerous world implicit theory items to their respective factors, albeit above the cut-off point of .32 recommended in the literature (Tabachnick & Fidell, 2007). Previous research suggested that emotional congruence with children is a multidimensional construct (Waldron et al., 2006; Wilson, 1999) and the variety of attributes within the concept of emotional congruence with children as conceptualised by Finkelhor (1984) has been recognised by other researchers (e.g., McPhail et al., 2013; Wilson, 1999). Findings from a recent study by Paquette and McPhail (2020) also supported the multidimensional structure of the emotional

congruence with children as a construct. Based on these findings in the literature, the

emotional congruence factor of the dangerous world implicit theory will benefit from further

research that aims to distinguish whether the dangerous world implicit theory should include

the emotional congruence with children dimension at all, or if so, should it only be in a

concept that represents the perception of children as safe(r) rather than the other dimensions

of the emotional congruence with children, such as special relationships with children, or

preference for relationships with children (Waldron et al., 2006), which may be more relevant

for paedophilic interest.

Potential Improvement in the Measurement Models of Other Constructs

In a full SEM model, the evaluated relationship between variables only involves the

latent constructs. Therefore, before evaluating a full SEM model, it is a primary step to test

the measurement model of each latent variable in the structural model to ensure that the scale

is psychometrically sound. This initial step enables researchers to have more confidence in

their findings from evaluating the hypothesised structural model (i.e., between latent

constructs; Byrne, 2012).

In this chapter, although the measurement models of each psychological construct

other than the dangerous world implicit theory were tested, revising these models was

avoided, despite low factor loadings of some items or correlated measurement errors. This

decision was made in order to test for the validity of the dangerous world implicit theory

scale using established measurement tools for the four other constructs, which was one of the

aims of this chapter. The scales used to measure hostile attribution bias, hostile sexism,

emotional congruence with children and children and sexual beings implicit theory have

already been in use in the literature and in practice (Beckett et al., 1996; Coccaro et al., 2009;

Gannon, 2006; Glick & Fiske, 1996; Waldron et al., 2006). Therefore, it was appropriate to

keep these models as close to their published versions as possible whilst testing for

convergent validity of the dangerous world implicit theory scale. One exception to this strategy was using item parcels in the measurement model of hostile attribution bias (Matsunga, 2008). Nevertheless, no items were removed from that scale either. Therefore, any unintentional conceptual change to the construct measurements were avoided.

It should be noted that testing for the measurement model of each latent variable in this study showed areas where these published scales for hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Waldron et al., 2006), and children as sexual beings implicit theory (Gannon, 2006) can be improved by model revisions (e.g., removal of items not loading strongly on the factor or correlating errors or even removing one of the correlated items; Brown, 2015). Improvement of these tools that are used to measure psychological constructs particularly related to sexually offending behaviour against children should be considered for future research.

Conceptualisation of the Dangerous World Implicit Theory

The dangerous world implicit theory as conceptualised by Ward and Keenan (1999) revolves around the core belief that the world is a dangerous and hostile place. One of the hypotheses in this thesis was that there would be conceptual similarities between the hostile attribution bias and the perception of the world as a hostile place as described in Ward and Keenan's (1999) dangerous world implicit theory. While this hypothesis was not supported over two studies in Chapter Two, the aim of the current study was to examine this relationship by measuring the concept of dangerous world implicit theory with an item-based questionnaire, consisted of four sub-constructs. In other words, this study was an attempt to re-examine the relationship between the two constructs using a different tool to measure dangerous world implicit theory and eliminate possible issues in relation to the tool that was used to measure the dangerous world implicit theory in Chapter Two (i.e., the dangerous world vignettes, see Appendix I).

The findings from this study indicated that the relationship between the hostile attribution bias and hostile world sub-construct of the dangerous world implicit theory was small, albeit significant. More importantly, hostile attribution bias did not explain a substantial amount of variance in the hostile world factor of the dangerous world implicit theory. This finding was particularly notable when compared to the similarities between the other three sub-constructs of the dangerous world implicit theory (i.e., retribution, emotional congruence, and children as sexual beings) and the other three psychological constructs under examination (i.e., hostile sexism, emotional congruence with children, and children as sexual beings implicit theory). These six constructs shared considerable variance with their respective comparison, indicating some overlap with each other.

Both the findings in this study as well as the previous two studies in Chapter Two strongly indicated that there is *no* clear evidence that suggests that hostile attribution bias and hostile world sub-construct of the dangerous world implicit theory reflect an identical or overlapping construct. The explanation of these findings could be that either there are conceptual differences between the hostile attribution bias and the perception of the world as a hostile and dangerous place, or the two measurement tools for these two constructs were not tapping in to the respective concepts. Considering the consistent findings using different measurement tools for the dangerous world implicit theory, the latter explanation of these findings was rather weaker. It was surprising that perception of others' intentions in a negative way in ambiguous social situations (Dodge, 2006; Yeager et al., 2013) is—statistically—not similar to the perception of the world and other people as hostile, as conceptualised by Ward and Keenan (1999).

Another conceptual examination of the dangerous world implicit theory involved treating hostile sexism as the predictor of retribution sub-construct of the dangerous world implicit theory as it included three items (i.e., items dw17, dw18, and dw19) which depicted

beliefs around seeking retribution for women's threatening actions. However, it was expected

that the two factors would yield rather low shared variance. Based on face validity, I would

argue that the hostile sexism and retribution—even if the intention of retribution within the

items is in return to women—are conceptually different. While hostile sexism involved

negative attitudes towards women (Glick & Fiske, 1996), retribution as one element of the

dangerous world implicit theory involved fighting back against other people who are believed

to be against them and are out to threaten one's control and authority (Ward & Keenan,

1999). Contrary to this argument, hostile sexism was still significantly associated with the

retribution sub-construct of the dangerous world implicit theory in this study, suggesting a

considerable amount of similarity between the two latent constructs. Adding this finding to

the results from the first two studies of this thesis in Chapter Two, the findings suggested that

hostile sexism plays a part in explaining some elements of the dangerous world implicit

theory. It is still yet to be understood *how* hostile sexism may be related to sexual offending

against children.

The relationship between the emotional congruence sub-construct of the dangerous

world implicit theory and the concept of emotional congruence with children (McPhail et al.,

2014), particularly feeling positive affect from children, as conceptualised by Waldron et al.

(2006), suggested that they also shared some similarities, as expected. This indicated that

there is an element of the dangerous world implicit theory as conceptualised by Ward and

Keenan (1999) that involves having emotional and cognitive association with children. In

addition to this, the relationship between children as sexual beings sub-construct of the

dangerous world implicit theory and the children as sexual beings implicit theory showed that

there is considerable association between the two. This finding suggested that one aspect of

the dangerous world implicit theory (Ward & Keenan, 1999) involves perceiving children as

capable of engaging in sex and satisfying adults' sexual desires, as in the children as sexual beings implicit theory articulated by Ward and Keenan.

Implications and Conclusions

Findings from this study suggested a number of implications in research and practice as well as areas for improvement. The hypothesis of interpreting others' behaviour in a biased and hostile way (Dodge, 1980, 2006) and perceiving the world as a hostile and threatening place (Ward & Keenan, 1999) sharing conceptual similarities was not supported. Despite the fact that these two constructs appear to be similar, the statistical analyses suggested the opposite. Therefore, it would not be recommended to treat the two psychological constructs as equal, or even similar. In other words, using a measure of hostile attribution bias with an intention to measure the hostile perception of the world assuming that it represents an aspect of the dangerous world implicit theory would not be advised. The multi-dimensional construct of dangerous world implicit theory appears to involve a form of perception of the world in a negative and untrustworthy way that is different from the biased interpretation of others' ambiguous behaviour as described in the concept of hostile attribution bias. This needs to be explored and differentiated in future research so that there is satisfactory explanation for the differences between the two concepts.

Unlike the lack of conceptual similarity between hostile attribution bias and hostile world sub-construct of the dangerous world implicit theory, the other three dimensions of the dangerous world implicit theory showed considerable similarities with the respective psychological constructs that are widely used in sexual offending against children or sexual offending literature in general (i.e., hostile sexism, emotional congruence with children, and children as sexual beings implicit theory). This suggested that parts of the dangerous world implicit theory involve having emotional and cognitive associations with children and seeing children as appropriate beings for satisfying adult sexual desires. Moreover, the association

between hostile sexism and the retribution sub-constract of the dangerous world implicit theory was consistent with the findings from previous studies in Chapter Two. This finding suggested that hostile sexism was associated with parts of the dangerous world implicit theory which depicted negative attitudes against women as well as the endorsement of seeking retribution in return to others' and women's behaviours, in particular. In other words, this may suggest that unlike my initial hypothesis, parts of the dangerous world implicit theory does not involve a common factor that is conceptually the same as hostile sexism. However, hostile sexism is still associated with the retribution sub-construct of the dangerous world implicit theory, which also involves the belief of seeking retribution against women, by controlling, punishing, or putting them in their place, if women question their authority.

Chapter Summary

In this chapter, I confirmed the four-factor model of dangerous world implicit theory including the addition of new items for the children as sexual beings sub-construct, with an independent male community sample, and examined the associations between the four sub-constructs of the dangerous world implicit theory and the other psychological constructs: hostile attribution bias, hostile sexism, emotional congruence with children, and children as sexual beings implicit theory. The findings in this chapter indicated that the three of the four sub-constructs of the dangerous world implicit theory (retribution, emotional congruence, and children as sexual beings) were positively and significantly associated with the three other psychological constructs (hostile sexism, emotional congruence with children, and children as sexual beings implicit theory, respectively). However, there was no evidence of a strong association between the hostile world sub-construct dangerous world implicit theory and the hostile attribution bias, which was a counter-hypothetical albeit consistent finding with the previous two studies described in Chapter Two of this thesis.

CHAPTER FIVE

The Role of Adverse Childhood Experiences and the Dangerous World Implicit Theory

in Sexual Offending Against Children in a Community Sample: A Two-Wave Study

Chapter Overview

In the previous chapter, I confirmed the four-factor model of dangerous world implicit theory and examined the relationship between the dangerous world implicit theory and the four other psychological constructs: hostile attribution bias (Dodge, 1980), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984), and a children as sexual beings implicit theory (Ward & Keenan, 1999), using Structural Equation Modelling (SEM) in Mplus (Muthén & Muthén, 1998-2017). As part of the same study in the previous chapter, I measured additional concepts including adverse childhood experiences (ACEs) and the proclivity to sexually offend against children. In this chapter, I examined the relationship between ACEs and the dangerous world implicit theory with four sub-constructs. I also examined their role in sexual offending against children using a two-wave study. I examined the predictive role of the ACEs in the development of holding four dangerous world implicit theory sub-constructs: hostile world, retribution, emotional congruence, and children as sexual beings. I also examined the role of the four dangerous world implicit theory sub-constructs between the ACEs and the self-reported sexually abusive behaviour and proclivity to sexually offend against children at two different time points, 14 months apart.

Introduction

Sexual offending behaviour against children is a complex issue and after decades-old theories, there is consensus that multiple factors are likely to have a role in the emergence and facilitation of such behaviour (Dangerfield et al., 2020; Ó Ciardha, Gannon, & Ward, 2017; Ward & Beech, 2017). In order to understand sexual offending behaviour against

children, understanding their previous experiences, such as ACEs, is as crucial as

understanding their offence-supportive cognition and cognitive processes (Grady et al.,

2016). It is also important to study previous adversities in order to understand the aetiology of

cognitive distortions that are thought to be associated with sexual offending against children

(Ó Ciardha et al., 2017; Ó Ciardha & Ward, 2013; Ward, 2000).

The examination of ACEs became popular following a large-scale epidemiologic

study carried out by the Centers for Disease Control and Prevention (CDC) in partnership

with a health-care organisation, Kaiser-Permanente, in the mid-90s. ACEs refer to potentially

traumatic events that take place in the childhood (i.e., before the age of 18, CDC, 2020).

According to the CDC (2020), ACEs are grouped in three categories: abuse, neglect, and

household challenges. The abuse category includes emotional, physical, and sexual abuse in

childhood, and neglect includes emotional and physical neglect. Finally, witnessing violence

against mother, separation or divorce of the parents, substance abuse, mental illness, and

imprisonment among household members are classified as the household challenges.

The results from the large-scale study showed that the risk of negative health

outcomes increases as the number of ACEs experienced increased (Felitti et al., 1998). Felitti

et al. (1998) also found that individuals who experienced four or more adverse events in

childhood were at a higher risk of developing alcohol and substance abuse, depression, and

attempting suicide in addition to physical health problems including heart, lung, and liver

diseases and several others. The impact of ACEs on mental and physical health have been

extensively studied since the 90s. However, almost a decade earlier, Browne and Finkelhor

(1986) carried out a review on the impact of child sexual abuse. The review of studies

showed a number of frequently reported initial and long-term effects including sexually

inappropriate behaviour (Friedrich, Urquiza, & Beilke, 1986), difficulty in trusting, feelings

of fear, hostility, and betrayal (Briere, 1984, as cited in Browne & Finkelhor, 1986), although

Browne and Finkelhor (1986) highlighted that the literature focused more on women victims of child sexual abuse than men.

Previous research showed associations between ACEs and sexual victimisation in adulthood (Ports, Ford, & Merrick, 2016). Research also showed that the ACE significantly increased the risk of intimate partner violence victimisation for women and significantly increased risk of intimate partner violence perpetration among men (Whitfield, Anda, Dube, & Felitti, 2003). In addition, experiences of trauma and early childhood victimisation among offender populations have been found to be prevalent (Courtney & Maschi, 2013; Weeks & Widom, 1998). Previous studies showed that offender populations reported higher levels of ACEs compared to community samples (e.g., Baglivio et al., 2014; Reavis, Looman, Franco, & Rojas, 2013). Widom and Maxfield (2001) also found that ACEs increased the risk of criminal behaviour.

ACEs were associated with the overall negative health outcomes (Felitti et al., 1998), increased risk of criminal behaviour (Widom & Maxfield, 2001) and victimisation (Ports et al., 2016; Whitfield et al., 2003). Recently, research into understanding individuals who sexually abuse children has started to focus on the role of ACEs in the development of sexually violent behaviour (e.g., Abbiati et al., 2014; Jennings, Zgoba, Maschi, & Reingle, 2014; Langton, Murad, & Humbert, 2017; Levenson et al., 2014; Levenson, Willis, & Prescott, 2015; Levenson & Socia, 2016). Previous research showed that individuals who sexually offended against children reported more childhood physical, emotional, and sexual abuse as well as neglect (Abbiati et al., 2014) than the community males (Levenson et al., 2015). Another study by Jennings et al. (2014) showed that experiencing childhood emotional abuse and neglect in particular was a significant risk factor for both sexual victimisation and sexual offending behaviour. Their study also showed support for the overall victim-offender overlap hypothesis where multiple forms of adverse childhood experiences were significant

predictors of sexual offending (Jennings et al., 2014). Weeks and Widom (1998) found that individuals who are convicted of sex offences reported higher rates of childhood sexual victimisation than any other offenders including violent and non-violent offenders. In addition to these, Lee, Jackson, Pattison and Ward (2002) found that childhood sexual and emotional abuse as well as family dysfunction were risk factors for paraphilias and sexual abuse in childhood was a risk factor specifically for paedophilia. Research findings in the literature, therefore, suggest that the childhood adversities including physical, emotional, and sexual abuse, neglect, and family dysfunction are associated factors with adulthood sexual victimisation and/or sexual offending behaviour.

In a relatively recent aetiological framework of sexual offending, Grady, Levenson, and Bolder (2016) proposed an aetiological model of ACE to sexual offending suggesting that exposure to ACE is associated with the development of insecure attachment systems, which in turn, leads to the development of criminogenic needs that contribute to sexually abusive behaviour. In their model, Grady et al. (2016) hypothesised that ACE leads to developing insecure attachment models, which then leads to developing criminogenic needs—also known as stable *dynamic risk factors* (Thornton, 2002) or *causal psychological risk factors* (Beech & Ward, 2004)—that are risk factors associated with sexual offending behaviours and include deficits in several areas of adaptive functioning such as, arousal control, emotional regulation, intimacy and relationship skills, as well as healthy sexual attitudes and others (Grady et al., 2016). According to Thornton (2002), one of the dynamic risk factor domains included offence-supportive or distorted cognitions.

Grady, Yoder, and Brown (2018) recently tested this model among young male offenders of both sexual and non-sexual crimes. Their findings indicated a relationship between physical abuse and insecure attachment styles where such attachment styles mediated the relationship between experiencing abuse and deficits in executive functioning.

Moreover, childhood sexual abuse had direct relationship with sexual offending and this relationship was not mediated through regulation deficits. In an earlier study, Simons, Wurtele and Heil (2002) found no direct effect of childhood sexual abuse on the number of victims rather, this relationship was mediated through lack of empathy towards the child victims. In a more recent study, Grady, Looman, and Abracen (2019) examined the relationship between childhood abuse, attachment styles as well as psychopathy. Whilst their results did not indicate any significant associations between childhood abuse and psychopathy, the findings showed a positive relationship between childhood abuse and preoccupied (or fearful) attachment styles. Their findings were also in line with the literature suggesting childhood abuse leads to disruptions in cognitive development among infants (Perry, Pollard, Blackley, Baker, & Vigilante, 1995).

In the literature, offence-supportive cognitions are classified as criminogenic needs, also called *dynamic risk factors* (Hanson & Harris, 2000; Thornton, 2002) or, *causal psychological risk factors* (Beech & Ward, 2004). Ward and Keenan (1999) also suggested that the development of implicit theories as underlying schemas leading to occurrence and maintaining of sexual offending against children are developed in early years. Grady and her colleagues have recently examined the aetiological model of ACE leading to development of insecure attachments which then lead to psychological or social deficits that are associated risk factors for sexual offending among juveniles (Grady et al., 2018; Grady et al., 2019). However, there is no research to date which examined the relationship between ACE and development of offence-supportive cognition among adult males. Moreover, there is no research to date which particularly examined role of dangerous world implicit theory in Grady et al.'s (2016) framework. Thus, there is a gap in the literature where the role of ACEs in the development of offence-supportive cognitions, such as the dangerous world implicit theory, is yet to be investigated. In addition, the role of both the ACEs and the dangerous

world implicit theory in sexual offending against children has not been simultaneously examined.

In this two-wave study, the aim was to examine the underlying mechanism of the development of sexual offending behaviour against children. Following on from Ward and Keenan's (1999) argument that implicit theories are developed in early developmental years, the first hypothesis in the current study was that ACE will be a significant predictor of the dangerous world implicit theory sub-constructs. The implicit theories are argued to be factors associated with a causal or maintaining role in sexual offending behaviour against children (Ward, 2000; Ward & Keenan, 1999). Therefore, the second hypothesis in the current study was that dangerous world implicit theory sub-constructs will be significant predictors of self-reported past sexual offending behaviour as well as the proclivity to commit sexual offences against children, at both waves. Finally, the third hypothesis was that the dangerous world implicit theory will meaningfully explain the link between ACEs and sexual offending behaviour against children as proposed by Grady et al. (2016).

Wave 1

The data for the first wave is the same as the study in the previous chapter (Chapter Four) and the sample size was $N = 712$. In the first wave, participants completed eight measures in total. Four of these are the measures described in the previous chapter: four-factor dangerous world implicit theory scale, hostile attribution bias, hostile sexism, emotional congruence with children, and children as sexual beings implicit theory. In addition to those four measures, participants also completed four more measures described below. Only the dangerous world implicit theory measure and the four measures below were included in the analysis in the first wave in this chapter. The criteria for participation, and study procedure were the same as in the study in the previous chapter.

Method

Measures

Adverse Childhood Experiences (ACE) Scale. ACE is a tool which assesses early adverse experiences such as physical abuse, sexual abuse, neglect as well as parental incapacities or dysfunctional household. The original ACE scale consisted of seven categories with 17 items in total (see Felitti et al., 1998). By incorporating 10 simplified items from the Juvenile Victimization Questionnaire (Finkelhor, Hamby, Ormrod, & Turner, 2005), Finkelhor, Shattuck, Turner and Hamby (2015) proposed a revised version of the ACE scale by adding four items. The 10 items each measured emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, witnessing violence against mother/step-mother, presence of household substance abuse, household mental illness, parental separation or divorce, and incarcerated household member. In addition to these 10 items, Finkelhor et al. (2015) added four items each measuring peer victimisation, peer isolation/rejection, exposure to community violence, and low socioeconomic status (see Appendix XVIII). In this study, 13 items from Finkelhor et al.'s (2015) revised inventory were included. One item (i.e., socioeconomic status) was excluded as it was previously found to predict physical health, but not psychological distress (Finkelhor et al., 2015).

Self-Reported Past Problematic Sexual Behaviour. This measure was developed for the current study to represent a self-report behavioural measure of sexual experiences. It consisted of four items assessing past problematic sexual behaviour since the age of 18 in order to create a baseline measure of such behaviour. The phrasing of the questions, although explicit, were easy to understand and represented an enquiry about whether an individual's sexual behaviours since the age of 18 could be classified or interpreted as *problematic*. The participants responded either 1 (*yes*) or 0 (*no*) to each of the four items (e.g., "Have there been occasions that you have regretted your sexual behaviour?", "Have there been occasions

when you thought that your sexual behaviour could get you into legal trouble?"). When a participant responded *yes* to any of the four items, they were presented an additional question asking whether any of their sexual behaviours had involved adults or children (see Appendix XVII).

Self-Reported Proclivity to Access Child Sexual Exploitation Material. The term child sexual exploitation material (CSEM) refers to "material that depicts and/or that documents acts that are sexually abusive and/or exploitative to a child" (ECPAT International, 2016, p. 39). This measure consisted of a single item developed to assess the likelihood of individuals to watch or look at pornographic material involving children (i.e., "If you could be sure that no one would know and that you would not be punished, how likely would you be watching pornographic material containing younger individuals below the age of 16?"). The item was rated on a 7-point Likert-type scale from 0 *(not likely at all)* to 6 (*very likely*; see Appendix XX).

Self-Reported Proclivity to Commit Contact Offences Against Children. This measure consisted of a single item developed in order to assess the likelihood of individuals to engage in sexual activities involving individuals under the age of consent (i.e., "If you could be sure that no one would know and that you would not be punished, how likely would you be engaging in sexual activity with someone below the age of 16?"). The item was rated on a 7-point Likert-type scale from 0 *(not likely at all)* to 6 (*very likely*; see Appendix XX).

Self-Evaluation of Social Desirability. This was a single item measure asking participants to self-evaluate how honest they were with their overall responses to the questions in the survey ("These questions discussed some stigmatising and sometimes illegal concepts. How honest do you feel you were in answering these questions?"). Participants responded on a 7-point Likert-type scale from 0 (*completely open and honest*) to 6 (*I wasn't honest at* all; see Appendix XX).

Results

Descriptive Statistics of the Outcome Variables

A considerable number of participants self-reported one or more past problematic sexual behaviour since the age of 18. The breakdown of number of participants who responded 'yes' to the four self-reported past problematic sexual behaviour questions are shown in Table 29. Although the number of participants who self-reported any past problematic sexual behaviour was high, only three participants disclosed that those sexual behaviours involved children. Due to the low variance in this dependent variable, which would not yield any meaningful results in relation to the research questions of this study, it was excluded from further analyses. Thus, only the two proclivity measures were included: proclivity to commit contact sexual offences against children and proclivity to access child sexual exploitation material. The means and standard deviations of variables based on average scores are presented in Table 30.[20]

Table 29

Wave 1: Number of Participants Who Reported Past Problematic Sexual Behaviour Involving Adults

N	Scale Item
289	Have there been occasions that you've regretted your sexual behaviour?
158	Have there been occasions that you thought your sexual behaviour might be abnormal or atypical?
40	Have there been occasions when you thought your sexual behaviour could get you into legal trouble?
93	Have there been occasions where you found your sexual behaviours were interfering with your day to day life?

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[20] Please note that these descriptive statistics are for information on the distribution of aggregated scores due to prevalent use in psychology. However, the SEM in Mplus does not rely on these aggregated scores unless specifically stated (e.g., parcelling of HAB items in Chapter Four).

Table 30

Wave 1: Means and Standard Deviations of Variables

Variable	N	Mean (**SD**)
HW	712	1.87 (.54)
RET	712	.79 (.55)
EC	712	1.65 (.62)
CSB	712	1.10 (.27)
SOCDES1	712	.20 (.68)
PPROC1	712	.25 (.88)
CPROC1	712	.15 (.68)

Structural Equation Modelling (SEM)

I ran a full SEM[21] in order to examine the relationship between the ACE, four dangerous world implicit theory sub-constructs, proclivity to commit contact sexual offences against children, and proclivity to access CSEM, controlling for social desirability measure. The measurement models of the ACE and the dangerous world implicit theory with four sub-constructs were included in the full SEM. The ACE was treated as an exogenous latent variable and the two proclivity variables were treated as endogenous variables. The four dangerous world implicit theory sub-constructs; hostile world, retribution, emotional congruence, and children as sexual beings were treated as both exogenous and endogenous latent variables. The single item social desirability variable was treated as a covariate, thus was controlled for in the overall model. The model specifications can be seen in Mplus syntax titled *Wave 1 SEM 1* (see Appendix XXI).

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[21] The estimator used in this model was WLSMV however, the two proclivity items as endogenous variables were treated as continuous for the purposes of easier interpretation of results. Treating the two endogenous variables as categorical—which yields either logit or probit coefficients depending on the estimator used (Muthén & Muthén, 1998-2017)—did not necessarily change the results thus, linear regression coefficients are presented here.

The overall model fit for the first model in the first wave indicated a poor fit, χ^2 (962) = 2147.62, $p < .001$, RMSEA = .042 (90% CI = 0.039 – 0.044), CFI = .867, TLI = .857. The Mplus output indicated that three children as sexual beings sub-construct items (i.e., dw25, dw27, dw28) were associated with ACE items 7 and 10, creating a misfit[22] in the model. Therefore, I removed these three items and re-ran the full SEM model. The model specifications can be seen in Mplus syntax titled *Wave 1 SEM 2* (see Appendix XXI). The goodness-of-fit information indicated a good fit, χ^2 (833) = 1446.20, $p < .001$, RMSEA = .032 (90% CI = 0.029 – 0.035), CFI = .917, TLI = .910. The model diagram which consists of only the significant regression paths and covariates among latent constructs and the dependent variables are presented in Figure 13.

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[22] The Mplus output indicated that there were Tetrachoric correlations of 1 between the three dangerous world implicit theory items and two ACE items, as a result of empty cells in bivariate tables. According to online Mplus resources provided by their developers, in such cases only one of the variables should be used in the analysis (Muthén, 2011).
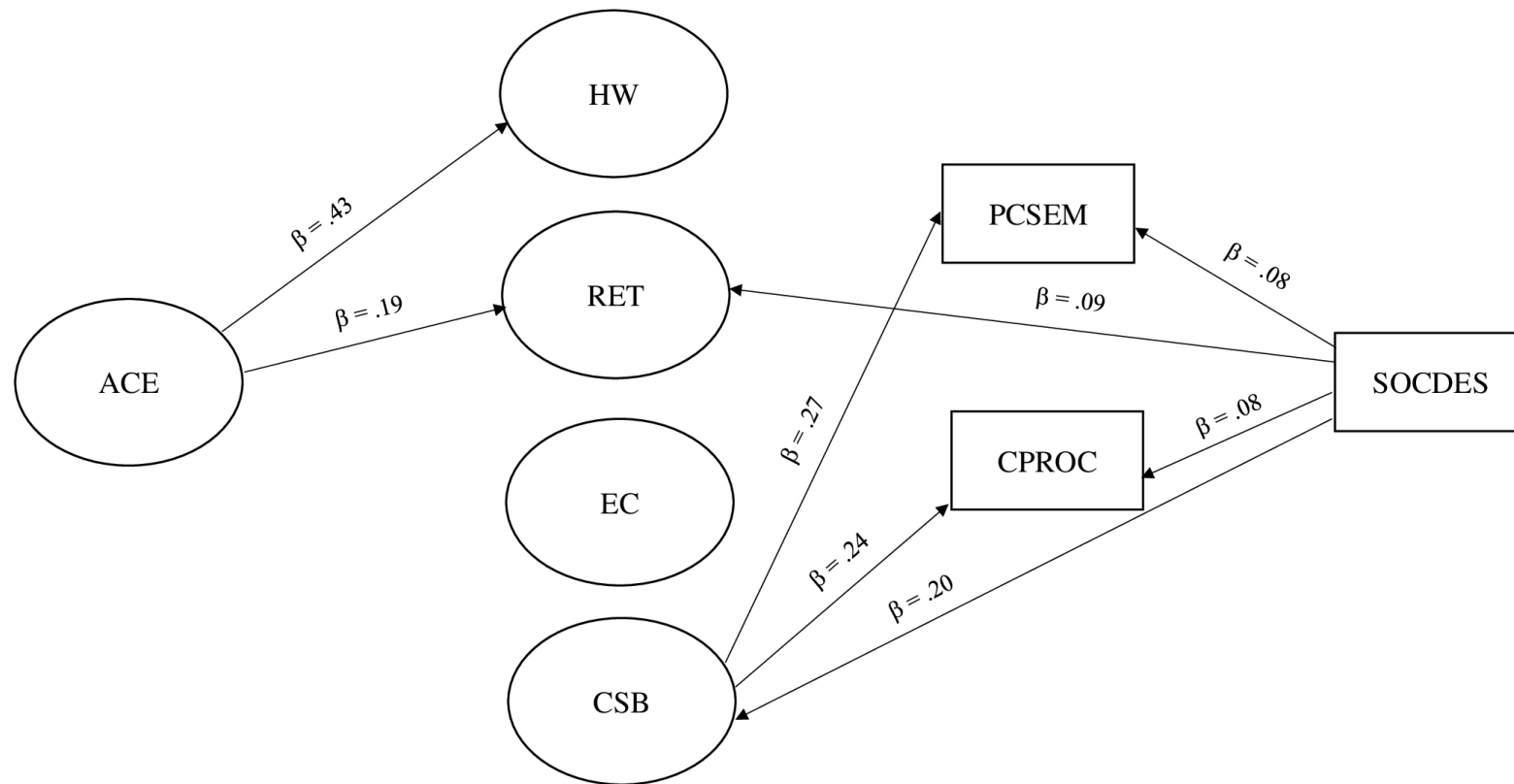
Figure 13. Wave 1 SEM 2 Model Diagram with the Significant Regression Paths Only. ACE = adverse childhood experiences, HW = hostile world, RET = retribution, EC = emotional congruence, CSB = children as sexual beings, PCSEM = proclivity to access child sexual exploitation material, CPROC = proclivity to sexually engage with children, SOCDES = self-evaluated social desirability

The results showed that ACE was a significant predictor of both hostile world (β = .43, $p < .001$) and retribution (β = .19, $p < .001$), but not emotional congruence (β = -.004, p = .933) or children as sexual beings (β = .001, p = .982) sub-constructs of the dangerous world implicit theory. Only the children as sexual beings sub-construct of the dangerous world implicit theory was a significant predictor of both proclivity measures: self-reported proclivity to access CSEM and to commit contact sexual offences against children (β = .27, $p < .001$, b = .24, $p < .001$, respectively). Self-evaluated social desirability was significantly associated with retribution sub-construct (β = .09, p = .042), and the two proclivity measures (β = .08, $p < .001$, for both variables) though the associations were small, apart from the children as sexual beings sub-construct (β = .20, $p < .001$). The results in relation to the total, direct, and indirect effects from ACE to the two proclivity measures did not show any significant effects, except from the total effect of ACE and the four dangerous world implicit theory sub-constructs on the proclivity to access CSEM (β = .08, p = .038). There was a large correlation between the two proclivity measures: proclivity to access CSEM and to commit contact sexual offences against children (r = .73, $p < .001$).

Finally, there were small correlations between emotional congruence and retribution as well as emotional congruence and children as sexual beings. There were moderate correlations between hostile world and retribution as well as retribution and children as sexual beings. The correlations among the four dangerous world implicit theory sub-constructs are presented in Table 31. There was a moderate negative correlation between error measurements of the two items; dw4 and dw5 (r = -.46, $p < .001$). The error measurements of the items dw16 and dw17 also correlated moderately and positively (r = .37, $p < .001$).

Table 31

Wave 1: Correlations Among DWIT Sub-Constructs

	HW	RET	EC	CSB
HW		.38*	.09	.06
RET			.23*	.46*
EC				.26*
CSB				

Note. N = 712. DWIT = dangerous world implicit theory, HW = hostile world, RET = retribution, EC = emotional congruence with children, CSB = children as sexual beings. * *p*<.001

Discussion

The first wave study aimed to examine the role of ACEs and dangerous world implicit theory in sexually offending behaviour against children. The low variance in the actual self-reported sexual offending behaviour against children did not allow for any meaningful analyses. However, the two proclivity measures which assessed the likelihood to commit contact sexual offences against children and to access CSEM were still included in the analyses as outcome measures. The results indicated that only children as sexual beings sub-construct of the dangerous world implicit theory significantly predicted both the proclivity to access CSEM and to commit contact sexual offences against children. In other words, the findings suggested that three sub-constructs of the dangerous world implicit theory (i.e., hostile world, retribution, emotional congruence) did not play a predictive role in the proclivity to commit contact or online sexual offences against children in this sample.

On the other hand, there were some meaningful findings in relation to the predictive role of ACEs in the development of the sub-constructs of the dangerous world implicit theory. The results showed that ACE was a significant predictor of the hostile world and

retribution, but not emotional congruence and children as sexual beings sub-constructs of the dangerous world implicit theory. This suggested that ACE represents one factor that has an impact on the development of the perception of the world as a hostile and dangerous place as well as the tendency to seek retribution against people who are perceived as threatening. This finding is in line with both Ward and Keenan's (1999) and Grady et al.'s (2016) overall hypotheses. The more adverse and traumatic experiences such as child sexual, physical, and verbal abuse, as well as dysfunctional household and others an individual experienced in the early developmental years, the more they will perceive the world as dangerous and other people as threatening. However, for the perception of children as safe, reliable, and loving as well as the perception of sexual activities with children as loving and acceptable, the ACE was not a significant factor predicting their development. On one hand, ACE did not significantly predict the development of having emotional association with children and the perception of children as safe was not significantly associated by social desirability bias. On the other hand, the perception of children as sexual beings was significantly associated with the social desirability bias. Therefore, the findings suggested that the individuals in this study were likely to underreport their endorsement of children as sexual beings. This finding in particular, was not surprising, considering the stigmatising nature of items in the children as sexual beings sub-construct.

One of the limitations of this study was the outcome measure. The self-reported past problematic sexual behaviour measure was developed specifically for this study, taking into consideration that it involved a community sample and that the query related to self-reported sexual behaviour that is stigmatising and illegal. The vagueness of the four questions in relation to sexual behaviours showed that there could be several issues with the wording. For example, despite the community sample, if an individual had paedophilic interests and associated behaviours, they may not necessarily think that their behaviour is 'problematic'. In

addition to this and more likely, when asked about 'problematic' sexual behaviour, it may

consist of any other stigmatised sexual behaviours including sexual orientations and/or

sexually addictive behaviours, which many lay people may believe or label it as

'problematic' based on socially accepted norms, but not necessarily consist of sexual

behaviour involving children.

Wave 2

Data collection for the second wave took place approximately 14 months after the

first wave and over a period of three months in total. In the second wave, participants were

only presented with the self-reported behavioural outcome measures and the self-evaluation

of social desirability measure. The self-reported behavioural outcome measures included the

self-report measure of past problematic sexual behaviour and the two proclivity to sexually

offend measures that were used in Wave 1. The past problematic sexual behaviour measure

consisted of the same questions as in Wave 1, but asked participants to report their sexual

behaviour in the past 14 months. The low variance in the self-reported past problematic

sexual behaviour which involved children was not meaningful in the first wave. Whilst this

measure was included in the second wave for the completeness of the two-wave study, I

further developed a second self-reported behavioural outcome measure in order to try and

capture any offending behaviour in the past, if there was any.

Sample

A total of 513 responses were recorded in Qualtrics. The data of 27 individuals were

excluded due to being either half completed in Qualtrics or returned in Prolific. A total of $N =$

486 responses included in the analyses. The attrition rate in the second wave was 31%, where

there were missing responses from $N = 226$ individuals. In order to address the missing data,

I used full information maximum likelihood (FIML) as the estimation method. According to

Newsom (2015), when maximum likelihood (ML) estimation is employed with missing data,

it is known as FIML as this framework includes all cases regardless of the missingness, unlike other traditional approaches (e.g., listwise or pairwise deletion). In FIML, missing values are not imputed and yet, estimates are based on all available data. FIML is shown to be less biased than other traditional approaches (e.g., Enders, 2001). In addition, I used MLR as the model estimator, which is a ML parameter estimation with robust standard errors (Muthén & Muthén, 1998-2017). MLR is an alternative option to the conventional ML estimation and is known to be robust to non-normality of data, which was the case in this study.

Measure

Self-Reported Past Problematic Sexual Behaviour 2.0. This measure aimed to assess any self-reported past problematic sexual behaviour, with a less ambiguous description of the behaviours under investigation. The measure consisted of 21 statements, in total. Eight of these statements represented behaviours that were classified as sexual offending against children, including both contact and non-contact offences (e.g., "Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone who I thought was aged 16 or older, but subsequently turned out to be younger", "Since the age of 18, I have knowingly and deliberately watched pornographic material featuring people younger than 16"). Five of the statements represented behaviours that were classified as sexual offending against adults (e.g., "Since the age of 18, I have forced or pressured or tricked someone aged 16 or older into having sex (oral, anal or penetrative) or sexual contact (touching or kissing) with me, without using physical force"). Five other statements represented behaviours in more grey areas, such as behaviours that may be risky for sexual offending in general, but not necessarily illegal (e.g., "Since the age of 18, I have fantasised about having sex with someone aged 16 or older without their agreement"). Finally, three statements represented behaviours that may be involved in healthy, adult relationships (e.g.,

"Since the age of 18, I have masturbated alone (without using pornography) to a sexual fantasy involving individuals aged 16 or older").

This new measure was included in the survey twice: one aimed to measure any self-reported past problematic behaviour since the age of 18 and one aimed to measure any self-reported past problematic behaviour in the past 14 months. All items were presented randomly for both times. Participants rated items on a 5-point Likert-type scale from 0 (*definitely untrue*) to 4 (*definitely true*; see Appendix XXII). For the purposes of the research questions in this chapter, I only included the eight items which represented sexual offending behaviour against children.

Results

Demographics

According to the demographic information of the $N = 486$ participants who completed the study in the second wave, 99.6% reported their gender as male ($N = 484$) and 0.4% as trans male/trans man ($N = 2$). The mean age of the participants was 38.01 ($SD = 13.02$) ranging from 18-72. All participants were UK residents ($N = 486$). The majority of participants identified their ethnicity as Caucasian (88.7%). The rest of the participants reported that they belonged to South Asian (3.3%), African (2.1%), East Asian (1.6%), Mixed (1.6%), Caribbean (0.6%) and other (1.6%) ethnic background. The majority of the participants reported that they were fluent in English (88.3%, $N = 429$) and 11.7% of the participants reported being fluent in both English and at least one other language ($N = 57$).

Descriptive Statistics of the Outcome Variables

A similar pattern of self-reported past problematic behaviour was present to the first wave. There were a considerable number of individuals who self-reported one or more past problematic sexual behaviour in the past 14 months. The breakdown of number of participants who responded 'yes' to the four self-reported past problematic sexual behaviour

questions are shown in Table 32. Despite the presence of individuals who self-reported any past problematic sexual behaviour, there were only six individuals who disclosed that those sexual behaviours involved children in the past 14 months. Similar to the first wave analyses, this self-reported past problematic sexual behaviour measure was excluded from analyses in the second wave due to the low variance in this dependent variable, which would not yield any meaningful results in relation to the research questions of this study. The means and standard deviations of variables based on average scores are presented in Table 33.[23]

Table 32

Wave 2: Number of Participants Who Reported Past Problematic Sexual Behaviour Involving Adults

N	Scale Item
119	Have there been occasions that you've regretted your sexual behaviour?
81	Have there been occasions that you thought your sexual behaviour might be abnormal or atypical?
17	Have there been occasions when you thought your sexual behaviour could get you into legal trouble?
47	Have there been occasions where you found your sexual behaviours were interfering with your day to day life?

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[23] Please note that these descriptive statistics are for information on the distribution of aggregated scores due to prevalent use in psychology. However, the SEM in Mplus does not rely on these aggregated scores unless specifically stated (e.g., parcelling of HAB items in Chapter Four).

Table 33

Wave 2: Means and Standard Deviations of Variables

Variable	N	Mean (SD)
SOCDES2	452	.17 (.56)
PPROC2	452	.30 (.97)
CPROC2	452	.17 (.72)

On the other hand, the new measure developed for the second wave in order to assess any past problematic behaviour using a Likert-type scale, showed similar patterns in terms of the endorsement of the statements, though there was more flexibility for the response options for individuals who did not report that the behaviours stated in the items were definitely true. Particularly, the first item (i.e., "I have accidentally seen pornographic material that I thought might feature people younger than 16"), although positively skewed, there were more individuals who endorsed the statement as 'somewhat true' or 'definitely true'. The breakdown of participants' responses to the new self-reported past problematic sexual behaviour questions for both time periods are shown in Table 34.

Self-Reported Problematic Sexual Behaviour 2.0: CFA

After careful consideration, I decided to only include the responses to the lifetime incidence measure of self-reported problematic sexual behaviour (i.e., since the age of 18) in the model with ACE and the sub-constructs of the dangerous world implicit theory, and to exclude the responses for the wave 2 respresentation of the same measure, simply because the two measures were nested and it was not plausible to calculate the difference in responses for the two time periods. Prior to modelling this new outcome measure (only the lifetime incidence measure), I examined whether the items in this new measure were indicators of a common underlying construct of problematic sexual behaviour against individuals under the

age of 16. In order to establish the uni-dimensional structure of the new measure developed

for assessing self-reported problematic sexual behaviour, I ran a one-factor CFA in Mplus,

using WLSMV estimator, treating the indicators categorical (Mplus syntax titled *CFA 2.0* see

Appendix XXI). The goodness-of-fit information indicated a good fit, χ^2 (20) = 37.744, *p* =

.010, RMSEA = .043 (90% CI = 0.021 – 0.063), CFI = .991, TLI = .987. All eight items

representing sexually offending behaviour against individuals under the age of 16, since the

participants' age of 18, loaded on one factor substantially and significantly, above the cut-off

point of .32 (Tabachnick & Fidell, 2007). Standardised factor loadings can be found in Table

35.

Table 34

Lifetime Incidence Measure: Breakdown of response patterns for the self-reported past problematic sexual behaviour involving children 2.0

Scale Item	Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true	Mean	*SD*
1. Since the age of 18, I have accidentally seen pornographic material that I thought might feature people younger than 16.	369	46	21	39	11	3.21	4.05
2. Since the age of 18, I have knowingly and deliberately watched pornographic material featuring people younger than 16.	466	8	5	4	3	2.92	4.17
3. Since the age of 18, I have forced or pressured or tricked someone younger than 16 into sharing nude or sexual images or videos of themselves with me.	476	5	3	2	0	2.88	4.18
4. Since the age of 18, I have shared nude or sexual images or videos of myself with another person who was younger than 16.	473	7	2	3	1	2.89	4.18
5. Since the age of 18, I have exposed my genitalia to someone that I know or suspect was younger than 16, who was physically present or nearby but without making physical contact with them.	475	4	2	0	5	2.90	4.18

6. Since the age of 18, I have masturbated in the presence of someone I knew to be younger than 16.	477	4	2	1	2	2.88	4.18
7. Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone who I thought was aged 16 or older, but subsequently turned out to be younger.	461	9	9	5	2	2.93	4.16
8. Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone I knew to be younger than 16.	475	1	2	4	4	2.90	4.18

Note. N = 486.

Table 35

CFA 2.0: Standardised Factor Loadings of 8 Sexual Offending Against Children Items

Scale items	
1. Since the age of 18, I have accidentally seen pornographic material that I thought might feature people younger than 16.	.473
2. Since the age of 18, I have knowingly and deliberately watched pornographic material featuring people younger than 16.	.752
3. Since the age of 18, I have forced or pressured or tricked someone younger than 16 into sharing nude or sexual images or videos of themselves with me.	.871
4. Since the age of 18, I have shared nude or sexual images or videos of myself with another person who was younger than 16.	.804
5. Since the age of 18, I have exposed my genitalia to someone that I know or suspect was younger than 16, who was physically present or nearby but without making physical contact with them.	.925
6. Since the age of 18, I have masturbated in the presence of someone I knew to be younger than 16.	.960
7. Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone who I thought was aged 16 or older, but subsequently turned out to be younger.	.848
8. Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone I knew to be younger than 16.	.872

Note. N = 486.

Self-Reported Problematic Sexual Behaviour 2.0: SEM for Lifetime Incidence

I examined the role of ACE and dangerous world implicit theory sub-constructs in self-reported past problematic sexual behaviour involving children using SEM. The measurement models of the ACE, the dangerous world implicit theory with four sub-constructs, and the measure of self-reported lifetime incidence of problematic sexual behaviour involving children were included in the SEM. The ACE was treated as an exogenous latent variable and the new self-reported past problematic sexual behaviour was treated as endogenous variables. The four dangerous world implicit theory sub-constructs; hostile world, retribution, emotional congruence, and children as sexual beings were treated as both exogenous and endogenous latent variables. The social desirability variable measured in the second wave was treated as a covariate, and therefore, was controlled for in the overall model. The SEM was estimated using MLR in order to utilise the FIML feature in Mplus (Muthén & Muthén, 1998-2017). The model specifications can be seen in Mplus syntax titled *SEM 2.0*[24] (see Appendix XXI).

Due to the features in Mplus, there are no model fit indices available when MLR is used in SEM. The model diagram consists of only the significant regression paths and covariates among latent constructs and the dependent variables are presented in Figure 14. Modelling with a new outcome variable did not change the results for the relationships between ACE and the dangerous world implicit theory sub-constructs from the first wave: ACE was a significant predictor of both hostile world ($\beta = .43$, $p < .001$) and retribution ($\beta = .18$, $p = .004$), but not emotional congruence ($\beta = .013$, $p = .838$) or children as sexual beings ($\beta = .023$, $p = .713$) sub-constructs of the dangerous world implicit theory.

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[24] Please note that the three dangerous world implicit theory items (dw25, dw26, dw27), which were excluded from the Wave 1 SEM 2 due to model misfit were included in the rest of the models, without any issues.
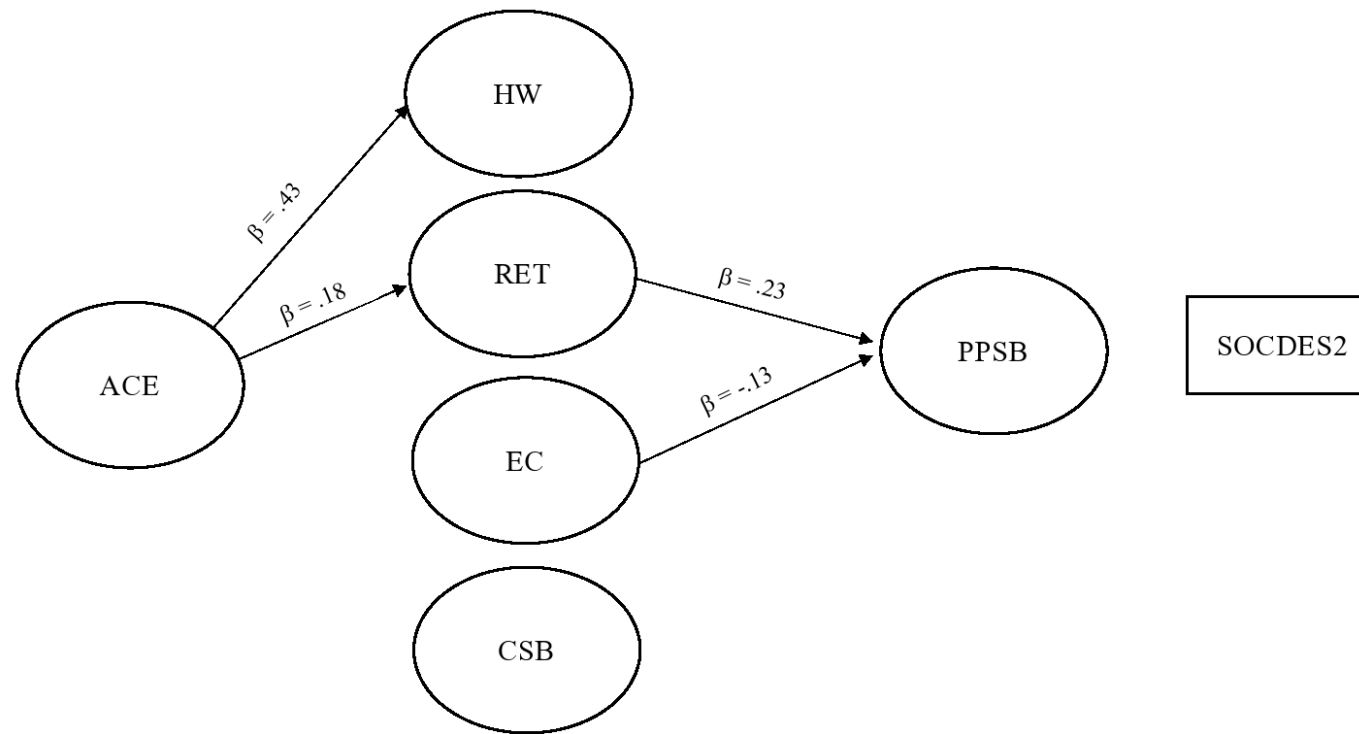
Figure 14. SEM: Lifetime Incidence Model Showing the Significant Regression Paths Only. ACE = adverse childhood experiences, HW = hostile world, RET = retribution, EC = emotional congruence, CSB = children as sexual beings, PPSB = past problematic sexual behaviour, SOCDES2 = self-evaluated social desirability in wave 2

The results for the relationship between the lifetime incidence measure of the new self-reported problematic sexual behaviour involving children and the psychological constructs measured in the first wave showed that only retribution ($\beta = .23$, $p = .025$) and emotional congruence ($\beta = -.13$, $p = .049$) were significant predictors of self-reported problematic sexual behaviour involving children controlling for the self-evaluated social desirability in the second wave. The results indicated that hostile world ($\beta = -.05$, $p = .334$), children as sexual beings ($\beta = .06$, $p = .501$), or ACE ($\beta = .05$, $p = .275$) were *not* significant predictors of the self-reported past problematic sexual behaviour. The self-evaluated social desirability measured in the second wave was *not* significantly associated with the self-reported lifetime problematic sexual behaviour involving children. The results for the total, direct, and indirect effects from ACE to the lifetime incidence measure of the self-reported past problematic sexual behaviour did not show any significant effects. However, the specific indirect effect from ACE to the past problematic sexual behaviour through retribution sub-construct of the dangerous world implicit theory only was approaching significance ($\beta = .04$, $p = .080$).

Finally, the addition of the self-reported past problematic sexual behaviour measure as the new outcome variable did not change the correlational findings among dangerous world implicit theory sub-constructs from the first wave. There were small correlations between hostile world and retribution as well as retribution and emotional congruence sub-constructs of the dangerous world implicit theory. There was also a moderate correlation between retribution and children as sexual beings sub-constructs. The correlations among the four dangerous world implicit theory sub-constructs are presented in Table 36.

Table 36

SEM 2.0: Correlations Among DWIT Sub-Constructs

	HW	RET	EC	CSB
HW		.32*	.14	.10
RET			.22*	.48*
EC				.11
CSB				

Note. $N = 712$. DWIT = dangerous world implicit theory, HW = hostile world, RET = retribution, EC = emotional congruence with children, CSB = children as sexual beings. * $p<.001$

Proclivity Measures: Two-wave (Longitudinal) SEM

It cannot be dismissed that the initial aim of this two-wave study was to focus on actual sexually offending behaviour (against children) as an outcome measure. Therefore, the proclivity measures were included in order to examine the association between the self-reported actual offending behaviour and the proclivity to offend, rather than simply focusing on the proclivity outcome in two-waves. As seen in the previous sections of this chapter, the self-reported actual sexual offending behaviour measures either did not capture adequate variance among participants' responses, or that participants behaved prosocially. The new outcome measure representing sexually offending behaviour was also developed after the first wave. Therefore, the responses were not true representations of data collected at two different time points. However, the data collected at both waves was available for the two proclivity measures and could be modelled as two-waves. Although any change in the level of endorsement of proclivity to commit sexual offences against children was not the main focus of this study, I still examined the role of ACE and dangerous world implicit theory sub-constructs in proclivity to sexually offend against children (either contact offences or

accessing CSEM) using longitudinal SEM, because of the available data. The measurement models of the ACE and the dangerous world implicit theory with four sub-constructs were included in the longitudinal SEM. The two proclivity variables measured at two waves were treated as single observed variables, rather than a latent variable with a measurement model. The ACE was treated as an exogenous latent variable and the two proclivity variables in the second wave were treated as endogenous variables. The four dangerous world implicit theory sub-constructs; hostile world, retribution, emotional congruence, and children as sexual beings were treated as both exogenous and endogenous latent variables. The social desirability variables from both waves were also controlled for in the overall model. The effects of the psychological variables were cross-lagged, which means that the effects of ACE and the dangerous world implicit theory sub-constructs on the proclivities in the second wave were estimated, while controlling for the initial values of the proclivity measures in the first wave (Newsom, 2015). The longitudinal SEM was estimated using MLR in order to utilise the FIML feature in Mplus (Muthén & Muthén, 1998-2017). The model specifications can be seen in Mplus syntax titled *Two-wave proclivity SEM* (see Appendix XXI).

Due to the features in Mplus, there are no model fit indices available when MLR is used in SEM. The model diagram consisted of only the significant regression paths and covariates among latent constructs and the dependent variables are presented in Figure 15. Modelling with new outcome variables did not change the results for the relationships between ACE and the dangerous world implicit theory sub-constructs from the previous models: ACE was a significant predictor of both hostile world ($\beta = .43$, $p < .001$) and retribution ($\beta = .18$, $p = .004$), but not emotional congruence ($\beta = -.006$, $p = .915$) or children as sexual beings ($\beta = .04$, $p = .379$) sub-constructs of the dangerous world implicit theory.
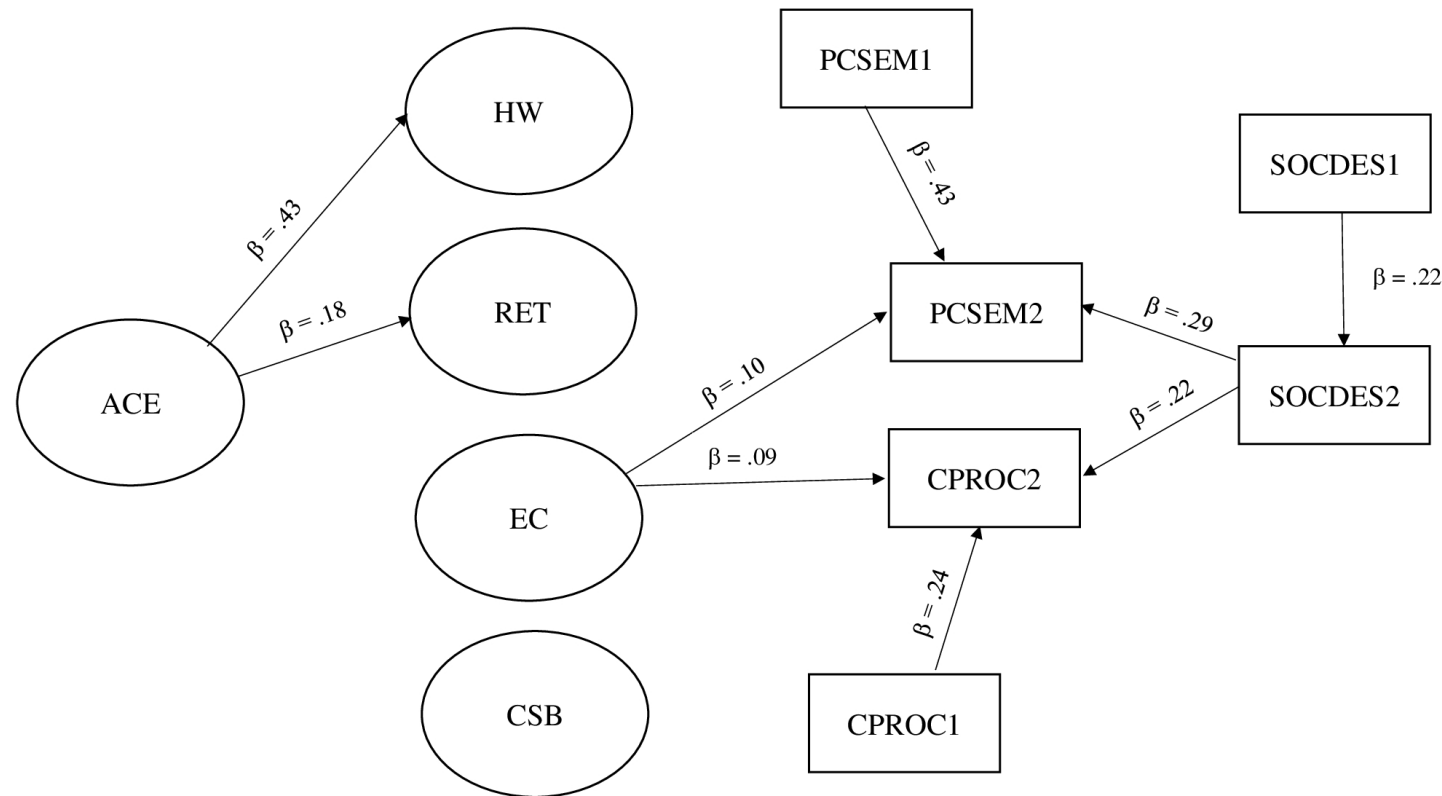
Figure 15. SEM: Two-Wave Proclivity Model Diagram Showing the Significant Regression Paths and Covariances Only. ACE = adverse childhood experiences, HW = hostile world, RET = retribution, EC = emotional congruence, CSB = children as sexual beings, PCSEM1 = proclivity to access child sexual exploitation material in wave 1, CPROC1 = proclivity to sexually engage with children in wave 1, PCSEM2 = proclivity to access child sexual exploitation material in wave 2, CPROC2 = proclivity to sexually engage with children in wave 2, SOCDES1 = self-evaluated social desirability in wave 1, SOCDES2 = self-evaluated social desirability in wave 2.

The results for the relationship between the self-reported proclivities in the second wave and the psychological constructs measured in the first wave showed that only emotional congruence (β = .10, p = .006) sub-construct of the dangerous world implicit theory was a significant predictor of the proclivity to access CSEM self-reported in the second wave, controlling for the proclivity to access CSEM self-reported in the first wave as well as the self-evaluated social desirability in the second wave. The results indicated that hostile world (β = .001, p = .978), retribution (β = .01, p = .860), children as sexual beings (β = .15, p = .120), or ACE (β = .01, p = .705) were *not* significant predictors of the proclivity to access CSEM self-reported in the second wave. Further, similar to the proclivity to access CSEM, only the emotional congruence sub-construct (β = .09, p = .017) was a significant predictor of the proclivity to commit contact sexual offences against children self-reported in the second wave, controlling for the proclivity to commit contact sexual offences against children self-reported in the first wave as well as the self-evaluated social desirability in the second wave. Similar to the relationship between dangerous world implicit theory sub-constructs and the proclivity to access CSEM, the hostile world (β = .04, p = .335), retribution (β = .04, p = .643), children as sexual beings (β = .14, p = .159) or the ACE (β = -.03, p = .400) were *not* significant predictors of the proclivity to commit contact sexual offences against children self-reported in the second wave. The results for the total, direct, and indirect effects from ACE to the two proclivity measures did not show any significant effects.

Self-evaluated social desirability measured in the second wave was significantly associated with both of the proclivity measures in the second wave: (proclivity to commit contact sexual offences against children, β = .22, p = .001, proclivity to access CSEM, β = .29, p < .001). There was a large correlation between the two proclivity measures measured in the second wave: proclivity to access CSEM and to commit contact sexual offences against children (r = .65, p < .001). There also was a small correlation between the two social

desirability measures self-evaluated in two waves ($\beta = .22$, $p = .012$). Finally, the addition of

the two proclivity measures from both waves as the new outcome variables did not change

the correlational findings among dangerous world implicit theory sub-constructs from the

first wave. The correlations among the four dangerous world implicit theory sub-constructs

are presented in Table 37.

Table 37

Two-Wave Proclivity SEM: Correlations Among DWIT Sub-Constructs

	HW	RET	EC	CSB
HW		.30*	.10	.02
RET			.19*	.44*
EC				.18*
CSB				

Note. $N = 712$. DWIT = dangerous world implicit theory, HW = hostile world, RET = retribution, EC = emotional congruence with children, CSB = children as sexual beings. * $p<.001$

Discussion

The second wave of this two-wave study aimed to examine the role of ACE and the

dangerous world implicit theory in self-reported lifetime incidence of any sexual behaviour

involving children as well as change in self-reported endorsement of proclivity to sexually

offend against children, over a period of 14 to 17 months. The results for the lifetime

incidence of any sexual behaviour involving children showed that retribution and emotional

congruence, but not hostile world and children as sexual beings sub-construct of the

dangerous world implicit theory significantly predicted the self-reported past problematic

sexual behaviour involving children since the age of 18. The important finding is that

individuals who had higher endorsement of seeking retribution against other people's threatening behaviour, also reported higher agreement for the past problematic sexual behaviour involving children. However, there was a negative relationship between emotional congruence and lifetime incidence of problematic sexual behaviour involving children. In other words, individuals who reported higher endorsement of emotional congruence with children were *less* likely to report any engagement in past problematic sexual behaviour involving children since the age 18.

The results for the two proclivity measures: proclivity to access CSEM and the proclivity to commit sexual offences against children showed that only emotional congruence sub-construct of the dangerous world implicit theory was a significant predictor of change in endorsement of both proclivity to commit contact offences and to access CSEM, after controlling for the responses in the first wave as well as the self-evaluated social desirability. In other words, individuals who had higher emotional congruence with children were more likely to have the propensity to watch sexually explicit material involving children and to engage in sexual activities involving children, even after significant effect of the self-evaluated social desirability (see Mills, Loza, & Kroner, 2003).

Children as sexual beings sub-construct of the dangerous world implicit theory was *not* a significant predictor of the two proclivity measures, nor of the new measure of self-reported past problematic sexual behaviour. One plausible explanation for this finding is that the relationship between children as sexual beings and the proclivity measure in the first wave was taken into account when modelling the two-wave proclivity outcomes. Therefore, it may be the reason for the lack of significant relationship between children as sexual beings and any change in the endorsement of proclivity to commit contact offences or to access CSEM over time.

Another finding which was counter-hypothetical was the lack of relationship between ACE and any of the outcome measures, or any indirect relationship between them through the dangerous world implicit theory sub-constructs. This finding indicated that there were no mediating effect of the dangerous world implicit theory sub-constructs between the ACE and the three outcome measures: proclivity to access CSEM, proclivity to commit contact offences, and past problematic sexual behaviour involving children. Only retribution sub-construct of the dangerous world implicit theory was approaching significance in the indirect effect of ACE on lifetime incidence of problematic sexual behaviour involving children.

Chapter Discussion

This two-wave quantitative study aimed to examine the relationship between the ACE, dangerous world implicit theory, and proclivity to sexually offend against children as well as lifetime problematic sexual behaviour involving children. ACEs have been a central factor that has been reviewed in relation to its prevalence among individuals who behaved in sexually violent or inappropriate ways as well as the long-term effects of experiencing childhood adversities. For example, it has been repeatedly shown that offending populations had higher levels of ACEs compared to community samples (e.g., Baglivio et al., 2014; Reavis et al., 2013) and that the risk of criminal behaviour increased by the level of ACEs (Widom & Maxfield, 2001). In addition, it was found that individuals who sexually offended against children self-reported more physical, emotional, and sexual abuse as well as neglect in their childhood (Abbiati et al., 2014) than community males (Levenson et al., 2015). Individuals who were convicted of sex offences were also found to have experienced higher rates of childhood sexual victimisation than other violent and non-violent offender samples (Weeks & Widom, 1998). Jennings et al. (2014) found that childhood emotional abuse and neglect were significant risk factors for both sexual victimisation and sexual offending behaviour. Jennings and colleagues' (2014) findings also showed support for the victim-

offender hypothesis that multiple forms of ACEs were significant predictors of sexual

offending. Overall, the existing body of research has consistently indicated an association

between ACEs and future victimisation, criminal behaviour, including sexual offending

(Abbiati et al., 2014; Jennings et al., 2014; Levenson et al., 2015; Papalia, Luebbers, Ogloff,

Cutajar, & Mullen, 2017; Weeks & Widom, 1998).

Recently, the role of ACEs in sexual offending has received both theoretical (Grady et

al., 2016) and empirical (Grady et al., 2018) attention. According to Grady et al. (2016)'s

theoretical framework, ACEs are associated with the development of insecure attachment

styles, which in turn leads to the development of criminogenic needs that contribute to sexual

offending behaviour. These criminogenic needs also include offence-supportive or distorted

cognitions (Grady et al., 2016; Thornton, 2002). Grady et al. (2018) empirically examined the

theoretical framework by Grady et al. (2016), where they investigated the relationship

between ACEs, insecure attachment styles, and sexual offending among young males. Their

findings suggested that physical abuse and insecure attachment styles were associated where

insecure attachment styles had a mediating effect between victimisation of childhood abuse

and deficits in executive functioning. In addition, their findings indicated that childhood

sexual abuse was directly associated with sexual offending, without any mediating effect of

regulatory deficits (Grady et al., 2018).

Grady et al. (2016) provided a useful theoretical framework in relation to the

aetiology of sexual offending, incorporating multiple factors that may have causal

relationships with sexual offending behaviour. Grady et al.'s (2018) study is also an example

of empirically examining this framework. However, this aetiological framework was not

empirically tested among adult males. In addition, the role of dangerous world implicit theory

as one form of cognitive distortions typically held by individuals who sexually abuse children

(Ward & Keenan, 1999) was not incorporated in the examination of the causal relationship

between ACEs and sexual offending against children. Previous longitudinal research usually

focused on longitudinal observations of reconviction rates of individuals who were

previously convicted of sexual offences (Nisbet, Wilson, & Smallbone, 2004), against

children (e.g., Hagan & Gust-Brey, 2000) in adolescence, or the proportion of sample

offending among individuals who experienced childhood sexual abuse (Papalia et al., 2017).

Other research using longitudinal designs explored whether implicit and explicit evaluations

of sexual aggression predict subsequent sexually aggressive behaviour against women in a

community sample, using cross-lagged panel analyses (Hermann & Nunes, 2016). However,

there is no published research which specifically looked at adult males' sexual offending

behaviour against children simultaneously with their ACEs and cognitive distortions, using a

longitudinal design. In addition, this study was the first attempt to my knowledge to test for

an underlying mechanism of the development of cognitive distorts, particularly the dangerous

world implicit theory, and its role in past offending behaviour or proclivity to sexually offend

against children.

　　　　The findings from this two-wave study can be interpreted in relation to the three

hypotheses: (1) the predictive role of ACE in the development of cognitive distortions as

criminogenic needs, (2) the predictive role of dangerous world implicit theory as a

criminogenic need in self-reported sexual offending against children or the proclivity to

engage in such behaviour, and (3) the role of dangerous world implicit theory as an

explanatory factor for a relationship between ACEs and sexual offending behaviour against

children. The first hypothesis was supported for the two dangerous world implicit theory sub-

constructs: ACE was a significant predictor of hostile world and retribution sub-constructs.

There was no evidence to suggest that ACE was a predictor of the emotional congruence and

children as sexual beings sub-constructs of the dangerous world implicit theory, which

suggests that there are other factors that have a role in the development of perception of

children as emotionally equivalent and safe as well as the perception of children as sexual beings.

Second, the children as sexual beings sub-construct of the dangerous world implicit theory was significantly associated with the proclivity to engage in sexual activities with children and to access CSEM, measured cross-sectionally. However, it was not significantly associated with the two proclivity measures when modelled for two-wave estimation, controlling for the cross-sectional relationship. Instead, only emotional congruence sub-construct was significantly associated with the self-reported proclivity to access CSEM and the proclivity to engage in sexual activities involving children in the second wave, controlling for the first wave. One plausible explanation for this finding is that the relationships between children as sexual beings and the proclivity measures in the first wave were taken into account when modelling the two-wave proclivity outcomes. Therefore, it may be the reason for the lack of significant relationship between children as sexual beings and any change in the level of endorsement of proclivity to commit contact offences or to access CSEM over time. It is also possible that the children as sexual beings sub-construct of the dangerous world implicit theory is a more stable construct than emotional congruence and therefore, any relationship between children and sexual beings and the level of proclivity in the first wave was taken into account within the relationship between the construct and level of endorsement in proclivity in the second wave.

In addition to these, both retribution and emotional congruence, but *not* hostile world and children as sexual beings sub-constructs were significantly associated with a lifetime incidence measure of sexually offending behaviour against children. However, there was a negative relationship between emotional congruence and lifetime incidence of problematic sexual behaviour involving children, indicating that individuals who reported higher endorsement of emotional congruence with children were *less* likely to report any

engagement in past problematic sexual behaviour involving children since the age 18. This finding may suggest that the new outcome variable measuring lifetime incidence of any offending behaviour is likely to capture antisocial traits (*antisocial orientation*, see Hanson & Morton-Bourgon, 2005) that may be related to past offending behaviours rather than paedohebephilia, which may be more likely to be captured by proclivity measures.

Finally, the findings suggested no evidence for the mediating role of dangerous world implicit theory for an association between ACE and sexual offending behaviour. There are three important implications of the findings in this chapter. First, the significant association between ACEs and the two sub-constructs of the dangerous world implicit theory; hostile world and retribution indicated that experiences of adversities in childhood may explain the development of perceiving the world as a dangerous and threatening place as well as the endorsement of reacting with retribution in return to others' perceived hostile intentions and behaviours. This finding is supportive of Ward and Keenan's (1999) hypothesis that the implicit theories held by individuals who sexually abuse children are developed as a result of early developmental experiences.

This finding is also supportive of one aspect of Grady et al.'s (2016) theoretical framework, which hypothesised that ACE is associated with insecure attachment styles, which in turn leads to the development of criminogenic needs such as, cognitive distortions (Thornton, 2002). This study provides evidence for the predictive role of ACE in the development of dangerous world implicit theory, as one manifestation of cognitive distortions and it supports the multi-dimensional structure of the dangerous world implicit theory itself. In other words, the evidence is consistent with the possibility that ACE may be one factor that explained the development of the dangerous world implicit theory, and for two sub-constructs of the dangerous world implicit theory, in particular. The two sub-constructs of the dangerous world implicit theory which were more about the perception of the world

and other people as threatening, dangerous, and that one would be in need of seeking retribution against these individuals who are perceived to be malevolent were found to be associated with the childhood adversities, but not the dangerous world implicit theory sub-constructs which were conceptually more about affectionate and sexual relationships with children. This suggested that there would be factors other than the ACE that would be associated with the development of the emotional congruence and children as sexual beings sub-constructs of the dangerous world implicit theory. In other words, these findings indicated that ACE was not the answer for what leads to the development of feeling emotionally and cognitively associated with children and perceiving them as appropriate and normal to engage in sexual interactions with adults. Therefore, there need to be other factors—or a combination of ACE and other factors—that are involved in the development of feeling emotional connection with children and perceiving that children can participate in sexual activities with adults, such as paedohebephilia (Seto, 2018).

Whilst there was evidence suggesting associations between the ACEs and the sub-constructs of the dangerous world implicit theory, the interpretation of the ACE playing a predictive role in the development of the dangerous world implicit theory is based on the assumption that ACEs are events that had happened prior to the self-reported beliefs and attitudes that represent the dangerous world implirit theory. However, due to limited experimental data, the association between the ACE could equally be in the opposite causal direction, where participants self-rerported more ACEs, as a result of meaning making of their perception of the world as a dangerous place. Therefore, the validity of these findings can only be conditional on future research with more conclusive evidence, demonstrating a causal relationship from ACE to the development of dangerous world implicit theory.

Second, the dangerous world implicit theory was not a mediator of an association between ACE and sexual offending behaviour against children. Due to limited resources, this

study did not include an examination of the role of attachment styles as suggested in Grady et al.'s (2016) framework. This could be one explanation of the lack of mediating effect of dangerous world implicit theory between ACE and past or proclivity for sexual offending behaviour. This is also supportive of Ward and Keenan's (1999) hypothesis in which, individuals who do not sexually abuse children but still endorse dangerous world implicit theory would require other factors, such as insecure attachment styles (Grady et al., 2016), in order to commit sexual offences against children.

Third, this two-wave study involved two different approaches to develop a tool that measures self-reported sexual offending behaviour against children. The first measure used was not flexible enough to accommodate individuals' responses, nor encompassed the wide range of behaviours that can be classified as a sexual offence against a child. However, the second measure of self-reported past problematic sexual behaviour was an improvement on these issues. The challenges associated with the positively skewed distribution of response patterns to any measure that assesses socially stigmatising and illegal behaviours were present in this study. In addition, the items in this new scale were not about the numeric frequency of the offending behaviour. As a result, it was not possible to calculate the difference between reported behaviours for two time periods (since the age of 18 versus in the past 14 months). This is a limitation of the second measure developed after the first wave, which was not able to accurately capture any change in behaviour in the last 14 months since the first wave. Nevertheless, this provides room for future research to establish validity and reliability as well as to improve a scale that can be potentially used in research that aims to assess sexually offending behaviour against children.

Using a lagged regression model (Newsom, 2015), I examined a causal precedence of ACE and dangerous world implicit theory as causal factors of proclivity to sexual offend against children. Although the cross-lagged design is effective in predicting change in a

variable controlling for the initial responses, it is always considered as imperfect when there

is no experimental data (Newsom, 2015). In other words, in cross-lagged designs, even

though the initial responses to measures can be taken into account whilst modelling

predictive factors for responses at a later time, there still is no manipulation of variables, like

in an experimental design. In addition to this, I measured the proposed distally causal (i.e.,

ACE) and mediating variables (i.e., dangerous world implicit theory) simultaneously,

because of the only possibility to assess adults' childhood adversities retrospectively.

The sample in this study was community based. Whilst it is already well-known that

ACEs are prevalent in communities in the UK (e.g., Bellis et al., 2014c) and that it is

believed that individuals who do not commit sexual offences against children can hold

dangerous world implicit theory (Ward & Keenan, 1999), it was particularly challenging to

estimate the underlying mechanism of sexual offending behaviour against children using a

community sample. Therefore, it is warranted to replicate a similar approach using forensic

populations. Although some research findings showed that self-reported past sexual

offending behaviour and proclivity measures are effective even after controlling for social

desirability (Mills et al., 2003) the validity of these measures has been criticised in the

literature (Lalumière, Harris, Quinsey, & Rice, 2005). In order to address this limitation,

future research should try to incorporate a forensic population or other variables which can be

indicators of sexual offending behaviour against children, for example information from

official history of criminal convictions (Hermann, Nunes, & Maimone, 2016).

Finally, the two-wave study partially followed the aetiological framework proposed

by Grady and her colleagues (2016). According to their model, the ACEs are associated with

insecure attachment styles, which in turn leads to the development of criminogenic needs that

contribute to the sexually offending behaviour. As explained above, this study did not include

any assessment of insecure attachment styles and future research should consider inclusion of

this factor when examining the role of ACEs and dangerous world implicit theory—or any other cognitive distortion—in sexual offending behaviour against children.

Chapter Summary

In this chapter, I examined the role of ACEs in the development of holding dangerous world implicit theory as well as the role of both of these factors in sexual offending behaviour against children, following Grady et al.'s (2016) aetiological framework. The findings indicated that ACE played a significant role in the development of hostile world and retribution, but not emotional congruence and children as sexual beings sub-constructs of the dangerous world implicit theory. Further, findings suggested that retribution sub-construct had a significant role in lifetime incidence of sexually problematic behaviours involving children. Findings also suggested that emotional congruence and children as sexual beings sub-constructs were associated with the proclivity to access CSEM and the proclivity to engage in sexual activities involving children. In addition, ACE was not significantly associated with the self-reported past problematic sexual behaviour, proclivity to commit sexual offences against children, or the proclivity to access CSEM. There were no mediating effects of the dangerous world implicit theory on the relationship between ACE and both the two proclivity measures and the self-reported problematic sexual behaviour, suggesting a potential role of other factors that were not investigated in this study, such as insecure attachment styles (Grady et al., 2016; Ward & Keenan, 1999). Finally, this study also offered a potential new measure to assess self-reported past problematic sexual behaviour, which can be tested for reliability and validity in the future research.

CHAPTER SIX

"No, children weren't threatening"

Examining Adverse Childhood Experiences and the Concept of Dangerous World

Implicit Theory in Sexual Offending Against Children: A Case Study

Chapter Overview

In the previous empirical chapters, I examined the conceptualisation of the dangerous world implicit theory using quantitative research methods. In Chapter Two, I explored the associations between the dangerous world implicit theory and the psychological constructs— hostile attribution bias (Dodge, 1980), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (McPhail et al., 2014), and the children as sexual beings implicit theory (Ward & Keenan, 1999)—using dangerous world vignettes developed for the first two studies (Appendix I). In Chapter Three, I explored the factorial structure of the dangerous world implicit theory using an item-based tool I developed, and in Chapter Four, I examined the associations between the dangerous world implicit theory and the same psychological constructs using the same item-based questionnaire developed (Appendix XV). In the previous chapter; Chapter Five, I quantitatively examined the role of adverse childhood experiences as an underlying factor for the development of the offence-supportive beliefs; dangerous world implicit theory, in particular.

In all previous empirical chapters, I argued and found supportive evidence of the concept of dangerous world implicit theory with four dimensions, using community samples. In this chapter, I examine the conceptualisation of the dangerous world implicit theory by comparing the two-version concept as described by Ward and Keenan (1999) and the conceptualisation of the dangerous world implicit theory with four sub-constructs as I argued, using an in-depth qualitative examination of the lived experience of an individual with a history of sexual offences involving children.

Introduction

The implicit theories as hypothesised by Ward and Keenan (1999) can be seen as offence-supportive beliefs that contribute to the onset and maintaining of sexually abusive behaviour against children (Ward, 2000). The five key implicit theories held by individuals who sexually abuse children have been hypothesised as entitlement, uncontrollability, nature of harm, children as sexual beings, and dangerous world implicit theories (Ward & Keenan, 1999). According to Ward (2000) as well as Ward and Keenan (1999), these implicit theories generate thought patterns—usually referred to as cognitive distortions in the sexual offending literature (Abel et al., 1984; Ó Ciardha & Ward, 2013)—and are hypothesised to facilitate and maintain sexually abusive behaviour against children.

To date, there have been a number of studies that qualitatively examined the implicit theories held by individuals who sexually abuse children (e.g., Marziano et al., 2006; Keown et al., 2010; Paquette et al., 2014). The qualitative research into the implicit theories of individuals who sexually abused children has usually consisted of thematic analysis of semi-structured interviews, identifying the five key implicit theories as themes. For example, Marziano et al. (2006) examined semi-structured interviews with 22 individuals convicted of sexual offences against children in order to assess whether the cognitive distortions expressed by them could be conceptually categorised in line with the five key implicit theories as hypothesised by Ward and Keenan (1999). Similarly, Keown et al. (2010) examined semi-structured interviews with 67 participants, of whom 34 of them were individuals who were convicted of sexual offences against children and 33 of them were non-sexual offender controls. In both of these studies, the results suggested the existence of the five implicit theories as hypothesised by Ward and Keenan (1999). Using similar qualitative approaches, Paquette et al. (2014) also examined semi-structured interviews with 20 individuals convicted of sexual offences against children in order to assess whether the cognitive distortions

expressed by them could be conceptually categorised in line with the five key implicit theories as suggested by Ward and Keenan (1999).

Overall, previous qualitative research into the implicit theories demonstrated that it was possible to meaningfully categorise the cognitive distortions of individuals who were convicted of sexual offences against children in line with Ward and Keenan's (1999) five key implicit theories (e.g., Keown et al., 2010; Marziano et al., 2006). However, these studies (Keown et al., 2010; Marziano et al., 2006) did not specifically identify which of the two versions of the dangerous world implicit theory—as conceptualised by Ward and Keenan (1999)—the cognitive distortions expressed by the participants represented. In other words, there has been no distinction made whether the endorsement of the dangerous world implicit theory by the participants differentiated between the two versions as hypothesised by Ward and Keenan (1999).

Unlike other qualitative studies into the implicit theories of individuals who sexually offend against children (Keown et al., 2010; Marziano et al., 2006), Paquette et al. (2014) identified that the cognitions expressed by participants were consistent with the first version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). In addition to this, Paquette et al. (2014) identified a sixth implicit theory, which the authors labelled as 'child as partner'. Paquette et al. (2014) referred to this implicit theory as containing a "child-centric emotional component" (p. 192). According to Paquette et al. (2014), the child as partner implicit theory represented perception of children as emotionally equal to the participants. The cognitions that were categorised as the child as partner implicit theory included seeing relationships with children as relatable, non-sexual, and affectionate (Paquette et al., 2014).

Whilst Paquette et al. (2014) acknowledged that the identified child as partner implicit theory resembled the concept of emotional congruence with children (Finkelhor,

1984; Wilson, 1999), the authors did not explore whether the child as partner implicit theory might also correspond to the second version of the dangerous world implicit theory in a Wardian framework (Ward & Keenan, 1999). This was not particularly surprising since, until recently (Ildeniz & Ó Ciardha, 2019), there has not been an in-depth examination of the multiple sub-constructs which could potentially be embedded within the concept of the dangerous world implicit theory (Ward & Keenan, 1999). Findings from the previous quantitative studies in this thesis suggested that the dangerous world implicit theory is a multi-dimensional construct and that emotional congruence with children (Finkelhor, 1984; McPhail et al., 2014; Wilson, 1999) may form one element of the concept of dangerous world implicit theory. Based on the quantitative measurement tools used in this thesis, the findings suggested an overlap between the dangerous world implicit theory and the 'positive affect from children' sub-construct of the emotional congruence with children concept, in particular (Beckett et al., 1996; Waldron et al., 2006). The positive affect from children sub-construct involved beliefs around children which consisted of feeling affection from the presence of, or thinking about children and thinking that children have a special interest in the individual (Waldron et al., 2006).

The lack of attention to the variations in the conceptualisation of different types of the dangerous world implicit theory among the qualitative studies in the literature (Keown et al., 2010; Marziano et al., 2006) as well as the lack of recognition of the potentially cognate phenomena in parallel literatures (Kelley, 1927; Ó Ciardha, 2017; Paquette et al., 2014) indicated the need to qualitatively examine the multi-dimensional structure of the dangerous world implicit theory (Ward & Keenan, 1999).The aim of this chapter is similar to the one of Chapter Five: (1) to examine the conceptualisation of the dangerous world implicit theory and (2) to examine the underlying mechanisms that may have a causal role in the development of dangerous world implicit theory, which is hypothesised to facilitate and

maintain sexual offending behaviour against children (Ward, 2000; Ward & Keenan, 1999).

Different from the previous chapters, the aim of the current chapter is also to investigate in

detail what the concepts like the dangerous world implicit theory and adverse childhood

experiences (ACEs) as well as their development may look like in a single individual, using

an in-depth qualitative approach (Yin, 2018).

One aspect of this chapter involves qualitative examination of the concept of

dangerous world implicit theory (Ward & Keenan, 1999). In this chapter, I examine two

theoretical propositions: (1) the concept of a dangerous world implicit theory with four sub-

constructs as I previously identified: hostile world, retribution, emotional congruence, and

children as sexual beings, and (2) the two-version dangerous world implicit theory as

hypothesised by Ward and Keenan (1999). According to the first theoretical proposition, the

hostile world sub-construct of the dangerous world implicit theory involves the perception of

the world as a dangerous place, where other people—including women and children—are

seen as untrustworthy, threatening, rejecting, and abusive. The *retribution* sub-construct of

the dangerous world implicit theory involves the tendency to fight back and seek retribution

in return to others' hostile behaviours such as threatening the individual's authority, by

asserting dominance, control, and/or punishment. The *emotional congruence* sub-construct of

the dangerous world implicit theory involves the perception of children as a safe haven from

an otherwise hostile world, where children are seen as caring, loving, accepting, and reliable,

particularly compared to other adults. Having relationships with children is perceived safer

than with adults in emotional congruence sub-construct of the dangerous world implicit

theory. The *children as sexual beings* sub-construct of the dangerous world implicit theory

involves the perception of sexual engagements with children as loving, where children are

seen as capable of understanding and happy to satisfy the individual's sexual needs. In the

children as sexual beings sub-construct, children are perceived as individuals who enjoy sex with adults and can also see it as loving.

The second—or, the alternative—theoretical proposition examined in this chapter is Ward and Keenan's (1999) hypothesised dangerous world implicit theory with two versions. The first version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999) involved the perception of the world as a dangerous and threatening place. According to this first version, other people are seen as threatening, rejecting or abusive. Individuals holding the first version of dangerous world implicit theory believe that they may punish women or children by sexually abusing them in order to achieve dominance and/or control over them, if they are perceived as threatening. This first version involved the perception that it is necessary to fight back when the individuals feel threatened or harmed by other people. The second version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999) consisted of the perception of children as safe, accepting, and dependable. Whilst the world and other adults are perceived as dangerous and threatening similar to the first version, in the second version, children are seen as particularly more loving and reliable than adults. The second version of the dangerous world implicit theory also involved the perception of children as capable of understanding and happy to satisfy the individual's sexual desires. Unlike the first version, in the second version, individuals holding the dangerous world implicit theory do not believe that they are capable of retaliation or fighting back against other threatening adults.

In previous chapters, I examined the concept of a dangerous world implicit theory with four sub-constructs using quantitative research methods. However, in the current chapter, I examine the same theoretical proposition qualitatively, using single-case-study approach (Yin, 1994, 2018). According to Yin (2018), the case study is recognised as a research method, which is distinguished from other research methods such as, experimental,

survey, or historical research. The definition of case study has two aspects outlining the scope and features of the case study research method; first, the case study is an empirical method or an inquiry (Yin, 2003), where a 'case' as a contemporary phenomenon is investigated in depth by incorporating its context; and second, an existing theoretical framework aids the methodology of the case study, the case study involves several more variables than data points, and preferably involves triangulation of methodology by relying on evidence from multiple sources (Yin, 2018). According to Yin (2003, 2018), case study research method is used when the research questions mainly focus on 'how' and 'why' questions in relation to the phenomenon under investigation. The aim of using a single-case-study in this chapter is to examine *how* an individual's cognitions can be meaningfully conceptualised.

In this chapter, I used a holistic single-case study design, which involved a single unit of analysis (Yin, 2018). Single case study is usually suggested to be used for testing, verifying or invalidating a theory (Benbasat, Goldstein, & Mead, 1987; Gagnon, 2010; Yin, 1981). In line with Yin's (2018) recommendations, the rationale in this study can be classified as a *critical case.* A critical case study rationale indicates that the case is critical to the theory—or theoretical propositions—examined. According to Yin (2018), a single-case study can be used to examine and decide whether the propositions specified by the theory are accurate or whether any other explanations—or propositions— can be more applicable. Yin (2018) explains that "…the single-case can represent a significant contribution to knowledge and theory building by confirming, challenging, or extending theory" (p. 49). Therefore, the use of single-case-study of a critical case in this chapter is suitable. I used a single-case-study of a critical case to examine the theoretical proposition of the dangerous world implicit theory as a four-factor multi-dimensional construct as I argued against the theoretical proposition of two-version dangerous world implicit theory hypothesised by Ward and Keenan (1999). When analysing single-case-study, Yin (2018) suggested using *pattern*

matching as the analytical technique. Pattern matching involves a comparison of patterns in data with the patterns predicted before data collection (Trochim, 1989; Yin, 2018). Using pattern matching technique, I aimed to examine whether the qualitatively expressed cognitions by the case study participant could be meaningfully mapped on to my argument of a multi-dimensional dangerous world implicit theory, or to Ward and Keenan's (1999) conceptualisation of the dangerous world implicit theory with two versions.

Adverse childhood experiences (ACEs) refer to potentially traumatic, adverse events until the age of 18 including child sexual, verbal or physical abuse, neglect, domestic violence, parental separation, presence of household members with alcohol or drug addition, poor mental health, or imprisonment (Bellis et al., 2014c; CDC, 2020). In the literature, research showed that individuals who committed sexual offences against children experienced more ACEs than any other offender groups (Abbiati et al., 2014; Weeks & Widom, 1998) as well as community male participants (Levenson et al., 2015). In addition, Marziano et al. (2006) found that participants that were convicted of sexual offences against children who reported experiencing sexual abuse during childhood held the dangerous world implicit theory to a significantly higher degree than others who were not victims of child sexual abuse themselves. In this single-case-study of an individual who had committed multiple sexual offences against children, I expected to find retrospective presence of ACEs as well as an endorsement of the dangerous world implicit theory.

Whilst one aspect of this chapter was to examine the conceptualisation of the dangerous world implicit theory (Ward & Keenan, 1999), a second aspect was to examine the link between ACEs and the development of offence-supportive cognitions as criminogenic needs (Grady et al., 2016). According to Yin (2018), a second analytical technique that can be used when analysing case studies is a sub-type of pattern matching; *explanation building*. When using explanation building, the aim of analysis is to build an explanation of the

phenomenon studied, by specifying the theoretical propositions outlining the causal

sequences (Yin, 2018). In this chapter, I aimed to examine whether the individual case had

developed a hostile perception of the world and perceived other people as threatening as a

consequence of the traumatic adversities during childhood (ACEs), in line with the

framework Grady et al. (2016) suggested. According to Grady et al. (2016), an aetiological

model of sexual offending involved an association between ACEs and insecure attachment

styles, which leads to the development of criminogenic needs, such as cognitive distortions

(Beech & Ward, 2004; Thornton, 2002), that contribute to sexually abusive behaviour.

Similar to the previous chapter, I examine both the ACEs and the endorsement of dangerous

world implicit theory as a criminogenic need within the context of sexual offending against

children. However, different from the previous chapters, I use qualitative approaches.

Method

Participant Information

[REDACTED]

Design

The traditional case study research does not usually involve formal research designs, like there is in experimental research (Yin, 2018). However, Yin (2018) has suggested some potential case study research designs, which facilitates conducting stronger and methodologically sound case study research. In line with Yin's (2003, 2018) criteria for a case study design, a *holistic*, single case study design was adopted in the current study, where the case was the single unit of analysis and there were no subunits of the case.

The rationale for this single-case-study was to select a *critical case* (Flyvbjerg, 2006) in order to determine whether several theoretical prepositions were supported or whether any other alternative explanations would have been more applicable (Yin, 2018; Willing, 2001). In this case study, Bob represents the critical case to test a significant theory; the implicit theories theory, and the dangerous world implicit theory, in particular (Ward, 2000; Ward & Keenan, 1999).

Triangulation. Thomas (2011, 2016) drew attention to the importance of triangulation in case study designs. Triangulation in social sciences refers to "…looking at things from different angles and using different methods for looking", which is argued to be better than viewing from one point (Thomas, 2017, p. 153). The use of triangulation is suggested to demonstrate reliability (Willing, 2001) and/or validity of results (Cox & Hassard, 2010), and the corroborating evidence is perceived as more powerful (Thomas, 2017). Yin (2018) also outlined principles of data collection which help increase the construct validity and the reliability of evidence in case study research. According to Yin

(2018), the case study research has more quality and is more convincing when multiple sources of evidence are used and different methods are converged.

Although the main source of evidence in this case study was the semi-structured interview, multiple sources of evidence were also incorporated including prior knowledge on the participant's background and the previous offences from the period of my volunteering with him, which were also confirmed at the beginning of the interview as part of initial demographics questions (see Participant Information section above and the interview schedule in Appendix XXI). Denzin (1978, as cited in Thomas, 2017) referred to the use of multiple methods of data collection as *triangulation of methodologies.* This applied—at least—for the adverse childhood experiences examined both qualitatively and quantitatively in this case study (Thomas, 2017). In addition to this combination of methods for data collection as part of triangulation, *theoretical triangulation* was used when interpreting the role of ACEs in sexual offending behaviour against children (Flick, 2018; Thomas, 2017). Theoretical triangulation involves approaching and evaluating data from multiple hypotheses and theoretical perspectives or frameworks and is seen as a more effective critique of theories under investigation (Denzin, 1978, as cited in Thomas, 2017). Both the theoretical propositions by Ward and Keenan (1999) and the aetiological framework by Grady et al. (2016) were used in the interpretation of the findings in this case study.

Measures and Materials

Adverse Childhood Experiences (ACE) Scale. ACE Scale is a tool that assesses early adverse experiences such as physical abuse, sexual abuse, neglect as well as parental incapacities or dysfunctional household. Using Finkelhor et al.'s (2015) revised version of the ACE scale, there were 14 items in total. The first 10 items each measured emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, mother treated violently, household substance abuse, household mental illness, parental separation or

divorce, and incarcerated household member. The last four items—which were added to the

original ACE Scales (Felitti et al., 1998; Finkelhor et al., 2005) by Finkelhor et al. (2015)—

each measured peer victimisation, peer isolation/rejection, exposure to community violence,

and low socioeconomic status. Each of the 14 items in this scale has two response options 1

(*yes*) or 0 (*no*; see Appendix XVI). Item scores were summed to obtain the total ACE score

that could range between 0 and 14. Higher total scores indicated higher number of childhood

adversities.

Semi-Structured Interview. The interviews are regarded as one of the most

important sources of gathering information in case study research (Gagnon, 2010; Yin, 2018).

In this study, the semi-structured interview schedule was developed with sub-sections aimed

to cover different aspects of Bob's life. These sub-sections included demographics and

questions in relation to his childhood, early adulthood, past offences, prison experiences,

desistence and pro-social controls. A final question was also asked, particularly to capture his

perceptions of the world (i.e., "What do you think about the world? What kind of place is

it?"). Although the interview schedule was prepared with a chronological and conceptually

consistent line of inquiry (Yin, 2018), the interview itself was carried out with flexibility,

incorporating any relevant follow-up questions (Rubin & Rubin, 2005). An outline of full

interview schedule is available in Appendix XXI and the full interview transcript is available

in Appendix XXII.

Procedure

The participant was initially approached with an informal verbal invitation to the case

study research and showed willingness to take part. The University Research Ethics

Committee reviewed and approved this study prior to data collection (Ethics ID:

201915597767465784). The interview took place in a single setting and lasted for

approximately two and a half hours. The participant was told about the nature of research and

given the opportunity to ask questions prior to his participation. He was then asked for his

consent before starting the interview. The participant was asked to choose a pseudonym

(Bob) in order to maintain anonymity. After completing a couple of demographics questions,

the semi-structured interview was conducted and audio recorded. The ACE Scale (Finkelhor

et al., 2015) was administered during the semi-structured interview, following questions

related to the participant's childhood. After concluding the interview, Bob was thanked for

his participation and was debriefed (see Appendix XXIII). In line with Henwood and

Pidgeon's (1992) criteria that characterise good qualitative research, a reflexivity account is

included in Appendix XXV. The reflexivity account involved acknowledging my values and

assumptions as well as my role as a researcher, which, in the literature, is argued to inevitably

shape the inquiry (Elliott, Fischer, & Rennie, 1999; Henwood & Pidgeon, 1992; Willing,

2001).

Analytic Approach

After completion of the data collection, the semi-structure interview was transcribed

and the data were coded by "…identifying and coding passages in the texts that describe or

relate to categories or concepts connected to the phenomenon of interest" (Gagnon, 2010, p.

72). In line with Yin's (2018) recommendations, three analytical *strategies* were used: (1)

relying on theoretical propositions, (2) working the data from the "ground up", and (3)

examining plausible rival explanations. According to Yin (2018), these strategies can be used

in combination. In addition to these analytical strategies, the *pattern matching* and

explanation building analytical *techniques* were also adopted whilst analysing the data, as

suggested by Yin (2018).

Pattern matching is one of the preferred analytical techniques used in case study

analysis (Yin, 2018). Pattern matching involves comparing empirical patterns emerging from

the case study with the hypothesised or expected patterns prior to the case study data

collection as well as any other alternative or rival explanations (Trochim, 1989; Yin, 2018).

Patten matching is also seen as an approach to evaluate construct validity (Marquart, 1989).

In this case study, the main focus was the conceptualisation of holding the dangerous world

implicit theory and its relationship with ACEs and sexually offending behaviour against

children. In relation to the first analytical strategy, I relied on theoretical propositions I

argued in this thesis: that the dangerous world implicit theory is multidimensional and these

dimensions were identified as hostile world, retribution, emotional congruence, and children

as sexual beings. In addition to relying on these theoretical propositions, I also analysed the

case study data with a ground-up strategy and identified meaningful patterns emerged in the

data, albeit beyond the concept of the dangerous world implicit theory (Ward & Keenan,

1999) and the ACEs (Finkelhor et al., 2015; Grady et al., 2016). As part of the third strategy I

adopted, examining rival explanations (Yin, 2018), I examined the alternative

conceptualisation of the dangerous world implicit theory with two versions as hypothesised

by Ward and Keenan (1999), against the expected four-factor model of the dangerous world

implicit theory.

The second analytical technique used in this case study was explanation building

(Yin, 2003, 2018). According to Yin (2018), explanation building is an analytical technique

which involves building an explanation about the case, using the case study data. In this case

study, the aim of explanation building strategy was to explain 'how' the ACEs and the

cognitive distortions, such as dangerous world implicit theory, had an impact on the

occurrence of the child sexual abuse phenomenon. For this, I specified the expected causal

sequences that explained the child sexual abuse behaviour in this case, using theoretical

triangulation (Denzin, 1978, as cited in Thomas, 2017). For theoretical triangulation, I

investigated the phenomenon of child sexual abuse by integrating Grady et al.'s (2016)

aetiological framework and the implicit theories theoretical framework by Ward (2000) and

Ward and Keenan (1999). Ward (2000) and Ward and Keenan (1999) hypothesised that implicit theories—including the dangerous world implicit theory—are developed from experiences during early developmental years. According to Grady et al.'s (2016) aetiological framework of sexual offending, experiencing ACEs (and insecure attachment styles) lead to the development of criminogenic needs, such as offence-supportive cognitions (Thornton, 2002), which then leads to sexually offending behaviours.

In line with Yin's (2018) recommendations, the *explanation building* procedure followed both deductive and inductive approaches. In other words, the explanation building of this case was based on both the theoretical propositions (i.e., Grady et al., 2016; Ward, 2000; Ward & Keenan, 1999) and the case study data (i.e., semi-structured interview with Bob and Bob's ACE score). According to Yin (2018), the explanation building in a single-case-study may not necessarily come to a conclusion however, it can be seen as a "...process of refining a set of ideas" (p. 181). In this case study, the focus was on the examination of the causal sequence of sexual offending against children in relation to ACEs and holding sub-constructs of the dangerous world implicit theory.

Inter-Rater Reliability (IRR)

In the literature, qualitative researchers are argued to be less worried about reliability as their main goal involves exploring a phenomenon in great detail rather than providing a measurement of certain concepts in large samples (Willing, 2001). McDonald, Schoenebeck and Forte (2019) recommended that one of the reasons to use IRR is to minimise any confirmation bias when collecting, analysing, or interpreting qualitative data. Campbell, Quincy, Osserman and Pedersen (2013) highlighted the limited guidance in the literature in relation to coding semi-structure interviews and establishing inter-rater reliability and agreement.

Yin's (2018) guidelines on how to conduct a case study is probably one of the most comprehensive resources in the literature, specifically covering case study research. Yin (2018) provides tactics for dealing with reliability, such as using a study protocol, developing case study database, or collecting and providing evidence for the case study, for example, through triangulation. However, Yin (2018) did not provide any concrete guidelines for establishing IRR, nor about using indices for this purpose. Therefore, I followed recommendations for establishing IRR in the wider literature on qualitative research methods (e.g., Syed & Nelson, 2015).

IRR is one type of reliability which is involves the reproducibility of coding across different coders (Campbell et al., 2013; Krippendorff, 2004). In broad terms, reproducibility of data involves two or more individuals coding the same data with the same coding manual (Krippendorff, 2004). Syed and Nelson (2015) emphasised that "…establishing reliability is a process and not a product" (p. 3). Following the guidelines for establishing IRR by Syed and Nelson (2015) as well as in line with Campbell et al.'s (2013) examples of assessing IRR and intercoder agreement, I explain the steps taken in order to establish the IRR and intercoder agreement in this case study.

After the semi-structured interview was transcribed, a coding manual was developed—as an iterative process (Saldaña, 2013)—by coding any text including words, phrases or sentences using first; a theory-driven and second; a data-driven approach (Syed & Nelson, 2015; Yin, 2018). The coding manual outlined a description for each code (Syed & Nelson, 2015) and a complete list of codes with coded text is included in Appendix XXVI. After training the second coder in relation to the analytical strategies and techniques used, the *gold standard* method (see Syed & Nelson, 2015) was followed. The second coder coded approximately 50% of the total data set (Syed & Nelson, 2015) and the reliability was established.

Intercoder agreement refers to when multiple coders can adjust discrepancies through discussion (Campbell et al., 2013). The percentage agreement has been criticised in the literature for being a liberal index since it does not take into account for chance agreement (Krippendorff, 2011; Syed & Nelson, 2015). Considering this limitation of the percentage agreement, Cohen's (1960) kappa has been an alternative reliability index which accounts for chance agreement (Syed & Nelson, 2015). Syed and Nelson (2015) also recommended to provide multiple reliability indices; therefore, both the percentage agreement and kappa for each code were reported in this chapter. The IRR values are presented in Table 38. The percentage agreement between the two coders for all codes except for one was higher than 90%, indicating very high agreement, overall. The kappa values for the agreement on each code[25] indicated a range from moderate to almost perfect agreement (Viera & Garrett, 2005).

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[25] There was no agreement for one of the other relevant codes (i.e., change in children as sexual beings and nature of harm). Following Syed and Nelson's (2015) guidelines for the gold standard method, this code was still included in the Appendix XXIV, but not presented as part of the results.

Table 38

Inter-Rater Reliability: Percentage and Cohen's kappa values

Codes	%	κ
Adverse Childhood Experiences	98	.90
Hostile World	96	.85
Retribution	97	.83
Emotional Congruence	99	.93
Children as Sexual Beings	93	.63
Uncontrollability Implicit Theory	98	.84
Intimacy Deficits	87	.43
Nature of Harm Implicit Theory	98	.71
Hostile World	96	.76
Change in Children as Sexual Beings and Nature of Harm Implicit Theory	85	-.60

Results

Identified Endorsement of Dangerous World Implicit Theory

As mentioned above, Bob received multiple psychological treatments and/or psychoeducation interventions both whilst in and out of prison, on parole. Therefore, the majority of his expressed cognitions during the interview were retrospective. However, it was possible to meaningfully code them as different sub-constructs of the dangerous world implicit theory based on the dimensions identified in the earlier chapters of this thesis: hostile world, retribution, emotional congruence, and children as sexual beings. Below, I present extracts from the interview that represented the four sub-constructs of the dangerous world implicit theory. Due to the sheer volume of coded material within conversations, I only

presented a limited number of extracts as examples of representation of the four sub-constrcuts of the dangerous world implicit theory. For all coded data extracts, please refer to the Appendix XXVI.

Hostile World. The hostile-world sub-construct of the dangerous world implicit theory refers to the perception of the world as dangerous and threatening, in which other people are seen as hostile, untrustworthy, and abusive. When asked about his perceptions of the world and other people, Bob very clearly expressed his negative view of the world and his distrust in other people. His thoughts and feelings about the world and other people were distinctively marked by fear:

> **Bob:** *I started hating the world, I started hating people. I didn't trust people.*
>
> **Researcher:** *How did you perceive them [other people] at the time? When you say you didn't trust them, how would you define them?*
>
> **Bob:** *Frightening.*
>
> **Researcher:** *Frightening.*
>
> **Bob:** *Yeah, yeah. People to be feared. Yeah, definitely, yeah. And, that's pretty much most—I always walked around fearing, yeah.*
>
> <div align="center">***</div>
>
> **Bob:** *I didn't wanna be near them. I wanted to get away and yeah. I just didn't trust anyone, and I used to isolate myself, keep myself—I stopped trying to make friends. It was just difficult. That's all—that's all I can remember I can really describe it I found it really difficult. I found life difficult. Yeah, yeah, very stressful.*
>
> **Researcher:** *...when you had the distrust to other people around you back then, and you were finding it scary, fearful to be around them, what were you thinking about if them were doing something to you? So, you know, in case*

they would have done something to you, how would you have reacted? What

were you thinking?

Bob: *Well, it's like. People didn't really have to do anything because it was*

like, I would always feared them anyway, you know so, it was kind of like,

even when I went to school, it was like, I always had that fear of what people

might do, you know. I guess I just didn't wanna be there..I was called stupid,

you know, I was called useless, a waste of space and...

Later in the interview, he also described how his perception of other people was threatening

and controlling, and thus, he did not like being around other people:

Researcher: *Let's come to your early adulthood. So, how was that time in*

your life? What kind of jobs were you doing? What was happening in your

life?

Bob: *I was doing training jobs so like, I was training to be a chef and I used*

to get put out on placements…But I used to find it quite difficult, 'cause it used

to be around a lot of people and I didn't like being around a lot of people so, I

used to find it stressful.

Researcher: *Where was that coming from that you didn't like being around*

other people?

Bob: *Childhood. Yeah, it came from childhood. I hated to being around big*

crowds 'cause I feel that I used to feel threatened. So yeah, I didn't like that.

And I also find it difficult when people were telling me what to do as well, you

know. And if I didn't do something right, them telling me in a correcting way,

which, I used to get on my [inaudible] "don't tell me how to do stuff" you

know.

> **Researcher:** *Okay. What did that mean to you when they were kind of telling you what to do?*
>
> **Bob:** *I was feeling like I was being controlled and it just felt threatening. I just got a hate for people telling me what to do and how to do it, and telling me that I've done something wrong, you know. Even though they're not actually saying I've done something wrong but maybe "do it in a different way". And I'm like "well, no, it's, I'm alright doing it how I'm doing it" you know.*

Bob also described his perception of other people as bullies by whom he felt intimidated by their intention to control him:

> **Bob:** *'Who're you to tell me what to do and how to do it?' That's my initial response; 'who are you to tell me what to do and how to do it?'*
>
> **Researcher:** *Who do you think they were?*
>
> **Bob:** *Bullies… [laughs]. That's what it felt like. It felt intimidating. I hated people tell me what to do. Always.*

Later in the interview, I also revisited his thoughts on people telling him what to do in relation to whilst he was in prison. He expressed similar perceptions of other people as above, where he saw other people as threatening and felt controlled by them. For him, other people were 'bullies':

> **Researcher:** *So, what do you think that meant for you that there was someone who was telling you what to do?*
>
> **Bob:** *I was being controlled.*
>
> **Researcher:** *Controlled by?*
>
> **Bob:** *By staff. By people in authority. Being told what to do again and I hated being told what to do.*
>
> **Researcher:** *What does it mean to you?*

Bob: *Threatening. It's threatening.*

Researcher: *To be controlled or being told what to do by someone with an authority—*

Bob: *Yeah. It's threatening. It's like if someone's telling me what to do, it creates an anxiety within me.*

Researcher: *Because of? Where is that coming from?*

Bob: *I guess it as from my childhood. Because of not understanding what was going on so I was always anxious…in the abuse…*

Researcher: *So, when someone tells you what to do, how to behave, you find it controlling and you find that that's a person with an authority telling you. How do you or did you use to see someone with an authority?*

Bob: *I hated them. I hated them telling me what to do. Because they were just bullies. That's how I saw them, they were just bullies. Anyone that told me what to do, they were just bullies…*

When asked about his childhood, Bob was able to recall and share multiple forms of adversities in his childhood. He was sexually abused by an adult who befriended his family and he repeatedly suffered from his father's physical violence towards himself, his siblings, and his mother. In the two extracts below, he expressed his distrust towards his mum over not protecting him from his father's beatings:

Bob: *I didn't really feel able to speak to mum about what was going on [sexual abuse] and then also because she knew what was going on in the house, that's kind of like... I guess I had that distrust there as well, from mum. Sorry for me to say that, but yeah... Because she didn't really stop it, you know.*

When we talked about how he perceived his mother as well as other women such as his female teacher, he mentioned similar patterns at different stages of the interview towards trusting female figures in his life, despite the complexities:

> **Researcher:** *Would you also see other women in the same way as you see your mum?*
>
> **Bob:** *No, 'cause I was, no, I wasn't, I wasn't shy around my mum, but I was shy around women. Yeah, and I guess that's always been the case really. I guess I just found it difficult to communicate with them. Again, Mrs [teacher] from my school who I remember quite clearly, she used to be quite a bully. She used to hit us with the slipper and stuff, yeah so... I guess it was just another women figure that used to bully so, you can't really trust, you know. So, yeah, it was hard, it was hard.*

When asked about his significant relationships, Bob recalled his relationship with a girl when he was 15. Bob shared that the girl laughed at him when he tried to sexually engage with her. He described how this made him feel embarrassed and the extract below demonstrated how his perception of women was shaped following this incidence:

> **Bob:** *When I was 15, I had a relationship with a girl called A and me and A used to get on quite well and…I tried to please her digitally and she laughed at me. I felt so stupid and so small. And I guess that kind of knocked my confidence quite a lot, so… I felt really embarrassed actually as well.*
>
> **Researcher:** *What did you think about her?*
>
> **Bob:** *You know what, I don't remember. I don't really know. I just know that I felt really embarrassed. For me it was more about the embarrassment, about how she made me feel, you know. She made me feel stupid, you know.*
>
> **Researcher:** *Were you able to trust her, ever?*

Bob: *No, no.*

Researcher: *Before or after that experience?*

Bob: *Before, I could. After, after, no, no. 'Cause she made me feel like, you know, like I said, stupid, so…*

<p align="center">***</p>

Bob: *I used to fear that they would make me feel embarrassed. I also feared that I wouldn't be able to please her, so, yeah. I know that I didn't want to experience that feeling again. It made me feel so, so, so small, so little.*

Later in the interview, Bob mentioned about his relationship with another woman after he was released from prison following his first contact sexual offence. Bob described that he felt comfortable and loved in that relationship however, it came to an end as they drifted apart. Bob expressed his feelings in relation to trusting women:

Bob: *Because I've a relationship breakdown, they're finding somebody else and the way that I felt after that, again, I find it difficult to trust women.*

After his relationship with that woman, Bob committed his second contact sexual offence against children. In the extract below, it can be seen how Bob perceived the world around him as unfair:

Researcher: *After that relationship ended, what happened?*

Bob: *So, I went onto offend again, ended up committing an offence against a boy. I went to prison for 10 years. And again, it's kind of like, whilst I'm in prison, I'm being abused by inmates, by staff, either physically, sexually or verbally. Yeah…it's a really hard time, people telling me what to do, how to do it… Not really trusting anybody, always in fear.*

Researcher: *How did you see other people at that point in your life?*

Bob: *I guess I hated people, I hated the world, I hated life. As far as I was concerned, my life had been destroyed.*

Researcher: *So, after that happened, after the relationship ended, how were you seeing other people in your life?*

Bob: *I hated everybody.*

Researcher: *Where was that hate coming from?*

Bob: *Through feelings that I'd been unjust and an injustice done to me. That nobody was really giving me a chance. So, what was the point?*

When asked about the differences in his past relationships with different partners, Bob shared that the biggest difference was his inability to trust other people:

Researcher: *What was the difference between L and R?*

Bob: *The trust.*

Researcher: *What about the trust?*

Bob: *Like I said, I always felt like I couldn't trust again, I couldn't let anybody get that close to me again.*

*** *

Bob: *Trust issue; that was the biggest thing.*

Researcher: *What do you mean by the trust issue?*

Bob: *Because I couldn't… I didn't feel like I could trust anybody.*

Researcher: *Do you mean the adults in this case?*

Bob: *Adults, other children when I was younger, you know at school.*

Bob's perception of the world and other people as threatening and untrustworthy was also present when we talked about his time in prison. He perceived other people as out to hurt him:

Bob: *On my first time, I was very fearful. I went into the prison and there's lots of big men about. It's a very scary place. I'm put into a group with two other guys. I'm violently raped… I have staff that tell me what to do all the time. People coming up to your door, people shouting at out of windows; 'nonces', [inaudible], 'beasts'. So, they're calling you names. You get urine chucked under your door. You get physically beaten, so you out in hospital with broken ribs, not just with fists but with broom handles and stuff.*

Researcher: *How did you use to think about other people when you were in prison?*

Bob: *I hated it. I hated people.*

Researcher: *What do you think how the people were at the time when you were in prison? How would you define people? How would you define the world around you when you were in the prison? You said you were fearful.*

Bob: *It was just everyday was fearful, you never knew what to expect. You never knew what to expect. And it literally could come out of the blue [clicks his finger] like that, you know. People just wanting to take their anger out on you or staff just being bullies 'cause they were like that as well; they were bullies, too. Treating you like muck, dirt.*

Researcher: *So, what do you think the other people want? What's their aim?*

Bob: *I don't know. I don't know what their aim was. All I know is I just didn't trust anybody.*

Researcher: *What do you think was going to happen from them; by them, to you?*

Bob: *They were always gonna hurt me. And that was pretty much. I didn't trust people because to trust men, you gotta [get] hurt and to trust men you let*

> *people get close and you can't let people get close to you. So, everybody was*
>
> *out to hurt. I didn't trust people, I didn't trust staff, I didn't trust the inmates.*
>
> *It was just like I just wanted to be on my own.*

When asked about what being in prison meant for him, Bob reiterated that he felt controlled by people:

> **Bob:** *I guess I know that I don't want to be in prison anymore, I know that I*
>
> *don't want to hurt anybody anymore. And I guess that in the past, but I saw it*
>
> *as them controlling my life. But then also it was an opportunity to change, so...*
>
> *yeah. I mean, for me now, it's helped me to move along in my life, it's helped*
>
> *me to move forward. I guess in the past, it was just like I weren't having none*
>
> *of it, you know. Again, it was just like people controlling my life and I weren't*
>
> *having them.*

       [Lack of] Retribution. The retribution sub-construct of the dangerous world implicit theory involves the endorsement of fighting back against other people who are perceived to be threatening and controlling. As presented above, Bob's expressions clearly showed his negative perceptions of the world and other people. However, when asked about his responses and reactions towards other people's behaviour which he perceived as threatening, Bob did not express any tendency towards seeking retribution for other people's threatening or abusive actions. Bob did not express any tendency to punish other people whom he perceived as threatening and controlling. Therefore, the evidence indicated a *lack* of the retribution sub-construct. The extract below demonstrates that Bob was too scared to actually seek retribution for other people's bullying and threatening behaviour:

> **Researcher:** *So, when you said, when you went to school and you were fearful*
>
> *of being there regardless of them doing something or not. So, you were scared*
>
> *about the possibility of them-*

Bob: *That something might happen.*

Researcher: *So, if you go back and think about it, what would you be thinking about how would you have reacted if they had done something to you?*

Bob: *I would have just cowered.*

Researcher: *Sorry?*

Bob: *I would have just cowered, I wouldn't do anything, I would have just cowered away, yeah. If they wanted to hit me, I would have let them hit me.*

Researcher: *Okay, you wouldn't react? You wouldn't hit back?*

Bob: *I'd be too scared to... yeah, I'd be too scared to.*

Researcher: *Okay.*

Bob: *I mean...way back, when I was younger, I was only a skinny person anyway, it was like, I was just like... I didn't feel that I was able to fight back. So, yeah...*

Researcher: *Okay, you didn't feel like you were able to fight back.*

Bob: *No, not at all.*

Researcher: *Okay, so, thus, you wouldn't fight back.*

Bob: *No, no, no.*

His tendency to seek retribution against women was also particularly non-existent. Following our conversation around his first intimate relationship and his experience of feeling embarrassment, when asked about how he would behave around women, Bob also expressed his feelings that he was not able to approach women:

Researcher: *So, tell me a bit more about being around girls and women.*

Bob: *I just... like I said, I just felt shy, I felt that I couldn't approach them. I didn't wanna be, I didn't wanna be laughed at again, you know. I didn't wanna feel small, you know.*

When asked about his experiences in prison, Bob's lack of tendency to seek retribution was present where he explained that he did not express his anger on other people, even when he felt frustrated:

> **Bob:** *I used to get very angry with nowhere to turn it to, nowhere releasing that anger and I guess that was like all the way through my life. I used to internalise that anger.*
>
> **Researcher:** *So, you wouldn't take that anger out on someone else?*
>
> **Bob:** *No, no. I would occasionally hit the walls through frustration. I guess just a lot of the time I used to bottle my feelings up. 'Cause that's what I was always told to do: 'stop being a baby', 'get on with your life', 'stop crying or [I will be] someone to cry for', that type of behaviour. I guess it was like all my feelings from being very young. I used to bottle up, I never used to express myself, I never used to talk about things. I never used to say how I was feeling. I didn't feel able to, or comfortable to for that matter.*

Instead of seeking retribution, Bob tended to isolate himself from other people both when he was a young child and whilst he was in prison:

> **Bob:** *[During childhood] I didn't wanna be near them [other people]. I wanted to get away and yeah. I just didn't trust anyone and I used to isolate myself, keep myself—I stopped trying to make friends.*
>
> <div align="center">***</div>
>
> **Researcher:** *When you were in prison and you felt like people were abusive and you were fearful, how were you thinking of reacting to that?...*
>
> **Bob:** *No, a lot of the time I used to shut myself away, behind the door 'cause I was so petrified. I was so scared. So, I used to go on a... it's called a rule; they call it Rule 43 so, it means you lock behind your door. Pretty much all the*

time. And that's what I used to do to protect myself. So, I would come about like for probably an hour a day. So, 23 hours a day, I would be locked behind my door...

Emotional Congruence. The emotional congruence sub-construct of the dangerous world implicit theory involves the positive perception of children as loving, caring, and dependable, as opposed to adults. As described above, Bob's perception of the world and other people—including women—was threatening, dangerous, abusive, and rejecting. Following on from Bob's lack of tendency to seek retribution for other people's threatening and abusive behaviours towards him, the individuals which he did not find threatening were children. In the extract below, Bob described that he enjoyed being around children and they made him feel loved and safe:

Bob: *I just know that I wanted to be around them [children]. They made me feel special, they made me feel loved. I enjoyed being with them. I enjoyed them doing things to me and me doing things to them.*

Researcher: *Would you classify this, you know, enjoyment from being with them and doing things to each other, only in sexual terms or in general?*

Bob: *In general, yeah... it includes sex as well.*

Researcher: *Like it includes sex as well but you would also enjoy just watching TV with them as well?*

Bob: *Yeah, yeah, yeah, and play.*

Researcher: *How do you feel about the idea of spending time with a kid either sexually or non-sexually? What does it mean to you, like how do you see kids?*

Bob: *Well, like I said, I used to see it as being, just having fun, you know, having fun. That was it really, just having fun, playing, enjoying.*

Researcher: *It sounds more like you were feeling close to children.*

Bob: *Yeah, I didn't feel threatened.*

Researcher: *Okay. How about adults? If you compare it?*

Bob: *I'd rather be with a child than adult, that's how it used to be. Cause I didn't feel threatened, I didn't feel I had to prove... Yeah, I didn't feel intimidated so, I didn't feel scared, yeah... relaxed, I could be relaxed.*

When asked to tell me about his offences, Bob expressed his desire to be around children where he felt loved, prior to his offending:

Bob: *So, my first ever conviction was for offences against children from 2 to 9 involved various sexual charges. It occurred whilst I was babysitting. I just know that I had all these thoughts going round in my head and I didn't know how to deal with them, and I couldn't really... didn't know how to stop myself. I just wanted to be around children.*

Researcher: *Okay. Can you tell me a bit about those thoughts that were going on in your head?*

Bob: *I just wanted to feel loved and I wanted to love, you know. Yeah, I wanted to be near, I wanted to feel that closeness, I wanted to feel special.*

When asked about his perception of other people as untrustworthy and threatening, Bob described that it was adults who were untrustworthy whereas, children were not threatening once he was an adult himself:

Bob: *Because I couldn't... I didn't feel like I could trust anybody.*

Researcher: *You mean adults in this case?*

Bob: *Adults, other children when I was younger, you know at school.*

Researcher: *But when you were an adult, you didn't see the children as untrustworthy.*

Bob: *No, children weren't threatening.*

Children as Sexual Beings. Children as sexual beings sub-construct of the dangerous world implicit theory involves the perception of sexual activities with children as loving where children are perceived as willing and eligible to satisfy the individual's sexual desires. When we talked about his sexual thoughts involving children, Bob demonstrated that his perception of sexual activities with children was that it was loving, fun, enjoyable, and special*[26].

> **Researcher:** *Would you like to tell me a bit more about your sexual thoughts about children?*
>
> **Bob:** *I just know that I wanted to be around them. They made me feel special, they made me feel loved, I enjoyed being with them. I enjoyed them doing things to me and me doing things to them. Yeah, it was just...*
>
> **Researcher:** *Would you classify this, you know, enjoyment from being with them and doing things to each other, only as sexual terms or in general?*
>
> **Bob:** *In general, yeah... it includes sex as well.*

When asked about his first contact offence against children, Bob explained that for him it was loving and peaceful. It provided peace for Bob*:

> **Bob:** *So, my first ever conviction was for offences against children from 2 to 9 involved various sexual charges. It occurred whilst I was babysitting. I just know that I had all these thoughts going round in my head and I didn't know how to deal with them, and I couldn't really... didn't know how to stop myself. I just know that I wanted be around children and yeah, have sexual pleasure.*

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[26] Some of the extracts are also presented under other codes (e.g., emotional congruence) because of the overlapping content as part of the conversation. These extracts are marked with an asterisk (*).

Researcher: *Okay. Can you tell me a bit about those thoughts that were going on in your head?*

Bob: *I just wanted to feel loved and I wanted to love, you know. Yeah, I wanted to be near, I wanted to feel that closeness, I wanted to feel special. I wanted that peace 'cause my head was such a mess and I guess in abusing, I found a relaxation and I felt a relief so...*

Researcher: *Relief from what?*

Bob: *Pressures. Yeah, from pressures. 'Cause whilst I was abusing, I didn't think about anything else but I didn't see it as abusing either. I saw it as loving, you know. Yeah, it was just pressures of life, feeling stressed out and I didn't want to feel stressed, I wanted to feel relaxed and calm. And I guess that's where I found calmness.*

When asked about his retrospective perceptions of what children may have thought when they were made to sexually engage with him, he described that for him, it was loving, enjoyable, and pleasurable:

Researcher: *What do you think back then or at different times of your life, that the children that you engaged with sexually were actually feeling, thinking? What do you think that they were thinking? What do you think that they were feeling?*

Bob: *That they [children] loved me, that they liked me, that they liked what I was doing. That's what I was telling myself.*

Researcher: *Okay, tell me a bit more about that.*

Bob: *That then, it was that they enjoyed what I was doing then, and I enjoyed what they were doing, yeah, so... they loved me, they felt comfortable around me, they felt pleasure. They felt they were happy.*

> **Researcher:** *Okay. What did you think about the kids and the sexual activities? What did those mean to you together?*
>
> **Bob:** *That it was okay. That it was enjoyable. For both of us. I were loving them, they were loving me. They seemed happy.*

Bob also recalled his own experiences of sexual abuse as a child and was able to relate to how he perceived it at the time. In the extract below, he also continued describing that he perceived his own sexual victimisation as being loved:

> **Researcher:** *Okay. And what about how the kids used to see sex? What do you think sex meant for children?*
>
> **Bob:** *I don't know. I guess that they just enjoyed it. and we did enjoy it. I don't know how they viewed it; I wouldn't know. They probably, like myself, looking at it from adult experience now, they probably felt like myself, very confused, not understanding what was going on.*
>
> **Researcher:** *Are you relating to your own past experience with abuse when you were a kid that you were confused?*
>
> **Bob:** *Yeah, and not really understanding it, not really taking on board what was going on.*
>
> **Researcher:** *However, when the offences were taking place, you were seeing them as actually enjoying it.*
>
> **Bob:** *Yeah, yeah, and we did enjoy it, you know. It's just some of it wasn't very pleasant. So... even though what they did was wrong, there was still that element of pleasure there.*
>
> **Researcher:** *What do you mean?*
>
> **Bob:** *The adults. Even though the adults sometimes*
>
> **Researcher:** *did to you?*

> **Bob:** *Yeah. So, and the other children as well. Even though it was wrong, we didn't see it as being wrong, we saw it as... just enjoying, I mean fun... being loved.*

Earlier in the interview, Bob also described his own child sexual abuse experiences and similar perceptions on sexual engagement with children representing a loving relationship was present:

> **Researcher:** *And, what about the other kids that you were forced to engage with, the other kids?*
>
> **Bob:** *I guess it was just that we... I used to get pleasure, I used enjoy it, I used to feel like I belonged...that felt loved, that cared for. I used to get treated, given stuff.*
>
> **Researcher:** *By the adults?*
>
> **Bob:** *By the adults, yeah*
>
> **Researcher:** *But you kind of felt like you were being loved by the other kids that you were made to...*
>
> **Bob:** *And the adults, and the adults, I didn't see it as abuse. So, I actually felt like, yeah... special, so...*
>
> **Researcher:** *So you also said that you get pleasure from it. Are we talking about a sexual pleasure?*
>
> **Bob:** *Yeah, I used to get aroused, yeah. Used to make me feel good. Yeah...*
>
> **Researcher:** *Okay, and how were you seeing this all activity when you were a kid, with a kid?*
>
> **Bob:** *I enjoyed it, I enjoyed the attention.*

When asked about how he perceived the sexual interactions with the children he offended against, Bob recalled that his retrospective perception was that it was a loving engagement:

> **Bob:** *That I was loving, that's how I viewed it. When I was offending, I viewed it as loving.*

Later in the interview, Bob expressed how his cognitions has changed and that he did not perceive children as "sexual objects". When asked about his thoughts on this, he was able to retrospectively compare his perception of children in relation to sex. The extract below demonstrated his perception of children as loving and caring:

> **Researcher:** *When you said that children are not sexual objects, how did you use to think about that in the past?*
>
> **Bob:** *That sex is just sex. It's loving. You know, it's showing that you care but you don't need to have sex to show that you care. You can show that you care in lots of different ways, without having sex. But like I said, when I was younger, I didn't see that. I always saw that, that was part of caring and showing that you loved.*

When asked about how he perceived sexually engaging with children, Bob's description of contact sexual offences against children involved both the satisfaction of his sexual needs and feeling happy and wanted:

> **Bob:** *Yeah, it [having sex with children] did. Yeah, it did make me feel satisfied, it made me feel relaxed.*
>
> **Researcher:** *For the contact offences.*
>
> **Bob:** *Yeah. For that moment, yeah. It used to make me feel relaxed, it used to make me feel happy, it used to make me feel wanted and special.*
>
> **Researcher:** *But in a sexual way... is that what you mean?*
>
> **Bob:** *Sexual and non-sexual. Yeah, whereas the images was for, it was purely for sexual satisfaction.*

Whilst Bob used to think that viewing CSEM did not necessarily represent a 'loving'

engagement with children, his retrospective perceptions of online sexual offending still

involved perceiving children as a source which could satisfy his sexual needs:

> **Bob:** *I guess that for me it [viewing CSEM] wasn't loving or anything like*
>
> *that, it was meeting my sexual need.*
>
> **Researcher:** *via kids, but in a different way*
>
> **Bob:** *Yeah, it was just meeting my sexual needs [inaudible].*

Adverse Childhood Experiences (ACEs) Score

In this case study, there is robust evidence that Bob had experienced multiple ACEs

both as a result of the semi-structured interview and the ACE Scale (Finkelhor et al., 2015).

His total ACE score was 10 out of 14 and he self-reported that he experienced physical,

emotional, and sexual abuse, emotional and physical neglect, witnessed mother (or

stepmother) treated violently, exposed to household substance abuse, peer victimisation, peer

isolation/rejection, and low socioeconomic status.

The Role of ACEs in Bob's Sexual Offending Against Children

In this section, I present extracts from the semi-structured interview that were coded

as ACE describing Bob's experienced adversities in his childhood. In addition, I also present

these extracts as an evidence of how Bob's ACEs may have shaped his perception of the

world, other people, children, and sex with children as a causal factor. The evidence in this

case study appears consistent with the aetiological model of sexual offending as proposed by

Grady et al. (2016). According to Grady et al.'s framework, ACEs including childhood

physical, sexual, and emotional abuse as well as neglect is related to development of

criminogenic needs (e.g., schematic beliefs such as, dangerous world implicit theory), which

is then linked to sexually offending behaviour against children. As a result of the semi-

structured interview, there was robust evidence of adverse experiences during Bob's

childhood. There was also evidence that Bob interpreted there is a link between experiencing adversities in childhood and his later world view, where he perceived the world as a dangerous place and mistrusted other people, including women.

When asked about his childhood, Bob described it as an anxious period in his life and recalled himself as always living in fear. He disclosed a history of frequent and continuous physical abuse from his father, which he, his siblings, and his mother suffered from. Bob also recalled experiencing bullying by both his peers and teachers at school, sexual abuse by an adult who befriended the family as well as emotional abuse and emotional neglect by his father. The following extracts show how Bob described his childhood and experiencing his father's physical and emotional abuse:

> **Bob:** *Most of my childhood was quite anxious. Yeah, 'cause my dad was very nasty, since I can remember really. He was always beating us, in the house. It was quite a difficult childhood, really. He would beat, be angry whether he had a drink or didn't have a drink. I was always in fear. So, yeah, I found it quite difficult.*

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> **Bob:** *My dad was to be feared at all times; were he in the house or not in the house. So, even if my dad was away from home, I always feared when he would be coming back because of what it would be like, how he would respond whether we get beaten, you know… Yeah, 'cause it didn't matter what happened, he would just do whatever he wanted, you know and treat us however he wanted. Even if he did something, you know, that he caused the problem, he would blame us. But, he was the one that caused the problem, you know so… yeah, it was hard, it was hard. And my mum even though she didn't really do anything to stop my dad from beating us, she took beatings.*

Bob continued describing his childhood experiences by recalling being bullied at school as a result of the neglect he experienced by his caregivers and also their low socio-economic status:

> **Bob:** *School life was okay to start within my earlier years but, as I started growing older, going through the juniors and upper schools, it became very difficult because I was picked on, I was bullied because we weren't really that well off; and so, like a lot of my stuff used to be hand me downs and stuff like that. And I used to go to school sometimes smelling of wee because of wetting my bed. And I used to get picked on because of that well. So yeah, it was a really difficult time.*

Bob described being bullied by the teachers at school, which he reflected on as making him distrust other people:

> **Bob:** *I guess I started to really distrust people because even the school teachers would bully me as well. If they saw people picking on me they wouldn't do anything to stop it, you know. And then, they used to bully as well. Yeah, was very difficult.*

Bob also described the emotional neglect he suffered from his father, where he did not feel loved by his father and never received any affection from him:

> **Bob:** *I know my mum loved us, whereas my dad, I can't say that 'cause he never turned around and said "I love you" or anything, you know. And never showed any of that really that he did love us.*

When asked about his first intimate relationship, Bob shared that his first relationship with a girl came to an end because of his own experiences of child sexual abuse. At the age of 13, his parents separated and his mother met someone else who also started living with them. As part of their family trips, they met a man who befriended the family and sexually abused him:

> **Bob:** *It was when I was being sexually abused. We used to go to the local [working men's] club on Sunday afternoon that used to be our family trip. And then, met up with this guy, I guess befriended all the family and then, you know, took me around his house one day and then started to abuse me. So, as things went on and it got more and more progressive, you know, from touching to oral to...well, finished in anal but also have been made to do sex things with other children.*

Bob described the sexual exploitation he experienced as a child by an adult who befriended the family:

> **Bob:** *I guess the only time it really didn't feel normal was when I was anally raped. That hurt and it was from that point that I knew in my head that things weren't quite right. You know, and that they shouldn't be, they shouldn't be doing that. So, I guess it was then that I started to do things and as I said that's when I kind of fell out of favour, you know.*
>
> **Researcher:** *What does that mean?*
>
> **Bob:** *It means that I stopped getting like money, I stopped getting treats and stuff like that, you know. They would push me to one side, wouldn't like include me as much, yeah.... In the end, I just stopped going.*

When Bob recalled his own experiences of sexual abuse as a child, he also described his perceptions of sexual engagement with adults as fun and being loved. This suggested that what he experienced sexually with an adult when he was a child may have shaped his perceptions later in adulthood including seeing it as normal*:

> **Researcher:** *However, when [Bob's] offences were taking place, you were seeing [children] as actually enjoying it.*

> **Bob:** *Yeah, yeah, and we did enjoy it, you know. It's just some of it wasn't very pleasant... even though what they did was wrong, there was still that element of pleasure there.*
>
> **Researcher:** *What do you mean?*
>
> **Bob:** *The adults. Even though the adults sometimes*
>
> **Researcher:** *did to you?*
>
> **Bob:** *Yeah. So, and the other children as well. Even though it was wrong, we didn't see it as being wrong, we saw it as... just enjoying, I mean fun... being loved.*

Later in the interview, when asked about differences in his perceptions of past relationships, Bob mentioned that his inability to trust other people was key. When prompted with a question, he mentioned his inability to trust other adults in his adulthood as well as to his peers when he was a child, suggesting that his perception of other people may have developed in the early years, as a result of adversities he experienced*****:

> **Researcher:** *What do you mean by trust issue?*
>
> **Bob:** *Because I couldn't... I didn't feel like I could trust anybody.*
>
> **Researcher:** *Do you mean adults in this case?*
>
> **Bob:** *Adults, other children when I was younger, you know at school.*

When asked about his perception of other people as threatening, Bob described it as something that came from his childhood*:

> **Researcher:** *Where was that coming from that you didn't like being around other people?*
>
> **Bob:** *Childhood. Yeah, it came from childhood. I hated to being around big crowds 'cause I feel that I used to feel threatened. So yeah, I didn't like that. And I also find it difficult when people were telling me what to do as well, you*

> *know. And if I didn't do something right, them telling me in a correcting way,*
>
> *which, I used to get on my [inaudible] "don't tell me how to do stuff" you*
>
> *know.*

Similar to the extract above, later in the interview, when Bob was asked about his perception of other people's behaviours such as 'telling him what to do' as threatening, he reflected on this as something that may have been shaped as a result of his childhood experiences*:

> **Researcher:** *So, what do you think that meant for you that there was someone who was telling you what to do?*
>
> **Bob:** *It was being controlled.*
>
> **Researcher:** *Controlled by?*
>
> **Bob:** *By staff. By people in authority. Being told what to do again and I hated being told what to do.*
>
> **Researcher:** *What does it mean to you?*
>
> **Bob:** *Threatening. It's threatening.*
>
> **Researcher:** *To be controlled or being told what to do by someone with an authority—*
>
> **Bob:** *Yeah. It's threatening. It's like if someone's telling me what to do, it creates an anxiety within me.*
>
> **Researcher:** *Because of? Where is that coming from?*
>
> **Bob:** *I guess it as from my childhood. Because of not understanding what was going on so I was always anxious…in the abuse…*

Other Relevant Concepts

The aim of this case study is to focus on the qualitative examination of the conceptualisation of the dangerous world implicit theory (Ward & Keenan, 1999) and the role of the ACEs as a factor associated with the development of cognitive distortions as a

criminogenic need (Grady et al., 2016). There are also other portions of text within the semi-structured interview that could be meaningfully coded into different categories beyond the concept of ACE and the four sub-constructs of the dangerous world implicit theory. However, this is beyond the scope of the aim of this study as part of this thesis. The codes are included in the Appendix XXV with the rest of the coded text however, they are not included as part of the results here. The codes derived from the data included: other implicit theories hypothesised to be held by the individuals who sexually abuse children such as *uncontrollability* and *nature of harm* (Ward & Keenan, 1999); *intimacy deficits* which referred to disruptions in healthy, adult relationships and inability to have closeness (Finkelhor, 1984; Ward et al., 2006); *change* in the perceptions of hostile world and children as sexual beings sub-constructs of the dangerous world implicit theory as well as change in the endorsement of nature of harm implicit theory (Ward & Keenan, 1999).

The presence of other implicit theories such as uncontrollability and nature of harm is in line with Ward and Keenan's (1999) hypothesis that individuals who sexually abuse children may hold one or more of the five key implicit theories. In addition, the cognitions expressed by Bob, which were classified as the intimacy deficits, are in line with the rest of the sexual offending against children literature. For example, in the early theories, Finkelhor (1984) argued that the concept of emotional congruence with children (labelled as *emotional congruence* sub-construct of dangerous world implicit theory here) is likely to function closely with blockage, where adult men are unable to have their sexual and emotional needs met through adaptive ways such as, relationships with adults (Finkelhor & Araji, 1986). In addition, Marshall (1989) also previously drew attention to the importance of emotional loneliness as a consequence of the inability to achieve intimacy in adult men, which may lead to seeking sexual relationships with children. The change in Bob's attitudes and perceptions of the world and other people, including children and his offending behaviour was prominent

throughout and towards the end of the interview, in particular. This was not particularly surprising considering the number of treatment programmes and community support he received whilst in the prison and during probation, prior and at the time of this interview.

Chapter Discussion

The aim of this single-case-study (Yin, 2018) was to qualitatively examine the conceptualisation of the dangerous world implicit theory (Ward & Keenan, 1999), incorporating the examination of the role of ACEs in relation to the development of cognitive distortions (Grady et al., 2016), with an individual who had a history of sexually abusive behaviour against children. As a result of the analytic approaches in this study, I examined the theoretical propositions of (1) the concept of the dangerous world implicit theory with four sub-constructs and (2) the ACEs as an explanatory factor for developing cognitive distortions that may lead to sexually abusive behaviour against children (Grady et al., 2016; Ward, 2000; Ward & Keenan, 1999), using pattern matching and explanation building analytical techniques (Yin, 2018). Five categories of coded text included the retrospective self-report of experiencing adversities during childhood (ACEs), and the three out of four sub-constructs of the dangerous world implicit theory: hostile world, emotional congruence, and children as sexual beings. The evidence in this case study suggested a *lack* of tendency to seek retribution for others's behaviour who were perceived as threatening, untrustworthy, and abusive.

The Conceptualisation of the Dangerous World Implicit Theory

In terms of the conceptualisation of Bob's endorsement of the dangerous world implicit theory, only three of the four dangerous world implicit theory sub-constructs appeared to be present for Bob: hostile world, emotional congruence, and children as sexual beings. The endorsement of *hostile world* sub-construct of the dangerous world implicit theory was present as Bob perceived the world as a threatening place where other people

were abusive and rejecting. Bob's description of the world was a fearful place and he described other people as 'bullies' who were controlling him. He felt threatened, intimidated, controlled, and rejected by the people around him. Bob also recalled several times that he struggled to trust other people and to have trusting relationships particularly with women. According to the findings in this case study, Bob's negative perception of the world and other people was marked by fear and isolation in a dangerous and threatening world, in combination with his frustration.

The findings from this case study also showed Bob's endorsement of *emotional congruence* sub-construct of the dangerous world implicit theory. Unlike his negative perception of other adults, Bob particularly felt safer and more accepted by children. Bob expressed that he did not feel threatened by children like he did by other adults. According to Bob, children were loving, caring, and dependable. He clearly expressed that he *liked* being around children and he had preferred to be around children than adults. Further, the results from this case study indicated Bob's endorsement of *children as sexual beings* sub-construct of the dangerous world implicit theory. Bob expressed his—retrospective—positive views around sex with children. According to Bob, having sexual engagement with children was a loving relationship and was the norm. He used to believe that when he sexually engaged with children, they felt pleasure, happy, and loved.

Finally, in relation to the endorsement of *retribution* sub-construct of dangerous world implicit theory, the findings from this case study particularly indicated Bob's *lack* of tendency to fight against other people whom he perceived as abusive, threatening, and rejecting, where he had felt hurt by them. There was clear indication that Bob did *not* feel capable of fighting against other people and instead, he isolated himself both from other people in general and from forming and maintaining healthy sexual relationships with adults.

Comparison of Rival Theoretical Propositions

As identified and explained above, Bob's endorsement of a dangerous world implicit theory could be meaningfully categorised into three of the sub-constructs. The findings from this case study indicated that Bob held a perception of the world as a dangerous place and saw other people, including women, as threatening and abusive. However, Bob lacked a tendency to seek retaliation against other people whom he viewed as controlling. In other words, the findings did not suggest any evidence of endorsing the necessity to fight back and retaliate against others. Instead, Bob used to be fearful around other people, did not feel capable of fighting back and usually isolated himself. Following from this avoidance of seeking retaliation, Bob felt safer around children; he perceived children as loving, dependable, and caring. He enjoyed being in the presence of children where he also perceived engaging with children sexually as normal and not abusive. To him, sex with children was a way of showing love and was an act of reciprocal care. As a result, there was evidence of Bob holding the three sub-constructs: hostile world, emotional congruence, and children as sexual beings. The evidence suggested a lack of endorsement of retribution sub-construct.

The theoretical proposition of dangerous world implicit theory in two versions as hypothesised by Ward and Keenan (1999) was the rival proposition offering an alternative conceptualisation of the concept. In Bob's case, his endorsement of the dangerous world implicit theory was consistent with the second version of the theory as conceptualised by Ward and Keenan (1999). According to Ward and Keenan's (1999) conceptualisation, the first version of the dangerous world implicit theory consisted of the perception of the world and other people as dangerous, threatening, and rejecting. The first version also involves the tendency or the willingness to fight back and punish people—women and/or children—who are seen as abusive and threatening in order to gain control and dominance over them.

Sexually abusive behaviour in the first version of the dangerous world implicit theory represents a way of seeking retribution for other people's hostile and threatening behaviour.

The second version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999) similarly involved the perception of the world as dangerous and other people as threatening and abusive. However, unlike the first version, children are not perceived as threatening and rejecting. Instead, children are seen as reliable, dependable, accepting, and loving. Similar to the first version, adults in the second version are seen as threatening and untrustworthy. However, unlike the first version, individuals holding the second version of the dangerous world implicit theory do not believe that they are capable of seeking retribution such as, fighting back and punishing others whose intentions are perceived as malevolent. Whilst children are seen as loving and caring, individuals holding the second version of the dangerous world implicit theory also believe that children are capable of understanding and satisfying their sexual desires.

The findings from this case study indicated that Bob's endorsement of the dangerous world implicit theory was also consistent with the second version and could be meaningfully categorised in line with Ward and Keenan's (1999) two-version conceptualisation. This provided evidence supporting the two-version conceptualisation of the dangerous world implicit theory, as hypothesised by Ward and Keenan (1999). As Yin (2003) suggested, the main aim of pattern-matching is not to confirm or object to the predicted proposition, rather to build explanations about why the patterns did or did not match. Yin argued that it is the process of building explanations that results in support for or the modification of the theory or conceptual framework that underpins the study.

Whilst the case study data supported the two-version conceptualisation as hypothesised by Ward and Keenan (1999), using the concept of dangerous world implicit theory with four sub-constructs as I argued specified the multiple dimensions within a single

version. In this case study, the findings could be categorised under three sub-constructs: hostile world, emotional congruence, and children as sexual beings, forming the second version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). Morever, lack of retribution sub-construct indicates an overlap with Ward and Keenan's hypothesis of a dangerous world implicit theory, version two, where unlike the first version, individuals holding the second version are not capable of fighting back and seeking retribution for others' behaviours, perceived as hostile and abusive. I argue that it is more practical to look for presence or lack of each dimension (i.e., sub-construct) within the concept of the dangerous world implicit theory than to look for an entire theory which is consisted of multiple dimensions. Although the concept of dangerous world implicit theory with two versions was still meaningful and applicable in this case study, using a multi-dimensional conceptualisation of the dangerous world implicit theory with four sub-constructs is a more precise approach that enables to operationalise the concept.

Aetiological Framework of ACE and Dangerous World Implicit Theory

From what Bob described as his childhood, there was robust evidence that he had experienced several forms of childhood adversities including physical and emotional violence perpetrated repeatedly by his father, witnessing physical violence directed at his mother by his father, being exposed to his father's drinking problem, victimisation as well as rejection by his peers at school, and sexual abuse by other adults known to the family members. Findings from this study indicated that Bob's childhood was characterised by his fear and anxiety at home as well as at school, as a consequence of his victimisations by his father, peers, and teachers at school, in addition to the confusion as a consequence of his own sexual victimisation when he was a child.

The research into the examination of childhood histories of individuals who committed sexual offences against children is not new to the literature (Seghorn, Prentky, &

Boucher, 1987; Tingle, Barnard, Robbins, Newman, & Hutchinson, 1986; Ward et al., 2000).

Overall, research evidence in the literature in relation to the ACEs among individuals who

sexually abused children showed that these individuals had poor relationships with parents

and with peers, had experienced physical and/or sexual abuse as well as domestic violence in

general (Prentky et al., 1989; Seghorn et al., 1987; Tingle et al., 1986). The findings from this

case study was in line with the overall research evidence existing in the literature. For

example, similar to Tingle et al.'s (1986) findings, Bob experienced poor relationships with

his parents and more so, with his father. He also reported experiencing physical abuse by his

father repeatedly, which was also the same for his mother. In addition to these, Bob also

reported his difficulties in relation to the conflict at school with his peers similar to Tingle et

al.'s (1986) findings. Bob's experiences of sexual abuse in childhood was also in line with

earlier research findings in the literature (Seghorn et al., 1987; Tingle et al., 1986). Similarly,

Marziano et al. (2006) also found that individuals who were convicted of sexual offences

against children who also reported childhood sexual abuse endorsed significantly more

dangerous world implicit theory than the ones who did not experience childhood sexual abuse

victimisation themselves. Therefore, Bob's overall endorsement of dangerous world implicit

theory together with his childhood sexual abuse history was a consistent finding with

Marizano and his colleagues' (2006) findings.

In the literature, Grady et al.'s (2016) theoretical framework suggests that ACEs can

act as a casual factor in the development of insecure attachment styles and cognitive

distortions in relation to sexual abuse against children. Similarly, Ward et al. (2000) argues

that ACEs can both lead to the ability to infer mental states (i.e., theory of mind) to be

compromised and that these adversities can lead to the development of insecure attachment

styles and other criminogenic needs. In addition to these, over two papers (Ward, 2000; Ward

& Keenan, 1999), the implicit theories, including the dangerous world implicit theory as

examined in this thesis, were hypothesised to be a consequence of experiences from early childhood years. In summary, the theoretical propositions in the literature suggests that ACEs may be a causal factor in sexual offending behaviour against children, through several other concepts that increase the risk of offending such as, insecure attachment styles and/or cognitive distortions, deficits in victim empathy, social skills, intimacy and relationship skills, and others (Grady et al., 2016; Ward et al., 2000).

The findings from this case study demonstrated the presence of multiple ACEs in Bob's past and how these experiences may have shaped his beliefs about other people and the world in general. For example, Bob reflected back on his victimisation by the teachers at his school and interpreted this as one factor that had an impact on how he perceived other people from an early age. According to Bob, these experiences made him distrust other people, indicating that childhood victimisation shaped his view of other people as untrustworthy. In addition, he also explicitly expressed that his dislike of being around people in his adulthood was a consequence of his childhood, which resulted in perceiving other people as threatening. In another instance during the interview, Bob also referred back to his childhood when he was asked about where his view of other people as threatening and controlling stemmed from when people used to tell him what to do. Overall, there were several occasions during the interview where Bob explained his perception of the world and other people as dangerous, hostile, threatening, untrustworthy, and controlling was a consequence of his childhood.

The implicit theories are hypothesised to be criminogenic and are thought to play a causal or maintaining role in sexual offending against children (Ward, 2000; Ward & Keenan, 1999). Whilst acknowledging the potential role of other factors (e.g., other implicit theories or insecure attachment; Grady et al., 2016; Ward, 2014), Bob's endorsement of the dangerous world implicit theory could be one factor that facilitated and helped maintain his past sexual offences against children. In addition to this, the findings from this case study

indicate a similar pattern to the findings from the two-wave study in Chapter Five, which

suggested a predictive role of ACEs in the development of dangerous world implicit theory

sub-constructs. For example, in the first wave of the two studies in the previous chapter, ACE

was a significant predictor of the hostile world sub-construct of the dangerous world implicit

theory. Similarly, in this chapter, the findings indicated that Bob's adverse and potentially

traumatic childhood experiences shaped his world view and other people as dangerous,

threatening, and untrustworthy.

Other than his endorsement of hostile world sub-construct of dangerous world

implicit theory that he associated with his adverse childhood experiences, Bob also

mentioned that his perception of sex with children was a concept that he understood as

'normal' from his own history of sexual abuse victimisation. On that occasion during the

interview, he explained that despite knowing that his sexual engagement as a child with

adults and other children was 'wrong' he perceived it as fun, enjoyable, and as being loved.

This suggested that his endorsement of children as sexual beings sub-construct of dangerous

world implicit theory may have been developed as a consequence of witnessing and

experiencing sexual interactions with adults when he was a child. Ward and Keenan (1999)

also argued that exposure to sexual activities at an early age can cause a child to believe the

normality of sexual engagement between adults and children.

According to Seto (2018) one approach to explain paedophilic interest is interpreting

it as a behavioural disorder where sexual interest and arousal in children is learned though

childhood sexual abuse. The abused-abuser hypothesis is one of the most intuitive

explanations of child sexual abuse that received attention (Kobayashi, Sales, Becker,

Figueredo, & Kaplan, 1995). Although the evidence base for the link between childhood

sexual abuse and sexual offending against children later in life is rather mixed and

complicated (e.g., Salter et al., 2003; Widom & Massey, 2015), there were studies which

suggested an association between sexual abuse history and later sexual offending, where individuals who committed sexual offences including against children were more likely to have experienced childhood sexual abuse victimisation themselves (e.g., Seto & Lalumière, 2010; Jespersen, Lalumière, & Seto, 2009). Similar to any other single-factor explanations of child sexual abuse (e.g., cognitive distortions, Dangerfield et al., 2020; Ward & Keenan, 1999), a history of sexual abuse victimisation is neither a necessary nor a sufficient sole factor determining sexual offending behaviour against children (Seto, 2018). However, despite some progress made towards better understanding the neurodevelopment aspect of paedophilia (e.g., Dyshniku, Murray, Fazio, Lykins, & Cantor, 2015), Seto (2018) highlighted the gap in our understanding of the association between childhood sexual abuse and sexual offending against children—or the development of paedophilia—later in life. Therefore, Bob's self-reflections on the associations between his history of sexual abuse and his sexual offending against children later in life, as shown in this case study, cannot be dismissed.

The evidence for the role of ACEs in the development of perception of children as sexual beings in this case study was not as strong as the evidence for the development of perception of hostile world. Although childhood sexual victimisation was not specifically examined as a predictor of the dangerous world implicit theory sub-constructs, the two-wave study in the previous chapter did not indicate an association between ACEs and the children as sexual beings sub-construct. Nevertheless, it is worth noting Bob's self-reported perception in relation to sexual engagement with children. Finally, the ACE was also a significant predictor of the retribution sub-construct of the dangerous world implicit theory in the first wave of the two studies in the previous chapter. However, as explained above, there was no evidence of Bob's endorsement of retribution seeking for others' threatening and abusive behaviours towards him. This suggests that there may be other factors that played a

part in shaping how he responded to the outside world such as, by isolating himself instead of fighting back and punishing other people.

Strengths of the Single-Case Study in Examining the Conceptualisation of the Dangerous World Implicit Theory

Case study research is usually—misleadingly—perceived as a more useful research practice in the preliminary stages of any research, that it cannot provide reliable knowledge into the phenomenon studied in a broader sense, and that it lacks generalisability (Abercrombie, Hill, & Turner, 2006; Flyvbjerg, 2006). The current case study is already based on theoretical propositions rather than being treated as a pilot study to generate hypothesis, and this enables the examination of both the construct validity and the conceptualisation of the dangerous world implicit theory (Yin, 2018). It also provides in-depth information about the phenomenon in a broader sense. For example, the data from the semi-structured interview with Bob shows that his expressed cognitions could be meaningfully categorised into concepts relevant to sexual offending behaviour against children. While I did not present an in-depth discussion of the concepts relevant to sexual offending behaviour against children beyond the ones under investigation (i.e., ACEs and dangerous world implicit theory), there is in-depth information about the child sexual abuse phenomenon in this case study.

Using pattern matching between the theoretically driven predicted patterns and the empirically-found patterns helped to highlight the strengths and limitations of the underpinning theoretical framework of the dangerous world implicit theory, in particular (Ward, 2000; Ward & Keenan, 1999). As Yin (2018) argued, this approach indeed helps to enlighten the concept of dangerous world implicit theory which could facilitate both the understanding of the concept and its operationalisation. As a result of the pattern matching in this study, the conceptualisation of the dangerous world implicit theory in addition to what

Ward and Keenan (1999) hypothesised is clarified and enriched. For example, the findings suggests that the concept of a dangerous world implicit theory does not simply mean to hold all four sub-constructs (i.e., hostile world, retribution, emotional congruence, and children as sexual beings) as identified in the four-factor model of the dangerous world implicit theory in Chapters Three and Four. It appears possible to hold the dangerous word implicit theory with the presence of some of the sub-constructs and lack of others.

This approach helped clarify the conceptualisation of the second version of the dangerous world implicit theory as introduced by Ward and Keenan (1999). In a multi-dimensional model of dangerous world implicit theory, the *lack* of retribution whilst endorsing hostile world, emotional congruence, and children as sexual beings sub-constructs would be equally representative of the second version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). In other words, this combination of endorsement of sub-constructs would represent the second version of the dangerous world implicit theory which involves perception of the world as a dangerous place, feeling safer with children and thinking that it is okay to have one's sexual needs met by children, without feeling capable to fight back to punish other people in order to achieve dominance and control over them (Ward & Keenan, 1999).

When working with forensic clients, case formulation is seen as an important and crucial tool (Eells, 2007; Wilcox, Garrett, & Harkins, 2015). Case formulation incorporates a structure into treatment practice, which provides a more in-depth understanding of the clients, beyond what their offending behaviour involved. Instead, effective case formulation incorporates causal factors that may have contributed to the client's offending behaviour, how offending behaviour emerged and progressed, presenting issues, and protective factors. Moreover, it provides a theory, or an explanation for the clients' offending behaviour (Wilcox et al., 2015). This highlights the importance of identifying the individual needs for

people receiving psychological treatment programmes in relation to their sexually offensive

behaviours. This is particularly important to be able to adopt appropriate means of

psychological intervention for the clients. For example, if a practitioner is concerned about a

client holding an implicit theory, or a dangerous world implicit theory, then findings from

this case study may help unpack, or shed some light to what kind of sub-constructs an

abstract concept of a dangerous world implicit theory could involve in individual cases.

Limitations

The limitation for this case study is its inability to infer any statistical generalisability

of the findings about a population (Yin, 2003). One of the biggest concerns about case study

research is the obvious inability to generalise from a single case study (Yin, 2018), and yet,

generalisability has been one of the biggest misunderstandings about case study research in

the literature (see Flyvbjerg, 2006). It has been made clear in the literature that case study

research does not aim to generalise probabilities (Yin, 2018) and such statistical

generalisation is irrelevant to case study research and therefore, should be avoided (Yin,

2010). Yin (2018) recommended that the 'case' is an "opportunity to shed empirical light on

some theoretical concepts or principles" (p. 38), rather than being classified as a 'sample'.

The aim of this case study was to engage in *analytic generalisation* (Yin, 2010; 2018).

According to Yin (2018), analytic generalisation refers to generalising conclusions drawn

from the case study at a 'conceptual level', which is different from inferring generalisations

in relation to population characteristics. In other words, analytic generalisation involves an

examination of whether findings strengthen or challenges the way a theory has been

constructed (Yin, 2010), or may be in the form of challenging, changing, rejecting, or

advancing the theoretical concept examined (Yin, 2018). This case study, therefore, may

provide insight for the conceptualisation of a dangerous world implicit theory, rather than

drawing statistical probabilities of the endorsement of a dangerous world implicit theory for a

group of people. The findings from this case study supported the second version of the concept of dangerous world implicit theory and there was not adequate information in order to provide analytic generalisation for the first version of the dangerous world implicit theory, as conceptualised by Ward and Keenan (1999).

Chapter Summary

In this chapter, the conceptualisation of the dangerous world implicit theory was examined by comparing two theoretical propositions: the four-factor model and the two-versions model of dangerous world implicit theory (Ward & Keenan, 1999). The findings from the single-case-study indicated that the offence-supportive beliefs could meaningfully be classified within the four-factor model of dangerous world implicit theory, where it was possible to capture the presence or lack of each sub-construct. However, the findings should not be misinterpreted as lack of evidence for the conceptualisation of the dangerous world implicit theory as hypothesised by Ward and Keenan (1999). Instead, a four-factor model of dangerous world implicit theory supported Ward and Keenan's (1999) hypothesis. In other words, findings from this single-case-study provided qualitative support for the second version—but not the first version—of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). However, the four-factor multidimensional model of the dangerous world implicit theory that I argued and examined in the previous chapters provided more precise context for the sub-constructs that is embedded within the second version of the dangerous world implicit theory: hostile world, emotional congrunence, and children as sexual beings.

The second qualitative examination in this chapter was the role of ACEs in the development of dangerous world implicit theory, based on the aetiological framework by Grady et al. (2016). The findings appeared to support that the development of the hostile world sub-construct of the dangerous world implicit theory; the perception of the world and

other people as dangerous, hostile, and threatening could be a consequence of the adversities experienced in early developmental years (Ward, 2000; Ward & Keenan, 1999). This interpretation of the findings was in line with the results from the previous two-wave studies in Chapter Five. The findings also suggested that a similar role of ACEs could be present in the development of the perception of children as sexual beings, unlike the findings from the two-wave studies in the previous chapter. However, this needed to be taken with caution as the evidence for the role of ACE in the development of the perception of children as sexual beings was less strong than it was for the development of perception of the world as a dangerous and threatening place.

CHAPTER SEVEN

General Discussion

Chapter Overview

In this thesis, I investigated and discussed the conceptualisation of the dangerous world implicit theory using different methodologies and research designs. The main aim of this thesis was to unpack and examine the concept of dangerous world implicit theory as conceptualised by Ward and Keenan (1999). Whilst Ward and Keenan (1999) hypothesised that the dangerous world implicit theory manifests in two forms, throughout this thesis, I argued that the concept of dangerous world implicit theory can be conceptualised as a multi-dimensional construct. Moreover, in the previous chapter, I argued that different combinations of the dimensions involved in the dangerous world implicit theory could represent the second version as described by Ward and Keenan (1999). For example, the case study findings suggested that the endorsement of hostile world, emotional congruence, and children as sexual beings, but a lack of retribution sub-construct represented the conceptualisation of the second version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999).

In this chapter, I recap the limitations and the gaps in relation to the dangerous world implicit theory in the literature and provide an overall summary of the empirical work and the findings presented throughout earlier chapters in this thesis. I then discuss the findings from the studies presented in this thesis in relation to the existing research in the literature. Next, I propose an alternative theoretical framework that can be seen as a combination of both my arguments (which some are empirically examined in this thesis) and Ward and Keenan's (1999) theoretical conceptualisation of the dangerous world implicit theory. Finally, I present the practical implications of the findings as well as the limitations and the recommendations for future research.

Introduction

The cognition of individuals who sexually offend against children has been one of the focal points of aetiological explanations of sexual offending behaviour against children (see Dangerfield et al., 2020; Ó Ciardha & Ward, 2013). Thus, many of the theories which attempt to explain child sexual abuse involve a cognitive aspect (e.g., Abel et al., 1984; Finkelhor, 1984; Ward, 2000; Ward & Kenan, 1999; see Ward et al., 2006). The cognitive element of theories explaining sexual offending behaviour against children suggest that the way individuals who sexually abuse children think may be an explanatory factor in their offending behaviour. In addition, these cognitions must be, in some way, distorted, deviant, or offence-supportive (Gannon et al., 2007; Gannon & Wood, 2007). The concept of cognitive distortions has been criticised as very broad and cumbersome in explaining offender cognition (Gannon & Polaschek, 2006; Ó Ciardha & Ward, 2013). However, Ó Ciardha and Ward (2013) argued that the term still represents important offence-related concepts and is used widely in the sexual offending literature. According to Ó Ciardha and Ward's (2013) description, cognitive distortions refer to beliefs or attitudes that contradict accepted social norms which are found to be associated with the sexually offending behaviour.

The implicit theories theory (Ward, 2000; Ward & Keenan, 1999) has been an influential single-factor theory in the sexual offending against children literature (Dangerfield et al., 2020; Ó Ciardha & Ward, 2013; Ward et al., 2006). In two articles, Ward (2000) and Ward and Keenan (1999) introduced a theoretical framework of cognitive distortions in which individuals who sexually offend against children develop different sets of beliefs—like schema—which are hypothesised to be causal beliefs that underpin the cognitive distortions—or the distorted thinking—expressed by these individuals. Ward and Keenan (1999) introduced five key implicit theories that are prevalent among individuals who

sexually offend against children. These five implicit theories are entitlement, uncontrollability, nature of harm, dangerous world, and children as sexual beings implicit theory (Ward & Keenan, 1999).

According to Ward and Keenan (1999), the dangerous world implicit theory is based on a core belief which involves the perception of the world as a dangerous and hostile place. Whilst Ward and Keenan (1999) hypothesised two variants of the dangerous world implicit theory, both versions were conceptualised as two different manifestations of perceiving, understanding, and interpreting individuals' social interactions based on the core belief of the world as a dangerous place. The first version of the dangerous world implicit theory involves both the perception of the world as a dangerous place and other people's behaviours as malevolent, abusive, and rejecting. Individuals holding the first version of the dangerous world implicit theory perceive other people as threats to their authority and in order to achieve dominance and control over them, the individual may punish women or children by sexually abusing them. The first version of the dangerous world implicit theory consists of the belief that it is necessary to fight back and seek retribution for other people's threatening behaviours. Accordingly, in the first version of the dangerous world implicit theory, individuals believe that they are capable of fighting back and seeking retaliation in order to protect and strengthen their position against other people who are seen as threatening (Ward & Keenan, 1999).

Similar to the first version, in the second version of the dangerous world implicit theory, the core belief involves the perception of the world as a dangerous and threatening place. However, according to Ward and Keenan's (1999) conceptualisation, individuals perceive children as more accepting, reliable, loving, and caring than adults. Unlike other adults, who are perceived as threatening and malevolent, children are seen as safer and more dependable. In addition, individuals holding the second version of the dangerous world

implicit theory believe that children can understand and enjoy sexual engagement with adults. Individuals holding the second variant of the dangerous world implicit theory are hypothesised to believe that children can understand their sexual needs and desires and that children can meet their expectation to be loved and cared for. Another aspect that differentiates the second version of the dangerous world implicit theory from the first is that individuals holding the second version do not believe that they are capable of fighting back and seek retaliation for other people's abusive and malevolent behaviours (Ward & Keenan, 1999).

According to Ward (2000) and Ward and Keenan (1999), these implicit theories are hypothesised to develop as a result of early developmental experiences. Ward (2000) argued that these implicit theories help structure the way individuals perceive and interpret the world, themselves, and other people. Ward and Keenan (1999) acknowledged that not all individuals who sexually offend against children hold all or the same implicit theories. In addition, Ward and Keenan (1999) argued that not all individuals who may hold the implicit theories will sexually offend against children, emphasising the nature of their theory as single-factor, and that holding problematic cognitions is not sufficient to explain sexual offending behaviour against children. Ward and Keenan (1999) acknowledged that there could be other factors, such as insecure attachment styles, deviant sexual interest, deficits in intimacy or social skills that may contribute to the emergence of sexually abusive behaviour against children. However, the authors emphasised that holding implicit theories would still have a substantial role in sexual offending behaviour against children in which the implicit theories will shape how individuals interpret their world and other people's behaviours, resulting in maladaptive actions.

Although the perception of cognitive distortions as problematic thinking styles has been criticised in the literature (Auburn, 2010; Marshall, Marshall, & Kingston, 2011;

Maruna & Mann, 2006), the social cognition of individuals who sexually offend against children still received a great deal of attention and support (e.g., Ó Ciardha & Gannon, 2011; Ward et al., 2006) both empirically (e.g., Keown et al., 2010) and with theoretical work focused on cognitive distortions, or offence-supportive cognitions (Hartley, 1998; Mann & Beech, 2003; Neidigh & Krop, 1992; Ward, 2000; Ward & Keenan, 1999; Ward, Lauden, Hudson, & Marshall, 1995). The dangerous world implicit theory is the central focus of this thesis for multiple reasons. First, the dangerous world implicit theory is important enough to be thoroughly examined since it has been one of the most frequently hypothesised implicit theories among different offender groups (see Beech et al., 2005; Beech et al., 2009; Dempsey & Day, 2011; Gannon et al., 2012; Ó Ciardha & Gannon, 2012; Polaschek & Ward, 2002). Second, current psychometric tools assessing the cognitive distortions in relation to sexual offending against children were found to underrepresent the concept of dangerous world implicit theory (Gannon et al., 2009; Keown et al., 2010). As a result, the dangerous world implicit theory was not always included in the evaluation of research findings (e.g., Keown & Gannon, 2008). Third, research investigating the implicit theories theory usually treated the dangerous world implicit theory as a single (or unidimensional) construct (e.g., Keown et al., 2008), in spite of the conceptualisation by Ward and Keenan (1999), which they hypothesised two versions of the dangerous world implicit theory. Fourth, previous attempts to develop a scale (Howitt & Sheldon, 2007) conceptually did not cover the multi-faceted nature of the concept of dangerous world implicit theory as defined by Ward and Keenan (1999). Lastly, there has been limited attention in the literature to empirically examine the role of dangerous world implicit theory specifically in sexual offending behaviour against children as well as testing the underlying mechanism, such as early adverse experiences that may explain how holding a dangerous world implicit theory may be developed.

Summary of Findings

The first two studies (described in Chapter Two) were online studies using community samples which aimed to examine the associations between dangerous world implicit theory and four conceptually overlapping psychological constructs: hostile attribution bias (Dodge, 1980), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984; McPhail et al., 2014), and the children as sexual beings implicit theory (Ward & Keenan, 1999). In these two studies, four vignettes were developed in order to unpack and depict the concept of dangerous world implicit theory, in which the degree of endorsement of the protagonists' cognitions were used as a measure of holding the dangerous world implicit theory. The first of these studies involved an opportunity sample where participants of both genders were recruited through snowballing techniques. In the second study, the limitations of the first study in relation to the sample characteristics were addressed and the community sample consisted of males and UK residents only.

The findings from the first of these two studies suggested that there were considerable similarities between the parts of the dangerous world implicit theory and hostile sexism (Glick & Fiske, 1996), emotional congruence with children (McPhail et al., 2014), and children as sexual beings implicit theory (Ward & Keenan, 1999). However, the findings did not indicate strong evidence for an association between the dangerous world implicit theory and hostile attribution bias. This finding was consistent over two studies, even after two different hostile attribution bias measurement tools were used.

The third empirical study (described in Chapter Three) aimed to unpack and explore whether the dangerous world implicit theory is a multi-dimensional concept using different analytical approaches. Instead of using dangerous world vignettes (Appendix I), I developed items (Appendix IX) that represented the description of the dangerous world implicit theory by Ward and Keenan (1999) and adopted factor analytic approaches to explore the multi-

dimensional structure of the concept, using a male community sample. The findings from this study indicated that there was empirical support for the concept of dangerous world implicit theory as a multi-dimensional concept and that there were four sub-constructs that represented the concept of the dangerous world implicit theory as articulated by Ward and Keenan (1999). These sub-constructs were labelled as hostile world, retribution, emotional congruence, and children as sexual beings.

The exploratory study was followed by the fourth study which consisted of a number of variables, which some were described and analysed in Chapter Four and others in Chapter Five. As part of the Chapter Four, I first developed additional items for the children as sexual beings sub-construct and confirmed the four-factor multi-dimensional model of dangerous world implicit theory with an independent, male community sample. I then examined the associations between the four dangerous world implicit theory sub-constructs and the other four psychological constructs: hostile attribution bias (Dodge, 1980, 2006), hostile sexism (Glick & Fiske, 1996), emotional congruence with children (McPhail et al., 2014), and children as sexual beings implicit theory. In Chapter Four, I examined the same associations among the same constructs in Chapter Two, using a different measurement tool for the dangerous world implicit theory as well as a different statistical analysis approach (i.e., SEM).

The results in Chapter Four were similar to the findings in Chapter Two. Three of the four psychological constructs (hostile sexism, emotional congruence with children, and children as sexual beings) were positively and substantially associated with the three dangerous world implicit theory sub-constructs (retribution, emotional congruence, and children as sexual beings, respectively). However, the results for the association between the hostile world sub-construct of the dangerous world implicit theory and hostile attribution bias was counter-hypothetical. The findings did not indicate strong evidence for a positive

association between these two constructs, which was, again, opposite to one of the central

hypotheses of this thesis. This finding was consistent, even after using a different

measurement tool for the dangerous world implicit theory (i.e., item-based questionnaire

instead of dangerous world vignettes, which were used in Chapter Two).

In Chapter Five, I examined a possible underlying mechanism of sexual offending

behaviour against children quantitatively with a two-wave study, where male community

participants self-reported their proclivity or lifetime incidence of sexually abusive behaviour

against children. I examined the development of holding dangerous world implicit theory as a

result of adverse childhood experiences (ACEs) and whether these two variables were—

directly or indirectly—associated with the sexual offending behaviour in the adulthood. The

first outcome measure I developed for the first wave study did not indicate any variability

(i.e., there was not a meaningful number of participants who self-reported any offending

behaviour involving children). Therefore, only the proclivity to sexually offend against

children was examined in relation to the ACEs and holding dangerous world implicit theory.

The findings from the first wave study in Chapter Five indicated that the hostile world

and retribution, but *not* emotional congruence and children as sexual beings sub-constructs of

the dangerous world implicit theory were significantly predicted by the ACEs. Whilst only

the children as sexual beings sub-construct of the dangerous world implicit theory was a

significant predictor of proclivity to sexually offend against children for both contact

offences and access to CSEM measured in the first wave, there was no supportive evidence

for the dangerous world implicit theory explaining the link between the ACEs and the

proclivity to sexually offend against children.

In the second wave, I developed a second measure that aimed to capture lifetime

incidence of sexual offending behaviour against children by including items with more

precise description of problematic behaviours as well as allowing more variability in the

response options in order to address the limitations of the initial measure. This new measure was only developed after the first wave and therefore, data available was limited from the aspect of recording any change of sexual offending behaviours over time. It was only possible to evaluate the predictive role of ACE and the dangerous world implicit theory sub-constructs in any self-reported past problematic sexual behaviour since the age of 18, rather than a change in such behaviour over time. Only retribution and emotional congruence sub-constructs were significant predictors of the new self-report measure of past problematic sexual behaviour since the age of 18. Although my initial aim was not to examine any change in proclicity over time, data for two proclivity measures was available from both waves. The results showed that only emotional congruence sub-construct was a significant predictor of the relative change in two proclivity measures. Similar to the findings in the first-wave, there was little evidence that suggested dangerous world implicit theory explained a link from ACEs to any sexual behaviour involving children nor the ACEs was directly associated with such behaviours.

These findings from the two-wave study in Chapter Five indicated support for some parts of Grady et al.'s (2016) aetiological framework of sexual offending. In line with Grady et al.'s (2016) framework as well as Ward and Keenan's (1999) hypothesis, ACE was a significant factor in explaining the development of two dangerous world implicit theory sub-constructs. In particular, adversities during childhood were significant predictors of the perception of the world as a dangerous place where people are perceived as threatening and would deserve to receive retribution. Unlike the relationship between the ACEs and the development of the perception of the world and other people as threatening, dangerous world implicit theory sub-construct related to perceiving children as capable of engaging in sex with adults was associated with higher proclivity to consume CSEM and to sexually engage with children. Similarly, sub-construct representing emotional association with children was

associated with any past problematic sexual behaviour involving children as well as higher proclivity to consume CSEM and to sexually engage with children over time. These findings overall, indicate that ACE is a predictor of some but not all parts of the dangerous world implicit theory and similarly, some but not all parts of the dangerous world implicit theory seemed to be associated with proclivity or actual sexual abuse of children.

The final study, Chapter Six, was a qualitative single-case-study (Yin, 2003; 2018) on the examination of the ACEs as an underlying mechanism for the development of dangerous world implicit theory as well as the conceptualisation of the dangerous world implicit theory with four sub-constructs. The results from this chapter were qualitatively confirmatory for some of the previous findings. These included, the dangerous world implicit theory as a concept meaningfully represented with three sub-constructs: hostile world, emotional congruence, and children as sexual beings. In addition, the findings were meaningful for the conceptualisation of the dangerous world implicit theory where a combination of presence and lack of dimensions represented the second version that Ward and Keenan (1999) hypothesised. Although it was not possible to comment on the direct or indirect effects of the ACEs through dangerous world implicit theory on sexual offending behaviour against children like it would be in traditional quantitative statistical analyses, the results suggested that ACEs may be an explanatory factor in the development of how the world is perceived (Grady et al., 2016), such as the hostile world sub-construct of the dangerous world implicit theory, in particular (Ward & Keenan, 1999).

Theoretical and Practical Implications of Research

There are a number of implications of the research findings presented in this thesis, from several different aspects. The findings support my argument that the dangerous world implicit theory is a multi-dimensional construct. Not only is it a multi-dimensional construct because Ward and Keenan (1999) hypothesised it in two versions, the findings show that the

dangerous world implicit theory is a multi-dimensional concept where it consists of four different sub-constructs, labelled as hostile world, retribution, emotional congruence, and children as sexual beings. The implicit theories theory (Ward, 2000; Ward & Keenan, 1999) has been very influential in the sexual offending literature that further theories or models (e.g., the integrated model of risk and aetiology, Beech & Ward, 2004; an integrated theory of sexual offending; Ward & Beech, 2006), or rehabilitation models (e.g., an implicit theory approach to challenge cognitive distortions; Drake et al., 2001; the good lives model of treatment; Ward & Gannon, 2006; Ward et al., 2007) consist of the implicit theories framework of cognitive distortions. A practical implication of the findings presented in this thesis is that clinicians can identify specific psychological constructs that are embedded within the dangerous world implicit theory and assess the presence or absence of sub-constructs such as hostile world, retribution, emotional congruence, or children as sexual beings instead of the dangerous world implicit theory altogether.

The findings suggests that three psychological constructs, of which two are widely applied to sexual offending against children (i.e., emotional congruence with children, Finkelhor, 1984; McPhail et al., 2014, and children as sexual beings implicit theory, Mihailides et al., 2004; Ward & Keenan, 1999), and one is applied to sexual aggression towards adult women (i.e., hostile sexism, Glick et al., 2000; Glick & Fiske, 1996), have considerable similarities with parts of the dangerous world implicit theory. These repeatedly consistent findings using different measurement tools, analytical approaches, and samples suggest that the concept of dangerous world implicit theory partly involves constructs similar to the constructs which are already established and have robust empirical evidence in sexual aggression literature (e.g., Mann et al., 2010; Masser et al., 2006; Mihailides et al., 2004). Whilst any association among emotional congruence with children (Finkelhor, 1984), the children as sexual beings implicit theory, and the dangerous world implicit theory (Ward &

Keenan, 1999) is important and anticipated, the similarity between retribution sub-construct of the dangerous world implicit theory and hostile sexism (Glick & Fiske, 1996) is particularly important to draw attention to. Initially, I argued that perception of the world as well as other people as hostile (and seeking retribution against threatening people) *and* holding negative attitudes against women were two of the concepts that the dangerous world implicit theory would involve. However, findings from factor analyses showed that perceiving the world as well as other people as hostile is a separate construct from retributing against their abusive behaviours. These two referred to as the hostile world and retribution sub-constructs of the dangerous world implicit theory. In addition, while retrtibution sub-construct represented the endorsement of seeking retribution against malevolent people, the similarity with hostile sexism suggests that either some of the items within the retribution sub-construct depicts negative perception of women including their behaviour and intentions, which is similar to hostile sexism (Glick & Fiske, 1996), or that hostile sexism may be nested within the construct of retribution. In other words, endorsement of punishing women as a result of their threatening behaviour may be a part of a more generic tendency to punish anyone–regardless of their gender–in order to achieve dominance or control over them.

The findings in this thesis provide supportive evidence of an association between cognitive distortions associated with sexual offending against children (Ward & Keenan, 1999) and hostile attitudes toward women which is associated with sexual violence against women (Abrams et al., 2003; Glick & Fiske, 1996). The consistent findings in this thesis suggest that hostile sexism is associated with factors that play a role in sexual offending behaviour against children. However, despite this association between hostile sexism and factors related to sexual offending against children, it is still unclear what kind of role hostile sexism has in relation to such sexually offending behaviour. For example, the association between perceiving women as malevolent and untrustworthy and sexual violence against

women is established in the literature (e.g., Abrams et al., 2003). However, seeing women as

threatening and untrustworthy *may* equally lead to seeking out intimacy and sex with children

as a consequence of the inability to interact and connect with women and simultaneously

perceiving children as safer and easier to relate to (Finkelhor, 1984; Marshall, 1989).

Although the role of hostile sexism has not received much attention in child sexual abuse

research, it has sometimes been referred to as a potential dynamic risk factor associated with

insecure attachment styles (Berlin & Cassidy, 1999, as cited in Marshall & Marshall, 2017).

Therefore, researchers and clinicians working with clients who sexually abuse children could

pay attention to the potential role of hostile attitudes towards women and that hostile sexism

may be another dynamic risk factor embedded within holding dangerous world implicit

theory (Marshall & Marshall, 2017; Thornton, 2002).

Unlike the associations between psychological constructs which are common in

sexual offending literature such as hostile sexism (Glick & Fiske, 1996), emotional

congruence with children (McPhail et al., 2014), children as sexual beings implicit theory

(Ward & Keenan, 1999), and the concept of dangerous world implicit theory, the findings

suggest that there is little if any association between the concepts of hostile attribution bias

and the dangerous world implicit theory. Hostile attribution bias refers to the biased

interpretation of other people's behaviours in a hostile way, even if the social situation is

benign or ambiguous (Copello & Tata, 1990; de Castro et al., 2002; Dodge, 1980; Yeager et

al., 2013). Despite the face validity between the concept of hostile attribution where

individuals interpret other people's actions in a hostile way, even if there could be other

benign explanations and the perception of the world as a dangerous place, where other people

are perceived as threatening, rejecting, and with malevolent intentions as in hostile world

sub-construct of dangerous world implicit theory (Ó Ciardha, 2017), the re-occurring findings

in this thesis suggest lack of evidence of any major overlap between hostile attribution bias (Dodge, 1980) and dangerous world implicit theory (Ward & Keenan, 1999).

One potential explanation for these findings could be any differences between the measurement tools used to assess both concepts. However, this potential explanation is rather a weak account for this lack of similarity, particularly after this relationship is examined over multiple studies, with different samples, and using different measurement tools. This, then, *may* indicate a conceptual difference between hostile attribution bias and dangerous world implicit theory. Despite the face validity as explained above, if the dangerous world implicit theory functions like a scientific theory (Ward & Keenan, 1999), at a more implicit level than cognitive products (e.g., surface level expressions of thoughts, attitudes, or beliefs; Ó Ciardha & Ward, 2013), and if explicit measurement tools of hostile attribution bias (e.g., SEIP-Q; Coccaro et al., 2016) reflect rather an expression of biased information processing, the way that these two constructs are defined and attempted to be measured may not be corresponding to their conceptual level. This may explain why none of the studies in this thesis show clear empirical evidence in support for the conceptual similarities between these two constructs. Therefore, researchers should be careful if assuming a measure of hostile attribution bias (e.g., Coccaro et al., 2016) satisfactorily measures the perception of the world as a dangerous place as conceptualised by Ward and Keenan (1999). Similarly, it would be useful for clinicians to view these two constructs as separate rather than as similar when working with clients.

The findings in this thesis address the gap in the literature in relation to the underrepresentation of dangerous world implicit theory within current psychometric tools assessing cognitive distortions. According to Gannon et al. (2009), the dangerous world implicit theory is one of the implicit theories with least representation across a number of established cognitive distortions questionnaires (Abel et al., 1989; Bumby, 1996; Lindsay et

al., 2007, as cited in Gannon et al., 2009; Nichols & Molinder, 1984, as cited in Gannon et al., 2009). Although validation with a forensic population is warranted as well as the existing room for improvement (see below for future research avenues), the results from two studies in this thesis provide a new item-based measure that aims to assess endorsement of dangerous world implicit theory (Ward & Keenan, 1999). This scale is not the first that assesses the dangerous world implicit theory or that is developed specifically to capture the dangerous world implicit theory. Howitt and Sheldon's (2007) C&SA questionnaire involved two sub-scales (world is hostile and children are reliable) with six items, representing the two versions of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999). However, their tool was limited in depicting the multi-dimensional structure of the dangerous world implicit theory. Therefore, the item-based questionnaire developed as a result of the examination of the conceptualisation of the dangerous world implicit theory in this thesis is unique and valuable for researchers in the field. When future research involves examination of the role of dangerous world implicit theory, this thesis provides a valuable and reliable alternative tool. This alternative tool developed in this thesis not only assesses the endorsement of the dangerous world implicit theory, but it does so by specifically identifying the endorsement of sub-constructs.

Another practical implication of the findings in this thesis is from the role of ACEs in the development of dangerous world implicit theory (Grady et al., 2016). The results suggest that adverse and potentially traumatic experiences in the childhood may have a significant role in the endorsement of hostile world and retribution sub-constructs of the dangerous world implicit theory. These findings provide empirical support for the importance of taking into account and understanding each individual's childhood experiences in order to better understand the aetiology of their cognitive distortions. This is particularly important for the perception of the world as a dangerous place and other people as threatening as well as with

the endorsement of seeking retribution against rejecting and abusive people in order to gain control and dominance over them. However, the findings do *not* suggest a developmental pathway between ACEs and the perception of children as safer and as sexual beings. This suggests there may be an interaction of multiple other factors in addition to ACE that shapes individuals' perception of children as safer and that sexual engagement with them is loving. Keeping that inconclusive finding with the aetiology of emotional congruence and children as sexual beings sub-constructs of the dangerous world implicit theory in mind, I argue that adversities in the childhood as a factor shaping individuals' distorted thinking where they interpret any situation and perceive any individual around them as hostile, dangerous, and threatening would not come as a surprise to practitioners working with individuals who behave in a sexually offending manner against children and endorse dangerous world implicit theory. This aspect of the findings is rather confirmatory of the theoretical frameworks available in the literature than it is ground-breaking.

These findings in relation to the association between the ACEs and the sub-constructs of dangerous world implicit theory must be interpreted with caution in relation to a causal explanation of the development of such cognitions. The findings provide evidence that is consistent with the possibility that ACEs may be a factor leading to the development of the dangerous world implicit theory. However, the same association could be in the opposite direction, where individuals hold sub-constructs of the dangerous world implicit theory and they make sense of their cognitions with adversities in the childhood as an explanation. Therefore, the interpretation of this evidence as ACE as a predictor of the dangerous world implicit theory would need to be supported with future research evidence demonstrating a causal effect of ACEs on the development of dangerous world implicit theory. The interpretation of these findings as ACEs leading to the development of cognitions such as dangerous world implicit theory is most likely assuming that ACEs occur early in the

childhood and that distorted cognitions such as dangerous world implicit theory are hypothesised to develop as a result of experiences in early childhood, which are then continue being shaped throughout years up until adulthood (Ward & Keenan, 1999).

A considerable part of this thesis involves using structural equation modeling (SEM) based analytic approaches (Chapters Three, Four, and Five). Confirmatory factor analysis (CFA) is known as one part of SEM. CFA particularly involves the relationship between observed variables (e.g., scale items) and underlying latent variables (i.e., factors), referred to as the measurement model (Brown, 2015). CFA is usually used as part of the psychometric evaluation of test instruments including scale development or construct validation, in order to examine the latent structures within questionnaires (Brown, 2015). Therefore, CFA is usually used to confirm (or, similarly, EFA is used to explore) the underlying dimensions of a measure consisted of a set of items (Brown, 2015; Fabrigar et al., 1999). In this thesis, I utilise the SEM approach incorporating an in-depth attention to and recognition of measurement models of constructs I examine (e.g., dangerous world implicit theory, hostile sexism, emotional congruence with children). In addition, I utilise this SEM based CFA approach relying on Mplus software (Muthén & Muthén, 1998 – 2017).

The preference for the Mplus software was due to two main reasons: first, Mplus is known for its user-friendly features with clearly expressed outputs, and second, some of the analytic features (e.g., estimation methods) are only available in Mplus (Brown, 2015) compared to other software (e.g., SPSS Amos, LISREL). As a result, part of the theoretical implications of the research findings in this thesis include a unique approach to studying the conceptualisation of an abstract construct, that is not directly observable, using advanced software and/or statistical approaches beyond the traditional methods (i.e., factor analysis in SPSS). These approaches are beyond calculating and using sum scores from measures, they allow us to take measurement error into account with every construct or every multi-variate

model that has been tested. The use of SEM-based analytic approaches in this thesis provides a thorough examination of how forensically relevant psychological constructs which are not directly observable, such as hostile sexism (Glick & Fiske, 1996) or emotional congruence with children (Paquette & McPhail, 2020), but particularly the concept of a dangerous world implicit theory (Ward & Keenan, 1999), are, and can be measured simultaneously examining their role in sexual offending behaviour against children and/or their associations with other psychological constructs. Therefore, this thesis provides a unique and thorough examination of the conceptualisation and operationalisation of dangerous world implicit theory, using advanced level analytic approaches. This will hopefully be useful for researchers who are interested in the concept of dangerous world implicit theory itself and/or as an example of how forensically relevant psychological constructs can be studied at a conceptual level using SEM-based approaches.

A Refined Conceptualisation of the Dangerous World Implicit Theory

From a theoretical aspect, this thesis thoroughly examines the theoretical conceptualisation of the dangerous world implicit theory by Ward and Keenan (1999). The findings from the empirical studies presented in this thesis support Ward and Keenan's (1999) conceptualisation of dangerous world implicit theory. In other words, the description of the dangerous world implicit theory as proposed by Ward and Keenan (1999) did not necessarily change as a result of the research findings presented in this thesis. However—and more importantly—the findings from a series of studies presented in this thesis indicate an empirically supported ground to refine the conceptualisation of the dangerous world implicit theory by detailing and unpacking the sub-constructs the dangerous world implicit theory is consisted of.

The quantitative findings support the multi-dimensional structure of the dangerous world implicit theory, where four sub-constructs were identified as hostile world, retribution,

emotional congruence, and children as sexual beings. Furthermore, using pattern matching technique (Chaper Six), the findings suggest that the concept of a dangerous world implicit theory did not simply mean to hold all four sub-constructs. It appears possible to hold the dangerous word implicit theory with the presence of some of the sub-constructs and lack of others. As a result, the conceptualisation of the second version of the dangerous world implicit theory as introduced by Ward and Keenan (1999) could also be explained by a combination of the hostile world, emotional congruence, and children as sexual beings sub-constructs. Moreover, the second version of the dangerous world implicit theory as conceptualised by Ward and Keenan (1999) would be equal to the *lack* of retribution whilst endorsing hostile world, emotional congruence, and children as sexual beings sub-constructs. In other words, this combination of endorsement of sub-constructs would represent the perception of the world as a dangerous place, feeling safer with children and thinking that it is okay to have one's sexual needs met by children, without feeling capable to fight back to punish other people in order to achieve dominance and control over them (Ward & Keenan, 1999).

The findings both from quantitative and qualitative findings in this thesis suggest which sub-constructs the second version of the dangerous world implicit theory would involve. Whilst there is not any particular empirical finding which suggests a multi-dimensional conceptual representation of the first version of the dangerous world, I propose an alternative theoretical framework of an *unpacked* multi-dimensional dangerous world implicit theory. According to this framework, different combinations of presence and absence of some sub-constructs also represent the two versions of the dangerous world implicit theory, as conceptualised by Ward and Keenan (1999). A visual representation of this alternative framework of dangerous world implicit theory can be seen in Figure 16.

It is likely that the hostile world sub-construct of the dangerous world implicit theory is expected to be present before any other sub-constructs, as it is also described as the *core belief* by Ward and Keenan (1999). However, endorsing only the *hostile world* sub-construct as the core belief would not necessarily indicate the presence of the dangerous world implicit theory altogether. In order to be able to argue the presence of (either versions of) the dangerous world implicit theory (Ward & Keenan, 1999), there will be a need for the presence of other sub-constructs of the dangerous world implicit theory such as, retribution, emotional congruence, or children as sexual beings. According to this framework, a combination of endorsing hostile world and retribution, and lack of endorsing emotional congruence and children as sexual beings sub-constructs would represent the first version of the dangerous world implicit theory. In other words, perceiving the world as a hostile and dangerous place, and other people as untrustworthy and threatening, combined with seeking retribution for other people's threatening behaviour would be a similar representation of the first version of the dangerous world implicit theory, in which individuals believe that the world is a dangerous place, other people have malevolent intentions, and may punish other people (including women and/or children) in order to fight back and achieve control over them. Similarly, a client may instead hold hostile world, emotional congruence, and children as sexual beings sub-constructs, but not retribution sub-construct, and this would represent the second version as hypothesised by Ward and Keenan (1999).

Following this thorough examination of the concept of a dangerous world implicit theory and the introduction of an alternative framework, it is important to clarify the role and importance of the dangerous world implicit theory itself. Although the findings presented in this thesis support the relevance of multiple constructs well-known in the sexual or aggressive offending literature to the concept of dangerous world implicit theory, the findings do *not* indicate redundancy of the dangerous world implicit theory altogether. For example,

whilst emotional congruence and children as sexual beings sub-constructs can be standalone concepts relevant to sexual offending to children, through a dangerous world implicit theory lens with hostile world, emotional congruence, and children as sexual beings sub-constructs may offer completeness of how an individual views not only sexual activities with children, but also the world and other people including children. This would otherwise not be possible if the sub-constructs are only aimed to be used individually. More importantly, the findings from the studies presented in this thesis would require replication and extension as well as application to offending samples before there could be the space and the evidence for a thorough discussion about whether or not the dangerous world implicit theory is redundant.

This framework helps enrich the concept of dangerous world implicit theory, which could facilitate both the understanding of the concept and its operationalisation. Different combinations of the four sub-constructs can be identified as representing one of the two versions of the dangerous world implicit theory. Therefore, this alternative framework provides a thorough identification of the dangerous world implicit theory, through which to understand each individual's treatment needs in relation to cognitive distortions.

Dangerous World Implicit Theory
Version I

Dangerous World Implicit Theory
Version II

HOSTILE WORLD

HOSTILE WORLD

RETRIBUTION

RETRIBUTION

EMOTIONAL
CONGRUENCE

EMOTIONAL
CONGRUENCE

CHILDREN AS
SEXUAL BEINGS

CHILDREN AS
SEXUAL BEINGS

Figure 16. Visual representation of how Ward and Keenan's (1999) two-version dangerous world implicit theory can be re-conceptualised involving four sub-constructs, highlighting the multi-dimensional structure. The The sub-constructs highlighted in yellow represent their presence and the shaded colours represent their lack of.

Limitations and Future Research Avenues

The empirical work in this thesis presents limitations and these areas provide important avenues for future research. The most obvious limitation of the quantitative studies presented in this thesis is that they consisted of community samples, where the majority of them involved UK-resident, adult men. The community samples are justified since Ward and Keenan (1999) argue that non-offending individuals may still hold implicit theories. However, the findings from quantitative studies which examine the development of an item-based tool to assess the endorsement of dangerous world implicit theory, in particular, needs to be replicated with a forensic population. Similarly, the two-wave longitudinal study is faced with a number of limitations, also relevant to the use of community samples. It is not surprising to find very low variance of self-reported past problematic sexual behaviour, which presents the difficulty in carrying out research on socially stigmatising and illegal subject matters using community samples, in addition to the imperfect representativeness of these samples.

From an aetological perspective, the relationship between ACEs and sexual offending behaviour through the perception of the world and other people as threatening and the endorsement of seeking retribution against malevolent individuals would require further investigation. The lack of any indirect effect of dangerous world implicit theory sub-constructs between ACEs and both self-reported past sexually abusive behaviour and the proclivity to access CSEM and to engage in sexually abusive behaviour against children may suggest that these sub-constructs of the dangerous world implicit theory on their own is not enough to explain such behaviours. Therefore, it strongly suggests that there may be other factors which have a role in the emergence of the sexually abusive behaviour against children such as, insecure attachment styles (Grady et al., 2016; Ward & Keenan, 1999). Marshall et al. (2011) criticise targeting cognitive distortions in treatment of individuals who commit

sexual offences and argue that the focus should instead be on acquisition of relationship

skills. Without completely dismissing the role of cognitive distortions in sexually offending

behaviour (Ó Ciardha & Gannon, 2011), which is also shown by the findings from the studies

presented in this thesis, future research should consider examining the interaction of a

number of factors along with cognitive distortions. For example, a combination of perception

of the world as hostile and retribution seeking attitudes as well as other factors such as,

deviant sexual interests, insecure attachment models (Ward & Keenan, 1999), or intimacy

deficits (Marshall, 1989) could explain the potentially causal pathway from adversities in the

childhood to sexually abusive behaviours later in life (Grady et al., 2016).

        The quantitative studies which were exploratory and confirmatory for the

development of the item-based dangerous world implicit theory tool were robust. However,

scale development is an iterative process (Tay & Jebb, 2017). Therefore, this thesis at its

current state is limited from the aspect of validation of the measurement tool developed for

the dangerous world implicit theory with a forensic population. The convergence validity of

the item-based tool for the dangerous world implicit theory with Howitt and Sheldon's (2007)

C&SA scale should also be examined. In addition to the need for validation of the scale with

a representative sample, the scale can also be improved for future use in research (DeVellis,

2017). For example, the number of items could be revised by excluding reverse coded items,

reducing the number of items to make it shorter as well as balancing the number of items in

each sub-construct. Moreover, a more representative sample in future studies could also be

used to test for a second-order CFA (Brown, 2015), in which the two versions of the

dangerous world implicit theory may be modelled as an underlying latent construct of

different combinations of current sub-constructs, although larger sample sizes with forensic

populations are harder to get. In other words, future quantitative research can aim to examine

the multi-dimensional structures of the two versions of the dangerous world implicit theory as

conceptualised by Ward and Keenan (1999). Testing for a second-order CFA involves psychometrically examining the role of sub-dimensions together indicating a common underlying construct, the dangerous world implicit theory.

Conclusions

Ward and Keenan (1999) proposed one of the most influential single-factor theories on cognitive distortions in sexual offending behaviour against children. In the past two decades, the implicit theories theory (Ward, 2000; Ward & Keenan, 1999) received much attention (see Ó Ciardha & Ward, 2003; Thakker et al., 2007; Ward et al., 2006). The dangerous world implicit theory was one of the most frequently hypothesised implicit theories across different offender groups and yet, it was sometimes excluded from the analyses in empirical studies (e.g., Keown et al., 2010) due to underrepresentation within the current psychometric tools assessing cognitive distortions (Gannon et al., 2009). In addition, it was usually treated as a single—in other words, unidimensional—construct (e.g., Keown et al., 2008), despite the original conceptualisation by Ward and Keenan (1999) with two versions.

In recognition of this inconsistent treatment of the concept of dangerous world implicit theory in the literature as well as lack of attention to the likelihood of dangerous world implicit theory containing multiple psychological constructs as opposed to only two variations, this thesis presents a critical examination of the conceptualisation of the dangerous world and the potentially cognate psychological constructs that have been available both in the aggression and sexual offending literatures (Dodge, 1980; Glick & Fiske, 1996; McPhail et al., 2014; Ward & Keenan, 1999). As empirically examined and discussed in this thesis, it is important to better understand the already existing—and useful—theoretical frameworks at a conceptual level instead of either rediscovering the wheel (Kurglanski, 2001) or dismissing potentially more precise ways to define highly relevant concepts in relation to sexual

offending behaviour against children, such as the dangerous world implicit theory (Ward & Keenan, 1999), which in turn, would facilitate the operationalisation of the concept (Martinez, 2017) as well as providing useful insights for treatment approaches.

Drawing from this underlying motivation and rationale, this thesis provides several and important findings towards getting closer to eliminating some of the gaps in the literature: This thesis addresses one of the main research questions in relation to the conceptualisation of dangerous world implicit theory by Ward and Keenan (1999); by providing robust findings that indicates the dangerous world implicit theory is a multi-dimensional construct. In addition, the findings suggest that some parts of the dangerous world implicit theory consist of similar constructs to the available and known concepts from sexual offending literature including hostile sexism (Glick & Fiske, 1996), emotional congruence with children (Finkelhor, 1984; McPhail et al., 2014), and children as sexual beings implicit theory (Ward & Keenan, 1999). In this thesis, I demonstrate that two different combinations of these multiple constructs provide a meaningful concept of dangerous world implicit theory as hypothesised by Ward and Keenan (1999) with two versions. This sheds some light on how researchers and practitioners can alternatively perceive cognitive distortions expressed by their client groups that are consistent with the dangerous world implicit theory, by looking at and identifying individual, but potentially multiple constructs, occurring simultaneously in clients.

In addition to the thorough examination of how dangerous world implicit theory has been conceptualised by Ward and Keenan (1999) and refining it, this thesis also provides an integration of other important factors, such as childhood adversities and cognitive distortions, and offers meaningful findings in relation to the aetiological explanations of holding dangerous world implicit theory (Grady et al., 2016). For example, ACE is a significant factor in the development of hostile world and retribution sub-constructs of the dangerous

world implicit theory. This thesis provides an investigation of the aetiology of sexual

offending behaviour against children by taking distal factors into account—for the first

time—amongst adult men. Whilst this thesis involves a particular attention and utilisation of

advance statistical techniques as part of the quantitative approaches, it is also the first which

examines the conceptualisation of one particular implicit theory using qualitative case study

approach (Yin, 2018). As a result, the use of different research methods and the findings

discussed in this thesis help advance the understanding of dangerous world implicit theory by

unpacking, then *re-packing* it with a more precise definition. This combined

conceptualisation of the dangerous world implicit theory proposed in this thesis encourages

researchers and practitioners to recognise individual treatment needs when working with

individuals who sexually offend against children, or when researching cognitive distortions

of these individuals. Despite the limitations outlined earlier, the research in this thesis

contributes to and expands on the conceptualisation of the dangerous world implicit theory as

well as the understanding of underlying mechanisms which may be developmentally

associated with the dangerous world implicit theory and sexually abusive behaviour against

children.

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APPENDICES

Appendix I: Dangerous World (DW) Vignettes

I developed four vignettes based on the dangerous world implicit theory (Ward & Keenan, 1999).

<u>Vignette DW1 part A</u>: Tom thinks that world is a dangerous place. He believes that other people always put their own interests first. They're normally willing to be abusive or to reject him to promote their own interests. Tom believes that it is often necessary to fight back in order to show other people who's boss. This might involve punishing individuals who do him harm and to make sure he always comes out on top. Tom is ready to strike back when necessary and he regularly asserts his dominance over others.

Please answer the following questions thinking about Tom:

Can you identify with Tom?

1	2	3	4	5
No, I don't think like Tom at all		I can identify somewhat with Tom's worldview		Yes, I see the world as Tom does

Do you ever find yourself thinking like Tom?

 a) Never

 b) Rarely

 c) Sometimes

 d) Often

 e) Always

<u>Vignette DW1 part B</u>: Tom has some specific views about women and children. If women or children threaten Tom or need to be disciplined, he has no problem giving them what is coming to them. Tom sometimes feels he has to teach the women in his life a lesson to put them in their place, especially if they question his authority or the authority of other men.

Thinking specifically about Tom's views on women and children, please answer the following questions:

Can you identify with Tom?

1	2	3	4	5
No, I don't think like Tom at all		I can identify somewhat with Tom's worldview		Yes, I see the world as Tom does

Do you ever find yourself thinking like Tom?

a) Never

b) Rarely

c) Sometimes

d) Often

e) Always

Vignette DW2 part A: Similar to Tom, Steven sees the world as threatening. Steven believes that adults are unreliable while children are dependable. For Steven, many people are untrustworthy and rejecting. He feels that people are often rejecting and will take unfair advantage of him or of other similar men who are often blameless. Adults are the worst for behaving like this. Steven feels that he is unable to get his own back if adults threaten him or reject him. Children are more reliable, accepting and be able to be trusted. For Steven children are more caring and loving and will even put Steven's needs before their own. He feels that children will never reject him. Steven believes that children give more acceptance and love than adults.

Please answer the following questions thinking about Steven:

Can you identify with Steven?

1	2	3	4	5
No, I don't think like Steven at all		I can identify somewhat with Steven's worldview		Yes, I see the world as Steven does

Do you ever find yourself thinking like Steven?

   a) Never

   b) Rarely

   c) Sometimes

   d) Often

   e) Always

<u>Vignette DW2 part B</u>: Steven has some further specific beliefs about children. He believes that children are innocent and want to please adults. He also thinks that in under circumstances, children can benefit from sex with an adult. Even young children can understand Steven's sexual desires and are happy to satisfy him. This can make children feel loved and wanted.

Thinking specifically about Steven's views on children and sex, please answer the following questions:

Can you identify with Steven?

1	2	3	4	5
No, I don't think like Steven at all		I can identify somewhat with Steven's worldview		Yes, I see the world as Steven does

Do you ever find yourself thinking like Steven?

a) Never

b) Rarely

c) Sometimes

d) Often

e) Always

Appendix II: The Hostile Interpretations Questionnaire [HIQ]

(Simourd & Mamuza, 2002)

Described below are different social situations in which a person named Chris finds himself. Read each situation and answer each question by putting a circle around the number that shows what you think.

IMPORTANT: there are no right or wrong answers we would just like to know what you think.

A. Chris is on probation. He is walking down the street with a couple friends when a police officer approaches and asks where they are going.

A1. Rate how likely you think it is that police officers approach people on probation like this.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

A2. Rate how likely you think the police officer wants to start something with Chris.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

A3. Chris refuses to cooperate because he figures the police officer is trying to give him a hard time. If you found yourself in this same situation today, rate how differently or similarly you would respond.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

A4. If Chris refuses to cooperate, how responsible is the police officer for Chris' reaction.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

B. Chris goes to see his probation officer for the first time. The probation officer reads him the conditions of his probation.

B1. Rate how likely you think it is that probation officers read the conditions of probation just to put guys in their place and show them who's boss.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

B2. Rate how likely you think the probation officer wants to put Chris in his place.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

B3. Chris figures that the probation officer is power-tripping and lets him/her know it. If you found yourself in this same situation today, rate how differently or similarly you would respond.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

B4. If Chris thinks the probation officer was power-tripping and decided to say something, rate the amount of responsibility would you place on the probation officer for Chris' reaction.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

C. Chris goes to his mother's house for dinner one night and all his brothers and sisters are there. They ask Chris a lot of questions about what he has been up to lately.

C1. Rate how likely you think it is that his family is always on Chris' case.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

C2. Rate how likely you think it is that his brothers and sisters are asking Chris all these questions because they are suspicious of him.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

C3. Chris figures that his brothers and sisters are trying to give him a hard time and so he tells them to mind their own business and leaves the dinner table. If you found yourself in this same situation today, rate how differently or similarly you would respond.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

C4. If Chris told his brothers and sisters to mid their own business and left the dinner table, rate the amount of responsibility would you place on his brothers and sisters for Chris' reaction.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

D. Chris invites a few friends to his house and when he walks in his common-law wife complains about how late he is.

D1. Rate how likely do you think it is that his wife always nags Chris.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

D2. Rate how likely you think his wife wants to start something with Chris.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

D3. Chris figures his wife has no business telling him what to do and when to do it so he puts her in her place. If you found yourself in this same situation today, rate how differently or similarly you would respond.

Extremely Different	Differently	Undecided	Similarly	Extremely Similar
(1)	(2)	(3)	(4)	(5)

D4. If Chris puts his wife in her place, rate the amount of responsibility would you place on his wife for Chris' reaction.

Not at all responsible	Not very responsible	Undecided	Somewhat responsible	Totally responsible
(1)	(2)	(3)	(4)	(5)

E. Chris is out with some friends drinking. One of his friends starts joking about the fact that Chris has had some trouble with the law.

E1. Rate how likely you think it is that his friends are always trying to get Chris pissed off.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

E2. Rate how likely you think his friends are trying to start something with Chris.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

E3. Chris finally gets tired of listening to his friend and tells him to "shut up or else…" If you found yourself in this same situation today, rate how differently you would respond.

Extremely Different	Differently	Undecided	Similary	Extremely Similar
(1)	(2)	(3)	(4)	(5)

E4. If Chris ends up saying this to his buddy, rate the amount of responsibility would you place on his friend for Chris' reaction.

Not at all responsible	Not very responsible	Undecided	Somewhat responsible	Totally responsible
(1)	(2)	(3)	(4)	(5)

F. Chris is at work hanging around with a couple of co-workers. The boss approaches Chris and asks him to go to his office because he needs to talk to Chris about something.

F1. Rate how likely you think Chris' boss is always looking for something to bother Chris about.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

F2. Rate how likely you think it is that Chris' boss is trying to give Chris a hard time today.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

F3. Chris figures his boss is going to fire him so he tells him where he can stick his job. If you found yourself in this same situation today, rate how differently or similarly you would respond.

Extremely Different	Differently	Undecided	Similarly	Extremely Similar
(1)	(2)	(3)	(4)	(5)

F4. If Chris tells his boss to stick the job, rate the amount of responsibility would you place on his boss for Chris' reaction.

Not at all responsible	Not very responsible	Undecided	Somewhat responsible	Totally responsible
(1)	(2)	(3)	(4)	(5)

G. Chris is walking down the street and notices two people walking toward him. They are talking to each other and as they get closer to Chris they glance at him. They continue talking all the while but as they pass Chris they start to laugh.

G1. Rate how likely you think it is that most people talk about Chris just because of the way he looks.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

G2. Rate how likely you think it is that these strangers were talking and laughing about Chris.

Extremely Unlikely	Unlikely	Undecided	Likely	Extremely Likely
(1)	(2)	(3)	(4)	(5)

G3. Chris figures the strangers are making fun of him and stops them to give them a piece of his mind. If you found yourself in this same situation today, rate how differently or similarly you would respond.

Extremely Different	Differently	Undecided	Similarly	Extremely Similar
(1)	(2)	(3)	(4)	(5)

G4. If Chris gives the strangers a piece of his mind, rate the amount of responsibility would you place on the strangers for Chris' reaction.

Not at all responsible	Not very responsible	Undecided	Somewhat responsible	Totally responsible
(1)	(2)	(3)	(4)	(5)

Appendix III: The Hostile Sexism Questionnaire

The Hostile Sexism Questionnaire is a subscale of The Ambivalent Sexism Inventory [ASI]

(Glick & Fiske, 1996).

<div align="center">Relationships Between Men and Women</div>

Below is a series of statements concerning men and women and their relationships in

contemporary society. Please indicate the degree to which you agree or disagree with each

statement using the following scale[27]: 0 = disagree strongly; 1 = disagree somewhat; 2 =

disagree slightly; 3 = agree slightly; 4 = agree somewhat; 5 = agree strongly.

1. Many women are actually seeking special favors, such as hiring policies that favour

   them over men, under the guise of asking for "equality."

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

2. Most women interpret innocent remarks or acts as being sexist.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

3. Women are too easily offended.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

4. Feminists are not seeking for women to have more power than men.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

5. Most women fail to appreciate fully all that men do for them.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

---

[27] Items hs4, hs10, and hs11 are reverse worded items and therefore, are expected to load negatively on the factor.

6. Women seek to gain power by getting control over men.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

7. Women exaggerate problems they have at work.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

8. Once a woman gets a man to commit to her, she usually tries to put him on a tight

leash.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

9. When women lose to men in a fair competition, they typically complain about being

discriminated against.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

10. There are actually very few women who get a kick out of teasing men by seeming

sexually available and then refusing male advances.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

11. Feminists are making entirely reasonable demands of men.

0	1	2	3	4	5
Disagree strongly	Disagree somewhat	Disagree slightly	Agree slightly	Agree somewhat	Agree strongly

Appendix IV: Children and Sex Emotional Congruence Scale (Waldron et al., 2006)

The scale is originally from the Sex Offender Assessment Pack (SOAP: Beckett, Beech, &

Fisher, 1996).

Please rate how strongly you agree or disagree with the following statements on a scale from

0 (untrue) to 4 (very true).

1. I prefer to spend my time with children.

0	1	2	3	4
Untrue				Very true

2. I have loved a child at first sight.

0	1	2	3	4
Untrue				Very true

3. Thinking about children makes me feel good.

0	1	2	3	4
Untrue				Very true

4. I know when children are interested in me.

0	1	2	3	4
Untrue				Very true

5. Sometimes, children look at me in a special way.

0	1	2	3	4
Untrue				Very true

6. Children stop me feeling lonely.

0	1	2	3	4
Untrue				Very true

7. Children are special for me.

0	1	2	3	4
Untrue				Very true

8. Children remind me of myself.

0	1	2	3	4
Untrue				Very true

9. I feel more comfortable with children than with adults.

0	1	2	3	4
Untrue				Very true

10. Sometimes I meet a child who has special feelings about me.

0	1	2	3	4
Untrue				Very true

11. I am better than most people at understanding children.

0	1	2	3	4
Untrue				Very true

12. I am better than most people at getting along with children.

0	1	2	3	4
Untrue				Very true

13. When I feel low, children cheer me up.

0	1	2	3	4
Untrue				Very true

14. Some children prefer to be with me than with their parents.

0	1	2	3	4
Untrue				Very true

15. Children seem to seek me out.

0	1	2	3	4
Untrue				Very true

Appendix V: Cognitive Distortions Scale (Gannon, 2009)

The scale is originally from The Opinions Questionnaire (Offending Behaviour Programmes Unit, 2000).

Please rate how strongly you agree or disagree with the following statements on a scale from 0 (strongly disagree) to 4 (strongly agree).

1. Having sex with a child is not really all that bad because it doesn't really harm the child.

0	1	2	3	4
Strongly disagree				Strongly agree

2. People underestimate how much children know about sex.

0	1	2	3	4
Strongly disagree				Strongly agree

3. Some children know more about sex than adults.

0	1	2	3	4
Strongly disagree				Strongly agree

4. If an adult has sex with a child who enjoys it and seems to want it, it shouldn't be considered a crime.

0	1	2	3	4
Strongly disagree				Strongly agree

5. Men who have sex with children are usually led into it by the child.

0	1	2	3	4
Strongly disagree				Strongly agree

6. Many children are sexually seductive toward adults.

0	1	2	3	4
Strongly disagree				Strongly agree

7. Most children actually enjoy sex with an adult so long as the man is nice to them.

0	1	2	3	4
Strongly disagree				Strongly agree

8. Most sexual contact between adults and children does not cause any harm.

0	1	2	3	4
Strongly disagree				Strongly agree

9. Some children are mature enough to enjoy a good sex joke with adults.

0	1	2	3	4
Strongly disagree				Strongly agree

10. Children are not as innocent as most people think.

0	1	2	3	4
Strongly disagree				Strongly agree

11. Children who sit in a way that is revealing are suggesting sex.

0	1	2	3	4
Strongly disagree				Strongly agree

12. An 8-year-old child can enjoy a good sex joke.

0	1	2	3	4
Strongly disagree				Strongly agree

Appendix VI: Chapter Two–Study 1 Information, Consent, and Debrief Form
Information Form
Title of Study: Examining attitudes and beliefs towards offending behaviour

Who is doing this research?
This research is being conducted by Gaye Ildeniz under the supervision of Dr Caoilte Ó Ciardha.

Who can take part?
Anyone over 18 with a good knowledge of English.

What happens if I decide to take part?
In this study there are some questionnaires that we would like you to fill in involving general questions relating to attitudes and beliefs towards offending behaviour. Some of these questions may be of sensitive nature. We are interested in examining how people typically answer different types of questionnaires.
The tasks involve rating the given statements using a scale depending on how much you agree or disagree with the information given, or depending on how much you identify yourself with the given ideas in the questions. The tasks should take about 20 minutes.
Since at no time are we interested in your identity we can guarantee confidentiality. These data will be stored at the University of Kent. Before starting the study you will be required to create a unique code which you will enter in to the computer. This code rather than any identifying information will appear on your responses. This is to ensure complete anonymity, nobody but you will know your code, and it will not be possible for your results to be linked back to you.

What happens if I change my mind?
If you agree to take part, but then change your mind, you can quit survey by closing the page with no negative consequences. It doesn't matter if you have already started.
We can withdraw your details from the data if requested, as long as you can provide your unique code. If you want your information to be taken out of the data, this can be done in writing to the Psychology Department and also over the phone.
The contact details are:
School of Psychology - Keynes College, University of Kent, Canterbury, Kent CT2 7NP
+44 (0) 1227 764000

What will happen to the information I give?
All the information you give in this study is anonymous. You will create a unique code that cannot be linked to your name. That way, when we analyse your results we won't know who it belongs to. The information we get from this study will be used to write a postgraduate dissertation.
If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel (via the Psychology Department Office) in writing, providing a detailed account of your concern.
Thank you for taking the time to read through this information. I hope you will consider taking part in the study.

Researcher contact details:
Gaye Ildeniz   Dr Caoilte Ó Ciardha
gi27@kent.ac.uk   C.C.OCiardha@kent.ac.uk

Consent Form

Statement of consent to take part in the study entitled: "Examining attitudes and beliefs towards offending behaviour"

- I have read and understood the information sheet about this research and any questions I had have been answered to my satisfaction.
- I understand that my participation in this study is voluntary and that I have the right to withdraw at any time without penalty.
- I understand that if I decide to leave the experiment at any time I can, and the information I have given about me will be destroyed and not used for the research.
- I understand that if I want my data to be withdrawn from the research I can do so by contacting the School of Psychology at the University of Kent quoting my unique code number and the name of the study.
- I understand that the information I give will be anonymous.
- I give my permission for the researcher to use the information I provide for the purposes indicated on the information sheet.

○ I agree to take part in this research.
○ I disagree and would like to exit the study.

Debrief Form

PLEASE READ AND CLICK THE ARROW AT THE BOTTOM OF THE PAGE TO SAVE YOUR DATA.

Title of Study: Examining attitudes and beliefs towards offending behaviour
Thank you very much for taking part in this research. This research compares whether there is a relationship between people's attitudes and beliefs about general offending behavior and sexually inappropriate behavior with children. It also looks at people's attitudes towards women and whether there is a relationship between those attitudes and people's perception of the world.

If you have any questions about the experiment please don't hesitate to contact:

Gaye Ildeniz   Dr Caoilte Ó Ciardha
gi27@kent.ac.uk   C.C.OCiardha@kent.ac.uk

If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel (via the School of Psychology Office) in writing, providing a detailed account of your concern. The address for this is:
Chair of the Psychology Research Ethics Panel, School of Psychology, Keynes College, The University of Kent at Canterbury, Canterbury, Kent CT2 7NP

If at any time you decide that you want your data to be removed from the study, you can do so by writing to the School of Psychology, quoting your unique code and the name of the study.
School of Psychology - Keynes College, University of Kent, Canterbury, Kent CT2 7NP
+44 (0) 1227 764000

If you wish to discuss any of the issues raised in this study or any other problem you may have, the helplines below may be useful to you.
Stop it Now   Victim Supportline
0808 1000 900   0845 30 30 900
www.stopitnow.org.uk   www.victimsupport.org

The Samaritans (UK)   The Samaritans (Cyprus)
08457 90 90 90   +357 7777 7267
www.samaritans.org   www.cyprussamaritans.org

The Samaritans (New York)   S.O.S Amitié (Paris)
(212) 673-3000   01 42 96 26 26
www.samaritansusa.org   www.sos-amitie.com

Once again thank you very much for taking part in this research.

Appendix VII: Chapter Two– Study 2 Information, Consent, and Debrief Form
Information Form
Title of Study: Examining attitudes and beliefs towards offending behaviour
Who is doing this research?
This research is being conducted by Gaye Ildeniz under the supervision of Dr Caoilte Ó Ciardha.

Who can take part?
Native English speakers who are 18 years old or above.

Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully.
What happens if I decide to take part?
In this study, there are some questionnaires that we would like you to fill in involving general questions relating to attitudes and beliefs towards offending behaviour. The tasks involve rating the given statements using a scale depending on how much you agree or disagree with the information given, or depending on how much you identify yourself with the given ideas in the questions. There are no right or wrong answers.
There are several scenarios as well as statements within the task and we are interested in how people typically answer different types of questions regarding offending behaviour. Some of the scenarios or statements expressed in the questionnaires ask about your attitudes towards sexual offending and other offences. We provide contact details for support organisations at the end of the study, in case any of the materials presented are upsetting or raise any issues for you.
Since at no time are we interested in your identity we can guarantee confidentiality. These data will be stored at the University of Kent. Before starting the study you will be required to create a unique code which you will enter in to the computer. This code rather than any identifying information will appear on your responses. This is to ensure complete anonymity, nobody but you will know your code, and it will not be possible for your results to be linked back to you.

What happens if I change my mind?
If you agree to take part, but then change your mind, you can quit survey by closing the page with no negative consequences. It doesn't matter if you have already started.
We can withdraw your details from the data if requested, as long as you can provide your unique code. If you want your information to be taken out of the data, please email the addresses below.

What will happen to the information I give?
All the information you give in this study is anonymous. You will create a unique code that cannot be linked to your name. That way, when we analyse your results we won't know who it belongs to. The information we get from this study will be used to write a postgraduate thesis.

If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel (via the Psychology Department Office) in writing, providing a detailed account of your concern. The address for this is:
Chair of the Psychology Research Ethics Panel, School of Psychology, Keynes College, The University of Kent at Canterbury, Canterbury, Kent CT2 7NP

Thank you for taking the time to read through this information. I hope you will consider taking part in the study.

Researcher contact details:
Gaye Ildeniz   Dr Caoilte Ó Ciardha
gi29@kent.ac.uk   C.C.OCiardha@kent.ac.uk

Consent Form

<u>Statement of consent to take part in the study entitled: "Examining attitudes and beliefs towards offending behaviour"</u>

- I have read and understood the information sheet about this research and any questions I had have been answered to my satisfaction.
- I understand that my participation in this study is voluntary and that I have the right to withdraw at any time without penalty.
- I understand that if I decide to leave the experiment at any time I can.
- I understand that if I want my data to be withdrawn from the research I can do so by contacting the School of Psychology at the University of Kent quoting my unique code number and the name of the study.
- I understand that the information I give will be anonymous.
- I give my permission for the researcher to use the information I provide for the purposes indicated on the information sheet.

○ I agree to take part in this research.
○ I disagree and would like to exit the study.

Debrief Form
Title of Study: Examining attitudes and beliefs towards offending behaviour
Thank you very much for taking part in this research. This research compares whether there is a relationship between people's attitudes and beliefs about general offending behaviour and sexually inappropriate behaviour with children. It also looks at people's attitudes towards women and whether there is a relationship between those attitudes and people's perception of the world.

If you have any questions about the experiment please don't hesitate to contact:

Gaye Ildeniz   Dr Caoilte Ó Ciardha
gi29@kent.ac.uk   C.C.OCiardha@kent.ac.uk

If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel (via the School of Psychology Office) in writing, providing a detailed account of your concern. The address for this is:

Chair of the Psychology Research Ethics Panel, School of Psychology, Keynes College, The University of Kent at Canterbury, Canterbury, Kent CT2 7NP

If at any time you decide that you want your data to be removed from the study, you can do so by writing to the School of Psychology, quoting your unique code and the name of the study.

If you wish to discuss any of the issues raised in this study or any other problem you may have, the helplines below may be useful to you.

Stop it Now   *Victim Supportline*
0808 1000 900   *0845 30 30 900*
www.stopitnow.org.uk   www.victimsupport.org

The Samaritans (UK)   *The Samaritans (Cyprus)*
08457 90 90 90   *+357 7777 7267*
www.samaritans.org   www.cyprussamaritans.org

The Samaritans (New York)   *S.O.S Amitié (Paris)*
(212) 673-3000   *01 42 96 26 26*
www.samaritansusa.org   www.sos-amitie.com

Once again thank you very much for taking part in this research.

Appendix VIII: Social Emotional Information Processing Questionnaire [SEIP-Q]
(Coccaro, Fanning, & Lee, 2016)

Please read these short stories about relationships with other people and answer all questions asked about the story as honestly as possible. Please rate how likely the following statements are on a scale from 0 (Not at all likely) to 3 (Very likely).

Story 1

   You tell a friend something personal and ask your friend not to discuss it with anyone else. However, a couple of weeks later, you find out that a lot of people know about it. You ask your friend why she/he told other people and your friend says:

  "Well, I don't know, it just came up and I didn't think it was a big deal."

A. Why do you think your friend shared your secret when you told them not to share it with anyone?
Rate the likelihood of each statement on a scale of 0-3:

A1. My friend wanted to expose my secret.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A2. My friend wanted to impress other people with their secret knowledge about me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A3. My friend forgot that this was an important secret for me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A4. My friend wanted me to feel stupid for asking to keep my secret.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be upset with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you say: "I told you that in confidence. I'm disappointed in you. Next time be more discreet."

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that your friend will keep your secrets in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you say: "How could you do that?! I'm going to "kill" you!"

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that your friend will keep your secrets in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you give your friend the "silent treatment" for the next few weeks.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that your friend will keep your secrets in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 2

Imagine that you are in a karate class competition and you have to demonstrate your abilities to your instructor. You are matched up to "fight" with someone in the class who you do not know well. While you are being evaluated, your karate classmate hits you in a way other than the way you were taught and you are hurt.

A. Why do you think your karate classmate hit you in a way other than the way you were taught?
Rate the likelihood of each statement on a scale of 0-3:

A1. My karate classmate wanted to physically hurt me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A2. My karate classmate wanted to win the match.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A3. My karate classmate did it by accident.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A4. My karate classmate wanted to make me look "bad".

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be embarrassed with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you say: "We weren't taught that move. Let's keep it to the moves we were taught."

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that your karate classmate will use only the moves you were taught the next time you and your karate classmate have a competition?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would your karate classmate respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you hit your karate classmate hard during the next match.

E1. How likely is it that you would act this way?
0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?
0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that your karate classmate will use only the moves you were taught the next time you and your karate classmate have a competition?
0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would your karate classmate respect you?
0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?
0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?
0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?
0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you spread rumors about your karate classmate to other people.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that your karate classmate will use only the moves you were taught the next time you and your karate classmate have a competition?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would your karate classmate respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 3

   Early one morning (at "rush hour") you go to a busy local coffee shop to get a cup of coffee. While you were waiting, someone you see at the coffee shop regularly, but do not know personally, cuts in the line in front of you.

A. Why do you think this person cut in line in front of you?
   Rate the likelihood of each statement on a scale of 0-3:

   A1. This person wanted to make me wait longer to get my coffee.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A2. This person was in a hurry to get in to work.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A3. This person didn't realize that he (or she) cut in line in front of me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A4. This person wanted me to feel unimportant.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be upset with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you tell the person that you were in line ahead of them and that they should wait their turn?

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that this person will cut in front of you in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would this person respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you started cursing at this person because he/she cut in the line in front of you?

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that this person will cut in front of you in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would this person respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you make a "nasty comment" about the person who cut in front of you to another person at the coffee shop.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that this person will cut in front of you in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would this person respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 4

Imagine that you and a group of your co-workers went on a business trip. While at the hotel, waiting to meet a customer, you stop to buy a cup of coffee. Suddenly, one of your co-workers bumps your arm and spills your coffee over your shirt. The coffee is hot and your shirt is wet.

A. Why do you think your co-worker bumped your arm making you spill your coffee? Rate the likelihood of each statement on a scale of 0-3:

A1. My co-worker wanted to burn me with the hot coffee.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A2. My co-worker was focused on the meeting.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A3. My co-worker did it by accident.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A4. My co-worker wanted to make me look "bad" to the customer.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be embarrassed with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you say: "I'm a mess. Do you think I have time to go change my shirt?"

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that your co-worker will spill coffee on your shirt in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would your co-worker respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you say: "You idiot! Look what you've done."

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that your co-worker will spill coffee on your shirt in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would your co-worker respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you ignore your co-worker during the rest of the business trip.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that your co-worker will spill coffee on your shirt in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would your co-worker respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 5

You make plans with one of your friends to go on a short trip for the weekend. You're very excited about these plans and have been looking forward to the trip. However, at the last minute, your friend says that he (or she) no longer wants to go on the trip and has made plans with another friend for the weekend.

A. Why do you think your friend said he/she no longer wanted to go on the trip?
Rate the likelihood of each statement on a scale of 0-3:

A1. My friend doesn't want to be with me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A2. My friend wanted to do something else.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A3. My friend forgot about the plans we made.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

A4. My friend wanted me to feel unimportant.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be upset with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you say: "I was really looking forward to this. Next time I'd appreciate it if you would tell me sooner when you change your mind about these things."

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that your friend will break plans with you the next time?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you say: "You're such a jerk! Who needs you, anyway!?"

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that your friend will break plans with you the next time?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you exclude your friend from all your plans from then on.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that your friend will break plans with you the next time?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 6

One day at work you decide to go to the cafeteria for lunch. After you purchase your lunch, you notice that the seating area is very crowded and no empty tables are available. You notice one of your co-workers sitting alone at a small table and ask if you can join him (or her) for lunch. Your co-worker says "no".

A. Why do you think your co-worker said "no"?
    Rate the likelihood of each statement on a scale of 0-3:
    A1. My co-worker wanted to exclude me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

    A2. My co-worker wanted to be alone at that time.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

    A3. My co-worker was "lost in thought" and didn't realize I had asked to join him (or her).

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

    A4. My co-worker wanted me to feel bad.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be embarrassed with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you say: "I wanted to have some company while I ate lunch. If that's not OK for you today could we do that some other time?"

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that your co-worker will let you join him (her) for lunch in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would your co-worker respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you say: "The hell with you! Who wants to sit with you anyway?"

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that your co-worker will let you join him (her) for lunch in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would your co-worker respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you exclude this co-worker from any of your social plans for the next few weeks.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that your co-worker will let you join him (her) for lunch in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would your friend respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 7

Imagine that you go to the first meeting of a club you want to join. You would like to make friends with the other people in the club. You walk up to some of the other club members and say, "Hi!" but they don't say anything back.

A. Why do you think the club members didn't say anything back to you?
   Rate the likelihood of each statement on a scale of 0-3:
   A1. The club members wanted to ignore me.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A2. The club members were more interested in talking among themselves.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A3. The club members didn't hear me say "Hi".

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A4. The club members wanted me to feel unimportant.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be embarrassed with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you keep standing there and wait for a pause in the conversation so that you can introduce yourself.

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that the club members will say anything back to you in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would the club members respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you give them a dirty look to show you don't like their behavior and turn away to go find someone else to talk to.

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that the club members will say anything back to you in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would the club members respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you ignore these co-workers for the next few weeks.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that your co-workers will say anything back to you in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would your co-worker respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Story 8

You are driving in to work one day and just after you pull into a parking space, another car pulls up into the space to your right. As the person in the other car, a co-worker, gets out of his/her car, their car door hits your passenger side door and leaves a scratch on your car. The person walks away as you get out of your car.

A. Why do you think this person acted this way?
   Rate the likelihood of each statement on a scale of 0-3:

   A1. This person wanted to damage my car.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A2. This person was in a hurry to get in to work.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A3. This person scratched my car by accident and didn't notice.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

   A4. This person wanted me to feel unimportant.

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

B. How likely is it that you would be angry if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

C. How likely is it that you would be upset with yourself if this happened to you?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Imagine that you walk over to the person as they are leaving and point out that they may have scratched your car and ask what can be done about repairing the damage.

D1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

D3. If you acted this way, how likely is it that this person will be more careful with your car in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

D4. If you acted this way, how much would this person respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

D5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

D6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

D7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you start calling and cursing after this person because he/she scratched your car?

E1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

E3. If you acted this way, how likely is it that this person will be more careful with your car in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

E4. If you acted this way, how much would this person respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

E5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

E6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

E7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Imagine that you make a "nasty comment" about this person to another person at work.

F1. How likely is it that you would act this way?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F2. How good or bad is it to act this way?

0	1	2	3
Very bad	Bad	Good	Very good

F3. If you acted this way, how likely is it that this person will be more careful with your car in the future?

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

F4. If you acted this way, how much would this person respect you?

0	1	2	3
Not at all	Only a little	Much	Very much

F5. How easy would it be for you to act this way?

0	1	2	3
Very easy	Kind of easy	Kind of hard	Very hard

F6. How would you feel about yourself if you acted this way?

0	1	2	3
Very bad	Bad	Good	Very good

F7. How much would other people like you if they saw you acting this way?

0	1	2	3
Not at all	Only a little	Much	Very much

Appendix IX: Dangerous World Implicit Theory (DWIT) Items

I developed 32 items based on the dangerous world implicit theory (Ward and Keenan, 1999). Items number 3, 5, 9, 14, 15, 22, and 26 are designed to be reversely coded. Below is a series of statements related to beliefs regarding the world and other people. Please rate how strongly you agree or disagree with each of them on a scale from 1 (strongly disagree) to 5 (strongly agree).

0	1	2	3	4
Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree

DW version 1

1. The world is a hostile and dangerous place.

2. People are generally abusive and out for themselves.

3. Most people are welcoming and accepting.

4. It's often necessary to fight back in order to show other people who's boss.

5. If someone does me harm, it's better to "turn the other cheek".

6. I'm always ready to strike back when necessary.

7. I regularly assert my dominance and control over others.

8. Other people generally want to dominate or hurt me.

9. Women are trustworthy.

10. I have no problem disciplining women or children if they have it coming.

11. If a woman questions a man's authority, she should be put in her place.

12. If the women in my life question me, I'll find a way of controlling or punishing them.

13. Women have no right to question a man's authority.

14. Even if a woman intended to manipulate me, I wouldn't harm her.

DW version 2

15. The world is welcoming and nonthreatening.

16. Children are much more dependable than adults.

17. Many people are untrustworthy and rejecting.

18. People like me are blameless but others take advantage of us.

19. Adults are more rejecting and abusive than children.

20. I feel powerless against threatening or rejecting adults.

21. Children are more accepting than adults.

22. I trust children and adults about the same.

23. Children are more caring and loving than adults.

24. Children will put my needs above their own.

25. I feel that children will never reject me.

26. Adults are more accepting than children.

27. You can't trust adults.

28. I feel that children really know how to love me.

29. Children are innocent and want to please adults.

30. Under certain circumstances, children can benefit from sex with an adult.

31. Even young children can understand my sexual desires and are happy to satisfy me.

32. Some kids like sex with adults because it makes them feel wanted and loved.

Appendix X: Chapter Three-Alternative Estimation and Rotation Methods

It is important to note that using an alternative method of estimation, *robust maximum likelihood* (*MLR* in Mplus) with Geomin as the rotation method, the four-factor solution was slightly different. According to the final four-factor model with MLR after excluding 7 items (items dw5, dw14, dw18, dw20, dw22, dw24, dw26) which did not significantly load on any of the factors, the factor solution was conceptually more meaningful, where the *children as sexual beings* items (i.e., items dw30, dw31, and dw32) loaded onto a separate factor from the *retribution* items.

Using MLR when assumptions about skewness and number of categories are not met has been criticised in the literature (Brown, 2015; Lubke & Muthén, 2004). The MLR treats ordinal variables as continuous (Brown, 2015). As a result, in this case, the model fit was adversely affected and the standard errors were higher than in the WLSMV solution. This is due to the standard errors, estimates and certain model fit statistics being adversely affected by non-normality, particularly excess multivariate kurtosis (Flora, LaBrish, & Chalmers, 2012). Therefore, despite using MLR yielded a conceptually more interpretable factor structure, adopting a model using WLSMV estimator was statistically more appropriate (Brown, 2015; Muthén, 1984).

CF-Varimax, as an alternative rotation, minimizes only column (i.e., factor) complexity and allows for greater cross loadings (Sass & Schmitt, 2010). Using CF-Varimax rotation with WLSMV estimator did not significantly change the factor solution however, the resulting pattern matrix was more difficult to interpret, thus was not preferred.

Appendix XI: Chapter Three-Mplus Syntaxes for Data Analyses

TITLE: EFA 1

DATA: FILE = N400rescaled.dat;

VARIABLE: CATEGORICAL ARE ALL;

NAMES = dw1 dw2 dw3 dw4 dw5
dw6 dw7 dw8 dw9 dw10
dw11 dw12 dw13 dw14
dw15 dw16 dw17 dw18
dw19 dw20 dw21 dw22
dw23 dw24 dw25 dw26
dw27 dw28 dw29 dw30
dw31 dw32;

USEVARIABLES ARE dw1 dw2 dw3 dw4 dw5
dw6 dw7 dw8 dw9 dw10
dw11 dw12 dw13 dw14
dw15 dw16 dw17 dw18
dw19 dw20 dw21 dw22
dw23 dw24 dw25 dw26
dw27 dw28 dw29 dw30
dw31 dw32;

ANALYSIS: TYPE IS EFA 1 6;
ROTATION IS GEOMIN;
ESTIMATOR IS WLSMV;

TITLE: EFA 2

DATA: FILE = N400rescaled.dat;

VARIABLE: CATEGORICAL ARE ALL;

NAMES = dw1 dw2 dw3 dw4 dw5
dw6 dw7 dw8 dw9 dw10
dw11 dw12 dw13 dw14
dw15 dw16 dw17 dw18
dw19 dw20 dw21 dw22
dw23 dw24 dw25 dw26
dw27 dw28 dw29 dw30
dw31 dw32;

USEVARIABLES ARE dw1 dw2 dw3 dw4 dw5
dw6 dw7 dw8 dw9 dw10
dw11 dw12 dw13 !dw14
dw15 dw16 dw17 dw18
dw19 dw20 dw21 dw22
dw23 dw24 dw25 !dw26
dw27 dw28 dw29 dw30
dw31 dw32;

ANALYSIS: TYPE IS EFA 1 6;
ROTATION IS GEOMIN;
ESTIMATOR IS WLSMV;

TITLE: EFA with target rotation

DATA: FILE IS N400rescaled.dat;

VARIABLE: CATEGORICAL ARE ALL;

        NAMES ARE dw1 dw2 dw3 dw4 dw5
        dw6 dw7 dw8 dw9 dw10
        dw11 dw12 dw13 dw14
        dw15 dw16 dw17 dw18 dw19 dw20
        dw21 dw22 dw23 dw24 dw25
        dw26 dw27 dw28 dw29
        dw30 dw31 dw32;

    USEVARIABLES ARE
    dw1 dw2 dw3 dw4 dw5
    dw6 dw7 dw8 dw9 dw10
    dw11 dw12 dw13 !dw14
    dw15 dw16 dw17 dw18 dw19 dw20
    dw21 dw22 dw23 dw24 dw25!dw26
    dw27 dw28 dw29 dw30
    dw31 dw32;

ANALYSIS:

        ROTATION IS TARGET(OBLIQUE);
        ESTIMATOR IS WLSMV;
        PARAMETERIZATION IS THETA;

MODEL:
f1 BY dw1-dw32
dw4-dw7~0 dw10-dw13~0 dw16~0 dw18-dw21~0 dw23-dw25~0 dw28-dw32~0 (*1);

f2 BY dw1-dw32
dw1-dw13~0 dw15~0 dw17-dw18~0 dw20~0 dw22~0 dw24~0 dw27~0 dw30-dw32~0 (*1);

f3 BY dw1-dw32
dw1-dw3~0 dw8-dw9~0 dw15-dw17~0 dw19~0 dw21-dw23~0 dw25~0 dw27-dw32~0 (*1);

f4 BY dw1-dw32
dw1-dw29~0 (*1);

PLOT:
TYPE IS PLOT3;

OUTPUT:
STDYX;
MODINDICES;
RES;

```
TITLE:        CFA 1

DATA:         FILE = N400rescaled.dat;

VARIABLE:  CATEGORICAL ARE ALL;

              NAMES = dw1 dw2 dw3 dw4 dw5
                    dw6 dw7 dw8 dw9 dw10
                    dw11 dw12 dw13 dw14
                    dw15 dw16 dw17 dw18
                    dw19 dw20 dw21 dw22
                    dw23 dw24 dw25 dw26
                    dw27 dw28 dw29 dw30
                    dw31 dw32;


USEVARIABLES ARE dw1 dw2 dw3 dw4 !dw5
                    dw6 dw7 dw8 dw9 dw10
                    dw11 dw12 dw13 !dw14
                    dw15 dw16 dw17 !dw18
                    dw19 dw20 dw21 dw22
                    dw23 !dw24
                    dw25 !dw26
                    dw27 dw28 dw29 dw30
                    dw31 dw32;

ANALYSIS:  ESTIMATOR IS WLSMV;

MODEL:     HW BY dw1 dw2 dw3 dw8 dw9 dw15 dw17 dw22 dw27;
           EC BY dw16 dw19 dw21 dw23 dw25 dw28 dw29;
           RET BY dw4 dw6 dw7 dw10 dw11 dw12 dw13 dw20;
           CSB BY dw30 dw31 dw32;

OUTPUT: sampstat standardized modindices (all) tech4 res;
```

```
TITLE:        CFA 2

DATA:         FILE = N400rescaled.dat;

VARIABLE:  CATEGORICAL ARE ALL;

              NAMES = dw1 dw2 dw3 dw4 dw5
                   dw6 dw7 dw8 dw9 dw10
                   dw11 dw12 dw13 dw14
                   dw15 dw16 dw17 dw18
                   dw19 dw20 dw21 dw22
                   dw23 dw24 dw25 dw26
                   dw27 dw28 dw29 dw30
                   dw31 dw32;


USEVARIABLES ARE dw1 dw2 dw3 dw4 !dw5
                   dw6 dw7 dw8 dw9 dw10
                   dw11 dw12 dw13 !dw14
                   dw15 dw16 dw17 !dw18
                   dw19 !dw20
                   dw21 dw22 dw23 !dw24
                   dw25 !dw26
                   dw27 dw28 dw29 dw30
                   dw31 dw32;

ANALYSIS:  ESTIMATOR IS WLSMV;

MODEL:     HW BY dw1 dw2 dw3 dw8 dw9 dw15 dw17 dw22 dw27;
           EC BY dw16 dw19 dw21 dw23 dw25 dw28 dw29;
           RET BY dw4 dw6 dw7 dw10 dw11 dw12 dw13;
           CSB BY dw30 dw31 dw32;

OUTPUT: sampstat standardized modindices (all) tech4 res;
```

Appendix XII: Chapter Three–
CFA 1 Model Diagram, Standardised Factor Loadings, and Factor Correlations
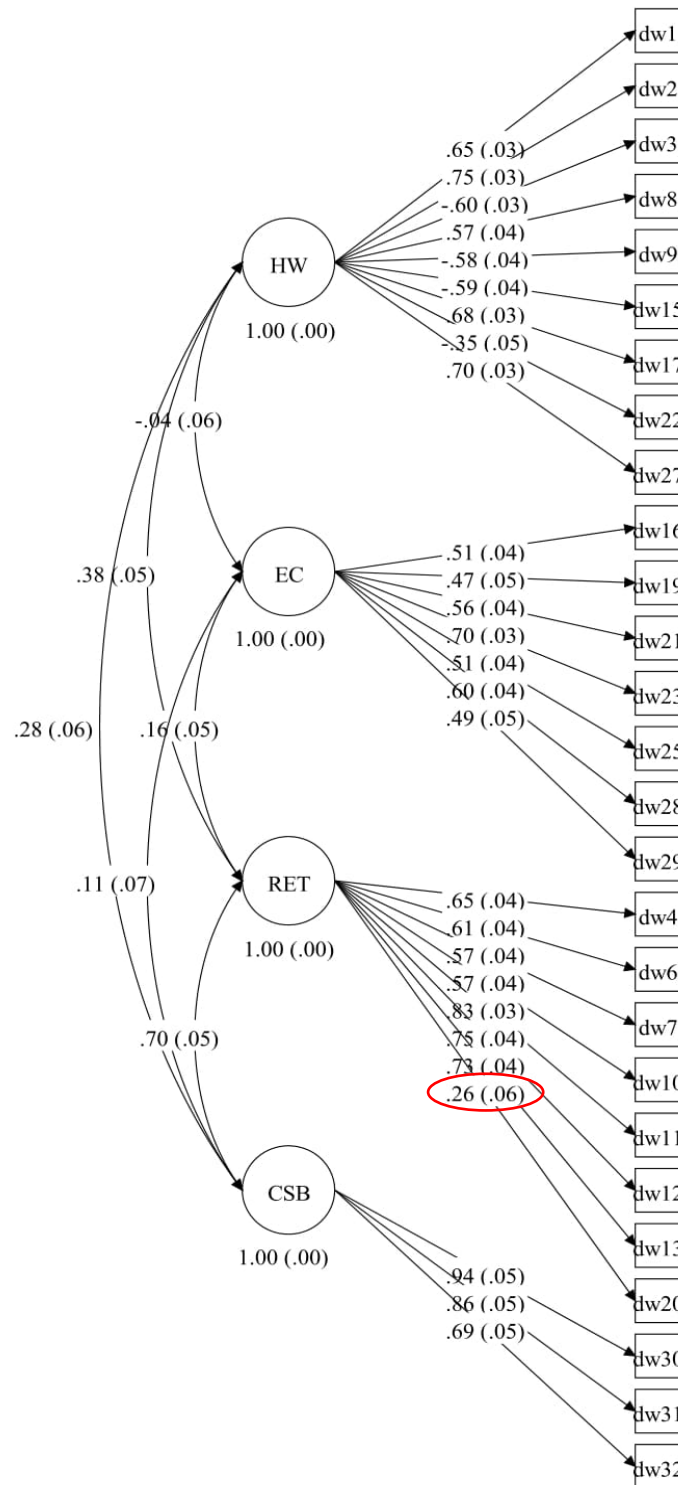
Figure 17. Four-Factor Dangerous World Implicit Theory CFA Model 1 with 27 Items. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings. Item dw20 identified by the red circle was not significantly loading to the specified factor (retribution) above the cut-off point of .32.

Table 39

CFA 1: Standardised Factor Loadings of 27 Dangerous World Implicit Theory Items, Sorted By Size

Scale items	HW	EC	RET	CSB
dw2. People are generally abusive and out for themselves.	.746			
dw27. You can't trust adults.	.696			
dw17. Many people are untrustworthy and rejecting.	.683			
dw1. The world is a hostile and dangerous place.	.645			
dw3. Most people are welcoming and accepting.	-.602			
dw15. The world is welcoming and nonthreatening.	-.586			
dw9. Women are trustworthy.	-.579			
dw8. Other people generally want to dominate or hurt me.	.573			
dw22. I trust children and adults about the same.	-.350			
dw23. Children are more caring and loving than adults.		.704		
dw28. I feel that children really know how to love me.		.602		
dw21. Children are more accepting than adults.		.564		
dw25. I feel that children will never reject me.		.509		
dw16. Children are much more dependable than adults.		.507		
dw29. Children are innocent and want to please adults.		.490		
dw19. Adults are more rejecting and abusive than children.		.469		
dw11. If a woman questions a man's authority, she should be put in her place.			.826	
dw12. If the women in my life question me, I'll find a way of controlling or punishing them.			.747	
dw13. Women have no right to question a man's authority.			.731	
dw4. It's often necessary to fight back, in order to show other people who's boss.			.650	
dw6. I'm always ready to strike back when necessary.			.606	
dw7. I regularly assert my dominance and control over others.			.567	
dw10. I have no problem disciplining women or children if they have it coming.			.567	
dw20. I feel powerless against threatening or rejecting adults.			.260	
dw30. Under certain circumstances, children can benefit from sex with an adult.				.944
dw31. Even young children can understand my sexual desires and are happy to satisfy me.				.858
dw32. Some kids like sex with adults because it makes them feel wanted and loved.				.689

Note. N = 400. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings. The scale item dw20 in bold was not loading to any of the factors above the cut-off point.

* *p*<.05

Table 40

CFA 1: Factor Correlations

	HW	EC	RET	CSB
HW		-.04	.38*	. 28*
EC			.16*	.11
RET				.70*
CSB				

Note. $N = 400$. HW = hostile world; EC = emotional congruence; RET = retribution; CSB = children as sexual beings.

* $p<.05$

Appendix XIII: Hypothesised Distribution of Items in EFA with Target Rotation

Hypothesised distribution of the dangerous world implicit theory items within a 4-factor

solution using EFA with target rotation

Factor 1: Hostile World (HW)

1. The world is a hostile and dangerous place.

2. People are generally abusive and out for themselves.

3. Most people are welcoming and accepting.

8. Other people generally want to dominate or hurt me.

9. Women are trustworthy.

17. Many people are untrustworthy and rejecting.

22. I trust children and adults about the same.

27. You can't trust adults.

15. The world is welcoming and nonthreatening.

Factor 2: Emotional Congruence (EC)

16. Children are much more dependable than adults.

19. Adults are more rejecting and abusive than children.

23. Children are more caring and loving than adults.

28. I feel that children really know how to love me.

29. Children are innocent and want to please adults.

21. Children are more accepting than adults.

25. I feel that children will never reject me.

Factor 3: Retribution (RET)[28]

7. I regularly assert my dominance and control over others.

10. I have no problem disciplining women or children if they have it coming.

11. If a woman questions a man's authority, she should be put in her place.

12. If the women in my life question me, I'll find a way of controlling or punishing them.

13. Women have no right to question my authority.

18. People like me are blameless but others take advantage of us.

24. Children will put my needs above their own.

4. It's often necessary to fight back, in order to show other people who's boss.

6. I'm always ready to strike back when necessary.

5. If someone does me harm, it's better to "turn the other check".

20. I feel powerless against threatening or rejecting adults.

Factor 4: Children as Sexual Beings (CSB)

30. Under certain circumstances, children can benefit from sex with an adult.

31. Even young children can understand my sexual desires and are happy to satisfy me.

32. Some kids like sex with adults because it makes them feel wanted and loved.

---

[28] As a result of the EFA 2 model, items dw4, dw6, dw5, and dw20 loaded on to a separate 4th factor. With this distribution, I argued that the four items (dw4, dw6, dw5, and dw20) conceptually belonged to the *retribution* factor.

Appendix XIV: Chapter Four-Additional Dangerous World Implicit Theory Items

I developed 10 new items based on the perception of children as sexual agents dimension of the dangerous world implicit theory (Ward & Keenan, 1999).

Below is a series of statements related to beliefs regarding the world and other people. Please rate how strongly you agree or disagree with each of them on a scale from 0 (strongly disagree) to 4 (strongly agree).

0	1	2	3	4
Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree

Previously developed Children as Sexual Beings items (Factor 4 in Chapter 3):

32. Under certain circumstances, children can benefit from sex with an adult.
33. Even young children can understand my sexual desires and are happy to satisfy me.
3. Some kids like sex with adults because it makes them feel wanted and loved.

New items developed for the CFA study[29]:

4. Sex between children and adults is very loving.
5. Touching a child sexually can be a way of showing love and affection.
6. Some kids are very mature for their age.
7. If an adult and children love each other, sex between them is okay.
8. Children sometimes try to seduce grown-ups.
9. Adults typically deny that children have sexual desires, because it makes them uncomfortable.
10. In some circumstances, a child could consent to a romantic relationship with an adult.

New items developed to be reverse coded:

11. Sex between children and adults is not appropriate.
12. Children don't know a lot about sex because they are very young.
13. Sex is not something kids would enjoy.

---

[29] Item #4 is the same as one of the dangerous world implicit theory example (Ward & Keenan, 1999, p.830). Item #5 is the same as one of the children as sexual beings IT (Ward & Keenan, 1999, p.828). Items #6 and #7 are adapted versions of the children as sexual beings IT examples (Ward & Keenan, 1999, p. 828). Rest of the items (items #8-13) are developed without being adapted from any other sources whilst attempting to capture the same content.

Appendix XV: Chapter Four-Full List of 36[30] Dangerous World Implicit Theory Items

Below is a series of statements related to beliefs regarding the world and other people. Please rate how strongly you agree or disagree with each of them on a scale from 0 (strongly disagree) to 4 (strongly agree).

0	1	2	3	4
Strongly Disagree	Disagree	Somewhat Agree	Agree	Strongly Agree

dw1. People are generally abusive and out for themselves.

dw2. You can't trust adults.

dw3. Many people are untrustworthy and rejecting.

dw4. The world is a hostile and dangerous place.

dw5. Most people are welcoming and accepting.

dw6. The world is welcoming and nonthreatening.

dw7. Women are trustworthy.

dw8. Other people generally want to dominate or hurt me.

dw9. I trust children and adults about the same.

dw10. Children are more caring and loving than adults.

dw11. I feel that children really know how to love me.

dw12. Children are more accepting than adults.

dw13. I feel that children will never reject me.

dw14. Children are much more dependable than adults.

dw15. Children are innocent and want to please adults.

dw16. Adults are more rejecting and abusive than children.

---

[30] Items dw5, dw6, dw7, dw34, dw35, and dw36 are reverse worded items and therefore, are expected to load negatively on the factor.

dw17. If a woman questions a man's authority, she should be put in her place.

dw18. If the women in my life question me, I'll find a way of controlling or punishing them.

dw19. Women have no right to question a man's authority.

dw20. It's often necessary to fight back, in order to show other people who's boss.

dw21. I'm always ready to strike back when necessary.

dw22. I have no problem disciplining women or children if they have it coming.

dw23. I regularly assert my dominance and control over others.

dw24. Under certain circumstances, children can benefit from sex with an adult.

dw25. Even young children can understand my sexual desires and are happy to satisfy me.

dw26. Some kids like sex with adults because it makes them feel wanted and loved.

dw27. Sex between children and adults is very loving.

dw28. Touching a child sexually can be a way of showing love and affection.

dw29. Some kids are very mature for their age.

dw30. If an adult and a child love each other, sex between them is okay.

dw31. Children sometimes try to seduce grown-ups.

dw32. Adults typically deny that children have sexual desires, because it makes them uncomfortable.

dw33. In some circumstances, a child could consent to a romantic relationship with an adult.

dw34. Sex between children and adults is not appropriate.

dw35. Children don't know a lot about sex because they are very young.

dw36. Sex is not something kids would enjoy.

Appendix XVI: Chapter Four-Hostile Attribution Bias Items

Social Information-Processing – Attribution Bias Questionnaire (SIP-ABQ; Coccaro, Noblett, & McCloskey, 2009), presenting items representing hostile attribution only.

Please read these short stories about relationships with other people and answer both questions asked about the story as honestly as possible. Please rate how likely the following statements are on a scale from 0 (Not at all likely) to 3 (Very likely).

0	1	2	3
Not at all likely	Unlikely	Likely	Very likely

Story 1

You tell a friend something personal and ask your friend not to discuss it with anyone else. However, a couple of weeks later, you find out that a lot of people know about it. You ask your friend why she/he told other people and your friend says:

"Well, I don't know, it just came up and I didn't think it was a big deal."

Why do you think your friend shared your secret when you told them not to share it with anyone?

ha1_1. My friend wanted to expose my secret.
ha1_2. My friend wanted me to feel stupid for asking to keep my secret.

Story 2

Imagine that you are in a karate class competition and you have to demonstrate your abilities to your instructor. You are matched up to "fight" with someone in the class who you do not know well. While you are being evaluated, your karate classmate hits you in a way other than the way you were taught and you are hurt.

Why do you think your karate classmate hit you in a way other than the way you were taught?

ha2_1. My karate classmate wanted to physically hurt me.
ha2_2. My karate classmate wanted to make me look "bad".

Story 3

Early one morning (at "rush hour") you go to a busy local coffee shop to get a cup of coffee. While you were waiting, someone you see at the coffee shop regularly, but do not know personally, cuts in the line in front of you.

Why do you think this person cut in line in front of you?

> ha3_1. This person wanted to make me wait longer to get my coffee.
> ha3_2. This person wanted me to feel unimportant.

Story 4

Imagine that you and a group of your co-workers went on a business trip. While at the hotel, waiting to meet a customer, you stop to buy a cup of coffee. Suddenly, one of your co-workers bumps your arm and spills your coffee over your shirt. The coffee is hot and your shirt is wet.

Why do you think your co-worker bumped your arm making you spill your coffee?

> ha4_1. My co-worker wanted to burn me with the hot coffee.
> ha4_2. My co-worker wanted to make me look "bad" to the customer.

Story 5

You make plans with one of your friends to go on a short trip for the weekend. You're very excited about these plans and have been looking forward to the trip. However, at the last minute, your friend says that he (or she) no longer wants to go on the trip and has made plans with another friend for the weekend.

Why do you think your friend said he/she no longer wanted to go on the trip?

> ha5_1. My friend doesn't want to be with me.
> ha5_2. My friend wanted me to feel unimportant.

Story 6

One day at work you decide to go to the cafeteria for lunch. After you purchase your lunch, you notice that the seating area is very crowded and no empty tables are available. You notice one of your co-workers sitting alone at a small table and ask if you can join him (or her) for lunch. Your co-worker says "no".

Why do you think your co-worker said "no"?

> ha6_1. My co-worker wanted to exclude me.
>
> ha6_2. My co-worker wanted me to feel bad.

Story 7

Imagine that you go to the first meeting of a club you want to join. You would like to make friends with the other people in the club. You walk up to some of the other club members and say, "Hi!" but they don't say anything back.

Why do you think the club members didn't say anything back to you?

> ha7_1. The club members wanted to ignore me.
> ha7_2. The club members wanted me to feel unimportant.

Story 8

You are driving in to work one day and just after you pull into a parking space, another car pulls up into the space to your right. As the person in the other car, a co-worker, gets out of his/her car, their car door hits your passenger side door and leaves a scratch on your car. The person walks away as you get out of your car.

Why do you think this person acted this way?

> ha8_1. This person wanted to damage my car.
> ha8_2. This person wanted me to feel unimportant.

Appendix XVII: Chapter Four-Mplus Syntaxes for Data Analyses

TITLE: DWIT CFA1

DATA: FILE = N712 CFA DWIT.dat;

VARIABLE: CATEGORICAL = ALL;

NAMES = dw1 dw2 dw3 dw4 dw5
dw6 dw7 dw8 dw9 dw10
dw11 dw12 dw13 dw14
dw15 dw16 dw17 dw18
dw19 dw20 dw21 dw22
dw23 dw24 dw25 dw26
dw27 dw28 dw29 dw30
dw31 dw32 dw33 dw34
dw35 dw36;

USEVARIABLES = dw1 dw2 dw3 dw4 dw5
dw6 dw7 dw8 dw9 dw10
dw11 dw12 dw13 dw14
dw15 dw16 dw17 dw18
dw19 dw20 dw21 dw22
dw23 dw24 dw25 dw26
dw27 dw28 dw29 dw30
dw31 dw32 dw33 dw34
dw35 dw36;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: HW BY dw1 dw2 dw3 dw4 dw5 dw6 dw7 dw8;
RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15 dw16;
CSB BY dw24 dw25 dw26 dw27 dw28 dw29 dw30 dw31 dw32 dw33
dw34 dw35 dw36;

OUTPUT: sampstat standardized modindices (all) tech4 res;

TITLE: DWIT CFA2

DATA: FILE = N712 CFA DWIT.dat;

VARIABLE: CATEGORICAL = ALL;

               NAMES = dw1 dw2 dw3 dw4 dw5
                       dw6 dw7 dw8 dw9 dw10
                       dw11 dw12 dw13 dw14
                       dw15 dw16 dw17 dw18
                       dw19 dw20 dw21 dw22
                       dw23 dw24 dw25 dw26
                       dw27 dw28 dw29 dw30
                       dw31 dw32 dw33 dw34
                       dw35 dw36;

          USEVARIABLES = dw1 dw2 dw3 dw4 dw5
                       dw6 dw7 !dw8
                       dw9 dw10 dw11 dw12
                       dw13 dw14 dw15 !dw16
                       dw17 dw18
                       dw19 dw20 dw21 dw22
                       dw23 dw24 dw25 dw26
                       dw27 dw28 !dw29
                       dw30 dw31 dw32 dw33
                       dw34 dw35 dw36;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: HW BY dw1 dw2 dw3 dw4 dw5 dw6 dw7;
             RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
             EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
             CSB BY dw24 dw25 dw26 dw27 dw28 dw30 dw31 dw32 dw33 dw34 dw35 dw36;
             dw4 WITH dw6;
             dw20 WITH dw21;

OUTPUT: sampstat standardized modindices (all) tech4 res

TITLE: DWIT CFA3

DATA: FILE = N712 CFA DWIT.dat;

VARIABLE: CATEGORICAL = ALL;

                  NAMES = dw1 dw2 dw3 dw4 dw5
                          dw6 dw7 dw8 dw9 dw10
                          dw11 dw12 dw13 dw14
                          dw15 dw16 dw17 dw18
                          dw19 dw20 dw21 dw22
                          dw23 dw24 dw25 dw26
                          dw27 dw28 dw29 dw30
                          dw31 dw32 dw33 dw34
                          dw35 dw36;

          USEVARIABLES = dw1 dw2 dw3 dw4 !dw5
                          dw6 !dw7 dw8
                          dw9 dw10 dw11 dw12
                          dw13 dw14 dw15 !dw16
                          dw17 dw18
                          dw19 dw20 dw21 dw22
                          dw23 dw24 dw25 dw26
                          dw27 dw28 !dw29
                          dw30 dw31 !dw32
                          dw33 dw34 dw35 dw36;

ANALYSIS: ESTIMATOR IS WLSMV;

OUTPUT: sampstat standardized modindices (all) tech4 res

MODEL: HW BY dw1 dw2 dw3 dw4 dw6;
                  RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
                  EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
                  CSB BY dw24 dw25 dw26 dw27 dw28 dw30 dw31 dw33 dw34 dw35 dw36;
                  dw4 WITH dw6;
                  dw20 WITH dw21;

OUTPUT: sampstat standardized modindices (all) tech4 res

TITLE: HAB CFA1

DATA: FILE = N712 CFA HAB.dat;

VARIABLE: CATEGORICAL = ALL;

            NAMES = ha1_1 ha1_2 ha2_1 ha2_2
                    ha3_1 ha3_2 ha4_1 ha4_2
                    ha5_1 ha5_2 ha6_1 ha6_2
                    ha7_1 ha7_2 ha8_1 ha8_2;

        USEVARIABLES = ha1_1 ha1_2 ha2_1 ha2_2
                    ha3_1 ha3_2 ha4_1 ha4_2
                    ha5_1 ha5_2 ha6_1 ha6_2
                    ha7_1 ha7_2 ha8_1 ha8_2;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: HAB BY ha1_1 ha1_2 ha2_1 ha2_2 ha3_1 ha3_2 ha4_1 ha4_2
             ha5_1 ha5_2 ha6_1 ha6_2 ha7_1 ha7_2 ha8_1 ha8_2;

OUTPUT: sampstat standardized modindices (all) tech4 res;

TITLE: HAB CFA2

DATA: FILE = N712 CFA HAB PARCELS INTEGER.dat;

VARIABLE: CATEGORICAL = ALL;

NAMES = ha1i ha2i ha3i ha4i ha5i ha6i ha7i ha8i;

USEVARIABLES = ha1i ha2i ha3i ha4i ha5i ha6i ha7i ha8i;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: HAB BY ha1i ha2i ha3i ha4i ha5i ha6i ha7i ha8i;

OUTPUT: sampstat standardized modindices (all) tech4 res;

TITLE: HS CFA

DATA: FILE = N712 CFA HS.dat;

VARIABLE: CATEGORICAL = ALL;

               NAMES = hs1 hs2 hs3 hs4 hs5
                   hs6 hs7 hs8 hs9 hs10 hs11;

         USEVARIABLES = hs1 hs2 hs3 hs4 hs5
                   hs6 hs7 hs8 hs9 hs10 hs11;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: HS BY hs1 hs2 hs3 hs4 hs5 hs6 hs7 hs8 hs9 hs10 hs11;

OUTPUT: sampstat standardized modindices (all) tech4 res;

TITLE: ECwC CFA

DATA: FILE = N712 CFA ECwC.dat;

VARIABLE: CATEGORICAL = ALL;

                      NAMES = ec1 ec2 ec3 ec4 ec5
                            ec6 ec7 ec8 ec9 ec10
                            ec11 ec12 ec13 ec14 ec15;

              USEVARIABLES = ec1 ec2 ec3 ec4 ec5
                            ec6 ec7 ec8 ec9 ec10
                            ec11 ec12 ec13 ec14 ec15;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: ECwC BY ec1 ec2 ec3 ec4 ec5 ec6 ec7 ec8 ec9 ec10 ec11 ec12 ec13 ec14 ec15;

OUTPUT: sampstat standardized modindices (all) tech4 res;

TITLE: CSBIT CFA

DATA: FILE = N712 CFA CSBIT.dat;

VARIABLE: CATEGORICAL = ALL;

                   NAMES = csb1 csb2 csb3 csb4
                           csb5 csb6 csb7 csb8
                           csb9 csb10 csb11 csb12;

             USEVARIABLES = csb1 csb2 csb3 csb4
                           csb5 csb6 csb7 csb8
                           csb9 csb10 csb11 csb12;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: CSBIT BY csb1 csb2 csb3 csb4 csb5 csb6 csb7 csb8 csb9 csb10 csb11 csb12;

OUTPUT: sampstat standardized modindices (all) tech4 res;

TITLE: Full SEM

DATA: FILE = N712 SEM.dat;

VARIABLE: CATEGORICAL = ALL;

                    NAMES = dw1 dw2 dw3 dw4 dw5
                            dw6 dw7 dw8 dw9 dw10
                            dw11 dw12 dw13 dw14
                            dw15 dw16 dw17 dw18
                            dw19 dw20 dw21 dw22
                            dw23 dw24 dw25 dw26
                            dw27 dw28 dw29 dw30
                            dw31 dw32 dw33 dw34
                            dw35 dw36
                            ha1i ha2i ha3i ha4i
                            ha5i ha6i ha7i ha8i
                            hs1 hs2 hs3 hs4 hs5
                            hs6 hs7 hs8 hs9 hs10 hs11
                            ec1 ec2 ec3 ec4 ec5
                            ec6 ec7 ec8 ec9 ec10
                            ec11 ec12 ec13 ec14 ec15
                            csb1 csb2 csb3 csb4
                            csb5 csb6 csb7 csb8
                            csb9 csb10 csb11 csb12;

           USEVARIABLES = dw1 dw2 dw3 dw4 !dw5
                            dw6 !dw7 dw8
                            dw9 dw10 dw11 dw12
                            dw13 dw14 dw15 !dw16
                            dw17 dw18
                            dw19 dw20 dw21 dw22
                            dw23 dw24 dw25 dw26
                            dw27 dw28 !dw29
                            dw30 dw31 !dw32
                            dw33 dw34 dw35 dw36
                            ha1i ha2i ha3i ha4i
                            ha5i ha6i ha7i ha8i
                            hs1 hs2 hs3 hs4
                            hs5 hs6 hs7 hs8
                            hs9 hs10 hs11
                            ec1 ec2 ec3 ec4 ec5
                            ec6 ec7 ec8 ec9 ec10
                            ec11 ec12 ec13 ec14 ec15
                            csb1 csb2 csb3 csb4
                            csb5 csb6 csb7 csb8
                            csb9 csb10 csb11 csb12;

ANALYSIS: ESTIMATOR IS WLSMV;

MODEL: HW BY dw1 dw2 dw3 dw4 dw6;
                    RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
                    EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
                    CSB BY dw24 dw25 dw26 dw27 dw28 dw30 dw31 dw33 dw34 dw35 dw36;
                    dw4 WITH dw6;
                    dw20 WITH dw21;
                    HAB BY ha1i ha2i ha3i ha4i ha5i ha6i ha7i ha8i;

```
HS BY hs1 hs2 hs3 hs4 hs5 hs6 hs7 hs8 hs9 hs10 hs11;
ECWC BY ec1 ec2 ec3 ec4 ec5 ec6 ec7 ec8 ec9 ec10 ec11 ec12 ec13 ec14 ec15;
CSBIT BY csb1 csb2 csb3 csb4 csb5 csb6 csb7 csb8 csb9 csb10 csb11 csb12;
HW ON HAB;
RET ON HS;
EC ON ECWC;
CSB ON CSBIT;

OUTPUT: sampstat standardized modindices (all) tech4 res;
```

Appendix XVIII: The Adverse Childhood Experiences (ACE) Scale

(Finkelhor, Shattuck, Turner, & Hamby, 2015)[31]

Before the age of 18….

1. Did a parent or other adult in the household often or very often…
   Swear at you, insult you, put you down, or humiliate you?
      or
   Act in a way that made you afraid that you might be physically hurt?
      Yes   No   If yes enter 1 _____

2. Did a parent or other adult in the household often or very often…
   Push, grab, slap, or throw something at you?
      or
   Ever hit you so hard that you had marks or were injured?
      Yes   No   If yes enter 1 _____

3. Did an adult or person at least 5 years older than you ever…
   Touch or fondle you or have you touch their body in a sexual way?
      or
   Attempt or actually have oral, anal, or vaginal intercourse with you?
      Yes   No   If yes enter 1 _____

4. Did you often or very often feel that…
   No one in your family loved you or thought you were important or special?
      or
   Your family didn't look out for each other, feel close to each other, or support each other?
      Yes   No   If yes enter 1 _____

5. Did you often or very often feel that…
   You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
      or
   Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
      Yes   No   If yes enter 1 _____

6. Was a biological parent ever lost to you through divorce, abandonment, or other reason?
      Yes   No   If yes enter 1 _____

---

[31] Item 14 was not included in the study in Chapter Five.

7. Was your mother or stepmother:
    Often or very often pushed, grabbed, slapped, or had something thrown at her?
            or
    Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?
            or
    Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
            Yes   No   If yes enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
            Yes   No   If yes enter 1 _____

9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
            Yes   No   If yes enter 1 _____

10. Did a household member go to prison?
            Yes   No   If yes enter 1 _____

11. Did other kids, including brothers or sisters, often or very often hit you, threaten you, pick on you or insult you?
            Yes   No   If yes enter 1 _____

12. Did you often or very often feel lonely, rejected or that nobody liked you?
            Yes   No   If yes enter 1 _____

13. Did you live for 2 or more years in a neighbourhood that was dangerous, or where you saw people being assaulted?
            Yes   No   If yes enter 1 _____

14. Was there a period of 2 or more years when your family was very poor or on public assistance?
            Yes   No   If yes enter 1 _____

Appendix XIX: Self-Reported Past Problematic Sexual Behaviour

I created the measure below in order to assess the existence of potentially problematic self-reported sexual behaviour for the purposes of the two-wave study in Chapter Five.

When we say sexual behaviour, we mean your sexual interactions with other people or sexual behaviours on your own involving the use of pornography.

Since your 18[32] birthday,

- Have there been occasions that you have regretted your sexual behaviour? Yes/No

- Have there been occasions that you thought your sexual behaviour might be abnormal or atypical? Yes/No

- Have there been occasions when you thought that your sexual behaviour could get you into legal trouble? Yes/No

- Have there been occasions where you found your sexual behaviours were interfering with your day-to-day life? Yes/No

> You answered 'yes' to one of the questions about your sexual behaviours and problems or concerns they may have caused. Did any of these sexual behaviours involve children in any way? For this study, when we say children, we mean individuals below the current age of sexual consent where you live. Please remember that your answers are anonymous.

The sexual behaviours involved only adults ¡

The sexual behaviours involved children ¡

---

[32] In the second wave, the indicated time period was "In the past 14 months".

Appendix XX: Chapter Five

Two Self-Reported Proclivity and Self-Evaluation of Social Desirability Measures

Self-reported proclivity to access child sexual exploitation material:

Thinking of the future…

If you could be sure that no one would know and that you would not be punished, how likely would you be watching pornographic material containing younger individuals below the age of 16?

0	1	2	3	4	5	6
Not likely			-----------------			Very likely

Self-reported proclivity to commit contact offences against children:

Thinking of the future…

If you could be sure that no one would know and that you would not be punished, how likely would you be engaging in sexual activity with someone below the age of 16?

0	1	2	3	4	5	6
Not likely			-----------------			Very likely

Self-evaluation of social desirability

These questions discussed some stigmatising and sometimes illegal concepts. How honest do you feel you were in answering these questions? (please note that payment <u>will not</u> depend on your answer to this question).

0	1	2	3	4	5	6
Completely open and honest			-----------------			I wasn't honest at all

Appendix XXI: Chapter Five-Mplus Syntaxes for Data Analyses

TITLE: Wave 1 SEM 1

DATA: FILE = N712 Wave1.dat;

VARIABLE:
        CATEGORICAL = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13
                dw1 dw2 dw3 dw4 !dw5
                dw6 !dw7 dw8
                dw9 dw10 dw11 dw12
                dw13 dw14 dw15 !dw16
                dw17 dw18 dw19 dw20 dw21
                dw22 dw23 dw24 dw25 dw26
                dw27 dw28 !dw29
                dw30 dw31 !dw32
                dw33 dw34 dw35 dw36;

        NAMES = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8
                ace9 ace10 ace11
                ace12 ace13
                dw1 dw2 dw3 dw4 dw5
                dw6 dw7 dw8 dw9 dw10
                dw11 dw12 dw13 dw14
                dw15 dw16 dw17 dw18
                dw19 dw20 dw21 dw22
                dw23 dw24 dw25 dw26
                dw27 dw28 dw29
                dw30 dw31 dw32
                dw33 dw34 dw35 dw36
                pproc1 cproc1 socdes1;

    USEVARIABLES = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13
                dw1 dw2 dw3 dw4 !dw5
                dw6 !dw7 dw8
                dw9 dw10 dw11 dw12
                dw13 dw14 dw15 !dw16
                dw17 dw18 dw19 dw20 dw21
                dw22 dw23 dw24 dw25 dw26
                dw27 dw28 !dw29
                dw30 dw31 !dw32
                dw33 dw34 dw35 dw36
                pproc1 cproc1 socdes1;

ANALYSIS: TYPE = GENERAL;
                ESTIMATOR IS WLSMV;

MODEL: ACE BY ace1 ace2 ace3 ace4 ace5 ace6 ace7 ace8 ace9 ace10 ace11 ace12 ace13;
                HW BY dw1 dw2 dw3 dw4 dw6;
                RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
                EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
                CSB BY dw24 dw25 dw26 dw27 dw28 dw30 dw31 dw33 dw34 dw35 dw36;

```
          dw4 WITH dw6;
          dw20 WITH dw21;
          HW RET EC CSB ON ACE;
          pproc1 ON HW RET EC CSB SOCDES1 ACE;
          cproc1 ON HW RET EC CSB SOCDES1 ACE;
          HW RET EC CSB ON SOCDES1;
          ACE WITH SOCDES1;
          HW WITH RET EC CSB;
          RET WITH EC CSB;
          EC WITH CSB;

   MODEL INDIRECT:
          pproc1 IND ACE;
          cproc1 IND ACE;

OUTPUT:      sampstat standardized modindices (all) tech4 res;
```

TITLE: Wave 1 SEM 2

DATA: FILE = N712 Wave1.dat;

VARIABLE:
        CATEGORICAL = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13
                dw1 dw2 dw3 dw4 !dw5
                dw6 !dw7 dw8
                dw9 dw10 dw11 dw12
                dw13 dw14 dw15 !dw16
                dw17 dw18 dw19 dw20 dw21
                dw22 dw23 dw24 !dw25
                dw26 !dw27 dw28 !dw29
                dw30 dw31 !dw32
                dw33 dw34 dw35 dw36;

        NAMES = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8
                ace9 ace10 ace11
                ace12 ace13
                dw1 dw2 dw3 dw4 dw5
                dw6 dw7 dw8 dw9 dw10
                dw11 dw12 dw13 dw14
                dw15 dw16 dw17 dw18
                dw19 dw20 dw21 dw22
                dw23 dw24 dw25 dw26
                dw27 dw28 dw29
                dw30 dw31 dw32
                dw33 dw34 dw35 dw36
                pproc1 cproc1 socdes1;

    USEVARIABLES = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13
                dw1 dw2 dw3 dw4 !dw5
                dw6 !dw7 dw8
                dw9 dw10 dw11 dw12
                dw13 dw14 dw15 !dw16
                dw17 dw18 dw19 dw20 dw21
                dw22 dw23 dw24 !dw25
                dw26 !dw27 dw28 !dw29
                dw30 dw31 !dw32
                dw33 dw34 dw35 dw36
                pproc1 cproc1 socdes1;

ANALYSIS: TYPE = GENERAL;
                ESTIMATOR IS WLSMV;

MODEL: ACE BY ace1 ace2 ace3 ace4 ace5 ace6 ace7 ace8 ace9 ace10 ace11 ace12 ace13;
                HW BY dw1 dw2 dw3 dw4 dw6;
                RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
                EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
                CSB BY dw24 dw26 dw30 dw31 dw33 dw34 dw35 dw36;
                dw4 WITH dw6;
                dw20 WITH dw21;

```
HW RET EC CSB ON ACE;
pproc1 ON HW RET EC CSB SOCDES1 ACE;
cproc1 ON HW RET EC CSB SOCDES1 ACE;
HW RET EC CSB ON SOCDES1;
ACE WITH SOCDES1;
HW WITH RET EC CSB;
RET WITH EC CSB;
EC WITH CSB;

MODEL INDIRECT:
pproc1 IND ACE;
cproc1 IND ACE;

OUTPUT:     sampstat standardized modindices (all) tech4 res;
```

TITLE: CFA 2.0

DATA: FILE = N486 Wave2.dat;

VARIABLE:
        CATEGORICAL = !ace1 ace2 ace3 ace4
                !ace5 ace6 ace7 ace8 ace9
                !ace10 ace11 ace12 ace13;
                !dw1 dw2 dw3 dw4 !dw5
                !dw6 !dw7 dw8
                !dw9 dw10 dw11 dw12
                !dw13 dw14 dw15 !dw16
                !dw17 dw18 dw19 dw20 dw21
                !dw22 dw23 dw24 !dw25
                !dw26 !dw27 dw28 dw29
                !dw30 dw31 !dw32
                !dw33 dw34 dw35 dw36;
                !PPROC1 CPROC1 SOCDES1
                DV1T1 DV2T1 DV3T1 DV4T1
                DV5T1 DV6T1
                DV7T1 DV8T1;
                !DV9T1 DV10T1 DV11T1 DV12T1
                !DV13T1 !DV14T1
                !DV15T1 DV16T1
                !DV17T1 DV18T1 DV19T1 DV20T1
                !DV21T1;
                !DV1T2 DV2T2 DV3T2 !DV4T2
                !DV5T2 DV6T2
                !DV7T2 DV8T2;
                !DV9T2
                !DV10T2 DV11T2 DV12T2 DV13T2
                !DV14T2 DV15T2 DV16T2 DV17T2
                !DV18T2 DV19T2 DV20T2 DV21T2
                !PPROC2 CPROC2 SOCDES2;

        NAMES = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13
                dw1 dw2 dw3 dw4 dw5 dw6
                dw7 dw8 dw9 dw10 dw11
                dw12 dw13 dw14 dw15 dw16
                dw17 dw18 dw19 dw20 dw21
                dw22 dw23 dw24 dw25 dw26
                dw27 dw28 dw29 dw30 dw31
                dw32 dw33 dw34 dw35 dw36
                PPROC1 CPROC1 SOCDES1
                DV1T1 DV2T1 DV3T1 DV4T1
                DV5T1 DV6T1 DV7T1 DV8T1
                DV9T1 DV10T1 DV11T1 DV12T1
                DV13T1 DV14T1 DV15T1 DV16T1
                DV17T1 DV18T1 DV19T1 DV20T1
                DV21T1 DV1T2 DV2T2 DV3T2 DV4T2
                DV5T2 DV6T2 DV7T2 DV8T2 DV9T2
                DV10T2 DV11T2 DV12T2 DV13T2
                DV14T2 DV15T2 DV16T2 DV17T2
                DV18T2 DV19T2 DV20T2 DV21T2
                PPROC2 CPROC2 SOCDES2;

```
    USEVARIABLES = !ace1 ace2 ace3 ace4
                   !ace5 ace6 ace7 ace8 ace9
                   !ace10 ace11 ace12 ace13
                   !dw1 dw2 dw3 dw4 !dw5
                   !dw6 !dw7 dw8
                   !dw9 dw10 dw11 dw12
                   !dw13 dw14 dw15 !dw16
                   !dw17 dw18 dw19 dw20 dw21
                   !dw22 dw23 dw24 !dw25
                   !dw26 !dw27 dw28 dw29
                   !dw30 dw31 !dw32
                   !dw33 dw34 dw35 dw36
                   !PPROC1 CPROC1
                   !SOCDES1
                   DV1T1 DV2T1 DV3T1 DV4T1
                   DV5T1 DV6T1
                   DV7T1 DV8T1;
                   !DV9T1 DV10T1 DV11T1 DV12T1
                   !DV13T1 !DV14T1
                   !DV15T1 DV16T1
                   !DV17T1 DV18T1 DV19T1 DV20T1
                   !DV21T1;
                   !DV1T2 DV2T2 DV3T2 !DV4T2
                   !DV5T2 DV6T2
                   !DV7T2 DV8T2
                   !DV9T2
                   !DV10T2 DV11T2 DV12T2 DV13T2
                   !DV14T2 DV15T2 DV16T2 DV17T2
                   !DV18T2 DV19T2 DV20T2 DV21T2
                   !PPROC2 CPROC2
                   !SOCDES2;

       MISSING =  ALL (9);

   ANALYSIS:    ESTIMATOR IS WLSMV;


   MODEL:       DVT1 BY DV1T1 DV2T1 DV3T1 DV4T1 DV5T1 DV6T1 DV7T1 DV8T1;


   OUTPUT:      sampstat standardized modindices(all) tech4 res;
```

TITLE: SEM 2.0

DATA: FILE = N486 Wave2.dat;

VARIABLE:
     CATEGORICAL = ace1 ace2 ace3 ace4
         ace5 ace6 ace7 ace8 ace9
         ace10 ace11 ace12 ace13;
         !dw1 dw2 dw3 dw4 !dw5
         !dw6 !dw7 dw8
         !dw9 dw10 dw11 dw12
         !dw13 dw14 dw15 !dw16
         !dw17 dw18 dw19 dw20 dw21
         !dw22 dw23 dw24 !dw25
         !dw26 !dw27 dw28 dw29
         !dw30 dw31 !dw32
         !dw33 dw34 dw35 dw36;
         !PPROC1 CPROC1 SOCDES1
         !DV1T1 DV2T1 !DV3T1
         !DV4T1 DV5T1 DV6T1
         !DV7T1 DV8T1
         !DV9T1 DV10T1 !DV11T1
         !DV12T1 DV13T1 !DV14T1
         !DV15T1 DV16T1
         !DV17T1 DV18T1 !DV19T1 DV20T1
         !DV21T1;
         !DV1T2 DV2T2 DV3T2 !DV4T2
         !DV5T2 DV6T2
         !DV7T2 DV8T2;
         !DV9T2
         !DV10T2 DV11T2 DV12T2 DV13T2
         !DV14T2 DV15T2 DV16T2 DV17T2
         !DV18T2 DV19T2 DV20T2 DV21T2
         !PPROC2 CPROC2 SOCDES2;

     NAMES = ace1 ace2 ace3 ace4
         ace5 ace6 ace7 ace8 ace9
         ace10 ace11 ace12 ace13
         dw1 dw2 dw3 dw4 dw5 dw6
         dw7 dw8 dw9 dw10 dw11
         dw12 dw13 dw14 dw15 dw16
         dw17 dw18 dw19 dw20 dw21
         dw22 dw23 dw24 dw25 dw26
         dw27 dw28 dw29 dw30 dw31
         dw32 dw33 dw34 dw35 dw36
         PPROC1 CPROC1 SOCDES1
         DV1T1 DV2T1 DV3T1 DV4T1
         DV5T1 DV6T1 DV7T1 DV8T1
         DV9T1 DV10T1 DV11T1 DV12T1
         DV13T1 DV14T1 DV15T1 DV16T1
         DV17T1 DV18T1 DV19T1 DV20T1
         DV21T1 DV1T2 DV2T2 DV3T2 DV4T2
         DV5T2 DV6T2 DV7T2 DV8T2 DV9T2
         DV10T2 DV11T2 DV12T2 DV13T2
         DV14T2 DV15T2 DV16T2 DV17T2
         DV18T2 DV19T2 DV20T2 DV21T2
         PPROC2 CPROC2 SOCDES2;

```
     USEVARIABLES = ace1 ace2 ace3 ace4
                    ace5 ace6 ace7 ace8 ace9
                    ace10 ace11 ace12 ace13
                    dw1 dw2 dw3 dw4 !dw5
                    dw6 !dw7 dw8
                    dw9 dw10 dw11 dw12
                    dw13 dw14 dw15 !dw16
                    dw17 dw18 dw19 dw20 dw21
                    dw22 dw23 dw24 dw25
                    dw26 dw27 dw28 !dw29
                    dw30 dw31 !dw32
                    dw33 dw34 dw35 dw36
                    !PPROC1 CPROC1
                    !SOCDES1
                    DV1T1 DV2T1 !DV3T1
                    DV4T1 DV5T1 DV6T1
                    DV7T1 DV8T1
                    !DV9T1 DV10T1 !DV11T1
                    !DV12T1 !DV13T1 !DV14T1
                    !DV15T1
                    !DV16T1 DV17T1 DV18T1
                    !DV19T1 DV20T1
                    !DV21T1
                    !DV1T2 DV2T2 DV3T2 !DV4T2
                    !DV5T2 DV6T2
                    !DV7T2 DV8T2
                    !DV9T2
                    !DV10T2 DV11T2 DV12T2 DV13T2
                    !DV14T2 DV15T2 DV16T2 DV17T2
                    !DV18T2 DV19T2 DV20T2 DV21T2
                    !PPROC2 CPROC2
                    SOCDES2;

   MISSING =  ALL (9);

 ANALYSIS:   ESTIMATOR IS MLR;
             iterations = 100000;
             convergence = 0.00005;
             type = general;

 MODEL:      ACE BY ace1 ace2 ace3 ace4 ace5 ace6 ace7 ace8 ace9 ace10 ace11 ace12 ace13;
             HW BY dw1 dw2 dw3 dw4 dw6;
             RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
             EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
             CSB BY dw24 dw25 dw26 dw27 dw28 dw30 dw31 dw33 dw34 dw35 dw36;
             PPSB BY DV1T1 DV2T1 DV4T1 DV5T1 DV6T1 DV7T1 DV8T1;
             HW RET EC CSB ON ACE;
             HW WITH RET EC CSB;
             RET WITH EC CSB;
             EC WITH CSB;
             PPSB ON SOCDES2 HW RET EC CSB ACE;

   MODEL INDIRECT:
             PPSB IND ACE;

 OUTPUT:     standardized tech4 res;
```

TITLE: Two-wave Proclivity SEM

DATA: FILE = N486 Wave2.dat

VARIABLE:
    CATEGORICAL = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13;
                !dw1 dw2 dw3 dw4 !dw5
                !dw6 !dw7 dw8
                !dw9 dw10 dw11 dw12
                !dw13 dw14 dw15 !dw16
                !dw17 dw18 dw19 dw20 dw21
                !dw22 dw23 dw24 !dw25
                !dw26 !dw27 dw28 dw29
                !dw30 dw31 !dw32
                !dw33 dw34 dw35 dw36;
                !PPROC1 CPROC1 SOCDES1
                !DV1T1 DV2T1 !DV3T1
                !DV4T1 DV5T1 DV6T1
                !DV7T1 DV8T1
                !DV9T1 DV10T1 !DV11T1
                !DV12T1 DV13T1 !DV14T1
                !DV15T1 DV16T1
                !DV17T1 DV18T1 !DV19T1 DV20T1
                !DV21T1;
                !DV1T2 DV2T2 DV3T2 !DV4T2
                !DV5T2 DV6T2
                !DV7T2 DV8T2;
                !DV9T2
                !DV10T2 DV11T2 DV12T2 DV13T2
                !DV14T2 DV15T2 DV16T2 DV17T2
                !DV18T2 DV19T2 DV20T2 DV21T2
                !PPROC2 CPROC2 SOCDES2;

        NAMES = ace1 ace2 ace3 ace4
                ace5 ace6 ace7 ace8 ace9
                ace10 ace11 ace12 ace13
                dw1 dw2 dw3 dw4 dw5 dw6
                dw7 dw8 dw9 dw10 dw11
                dw12 dw13 dw14 dw15 dw16
                dw17 dw18 dw19 dw20 dw21
                dw22 dw23 dw24 dw25 dw26
                dw27 dw28 dw29 dw30 dw31
                dw32 dw33 dw34 dw35 dw36
                PPROC1 CPROC1 SOCDES1
                DV1T1 DV2T1 DV3T1 DV4T1
                DV5T1 DV6T1 DV7T1 DV8T1
                DV9T1 DV10T1 DV11T1 DV12T1
                DV13T1 DV14T1 DV15T1 DV16T1
                DV17T1 DV18T1 DV19T1 DV20T1
                DV21T1 DV1T2 DV2T2 DV3T2 DV4T2
                DV5T2 DV6T2 DV7T2 DV8T2 DV9T2
                DV10T2 DV11T2 DV12T2 DV13T2
                DV14T2 DV15T2 DV16T2 DV17T2
                DV18T2 DV19T2 DV20T2 DV21T2
                PPROC2 CPROC2 SOCDES2;

```
USEVARIABLES = ace1 ace2 ace3 ace4
               ace5 ace6 ace7 ace8 ace9
               ace10 ace11 ace12 ace13
               dw1 dw2 dw3 dw4 !dw5
               dw6 !dw7 dw8
               dw9 dw10 dw11 dw12
               dw13 dw14 dw15 !dw16
               dw17 dw18 dw19 dw20 dw21
               dw22 dw23 dw24 dw25
               dw26 dw27 dw28 !dw29
               dw30 dw31 !dw32
               dw33 dw34 dw35 dw36
               PPROC1 CPROC1
               SOCDES1
               !DV1T1 DV2T1 !DV3T1
               !DV4T1 DV5T1 DV6T1
               !DV7T1 DV8T1
               !DV9T1 DV10T1 !DV11T1
               !DV12T1 !DV13T1 !DV14T1
               !DV15T1
               !DV16T1 DV17T1 DV18T1
               !DV19T1 DV20T1
               !DV21T1
               !DV1T2 DV2T2 DV3T2 !DV4T2
               !DV5T2 DV6T2
               !DV7T2 DV8T2
               !DV9T2
               !DV10T2 DV11T2 DV12T2 DV13T2
               !DV14T2 DV15T2 DV16T2 DV17T2
               !DV18T2 DV19T2 DV20T2 DV21T2
               PPROC2 CPROC2
               SOCDES2;

   MISSING =  ALL (9);

ANALYSIS:    ESTIMATOR IS MLR;
             iterations = 100000;
             convergence = 0.00005;
             type = general;

  MODEL:     ACE BY ace1 ace2 ace3 ace4 ace5 ace6 ace7 ace8 ace9 ace10 ace11 ace12 ace13;
             HW BY dw1 dw2 dw3 dw4 dw6;
             RET BY dw17 dw18 dw19 dw20 dw21 dw22 dw23;
             EC BY dw9 dw10 dw11 dw12 dw13 dw14 dw15;
             CSB BY dw24 dw25 dw26 dw27 dw28 dw30 dw31 dw33 dw34 dw35 dw36;
             HW RET EC CSB ON ACE;
             HW WITH RET EC CSB;
             RET WITH EC CSB;
             EC WITH CSB;
             PPROC2 ON PPROC1 SOCDES2 HW RET EC CSB ACE;
             CPROC2 ON CPROC1 SOCDES2 HW RET EC CSB ACE;
             PPROC1 WITH HW RET EC CSB ACE SOCDES1;
             CPROC1 WITH HW RET EC CSB ACE SOCDES1;
             SOCDES2 ON SOCDES1;
```

```
MODEL INDIRECT:
        PPROC2 IND ACE;
        CPROC2 IND ACE;

OUTPUT: standardized tech4 res;
```

Appendix XXII: Chapter Five

Self-Reported Past Problematic Sexual Behaviour 2.0-Wave 1

The following statements consist of various sexual behaviour that you may have engaged in. Some refer to very typical sexual behaviours, while others refer to behaviours that may be less typical, or in some cases illegal. **Some items are quite similar so ensure that you read each one carefully**. Please respond honestly, and remember that **your responses are completely anonymous.**

<u>Sexual offending against children</u>
- Since the age of 18, I have accidentally seen pornographic material that I thought might feature people younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have knowingly and deliberately watched pornographic material featuring people younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have forced or pressured or tricked someone younger than 16 into sharing nude or sexual images or videos of themselves with me.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have shared nude or sexual images or videos of myself with another person who was younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have exposed my genitalia to someone that I know or suspect was younger than 16, who was physically present or nearby but without making physical contact with them.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have masturbated in the presence of someone I knew to be younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone who I thought was aged 16 or older, but subsequently turned out to be younger.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone I knew to be younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Sexual offending against adults
- Since the age of 18, I have forced or pressured or tricked someone aged 16 or older into having sex (oral, anal or penetrative) or sexual contact (touching or kissing) with me, without using physical force.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have physically forced someone aged 16 or older into having sex (oral, anal or penetrative) or sexual contact (touching or kissing) with me.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have had sex or sexual contact with someone aged 16 or older who was too drunk or high to fully consent.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have forced or pressured or tricked someone aged 16 or older into sharing nude or sexual images or videos of themselves with me.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have recorded nude or sexual images or videos of someone aged 16 or older without their permission.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Grey-potentially problematic behaviours but not illegal
- Since the age of 18, I have been concerned about the amount of pornography that I watch.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have fantasised about having sex with someone aged 16 or older without their agreement.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have watched pornography where an actor/participant appears not to consent to the sexual activity.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have masturbated alone (without pornography) to a sexual fantasy involving individuals younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have found myself curious about watching pornographic material containing people younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Healthy: nothing is problematic or illegal with these
- Since the age of 18, I have felt I was "in love" with someone aged 16 or older.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have been in a sexual relationship lasting three months or more with someone aged 16 or older.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have masturbated alone (without using pornography) to a sexual fantasy involving individuals aged 16 or older.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Self-Reported Past Problematic Sexual Behaviour 2.0-Wave 2

The following statements consist of various sexual behaviour that you may have engaged in, **in the past 14 months**. Some refer to very typical sexual behaviours, while others refer to behaviours that may be less typical, or in some cases illegal. **Some items are quite similar so ensure that you read each one carefully**. Please respond honestly, and remember that **your responses are completely anonymous.**

<u>Sexual offending against children</u>
- In the past 14 months, I have accidentally seen pornographic material that I thought might feature people younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have knowingly and deliberately watched pornographic material featuring people younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have forced or pressured or tricked someone younger than 16 into sharing nude or sexual images or videos of themselves with me.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have shared nude or sexual images or videos of myself with another person who was younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have exposed my genitalia to someone that I know or suspect was younger than 16, who was physically present or nearby but without making physical contact with them.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have masturbated in the presence of someone I knew to be younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone who I thought was aged 16 or older, but subsequently turned out to be younger.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have had sex (oral, anal or penetrative) or sexual contact (touching or kissing) with someone I knew to be younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Sexual offending against adults

- In the past 14 months, I have forced or pressured or tricked someone aged 16 or older into having sex (oral, anal or penetrative) or sexual contact (touching or kissing) with me, without using physical force.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have physically forced someone aged 16 or older into having sex (oral, anal or penetrative) or sexual contact (touching or kissing) with me.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have had sex or sexual contact with someone aged 16 or older who was too drunk or high to fully consent.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have forced or pressured or tricked someone aged 16 or older into sharing nude or sexual images or videos of themselves with me.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have recorded nude or sexual images or videos of someone aged 16 or older without their permission.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Grey-potentially problematic behaviours but not illegal

- In the past 14 months, I have been concerned about the amount of pornography that I watch.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have fantasised about having sex with someone aged 16 or older without their agreement.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- Since the age of 18, I have watched pornography where an actor/participant appears not to consent to the sexual activity.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have masturbated alone (without pornography) to a sexual fantasy involving individuals younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have found myself curious about watching pornographic material containing people younger than 16.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

<u>Healthy: nothing is problematic or illegal with these</u>
- In the past 14 months, I have felt I was "in love" with someone aged 16 or older.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have been in a sexual relationship lasting three months or more with someone aged 16 or older.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

- In the past 14 months, I have masturbated alone (without using pornography) to a sexual fantasy involving individuals aged 16 or older.

0	1	2	3	4
Definitely untrue	Somewhat untrue	Neither true nor untrue	Somewhat true	Definitely true

Appendix XXIII: Chapter Six

Single Case Study Semi-Structured Interview Schedule

INFORMATION SHEET

WHY SHOULD I TAKE PART?

By taking part in this interview, you will help us to understand your past experiences prior to your sexual offending. This will support us in developing further understanding and effective interventions that tackle sexual abuse against children. Your participation in this research is entirely voluntary and you can refuse to answer any questions you may find uncomfortable.

THE PURPOSE OF THE STUDY

We are interested in hearing about your experiences, including how your past offending behaviour came about, how it affected you, and your process of living an offence-free life. We would like to take this interview as an opportunity to gain valuable insight into your experience at various time periods; your childhood, adulthood during offence times and the period after your last release. We hope to use such research to inform policy makers, law agencies, and practitioners working with individuals similar to your background and improve provisions currently available for at-risk individuals and ex-offenders.

WHAT WILL PARTICIPATION INVOLVE?

If you do decide to take part, you will meet with a researcher to complete an interview lasting between 1 and 2 hours which will be audio recorded. The interview will include questions about your childhood experiences, past thoughts and beliefs about children and women, the world in general as well as intimate relationships, both prior and after your offending. There will also be a short questionnaire during the interview. There are no right or wrong answers; we are only interested in your experiences and your perceptions of life events. Some questions are of a personal nature dealing with difficult or potentially stigmatising topics. We will be providing resources at the end of the study if you feel disturbed or uncomfortable with any of the issues raised in this study.

WHAT WILL HAPPEN TO THE INFORMATION I PROVIDE?

Any answers you provide will remain confidential and your identity will be anonymised using a pseudonym of your choice. Interviews will be transcribed by the researcher and stored on an encrypted, secure drive at the University of Kent for up to 5 years, following publication. If published, data will remain anonymized and will not present any information that may identify you.

EXCEPTIONS OF CONFIDENTIALITY

The interview will involve questions about crimes that you have committed. I will only ask about crimes that have been brought to the attention of the authorities. If you were to disclose a serious crime which has not previously been reported (for example, a crime involving sexual abuse), I may have a responsibility to report this to the relevant authorities. This may also be the case if you disclosed being at risk of self-harm. If there is something that you would like to disclose, I can help support you in contacting your Probation Officer or another relevant professional.

Should you wish to contact the researcher, please contact Gaye Ildeniz, PhD Student via the address below:

School of Psychology, Keynes College, University of Kent, Canterbury, CT2 7NP.

If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel via the postal address below, providing a detailed account of your concern:

School of Psychology, Keynes College, University of Kent, Canterbury, CT2 7NP.

CONSENT FORM

| Title of Project: | Sexual Offending Against Children: A Case Study | Ethics Approval Number: | |
| Investigator(s): | Gaye Ildeniz
Dr Caoilte Ó Ciardha | Participant Information Number: | |

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.

I understand that my participation is <u>voluntary</u>, which means that I do not have to take part and that I am free to withdraw at any time without giving any reason.

I understand that in case I disclose details of any previously undisclosed offences, the researcher may contact relevant authorities.

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.

I freely agree to participate in this study.

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 serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel via the postal address below, providing a detailed account of your concern:
School of Psychology, Keynes College, University of Kent, Canterbury, CT2 7NP.

INTERVIEW SCHEDULE

Thank you for agreeing to meet with me today. The main purpose of this interview is to provide you with the opportunity to tell me about your experiences as an individual who have committed sexual offences against children in the past and your journey towards maintain an offence-free lifestyle. Please provide as much detail as possible using your own words. This information will help us better understand the factors that may lead individuals engage with children in a sexual way and work together towards developing effective interventions to help and support other individuals vulnerable to committing such crimes.

I will ask you about your thoughts, feelings, and experiences, about your childhood, teenage years and events leading up to the offence(s) you were convicted of. If you have been convicted of multiple offences or multiple times, we can talk about any or all of them and I would appreciate if you can share as much details as you remember.

Please do stop me if there is something that you feel uncomfortable talking about, or if you are feeling uncomfortable in any way. We can then stop the interview to give you a break or talk about something that you feel more comfortable talking about.

Date of Birth:

Current Age:

Gender:

Education level:

List of psychological treatment programmes undertaken:

Number of previous convictions:

Nature of previous convictions:

Age(s) at offence(s):

Engagement with mental health services:

      If so, have you ever been diagnosed with a mental health disorder? If yes, what diagnosis?

Childhood:

1. **Where did you grow up, with who?**
2. **Family relationships with parents, siblings?**
   (Talking points: perceptions of women in your life, trustworthiness of family members/people around you?)
3. **Family environment, parental supervision?**
   (Talking points: parents' jobs?)
4. **How would you describe your childhood, was it happy?**
   (Talking points: things that stand out to you the most?)
5. **Any significant events or conflicts in teenager years?**
   (ACEs Scale will be administered at this stage of the interview in order to identify areas, which will be followed by further open-ended questions e.g., "What did your experiences of abuse mean to you?", "What were your thoughts on this when you were a child?")
6. **School experiences**
   (Talking points: school friends, bullying? trusting friends/others?)
7. **First intimate relationship**
   (Talking points: how old were you, how would you describe that relationship? perceptions of woman/man? perceptions of children?)

Early Adulthood:

1. **What kind of jobs did you work at?**
2. **Any significant relationships during that time?**
   (Talking points: how do you remember those relationships, trusting people?)
3. **Any intimate relationships?**
   (Talking points: how would you describe those relationships? did you have intimacy? sexual relationships? communication within the relationships? perceptions of women vs men vs children, trusting each of them?)
4. **Any sexual thoughts around children?**
   (Talking points: when did they start? how did they make you feel? any fantasies? perceptions of women/men opposite to children? what was normal then?)

Past Offence(s):

1. **Nature of offence(s)?**
2. **How did you perceive the victims?**
3. *(Talking points: reasons behind choosing particular victims, emotional congruence with children, associating children with sex, sexual arousal/interest/preference for children)*
4. **What did it (offence behaviour) mean to you?**
5. **How did offending make you feel?**
   (Talking points: what thoughts were going in your head?)

Prison Experiences:

1. **Can you tell me about your time in prison?**
   (If more than once, each of them chronologically. Talking points: relationships with other prisoners, support mechanisms)
2. **What did it mean to you being in prison?**
   (Talking points: fairness of the world, justice, perceptions of other people and their trustworthiness, making sense of the reasons you were in prison)
3. **What does it mean now?**
   (Talking points: any victim empathy?)

Desistence and Pro-Social Controls:

1. **Could you please tell me more about how you came to stop offending against children?**
   (Talking points: perceptions of women/children? what has changed? sexuality around children?)
2. **What type of things do you feel you needed to have in place to help you stop re-offending?**
3. **How have you been coping with difficulties?**
   (Talking points: what are the difficulties?)
4. **Perceptions of the future?**

What do you think about the world? What kind of place is it?

Additional Comments

1. **Do you have any comments or advice for professionals like myself conducting research or working directly with individuals who sexually offend against children?**
   (Talking points: things you feel we need to focus on that maybe we haven't already, perceived positive work being done to help offending individuals)
2. **Is there anything else overall you would like to share about your experiences?**

End of Interview

The Revised Adverse Childhood Experiences Scale (Finkelhor, et al., 2015)
Before the age of 18….

1. Did a parent or other adult in the household often or very often…
>   Swear at you, insult you, put you down, or humiliate you?
>   > or
>
>   Act in a way that made you afraid that you might be physically hurt?
>   > Yes   No   If yes enter 1 _____

2. Did a parent or other adult in the household often or very often…
>   Push, grab, slap, or throw something at you?
>   > or
>
>   Ever hit you so hard that you had marks or were injured?
>   > Yes   No   If yes enter 1 _____

3. Did an adult or person at least 5 years older than you ever…
>   Touch or fondle you or have you touch their body in a sexual way?
>   > or
>
>   Attempt or actually have oral, anal, or vaginal intercourse with you?
>   > Yes   No   If yes enter 1 _____

4. Did you often or very often feel that…
>   No one in your family loved you or thought you were important or special?
>   > or
>
>   Your family didn't look out for each other, feel close to each other, or support each other?
>   > Yes   No   If yes enter 1 _____

5. Did you often or very often feel that…
>   You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
>   > or
>
>   Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
>   > Yes   No   If yes enter 1 _____

6. Was a biological parent ever lost to you through divorce, abandonment, or other reason?
>   > Yes   No   If yes enter 1 _____

7. Was your mother or stepmother:

      Often or very often pushed, grabbed, slapped, or had something thrown at her?

          or

      Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard?

          or

      Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

          Yes   No   If yes enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?

          Yes   No   If yes enter 1 _____

9. Was a household member depressed or mentally ill, or did a household member attempt suicide?

          Yes   No   If yes enter 1 _____

10. Did a household member go to prison?

          Yes   No   If yes enter 1 _____

11. Did other kids, including brothers or sisters, often or very often hit you, threaten you, pick on you or insult you?

          Yes   No   If yes enter 1 _____

12. Did you often or very often feel lonely, rejected or that nobody liked you?

          Yes   No   If yes enter 1 _____

13. Did you live for 2 or more years in a neighbourhood that was dangerous, or where you saw people being assaulted?

          Yes   No   If yes enter 1 _____

14. Was there a period of 2 or more years when your family was very poor or on public assistance?

          Yes   No   If yes enter 1 _____

DEBRIEF SHEET
Research investigating past experiences, beliefs and emotions among individuals who have sexually offended against children

Thank you for completing the interview as part of this case study research. Your responses will help us broaden our understanding about a range of issues, including the factors that may link to sexually offending against children, how thoughts and emotions are linked to such behaviour as well as to stop offending.

ANONYMITY AND CONFIDENTIALITY: Your information and participation in this project will be kept strictly anonymous and confidential. The interview transcription will be stored securely and any data obtained will be stored in anonymized form.

INFORMATION: Should the interview have resulted in any distress, please inform the researcher(s) as they will be able to discuss alternative forms of external support services that may be helpful.

If you have further questions or concerns regarding your participation in this study, please contact Gaye Ildeniz or the research supervisor, Dr Caoilte Ó Ciardha via the address below:

School of Psychology, Keynes College, University of Kent, Canterbury, CT2 7NP.

The materials used in this study have been reviewed and approved by the Research Ethics Committee at the University of Kent (Ethics ID: 201915597767465784).
If you have any serious concerns about the ethical conduct of this study, please inform the Chair of the Psychology Research Ethics Panel via the postal address below, providing a detailed account of your concern:

School of Psychology, Keynes College, University of Kent, Canterbury, CT2 7NP.

We understand that some of the questions we asked may raise discomfort or distress. We therefore provide a list of support services below, and we encourage you to use them if any aspect of the study has affected you.

Stop it now: *Provides confidential advice on what steps you could take if you are unsure or worried about your own thoughts or behaviour towards children.*
Please call: *0808 1000 900*
Mondays to Thursdays: 9.00 am-5.00 pm

Samaritans: *Available 24 hours a day to provide confidential emotional support for people who are experiencing feelings of distress, despair, or suicidal thoughts.*
Please call: *116 123*

Victim Supportline: *If you have been affected by crime, you can get support or information.*
Please call: *0808 1689 111*

Appendix XXIV: Chapter Six-Full Interview Transcript

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Appendix XXV: Chapter Six-Reflexivity Account

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Appendix XXVI: Chapter Six-Coding Manual and Coded Data

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