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**ADAPTION AND VALIDATION OF ASSESSMENT
TOOLS FOR YOUNG PEOPLE WITH
INTELLECTUAL AND DEVELOPMENTAL
DISABILITIES WHO DISPLAY HARMFUL SEXUAL
BEHAVIOURS**

A thesis submitted to the University of Kent's School of Social Policy, Sociology and Social Research for the degree of Doctor of Philosophy in Applied Psychology

Aida Malovic

University of Kent

2020

Publications

Data and literature from this thesis have been reported in the following journal articles:

Malovic, A., Murphy, G., & Coulton, S. (2020). Finding the right assessment measures for young people with intellectual disabilities who display harmful sexual behaviour. *Journal of Applied Research in Intellectual Disabilities*, 33(1), 101-110.

Melvin, C., Malovic, A., & Murphy, G. H. (2019). Autism and Offending. In Chaplin, E., Spain, D. & McCarthy, J. (Eds.), *A Clinician's Guide to Mental Health Conditions in Adults with Autism Spectrum Disorders: Assessment and Interventions* (pp.359- 372). London: Jessica Kingsley Publication.

Malovic, A., & Melvin, C. (2018). *When sexual behaviours become harmful or abusive*. In Bates, C. (Eds.), *Sexuality and Learning Disabilities* (2nd ed). Brighton: Pavillion Publishing & Media. ISBN 9781911028550

Online resources:

Malovic, A., & Melvin, C. (2020, September 01). *Supported Loving toolkit: Harmful sexual behaviour*. <https://www.choicesupport.org.uk/about-us/what-we-do/supported-loving/supported-loving-toolkit/harmful-sexual-behaviour>

Data and Literature from this thesis have been disseminated at the following conferences:

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Malovic, A., Murphy, G., & Coulton, S. *Young people with intellectual and developmental disabilities who display harmful sexual behaviours: their needs, vulnerabilities and grooming*

experiences. Centre for Child Protection's Protecting our children: vulnerabilities to grooming, Canterbury (2017).

Malovic, A., Murphy, G., & Coulton, S. *Adolescents with intellectual and developmental disabilities who display harmful sexual behaviours: Adaptation of measures*. 15th World Congress IASSIDD (International Association For The Scientific Study Of Intellectual And Developmental Disabilities), Melbourne (2016).

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Abbreviations

Summary list of abbreviations used throughout thesis (Alphabetised).

Abbreviation	Definition
(A) SOTP	(adapted) Sex Offender Treatment Programme
AAIDD	American Association on Intellectual and Developmental Disabilities
AIM	Assessment, Intervention, Moving On
ASD	Autism Spectrum Disorder
CAMHS	Child and Adolescent Mental Health Service
CBT	Cognitive Behavioural Therapy
CJS	Criminal Justice Systems
CPS	Crown Prosecution Service
CSA	Child Sexual Abuse
CSEW	Crime Survey for England and Wales
CSS	Children's Social Services
EHC plan	Education, Health and Care plan
EHR	Education, Health and Care
GLM	Good Lives Model
GWM	Good Way Model
HMPPS	Her Majesty's Prison and Probation Service
HSB	Harmful Sexual Behaviour
ID	Intellectual Disability
IDD	Intellectual and/or Developmental Disability
KSS	Kerns Secure Scale
LDWG	Learning Disability Working Group
LSCB	Local Safeguarding Children's Boards
MDT	Multidisciplinary Team Reports

MHA	Mental Health Act
MoJ	Ministry of Justice
NHS	National Health Service
NOTA	National Organisation for the Treatment of Abusers
NSPCC	National Society for the Prevention of Cruelty to Children
R&D	Research & Development
RNR	Risk Need Responsivity
RSCA	Resiliency Scales for Children and Adolescents
SEND	Special Educational Needs and Disabilities
SOTP	Sex Offender Treatment Programme
SOTSEC-ID	Sex Offender Treatment Services Collaborative South East- (for men with) Intellectual Disabilities
UCLA-R	University of California, Los Angeles- Revised (loneliness scale)
UK	United Kingdom
YOT	Youth Offending Team
ySOTSEC- ID	young Sex Offender Treatment Services Collaborative South East- Intellectual Disabilities

Abstract

In recent years, data from the United Kingdom (UK) has suggested that around 3% of all reported offences are of a sexual nature. A proportion of these offences are committed by young people (under 18-year olds) with intellectual and developmental disabilities (IDD). Yet, the collective empirical understanding and knowledge of the mechanisms that lead young people with IDD to display and commit such behaviours, is sparse. In comparison to their non-disabled peers, very little is known about the characteristics of the young people with IDD who come into contact with specialist harmful sexual behaviours (HSB) services. In part this is due to a lack of appropriate assessment instruments available to researchers and clinical practitioners within UK. The aim of the present thesis was to explore current assessment practices for young people with IDD across forensic service providers, to identify limitations and implications of such shortcomings in our clinical understanding, and to adapt and validate a selection of instruments.

The majority of the offences are committed by adult males, with a small proportion accounted by men with IDD. Furthermore, around a third of sexual abuse reported by children and adolescents, in the UK, involves another young person under 18 years of age as the perpetrator. However, a general expert consensus, agrees that these figures are most likely under- estimates of the true scale of the problem. Furthermore, up to 40% of young people withing specialist service providers for HSB have been suggested to have IDD. Again, this represents another contested figure, considered too high. It is suggested to stem from poorly designed studies, indicating very little is known about these vulnerable young people. While their presence has clinical implications within HSB service providers, empirical data is scarce, and the area has received little attention in comparison to non-disabled counterparts.

Review of prior literature suggests adults with IDD who commit sexual offences are a distinct subgroup, different to the general sexual offender cohort. This is even more true for adolescents displaying HSB. In general, young people are different to adults as they are not only going through puberty, a time of rapid development of both physical and psychological changes, but they, unlike adults, lack privacy and still rely on a wide network of agents such as parents, educational providers

and professionals which they have little impact and control over. Research also indicates, for a significantly larger cohort of those who present with HSB there is a higher prevalence of adverse childhood experiences, than for the age matched peers. Studies in variations of types of abuse and neglect that might be experienced by young people who display HSB versus more general delinquents is ongoing, but a general consensus states that maltreatment events in childhood affect the young person's style of coping with psychosocial stressors and has a potential significant impact on their psychosocial development.

Some of the more recent studies have suggested that young people with IDD, who display HSB, are more likely to have experienced abuse and neglect, with the impact and the role these experiences play for the individuals often overlooked in the assessment and intervention work provided for the HSB. As demonstrated via the systematic review, in Chapter 3, part of the issue is a national scarcity of appropriate assessment instruments, that have been either developed for or adapted for young people with IDD. Instead, as explored in Chapter 4, service providers are either relying on the use of existing tools, that are inappropriate for young people with IDD, and/or they have developed an over- reliance on risk assessment tools.

Subsequently, in Chapter 5 justifications were provided for the adaptation and use of three instruments specifically focused on exploring young people's socioemotional development. The tools selected assess: i) attachment security of the young person to a caretaker, ii) their sense and experience of loneliness, and iii) provide an insight into their resilience. The three tools were chosen, in part due to them being in current use across service providers (as found in Chapter 4), as well as a need to balance out the risk focused assessment practices, that can overlook the socioemotional needs of the young people. Finally, Chapter 6 explored the psychometric properties of the two adapted instruments and checked the validity of a third tool.

The studies in this thesis suggests, more empirical and clinical attention needs to be provided to the area of instrument development and adaptations for young people with IDD. They are a distinct cohort, whose vulnerabilities and disabilities might play a unique role in understanding their offence pathways leading to displays of HSB. Implications for future research and practice are discussed.

Chapter 1.

Adults with intellectual and developmental disabilities who display harmful sexual behaviours.

Chapter Overview

The following literature review defines intellectual and developmental disabilities, and draws together relevant empirical research on adult sexual offenders with intellectual and or developmental disabilities (IDD). Historically, both clinical and forensic practices, including assessment and intervention programmes, for the forensic IDD population were primarily informed by clinical work and empirical research with neuro-typical adult males. For this reason, the following chapter aims to summarise and acknowledge such research and its theoretical underpinnings, as they have played a role in the wider forensic IDD work and although today's practices are better informed by the strengths and challenges as experienced specifically by men with IDD, the impact of the past approaches needs to be recognised as a similar, generalised approach was, for a long time also acceptable in working with forensic IDD adolescent populations. Therefore, the chapter presents key themes and findings not only from the United Kingdom (UK) but also further, pertinent international research.

The literature review starts with a working definition of IDD, a consideration of the models of disabilities and issues with terminology. It is followed by an account of sexual offender characteristics and prevalence, leading into specifically focusing on sexual offenders with IDD, followed by an account of sexual offending theories. Lastly, this is then considered in the context of assessments, risk assessments and treatment approaches for men with IDD.

Intellectual and Developmental Disabilities

Defining Intellectual and Developmental Disabilities (IDD)

Before delving into a review of the literature it is essential to have a clear understanding of what a definition of Intellectual and Developmental Disabilities (and subsequently IDD) truly entails in the following thesis. This will start off with a working definition of Intellectual disabilities (ID).

Two of the primary classification systems used across the world are the International Classification of Disease (ICD 11, 2018) and the Diagnostic and Statistical Manual (DSM-5) and respectively they define ID on the basis of two features, which need to have started before adulthood, with a lasting effect on development. These features being:

- A significantly reduced ability to understand new or complex information and a reduced ability to learn new skills; specifically characterised by an impairment in intellectual functioning.
- A reduced ability to cope independently; characterised by an impairment of adaptive/social functioning within the person.

These criteria were also applied within the, turn of the century Governmental White Paper Valuing People (Department of Health, 2001) in England, and as such is a nationally recognised definition that has been used by a number of services and agencies within the country. By taking into account both the intellectual and adaptive functioning of the individuals, these classification systems recognise that such deficits are relative to a person's culture and social context as they are measured against that which would be expected of a peer of the same age. This is considered imperative as adaptive behaviour is culturally dependent.

In terms of observed behaviours, this definition acknowledges that an individual with intellectual disabilities might find it hard to understand, learn and remember new information; they may have problems with communication and managing everyday tasks, and they might have limitations in their risk awareness (BILD, 2018). They might require personal support, with such potential needs increasing, as the individual's Intelligence Quotient (IQ) decreases.

In clinical terms such impairments are assessed via standardised IQ assessments, such as the Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1997), and an adaptive behaviour scale such as the Vineland Adaptive Behaviour Scales (Sparrow, Balla, & Cicchetti, 1984). It is through the combined assessment of both aspects, that a clinical diagnosis can be made.

The Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1997) currently in its fourth edition, is considered a gold standard psychometric assessment and it is a commonly used psychometric instrument of IQ in clinical settings. The instrument is composed of a number of indexes that separately assess an individual's cognitive performance on different constructs but, combined produce an overall Full- Scale IQ (FSIQ) score. A total population sample IQ has a gaussian distribution, with a mean of 100, where one standard deviation (SD) is 15 IQ points. The generally accepted cut- off for ID diagnosis is a score of ± 1.96 SD below the mean (i.e. IQ 70). However, as IQ tests are not accurate to one point, a FSIQ score is always reported with a 95% confidence interval (CI), which means for ID diagnosis, where the IQ score falls on the border, such as 70=75 it will be interpreted alongside scores from an adaptive behaviour assessment.

A clinical ID diagnosis may also specify severity levels, that are mild, moderate, severe and profound (APA and DSM- V, 2013). These vary somewhat in different classification systems, however in the United Kingdom they are as follows: mild ID includes persons with an IQ 55 to 70 (with 95% CI); moderate ID is indicated by an IQ score between 40-54 (with 95% CI); in severe ID the IQ score is 25-39 (with 95% CI); and for individuals with profound IQ the IQ is of less than 25 (with 95% CI) (BPS, 2000).

There is a category of intellectual functioning referred to as 'borderline', defined by an IQ of 70-79, below the average range of functioning, yet not meeting the diagnostic cut- off for ID. Individuals within this category might experience a range of functioning problems, and frequently require support from specialist services, which in many cases, they are sometimes unable to access due to an focus within services on solely IQ levels (Webb & Whitaker, 2012). The implications of this will be discussed further on.

For younger populations, aged 6- 16, the Wechsler Intelligence Scale for Children (WISC) has been developed specifically. The shortened form of WAIS, the Wechsler Abbreviated Scale of

Intelligence (WASI, currently on 2nd edition) will often be used in adolescent populations (Ford et al., 2008; Kamphaus et al., 2005), in hand with a measure of their adaptive skills, as well.

Providing IQ scores are normally distributed, the prevalence of people with ID within the UK should be around 1.2 million (Emerson et al., 2012). Yet, official national records within the country do not support this figure. On the contrary, in England an abrupt decline in ‘visible’ rates of individuals with ID is present. Namely, as identified through the Emerson and Glover (2012) study, reviewed data illustrated that figures as reported by the national education, health and social care agencies do not add up to the expected prevalence rates. Rather, the authors called these figures the ‘administrative prevalence’ rates of individuals with ID. The study found that the administrative prevalence rates (i.e. prevalence as recorded via public services) drops from around 40-50 individuals with ID per 1,000 to 6-7 per 1,000, specifically occurring at the point of transition from child (education) to adult (social care, health) services. Implicating, what was termed, a ‘transition cliff’ in known cases. Those who ‘disappear’ make up, what has been termed a ‘hidden majority’ of adults with ID in England (Emerson & Glover, 2012). This is a vast cohort of individuals, most likely with moderate or mild intellectual disabilities (Emerson, 2011; Tymchuk et al., 2001) who do not, despite their needs and specific vulnerabilities have contact with appropriate health and social care agencies (Alderwick & Dixon, 2019). Notably, as pointed out by Emerson and Glover (2012), there is a gap in the collective understanding and knowledge of the “hidden majority”, in terms of their health and well-being “as virtually all research and health surveillance focuses on administratively defined populations” (2012, p. 141). The presence of a similar hidden ID population has also been identified within the criminal justice system (Williams et al., 2014), as will be discussed later on.

Reverting back to terminology and definitions, more recently ‘Intellectual and Developmental Disabilities’ (IDD) has been coined and its use increased across sectors including the National Health Service (NHS), American Association on Intellectual and Developmental Disabilities (AAIDD) and academic publications (for example Journal of Intellectual and Developmental Disabilities).

The term IDD is understood to signify, a wider cohort of individuals with neurological conditions (comorbidities) including those with significant impairments in intellectual functioning, and/or autism, and/or with physical impairments. In other words, people with IDD will often have a

genetic disorder that negatively affects the trajectory of their physical, intellectual, and/or emotional development (Salvador-Carulla et al., 2011). This includes people with autism spectrum disorders, cerebral palsy, foetal alcohol syndrome, as well as attention-deficit/ hyperactivity disorder to name a few (Salvador-Carulla et al., 2011).

Within the following thesis both the term ID and IDD will be used, with the distinction between the two made only when present and explicitly noted in individual research papers. ID will signify individuals with a diagnosis of an intellectual disability, as made applying the principles above, and IDD will signify individuals with a dual diagnosis of autism spectrum disorder and ID.

The DSM-V (APA, 2013) defines autism spectrum disorder (ASD) on the basis of the presence of two features, i) persistent deficits in social relationships and social communication, and ii) a tendency to engage in restricted, repetitive patterns of behaviour, interests and activities. In ASD there can be significant variation in individuals' cognitive abilities, with some presenting at the higher functioning end of the spectrum, whilst others have a co-morbid ID. Co-morbidity with other neurological disorders, as well as additional mental health issues are common in autism (Emerson & Halpin, 2013). In general, people with autism who come into contact with the criminal justice system are those at the higher functioning end of the spectrum (King & Murphy, 2014). It is estimated that 20-30% of people with an intellectual disability also have autism (Emerson & Baines, 2010).

Models of disability and issues with terminology

For a long time, there was a misconception regarding the link between, broadly speaking offending behaviours and low intellectual functioning, i.e. "mental impairment", as termed at the time (see Selling, 1939; Goddard, 1920; Tutt, 1971). The putative relationship between 'mental impairment' and the proclivity to offend led to the institutionalisation and unethical treatments of people with intellectual and other disabilities, including mass sterilisation in some countries (Goddard, 1913; Fennell, 1996). Intellectual and developmental disabilities, were considered a deviation from that which was labelled 'normal'. These and other negative attitudes were reinforced by the existing *medical models of disability* which contended disability to be an abnormality in need

of a ‘cure’, often meaning eradicating from society via euthanasia (Olkin, 1999). In due course, meticulous empirical research, stemming from a number of disciplines, including medicine, psychology, sociology and philosophy, brought societal changes to practice. The *normalisation and social role valorisation* movements emerged (Bank-Mikkelsen, 1969; Wolfensberger, Nirje, Olshansky, Perske, & Roos, 1972) and emphasised the importance of valued social roles for people with disabilities. It also helped separate the narrative of mental illness from being associated with inborn deviance. With this *the social model of disability* (Oliver, 1986) emerged, in which the work of Berger and Luckmann (1966), was applied to demonstrate how the social construction of reality holds the power defining a person, and subsequently controlling them, on the basis of said held definitions/terminology. This was particularly pertinent in the instance of treatment of vulnerable individuals in the society. The social model of disability accordingly argued that disability is inherently a socially constructed phenomenon (Oliver, 1986), that is maintained via societal practices and approaches, which at times are discriminatory and prejudiced. Instead, in order to support and include individuals within the society in full, social and physical environments need to fully be accounted for and assessed, with any limitations addressed. With these new approaches to disability, societal and cultural approaches towards those accused of and prosecuted for offences, began to change as well. Moreover, changes in diagnostic procedures for disabilities, as discussed below, have helped move statutory practices, where unlawful behaviour was concerned, away from being risk averse to being risk responsive and intervention focused i.e. not solely focused on punishment but also rehabilitation.

Today it is recognised that vocabulary is linked to formulation of attitudes and one of the key features of a fairer, inclusive and more equal society is appropriate, respectful and meaningful terminology (Goodley, 2001). Research and debates on the topic of labelling/terminology and disability rights have continued to grow. This area of work is extensive in scope, spanning across disciplines, and thereby outside of the range of the following thesis (see Goodley, 2001; Cluley, 2018). But an acknowledgement of its impact is imperative.

Within the United Kingdom, for the best part of the last 30 years, the terminology adopted was that of ‘learning disabilities’ and ‘learning difficulties’, with both often applied synonymously across service providers, especially in children’s services (Gates & Mafuba, 2016). These terms have

been applied interchangeably in the context of health and social care for adults as well (Parkin, Kennedy, Bate, Long, Hubble & Powell, 2018), and unfortunately this has been linked to some of the issues identified within empirical research around inconsistencies within epidemiological and aetiological studies, and for variations found in prevalence research. More recently, the academic and research communities have started to deliberate alternatives with an aim to devise a universal and unified term. Given that the learning disabilities/learning difficulties confusions occurred mostly in the UK, increasingly researchers locally began to use the term intellectual disabilities instead (Department of Health, 2001), a term now widely used internationally including in Ireland (Higgins, 2013), Canada (Canadian Association for Community Living, 2017), the USA (Schalock et al., 2007), Australia and New Zealand (Higgins, 2014). As a term, intellectual disabilities has had a by and large good reception on the basis of the argument that it is a more progressive term, in that it acknowledges some of the social barriers faced by people with disabilities (Schalock et al., 2007). ID is considered to focus better, than previous terminology, on the functional behaviours and contextual factors that impact on the individual. This term sits within the more recently formulated *social-ecological framework* of disability as it communicates some of the more important values in relation to respect and dignity, and it is considered less offensive to individuals with the disability (Schalock et al., 2007). The social-ecological model of disability focuses on building, identifying and arranging the support people need to negotiate the demands of the settings and activities in which they wish to participate (Wehmeyer et al., 2017), which is important to consider and include when provision planning across national services, health, educational or legal settings.

This social-ecological conception of disability, the term ID, is reflected well in both the American Association on Intellectual and Developmental Disabilities (AAIDD) and the World Health Organisation (WHO). As Schalock, (2011) points out, this conception of disability carries a number of benefits, some covered above but also include i) [the term ID being] better suited across current professional practices which aim to focus on functional behaviours and contextual factors, as it is able to exemplify the interaction between the person and the environment; ii) it is well suited to highlight the role individualised supports can play in improving individual functioning; and iii) it encourages and allows for exploration of ‘disability identity’.

Today a number of classification systems are used internationally in the field of ID, and include ICD- 11 (WHO), and DSM-5, as discussed above.

Disadvantages faced by individuals with IDD

Despite the past societal approaches to disability, and changes made more recently, there is still a long way to go towards full equality, and societal inclusion of people with IDD. This is especially the case for those who display challenging behaviours (Emerson, 2001; Myrbakk & von Tetzchner, 2008), and includes those who, through contact with Criminal Justice System (CJS), might be placed in secure settings.

Bank-Mikkelson (1969) was one the first to develop the original ideas underpinning normalisation. This was based on the observation that, at the time people with IDD were more likely to experience systematic devaluation within society. This seminal work laid down the principles which highlighted the need to normalise the living conditions, experiences, expectations and aspirations of people at risk of being devalued, such as those with IDD; work that was later taken further by Wolfensberger and colleagues (Wolfensberger, Nirje, Olshansky, Perske, & Roos, 1972). The consequences of those negatively valued within society were identified as societal segregation, rejection (within areas of both micro and macro systems), and relegation to low social status; put simply societal exclusion. Since then, through enterprises that have included key stakeholders such as policymakers, educational provisions, researchers and employment initiatives, the UK has worked towards enhancing the social inclusion of individuals with IDD. An example of an initiative looking to improve social inclusion for people with IDD within UK is the Department of Education (2015) special educational needs and disability (SEND) code of practice. This code of practice provides statutory guidance on duties, policies and procedures relating to services for children who have special educational needs or disabilities, with a focus on inclusive educational practice and removing barriers to learning.

Some progress was made yet, a significant body of research, including recent work has reported that most remain socially isolated, lonely and with limited access to social opportunities (Department of Health, 2009).

For instance, individuals with mild and severe ID, have been found to be more at risk of social isolation due to poor social networks (McConkey, 2007), compared to their non- disabled counterparts. Studies with individuals who have moderate ID have reported they prefer to form close friendships with other people with IDD (McVilly et al., 2006) and individuals with severe to profound ID were found to be more likely to form relationships with nondisabled family members and staff (Whitehouse et al., 2001). As for intimate friendships, a number of studies suggest individuals with IDD feel it would only ever be likely to be with another person with intellectual disability (e.g. Mcvilly et al., 2006; Gilmore & Cuskelly, 2014).

In addition to the social barriers and poor social networks, as above, other consequences of social isolation include problems with finding paid employment and housing (Phillips et al., 2014), both of which, sequentially contribute towards a higher likelihood of the individual being economically disadvantaged (WHO, 2011).

Given the social inequalities above it is perhaps of no surprise that studies have suggested individuals with ID are at greater risk of developing further mental health issues and challenging behaviour compared to individuals without ID (Emerson et al., 2010; Fitzgerald et al., 2011).

Sexual offenders

Prevalence

Obtaining valid and reliable prevalence data in relation to any type of crime, in any one country, is a challenge. This is in particular the case within the United Kingdom (UK) as crime statistics are recorded by number of different agencies, across three separate judicial areas (England and Wales, Scotland and Northern Ireland).

The Office of National Statistics (ONS) was established with a view to provide a wide range of statistics and data analysis relating to areas of economy, population, and wider society across the whole of the UK. In relation to crime statistics it conceded its impact was limited as it was found to rely primarily on police recordings of crime that were found to be unreliable for a number of reasons discussed below (UK Statistics Authority, 2014).

In its place, the Home Office instructed crime and offence records to be obtained and collected via four national service providers. The i) Crime Survey for England and Wales (CSEW) that surveys systematic victim self-reports (on a yearly basis), ii) the Ministry of Justice (MoJ) that is categorised as national statistics, iii) police recorded crime and outcomes data as provided by the Home Office, and classified as official statistics, and iv) Crown Prosecution Service (CPS) data, sourced via administrative datasets, but it does not fall within the scope of official statistics.

In 2018 the CSEW published a review report on sexual offending (in England and Wales), in collaboration with the Home Office, MoJ and CPS. The report detailed data collected from the three most recent CSEW survey years, spanning from March 2016 to March 2018.

The aggregated data estimated that approximately 700,000 adults aged 16 to 59 years had experienced sexual assault in the 12 months prior to interview by CSEW (Elkin, 2018). This is equivalent to an estimated 2.1% of the population. It found that women were close to four times as likely as men to have experienced sexual assault in the previous year (3.4% compared with 0.9%).

A significant rise of offences, was identified where the figures increased from 2.0% in 2017 year to 2.7% in the year ending March 2018, and it was suggested they were accounted by increases in unwanted touching (that increased from 1.4% to 2.1%) and indecent exposure (increasing from 0.4% to 0.8%). Overall, however, instances of sexual assault have undergone fluctuations over the years, with their prevalence in the more recent years similar to a decade ago.

Notably, the CSEW data suggests that the majority of the sexual offences never come in contact with the criminal justice system, with fewer than one in five (17%) victims reporting their experience of rape or assault by penetration to the police (Elkin, 2018).

Under-reporting of crimes was particularly prominent for sexual offences. The most frequently listed reasons for not choosing to report the incident included notions that the event was “too trivial or not worth reporting”, the victim “didn’t think the police could do much to help”, or they saw it as a “private/ family matter and not police business” (Matheson, 2013, p. 6). Single females, aged between 16 and 19, with ‘limiting disabilities’ (as termed in the report) or illness, who came from lowest income bracket households were identified as some of the most vulnerable victims (Matheson, 2013).

As a comparison, a review of police records (solely) from June 2019, found that 163,076 sexual offences had been reported across England and Wales, in the last year. Equating to 3% of all recorded crimes in that same year (Elkin, 2019). Discrepancies in the figures, such as those between the police records and CSEW are not uncommon, and have been postulated to arise due to a number of reasons. In comparison to police recorded crimes, that are sensitive to differences in police recordings across counties, changes in police activity and the propensity of victims to report crimes, the CSEW surveys are sent directly to households asking residents about a range of experiences. Consequently, the CSEW survey is more likely to collect and include information on crimes and experiences of victimisation that are not actively reported to the police. The CSEW also allows for a wider range of offences to be recorded within the offence type category. Where police recorded sexual assault specifically refers to the sexual touching of a person without their consent, within CSEW the term describes a variety of sexual offences ranging from rape or assault by penetration (including attempts) to indecent exposure or unwanted touching. Elements such as those lead to variations in reported figures.

A few factors that are consistently found across both the services are the offender characteristics. As reported by the CSEW, sexual assault is most frequently perpetrated by males (99% of cases) with majority aged between 20-39 years old (65%). Most frequently the assault was perpetrated by a single offender (70%), at the victim's home (39%), or the offender's home (24%) (Flatley, 2017).

Types of sexual offenders

On the whole, adult sexual offenders are a heterogeneous cohort, they cross all socioeconomic groups, ages, educational, gender and cultural lines (Blasingame, Boer, Guidry, Haaven, & Wilson, 2014). Clinical work has suggested the presence of a number of subgroups that include the ones in focus within current thesis, offenders with intellectual disabilities, and adolescent offenders.

Adult sex offenders with ID is a topic that will be discussed in greater detail below. Adult sex offenders with ID are considered to be a different sample to sex offenders without ID, and they require adapted assessments and treatment programmes (Craig, Lindsay, & Browne, 2010). A

significant body of research has been dedicated to gathering empirical knowledge exploring how their vulnerabilities might impact on the offence. The exact prevalence of sexual offenders with ID is a contested topic, with studies reporting a wide range in prevalence rates, for a range of reasons. Changes in definitions of the ID, variations in the terminologies across countries, differences in sample methodologies and study designs, have been postulated as reasons for producing the wide parameters between prevalence rates.

Another subcategory of sexual offenders, are adolescents. While the vast majority of sex offences are committed by adult male perpetrators (Ministry of Justice, 2007), some studies have reported estimates of up to a third of all sexual offences to be committed by young people (Lovell, 2002), defined as those aged between 12-17 years old. Where the age of onset for some adult sex offenders has been reported to be in adolescence, some adolescent sex offenders have been found to have begun engaging in problematic sexual behaviour, in childhood (Seto & Lalumière, 2010). Furthermore, in a UK review of reported child sexual abuse cases, between 20% and 33% of all cases involved other children and adolescents as the alleged perpetrators (Hackett, 2014). Overall, they are considered to be a diverse group with differing motivational and offending patterns to adults (Smith et al., 2014). A proportion of adolescents who display harmful sexual behaviours have been identified as having ID (Erooga & Masson, 2006a), a cohort with specific vulnerabilities and needs that are only starting to be considered and studied in the forensic and clinical research field. The existing empirical research base on the topic of young people with ID who display harmful sexual behaviours, is sparse.

Recorded and available data suggests sexual recidivism rates of adult offenders are generally low, and fall between 10% to 15% when measured after 5 years (Hanson & Bussiere, 1998). But studies capturing and reporting on longitudinal data are rare, due to the difficulties associated with such data collection. The probability of sexual reoffending has been associated with two factors: (a) deviant sexual interests, and (b) antisocial orientation and, or lifestyle instability (Hanson & Bussiere, 1998; Quinsey & Lalumière, 1995; Roberts, Doren, & Thornton, 2002). On the other hand, and in contrast to adult offenders, adolescents have been found to have lower rates of sexual recidivism (Alexander, 1999), and they are less likely to have established a fixed pattern of sexual thoughts and behaviours (Prentky et. al., 2000), as will be discussed later.

Sexual Offenders with Intellectual Disabilities

Definition of sexually harmful behaviours and men with IDD

The need, but also the difficulties, in formulating a clear definition of what constitutes a sexual offence is a long standing issue, as debated by Courtney and Rose (2004). Many of the same issues in relation to the correct terminology of ID have also been deliberated here, with the one distinction being that a behaviour will always be defined by the societal and cultural rules within which it exists. Reviews of past work have identified blurred distinctions between what was termed difficult or challenging behaviours at the time, and antisocial/ criminal offending (Holland, Clare, & Mukhopadhyay, 2002).

A previous commonly accepted definition by Brown and Thompson (1997) suggested that sexual offending was

“... any sexual act (not necessarily involving contact) with another party who did not or could not consent to the act or for whom there exists a barrier to consent” (p. 141)

However, this utilises consent as its key component, which in people with IDD is a complex matter to determine at times. Rather, a good definition needs to effectively reflect the seriousness of the act; otherwise there is a risk of minimising the seriousness of the incident (Courtney & Rose, 2004).

Ward, Trigler and Pfeiffer (2001) came up with an alternative definition, for cases involving individuals with IDD, which albeit simple, the researchers argue is a clear working definition. The authors specify that sexually inappropriate or offensive behaviours can be found to incorporate any of the following: i) an act of sexual nature involving a non-consenting partner/s, ii) behaviour of a sexual nature that is public or intrusive, and/ or iii) behaviour of a sexual nature that is of a dangerous type towards the individual or others (Ward et al., 2001). Although this classification in general is preferable in IDD cases, most studies still have their own definitions of problematic sexual behaviours and those that are substantially different to the Ward, Trigler, and Pfeiffer (2001) formulation will be specified.

It is also worth noting that research studies vary in their inclusion of convicted and unconvicted men as part of an empirical sample. Thereby the definition and the term applied, will vary in accordance with the type of behaviour displayed and the legal implications of the act (Van den Bogaard et al., 2013). Consequently, terminology within the literature varies from ‘sexual offenders’ (which implies criminal conviction), to men who ‘sexually abuse’, to men with ‘sexually harmful behaviours’.

For the purposes of clarity and consistency, with the language in the subsequent chapters in discussing the literature around the men’s offending, this thesis will adapt the Ward, Trigler, and Pfeiffer (2001) definition of sexually offending behaviours and the relevant men will be referred to as displaying Harmful Sexual Behaviours (HSB).

Prevalence of offenders with ID and ASD

It is now well established that there is no direct linear correlation between intellectual disability and criminal behaviours (Holland, 1991). A growing argument, as informed by more stringent empirical research such as systematic reviews of prevalence studies, have appraised and analysed secondary data that found identified prevalence rates, across individual studies to be significantly affected by study designs. Two such systematic reviews concluded that, general offending rates between men with and without ID are not significantly different (Murphy & Mason, 2014), which also applied to men with and without ASD (King & Murphy, 2014). But, as noted previously, establishing prevalence rates of any offending, is a challenging undertaking, and even more so in relation to people with IDD. Variations across a number of factors such as differences in LD/ ID terminology, definitions of offending across countries, differences in the point during which data collection takes place within the CJS process, and differences in research methodology, have made it difficult to draw clear conclusions about true or pure offending rates (Murphy & Mason, 2014).

As an example, in relation to the topic of the thesis, the different means by which prevalence of sexual offending by men with IDD can be established include: examining the rates of sexual offending observed in populations with IDD, studying the prevalence of ID and ASD in populations

of sexual offenders, reviewing of service records across sectors, and/or collecting recidivism data of offenders with IDD. Each approach, however contains its own limitation such as sample size, access to accurate data and cultural limitations (such as focusing on white male perpetrators), and therefore individually and in their singularity, such studies are not appropriate for drawing wider interpretations. They are best utilised as secondary data sources in wider reviews (systematic or meta-analysis) that place them under methodological scrutiny and contextualise their results in the light of their limitations.

As an example, UK national processes in managing cases of adults with IDD who offend will vary depending on the offence type, and the extent and expertise of local service provisions (see Sturme, Taylor & Lindsay, 2004; Holland et al., 2002). As it stands currently, any one individual with IDD who commits a crime might either i) enter the criminal justice system with a progression to a trial hearing, ii) be diverted from the court and criminal justice system and be placed with statutory bodies such as in secure NHS settings, iii) be referred to private secure accommodation for individuals with IDD and/or severe challenging behaviour, or iv) for, what might be considered, less serious offences, be diverted into community learning disability services (Lindsay et al., 2010). Consequently, drawing conclusions around prevalence data, at any one of the stages will reflect limited cases.

Another point worth acknowledging, is that individuals with IDD who have committed offences may not always be subject to the legal processes of charge and conviction, on account of their disability. Within the UK criminal conviction, specifically in relation to individuals with IDD, will often start at either the point of detection of a criminal offence, or when the victim is able to disclose it. Troublingly, in instances where the victim also has IDD, direct disclosure by them has been found to be less likely to occur (Bates, 2018; Beadle-Brown et al., 2014; McCarthy, 2016). This is followed by the decision-making process to report the offence to the police or not, and in a proportion of cases with IDD this decision will be made by staff and care providers rather than the victim(s). Where a decision is made to report the incident, the police processes and decisions come next, followed by possible arrests and charge proceedings. But in cases of individuals with IDD, a number of issues have been identified in the manner in which police respond to vulnerable victims

(Jacobson, 2008), including inconsistencies in the decision-making around enforcement, diversion and disposal options, provisions of an appropriate adult for the accused and inconsistencies in the criteria for assessing fitness to interview of both parties. The decision to divert suspects away from CJS is made by police officers, with a considerable degree of discretion. In cases where the case is not diverted away from CJS, additional legal implications are present in the wider process of IDD cases. In the UK, convictions are considered results of illegal acts that need to be demonstrated as committed either in a guilty state of mind (*mens rea*) or through recklessness on the part of the alleged perpetrator. In a proportion of cases involving suspects with ID and/or ASD, legal proceedings will be challenged on account of an assumption of lack of *mens rea* but also due to challenges in attaining evidence where the victim has IDD. As a result, a number of IDD cases, especially sexual offences might not enter the CJS at all. Those that do, have been found to put men with IDD at a vast disadvantage within CJS, as a significant proportion do not understand their rights, have been found to be more likely to falsely confess, and not understand the wider processes (Clare & Gudjonsson, 1993; Clare & Gudjonsson, 1995; Gudjonsson 1992; Perske, 2011).

Given the challenges as identified above, general offending rates by people with ID, in the UK have been found to lie between 0% and 8.6% (Holland et al., 2002; King & Murphy, 2014). Studies based in police stations tend to report higher rates of ID in suspects with prevalence rates between 5-9% (Gudjonsson, Clare, Rutter & Pearse, 1993; Lyall, Holland, Collins & Styles, 1995). Prison prevalence rates for IDD vary considerably but the better quality studies reviewing secondary data in relation to general prison populations, have specifically reported rates of ID between 0.5-1.5% (see Fazel, Xenitidis, & Powell, 2008). In their systematic review Fazel and colleagues (2008) appraised 10 prison surveys from across a number of countries, with data collected between 1988 and 1997. The researchers concluded most studies defined ID on IQ assessments solely, with some even basing it on clinical judgments only with the majority of research having no consideration of men's adaptive functioning skills. The implications of which were best demonstrated by Hayes, Shackell, Mottram, and Lancaster (2007), who focused their study on one English prison, in which a random sample of 10% of the prisoners were selected. The participants' cognitive functioning and adaptive behaviours were assessed, from which the results indicated that by using IQ tests alone the ID

prevalence rate was 7.1%. On the other hand, if interpreting the scores from the adaptive functioning instruments, only the rate identified rose to 10.1%. Interpreting the scores together, from both instruments, however yielded a prevalence rate of ID of 2.9%, out of the full sample. Notably, this is not markedly different from an expected Gaussian population distribution.

It is recognised that only very few studies assess intellectual disability in prisons by taking account of a full IQ test and adaptive behaviour measures, but those who do generally produce lower prevalence rates as discussed by Murphy and Mason (2014). On the other hand, where screening tests are used alone or alternatives are applied, to the gold- standard IQ assessments, higher prevalence rates will be reported (Murphy, Gardner, & Freeman, 2017).

In a systematic review of prevalence rates of individuals with ASD in parts of the CJS, King and Murphy (2014) found that most of the published prevalence data at the time was of questionable quality, and presented conflicting information. Poor methods for diagnosing ASD were used with most of the studies presenting biased samples. Although on the whole, the rates were above 1% (at least in the Asperger group), the researchers concluded that, from the best designed of the studies, there was no evidence that people with ASD were more likely to engage in criminal activity than those without ASD.

Rates of sexual offenders with IDD

Specifically looking at sexual offenders, research in prisons has identified a range in prevalence rates of men with IDD, for the reasons as discussed above. Guay, Ouimet, and Proulx (2005) for instance found that out of their sample of sex offenders in a prison, 25% of the men had an IQ of below 70. Whereas Hayes (1991) estimated that 4% of the men with ID in prison, in Australia had been convicted of a sexual offence. The difference between the two studies is down partly to differences in assessment tools, namely Guay, Ouimet, and Proulx (2005) did not use a gold standard measure of IQ for the cognitive assessments, but may also be due to local policies and the provision of other facilities for men with ID and harmful sexual behaviour.

Alternatively, prevalence figures could be collected via a review of reported incidents of sexual abuse by people with IDD. Studies of victims have found that around a half of the perpetrators

of the abuse of people with ID are themselves individuals with ID, often those sharing day services or residential services with their victims. Studies such as Sobsey and Doe's (1991) identified this to be the case in 44% of the incidents, Turk and Brown (1993) found in their sample of victims with ID that also 42% of the offenders had ID, and Brown, Stein and Turk (1995) reported it in 53% of their cases reviewed.

Overall, as evident from above, methodological difficulties between empirical studies make it challenging if not impossible to establish valid and reliable estimates of offenders with IDD in a range of criminal populations, including sexual offenders.

In more recent years, the general aim of the research on the topic of offending and IDD has moved away from prevalence studies into developing theoretical models of the processes, care pathways, and the influence of the multifaceted dynamics within societies (Lindsay et al., 2010). One reason for this may be to try and unveil factors that lead to social exclusion, which is posed to have been one of the factors leading to offending behaviours (Holland et al., 2002).

Characteristics of men with IDD who display HSB

A significant body of literature has linked emotional and behavioural difficulties in people with IDD to (general) offending behaviours. Characteristics such as poor coping strategies (Lindsay et al., 2010) and mental health problems (Murphy, Holland, Fowler, & Reep, 1991) have been postulated to predict later involvement with the CJS. Research evidence suggests the presence of an association between mental health issues and offenders with IDD (Barron et al., 2002).

Men with IDD who display HSB often report family pathology in their childhood. Family discord, violence, poor parental control and neglect are common, as are incidents of parents who have criminal histories themselves (Day, 1994; Fortune & Lambie, 2004). Behavioural disturbances at school, psycho-social deprivation, and psychiatric illness are also frequently found (Awad, Saunders & Levene, 1984; Caparulo, 1991; Winter, Holland, & Collins, 1997). Consequently, studies have often found men reporting confused self-concepts, lack of sexual knowledge, lack of personal power and negative childhood sexual experiences (Hayes, 1991). Abuse histories are frequently reported, with researchers finding high rates of sexual abuse in childhood of their adult sexual offender samples

(for e.g. Brown & Thompson, 1997; Dhawan & Marshall, 1996) a finding of such frequency that it led early research within the area to suggest the presence of the “cycle of abuse”. However, more recently this has been disputed and argued not to be a cause and effect association. Early researchers were criticised for providing a “simplistic” overview of the relationship between abuse experienced and inflicted (Finkelhor, 1984; Williams et al., 1995; Lindsay, Law, Quinn, Smart, & Smith, 2001) in both ID and non-ID populations, as a number of methodological issues confounded the results of past studies. Not all sexual offenders have also been sexually abused themselves (Briggs & Hawkins, 1996), but data does suggest they are more likely to have experienced a high rate of abuse (which includes sexual abuse (Lindsay et al., 2010)) and neglect of different types, throughout their childhood (NSPCC, 2016) in comparison to other types of offenders.

Studies, to date have suggested there is some overlap in the characteristics of sexual offenders with and without IDD (Craig, 2010), for instance they both engage in a variety of types of offences, and the related offence cognitions appear to be comparable between the groups. Poor socio- affective functioning has specifically been suggested as a key component in both populations, by playing a part in the onset and maintenance of HSB (Lindsay & Taylor, 2005). Socio- affective functioning includes factors such as loneliness, intimacy, self-esteem and relationship skills, and often features in the dynamic risk assessment tools for adults (Marshall, Laws, & Barbaree, 1990; Marshall, Hudson, & Hodgkinson, 1993; Thornton, 2002). High levels of loneliness, low self-worth, lack of insight (Boer et al., 1995) as well as a higher external locus of control and being less able to maintain self- control of sexual urges (Rose et al., 2002) have been suggested as factors which play a more vital role in men with IDD than without IDD.

Types of offences of men with IDD include non-contact and contact behaviours involving children, peers, interfamilial persons as well as strangers (Griffiths et al., 1989; Hingsburger et al., 1991; Hays, Murphy, Langdon, Rose, & Reed, 2007). Overall, men with IDD have been reported as less selective in their victim choice, and to be more opportunistic in their actions, than non-IDD sex offenders (Murray, 1992; Lindsay, Taylor & Sturmey, 2004; Courtney, Rose, & Mason, 2006).

Also, men with IDD who display HSB have been found to be more simplistic in their grooming and less likely to plan ahead of a crime (Almond & Giles, 2008). Even so, an inability to

plan ahead, alongside a reduction in capacity and speed in processing information, is not necessarily a feature of sexual offenders with IDD per se, rather they are exemplars of cognitive characteristics found in IDD (Mackinnon, Bailey & Pink, 2004).

Other findings have indicated ID sex offenders to have relatively more of a preference for male, adult victims (than non-ID sex offenders), to be more likely to offend against strangers, and be less likely to use alcohol at the time of the offence (Blanchett, 2000; Blasingame et al., 2014; Day, 1994; Lambrick & Glaser, 2004; Lindsay et al., 2001). These factors however have been suggested to result from men with ID being more opportunistic, and more socially isolated, than non-ID sex offenders.

Nonpenetrative offences appear to be proportionately more likely than attempted or actual penetration in adult ID sex offenders than non-ID sex offenders (Bremble & Rose, 1999; Brown & Stein, 1997; Murrey, Briggs, & Davis, 1992) but this may be because the greater supervision to which they are subjected because of their disabilities means that lower level crimes are more often discovered.

UK Legal and Policy framework

The main legislation governing sexual offences in England and Wales is the Sexual Offences Act 2003. The Act consists of 3 parts, where i) Part 1 sets out the range of sexual offences, child sex offences and offences involving an abuse of a position of trust towards a child, ii) Part 2 details the notification requirements for any persons convicted of a sex offence crime, and iii) Part 3 provides information in relation to general conditions including service courts, and minor and consequential amendments. The Act offered stronger protection to children, than its prequel the Sexual Offences Act 1956. Notably it changed the definition of 'child' by amending the age from under 16 to under 18, and also created new types of sexual offences that have not been previously included. Importantly, it also had sections on capacity to consent, clarifying what lack of consent meant, and on vulnerable victims (such as those with IDD). Thus, the Act applies to adults but also to young people under 18 (and over 10 – the age of criminal responsibility).

In the UK, as early as the 1990s the Home Office policy (1990), specified that wherever possible, offenders with intellectual disabilities ('mentally disordered' as termed then) should be diverted from the criminal justice system to instead receive care and treatment from health and social services. The Reed review (Department of Health & Home Office, 1992) and the Mansell Report (DH, 1993) provided the policy context for adults with ID, at risk of offending, but also those who exhibited challenging behaviours or had mental health needs. Each emphasised the significance of tailoring treatment approaches to the individual, treating people in the least restrictive environment, and in the community rather than institutional settings. The Department of Health's (2007) Commissioning Specialist Adult Learning Disability Health Service, as well as the Valuing People Now (DH, 2009) have carried on sanctioning this policy specifically by pointing out such responsibilities to service commissioners in relation to offenders with ID. Therefore, it is common for community ID services to be caring for and managing men with histories of high risk sexual behaviour that is harmful to others, for some of whom there are no legal sanctions (McBrien et al., 2010) and others who might be on probation. Although, it is worth recognising that the Mental Health Act (1983, as amended by the Mental Health Act, 2007) does provide a framework by which 'mentally disordered defendants' (defined as 'any disorder or disability of the mind' (section 1(2))) can be referred onto compulsory treatment by the healthcare system, either before or after conviction, thereby leading to a diversion of the individuals from the criminal justice system. Whereas autistic-spectrum disorders do fall under this definition a diagnosis of learning disability requires in addition that the '*disability is associated with abnormally aggressive or seriously irresponsible conduct on his part*' (s. 2 (2)).

A study of the different pathways taken by ID offenders into offender services, by Lindsay et al. (2010) found that sexual offenders were most frequently referred to community forensic ID services and to maximum security, rather than generic community and medium/low security services. The factors identified to predict offender pathways included living in the community and having moderate ID which increased the chances of referral to community forensic ID services, while physical aggression, being charged, diversity of index problem behaviour and coming from tertiary health services increased the chances of referral to secure services. Sexual offenders, in particular,

were more likely to be referred to a community-based service if they were based in the community at the time of the index behaviour, however the chances of this decreased as the diversity of problematic behaviour exhibited by the offenders increased (Carson et al., 2014).

Theories about sexual offenders

Theories can be described as having two main objectives that feed into each other, they aim to explain as well as describe a specific process, in order to devise a theoretical framework (that incorporates relevant and significant factors) that can explain and plausibly predict the process in question. Theoretical frameworks will often suggest a relationship between abstract concepts, that are unobservable (for instance emotional wellbeing), and more concrete externalising processes, that can be directly observed (for instance behaviours) (Ward & Beech, 2006). A psychological theory will thereby strive to explain the causes of a phenomenon, or behavioural event through the acknowledgment of features that might help bring it into presence or existence. They will incorporate the latest findings and be based on the outcome of a number of established and empirically accepted concepts, and often they are purposed to be an absolute description of the process. Yet theories do fall out of fashion, concepts they are based on might be invalidated and thereby theories will change with empirical and clinical progress. In addition to theories, empirical work will also be, often discussed in terms of contributing towards developing models. It has been observed that models and theories, as terms, are often used interchangeably, although there are differences between the two (Ward, Polaschek, & Beech, 2006). Unlike theories, models are more simplistic in composition with an aim to focus the empirical work. When effective as judged through their plausibility, they might be developed into a more specific and detailed theory that is evaluated through empirical testing (Ward, Polaschek, & Beech, 2006).

Within sexual offending, historically there has been a tendency to focus on risk, the risk posed by the offender, with limited recognition of protective, or strength-based aspects that might also play a role. In this sense the strength-based approach aims not only to minimise the risk of recidivism but also it aims to foster and improve men's optimal ways of functioning through promotion of human goods (as will be described in detail via the Good Way Model). More recently models however, such

as the Good Lives model have started to consider the plausibility of a wider framework of factors (past and present in the individual's life) and integrate them into a broader model, holding implications for treatment as well as risk (Ward & Hudson, 1998).

Mainstream sex offender theories

The theoretical body of work regarding mainstream sexual offenders can be categorised using a three-tier framework as suggested by Ward and Hudson (1998). The categorical tiers are helpful in focusing and highlighting each theory's main features (Ward & Hudson, 1998). The function of a framework overview, apart from providing a platform from which to explore and contrast the different theories, is also to highlight discrepancies across research.

Level I theories, refer to a set of (what are considered to be) comprehensive theories or explanations of sexual offending. Theories which fall into this category are multifactorial in nature, and will generally be composed of factors as explored in Level II and Level III theories (as below). Ward and Hudson (1998) explained that Level I frameworks seek to integrate single factor theories, incorporating findings from different disciplines, in order produce a more holistic understanding of the offence and offence pathway. Examples, in general for sexual offenders, include Wolf's (1985) Multi-Factor Model of Deviant Sexuality, Marshall and Barbaree's (1990) Integrated Theory of the Etiology of Sexual Offending, and Finklehor's (1984) The Four Preconditions of Sexual Abuse theory.

Level II theories, middle level theories, include those that identify and hold to account individual factors, for instance empathy deficits, as features relevant to the aetiology of sexual offending (Ward & Hudson, 1998). Such theories will focus on fine-grained descriptions of each structure and processes. Examples in general for sexual offenders include Johnston and Ward's (1996) Social Cognition and Sexual Offending theory, Ward and Keenan's (1998) Child Molester's Implicit theory, and Blackburn's (1993) Social Learning theory.

Finally, the Level III theories, also referred to as descriptive or micro-models, detail the cognitive, motivational, behavioural, and social components, operational within the offence sequence, or the relapse process (Ward & Hudson, 1998). In a broad sense the categories here are theories that

attempt to explain the process of offending. Examples include Hudson, Ward, and McCormack's (1999) theory of Offence Pathways, and the Hall and Hirschman's, (1992) Quadripartite Model of child molestation

More recently, a new theory of sexual offending was proposed by Ward and Beech (2006), constructed via the process of reviewing the diverse models according to the three-tier framework and the process of 'theory knitting', resulting in one integral framework, reflected in the name, the Integrated Theory of Sexual Offending (ITSO). The factors ITSO incorporates include genetic predispositions, adverse developmental experiences, psychological dispositions, social, cultural structures and processes, and contextual factors. Through ITSO, Ward and Beech (2006) have postulated that biological, cultural, psychological, individual, learning, and social traits are all implicated in a sexual offence.

Good theories of offending are helpful as they can effectively aid the process of clinical rehabilitation or intervention work with the men. Theoretical components will usually be targeted within treatment and assessed as part of the outcome measures (Ward & Beech, 2006).

Sex offenders with IDD: theories

Unfortunately the theoretical developments in relation to sexual offenders with IDD have not been as fruitful (Wilcox, 2004). With a few exceptions, detailed below, there has been a limited amount of research in relation to the underlying processes governing the aetiology and maintenance of sexual offending by IDD offenders. Nevertheless, the three-level classification system developed by Ward and Hudson (1998) can be adapted and applied to IDD research, as summarised below.

Level I theories

An example of a level I theory, of sexual offenders with ID, can arguably be Lindsay's (2005) 'a model of sexual offending composed of grouping factors'. Lindsay (2005) devised multifactorial account of sexual offending by grouping attributes, such as inappropriate sexual behaviours, personality issues and psychological and developmental factors. Characteristics implicated in the motivation and aetiology for sexual offences included impulsivity, and experience of own history of sexual abuse, as well as denial (Lindsay, 2005). Another example is Keeling, Rose, and Beech's

(2009) adaptation of the ITSO framework for men with IDD who display HSB, as will be detailed further below.

Level II theories

Level II theories on the other hand aim to explain the impact of single factors in the aetiology and maintenance of sexual offending. This body of work has consequently identified dynamic risk factors, including poor attachment and emotional problems, out of which four domains (sexual interests, distorted attitudes, socio-affective functioning, and self-management) are postulated as implicated in the men's treatment need (Thornton, 2002) and hence requiring appropriate assessments that allowing for outcome based treatment work. This in turn led to the development of a number of assessment tools specifically for offenders with ID, focusing on cognitive distortions (SOTSEC-ID, 2010), deviant sexual interests (Blanchard et al., 1999), self- management as well as poor socio-affective functioning.

Level III

Level III theories relate primarily to descriptive models of the relapse prevention process across the research of men with IDD. A model of self- regulation has been proposed in men with ID by Ward and Hudson (2000), considered in the offence process model as developed by Polaschek (2003).

On the whole it is acknowledged complex factors, experiences and behaviours are at play in shaping the probability of an offence taking place. Out of the three, multi-factorial, Level I theories are hardest to evaluate. Instead, the single factor theories, which form some of the foundations of holistic models, need to be considered in greater detail, especially as they have been instrumental in feeding into the wider understanding of key treatment features within the offender work.

The counterfeit deviance theory

The counterfeit deviance theory (a Level I theory) stipulates that deviant behaviours such as sexual offending in men with IDD is precipitated by factors such as poor social skills, lack of sexual knowledge, limited opportunities for establishing sexual relationships and sexual naivety, as well as poor heterosexual skills, rather than a preference or sexual drive towards inappropriate objects

(Hingsburger, Griffiths and Quinsey, 1991). Overall in total eleven factors are included, and when interacting, are suggested to produce an increased probability of men engaging in sexual offending (Griffiths, Hingsburger, Hoath, & Ioannou, 2013).

For a long time, the counterfeit deviance theory was considered one of the most influential foundations for the development of treatment services for an IDD sex offender client group. The theory was effective in highlighting the individual in the context of their environment. For individuals with ID, it meant atypical behaviours (such as display of HSB) were seen to result from the atypical living situations they were in (Hingsburger, Griffiths & Quinsey, 1989). Gradually the focus intensified onto main two factors, educational issues and developmental maturation of the men. Namely it was suggested sexual offending in men with ID was a result of their poor social- sexual knowledge, in hand with their lack of awareness regarding taboos relating to sexuality, and societal rules resulted in inappropriate behaviours.

Some of the more recent developments within this theory include the highly contested hypothesis by Griffiths (2007) who postulated that in some cases certain sexually inappropriate behaviours are related to and result from specific conditions, such as a psychiatric disorder, medical disorders or medication. However, this has been criticised on a number of points including having a medical model view of the individual and a lack of empirical evidence to support it (Murphy pers. Comm.).

Another relationship reviewed, within the counterfeit deviance theory, is the link between experiencing sexual abuse during childhood and later sexual offending (Lindsay, 2002). Studies have indicated high rates of sexual abuse in the histories of men with IDD who display HSB (e.g. Dhawan & Marshall, 1996; Fago, 2003; Lindsay et al., 2001). They have however been criticised for their methodological limitations and often for being over simplified in their study of a very complex relationship (between factors). Today it is accepted that not all abuse victims go on to become offenders (Briggs & Hawkins, 1996) but childhood abuse is recognised as one of a number of pre-disposing factors.

Over the years, there has been some conflicting evidence in support of the counterfeit theory (Lindsay et al., 2006; Lockhart, Guerin, Shanahan, & Coyle, 2009; Lunsky, Frijters, Griffiths,

Watson, & Williston, 2007). It has been difficult to assess the theory in full as it requires a comprehensive evaluation of an individual's environment, socio-sexual attitudes and knowledge, partner selection, learning experiences, courtship skills and biomedical experiences (Hingsburger et al., 1991) and therefore, to no surprise, there is a lack of controlled studies on the topic (Lindsay & Taylor, 2009). Instead components of it have been investigated singularly, with some mixed results.

Michie et al. (2006) tested the sexual knowledge hypothesis by comparing two cohorts of adult men with ID, those who had committed sexual offences and those who had not. The counterfeit deviance hypothesis would predict that those with ID who display HSB would score less on the sexual knowledge measures. The researchers controlled for differences between the participant groups in terms of age and IQ. The men's sexual knowledge was assessed using a Socio-Sexual Knowledge and Attitudes Assessment Tool (SSKAAT). The authors completed three studies with the first study comparing 17 offenders with 20 controls. It was found that in 3 out of 13 subscales on the measures the sex offender cohort had higher levels of sexual knowledge. In the second study they selected a different jurisdiction with 16 offenders compared to 15 controls. Again, there were significant differences between the cohorts, with sex offenders scoring higher levels of knowledge on the 7 subscales. Finally, the authors combined the data for all 33 sex offenders and 35 controls. They found significant positive correlations between IQ scores and SSKAAT total score for the control group but no significant relationship between IQ and SSKAAT total score for the sex offender group. The findings threw doubt on the sexual knowledge hypothesis, and supported Griffiths and Lunsky (2004) study which, much like Michie et al. (2006) reported no differences in the scores on the sexual knowledge measure between men who had committed sexual offences and those who had not.

Langdon and Talbot (2006) used a different instrument for assessing the relationship between sexual knowledge and sexual offending behaviour. But also, the authors developed on previous studies by controlling for intervention effects, given that some interventions incorporate sexual education as a component of the programme. In a four way comparison the authors measured sexual knowledge in (i) people with ID who had a history of sexually inappropriate behaviours and who had taken part in an intervention and (ii) those with ID, also with a history of sexually inappropriate behaviours but who had not received any psychological interventions, (iii) a group with ID and no

offending history and (iv) a group of individuals without ID. No significant differences in sexual knowledge were found between the ID sex offenders, those having and those not having received treatment. Talbot and Langdon (2006) suggested that, partly the reason for no significant differences was the small sample size, as they had observed a tendency for higher scores in men who had received interventions. Furthermore, they found that sex offenders who had received treatment displayed greater knowledge than non-offenders, but those sex offenders who had not received treatment did not display less knowledge than non-offenders. Therefore, the authors too, concluded that a lack of sexual knowledge was most likely *not* the predisposing factor for men with ID in sexual offending.

On the other hand, Lunsky, Frijters, Griffiths, Watson, and Williston (2007) split their sexual offender cohort into a binary category, Type I (paraphiliacs) and Type II (non paraphiliacs). Overall, their data supported that of Talbot and Langdon (2006) and Michie et al. (2006) but their conclusions suggested that the relationship between sexual knowledge and offending is dynamic. The results illustrated that men with known sexual offence histories were significantly more likely to have received sex education than the control group. The authors thereby addressed some of the limitations from the previous work, and hypothesised that the higher level of sexual knowledge might have been as a result of the men's exposure to formal or even informal sex education.

Thus, it is evident that aspects of the theory have been studied and tested but it would appear that, over the years, research moved away from the named factors and their combined contribution and shifted this focus on sexual knowledge as a primary factor. In turn it has been considered one of the most researched and possibly most controversial topics within counterfeit deviance (Griffiths et al., 2013).

Cognitive distortions

A prime example of a Level II theory which looks to explain the role of a single factor in the aetiology and maintenance of sexual offending, is the notion of cognitive distortions in sexual offenders. Cognitive distortions amongst offenders are a selection of thinking errors that are automatically utilised by the person for a self-serving interpretation of offence situations. Distortions that can be engaged in include blaming the victim (e.g. 'they dressed provocatively'), justifying the

offending (e.g. 'they deserved it') or excusing the behaviour (e.g. 's/he didn't mind'). Typically the term refers to maladaptive beliefs and attitudes, and the distorted cognitions are considered to play an essential role in facilitating sexual offending (Ward et al., 1997). Ward (2000) noted that cognitive distortions emerge from implicit theories that are used by the offenders to make judgments about the victim's thoughts, feeling and behaviours. Distorted attitudes have been linked to sexual recidivism in both ID and non-ID sex offenders, and distorted attitudes have been recorded as more prevalent in child sex offenders (Thornton, 2002).

Victim empathy factors have also been hypothesised as being related to cognitive distortions, whereby a lack of victim empathy is postulated to be an internal failure in recognising harm caused, thereby creating a thinking error (Marshall et al., 1999) in the processing of their offence.

Correlational studies that have explored the relationship between victim empathy and cognitive distortions have found promising and positive results (Marshall, Hamilton, & Fernandez, 2001). The relationship between the two has been studied extensively, and as such has been integrated into theoretical models which stipulate that a lack of victim empathy and existing cognitive distortions act as disinhibitions to sexual offending (Finkelhor, 1984; Hall & Hirschman, 1991), and both have been associated with the onset and development of sexual offending (Ward & Siegert, 2002).

Much like non-ID sexual offenders those with ID have also been noted to display deviant sexual arousal patterns and cognitive distortions supportive of sexual offending (Murphy et al., 1983). Moreover cognitive distortions appear to be offence specific, as explored by Lindsay et al. (2006) who reported on two studies in which men who offended against adult women demonstrated significantly more cognitive distortions regarding rape, whereas men who had offended against children demonstrated significantly more cognitive distortions in relation to offences against children. Thus, it is proposed that different types of sex offenders may tend to hold cognitive distortions which are selectively consistent with the type of sex offence with which they have been charged (Lindsay et al., 2006).

Williams, Wakeling, and Webster (2007) found a significant change in cognitive distortions expressed by prisoners with ID, pre and post treatment, suggesting distortions are treatment responsive. This in turn implicates them as being good indicators of treatment change. However, in

this study prisoners with an IQ < 80 were grouped into the ID cohort, a limitation addressed by the SOTSEC-ID group (SOTSEC-ID, 2010). The SOTSEC-ID collaborative undertook a study of a group of men who sexually offended, with an average IQ < 70, where a CBT based intervention was adapted and provided for men with ID. Although the researchers found significant improvements following men's participation in the treatment programme on one of the measures of cognitive distortions (the QACSO), it was not the case for the other instrument, the SOSAS (see SOTSEC-ID, 2010). The reasons for this were suggested to come down to the poor internal consistency of the alternative measure, which had a number of double negative items that were difficult for the men to understand.

All in all, unlike victim empathy, which is more difficult to measure and assess, the research in relation to cognitive distortions has offered some more consistency and promising study results. Men with IDD who display HSB appear to display thinking errors that are specific to their index offences and studies suggest cognitive distortions might be receptive to effective treatment programmes.

The Integrated Theory of Sexual Offending (ITSO) for ID offenders

The Integrated Theory of Sexual Offending (ITSO) postulates that offending problems arise through interplay between three causal factors being biological, ecological and psychological (Ward et al., 2005). As a model the ITSO has gained popularity amongst researchers over the years, and it has also been adapted for men with ID (Keeling et al., 2009).

Within the ITSO the biological functioning of a person is considered in the context of the gene- culture theory (Odling- Smee et al., 2003) that proposes genetic determinants and neurobiological functioning as factors that lead to an increased inclination to seek basic goods (e.g. sex in the context of sexual offending). Specifically, it is postulated that sexual offenders carry a genetic bias which, when paired with dysfunctional motivation and cognitive processes can set in motion a person to seek their sexual needs in socially unacceptable ways (Ward & Beech, 2006). Keeling, Rose and Beech (2009) translated this for men with ID who display HSB. It was suggested that predisposing genetic factors for individuals with ID include inherited characteristics and

problems related to difficulties in utero, as recognised in the DSM-IV (2000). Importantly however the authors also note that a link between genetic conditions and sex offending is yet to be found.

Next the ITSO specifies ecological factors to be a combination of a person's circumstances and environment. These include social and cultural elements, all of which play a big role in a person's early childhood experiences (Ward et al., 2005). For individuals with ID ecological issues are especially prominent features, as they are vulnerable to poor developmental experiences across a number of domains (e.g. education, social care etc). Much like the non-ID populations, but arguably to a higher degree, factors associated with poor developmental experiences include being themselves victims of physical and sexual abuse, limited social support and poor parenting (Ward & Beech, 2006). As Dagnan and Jahoda (2006) noted, the personal circumstantial factors for individuals with ID are at a higher risk of exacerbation due to stigmatisation and social isolation.

In terms of the psychological system, Ward et al. (2005) argue that this is vulnerable to any impairments in the biological and ecological systems. The psychological system comprises three other interlocking neuropsychological systems; motivation emotion, perception and memory, and action selection and control (Ward & Beech, 2006). Keeling, Rose and Beech (2009) argued each of the three systems is analogous to stable dynamic risk factors as studied within sex offenders with ID. Schemas and implicit theories are stored in the perception and memory system, which can be measured through the self-regulation model. Both Courtney et al., (2006) and Langdon et al. (2007) have studied these systems, specifically in men with ID. Issues related to action selection and control systems translate to problems with self-regulation which can increase the likelihood of sexual offending (Ward & Beech, 2006). In their study Langdon et al. (2007) found some support for the hypothesis in that men engaged in both the approach- automatic and the offence pathways. However, due to limitations in relation to assessment measures used and sample size, it was concluded further research into the area was needed.

Overall, the ITSO encompasses features of theories from all three levels and appears to be able to at least partially account for sexual offending by people with ID. Although further work is needed in identifying specific aspects that are more salient for ID offenders, overall the model can

assist with the development of appropriate assessment and treatment programmes (Keeling et al., 2009).

Assessments

Measurement of the impact of treatment is a critical feature of any programme. Reliable and valid assessment instruments are essential in constructing good quality client formulations, and they are a helpful guide for the whole team in cases of holistic approaches. Moreover, they are critical in evaluating the effects of treatment.

Assessments will have slightly different roles depending on the setting, i.e. prison (e.g. risk focused) vs community services (e.g. strength focused), but nonetheless the primary concern service providers should have when planning assessment is to determine the domains that need to be assessed. Efficient, reliable and validated outcome measures should guide treatment decisions.

A number of questionnaires have been developed to measure the key issues in the treatment of men who display HSB. Marshall and Williams (2001) developed a list of principal components assessed and the equivalent tools used, see Table 1 (replicated from Marshall & Williams, 2001), in the work of mainstream sexual offenders.

Table 1

List of tools used in the assessment of adult sexual offenders

Domains measured	Measures	Authors
Cognitive Distortions	Abel's Child Molester Cognitions Scale	Abel et al., 1989
	Molest Scale	Bumby, 1996
	Rape Scale	Bumby, 1996
	Rape Myth Acceptance Scale	Burt, 1980
	Hostility Toward Women Scale	Check, 1984
	Empathy for Children	Hanson & Scott, 1995
Empathy	Empathy for Women	Hanson & Scott, 1995
	Child Molester Empathy Measure	Fernandez et al., 1999
	Rapist Empathy Measure	Fernandez & Marshall, 1999
	Interpersonal Reactivity Test	Davis, 1983

	Social Self-esteem Inventory	Lawson et al., 1979
Social Functioning	Problem solving	D'Zurilla & Goldfried, 1971
	Social Support Inventory	Flannery & Wieman, 1989
Assertiveness	Social Response Inventory	Keltner et al., 1981
	Rathus Assertiveness Scale	Rathus, 1973
Anger	Buss-Durkee Hostility Inventory	Buss & Durkee, 1957
	State-Trait Anger Expression Inventory	Spielberger, 1988
	State-Trait Anxiety Inventory	Spielberger et al., 1970
Anxiety	Fear of Negative Evaluations Scale	Watson & Friend, 1969
	Social Avoidance and Distress Scale	Watson & Friend, 1969
Relationships	UCLA Loneliness Scale	Russell et al., 1980
	Miller's Social Intimacy Scale	Miller & Lefcourt, 1982
	Clarke Sexual History Questionnaire	Langevin, 1983
Sexual Interest	Multiphasic Sexual Inventory	Nichols & Molinder, 1984
	Laws Card Sort	Laws, 1986
	Wilson Sex Fantasy Questionnaire	Wilson, 1978
Psychopathy	Psychopathy Checklist-Revised	Hare, 1991
	Self-monitoring Procedure	McDonald & Pithers, 1989
	STEP Measures of Offence Chain	Beckett et al., 1994
Relapse Prevention	Situational Competency Test	Miner et al., 1989
	Coping Inventory for Stressful Situations	Endler & Parker, 1990
	Sex as a Coping Strategy	Cortoni & Marshall, 1996
	Level of Service Inventory-Revised	Andrews & Bonta, 1995
	Violence Risk Assessment Guide	Harris et al., 1993
Recidivism	Minnesota Sex Offender Screening Tool	Epperson et al., 1995
	Rapid Risk Assessment for Sexual Offence Recidivism	Hanson, 1997
	Marlow-Crowne Social Desirability Scale	Crowne & Marlow, 1960
Social Desirability	Paulhaus Balanced Inventory of Desirable Responding	Paulhaus, 1991

The assessments and priority of the tools in men with IDD will have been informed by these existing practices for men in the mainstream setting (Wilcox, 2004). Accordingly, there is overlap in

the domains of interest. A recent systematic review (Cohen & Harvey, 2016) of interventions for adult male sex offenders with an ID, also devised a list of the assessments used across the intervention studies appraised. An adapted version of the measures is found in Table 2 (based upon Cohen & Harvey, 2016).

Table 2

Measures as applied in treatment studies of men with IDD who display HSB

Domain	Measures	Adapted by
Sexual Knowledge	Sexual Attitudes and Knowledge Assessment, SAK	Heighway & Webster, 2007
	Socio-Sexual Knowledge and Attitudes Assessment—Revised, SSKAAT-R	Griffiths & Lunsky, 2003
Cognitive shift	Multiphasic Sex Inventory, MSI,	Nichols & Molinder, 1984
	Nowicki-Strickland Locus of Control Scale, NS	Norwicki, 1976
	Sex Offenders Opinion Test, SOOT	Bray, 1997
	Sex Offences Self-Appraisal Scale, SOSAS	Bray & Forshaw, 1996
Victim empathy	Questionnaire on Attitudes Consistent with Sexual Offenders, QACSO	Lindsay, Carson & Whitefield, 2000
	Adapted Victim Empathy Consequences Task	Offending Behaviour Programmes Unit, HM Prison Service, 1996
	Interpersonal Reactivity Index, IRI	Davis, 1980
Psychological factors	Victim Empathy Scale—adapted, VES-A	Beckett & Fisher, 1994
	Coping Response Inventory, CRI	Moos, 1993
	Adapted Self-Esteem Questionnaire	Offending Behaviour Programmes Unit, HM Prison Service, n.d.c
	Adapted Emotional Loneliness Scale	Offending Behaviour Programmes Unit, HM Prison Service, n.d.a
Relapse Prevention	Psychiatric Assessment for Adults with Development Disabilities, Mini- PAS-ADD	Prosser et al., 1997
	Adapted Relapse Prevention Interview	Offending Behaviour Programmes Unit, HM Prison Service, n.d.b

*Note.**The table has been modified not to include the measures in relation to adaptive behaviours, as this is part of the ID diagnosis criteria, and risk assessments, as they are discussed below.

Neither of the tables above are comprehensive accounts of all the measures as reported in empirical treatment studies on men who display HSB, with or without IDD. They do provide an overview of the domains and their equivalent outcome measures, however, as currently prioritised across services. Notably there are not as many tools and as much variation in the measures for men with IDD. This could be down to a number of factors, including the smaller number of research studies in IDD, fewer typologies recognised in men with IDD and there being less opportunities to complete psychometric analysis of measures for men with IDD, due to recruitment and access issues.

Due to this lack of resources three main methodological approaches have been identified, as applied frequently in the assessment of men with IDD who display HSB: either authors will use existing measures, they might use existing measures that have been adapted, or develop new assessments/ tests (Keeling, Beech & Rose, 2007). Issues with use of existing measures that are not adapted include, unreliable results and variations in delivery, for instance it might be done verbally, with visual cues or by untrained staff. Similarly, where measures have been modified, identified limitations include adapted tools not always being appropriately assessed for their reliability and validity.

Overall assessment approaches have been well established for men without IDD, but more needs to be done for men with IDD if a comprehensive assessment of treatment needs is to be established.

Risk assessments

Historically assessing an offender's risk or "dangerousness" was done mainly with forensic psychiatric patients, then later applied in guiding judicial decisions, such as the relative risk of releasing an offender into the community (Quinsey, Harris, Rice, & Cormier, 2006). Nowadays risk assessments are applied partly in guiding sentencing and probation decisions, but also in addressing the provision of effective treatment programmes, principles such as risk (where those of higher risk are targeted) and need (where criminogenic needs, are identified and targeted for treatment) (Andrews et al., 1990).

The 'risk' principle, long applied in the prison service, maintains that the level of service provided to an individual should be dependent on the risk level of that offender, meaning that those assessed as higher risk offenders are allocated to higher intensity interventions and supervision programmes, whereas those with lower risk, to lower intensity treatment. The 'need' principle maintains that interventions need to focus on changeable problems that are causally correlated to the offending behaviour, known as dynamic risk factors. In addition to the two, Bonta and Andrews (2007) ascertained the presence of the responsivity principle, which specifies that services and interventions should be tailored to a person's individual learning style and motivation.

Risk assessments, in their early forms comprised of subjective evaluations conducted by psychiatrists and psychologists, and they were based on clinical expertise. However, over time, research contested the accuracy of this and proved clinical judgments to be no better than lay judgments (e.g. Quinsey & Ambtman, 1979). Instead the application of actuarial instruments proved to be significantly more accurate and objective tools (Ægisdottir et al., 2006; Hilton, Harris, & Rice, 2006), as they eliminated any errors such as base rate neglect, a common fallacy arising from an attempt to estimate a probability of an outcome (Quinsey, Harris, Rice, & Cormier, 2006). A risk assessment is now understood to be a scale-based measure that aims to predict the probability or likelihood of re-offending.

Instruments measuring actuarial risk of recidivism use risk predictors identified through published studies and then devise a manner in which to code the presence or absence of those factors to arrive at a score for an offender. This provides the professional user with a measure of probability of reconviction for an offence over a specified follow-up period. However not all risk assessments are actuarial in nature. The probability of recidivism must be generated from follow-up data in order to qualify as an actuarial tool (Camilleri & Quinsey, 2011). In the past, for a sex offender population, most of the risk predictors relied predominantly on static factors (Beech, Fisher, & Thornton, 2003), such as first age of offending. More recently, both IDD and non-IDD research has specified three main types of risk factors as associated with recidivism; static, dynamic stable and dynamic acute factors (Hanson, & Thornton, 2000; Hanson & Bussiere, 1998; Thornton, 2002).

Static factors are historic in nature, they cannot be altered or changed in a way that is readily influenced, for instance through interventions (Harkins & Beech, 2007). They are fixed factors that will not change through time, examples include aspects such as gender, and childhood experiences. Such information is easy to record, usually objective and good for actuarial analysis, as such it allows for risk to be defined in a quantitative manner (Grubin, 2007). Some of the more popular risk assessments based on static factors are the Static- 99 and Risk Matrix 2000 (frequently applied in prisons across UK), as well as police and the probation services.

Dynamic stable factors are related to the psychological characteristics of an offender, meaning their personality and learnt behaviours. They are called dynamic factors because they may alter, and stable because change tends to be slow. As such these are the factors which are generally the focus of intervention treatment (Ward, Polaschek, & Beech, 2006). Some of the more widely used instruments are RSVP, SVR-20 and SARN, (applied within the UK prison services). Psychometric testing can also be used to assess dynamic stable risk factors (Grubin, 2007). Dynamic acute risk factors are the characteristics of an offender and his vulnerabilities; they are reflective of a person's current state and circumstance. They are considered to be triggers and last for short periods of time (Hanson, Harris, Scott, and Helmus, 2007). Developing risk assessment instruments that try and quantify and qualitatively evaluate dynamic acute factors is difficult as they are, by definition constantly changing (Quinsey et al., 2006).

Factors that, in general, have been demonstrated as contributing to sexual recidivism in adult men are ID, deviant sexual experiences, antisocial behaviour, impulsivity, high sexual arousal, and sexual preoccupation (Embregts et al., 2010). Risk specifically associated with relapse in an IDD population has been found to include a range of actuarial data, for example, age, number of sexual convictions, and total criminal convictions of any kind (Wilcox, 2004). Further factors that have been postulated to increase risk are the nature of the sexual offences committed, and some aspects of an individual's history (including relationship history, and substance abuse).

Risk assessments of ID offenders are becoming increasingly common, however their development has been slow (Harris & Tough, 2004; Lindsay & Beail, 2004). In some cases, clinicians

have been observed to use their own unvalidated risk assessments (Camilleri & Quinsey, 2011), which, amongst other issues, leads to inconsistent definitions of high-risk men.

Actuarial Instruments in ID

There are some actuarial instruments with promising results for the ID population. The Violence Risk Appraisal Guide (VRAG) is one such tool, developed to predict the probability of violent or sexual reoffending. Originally, the tool was developed with a heterogeneous sample of psychiatric and non-psychiatric offenders, but numerous studies have illustrated its ability to predict recidivism in ID offenders (Quinsey et al., 2004).

Dynamic Instruments in ID

Some of the actuarial tools have been criticised for their lack of clinical utility as they are constructed entirely of static items. Static factors are indeed correlated with recidivism, but derived from historical events and stable characteristics, as such they do not predict changing imminence of reoffending during a follow-up period nor do they identify treatment targets, whereas tools which include dynamic acute items are able to assess short term risk. Dynamic risk tools have been demonstrated to be correlated with recidivism too however their main criticism is the lack of evidence which demonstrates that a change in the dynamic risk factors results in reduction in recidivism. To date, only one study has tested for this effect (Olver, Wong, Nicholaichuk, & Gordon, 2007).

A promising dynamic risk assessment tool is the Assessment of Risk and Manageability for IndividualS who Offend Sexually (ARMIDILO-S) (Boer, Tough, & Haaven, 2004). It is specifically developed for men with ID and it utilises some of the existing and acceptable items in relation to dynamic risk, including stable and acute items, but notably it also develops on this by distinguishing between items relating to the offender and to their environment. The authors have argued that, for men with ID, the inclusion of environmental variables in a framework for assessing risk, is paramount. This is because men with ID are, more so than men without ID, reliant on and have regular contact with external structures and support processes (Boer, McVilly, & Lambick, 2007) such as care staff, as well as other professionals. The predictive validity of the ARMIDILO-S instrument was recently evaluated, against two other frequently used tools, the static risk assessment

for sexual offending (STATIC-99), and a static risk assessment for violence (Violence Risk Appraisal Guide [VRAG]) (Lofthouse et al., 2013) on a sample of 64 sexual offenders with ID. Applying the receiver operating characteristic (ROC) area under the curve (AUC) statistic, the researchers found ARMIDLO-S to outperform the other two on its accuracy of predicting sexual recidivism of the men with ID (Lofthouse et al., 2013).

Lately, there has been an increased awareness of the negative connotations, such as overlooking personal strength, brought to surface in completing risk instruments based on the approaches above, thus a new method has emerged which focuses on more positive aspects, a person's strengths and resilience (Seligman, 2000). This has resulted in development of strength-based assessments, but more so in an adolescent ID population than for adults with ID (Beech, Craig, & Browne, 2008; Griffin, Beech, Print, Bradshaw, & Quayle, 2008).

Treatment

Treatment of men who sexually offend has evolved over the years from medical and behavioural programs such as the use of anti-androgens and the modification of deviant sexual interests via procedures such as covert sensitisation, aversive therapy, masturbatory satiation and biofeedback from a plethysmograph (Abel, Levis, & Clancy, 1970; Marshall, 1973) to multi-faceted and comprehensive cognitive-behavioural interventions which include rehabilitative features (Marshall, Anderson, & Fernandez, 1999; Marshall, Fernandez, Hudson, & Ward, 1998; SOTSEC-ID, 2013). The transition between the two was in part driven by new research at the time, that linked cognitive distortions, a term derived from Bandura's construct of *faulty thinking* (Bandura, 1986) to sexual offenders (Abel, Levis, & Clancy, 1970; Ó'Ciardha & Ward, 2013). By doing so, new interest and discussions were opened up within the field of offender treatment and research, and it soon translated into new sexual offender models such as Wolf's (1984) cycle of offending and Finkelhor's (1984) four factor framework. Thus, the shift was made from a medical model that over focused on restricting individuals to rehabilitative approaches of individuals (Lindsay, 2009b).

Over the years a number of meta-analysis have been published reviewing the effectiveness of treatment of (non-ID) sex offenders (Gannon, Olver, Mallion, & James, 2019; Hanson & Morton-

Bourgon, 2005; Kim, Benekos, & Merlo, 2016; Långström et al., 2013; Schmucker & Lösel, 2017b). Although, across the publications there is an agreement that due to the heterogeneous nature of individual studies it is difficult to draw clear cut conclusions on the general effectiveness of sex offender treatment programmes, there appears to be (especially when restricting the analysis to methodologically sound research such as RCTs and “equivalent control” group studies), on average, a reduction in recidivism rates in the treated groups (of non-IDD sex offenders) (Schmucker & Lösel, 2017a). Specifically, Kim, Benekos, and Merlo (2016) found that behavioural, CBT, and multisystemic therapy showed more positive effects, similarly Schmucker and Losel (2017) who included studies from across different countries, reported that cognitive behavioural therapy, as well as small sample studies, with medium to high risk offenders, and more individualized treatment, revealed better effects.

Focusing specifically on prison populations Mews, Di Bella, and Purver (2017) measured the impact of the prison-based Core Sex Offender Treatment Programme (SOTP) on the re-offending outcomes of sex offenders in England and Wales. The programme itself was designed by the HM Prison and Probation Service (HMPPS) for imprisoned men who have committed sexual offences. It works on the principles of identifying and addressing known criminogenic needs of the men, via cognitive behavioural group-based treatment approaches. It is available in approximately one-sixth of male prison establishments in England and Wales. Applying the propensity score matching technique, Mews, Di Bella, and Purver (2017) matched 2,562 convicted sex offenders who started treatment under the prison-based core SOTP programme with 13,219 comparison sex offenders who did not take part in any programmes, as identified via Police National Computer records, SOTP treatment records, and the Offender Assessment System database. The matched treatment and comparison groups were then compared on an extensive range of reoffending outcomes. The results indicated that matched treated and comparison groups had similar reoffending rates across a variety of outcome measures with some statistically significant differences detected. Treated sex offenders committed at least one sexual reoffence during the follow-up period when compared with the matched comparison offenders (10.0% compared with 8.0%). The finding suggested the prison managed Core SOTP treatment programme was associated with little or no changes in sexual and non-sexual reoffending, a

surprising outcome that the researchers suggested might have resulted from a number of variables and factors, not controlled for (such as deviant sexual interest and self-regulation problems) (Mews et al., 2017).

A more recent, meta-analysis on psychological treatment for men who have offended was published by Gannon et al. (2019). The researchers reviewed 68 articles from which 70 independent studies were extracted, describing the recidivism of 55,604 offenders, with 22,321 treated, and 33,283 as the comparison group. Gannon and colleagues (2019) identified that for sexual offenders, a number of key moderators were associated with significant and better reductions their recidivism. Notably, treatment effectiveness appeared improved when qualified registered psychologists were present in delivering the programs, and where any facilitating staff were provided with clinical supervision. Group-based treatment was also found to produce the greatest reductions in sexual recidivism, in comparison to one to one or mixed group treatments. Optimal outcomes were achieved by programmes that also included some form of arousal reconditioning (opposed to none or unknown). This, the most recent gold standard review by Gannon et al. (2019), offered new insight into the role of specific treatment components and clinician attributes in minimising recidivism rates.

Fewer review articles are available assessing the efficacy of interventions for sex offenders with IDD. Historically, intervention work for men with IDD, took the form of behavioural management that included focusing on improving men's social functioning, sexual awareness and sexual knowledge, extending relationships, improving their coping skills and reducing inappropriate sexuality (Griffiths, Quinsey & Hingsburger, 1989). Treatment focus for men with IDD, has subsequently carried on in this direction since, with some of the main treatment principles still evident in current practice.

Today, for men with IDD, cognitive- behavioural interventions are adapted to take into account men's vulnerabilities specific to their low IQs and additional co-morbidities such as ASD, ADHD etc. In a broad sense such adaptations include simplifying the content, using rehearsal and repetition, avoiding abstract notions, and optimising engagement via use of concrete strategies within sessions (Hays et al., 2007; Keeling, Rose, & Beech, 2008; Lindsay, 2009a). But before a review of

current cognitive behavioural therapy practices is presented, some consideration is given below towards alternative approaches to treatment.

Pharmacotherapy

Pharmacological treatments with sex offenders have been used in order to decrease their general level of sexual arousal, but medical treatments of this offender group have had a long-standing, and ethically controversial past. Historically practices included unlawful, compulsory, and non-consensual treatment, including sterilisation of men with IDD, and although it is an outdated approach to treatment (as a principal method), the role and potential of pharmacological supplements to treatment has been studied.

In practice it means that pharmacological treatment might still be considered but usually in conjunction with psychotherapeutic treatment (Hall & Hall, 2009), especially for certain typologies of sexual offender (most commonly paedophilia) (Garcia et al., 2013; Thibaut et al., 2010). As such, pharmacological treatment in the more recent years falls into two broad approaches i) drugs that are used to reduce the effects of sex hormones in parts of the brain associated with sexual urges, or ii) an indirect medical supplement intended for comorbid conditions such as impulsivity, aggression or alternative psychiatric disorders which could influence sexual disinhibition (Lindsay, 2009).

Given the long-standing ethical issues in using pharmacological medication most of the research in its use for sexual offenders is limited to case studies. Two examples of studies in relation to men with ID who displayed HSB are Myers (1991) and Cooper, Cernovsky, and Magnus (1992).

In his case study Myers (1991) examined the impact of 5 year-long treatment with medroxyprogesterone acetate (MPA) on a 26-year-old man with mild ID. The author reported a significant reduction of the man's sexual drive, as compared to baselines, during the course of the treatment and it led to full cessation of any sexual activity. However, this effect was temporary as the inappropriate behaviours resumed once the medical dose was decreased. Apart from the issues around the short-term effects, the authors recognised there might be problems with men's reliability if administered on a wider scale, in having to take the medicine on a day basis.

On the other hand, Cooper, Cernovsky and Magnus (1992) examined the effect cyproterone acetate (CPA) drug on a man with mild LD. With the participant acting as his own control, he took part in three conditions for over 38 months. The conditions included the CPA condition, no treatment condition, and a control condition (placebo). Authors found that at the end of 38 months the man had reduced hormones and, self-reported sexual arousal levels. It was noted that that long-term administration of CPA produced enduring antilibidinal effects, which in some cases can be permanent, however within three weeks of stopping the drug, all measures had returned to pretrial levels. Furthermore, although the man himself did not report any side-effects, the researchers cautioned the use of CPA for it may result in any of the following, weight gain, fatigue, mild diabetes, reduced volume of ejaculate, and gynaecomastia.

More recent studies have been conducted but predominantly on men without IDD (Courtney & Rose, 2004) and two main types of pharmacological interventions have been identified, the SSRI treatment and hormonal treatment. SSRIs have been found to be effective in paraphilias associated with obsessive-compulsive disorders, impulse control disorders, or depressive disorders (Thibaut et al., 2010). Hormonal treatments, on the other hand are considered mostly effective in paraphilias characterized by intense and frequent deviant sexual desire and arousal. Included in this are antilibidinal drugs, comprising of hormonal drugs that have a testosterone-suppressing effect, and non-hormonal drugs that affect libido through other mechanisms (Thibaut et al., 2010).

As for the methodological rigour of the research a number of literature reviews have concluded that the overall quality of evidence in favour for pharmacological treatment is poor (Courtney & Rose, 2004; Garcia et al., 2013; Thibaut et al., 2010). Studies primarily aim to measure short term improvements, and often rely on self-reports (Schober et al., 2005), with sample sizes that are often far too small (Brown & Thompson, 1997; O'Connor & Rose, 1998).

Instead a large body of literature has illustrated that cognitive-behavioural techniques are of superior efficacy when compared to either early behavioural or pharmacological interventions alone in treatment of sexual offenders (Courtney & Rose, 2004; Lindsay, 2009b).

Cognitive behavioural therapy for men with IDD

Although rehabilitative approaches to treatment for men with IDD who sexually offend, started with behavioural management therapies, such as Griffiths, Quinsey and Hingsbuger (1989) and Haaven, Little, and Peter- Miller's (1990) influential work, today this has developed into full cognitive-behavioural therapies.

The work of Haaven, and colleagues (1990), much in the same manner of Griffiths et al. (1998) composed of an integrative behavioural management regime for sex offenders. Where Griffiths et al. (1998) designed their programme for community clients, Haaven et al. (1990) clients were in a secure setting. But both included features within the programmes such as promotion of self-regulation in relation to the sexual behaviour and problem-solving. Also, both focused on the development of appropriate social skills and sociosexual functioning in their clients, as they were of the view that people with IDD might have restricted social and sexual opportunities that caused them to develop inappropriate choices.

Stemming from this is a broader cognitive behavioural therapy (CBT) which has become one of the most studied approaches in offender treatment (Craig, Browne, & Stringer, 2003; Hanson et al., 2002). The application of cognitive and problem-solving techniques within such therapy have developed to a sophisticated degree with the general population of sex offenders (Marshall, Anderson & Fernandez, 1999) and it has also been successfully adapted for offenders with IDD (Lindsay & Taylor, 2005; Lindsay et al., 2002; Taylor, Novaco, Gillmer, & Thorne, 2002), including sexual offenders (Courtney & Rose, 2004; Lindsay & Smith, 1998; Murphy, Powell, Guzman, & Hays, 2007).

The potential advantage of the CBT approach is that it combines cognitive therapy, exploring the thinking processes of the person, with behaviour therapy, examining and changing behaviours. Some of the most common themes in CBT based treatment programmes for individuals with IDD include teaching men social and relational skills, developing their victim empathy, increasing their sexual knowledge, improving their attitudes towards sexual relationships, increasing community engagement and motivation, confronting denial (if present) and improving self- control, modifying

cognitive distortions and improving relapse prevention (Barron et al., 2002; Lindsay & Taylor, 2005; SOTSEC-ID, 2010; Talbot & Langdon, 2006; Broxholme & Lindsay, 2003; Craig & Hutchinson, 2005; Lindsay, 2005). Furthermore, a group format, rather than individual therapy, has been established as a preference for both men with and without IDD (Hall, 1995; Haaven, Schlank, 2011; Heaton & Murphy, 2013).

In the field of sexual offenders with IDD a number of studies, in the course of the last 21 years, have evaluated adapted CBT interventions (Craig et al., 2006; Craig et al., 2012; Keeling et al., 2006b, 2007; Lindsay, Marshall, et al., 1998; Lindsay, Neilson, et al., 1998; Lindsay et al., 2011; Lindsay et al., 1999; Lindsay & Smith, 1998; Murphy et al., 2007; SOTSEC-ID, 2013; Rose et al., 2002; Rose et al., 2012; Heaton & Murphy 2013). Marott's (2017) systematic review of treatment of intervention for sex offenders with IDD, summarises these as including case studies, and group-based interventions, with the mean length of treatment being 13.5 months (with the range between 4-36 months). The locations varied from being based in community, to secure health units and prison settings. Those in community settings, included participants from a variety of living arrangements such as assisted living situations and private homes, with many participants either on probation or 24-hour supervision. In studies that conducted a follow-up, treatment gains were observed on knowledge, attitudes, cognitive, and behavioural measures (e.g. Lindsay, Marshall, et al., 1998; Lindsay, Neilson, et al., 1998; Lindsay & Smith, 1998; Murphy et al., 2010; Rose et al., 2002; Heaton & Murphy, 2013). However consistent collection of follow-up data is, in general an issue and only a handful of studies collected both cognitive and behavioural assessments (Lindsay, Marshall, et al., 1998; Lindsay, Neilson, et al., 1998; Lindsay & Smith, 1998; Murphy et al., 2010; Rose et al., 2002; Heaton & Murphy 2013). Furthermore, CBT based interventions have been criticised for overfocusing on the “Risk- Need” components of the RNR model (Bonta & Andrews, 2007), overlooking the individual circumstances of the person, in terms of potential social and ecological causes of the offence. This relates to the ITSO model and implies that some offence related vulnerabilities are of the ecological kind, meaning they have a social and cultural basis that might lead to individuals deciding to commit sexual offences (Ward, Polaschek & Beech, 2006). The offence in such instances is considered to be

often opportunistic, or the consequence of circumstances and as such the sexual offence is an act committed in the absence of any significant psychological deficits or vulnerabilities.

Behavioural outcomes consisted of documentation such as legal reconvictions, and data from police officers, mental health workers, and probation officers, cognitive outcomes on the other hand included changes in sexual attitudes and knowledge, and internal locus of control. Notions of treatment effectiveness is therefore a contested topic. Nevertheless, it is difficult to assess the true effectiveness of these studies, as apart from lacking comparison groups, none used a randomized controlled trial design or adopted an intent-to-treat analysis, and very few reported data on either attrition or loss to follow-up (Cohen & Harvey, 2016; Jones & Chaplin, 2017; Marotta, 2017).

Summary

The aim of this initial chapter has been to introduce the theoretical background for understanding men with IDD who sexually offend and to highlight the need for appropriate, adapted assessment and treatment, in order to better provide effective interventions for their maladaptive behaviours. The difference between those men with and without IDD who display HSB is still being understood, but history shows that the needs of people with IDD have been ignored to a great extent across service provisions. Basing treatment approaches upon theory and evidence (that is person centred) is fundamental to good practice (Sturmeay, 2004) especially in the case of offenders with IDD.

The reason for reviewing the literature on adults before moving onto adolescents is twofold, and in part relates to our growing understanding of offender profiles but also the wider system approaches to development of treatment. Firstly, in considering the offender profiles, empirical work on adult sex offenders has on several occasions recorded self-reports of them starting to engage in problematic sexual behaviour, in childhood and adolescence (Lindsay et al., 200; Seto & Lalumière, 2010; SOTSEC, 2010). Secondly, as reviewed by a leading national charity (NSPCC, 2014) on the topic of adolescents who display harmful sexual behaviours (HSB), it is known that often intervention models, for young people who display HSB, are based on adult sexual offender models. For these

reasons it was imperative to acknowledge and summarise the current theoretical and clinical understanding of adults with IDD who engage in harmful sexual behaviours.

In the following chapter the aim will be to address the profiles of adolescents with IDD who display harmful sexual behaviours in detail, before moving on to considering clinical assessments available for this vulnerable population.

Chapter 2

Literature review: adolescents with IDD who display harmful sexual behaviours.

Chapter Overview

As discussed in the previous chapter, a proportion of all harmful sexual offences are committed by men with IDD, with the exact figure contested, given the variations across study methodologies. The newest theory Integrated Theory of Sexual Offending (ITSO) in relation to primarily neuro-typical sexual offenders, integrates a number of interrelating causal variables to present a framework explaining the onset, development, and maintenance of sexual offending (Ward & Beech, 2006). The theory holds a convincing argument for how the interaction between the neurological (i.e. neurobiology), psychological and ecological factors (i.e. social and cultural environment and personal circumstances) explain the clinical symptoms that arise, such as emotional problems and social difficulties in men who sexually offend.

More often than not men with mild IDD and HSB report deprived childhoods, with experiences of violence and abuse (Gilby, Wolf & Goldberg, 1989; Day, 1994; Lindsay et al., 2002) accumulating in difficult and negative developmental experiences. Thus, poor attachments in childhood, childhood maladjustment and deficits in social relationships have been found to be as relevant to the IDD client group as to the neuro-typical groups. Added to this, individual factors, such as poorer problem-solving skills, difficulties with emotional control and communication difficulties are considered to make interaction for children with IDD more demanding and complex.

Yet, in comparison to the significant body of research regarding adult offenders, fewer studies have emerged exploring the experiences of adolescents (with and without IDD) who display harmful sexual behaviours. Therefore, the current chapter reviews the literature relating to the prevalence, abuse experiences, individual characteristics, offence characteristics and treatment programmes available for adolescents with IDD who displayed harmful sexual behaviours.

Adolescents

The potential impact of adverse and traumatic developmental experiences on children has been studied extensively, and it is with a level of certainty that we now know such developmental disruptions can contribute to personality difficulties which may lead the individual to develop an antisocial means of responding to others and develop into risky behaviours (i.e. general delinquency) in adolescence and adulthood (Hanson, Flood, & Holmes, 2016).

The ability to pinpoint exact factors, or even experiences that might make a difference in the outcome of a person's later life have been some of the driving elements behind this academic research. Initial studies on the childhood experiences of sexual offenders were based on retrospective data, collected via men's self-reported accounts (Lindsay, 2009a). Such studies found a relationship between offence behaviours in adulthood, and adverse experiences in childhood, which resulted in a "victim to abuser" hypothesis. Supportive of this view were a number of early studies, such as Brier and Runtz (1990) who found an association between sexual abuse in childhood and maladaptive sexual behaviours in adulthood (others include Langevin, Wright, & Handy, 1989; Groth, Longo, & McFadin, 1982). Lindsay, Law, Quinn, Smart, and Smith (2001a) also found, in their comparison of IDD sexual offenders, with IDD offenders of a non- sexual nature, significant differences in reported experiences of childhood sexual abuse. With sexual offenders significantly more likely to have been sexually abused in childhood, while violent offenders were more likely to have been physically abused. More recent research, however, has concluded that such associations are far from straight forward, this is particularly evident from children's studies. Namely, not all children who display harmful sexual behaviours have been victims of sexual abuse (Bladon et al., 2005) and not all victims of sexual abuse go on to become abusers (Salter et al., 2003). As will become evident from the literature review, a number of factors have been considered in playing a role in determining these trends.

A large proportion of sexual offending research has looked at the developmental trajectories of early displays of inappropriate and/or harmful sexual behaviours and their link to later adult offending. Freeman- Longo (1983), and Able et al. (1985) found, in their samples of retrospective

accounts from adult sexual offenders, the onset of sexual deviance started in adolescence. Self-reported rates suggest that as many as 50% of the adult sexual offenders committed their first offences during adolescence (Groth, Longo & McFadin, 1982; Knight & Prentky, 1993; Abel & Rouleau, 1990). Consequently, it is now believed that between 30% - 60% of adult sexual offenders engaged in sexually inappropriate or abusive behaviours during adolescence (Burton, 2000).

Moreover, recent data from the Ministry of Justice (2013) found a 12.3% increase in juvenile offenders cautioned for sexual offences since the year before, and empirical studies such as Radford et al. (2011) found that two thirds (65.9%) of contact sexual abuse experienced by children aged 0-17 was perpetrated by another young person under 18 years of age.

All in all, the adult self-reported data, criminal justice figures and studies focusing on child experiences of sexual abuse, suggest that there is a proportion of children and adolescents who display harmful sexual behaviours.

Young people's sexual behaviour should be considered within their developmental context as this can help identify key differences between the motivations and meanings of such behaviours at varying stages (Hanson, Flood, & Holmes, 2016). Young people will have different motivators, forces, factors, attitudes and roles in society, in comparison to adults (Rich, 2009). In addition to which, children and young people have been found to be more likely than adults to have unrecognised mental health problems (Bradshaw, Keung & The Children's Society, 2016), especially those with additional ID diagnosis (O'Brien, 2002), and to be reliant on the wider family and community systems of care. They reside in a world of different values, beliefs and expectations than adults, who have more control and a more significant role to play in comparison (Calder, 2002). Consequently, pathways and reasons that lead to the display of harmful sexual behaviours have been suggested to differ between adults and adolescents (Beech, Craig, & Browne, 2009).

Some of the adolescents with harmful sexual behaviours have ID and to date research has suggested that there are more similarities than differences between adolescent offenders with ID and those without ID (Almond & Giles, 2008; Haaven et al., 1990; Timms & Goreczny, 2002; Lane, 1991; Lane & Lobanov-Rostovsky, 1997). They display the same range of sexually abusive behaviours, with similar arousal patterns (Timms & Goreczny, 2002), and both groups indicate

similar behavioural impairments, alongside social skills deficits (Swartz & Masters, 1983; Gable & Warren, 1993). Nevertheless, a large body of this research has been based on methodologically limited studies. By their own admission, and in much the same way as research with adults often show that issues with IDD diagnosis is present, inappropriate assessment tools are used and conclusions are based on small sample sizes.

Therefore, the study of adolescents with IDD who display harmful sexual behaviours is an emerging field in which research and knowledge is still accumulating. Although in the recent decades a movement towards greater understanding of the issue of harmful sex behaviour has been noted, a gap, specifically in terms of the characteristics and developmental trajectories of adolescents with IDD who display harmful sexual behaviours, remains.

Terminology

Early research and publications on the topic of adolescents who display harmful sexual behaviours (HSB) used a plethora of terms and labels to signify the behaviour. These included phrases such as ‘child perpetrators’, ‘children who molest’, ‘sexually aggressive children’ and ‘abuse-reactive children’ (Araji, 1997). The different terminology often led to confusion over the exact nature of the behaviour, and so in time, it was recognised that none of the above phrases were accurate enough and many failed to acknowledge the range of behaviours the young people might exhibit. In addition to which, debates emerged in relation to the ethics of labelling a child as an offender (Lovell, 2002) and the damaging consequences it produces, such as stigmatisation resulting in unhelpful service-wide practices (Boyd & Blomfield, 2006; Vizard, Hickey, French, & McCrory, 2007) but also making it more difficult to integrate the young person back into society. Notably at an individual level negative labelling has the potential of impeding positive efforts practiced by the person, who wishes to change their pathway following treatment.

Academics who focused specifically on the ID population argued that in addition to the above, applying ‘sexual abuse’ as a label has the potential to imply a level of intent in the perpetrator, when this might not necessarily be the case for those with ID (Fyson et al., 2003). They reasoned that labels should not cast judgment on the individual, because in some instances, albeit negative, actions

might arise from naïve knowledge and understanding, they might also illuminate underlying issues such as a lack of understanding of social connotations, social boundaries and consequences of actions.

Critically, through the application of correct and effective terminology, a positive purpose could perhaps be achieved instead, allowing early identification of the negative behaviours and creating opportunities for the person to gain access to appropriate health care services. This debate resulted in the creation of a number of new terms including i) young people who sexually harm, abuse or offend (Fyson et al., 2003), ii) young people who sexually abuse (Boyd & Blomfield, 2006; Erooga & Masson, 1999) and iii) young people who display harmful sexual behaviours (HSB) (Smith et al., 2013).

Given that young people who display HSB is the preferred term of a number of leading national agencies who focus on assessment and intervention work with children and adolescents across the UK, such as NSPCC, AIM and NOTA, that is the term that will be applied in the following thesis.

Normal vs harmful and dangerous behaviours

Distinguishing between healthy sexual development in children and adolescents and harmful or risky behaviours can be a complex undertaking. Children engage in a wide range of sexual behaviours, as part of a healthy development (Rich, 2009). Recent reviews on the topic have concluded, however, that all in all we know more about deviant behaviours of the children and adolescents than we do know about normative ones (Barbaree & Marshall, 2006).

It is therefore paramount, when working with children and adolescents who display HSB to consider their behaviours in the context of two predominant factors, the child's age and their developmental stage (Rich, 2009). These two factors carry implications within the justice system, they can have implications for different motivational underpinnings and developmental significances for individuals. In addition, certain sexualised behaviours are considered normal when demonstrated in pre- adolescent children, but will be of concern if they carry on into adolescence (Ryan, 2000) and vice versa where other behaviours are part of adolescent development but would be highly unusual in pre- adolescents.

In order to address some of the issues and to promote consistency around assessments of sexual behaviours in children and adolescents, resources such as flow diagrams, models and visual representations have been presented. Most specialists in the field recognise the behaviours as existing on a continuum ranging from normal and developmentally appropriate to abnormal and potentially violent behaviours (Hackett, 2011), see Figure 1.

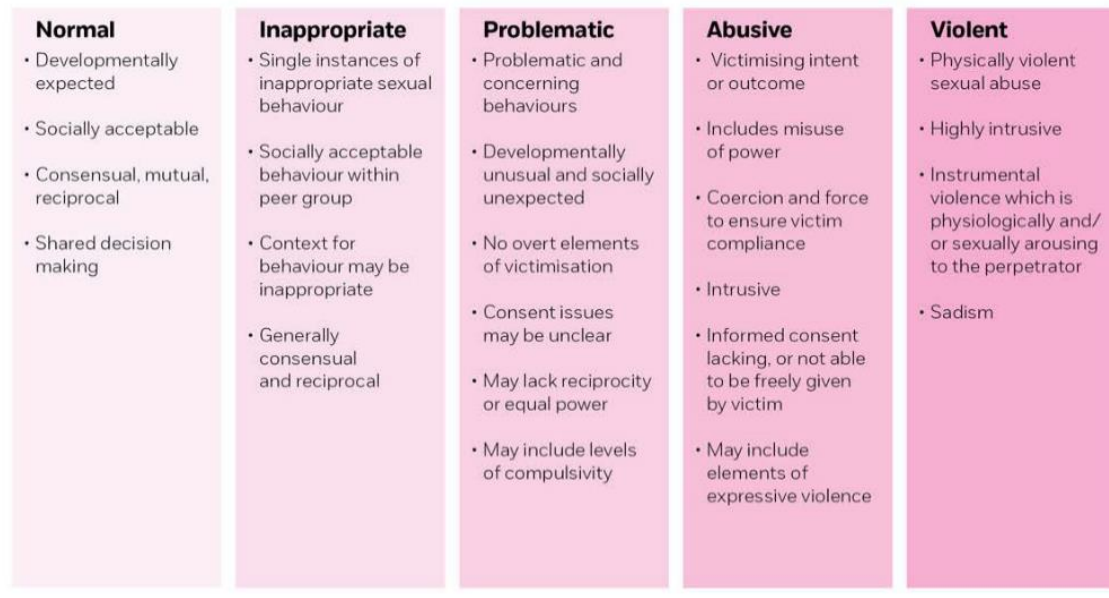


Figure 1. Hackett's continuum of sexual behaviours in children and young people

Within the UK, one of the more clinically accepted and recognised tools used to distinguish between healthy and concerning behaviours was developed by a sexual health charity, Brook. The Brook 'Traffic Light' tool, developed by the charity, aimed to help practitioners and families to identify, assess and respond appropriately to sexual behaviours in children and adolescents. It does so, by categorising sexual behaviours into one of three levels, as denoted by the colours of traffic lights. Each category can be used to help distinguish healthy sexual development from harmful behaviour based on the person's age. The three colour categories of the Brook Traffic Light are green, amber and red, each signifying an increase in severity of the behaviour, as following:

Green behaviours reflect safe and healthy sexual development. They are:

- displayed between children or young people of similar age or developmental ability
- reflective of natural curiosity, experimentation, consensual activities and positive choices

Amber behaviours have the potential to be outside of safe and healthy behaviour. They may be:

- of potential concern due to age, or developmental differences
- of potential concern due to activity type, frequency, duration or context in which they occur

Red behaviours are outside of safe and healthy behaviour. They may be:

- excessive, secretive, compulsive, coercive, degrading or threatening
- involving significant age, developmental, or power differences
- of concern due to the activity type, frequency, duration or the context in which they occur

With each of the colour categories, possible actions and additional information is also provided for the benefit of the professional. Given that green behaviours are considered healthy and normal, no further concrete actions are offered in these instances. For those instances where amber behaviours have been noted, the Brook team suggest further observations of the child, whereas in instances of red behaviours immediate action and interventions are recommended. Examples of appropriate responses include consulting national guidance and organisational policies, identifying risks and needs of the young person and potential or real risks they might present to others. As a resource the Brook Traffic Light instrument (Brook Traffic Light Tool, 2020) has already been applied and used across a variety of service provisions and multi-agency teams. Despite the high service needs and the demand for it, as a tool it has not been peer reviewed nor psychometrically validated. Furthermore, authors, at the time of writing, had not yet specified or assessed the tool's applicability for an ID population.

In summary, children and adolescents display a range of healthy behaviours at different developmental stages. It is when a child or young person behaves in ways considered to be outside this range that their behaviour may be considered and named as harmful, given that it might be harmful to themselves or others. At that stage further actions or observations might be required by the parent or service providers. It is important not to pathologise the person but to assess their behaviour in the context of their individual social, emotional and cognitive development.

Prevalence

Historically, prevalence rates of young people who display harmful sexual behaviours were based on adult self-reports, it is only in the more recent years that studies have attempted to gather first hand data within and across communities.

In 2015, the National Society for the Prevention of Cruelty to Children (NSPCC, Bentley et al., 2016) requested access to crime statistics under the freedom of information act (FOI). The intent was to review records of sexual offences against young people, specifically those under the age of 18, across England, Wales, Scotland, and Northern Ireland. The records revealed that the number of sexual offences against children, under the age of 18 within England had in fact increased sharply (by 39% between 2012/13 and 2013/14) although they had been stable over the preceding five-year period. Moreover, the data showed that in 4,209 cases the perpetrators were recorded as children and young people under 18 (Bentley et al., 2016). Unfortunately however, this data was not presented in the context of a broader records allowing for a percentage estimate. More recent FOI data, as requested by Barnardo's found that the number of sexual offences against under-18-year olds, by under-18-year olds, recorded by police, rose to 9,290 in 2016 (Ghani, 2016). The charity suggested the true figure to most likely to be higher as 16% of the police forces did not respond to the request. More recently still, an NSPCC review of its helpline themes found 773 calls made in 2017/18 by adults concerned about peer sexual abuse or children displaying harmful sexual behaviour (NSPCC, 2019). National data such as this helps contextualise the size of the problem, although it does not offer exact figures.

The accuracy of national data and those extracted from empirical studies are difficult to establish, for much the same reasons as the data in relation to adult incident rates and/or offences. Reported figures are affected by a variety of factors including police recording practices, and differences in definitions of sexual offences. In cases of crime statistics, it is important to bear in mind they refer to offenders over the age of criminal responsibility and only to crimes that have been recorded. Thereby, crime statistics represent a proportion of cases, and only specifically those that have been convicted of sexual harm or abuse. Furthermore, they also represent only the segment of

cases that have been committed by children over the age of criminal responsibility, which is 10 years old, in England and Wales. Crime statistics also do not represent the proportion of children and young people who might be displaying *problematic* sexual behaviour, who do not warrant action through the criminal justice system.

Indicators suggest between a quarter and a third of all sexual abuse in the United Kingdom involves children and adolescents under the age of 18 as the alleged abusers (Hackett, 2016; NSPCC, 2019). Some studies suggest higher rates between 30-50% (Halperin et al., 1996; Horne, Glasgow, Cox, & Calam, 1991; Vizard, Monck, & Misch, 1995). Variation in these data stems from differences in empirical methodologies and sample populations. In a well-regarded general population survey of UK-wide maltreatment histories of young people, Radford et al. (2011) interviewed over 6,000 young adults, teenagers, children and parents of younger children. Aside from finding that 1 in 5 children experienced severe maltreatment, two thirds (65.9%) of the young people, aged 0-17, reported experiencing contact sexual abuse perpetrated by someone aged under 18. Four out of five children aged 11-17 (82.7%), who experienced contact sexual abuse from a peer, also reported they did not tell anyone else about it. Thereby, suggesting data collected, in most cases will be affected by a variety of factors around the victim's decision but also ability to report the offence.

The prevalence of young people with IDD who display harmful sexual behaviours, is an even more complex matter. A number of misrepresentative interpretations, if not inaccuracies have been encountered in literature, offering misleading conclusions. One of the examples are review papers, based on adult samples (and adult self-report data) that have been referenced as reflecting younger population. An example of which has been O'Callaghan's (1998) reflection on practice issues as experienced in one specific specialist service. In the paper O'Callaghan reviews prevalence rates, but does so by reflecting on adult ID sex offender studies, and yet this paper has been known to be referenced as: "In general, learning disabilities have been overrepresented among adolescent sex offenders (O'Callaghan, 1998)" (pg. 251 Veneziano & Veneziano, 2002, also see Fyson, 2007), when this does not follow from the data.

Other examples, include erroneous references of older studies, such as work by Gross (1985) and Hayes (1991). They both have been cited in the more recent published literature as studies

looking at prevalence rates of children and/or young people with ID who display HSB, where in fact, neither are relevant. Gross (1985) reports on prevalence of an adult ID samples, as does Hayes (1991), who considers this in the context of service provisions for those with ID living in Australia.

The problem is similar in nature to the issues encountered in adult IDD offender populations, a severe shortage of good quality cross-sectional studies. Studies that not only apply, but disclose details of appropriate diagnostic tools for ID and ASD are rare. For these possible reasons, in the few available studies, often young people with IDD are said to be over-represented (Hunter & Goodwin, 1992; James & Neil, 1996; Dolan, Holloway, Bailey, Kroll, 1996; Hackett et al, 2013). Table 3 offers a broad review of studies published and cited for their prevalence data on adolescents with IDD who display HSB. Out of the 13 studies reviewed, only two specified the formative IQ assessment tool used on which the prevalence data were based (Vizard et al., 2007; Awad & Saunders, 1991).

Table 3

Published studies containing prevalence data on adolescents with intellectual and developmental disabilities who display harmful sexual behaviours

Study	Study location	Study design	Number of participants	Cognitive assessment	% of those with I.D.
Awad & Saunders, 1991	Family court clinic, Canada	Survey, in person	49 (100% sexual offences)	WISC-R	6% (N=3) fell into the mildly mentally retarded range. Full scale IQ of sexual offender sample was significantly lower (FSIQ $M=85$) than 'other delinquents' (FSIQ $M=95$) used as control group.
Kahn & Chambers, 1991	Mix of community and institution-based samples, USA	Retrospective case notes	221 (100% sexual offences)	Not disclosed	39% considered learning disabled.
Hunter & Goodwin, 1992	Residential treatment unit, USA	In person at site	39 (100% sexual offences)	Not specified apart from "recent psychological evaluation"	59.0% with a diagnosis of a learning disability and/or Attention Deficit Hyperactivity Disorder.
Richardson, Graham & Bhate, 1995	64% of participants were assessed in residential care facilities, and 36% were outpatients in	Retrospective file review	100 (100% sexual offences)	Not disclosed	44% held statemented under section V of the Education Act 1981, typically for a combination of behavioural and learning difficulties.

	the community, England				
James & Neil, 1996	A variety of statutory agencies, England	Epidemiological survey using a postal questionnaire sent to statutory agencies within a region	34 adolescents identified from the respondents across service providers (response rate was 65%)	Not disclosed	58.1% of sexually abusive youths reported to be “below average ability”.
Dolan, Holloway, Bailey, Kroll, 1996	Medium Secure, adolescent forensic mental health service, UK	Retrospective case notes	121 (94% index offence of sexual nature)	Not disclosed	56.2% (N=68) required special schooling, 45% had learning difficulties (N= 55) with 38% (N=46) classed as mildly impaired, 5.8% (N=7) moderately and 1.6% (N=2) severely impaired.
Manocha & Mezey, 1998	Specialist assessment and treatment facility, England	Case files	51 (100% sexual offences)	Not disclosed	19.6% formally diagnosed as learning disabled (N= 10) with 80% (N=8) qualifying as mild and 20% (N=2) as moderately disabled.
Farmer & Pollock, 1998	Residential and foster care, England	Fieldwork reviewing casefiles	250 (both sexually abused and abusing children)	Not disclosed	41% reported to have learning difficulties.
Vizard, Hickey French, McCrory, 2007	Fourth-tier NHS specialist service, England	Case files	280 (100% sexual offences)	WISC-III or DSM-IIIR or DSM-IV	37% of the sample were judged to be functioning below the ‘average’ level (IQ ≤84). Learning disability (IQ ≤ 70), present in 24% of the sample.

					In addition, 45% of the sample had received a statement of educational need, with combined learning and behavioural problems the most commonly cited reason. Over half of the sample (59%) had also required some form of educational assistance, such as classroom support, a school support unit, or removal to an EBD (Emotional and Behavioural Difficulties) school.
Boswell & Wedge, 2002	Voluntary children's home /specialist service provider, England	Interviews of ex-residents	10 (100% sexual offences)	Not disclosed	80% (N=8) had been "assessed as having mild, moderate or serious learning difficulties".
Taylor, 2003	Child protection strategy meetings and young justice records, England	Meeting minutes recorded during strategy meetings	227 (100% sexual offences)	Not disclosed	36% (N=82) reported to be, or were in the process of, receiving an educational statement for learning, emotional and behavioural difficulties.
Hackett, Masson & Phillips, 2005	Child and adolescent service providers, UK and Republic of Ireland	Survey	186 services	Not disclosed	Among the 111 YOT ¹ s, 47 teams (53%) estimated that up to 25% of the young people they had worked with had a mild-to-moderate learning disability, and a further 16 teams (18%) reported even higher proportions. Nine teams (8%) reported that they had worked with young people with a

¹ Youth Offending Teams

severe learning disability. Out of the 58 other services in England and Wales, 26 services (49%) estimated that up to 25% of the young people they had worked with had a mild-to-moderate learning disability, and a further 23 teams (40%) reported higher proportions of young people with such a disability. Thirteen teams (22%) reported that they had worked with young people with a severe learning disability.

Of the 10 Republic of Ireland services, four teams estimated that up to 25% of the young people they had worked with had a mild-to-moderate learning disability, and a further three teams reported higher proportions of young people with such a disability. One team reported that it had worked with young people with a severe learning disability.

Three out of the five services in Scotland surveyed estimated that up to a quarter of the young people they worked with who had sexually abused had a mild-to-moderate learning disability, with the other two teams reporting that between a quarter and a half of their work load had such a disability. One

					team said that it had worked with young people with a severe learning disability.
Hackett, Masson, Balfe & Phillips, 2013	Nine specialist service providers, England	Retrospective case record reviews	700 (100% sexual offences)	Not disclosed	38% (N=273) identified as learning disabled via case file reports.

There are numerous problems with these studies. Firstly, some originate in USA where ‘learning disabilities’ means only specific learning difficulties; second, some were from very specific services where only the most worrying young people (as viewed by the referrer) are referred, so are a very biased sample; thirdly, most studies did not measure the young people’s intellectual ability. The two studies, which stood out because of their attempts to assess for IDD, from the 13 reviewed were a Canadian CJS study by Awad and Saunders (1991) and an England based case file review study by Vizard and colleagues (2007).

Awad and Saunders (1991) focused on a sample of 49 young people who were attending family court in relation to their HSB. Out of this sample 6% of the young people met the criteria for “mild retardation” as diagnosed by WISC-R. This prevalence figure can only be considered as a reflection of a subgroup of young people who were caught, charged and had either been admitted or been found guilty in court. On the other hand, Vizard and colleagues (2007) completed a case file review of young people attending a very specialist (tier 4) HSB service. In this sample of 280 young people not all (only 19%) had convictions or a criminal record for their sexual acts. Most were referrals from social services with a fifth being from health professionals. Following either a psychometric assessment of intellectual functioning using the WISC-III, or a clinical assessment using the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R or DSM-IV), 24% of the sample were found to meet the criteria for learning disabilities, where the $IQ \leq 70$.

This discrepancy in figures might be present for a few reasons. Awad and Saunders (1991) focused, on a niche population, identified via the CJS process. Vizard and colleagues (2007) will have collected data on a wider sample of young people including those referred for displaying *problematic* sexualised behaviours. Moreover, Vizard et al. (2007) recruited their sample from a national specialist community service, which may have implications for the types of referrals received, that were possibly in some way more complex (e.g. with added IDD diagnosis) resulting in an over-representation of the sample. Vizard et al. (2007) also appears to have relied on the clinical assessments using DSM-III-R or DSM-IV, in certain cases, which has been criticised for its validity, in instances where used as a sole diagnostic instrument.

In addition to this, the studies are set within different countries (conducted 16 years apart) and, as will be discussed in chapter 4, within the UK, referral pathways have been set for young people away from the criminal justice.

However, the rest of the studies that have been consistently cited for their prevalence figures, give no information on how the cognitive assessments were completed or much details pertaining to their definition of a “learning difficulty”. The possibility of this leading to an over- representation is best exemplified by Vizard and colleagues (2007) who found that although only 24% of the sample ($n= 280$ cases) met the definition of ID, 45% of the full sample also received a statement of educational need, with a combined learning and behavioural problem, and an additional 59% had also required some form of educational assistance. This data illustrates how an over- reliance on educational reports and terminology might give rise to elevated prevalence rates. This might be one of the reasons for the high rates as found by Dolan et al. (1996, and frequently cited) who reported 56.2% of the sample requiring special schooling and 45% having learning difficulties (exact diagnostic process not disclosed).

Therefore, reasons for drastic imbalances in prevalence studies are very similar to those in adult research. More specifically, however, as a final point in relation to prevalence figures around adolescents and children who display HSB, it is important to note they do lack privacy associated with their living circumstance, and they hold lower levels of sophistication in hiding or disguising the activity, unlike (most) adults (Hackett et al., 2003). There is also an increased level of supervisions in their care and they hold a level of naivety about sexual activities. All of these factors may increase the likelihood of sexual behaviours being detected whereas in adults they might go undetected.

Methodological issues

Research attempting to identify and discern characteristics that are solely found in one fixed offender population is a complex methodological challenge, especially given that those children and young people who display HSB are considered to be a heterogeneous group. This is an issue particularly in the IDD cohort, where participant samples are generally very small and the nature of IDD is often poorly defined as children’s services tend to be inclusive. What is established in adults is that no single factor theory is able to explain the reason and source of sexual offending (Araji & Finkelhor, 1986) and

no one distinct characteristic has been identified as a leading factor in sexual deviance (Sermabeikian & Martinez, 1994). This has implications for the work with adolescents and children as well, given that they are more dependent on, and have regular contact with, wider systems (such as education) than adults.

Notably, recent studies have started to agree that adolescents of average intellectual functioning share more commonalities than differences with the ID offender sample (Almond & Giles, 2008; Fyson, 2007, 2009; Haaven et al., 1990; Lane, 1997; Regan, Spidel, Gretton, Catchpole, & Douglas, 2007; Timms & Goreczny, 2002; Lane, 1991; Lane & Lobanov-Rostovsky, 1997; Swartz & Masters, 1983; Haaven et al., 1990). The methods of data collection as well as the participant samples will have implications however.

Much of the research on sexuality relies on self-reports, which can be limited by issues such as recall error and reporting bias, resulting in inconsistencies (see Fortenberry & Aalsma, 2003). Different types of questionnaire designs have also been found to have an impact on what and how much adolescents choose to disclose. Supple, Aquilino, and Wright (1999) found that adolescents were more likely to reveal sensitive information about their behaviour to a computer, than during an interview, or even a pen and paper questionnaire. Furthermore, such designs have not yet been adapted for adolescents with IDD. Reviews considering the issue of data collection within HSB and ID, consider it to be riddled with invalid and unreliable measures (Blanchard, Cantor, & Robichaud, 2006).

One way around the issues above is to attempt data collection through parental interviews and reports, either via observations (by the parents/carers) or checklists and questionnaires. This is often encouraged by clinical instruments that will have both a young person and a parental version, exploring the same matter. However, often the parental version and data is meant to complement the young person's and not replace it, in cases where the young person is not able to take part. Drawing only on observe data or solely on parental reports limits the data collected.

Characteristics of adolescents who display HSB

Even more so than adults, adolescents and their behaviours need to be considered in the context of their social systems, such as the family environment and network. They are considered less as independent agents in the sense of established thinking patterns and actions, and more as subjective

beings whose social context and environment might mitigate the development of risky behaviours. Developmentally, adolescence is a period of considerable transformation, both physiologically and psychologically, and based on a child's previous experiences this might result in behaviours that end up being pathologised within specialist services, even though these issues might diminish or resolve without clinical interventions. In cases where there might be atypical development or psychopathology present, the young person's reliance and contact with the systems increases.

More recent synthesis and reviews within HSB research has found in the study of adolescents, more often than not, family systems are broken and children will have a long-term history of severe neglect and abuse (Ghani, 2016). A holistic clinical understanding of the impact of adverse experiences, added to complexities of cases where adolescents have additional vulnerabilities, such as IDD, are limited.

Studies into the characteristics specific to young people who display HSB have suggested that both ID and non-ID adolescents exhibited complex cognitive and behavioural deficits, with a propensity to engage in denial, display immature social skills, poor sexual skills, have a lack of assertiveness, engage in high self-criticism, obsessive deviant sexual fantasies, alongside poor empathy and poor impulse control (Swartz and Masters, 1983; Timms & Goreczny, 2002). The social deficits will often be evident through regular social and behavioural issues at school (Gilby et al., 1989; Day, 1994).

With an aim to establish a clear clinical profile of the male adolescents who display HSB, Day (1994) reviewed clinical literature paying particular attention to factors in relation to their characteristics. The data suggested, as a whole, that adolescents who display HSB were socially isolated, lonely, had a lack of age- appropriate sex education, displayed academic difficulties around motivation and compliance, lack of empathy for victims, lack of remorse and feelings of low self-esteem as well as gender inadequacies (Lakey, 1994). The family systems were also often broken, with a large number of studies finding that exposure to violence within the home was common (Awad & Saunders, 1989; Redlack, 2003; Richardson et al., 1995; Vizard et al., 1995; Almond & Giles, 2008; NSPCC, 2016).

The exact nature and differences, in early childhood abuse and neglect histories between the ID and non-ID cohorts, is still unclear. Some research suggests that adolescents with ID are more likely to come from homes with a history of severe family problems and disruption of attachment bonds, there is

usually separation from parents and placement away from home, with frequent experiences of sexual abuse, neglect, or physical abuse, (Veneziano & Veneziano, 2002; Lindsey, Neilson, Morrison, & Smith, 2001; Thompson & Brown, 1998) whereas Almond and Giles (2008) found non-ID adolescents to be more likely to witness domestic violence in their homes.

Retrospective studies with self-reports from adults have also been used as a means by which data on adolescents can be collected. In a study by Lindsay et al. (2001) it was found that when compared to non-sexual offenders, men with ID who had sexually offended appeared to have been more likely to report early sexual victimisation. Namely, 38% of the sexual offenders reported sexual abuse in their childhood, in comparison to 13% of the matched control group of non-sexual offenders with ID.

These implications, of adverse early childhood experiences and any differences that they might produce in behaviours, were explored in a clinical sample of ID and non-ID adolescents by Fortune and Lambie (2004). The authors utilised the Child Behaviour Checklist (CBCL) (Achenbach, 1991) that is designed to assess behavioural problems and social competence of children as reported by parents. In their sample of 24 adolescents with ID vs 131 non-ID adolescents the CBCL results indicated that those adolescents with ID who displayed HSB had extreme levels of psychological dysfunction alongside severe behavioural problems (including externalising and internalising problems). This mimicked the clinical profiles of children who were victims of sexual and physical abuse (Edgeworth & Carr, 2000). However, the low sample size of children with ID in the study limits the interpretations.

Given the diagnostic features of ID it is perhaps not surprising that early case reports note adolescents with ID often suffer from a range of additional social and psychological impairments, which might lead to issues such as low self-esteem, loneliness, a fear of intimacy and poor social skills (Becker & Abel, 1985).

Offence types

Some clear discrepancies have been found between adolescents with and without IDD, in relation to their offence types (Timms & Goreczny, 2002). They range in severity from non-contact acts, such as public masturbation, to acts involving physical violence or rape. More often than not, the index offence for which they have been referred to a specialist service, will not be an isolated incident. This might

mean, that a number of incidents might have occurred with the one victim, or a number of other problematic or offence behaviours occurred (with other victims) prior to detection and/or referral.

Generally, specialist services are more likely to report on contact offences amongst the adolescent population that is in contact with them (e.g. Fortune and Lambie, 2004; Vizard et al., 2007; Hackett et al., 2013b) due to the nature of referral patterns. This is especially more likely to be found in older studies when awareness was poorer. It is often found that a significant proportion of adolescents who display HSB will display more than just the one type of HSB (Vizard et al., 2007; Hackett et al., 2013b), and in some cases a review of the different service provider reports, such as schools or parental interviews, can reveal behaviours which start in early childhood as non-contact acts but with time they escalate to those behaviours of concern.

As a general cohort, adolescents presenting with HSB and ID are less likely to have a history of engaging in wider delinquent behaviours prior to their HSB index offence, than their non-ID counterparts (e.g. Almond et al., 2006; Dolan et al., 1996; Gilby et al., 1989; Richardson et al., 1995) and they are less likely to use alcohol at the time of the offence (Blanchard et al., 1999; Brown & Stein, 1997; Lindsay et al., 2002b; Coleman & Haaven, 1998; Day, 1994; Glaser, 1991). Spaccarelli, Bowden, Coatsworth, and Kim (1997) reported that up to 14% of the adolescent cohort in their study, where the index offence was of a non-sexual nature, nonetheless admitted to committing a sexual offence in their past.

Those with IDD who engage in HSB, have also been found to act on impulse (Tudiver & Griffin, 1992; Sternac & Sheridan, 1993; O'Callaghan, 1998; Timms & Goreczny, 2002; Hackett, 2004), with increased chances of them engaging in 'nuisance' type behaviours, such as public masturbation, indecent exposure, stalking and voyeurism (Gilby et al., 1989; Sternac & Sheridan, 1993; Fyson, 2007; Gilbey, Wolf & Goldberg, 1989; Almond & Giles 2008).

Adolescents with ID have also been found to engage in fewer grooming behaviours, more physical force and more verbal threats against victims (Fortune & Lambie, 2004), they have also been found to be less likely to victimise an individual repeatedly over a long period of time, in comparison to a non-ID abuser (Almond & Giles, 2008). Given this, past research has concluded that some of their victims and offence behaviours are associated with circumstances and opportunities rather than sexual preferences or deviances (Day, 1994), which is in line with the data collected from the IDD adult sample.

The suggested reasons for this have been based partly on the inherent difficulties and limitations individuals with IDD have, on account of their diagnosis, but also due to their limited social networks and lack of private space (O'Callaghan, 2001).

Age of onset/referral

In one of the largest population samples to date, which included 13,000 juvenile sex offenders in America, Finkelhor, Ormord, and Chaffin (2009) found a vast age range for onset, extending from 6 to 17-year olds, with 86% being 12 years and above. In a study of a UK adolescent population of 700 children and young people with HSB, Hackett, Phillips, Masson, and Balfe (2013) found the mean age at referral to be 14 years, and the modal age to be 15 years. This was comparable to Ryan et al.'s (1997) study of a North American population, where the modal age was 14 years. Hackett et al. (2013) also noted that the newer cases included in their study tended to have an increased proportion of younger children referred in comparison to older cases. This was proposed to be a reflection of an increase of awareness within professionals with regards to the existence and nature of HSB in early childhood.

Overall, the age of referral will vary, in accordance with the type of services where data collection is taking place. For instance, in a UK study with a sample of 280 children and adolescents, Vizard et al. (2007) found the average age of referral to be 9.5 years, with the mean age of 13.9 years at the time of assessment. Finkelhor and colleagues (2009) argued that their peak represented the age at which most of adolescents come to the attention of professionals for displaying HSB, not necessarily an age during which most adolescents might display HSB. Hackett et al. (2013) on the other hand suggest that the onset of puberty might play a role in the development of HSB, specifically as this stage of development might trigger conduct and interpersonal problems.

One factor that appears to have a relationship with the age of onset of HSB is the adolescent's own sexual victimisation (Thornton et al., 2008). Studies have consistently found that early sexual victimisation increases the probability of the young person displaying HSB earlier in life, generally before the age of 12 (Richardson, Kelly, Bhate, & Graham, 1997; Taylor, 2003; Murphy, DiLillo, Hayes, & Steere, 2001). Moffitt (1993) compared the characteristics of adolescents who displayed HSB with an 'early onset' (HSB displayed pre 12 years of age) vs 'late onset' (post 12 years of age). It was found that

the 'early onset' group had higher levels of perinatal complications, they also had a number of behavioural indicators of what the author called neuropsychological impairments, for instance impulsivity issues, poor early temperament and aggression, increased mental health problems and callous- unemotional personality traits thereby meeting some of the diagnostic requirements for conduct disorders. On the other hand, Moffitt (1993) found that the 'later onset' group had different behavioural and psychological profiles, with their antisocial behaviours being less influenced by early developmental factors.

Studies specifically considering the age of onset of HSB in adolescents with IDD have not, to the knowledge of the author, been published.

Family composition and own abuse histories

As was noted, adult men with IDD who display HSB will often report severe neglect and abuse in their childhood, experiences that have also often been recounted and recorded in cases of adolescents who display HSB (Barbaree & Langton, 2006). Families of adolescents with HSB are often characterised by domestic violence, physical abuse, neglect (physical and emotional) as well as abuse, in its various forms (Barbaree, Marshall, & McCormick, 1998; Alywin, Struder, Reddon & Clelland, 2003; Almond, Canter, & Gabrielle Salfati, 2006; Flood & Holmes, 2016).

In their file review of 700 adolescent cases in relation to HSB, Hackett et al. (2013) reported that two thirds of the children and young people, including those with ID, experienced at least one type of abuse or trauma during their early years. Examples included emotional abuse, severe neglect, sexual abuse, physical abuse, domestic violence, parental drug and alcohol use, parental rejection and family breakdown and conflict. Similarly, Vizard et al. (2007) in a sample of 280 adolescents in a special service for HSB, found high rates of victimisation, with 92% of the sample having experienced either some form of abuse or been exposed to neglect or domestic violence.

Specifically, in relation to adolescents with ID who display HSB, Stermac and Sheridan (1993) found the ID group to be four times more likely than non-ID group to have a history of sexual abuse, as victims. In the hope of understanding this better, the relationship between early childhood experiences and later behavioural outcomes, Lindsay et al. (2001b) compared the patterns of physical and sexual

abuse histories of adult non-sexual and sexual offenders. They reported that those who had offended sexually were more likely to have experienced sexual abuse, however the researchers themselves determined this to be an overly simplistic conclusion due to low sample sizes. What is clearer is that all individuals with IDD are at a higher risk of abuse than typically developing children and adolescents (Cooke & Sinason, 1998). Factors such as dependence on others for personal care, power imbalance between the person with ID and their carer, immaturity, lack of sexual knowledge, difficulties in communicating, and a lack of assertiveness are just some of the features that contribute to the vulnerability of children, and adolescents with ID (Sinason, 1993a,b).

Victims

Unlike non- ID adolescents, who have been reported as more likely to offend against females, adolescents with ID appear less particular in the gender choices of those whom they offend against (Balogh et al., 2001; Brown & Thompson, 1997b; Gilby, Wolf & Goldberg, 1989; Fortune & Lambie, 2004; Tudiver & Griffin, 1992). They are also more likely to offend against other vulnerable victims than non-IDD adolescents are (Nankervis, Hudson, Smith, & Phillips, 2000).

Gilby et al. (1989) reported that adolescents with ID had higher rates of offending against their peers, and were less likely to know their victims as they were opportunistic and impulsive in their actions (Gilby et al., 1989; Ryan & Lane, 1997; Timms & Goreczny, 2002). Lane (1991) also found the victim selection to be limited and guided by proximity to the offender and accompanied by few grooming behaviours. Reported clinical observations support this in often reporting victims to be more likely to be someone the adolescent knows, at school, recreational circles or family. When it is a stranger it is more likely to occur in a situation that is a part of the daily routine of the adolescent.

Almond and Giles (2008) compared 51 ID and 51 non-ID adolescents who display HSB. The study reviewed the case files from two specialist services for HSB within UK. The authors did not find any difference between the groups in their victim choices, victim demographic profiles i.e. age, gender and relationship to the offender. Rather, the two groups displayed similar levels of contact offences and they also used similar rates of coercion. But the ID group was more likely, than the non-ID group to commit exhibitionism, and the non-ID group more likely to use violence beyond, that deemed necessary

to control the victim. Furthermore, the episodes of abuse by the non-ID cohort was found to last longer than the ID cohort, which might be a reflection of the higher levels of scrutiny and observation experienced by young people with ID.

It is clear from the research above that there are both similarities and differences between the two groups. There is a lot of data to suggest that those adolescents with ID who display HSB are generally more opportunistic in their victim choice (Timms & Goreczny, 2002; Fortune & Lambie, 2004).

Reoffending and risk assessments

From the research presented above it is clear that adolescents who commit sexual offences are a heterogeneous group. There are diversities in their childhood experiences, they exhibit various emotional and behavioural problems, ranging from impulsivity, to conduct problems and they display a variety of HSB. For those reasons it is now recognised that currently no one risk assessment tool is able to cover all the possible risk factors (Hanson, & Thornton, 2000; Worling, 2002).

Recidivism rates of adolescents who display HSB are different to those of the adults convicted of sexual offending. It has been suggested that adolescents who had contact with specialist HSB services are less likely to reoffend sexually, but interestingly some data suggests they are still more likely to commit a later offence of a different nature (Caldwell, 2002; Miner, 2002; Nisbet, Wilson, & Smallbone, 2004). The exact rates for sexual recidivism in adolescents is unknown, leading to questions around the validity and reliability of existing risk assessment tools (Caldwell, 2002, 2007; Vitacco et al., 2009). Risk assessment instruments have often been criticised for over focusing on the risks of the individual and being deficit driven, with little understanding of the person's strengths, via an assessment of their protective factors.

Currently six main risk assessment tools, as developed for adolescents who display HSB, have been identified from published research. These are: the Juvenile Sex Offender Assessment Protocol-II (J-SOAP II by Prentky & Righthand, 2003), Estimate of Risk of Adolescent Sexual Offence Recidivism (ERASOR by Worling & Curwen, 2000), Juvenile Sexual Offence Recidivism Risk Assessment Tool-II (J-SORRAT-II by Epperson, Ralston, Fowers, & DeWitt, 2005), Juvenile Risk Assessment Scale (JRAS by Hiscox, Witt, & Haran, 2007), Assessment Intervention Moving- on (AIM by Henniker, Print, &

Morrison, 2002), and Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Children and Adolescents (MEGA by Miccio-Fonseca, 2009). A small number of additional tools have been found as referenced by healthcare practitioners but those instruments have predominantly a complimentary function which is to explore an additional variable such as person's psychopathic features and/ or risk of violent offending (for instance the Structured Assessment of Violent Risk in Youth, SAVRY, see Viljoen et al., 2008). Out of the six risk assessment tools only two, the AIM II and MEGA, have been adapted or developed specifically for the ID HSB adolescent population.

The J-SOAP-II tool is a 28-item risk assessment (Prentky & Righthand, 2003). The scale is empirically informed to assess the risk of sexual violence and general delinquency among individuals who have harmed sexually. It is specifically intended for male adolescents ages 12- 18 who have a history of sexually coercive behaviours. It is made up of four sub-scales, two of which include static factors: Preoccupation and Impulsive/Antisocial Behaviour, and two dynamic factors: Intervention and Community Stability/Adjustment. The J-SOAP-II is regularly applied in UK services but with a recognised limitation that there is a relative lack of consideration of protective (strength- based) factors within the young person.

The ERASOR tool was developed in order to assess the risk of sexual violence among adolescents between the ages of 12- 18 (Worling & Curwen, 2000). Sixteen of the items tap into dynamic risk factors, and 9 items focus on static factors. The assessment looks at five domains; sexual attitudes, interests and behaviour, historical sexual assaults, psychosocial functioning, family/ environmental functioning and interventions. The authors have argued ERASOR is able to differentiate between first time offenders and reoffenders. It is a popular instrument in the UK but much like the J-SOAP II there is little mention of protective factors.

The J-SORRAT-II is an actuarial risk assessment tool for male adolescents aged between 12 -18 years (Epperson et al., 2005). The tool looks at four domains: offending history and characteristics, abuse history, school history and interventions. It does not consider dynamic factors nor is it capable of predicting reoffending rates (Viljoen et al., 2008).

The JRAS tool was also developed specifically for adolescents who have committed sexual offences (Hiscox et al., 2007). It contains five dynamic and nine static factors. The main limitation for this tool is the lack of data available regarding its psychometric properties (Hempel et al., 2013).

The AIM assessment is the only instrument developed in the United Kingdom. Since its development it has been revised (AIM II) in order to adapt it for adolescents with ID (Griffin, Beech, Print, Bradshaw, & Quayle, 2008; Henniker et al., 2002). AIM II describes itself as an instrument that integrates static, acute dynamic and stable dynamic factors, and is underlined by risk and strengths aetiology (Griffin et al., 2008). It is based on four domains i) harmful behaviours, ii) development, iii) family and iv) environment. Griffin and Vettor (2012) evaluated the predictive validity of AIM II in estimating future sexual offences committed by adolescents with ID. The authors found that in comparison to the original AIM instrument, AIM II performed equally well, and sexual re-offending was predicted significantly better than subsequent non-sexual offending. One of the limitations to this assessment is the scarce empirical evidence base.

The last available risk assessment tool is the MEGA as developed in America (Miccio-Fonseca, 2009). MEGA was developed specifically for ID adolescents. It comprises of four scales: a risk scale, a protective scale, an estrangement scale, and historical correlative persistent (renamed from sexual deviancy scale). The tool has a constellation of static and dynamic factors. The intended cohort has an uncharacteristically wide age range as it is aimed children and adolescents (ages 4 to 19) and the author states it to be equally reliable for males and females. While the developers of the tool have reported strong evidence of good item consistency, no other independent studies have yet looked into the psychometric properties of the tool. Furthermore, ethical concerns have been raised by potential users of the tool, in that, currently, completed measures have to be sent to the authors for the results.

In short, a handful of HSB risk assessment tools are currently available and used for adolescent populations, with only two appropriate for an ID population, AIM-II and MEGA, of which the latter has received criticism within applied clinical settings due to its poor transparency in relation to scoring and empirical data. Furthermore, the applicability and validity of existing tools are frequently critiqued (Caldwell et al., 2008; Viljoen et al., 2009; Vitacco, Viljoen, & Petrila, 2009).

Interventions

Given that adolescents who display HSB are far from alike, and there are significant variations in problems experienced by the adolescents, this has implications for interventions and professional practitioners who work within the area (Rich, 2015). There are no single set markers or clearly defined risk factors and no definite developmental histories that set into motion a clear pathway into juvenile sexual offending (NSPCC HSB framework, 2016). The pathways are multi-determined and will often involve not only the individual but also the family, peers, schools and community variables (Letourneau et al., 2004), as well as the individual's temperament (Kagan & Sniderman, 2004), socioeconomics (Lipsey & Derson, 1998) and biology (O'Connor & Rutter, 1996). Young people are likely to minimise the impact of their actions or deny the HSB, they might also be resistant to change. The high attrition rates in intervention programmes have been attributed to factors such as these.

Treatment needs to be holistic in its approach, accounting not just for the reasons behind the HSB, but also facilitating change in the young person (Hackett, 2006) through a strength-based approach that will help equip the young people with skills, beliefs and values that help enhance their wellbeing and meet their needs in prosocial ways. Most current intervention models, in working with young people who display HSB, have been based on adult sexual offender modules (NSPCC, 2014). Such approaches might not only be confrontational in nature, but also do not consider the learning styles of younger people or their own victimisation histories (Worling, 2004). The only certainty is that any assessment and interventions undertaken need to acknowledge individual differences, account for the heterogeneity of the cohort and consider each young person as an individual, even when group work is undertaken. Currently there is little research on robust-evidence based interventions for adolescents with HSB (NICE, 2016).

To date, a number of published case studies have had a significant role in developing an overview of key components in intervention work, in light also of the limitations that might be present. Latham and Kinscheriff (2013) perhaps expressed it best, in stating that ultimately it is not only the behaviour that an intervention is looking to address, rather it is the individual engaging in the behaviour. Thereby highlighting why individual details and case differences matter, such as young person's intellectual capacity, age, relationship with others, their personal history and behavioural problems.

Within the UK, recently, a number of national service reviews, multi-disciplinary reports and national recommendations have also brought to the surface the need for practice guidelines and interventions for young people with IDD who display HSB (Ghani, 2016; Gilbert, 2008; Hackett, Holmes, & Branigan, 2017; Harrington et al., 2005; Mason & Prior, 2008; NG55, 2016). One of the most viable treatment approaches in the UK has been argued to be Cognitive Behavioural Therapy (CBT) although within the research evidence base, the IDD cohort has been found to be one of the least represented groups (NICE, 2016).

Nationally, there are no accredited treatment programmes available for adolescents with IDD who display HSB, and although a few adaptations to the mainstream programmes have been published there is limited data available regarding their effectiveness. These include *Change for Good* (NSPCC, 2014) and *Keep Safe* (Malovic et al., 2018). Even internationally, the evidence base is scarce. Some empirical evidence has been found for multi-systemic therapy in USA (Borduin et al., 2009; Letourneau et al., 2009), traditional cognitive-behavioural therapy, psychotherapeutic approaches and strengths-based approaches (NICE, 2016), the majority of which is developed for adolescents without IDD.

The one strength-based treatment approach, based in New Zealand, is specifically developed for adolescents with IDD, the *Good Way Model* (Ayland & West, 2006). Given the limited empirical research that has evaluated the outcomes of these three programmes, only a brief summary overviewing their treatment components will be provided here.

The *Good Way Model* (GWM; Ayland & West, 2006) was founded on the early work around relapse prevention drawing on risk-need-responsivity approaches (Andrews et al., 1990). In response to the unique cultural perspectives of the young people Ayland and colleagues worked with, as well as the abstract concepts presented as part of the early work, a need for change was evident. In time the community-based GWM emerged as a model that encompasses risk-need approaches, relapse prevention and trauma therapy within it. The narrative therapy is strength-based and composed of psychoeducational sections, creative tasks that increase participation and motivation, and it is also inclusive of the adolescent's wider network. It is developmental in approach, addresses the young person's trauma, abuse and neglect, and ensures responsibility for any abuse or harm of others remains with the young person. It also emphasises the need for an individual approach within the context of the

treatment. The model has been well-received amongst the young people themselves (Geary & Lambie, 2006) but there is no recidivism data published yet. It is also resource intensive, as it involves whole communities, excursions with the adolescents and the involvement of the wider networks that would be difficult to facilitate within the current UK political climate (2019).

Much closer to home, the treatment programme, *Change for Good* (McCrory, 2011) was developed by the NSPCC, based on the assessment and treatment work completed by their HSB specialist team called Turn the Page. The *Change for Good* programme is based on the CBT model, and draws on attachment theory, mentalisation theory, psychodynamic and systems theories (McCrory, 2011). The approach is strengths based and responds to the young person's HSB actions in the context of the social and emotional challenges they face. Although the programme was not devised specifically for adolescents with IDD, the internal evaluation by NSPCC deemed it a promising treatment model. The *Change for Good* programme is limited for a number of reasons, it has not been peer reviewed nor published yet, it was not specifically developed for adolescents with IDD, its delivery is one to one (which has cost implications) and it is only available to NSPCC services.

The more recent programme delivered within the UK, specifically for adolescents with IDD who display HSB, is the *Keep Safe* programme (Malovic et al., 2018). It is also based on the group CBT format, and it was developed with input from specialist practitioners from across both community and residential services within the UK. *Keep Safe* is strength based, and has incorporated components of the GWM (Ayland & West, 2006), as well as the adult based SOTSEC-ID programme (Murphy et al., 2007) and the Good Lives Model (Ward & Gannon, 2006). It seeks to also engage parents and carers of the young people in the treatment framework, as there is recognition of their need to understand the young person's behaviour, and their role in supporting the young people through the treatment process. This is a promising treatment model, as both the young people and the practitioners reported a positive response to the programme, however as of yet, published outcome data is lacking.

Summary

The aim of this chapter was to provide a literature review of the current empirical research on young people with intellectual and developmental disabilities who display harmful sexual behaviour. As

was illustrated, good quality research in the area is sparse and the understanding of the unique vulnerabilities and characteristics of this specific forensic population of young people, is limited. A number of services reviews of statutory agencies (for instance Shepherd, 2013) as well as national charities (for instance reports by Ghani, 2016; Hackett, Branigan, & Holmes, 2019) have highlighted a lack of consistency in the availability of specialist HSB services across the country.

HSB covers a wide range of behaviours, many of which do not come to the attention of authorities, and it is believed that this is especially true for cases involving young people with IDD. Although some attempts to estimate the prevalence of HSB in an IDD adolescent population have been made, the data suffers from methodological limitations. It is more appropriate to collect data using young people and children's self-reported experiences of sexual abuse by peers, and to do this through services which work with children with HSB. However, collection and publication of such data is scarce.

There is little published research on the most appropriate ways of assessing young people presenting with HSB, although there is general agreement that assessments need to take account of the whole circumstances of the child and their family. This includes consideration of any prior experience of abuse and other behavioural issues (Hackett, 2014). There are a number of risk assessment tools aiming to assess the likelihood of a child's HSB persisting or escalating, but none has been validated as a predictive measure of risk (Carson, 2017; Prentky et al, 2010).

In the following chapter the aim will be to systematically review assessment instruments available for young people (adolescents) who have IDD and present with HSB.

Chapter 3

Finding the right assessment measures for young people with IDD who display Harmful Sexual Behaviour.²

Chapter overview

In the previous chapter, a review of adolescents who display harmful sexual behaviours was presented. Literature relating to the prevalence, personal and offence characteristics was introduced. It was evident that the total population of young people who display harmful sexual behaviours is a heterogeneous group, not only in terms of age, gender, ethnicity and disability, but also in terms of the levels of personal and social vulnerabilities they experience, and in terms of the risks they present to others. Adolescents are different from adults in a number of significant ways. Their life experiences are more limited. They are often less socially, emotionally and physically mature. Their cognitive and emotional capacities and personality are not fully developed. Therefore, assessments of adolescents, especially those with IDD should be carried out in a way that is matched to the developmental or cognitive profile of the young person. But also, assessments need to have a wider focus than just for risk predictions. They need to offer a holistic picture of the young person and their strengths and challenges. In the current chapter literature relating to assessment tools used within UK for adolescents with IDD who display HSB, is systematically reviewed. As will become evident, no specific instruments have been developed, peer reviewed, nor validated yet.

The importance of assessments

Reliable and valid assessment instruments are essential in constructing good quality client formulations, and they are considered a helpful guide for the whole team in cases of holistic approaches. Moreover, they are essential in evaluating the effects of treatment.

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The information-gathering process for an individual can take several consultations, and different forms, depending on the client group and the type of service and intervention (Davey, 2018). Assessments might include psychological tests of stable characteristics, such as the Wechsler IQ measure, or it might include clinical tools that have been developed empirically. It is important to acknowledge at this point, such narrative and approaches towards assessment of latent psychological variables is embedded in the notion that an objective reality exists, which can be observed and measured through empirical study and deliberation. Meaning that through use of diagnostic classifications, made via what is perceived to be reliable and valid assessment tools, data can be collected and be meaningful in determining what is and what is not, present (Gergen, 2001). Validity, in this context is linked to psychometrics, where statistical results are interpreted to indicate a correspondence between test results and an external criterion. This may lead onto wider philosophical discussions around the epistemological notion of what is truth, which spans beyond the current thesis. A too strong focus on validity and reliability in terms of its psychometric conceptions has been criticised for leading to an emphasis on testing and verification of knowledge, rather than an exploration and creative generation of new knowledge (Kvale, 1995).

For these reasons it is more meaningful to carry out assessments with several purposes. Assessing for and determining a diagnosis could be helpful in indicating eligibility for a service, such as Weschler IQ assessments that are applied alongside Adaptive Behaviour questionnaires in finding out if an individual meets the criteria for ID diagnosis. But also, assessments are applied to form a pivotal part in planning, monitoring and evaluating interventions. Most often empirical research will utilise outcome measures, for the purpose of assessing changes in participants in response to a treatment or intervention. Other purposes of assessments are to identify a person's psychosocial strengths and difficulties, which will help towards effective clinical formulation and, in turn, this can inform psychological treatment (Langdon & Murphy, 2010). Finally, within forensic settings risk assessment tools have been developed, as discussed (Chapters 1 and 2), for the purpose of calculating the probability of individuals reoffending, usually on a categorical scale from low to high.

Generally speaking, assessment tools can utilise one of the following methodological approaches: interviews, observational systems, self-report measures and projective measures (Hunsley & Lee, 2006).

They will also fall into one of several categories, such as cognitive measures, outcome measures, and/ or risk assessments.

Considering adolescents, with IDD who display HSB, who may have significant difficulties with expressive and receptive speech, in addition to memory and understanding, assessments need to be adapted in order to overcome these challenges and meet the young person's needs. Ideally the assessment will be multifaceted covering a number of areas in relation to the person's bio-psycho-social functioning (Langdon & Murphy, 2010).

Specific to risk assessment, it is important to consider and examine factors that are thought to be related to sexual offending risk, including sociosexual knowledge and understanding, cognitive distortions, impulsivity, self-esteem and empathy (Langdon & Murphy, 2010). In the adult research a number of these have been found to differ between cohorts of sexual and non-sexual offenders without IDD (Fisher, Beech & Browne, 1999), however we have much less information about the adolescent populations however.

Assessment tools for adolescents with IDD who display HSB

Even though assessments are considered a critical component of treatment evaluation, there has been very little focus on the development of a comprehensive assessment approach for adults with IDD who display HSB (Keeling et al. 2007a, 2007b), but this is even truer for adolescents. Therefore, this study aimed to investigate what clinical assessment instruments, apart from two known risk assessment tools (AIM II developed by G-Map, 2012; and MEGA developed by Miccio-Fonseca & Rasmussen 2009), have been specifically developed or adapted for adolescents with intellectual disabilities who display harmful sexual behaviours. A systematic review was undertaken, given that it is considered a scientific, replicable and transparent approach in evaluating and summarizing research evidence (Denyer & Tranfield, 2009). In addition, it allows for any gaps in the published literature to be highlighted.

Previous research

The clinical challenge of assessing and treating individuals with intellectual disabilities who engage in sexually abusive or harmful sexual behaviour is well recognised in IDD services (Broxholme & Lindsay 2003; Keeling et al. 2007a,b; Craig et al. 2010; SOTSEC-ID, 2010; Heaton & Murphy 2013).

There is a growing societal concern about the issue of young people who display HSB. Data from the police forces in England and Wales report that 9,290 children and young people under 18 were recorded as perpetrators of sexual offences against other children and young people in 2016 (Bernardo's, 2017). Over a four-year period, there were 32,452 reports to police of alleged sexual offences by children on other children, which equates to an average of more than 22 cases every day.

Within specialist services for adolescents with HSB, it is thought that between 24% and 38% have intellectual disabilities (Vizard et al. 2007; Hackett et al. 2013), which greatly exceeds the estimated population prevalence of intellectual disabilities in the general population of around 2% (Emerson et al. 2012). The reasons for this discrepancy have been discussed in the earlier chapter but one of the most frequent explanations entail methodological limitations in assessment practices, as best exemplified by better designed studies such as the Awad and Saunders (1991), whose vigorous diagnostic testing resulted in only 6% of the sample meeting the criteria for mild ID.

As a cohort, adolescents with intellectual disabilities and HSB are considered over-represented in samples of referrals to sexual assessment and/or treatment services (Hawkes et al. 1997; O'Callaghan 1998; Almond et al. 2006), in terms of them being both victims and perpetrators (Hackett et al. 2005; Grimshaw 2008), yet at the same time, they seem to be under-represented in the practice literature and research. There are also concerns about the extent to which proper measures of intellectual disabilities have been employed in many studies, such that estimates of the prevalence of IDD may be exaggerated.

Recent interest in adolescents with IDD & HSB

It is clear that there is a paucity of research targeted at young offenders with intellectual disabilities and HSB. A number of UK national reports have resulted in reviews of youth offending services, and this in turn has highlighted the presence of inequalities and inconsistencies in assessment and intervention work with young offenders with IDD (Office of the Children's Commissioner, 2011).

The Bradley Report (Bradley 2009) drew attention to the issues experienced by offenders with intellectual disabilities. The report concluded that limited understanding of child and adolescent development and limited recognition, understanding and management of developmental and neurodevelopmental problems meant that often the young people and children are identified through their

criminality, rather than their needs and vulnerability (Children's Commissioner Report 2011), aspects which should have been recognised beforehand. Specific shortcomings, such as a lack of evidence-based assessments and treatments, have been identified within service providers and in research around younger forensic groups that include children and adolescents (Youth Justice Board 2008, 2014). In response to this, the National Safeguarding Report (Ofsted, 2008) called for improved provisions for such young people. The report specifically noted that the needs of children and young people with intellectual disabilities are neither well identified nor provided for.

Moreover, in terms of sexual offending, the Multi-agency Criminal Justice Joint Inspection Report (2013) noted that despite the fact that children and young people with intellectual disabilities who commit such offences form a small minority of the overall cohort of those who offend, the impact of their actions could be extremely destructive as they often involved other children and young people. The report concludes with a number of recommendations, such as the call for all agencies to actively contribute to assessments that are intended to inform decision making as well as planning for interventions, in order to minimize the risk of recidivism (CJJI 2013).

Method

Search strategy

An electronic search for adapted measures for adolescents with intellectual disabilities who display harmful sexual behaviours was conducted in December 2014, up to the end of December 2013. Searches included both databases and platforms. The platforms included were EBSCOHost, PubMed, Web of Science and ISI Proceeding. The databases hosted on these platforms included: SCOPUS, Cochrane and IBSS. A range of search terms for intellectual disabilities and sexual offending was generated by consulting the literature to identify synonyms (see Appendix A for a list of the search terms). To maximize the number of results, an array of terms representing intellectual disabilities were applied. Search terms were combined using Boolean operators (AND, OR) and truncation was indicated by an asterisk (*) to detect words with various endings (for instance, offen* would capture offence, offences, offending, offender). Articles which had the terms in their abstract or title passed the

first screening step; if this was at all ambiguous at the time, the inclusion and exclusion criteria were applied to the abstract.

Given the possibility of publication bias, where studies are not published for various reasons including small samples or poor methodology, the authors were keen to consult with experts from the field. Thus, prior to commencing data collection a UK-based advisory group was contacted for consultation in which discussions were held in relation to existing instruments in use across specialist providers. The Learning Disability Working Group (LDWG) was set up in 2008 in response to and in recognition of the lack of adapted resources presently available in the UK for children and adolescents with ID who display HSB. The group met 2- 3 times a year and was made up of health care professionals and academics who worked within the fields of service provision, for both ID and non-ID children and adolescents, at community and residential, hospital and national levels. The focus of the group was on reviewing, adapting and researching tools for assessment and outcome evaluations for adolescents with ID who display HSB.

Selection criteria

The selection process used in this review was to consider all abstract and full text, journal articles (in English) that have adapted a measure, instrument or assessment specifically for the purposes of use within an ID adolescent population, where the young person with ID displays HSB. Published clinical trials, case reports, editorials, guidelines and protocols were considered. Both grey literature and unpublished work was excluded from the review, as were books and book chapters as well as non-English language and thesis publications.

Participants

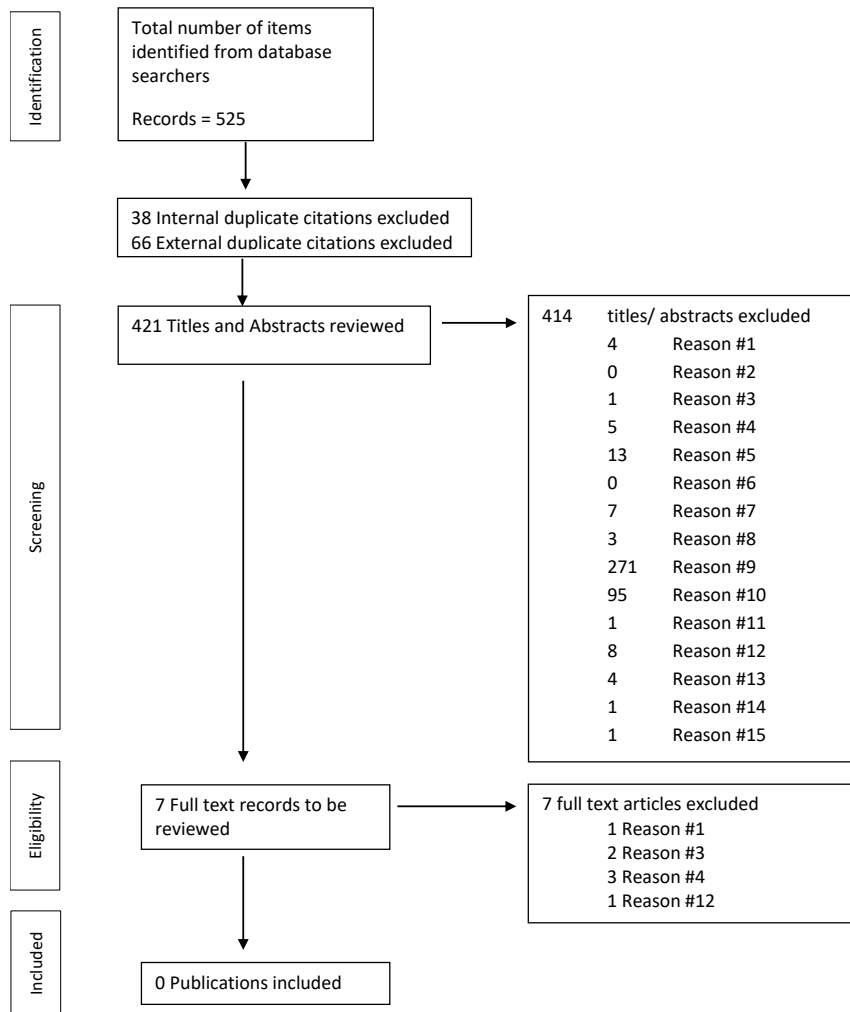
The review focused upon adolescents with ID who display HSB. Adolescents with ID were defined as young people, aged between 12 and 17 years of age, with an IQ <70 and problems in adaptive behaviours, meeting the classification of ID (DSM-V; APA, 2013). However, for pragmatic reasons this review included studies where only the average IQ was reported, provided this was <70, since most studies did not report adaptive behaviours.

Results

The search found no publications that met the selection criteria. The most frequently counted reason (see Appendix B *for a key to the reasons listed*), reason number 9, for non- inclusion was that the publication fell into a category which did not include ‘adolescents, nor adolescents with ID, it was not an HSB specific cohort, and it did not present an adapted measure’. The two next common reasons (numbers 10 and 5 respectively) were that it was not a publication that considered ‘adolescents with ID, HSB, or adaption of measures’ and ‘it was a non- ID and HSB specific cohort’ (see Flowchart 1). The Learning Disability Working Group (LDWG) was also able to provide valuable input and feedback on the research on the topic, within the UK and it was confirmed that they also did not know of any adapted tools for this population, though some were beginning to be developed (see below for further details).

Flowchart 1

Records found through database and platform searches



Where seven of the articles met the potential eligibility criteria, all were read in full but excluded as well, on the basis of four reasons. The most frequent being reason 12, which was that the article did not include an HSB sample nor did it discuss adaptation of instruments, with the next, most frequent reason 4, being that the article did not discuss the adaptation of an instrument.

Sensitivity analysis

Given the results of the systematic review, a sensitivity analysis was undertaken, by expanding the potential pool of the literature by dropping the word 'adapted' from the search strategy. All the other search terms and equating synonyms remained the same, and a new search was conducted on the same databases and platforms over the same period. The sensitivity analysis again yielded no additional results.

Overall findings

No studies were found through the systematic review of published journals despite the two search strategies, one of which was less limiting and had a wider search scope. However, the author is aware of selective grey literature as produced by the Learning disability Working Group (LDWG). This collaborative group, engaged in research work within the UK, has supported the adaptation, for adolescents, of three instruments previously used for adults with intellectual disabilities, through two doctoral research projects. One instrument is an adapted measure of sexual knowledge, The Assessment of Sexual Knowledge (ASK, by Galea et al. 2004), the second is an adapted instrument measuring the level of cognitive distortions present in young people with IDD and HSB, the adapted Questionnaire on Attitudes Consistent with Sexual Offending (QACSO, by Lindsay et al., 2007), and the third is work on a victim empathy measure, adapted from the Victim Empathy Scale (by Becket & Fisher, 1994). All three of the instruments are still in the early stages of psychometric data collection with adolescents with intellectual disabilities across sites in the UK.

Implications

The lack of published studies is perhaps not a great surprise. Rather, the results of the systematic review support the less stringent findings from the National Safeguarding Report (Ofsted 2008); Criminal Joint Inspection Reports (2013), the Multi-Agency Youth Justice Report (2013), as well as the Research into Practice Report (Hackett et al. 2013).

The large gap in clinical assessment instruments available for adolescents with intellectual disabilities who display HSB is evident and in addressing this gap in knowledge, arguably research, needs to turn to the evidence base already established in the mainstream offender work. Historically, conventional sex offender interventions and assessments have been mediated by the ‘What Works’ approach (Day & Howells, 2002; Martinson, 1974; McGuire, 1995). In practice, this has meant that two offender rehabilitation models, the Risk – Need – Responsivity (RNR) model (Andrews et al., 1990) and the Good Lives Model (GLM) (Willis et al., 2013), have been considered at the forefront of clinical intervention work. Arguably, the same methods might be appropriate for use with adolescent intellectual disability offenders. Both RNR and GLM have become instrumental in guiding service treatment models,

for adult and adolescent services, but also, they have been influential in assessment planning and development (Ward et al., 2007).

Risk – Need – Responsivity

The Risk – Need - Responsivity model (Andrews et al., 1990) postulates that the principles of risk, need and responsivity (RNR) need to be adhered to in order to reduce recidivism in offenders (Andrews & Bonta, 2010). The risk principle maintains that the intensity of treatment should match the level of risk (for re-offence) of the offender, the needs principle maintains that for interventions to be effective in reducing reoffending behaviour, they must specifically target the problem areas or needs shown to be empirically associated with criminal behaviour, and the responsivity principle highlights the importance of matching treatment modality with offender characteristics (Andrews & Bonta, 2010).

The Risk – Need – Responsivity-based assessment approaches have focused on devising instruments which measure three factors, those addressing the risk, needs and responsivity principles (Kraemer et al. 1995; CSOM 2007; Keeling et al. 2007a,b). The RNR approach has been widespread in the study of adult sexual offenders but the development and adaptations of specialized assessment tools for any adolescents who display HSB have been limited. In many studies, assessments of the factors as above have met the specific needs of the young population by using child-specific measures, but only a very limited number of studies have developed standardised measures (Frey 2010; Hunter 2011). Furthermore, to date, all such developments have focused on a non-intellectual disability offender population.

Good Lives Model

The GLM on the other hand is embedded in positive psychology, is strengths-based and maintains that whilst risk-based models are needed, they are not enough in addressing the needs of sexual offenders (Willis et al., 2013). Rather, it is argued, a treatment model needs to foster the development of both internal and external resources for the individual, in addition to promoting goals that reflect personal identity (Ward & Gannon, 2006). The theory asserts that, when working with sex offenders, clinicians need to focus the intervention towards helping individuals attain fixed goods of value and importance (such as good health, social support, etc.), in an adaptive and appropriate way.

With the emergence of this new model, the focus of assessments has shifted from being risk driven to including more strength-based tools (Worling 2013). GLM adherents argue that the extent to which risk-based assessment tools have been used to date for informing both researchers and clinicians is likely to have led both parties to make inaccurate judgments.

The Good Lives Model also recognizes the differences between adults and adolescents in terms of assessment models. It calls for a departure from a purely adult-based frameworks and stipulates that adolescents require a different model (Miner 2002; Rasmussen 2004). Adolescents have a different role within families and their wider community (Rich 2003), and they experience great developmental changes (Calder et al. 2001; Rich 2003) and generally have less established sexual preferences, attitudes and interests (Hanson & Morton-Bourgon 2005). It is recognized that the assessment focus needs to differ from that with adults, according to the needs of the adolescents, and that it will need to be based on the difficulties presented.

Discussion

As is evident from the literature reviewed, adolescents with intellectual disabilities who display HSB, much like their non-intellectual disability peers, are a heterogeneous group. However, in comparison with their non-intellectual disability counterparts, adolescents with intellectual disabilities appear to be more opportunistic, and less complex in their offending behaviours (Almond & Giles 2008). They are more likely to have troubled childhood experiences which might include abuse and neglect (Kelly 1992; Department of Health, Social Services and Public Safety 1999). However, apart from some of these outward (environmental) characteristics, clear systematic and offender-specific, as well as reliable and valid, empirical data are absent. A small number of studies have attempted to compare and contrast the intellectual disability and non-intellectual disability adolescents who display HSB, and in general, the only consistencies reported across the studies are their various methodological limitations (Van Wijk et al. 2006). Such limited studies can only produce general commentary and limited inferences on the specific vulnerabilities and any protective factors of the young people with intellectual disabilities. What therefore is required, and is highlighted by the present results, is the need for the development or adaptation of validated instruments and clinical assessment tools for adolescents with ID and HSB.

In addition to the issues relating to appropriate instruments, another significant methodological limitation noted throughout the research papers, as is evident in the exclusion criteria of the systematic review, is the inconsistency in the definition of the term learning or intellectual disabilities, an issue that also arises frequently in research relating to adults (Lambrick & Glaser 2004).

Given that much less is known about the validity of risk-based frameworks in the population of intellectual disability adolescent offenders, mindful progress needs to be made in terms of future directions. In the non- intellectual disability populations, a shift away from a risk-based paradigm, has been made towards a strengths-based approach instead (Ward et al., 2012). It has been justified as a positive ideology with an aim to provide offenders with motivators that focus away from aberrant behaviours (Ward & Stewart, 2003). Therefore, conceivably the development of new instruments for adolescents should follow a similar direction, with a focus on the development of strengths-based assessment tools. It is only through a shared focus that appropriate programme evaluations could take place.

This systematic review has some limitations. It followed a protocol, but it did not include book chapters, unpublished papers, and doctoral theses. However, through access to the LDWG, who are active in a number of network collaborations and projects related to the present topic, across the UK, it was possible to confirm that no other published adaptations were known to exist.

The thesis aims to direct the spotlight onto an area of work that is significantly under-researched. It is hoped that this paper will stimulate new research to fill the vacuum by kick-starting interest and spurring new ventures in adapting or developing tools which will offer some invaluable information about this vulnerable group of adolescents and, ultimately, assist in assessing treatment effectiveness.

Summary

This review chapter has systematically sought out empirical studies that have developed and/or adapted assessment instruments specifically for use with adolescents with IDD who display HSB. The findings highlighted the imperative need for such tools to be developed. There is a growing interest in this population, there is also a clinical understanding that the possible motivations for such behaviours in young people with IDD, may be different to their non-IDD counterparts. Young people with IDD are

more likely to have maladaptive experiences in their childhoods, also their social skills and social understanding of appropriate behaviours might be limited. Therefore, there is a need to assess cases where young people with IDD present with HSB, appropriately and consistently across service providers. A holistic assessment and approach towards understanding a person and their behaviours can only be achieved where the individual in question has a voice, a choice and is involved themselves as much as possible. Only by understanding them as completely as possible, can links start to be drawn between their vulnerabilities and their behaviours.

In Chapter 4 two studies are presented, reviewing current practices across and within specialist services which accept referrals for young people with IDD presenting with HSB.

Chapter 4

Current specialist service provisions in the UK and the characteristics of adolescents with IDD who display HSB.

Chapter overview

The theoretical chapters highlighted the current body of research on adult men with IDD who sexually offend. National practices in relation to these adult offenders include relatively well-defined assessment and treatment processes based on the principles of risk- need- responsivity. Overall, specifically in the recent years the existing systems have tried to adjust to the specific needs of men with IDD. By contrast, the literature also illustrated the lack of empirical and subsequent theoretical foundations in relation to adolescents, specifically those with IDD who display HSB.

To date the main focus of young people's research appears to have been in relation to offence types, onset and victims, with some early developments around risk assessment, and subsequent management. Less is known about national practices across specialist providers and whether there might be differences in both the lived experiences and profiles of young people with IDD (in comparison to those without IDD). The following chapter provides an overview of the current state of knowledge about the national consensus regarding principles of work and preferred approaches within the United Kingdom. Two studies will be presented: study one, a survey of assessment provisions for adolescents with IDD within specialist services and study two, a retrospective case series study focusing on a sample of cases extracted from a community-based specialist HSB service working with young people.

Specialist service provisions for adolescents

Young people who display harmful sexual behaviours were first considered as a matter of national concern in the United Kingdom, in the early 1990s (see NCH, 1992; Hackett, Masson, & Phillips, 2005a; Masson & Hackett, 2003; Shepherd, 2013; Smith et al., 2014). Today there is a recognition that, nationally, the high profile accorded to child sexual exploitation by central government has been beneficial, but has not yet been extended to HSB (Kaur & Christie, 2018). Policy and practice

around HSB cases have been found to vary, with little information available about the effectiveness of structures and services. Although some evidence of appropriate multiagency area procedures is present across different local councils, and authorities, procedural reviews have found considerable variation in document length and substance, indicating variations in referral practices across jurisdictions are also present (Smith et al., 2014). A recent review into the local commissioning of services addressing HSB found that due to the current economic climate, local commissioners' budgets were diminishing, as was the independently generated income of voluntary and community sector (VCS) service providers (Kaur & Christie, 2018). The use of short-term contracts, an average of three years, also limits VCS scope, quality and partnership/investment opportunities.

Young people within the Criminal Justice System

In the early 1990s, the policy guidelines within the UK devised a system of diversion of young people away from formal Criminal Justice Systems (CJS). It was considered a more positive approach benefitting young people, as evidence had suggested contact with CJS had a negative impact on outcomes (Erooga & Masson, 2006a). Alas such practices were short-lived (Muncie & Goldson, 2006) as, by end of the decade, due to changes of government and an introduction of the "tough on crime" stance, national practices shifted from adopting a preventative emphasis, back to more formal and punitive responses towards criminal behaviours (Erooga & Masson, 2006a; Fawcett et al., 2004; Salvador-Carulla et al., 2011). Although at the time both Scotland and Northern Ireland were part of the more penal focused format, in the more recent years their national strategies shifted back towards advocacy and support services (Smith et al., 2014).

Today, numerous UK national child protection guidelines specify the need for a unified response. Government recommendations state that young people who display HSB should be subject to multiagency consideration, established via a strategy meeting, case conference or equivalent (Ghani, 2016; HM Government, 2010; Northern Ireland Department of Health Social Services and Public Safety, 2003; Scottish Government, 2010; Welsh Assembly Government, 2006), yet variations are present and not made easy by the presence of differences in child protection and criminal justice policies across the jurisdictions of England, Northern Ireland, Scotland and Wales.

The trajectory any one case might take varies and where HSB is detected the case might be either processed under a criminal offence or via the child protection pathway, and in some instances both.

Young people who display HSB

On a national level, since the establishment of multiagency public protection arrangements, further to the Criminal Justice and Courts Services Act 2000, the majority of young people charged with sexual offending (under the Sexual Offences Act 2003) are formally risk managed and monitored through adult orientated public protection systems (Sutherland, 2008). In the late 1990s the multidisciplinary Youth Offending Teams (YOTs) were established with responsibility for young people who had offended, including offences of a sexual nature (Home Office, 1999). Following this, the Youth Justice Board (YJB) for England and Wales was also set up to support YOTs, with an overall aim to unify national approaches and address young peoples' needs and tackle offending behaviours (Masson, 2006). Unfortunately, succeeding reviews found little unity in the responses as there continued to be a separate child welfare and criminal justice system resulting in inconsistent responses to young people who display HSB (Masson, 2006), an issue that still remains today (Smith et al., 2014).

More recently, a review of referral pathways within England, found that Child Services (in 6 out of 11 local councils reviewed) and schools (in 2 out of 11) were the primary referral sources to specialist service (Smith et al., 2014). But again, inconsistencies in these practices were highlighted via the appraisal process as set through the formulation of the NICE guidelines (NG55, 2016). In the NICE national review (2016) of service provisions, it was found that a number of young people who were charged with criminal offences in relation to HSB had in fact been, prior to their index offence, referred to children's services due to harmful sexual behaviours. But at the time the behaviour was not recognised, and in some cases even dismissed (NICE, 2016). Such findings have been corroborated by empirical research which also confirmed inconsistencies towards understanding and assessing the harmful behaviours leaving the young people and their families confused, and also potentially subjected to unjust treatment (Hackett et al., 2005a; Shepherd, 2013). More recently, Kaur and Christie (2018) have suggested this issue might, in part, result from wider specialist providers not considering health agencies and education providers as information partners.

Young people with IDD who display HSB

A range of additional complexities arise when HSB cases involve young people with IDD. Currently within England the service pathways for young people with IDD lead to one of two outcomes, either the young person becomes detained by the Ministry of Justice (in cases of criminal charges) or the case is processed under the Mental Health Act/ Children's Act. This in turn will have implications for the types of service provisions offered, as illustrated best by Diagram 1 (found in *Appendix C*) developed by Melvin (2016).

The pathway diagram was developed resulting from a review of a number of national reports, documenting differences in young people's journeys across statutory and non- statutory services within the UK (Melvin, 2016). As it is illustrated, such journeys can take a variety of different paths, although the first step of the journey will most likely always involve Local Safeguarding Children's Boards (LSCB), initiated via the Children's Social Services (CSS) who review the index (HSB) event. Notably, how the LSCB manage cases and supports professionals to safeguard children at the earliest stage following concerns being raised regarding harmful behaviour, varies with each council, who have developed their own practice guidance.

At an early stage in the process a case might be diverted from the CJS due to the complex needs of the young person, in which instance the young person might instead become detained under the MHA (2007) or Children's Act (2004). Consequently, they will be subject to risk and specialist assessments, and the subsequent service provisions include: Secure Children's Homes, Medium Secure Units (accessed via National Commissioning Groups), Inpatient Units or Community Services (Melvin, 2016). On the other hand, where a case is deemed a criminal offence it will be processed by the YJB and subsequently the young person may be given either a custodial or a non- custodial sentence. Where custodial sentences are issued the young person will be detained by the MoJ and under the responsibility of YJBs. In such cases the service provisions include Youth Offenders Institutions, Secure Training Centres, and Secure Children's Homes. On the other hand, if the young person is issued a non- custodial sentence, they will receive either a referral order, a rehabilitation order, a caution or they will be diverted to community-based service providers (Melvin, 2016).

In 2016, with an update in 2019, NSPCC developed and published an operational framework that sought to address the patchy and uncoordinated approaches to service provisions across the country. The framework aimed to help local areas develop and improve multi-agency responses to children displaying HSB, and it provided a coordinated, systematic and evidence-based approach to recognising and responding to the risks and needs of this vulnerable group (NSPCC, 2019). However, it is yet to be accepted nationally.

As is apparent, despite efforts made to provide structures, such as tiering, coherence, fairness and availability of response in dealing with HSB cases, at large, there is an absence of evidence of this in the cases of young people with IDD (Smith et al., 2014). The absence of a national strategy within England specifically, is one reason for variations across services. Worryingly not only have recent reviews of commissioning agencies reported that the volume of HSB is on the increase, with services on the decrease, there is also no consensus on appropriate outcomes measurement (Carson, 2017; Kaur & Christie, 2018; Mcneish & Scott, 2018). Specifically measuring and assessing personal growth and change in individuals might include factors such as emotional wellbeing, improvement in relationship with family and friends and access to and benefit from positive alternative activities.

A sizable proportion of young people displaying HSB have a history of child maltreatment, which is more frequently reported for young people with ID than without (van der Put et al., 2014). The detrimental effects of such adverse childhood experiences can be captured and assessed on a number of neurobiological, psychological, and social processes. Adverse childhood experiences have specific but also cumulative effects leading to an assortment of negative outcomes including criminal and violent behaviours (e.g., Brown, 2018; Ballard et al., 2015; Duke, Pettingell, McMorris, & Borowsky, 2010; Felitti et al., 1998; Finkelhor, Shattuck, Turner, & Hamby, 2015; Teicher & Samson, 2016). In addition to such externalising behaviours, adverse childhood experiences have also been found to lead to internalising symptoms, i.e. mental health problems. Specifically, in a study investigating the mental health experiences of childhood sexual abuse in young people who displayed HSB themselves, authors found high rates of depression and trauma-related difficulties (Morais et al., 2018). Although not many young people who are victims of sexual abuse will go on to abuse themselves, the study does illustrate

that in cases where this is part of the young person's experience, it has implications for the treatments offered (Morais et al., 2018).

Overall it is recognised that those young people that perpetrate HSBs generally have other major difficulties in their lives including childhood experience of physical or sexual abuse or neglect, witnessing domestic violence, a lack of positive male role models, or having parents with mental health or substance abuse issues (Salter et al, 2003; Skuse et al, 1998; Glasser et al, 2001; Ogloff et al, 2012). They are likely to have low self-esteem, poor social skills and difficulties with anger, depression and peer relationships (Chaffin et al, 2002). How frequently such issues exist for young people with IDD is less well explored especially in the context of externalising behaviours such as HSB.

Mental health of young people with IDD

National data reviewing the rates of psychiatric disorders in children and adolescents', have reported diagnostic rates of mental health difficulties to be 39% higher among young people with ID than without (Emerson, 2003). Diagnosable psychiatric disorders include conditions such as conduct disorders, anxiety disorders, attention deficit hyperactivity disorder/hyperkinesis and pervasive developmental disorders (Emerson, 2003). Young people with ID are also reported to be 33 times more likely than those without ID to be on the autistic spectrum (Emerson, 2003). Often an ASD diagnosis in school aged children will be recognised as a special educational need (13.9%) and very few children without special educational needs have an ASD diagnosis (0.1%) (NHS-E, 2017). This means that children with ASD make up a sizable minority of the special educational needs group as a whole (one in seven).

Individuals with ASD have consistently been reported as having significantly increased rates of mental health problems and higher levels of disruptive behaviour, even in comparisons to individuals with ID (Bradley, Summers, Wood & Bryson, 2004; Brereton et al., 2006; Chadwick et al., 2000; Gilliot & Standen, 2007). The most frequently reported mental health issues are those related to anxiety and depression (Abramson et al., 1992; Barnhill, 2007; Bradley et al., 2004; Ghaziuddin, Weidmer-Mikhail & Ghaziuddin, 1998; Gilliot & Standen, 2007; Howlin, 2004, 2005; Lainhart & Folstein, 1994; Ozonoff, Garcia, Clark & Lainhart, 2005; Palucka & Lunsky, 2007; Sterling et al., 2008; Tantam, 2000;

Tsankanikos et al., 2006). The national NICE guidelines (2013) estimated that up to 70% of individuals with autism meet diagnostic criteria for at least one additional mental and behavioural disorder, and up to 40% meet the diagnostic criteria for at least two disorders.

Reasons for high rates of poor mental health in young people with IDD have been listed as multifaceted but they are associated with factors such as poverty, socio-economic disadvantage, as well as in some instances problematic experiences in childhood. Communities with higher poverty rates have been linked to higher incidence rates of both disability and neglect (Bywaters et al, 2016; Hughes and Avoke, 2010). Indeed, in comparison to those without IDD, children and adolescents with IDD have been found to be over four times more likely to experience neglect (Jones et al, 2012). Individuals with IDD living in lower-income households have also been recorded as more likely to have an emotional disorder, depression, and conduct disorders (Emerson, 2003). Children of lone parents were also recorded as more likely to experience emotional disorders, in addition to having increased rates of depression, anxiety and conduct disorders (Emerson, 2003).

Specifically, studies suggest the overlap of ASD with ID may exacerbate behavioural and emotional problems. Employing longitudinal methodology Estes, Dawson, Sterling, and Munson (2007) investigated the relation between the level of intellectual functioning and the risk for associated symptoms in ASD. They demonstrated that longitudinally children with higher intellectual functioning and communication were more likely to exhibit internalizing behaviours, whereas lower-functioning children (as indicated by standardised scores being below 70) were more likely to present with externalizing behaviours (e.g., irritability, stereotyped problems, and hyperactivity). Such research suggests that a wider awareness needs to be present of comorbid conditions in ASD cases, and the potential associated behavioural profiles.

Other studies have tried to unpick the sole impact of ASD on children's behaviour problems and emotional difficulties. Totsika and colleagues (2011) did so by undertaking a cross-sectional study of a large population-representative sample (18,415 cases) that included 5 to 16-year olds (mean age 10). An age matched group without a diagnosis of ASD or ID was compared to three diagnostic cohorts: 51 children with a comorbid ASD and ID diagnosis, 47 children with ASD, and 590 young people with ID. The authors reported that, when controlling for child age, gender, and any moderating effects of

adversity, the presence of ASD and ID always significantly increased the odds for behaviour problems (Totsika et al, 2011). Furthermore, presence of ASD (with or without ID) was associated with higher rates of hyperactivity, emotional symptoms and conduct problems. Although the authors did not differentiate levels of ID, they did identify a high level of co-morbidity (52%) between ID and ASD, and the contribution of ASD to behavioural and emotional problems was larger than that of ID.

Despite the established recognition that mental health problems are relatively common in ASD and ID, it is still often the case that children and young people do not get the specialist help they need as quickly as required (McShane, 2015). Troublingly a review of specialist child and adolescent mental health service provisions by the Equality and Human Rights Commissioner (2017) found that in parts of England cuts in services accumulated up to 25% of available provisions. The implications are that the mental health needs of young people are not being met, specifically for those with additional diagnosis such as ID and ASD. At the same time a report by NHS- England and Department of Health concluded that unidentified and non- treated severe mental health problems in young people have been associated with an increased likelihood of engaging in risky behaviours (of a delinquent nature) which include risky sexual behaviours (McShane, 2015).

In summary, across England, specialist provisions for young people who display HSB are patchy, with little consistency in assessment and treatment procedures. Appropriate support and protection are not always granted to the young person. This is despite research findings that demonstrate high rates of mental health issues in younger people who engage in risky behaviours and a growing understanding that in such cases it can be a potential indicator of children's own abuse histories (NSPCC, 2017). Assessments need to be holistic, relevant to the needs and challenges of the particular client group and they should help identify strength- based therapeutic goals. Yet, little is known as to what types of assessments current services offer, especially for IDD cases.

Study 1

Exploring the specialist service provisions within the UK.

Given that limited information is available as to the specialist service assessment processes the aim of this study was to undertake an evaluation of service providers across the UK. The methodological approach taken was in line with Hackett, Masson, and Phillips' (2005) study, which surveyed service providers across the UK between 2002 and 2003, with an aim to explore the service providers nature and range of work. The current study focused specifically on assessment practices of the service providers in relation to HSB cases. The exploratory study aimed to increase our understanding of the exact nature of assessment provisions within services that specifically accept referrals for young people with IDD who display HSB.

General aims

- Explore if there are differences between services who perform in-house diagnosis for ID and ASD.
- Explore if there is a relationship between service provider type (for e.g. secure, community, residential or charity based) and the psychological domains assessed (for e.g. trauma, resilience, cognitive distortions etc).
- Explore if there is a relationship between service type providers (for e.g. secure, community, residential or charity based) and the use of standardised tools, vs adapted tools for IDD populations.

Method

Design

Given the lack of published information, very little is known about assessment and treatment practices across specialist services in the UK for young people with HSB and ID/ASD. Therefore, a survey of UK specialist service providers was conducted. A questionnaire was developed using the Qualtrics system, allowing for anonymous online data collection. The data collection was only intended

to be focused on provisions in relation to young people with IDD who display HSB. The link to the survey was shared amongst known UK based networks of specialist service providers (as identified via Peto, Dent, Griffin, & Hindley, 2015; ySOTSEC-ID³) online platforms (such as Facebook pages, Twitter and LD networks) as well as being presented at events (such as academic and service conferences), that specialist HSB adolescent services would have access to. In inviting service providers to take part, an information sheet was first accessed, followed by the online survey.

Participants

The survey was devised to capture data in relation to service provisions for adolescents with IDD (i.e. ID and/or ASD) who displayed HSB, only. The respondents to the survey were staff working within the service provisions.

Settings

In order to obtain a range of service providers, that would be generalisable to current practice, invitations to the online questionnaire were sent across the UK to a variety of both residential and community service providers specialising in children and young people. Services contacted included: low secure forensic inpatient units (for example Northumberland, Tyne & Wear NHS Trust), medium secure forensic inpatient units (for example St Andrew's Healthcare), residential services (such as Secure Children's Homes), community-based specialist services (for example Bristol Be Safe service), and youth offending teams and charities (for example NSPCC and Barnardo's). The eligibility criteria for a service was i) that it provided specialist care for adolescents (under 18-year olds) who displayed HSB, ii) that it accepted referrals for IDD cases, and iii) that it was based in England.

Measure

The questionnaire was developed specifically for the current study and comprised of the sections as outlined below. The questionnaire was modelled on the work by Dent, Peto, Griffin, and Hindley, (2013) that sought to map national provision of the community forensic child and adolescent mental health services (CAMHS) but it also incorporated the appraised understanding of service provisions as

³ More details provided in Procedure section

revised by NICE guidelines (NG55, 2016). Broadly it sought information on anonymised service user demographic information and current practices within the service (a copy of the questionnaire, can be found in Appendix D).

Sections:

i) Section 1 sought to gain information about the service provider. It included questions around service type, staff roles, number of young people with HSB and IDD supported by the service, young people's age range, diagnoses and numbers of young people that were known to be victims of abuse or looked-after/adopted.

ii) Section 2 sought information regarding the types of HSB displayed by young people with IDD. The IDD category was split into 3 categories: those young people with ID only, those with ASD only, and those with a comorbid ID and ASD diagnosis (IDD).

iii) Section 3 explored the referral rates based upon Hackett's (2010) HSB continuum, investigating potential differences in severity thresholds for acceptance to service and treatment.

iv) Section 4 investigated the service assessment practices in terms of both their risk and psychometric assessments.

Finally, participants were asked two open-ended questions regarding any comments as to improvements or recommendations of assessments and interventions provided by their service.

Ethical approval

Ethical approval was sought through the Tizard Centre Ethical Committee, prior to commencing data collection. An application was submitted on the 13th December 2017 (see *Appendix E*). A response on the 22nd January 2018 stated that the application required amendments with regards to NHS procedures. A suggestion was made that NHS Trusts would consider the following project more than just an audit, and subsequently require NHS ethics permission. In response, advice was sought from a Senior Assessor at the Health Research Authority and a check using the HRA decision tool was performed. Both sources agreed that the project did not meet the criteria for research thereby sufficing for internal academic ethical approval (see *Appendix F* for the details of communication with the additional HRE

bodies). Receipt of final approval from the Tizard Ethical Board was confirmed on the 5th April 2018 (see *Appendix G*).

Procedure

Service Identification

The initial approach towards identifying specialist services was through the use of The Directory for High Risk Services (Hoare & Wilson, 2010) and the Community Forensic Child and Adolescent Mental Health Services report (Dent et al., 2013). A database was developed that included responses from professionals who had expressed an interest in taking part in the project. Included were service providers that had responded to an information email sent out across specialist mailing lists and networks (including Learning Disability network, ID network and ySOTSEC-ID). ySOTSEC-ID is a subcategory of the well-established SOTSEC-ID (Sex Offender Treatment Services Collaborative - Intellectual Disability) collaborative network. Both groups (SOTSEC-ID and ySOTSEC-ID) are made up of professionals engaged in providing treatment for men (and in case of ySOTSEC-ID, young people) with an ID who are at risk of sexual offending. ySOTSEC-ID has a members' network of professionals who work within children and adolescent services that specialise in HSB.

In addition to this, a systematic search of the NHS Service Finder, the Care Quality Commission Service Directory and the Autism Services Directory from the National Autistic Society was also undertaken. Such directories were trawled focusing on search terms such as “specialist”, “residential” and “forensic”, alongside limiters for age and diagnosis where relevant to the database. The Youth Justice Board national directory (2018) was used for identifying Youth Offending Teams (YOT), and the Secure Children's Homes (SCH) were identified using the Secure Children's Homes Directory (2018). All services were emailed with an invite to take part in the study via their publicly available contact details, the emails were sent, where relevant, to service managers, clinical psychologists, directors and therapeutic practitioners.

Qualtrics

The questionnaire was hosted by the online survey software provider Qualtrics. Invitations to participate and links to the questionnaire were sent to individuals on the contact list through the Qualtrics

system. Qualtrics allows for participants to enter data, then save and continue their response at a later time and date if necessary. Upon clicking on a link that directed those interested in the study to the Qualtrics page they were presented with a study information sheet. Consent was granted by clicking to continue onwards onto the survey. The debrief sheet and feedback form were presented at the end of the questionnaire, once the participant has submitted their final response

The Qualtrics storage system is in line with the EU Safe Harbour legislation; despite Qualtrics being an international provider, all data were collected and stored on UK servers. Data and passwords were all encrypted in line with the GDPR regulations (2018). Once downloaded, the data were stored in line with The Data Protection Act (1998). All data files were password protected.

Results

Service Characteristics

The final data set comprised of thirty-five service responses (out of 65 services that opened the link and reviewed the information sheet). In total 129 potential service providers were identified, meaning the response rate of those contacted, in total was 27%. Although thirty-five respondents completed the survey, not everyone answered all the questions, therefore each table presented will specify the number of respondents it relates to. The respondents were specialist practitioner staff, with the most frequent respondents being clinical psychologists ($n=11$), followed by team and service managers ($n=10$). Other respondents reported being in positions that included Special Needs Advisors, Psychiatrist, Nurse, and Mental Health Practitioner. The majority of the respondents were part of multi-disciplinary teams that varied in formation according to the service type (e.g. community vs residential) therefore teams reported to include YOT practitioners, nurses, education assistants, occupational therapists, speech and language therapists, counsellors, and play therapists. Detailed information on this was, however, not provided consistently in order for aggregation of data.

Given that this was an anonymous survey, the service type was a self-reported categorisation, completed by the participants. Participants were asked to both select a classification category that best applied to the service (e.g. include medium secure forensic in-patient service, community-based service

or youth offending team) and to select which sector best represented their service, either statutory, private or voluntary.

Representatives from community-based services were the most frequent respondents to the survey, as can be observed in Table 4. Most services accepted referrals of both genders. The largest service provider was the one youth offending institute (YOI), followed by respondents from youth offending teams (YOT). Residential services tended to have fewer young people (approx. 24) per service, than the other respondents.

Table 4

Service types and the referral criteria for young people

Service Type	Total number of young people reported at the service*	Number of services	Minimum Age	Maximum Age	Gender
Community-based services	823	17	Under 10	Over 18	Male and female
Youth offending teams	581	8	10	18	Male and female
Residential services	97	6	Under 10	18	Male and female
Secure children's homes	160	3	10	18	Male and female
Young offending institution	75	1	15	18	Male

Note. *estimated numbers of total numbers of young people at the service, as provided by the professional respondent

More detailed review of the data revealed that statutory services were the most frequent respondents ($n=25$), which included local authorities, social services and NHS. The second most frequent responses were from the voluntary sector ($n= 6$) and the private services were represented via 4 responses.

Thirty-three services (see Figure 2) went on to report their referral criteria, for which Hackett's (2010) proposed continuum of sexual behaviours was used as a guiding reference.

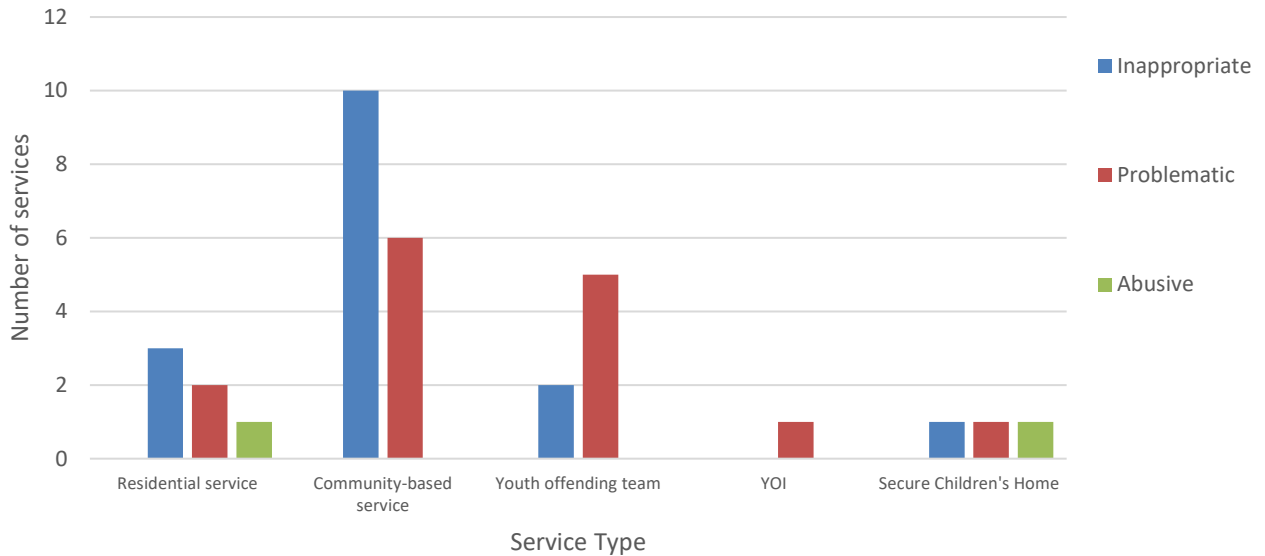


Figure 2. Behavioural stage at which services would start accepting referrals.

Most services report their referral threshold was at the point when a young person's behaviour is considered inappropriate in nature, although the youth offending institute reported accepting referrals for problematic behaviours (defined as behaviours which include instances where consent issues are unclear or there is a lack of reciprocity or equal power, and/ or include some levels of compulsions, Hackett, 2010). Secure children's' home and secure services reported a diversity in types of behaviours they would accept referrals for.

ID, ASD and IDD cases

Respondents were asked to estimate the number of young people they supported in their service at that point in time. In addition to which they were also asked to estimate how many of those young people had a diagnosis of ID, ASD or ASD and ID (the IDD cohort), irrespective of the presence of HSB. Out of 35 respondents, 7 providers reported not being 'sure' of exact numbers, 1 'preferred not to say', meaning 27 services reported a total estimate of 1736 young people using the services, with a range of 3-300 young people, at a single service, as illustrated in Table 5.

Table 5

Estimated figures of young people with intellectual and developmental disabilities.

Young people registered at the service (n=27 services)	Estimated n	Diagnosis	Estimated n	Percent of Total Sample
Total Sample	1736			
Young people with Intellectual/Developmental Disability	966			
		Intellectual Disability	603	34.7%
		Autism Spectrum Disorder	86	4.9%
		Comorbid Diagnosis*	277	15.9%

Note. * Comorbidity with ID of any type

Within the 27 services, an estimated 55% ($n=966$) of young people had a diagnosis of ID, ASD or IDD. Specifically, respondents estimated up to 34.7% of young people had an ID diagnosis, 4.9% had an ASD diagnosis and 15.9% had an IDD diagnosis.

Next respondents were asked if they provided diagnostic assessments of ID or ASD at their services, regardless of specifically HSB cases. Table 6 displays the number respondents who stated that they did so across the different types of service providers.

Table 6

Diagnostic service provisions of the service providers

Service type	n	Total number of young people reported at this type of service(s)*	Number of services that assess for ID	Number of services that assess for ASD
Community-based service	17	823	11	10
Youth offending team	8	581	3	2
Residential service	6	97	3	2
Secure children's home	3	160	1	1
Young offending institution	1	75	1	1
Total	35	1736	19	16

Overall a greater number of services responded that they diagnose for ID rather than ASD on-site. Exploratory investigations suggest Secure Children's Homes and YOTs are least likely to conduct diagnostic assessments within their services.

A Fisher Exact test was completed to explore a potential association between services types⁴ and in-house assessment of IDD. No association was identified according to chi-square analysis, the likelihood of completing an ID assessment ($X^2(4, N=35) = 4.56, p = .327$) nor an ASD assessment ($X^2(4, N=35) = 4.39, p = .386$) did not vary according to service type.

Psychometric assessment tools

Focusing specifically on cases of young people with IDD and HSB, respondents were asked to provide data in relation to the domains they assessed within their service and to name the tools used for completing the assessments. Table 7 summarises the information provided addressing the first half of the question, as to the domains assessed. The service providers reporting assessments of the highest number of domains were Youth Offending Teams and the Youth Offending Institute.

⁴ Categorisation as self-reported

Table 7

The domains assessed across 29 service providers.

Service type	Domains assessed								
	Resilience	Emotional loneliness	Attachment	Life goals	Sexual knowledge	Cognitive distortions	Victim empathy	Trauma	Risk
Community-based service (n= 12)	4	3	4	7	10	6	3	7	5
Youth offending team (n= 7)	4	3	5	3	4	5	3	5	7
Residential service (n= 6)	3	-	3	3	2	1	1	2	4
Secure children's home (n= 3)	1	1	2	2	1	1	2	3	3
Young offending institution (n= 1)	1	1	1	1	1	1	1	1	1
Total	13	8	15	16	18	14	10	18	20

Out of 35 respondents, 29 engaged with the question relating to assessments. Risk was the domain reported to be the most frequently assessed for. Aim 2 sought to explore, if an association was present between the service type and the domains assessed, a Pearson's chi-square test of independence was performed. Assessments of risk were significantly associated with service type $X^2(4, N=33) = 12.42$, $p = .004$. Community based services (as self-identified) were more likely to report not assessing for risk. Youth offending teams (including the youth offending institute), were most likely to self-report using risk assessments.

Respondents were also asked if any of the tools they used (across the domains, as above) were standardised, or if they had been developed in house, and if the tools were adapted to the needs of an IDD population. Table 8 shows the responses recorded from 29 respondents who engaged with the question. The most frequently assessed domain in young people with IDD was reported to be trauma, and sexual knowledge. Assessment of sexual knowledge was also the measure that was most likely to be reported adapted for IDD population.

Table 8

Number of tools adapted and standardised for IDD population across the eight main domains assessed at service.

Domain assessed (n=29 respondents)	Total number of services assessing the domain	Number of services using a standardised tool assessing the domain	Number of services reporting use of a tool developed in- house to assess the domain	Number of services reporting use of tools adapted for IDD population, assessing the domain
Trauma	18	11	3	5
Sexual knowledge	18	8	8	10
Life goals	16	5	8	5
Attachment	15	7	6	5
Cognitive distortions	14	7	6	5
Resilience	13	6	3	5

Victim empathy	10	5	4	3
Emotional loneliness	8	4	3	3

Aims 3 and 4 were explored via a chi-square analysis. Fisher's exact test reported a significant association between service type and assessments of cognitive distortions $X^2(8, N=29) = 13.86, p = .037$, where youth offending teams were more likely to report use of standardised tools for cognitive distortions, and community-based services were more likely to use in-house developed tools. Fisher's exact test also reported a significant association between service type and assessments of attachment $X^2(8, N=29) = 15.15, p = .003$, with youth offending teams more likely to report use of psychometrically validated tools for attachment, and community-based services more likely to use in-house developed tools.

Table 9 shows the aggregated responses in relation to use of standardised versus in-house developed tools, across the service providers. 18 of the respondents (62%) reported using standardised tools (across the different domains) with 14 (48%) reporting use of tools developed in-house.

Table 9

Aggregated responses of the tools used, across services either standardised or developed in-house

Service type n= 29	Standardised tools		Tools developed in- house	
	n	%	n	%
Community-based service (n= 12)	7	58%	8	66%
Youth offending team (n= 7)	5	71%	2	29%
Residential service (n= 6)	3	50%	3	50%
Secure children's home (n= 3)	2	66%	-	-
Young offending institution (n= 1)	1	50%	1	50%

The youth offending institute reported use of two different tools one of which was considered standardised and others that had been developed in-house. Upon closer inspection of the secure

children’s homes, in response to questions regarding assessments of different domains, they completed ‘Structured Clinical Assessments’ and did not use specific tools. Across the wider range of services youth offending teams are most likely to complete standardised assessments, and community-based services were most likely to report use of in- house developed tools.

Named assessment tools

Respondents were next asked to name the tools they used, within their services in assessing each of the domains, as above. Out of 35, 26 respondents completed this section, with 9 of the same respondents also providing free-hand answers in naming (additional) tools, which could not have been categorised across the eight domains as provided.

Table 10 shows the responses provided by the 26 individuals. Where a tool was named more than once (within the same domain), by the respondent, this was not repeated in the table below. The Table gives the domains named by the respondents as relevant to each assessment tool (often this is inaccurate, see below for discussion).

Table 10

The domains assessed and their corresponding instruments used at specialist services for young people with IDD who display HSB.

Domain assessed	Title of assessment tool	Authors	Original purpose of tool	Population intended for
Trauma	Trauma Symptom Checklist for Children (TSCC)	Briere, 1996	Measures severity of posttraumatic stress and related psychological symptomatology	Neurotypical children aged 8-16-year olds
	Impact of Events Scale- revised (IES-R)	Weiss, 2007	Measures the impact experienced following a traumatic event	Neurotypical adults (18+ year-olds)

Trauma and Attachment Belief Scale (TABS)	Pearlman, 2003	Assesses the long-lasting psychological impact of traumatic life events	Neurotypical children aged 9 years and up
Children's Revised Impact of Event Scale (CRIES)	Yule, 1997	Screen for Post-Traumatic Stress Disorder	Neurotypical children aged 8-18- year olds
Life Goals			
Sex Offender Risk Appraisal Guide (SORAG)	Harris, Rice, & Quinsey, 1993	An actuarial risk appraisal guide for predicting violent, including hands-on, sexual recidivism among men	Neurotypical adults who sexually offend (18+ year-olds)
Questionnaire of Attitudes Consistent of Sexual Offending (QACSO; version unclear)	Broxholme, 2003	Measure of cognitive distortions	Has been adapted for men with LD who sexually offend (18+ year-olds)
Assessment, Intervention and Moving on (AIM2)	Griffin, Beech, Print, Bradshaw & Quayle, 2008	Risk assessment tool	Neurotypical and LD children and adolescents (10+ year olds) who display HSB
The Juvenile Sex Offender Assessment Protocol (J-SOAP)	Prentky,, & Righthand, 2003	Risk assessment tool	Neurotypical adolescents ages 12- 18
The Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR)	Worling & Curwen, 2001	Risk assessment tool	Neurotypical adolescents ages 12- 18
Latency Age-Sexual Adjustment and Assessment Tool (LA-SAAT)	Rich, 2017	Latency Age-Sexual Adjustment and Assessment Tool. Risk focused tool that assessed sexual	Neurotypical pre-adolescent males, aged 8-13 who have engaged in inappropriate sexual behaviour

			behaviours and adjustment in children	
ASSETPlus	Youth Justice Broad, 2014		A structured risk assessment tool	All young people, aged 10 to 17 years, who come into contact with youth offending teams
Sexual Knowledge				
Assessment of Sexual Knowledge (ASK)	Butler, Leighton, & Galea, 2003		Assessment of sexual knowledge (questionnaire)	Adults with ID (18+ year-olds)
Sexual Knowledge, Experience, Feelings, and Needs (SEX KEN ID)	McCabe, Cummings & Deeks, 1999		Assessment of the sexual knowledge, experience, feelings, and needs of people with mild intellectual disabilities	Adults with mild ID (18+ year-olds)
Sexual Attitudes and Knowledge (SAK) (plus psychoanalytic assessment)	Authors unknown		Sexual Attitudes and Knowledge Assessment	Adults with ID (18+ year-olds)
Socio-Sexual Knowledge Attitudes Assessment Tool (SSKAAT)	Wish, McCombs, & Edmondson, 1979		Socio-sexual knowledge and attitudes test	Adult with ID (18+ year-olds)
The Assessment of Risk and Manageability of Individuals with Developmental and Intellectual Limitations who Offend - Sexually (ARMIDILO-S)	Boer, Haaven, Lambrick, Lindsay, McVilly, Sakdalan & Frize, 213		Risk assessment tool	Adults with ID who sexually offend (18+ year-olds)
LA-SAAT			As above	As above

ERASOR		As above	As above
J-SOAP		As above	As above
Cognitive Distortions			
The Risk for Sexual Violence Protocol (RSVP)	Hart et al., 2003	Risk assessment tool	Neurotypical adults (18+ year-olds)
ARMIDILO-S		As above	As above
Adapted QACSO		As above	As above
J-SOAP		As above	As above
ERASOR		As above	As above
LA-SAAT		As above	As above
ASSETPlus		As above	As above
Victim Empathy			
Carich-Adkerson Victim Empathy Scale	Carich- Adkerson, 1999	Victim empathy and remorse self- report inventory	Unclear
Beckett empathy scale	Unclear	Unclear but assumption service means the VAS- victim empathy scale	Neurotypical adults (18+ year-olds)
Adapted QACSO		As above	As above
LA-SAAT		As above	As above
ASSETPlus		As above	As above
AIM 2		As above	As above
J-SOAP		As above	As above
ERASOR		As above	As above
Emotional Loneliness			
Social and Emotional Loneliness Scale	Unclear	Version is unclear	Neurotypical children and adults
AIM2		As above	As above
J-SOAP		As above	As above
ERASOR		As above	As above
LA-SAAT		As above	As above
ASSETPlus		As above	As above
Attachment			

TABS		As above	As above
TSCC		As above	As above
AIM2		As above	As above
ARMIDILLO-s		As above	As above
J-SOAP		As above	As above
ERASOR		As above	As above
LA-SAAT		As above	As above
ASSETPLUS		As above	As above
Resilience			
Pearson's Resiliency Scales for Children and Young People (RSCY)	Prince-Embury, 2006	Child and adolescent profiles focusing on strengths as well as vulnerabilities	Neurotypical children 9-18-year olds
AIM2 U12		As above	As above
ARMIDILLO-S		As above	As above
J-SOAP		As above	As above
ERASOR		As above	As above
LA-SAAT		As above	As above
ASSETPlus		As above	As above

The responses from Table 10, best exemplify, perhaps the misconceptions professionals hold in relation to the objectives and role of risk assessment tools. These tools were some of the most frequently listed and were named as relevant to many different domains, although only two specific risk tools can be considered appropriate for an adolescent IDD population (who display HSB), the AIM2 and AssetPlus. Furthermore, the Table illustrates how many tools are being used inappropriately for young people with IDD, by either being age inappropriate or not adapted given their vulnerabilities. It is worth also noting that this table is at odds with Table 10 where professionals listed using a proportion of adapted tools, a frequency of which, in the light of information above, appears misleading. Not only that, but they are listing tools for domains the tool is not designed for, e.g. ARMIDILO for resilience, or QACSO for life goals.

Finally, some of the respondents (R) chose to provide freehand answers in the 'additional information' section of assessments. They specified:

R1 reported: “we use AIM2 a lot - it is not ideal tool for LD kids or girls though with clinical judgement/discussion and case formulation it is ok however, it is not suitable in sibling cases (we find)”

R2 reported: “Some psychometric validation of existing measures and whether [sic] they are appropriate [sic] to use with the LD population would be helpful. There is a dearth of measures specific to the LD population with HSB which is problematic”

R3 reported: “There is a lack of scientifically validated tools for YP population with / without ID due to the heterogeneity of the population plus difficulties in the rigour / recording of offences within criminal justice system.”

R4 reported: “When I have looked at standardised assessments, I have not found them to be suitable for children with LD and Autism and that they haven't [sic] been able to include the context and formulation for behaviours”

Discussion

Summary of Findings

The study devised an online survey in order to investigate the provisions available, in specialist services across the UK, for young people with IDD that display HSB. Specifically, it focused on the domains assessed and the corresponding tools utilised by the service providers.

Services and Service User Characteristics

Statutory, community-based services and youth offending teams were the most frequent respondents to the survey. The majority of the respondents who completed the survey were clinical psychologists. The bulk of services reported accepting both males and females, from ten and under to the age of eighteen. When asked about in-house diagnostic assessment 45% of services reported assessing for ASD and 54% reported assessing for ID. Although no significant differences were identified, youth offending teams and secure children's homes were least likely to report completing internal diagnostic services of this kind. In accordance with Hackett's (2010) continuum the majority of services reported referrals were accepted upon the presentation of “inappropriate” or “problematic” sexual behaviours.

Around one third of the young people who were in contact with the service had a diagnosis of ID, with diagnoses of ASD close to 5% and comorbid ID and ASD representing around 15% of the sample respectively.

Assessments

Although risk was reported as the most frequently assessed domain, the survey did not ask as detailed questions of the risk tools (regarding their appropriateness and adaptation for IDD populations) as it did of the other tools used to assess other domains. Questions regarding risk assessment tools were presented as tick box options, names were shown in a list to pick from. Whereas questions in relation to the details of the other assessment tools required professionals to answer by writing their responses (specifically in naming the tools). Notably, risk assessment tools were frequently listed inaccurately as assessments of different domains (as seen in Table 11). The finding that risk assessment tools were used as extensively, as reported in assessment of number of domains will be further discussed below.

Across services the most common domains (after risk) assessed were trauma and sexual knowledge, followed by life goals and attachment. Assessment of emotional loneliness tended to be least common, specifically in residential services. Differences between services and across populations were noted.

Within specific services the (one) youth offending institute reported the most consistent approach towards assessments, by indicating they assessed for all the domains as proposed. Upon closer inspection, the lead clinical psychologist from the service reported that ‘comprehensive assessments’ were undertaken at their service across the different domains but they did not specify tools. However, their responses indicated most of the assessment tools (87%) were developed in- house, with only the assessment of trauma using a tool that has been standardised.

Within the secure children’s home, responses indicated that risk and trauma were the two domains that were most frequently assessed (100% of the services). Across residential services these were reported to be risk (33% of the services) followed by life goals, attachment and resilience (50% of the services). Youth offending teams also primarily completed risk assessments (100%) most frequently, followed by trauma, cognitive distortions and attachment (across 71% of services). Finally, community-

based services most frequently reported assessing for sexual knowledge (across 83% of the respondents), followed by life goals and trauma (58% each). Risk was reported as assessed in only 41% of the community- based respondents.

Interestingly, 62% of the services reported using some standardised measures for assessments, with 48% reporting using some tools that were adapted in-house. Most likely to report using some standardised measures was the youth offending institute (100%) followed by the youth offending teams (71%). Most likely to report use of in- house developed tools were community-based services (66%) followed by the residential ones (50%).

Although most services reported completing some assessments of different domains, only 16 respondents (55% of the full sample) reported utilising tools that had been adapted for an IDD population. Most likely to be reported as adapted tools were assessments of sexual knowledge (in 55% of the cases), followed by trauma, life- goals, attachment, cognitive distortions and resilience (both 25% of the cases), least likely were victim empathy and emotional loneliness (16% of the cases).

Closer inspection of the data showed on average around 9% (range 5.7- 14.3) of services reported being “unsure” if the tool they used had been adapted for an IDD population. On average they were most unsure of the attachment tool (14.3% services, i.e. 5 cases).

Community based services (75%) were most likely to report use of adapted tools, followed by secure children’s homes (66%). Least likely to use adapted tools, according to self-reports were the youth offending teams (0%).

Most of the services assessed for the domains as proposed in the survey and although nine services provided details of other assessment tools used, these could have been appropriately catalogued across existing categories such as risk assessments, sexual knowledge and cognitive distortions.

Interpretations

These findings suggest that provisions within specialist services are patchy with little consistency in internal processes. Although a significant number of referrals for young people with ID, ASD or IDD is reported, services appear to fail to take into account their needs in completing psychological assessments (including diagnosis). Up to 48% of services surveyed offer diagnostic assessments in-house.

Although this is a low figure, it is possibly a reflection of the collaboration between multi- agencies. Good practice specifies (in health-based service providers) that once a referral is received the service will hold a multi- agency meeting involving representatives from services who have had an involvement with the case. This often includes children's social service, education, health and any other relevant agencies. The objectives include identification and co-ordination of goals across providers, as well as sharing of information. Through this process, where a child has been classified as having Special Educational Needs and Disabilities (SEND), often education providers will share the person's Education, Health and Care (EHCP) plans. In such instances the details of a diagnostic assessment will be made available to the specialist service. Although this is of benefit to services who might lack the internal structures to support (and afford) in- house diagnostics it offers little consistency, as types of assessments can vary across educational providers. In addition to which, in many cases, it is recognised that not all young people that require an EHC plans will have one in place. Where assessments are completed internally within specialist services, often they will require access to a multi-disciplinary team that includes clinical or educational psychologists, or child and adolescent psychiatrists.

The current study identified that the most unified approach across services was their focus on risk assessments. Risk tools were most consistently reported as assessments completed but also, they were reported as tools utilised for assessments of more extensive psychological domains. In services where a young person is detained under the MoJ, such as the secure children's homes and youth offending institutes (per Melvin, 2016 flowchart), this might not be unusual. They are expected to do so. But it does leave them (meaning youth criminal justice systems) to vulnerable to potential criticism for being too risk focused in their approach (Case, 2006). Specifically, as risk assessment tools often over- focus on risk, and under- focus on protective factors.

A bigger concern, perhaps is the proportion of services who reported using risk assessment tools in lieu of appropriate alternatives. AIM2 was one of the most frequently used, most likely as it has been validated for an IDD adolescent cohort. Alarming, however, the manner in which it has been reported here implies risk assessments are being used across specialist service providers within the UK to identify a variety of young person's psychosocial strengths and difficulties, possibly in order to facilitate (clinical)

formulation. Although risk assessment tools have evolved significantly over the last decade, they are not meant to replace other clinical tools that might assess the wider well-being needs of the young person.

If considering even the only appropriate risk tool available, in that it was developed with young people with IDD in mind, the AIM II model specifies that it is only intended as an initial assessment to help with the first stage in gathering and analysing information. It is meant to fit into a wider holistic assessment approach, that in hand with additional assessments informs and supports practitioners to consider appropriate interventions. Fundamentally, its aim is to help identify which, more specific assessment are required (H. Griffin & Beech, 2004), and its limitation is a lack of sensitivity to variations in risk (across cases).

The potential issues with an over-reliance on risk and risk tools has been acknowledged and discussed in the NICE guidelines (2016) on young people who display HSB. It is specifically stated, in their review of available risk tools, that we still lack fully validated models or frameworks (NICE, 2016). Furthermore, if the level of predicted risk is inaccurate this could lead to an over-punitive or over-restrictive approach. In other cases, it could result in the young person not getting the appropriate support needed to prevent further harmful sexual behaviour, in so doing exposing them to risk, both to themselves and others.

Aside from risk, the other domains reported as assessed most frequently in young people with IDD who display HSB, in descending order were trauma, sexual knowledge, life- goals, attachment, cognitive distortions, resilience, victim empathy and emotional loneliness. However, at odds with these was the number of tools reported as specifically adapted for young people with IDD. In descending order, they were, sexual knowledge, trauma, life-goals, attachment, cognitive distortions, resilience, victim empathy and emotional loneliness.

Given the results of the systematic review (Chapter 3) it is not surprising that most services did not have adapted tools to use for an IDD population. An interesting finding, however was that sexual knowledge tools were listed as the most frequently adapted tool (in 55% of respondents). Upon closer inspection of the questionnaire in which respondents named the tools, those named as assessment of sexual knowledge were in effect adapted for adults (ages 18+) with ID (see Table 12). Such tools are not appropriate for assessment of adolescent knowledge or understanding relating to sexual relationships and

the law. As noted in Chapter 3, however, recent developments in adapting an appropriate instrument, that explores sexual knowledge in adolescents with IDD who display HSB, is being undertaken by a PhD student in Nottingham.

The results here also indicate there are some strength based and person- centred practice in places, by services utilising assessments of trauma and life- goals. As noted, research has demonstrated that adolescents with IDD who display HSB will often experience their own neglect and abuse in their childhood (Almond et al., 2006; Alywin, Struder, Reddon & Clellannd, 2003; Barbree, Marshall & McCromick, 1998; NSPCC, 2016). Evidence on possible risk factors that contribute towards the development and continuance of HSB in young people, proposes that interventions should not only target the sexual behaviour but also the broader concerns within the child's family and potentially unresolved trauma and abuse histories (NSPCC, 2019). Therefore, appropriate assessment and an evaluation of the impact of such experiences is an imperative element of a holistic case approach.

Furthermore identifying personal life- goals utilises elements of the strength-based Good Lives Model (Willis et al., 2013) and moves the case out of a risk focused framework. Alas, all the tools listed in assessment of this domain were risk assessment tools (Table 12).

Where professionals provided names of the tools utilised for assessments of the eight domains, the results present a stark illustration regarding the internal assessment processes and procedures across specialist service providers. The tools listed are, by far, not appropriate given the age, needs and vulnerabilities of young people with IDD. This exemplifies, how services are managing cases with young people with IDD where there might not be access to alternative, appropriate instruments.

This is an issue as most of the tools listed, by professionals within this study will be instruments that are validated for a different cohort of people. In some cases, this might be an age appropriate cohort but more often than not they are not validated for an IDD cohort and individuals who might have a difficulty processing, and understand complex information. As an example, the Trauma Symptom Checklist for Children (TSCC) which was developed for children 8- 16 years- old, but has not been validated for young people with IDD. The instrument itself is long and made up of questions that can be difficult to understand, especially in cases where the young person might be left to complete the assessment independently (as per instrument instructions).

Overall, the data relating to national assessment practices across service providers, in the current study is concerning. National recommendations state that assessment results should be a basis for needs assessment as well as decisions in relation to therapeutic interventions, treatment placements and care plans (NICE, 2016). Risk assessments to meet the needs of young people are not suitable for an approach that is holistic in nature.

Limitations

Conclusions reached from this study must be drawn with caution because the young people's characteristics, behaviours and practice reported might not be a reflection of the true wider cohort. Had there been an opportunity to conduct direct observations, engage in a focus group with practitioners and review case files, a more comprehensive representation on practices would have been possible.

The small sample size is testament to the recruitment challenges encountered within this study. The 35 services that took part are unlikely to be generalisable to the UK specialist service system as a whole, particularly as responses from different service agencies were unbalanced. This might have been a reflection of the short time scales set on data collection but also perhaps evidence of the topic being of irrelevant to some services.

At times there was a high number of "not sure" responses that made it problematic to draw accurate conclusions. The reasons for this might be twofold; either the staff member completing the survey may not have had sufficient knowledge in relation to answering the question, although that is improbable given the recorded respondents positions, or there is a lack of transparency within services regarding young people's diagnoses or backgrounds. Comparative data from non-IDD cohorts may have been helpful to identify differences in support available.

One final, theoretical limitation with the data, that might have biased and limit conclusions is a lack of working definition (with the survey) of a "standardised measure". Meaning, this was open to professional's own interpretations, with some considering these to be psychometrically validated instruments and others interpreting them as possibly norm-based tools.

Study 2

Single service study of adolescents with IDD who display HSB.

In the following section, a case study of adolescents' with IDD in a community-based specialist service for adolescents' with HSB, referred for assessment, will be presented. The aim is to contribute to what is known about the nature of the psychopathology present in adolescents with IDD who display HSB, to understand how they are assessed in a service, and to further expand the knowledge base of the characteristics of this group. Although studies have reported of high levels of psychopathology including co-morbidity found in adolescents with IDD, there have been very few UK studies that have focused on the possible nuances across the characteristics within such a population. Namely there have been no studies that look to explore any descriptive differences between young people with ID, vs. ASD vs. IDD diagnosis. The methodological approaches of the current study were adapted from the Blandon, Vizard, French and Tranah (2005) and Hackett, Masson, Balfe & Phillips (2013) studies.

In their studies Blandon et al. (2005) reviewed case files of a tier 4 forensic specialist service, that received referrals for assessment and treatment of children and young people who display HSB. The study focused on the demographic and psychiatric data as collected on a community cohort of children during an 8 year period. The focus of the work was to expand empirical knowledge and understanding of these specific young people's psychiatric disorders.

Hackett et al. (2013) also reviewed national case files, pertaining to nine different service providers within the UK, and spanning a 1992-2000 time period. The focus was on individual, family and abuse characteristics, with a sample size of 700 young people. The outcome of the review confirmed that children and young people who display HSB are a heterogeneous cohort, with diverse and complex motivators at play, as well as childhood experiences. The researchers did also identify those with ID as a diverse, and specifically vulnerable sub- group in need of adapted interventions.

Method

Service and Sample

Data were obtained from a community-based specialist service working with children and young people who have displayed HSB. The National Society for the Prevention of Cruelty to Children (NSPCC), is the biggest UK children's charity working in child protection. It was founded in 1884 and it offers a range of services from preventing child abuse, to offering assessments and interventions for those at risk of offending. One service offered, since 1992, is a specialist service which will be called here *Service A*.

Service A focuses on working with children and adolescents who display harmful sexual behaviours. The service accepts children as young as 8 years old and a range of older adolescents, up to the age of 17. All referrals have to meet inclusion criteria and the children/adolescents have to have exhibited persistent sexualised behaviours prior to the index behaviour that prompted a referral. The service offers assessments, treatment, and a professional consultation for a wide range of organisations, including local authorities, youth offending services, courts and CAMHS. The majority of referrals made to *Service A* are from Children's Social Services, with others also made by children's residential homes and health professionals.

The majority of referrals to *Service A* sought assessment reports only, with a small proportion of cases progressing onto treatment. Such sequences were, however, rare, as commissioning of treatment varied in accordance with funding available from the referring organisation. A one-off professional consultation was also an option, but the processes involved were not as detailed as assessment reports. Consultations would produce shortened assessment reports, which in some cases moved into more comprehensive assessments.

Ethics

Ethical approval was sought and provided at the data collection site. As a charity, NSPCC have an internal ethics committee and standardised ethical application process, which was followed. A copy of the approval can be found in the *Appendix H*.

Multidisciplinary Team Reports

All the data here has been extracted from the internal Multidisciplinary Team Reports (MDT) at *Service A*. The MDT reports were written by the multi- disciplinary team, following the completion of a holistic assessment that included the young person, their family and wider professional network. As noted, where the MDT have been commissioned, they can provide either full assessments or a (shortened) consultation assessment (MDT reports are not written for treatment cases). Where they are for the purposes of a consultation, the MDT report is less detailed, often lacking a holistic assessment of young person's well-being and/ or an assessment of the wider network.

The full MDT reports are based on the assessments completed at the service by the clinical team. The clinical team included trained specialist children's practitioners, a family therapist, a social worker, a clinical psychologist, an assistant psychologist and a psychiatrist. The reports involve (when possible and appropriate) interviews and assessments with wider agencies who have had contact with the family and young person, the biological parents (or carers, in alternative cases) and the young person. The reports compose a case history based on compiled records and/or reports as shared by other agencies such as education, social care, criminal justice system, as well as parental interviews completed in- house. They also include an in- house assessment of the young person, that will vary in nature according to the needs and vulnerability of the individual (as will be detailed below), and finally a risk assessment will also be included in the report.

As the MDT reports are composed with contributions from a number of varying, external professionals and individuals, and given that the contribution from each young person varies according to their abilities, the final MDT reports do differ in respect of access to and consistency of information across cases.

Design

The current retrospective case series study used a cross sectional design and descriptive statistics to analyse anonymised diagnostic and demographic data extracted from all MDT reports where an assessment had been conducted by the specialist team in cases where the young person had an IDD diagnosis and was referred due to presenting with HSB. It is important to recognise that the study relies

solely on case files, which is a limitation. The files were neither written nor gathered for the purpose of scientific research, therefore the consistency with which information is recorded, with variation between cases, was present throughout. The study does aim however to follow the wider methodological approaches of two published, peer reviewed papers (Bladon et al., 2005; Vizard, 2014).

Procedure

An electronic trawl was carried out on the in-house electronic database system. The search looked for cases that included key words such as autism, learning disabilities (the term ID was not in use at the service at the time) and Asperger's, over the course of 5 years. It is important to note that cases that did not mention either an ID, ASD or IDD diagnosis, were excluded. The data selection period was set from the start of 2012 to April 2017. The reason for the period selected was that a new format of MDT reports was introduced in 2012. The older format was less accessible, with significant variations in how each case was recorded.

Data extraction form

For the purposes of the current study, a data collection form was designed and used to re-code the MDT reports into binary data. The form, completed for each individual case, was composed of sections which recorded the presence (or absence) of specific variables. The variables, determined prior to data collection, were informed by existing empirical literature (see Table 1 for a review of domains assessed in adult offenders, and the outcomes of Study 1, Table 7) as well as the content of the MDT reports. Data variables recorded included demographic characteristics of each case, family composition, young persons' school history, own abuse history, outcome of clinical assessment at the service, as well as details regarding the index behaviour for which referral had been made. As indicated, the in-house clinical assessments of the young people completed at the service varied between cases, as it depended on the age and cognitive ability of the individuals. The widest range of assessments and corresponding instruments, available was for the neurotypical, adolescent boys. Table 11 details the range of tools and their corresponding psychological domains.

Table 11

List of clinical assessments available at the service

Domain assessed	Title of assessment instrument	Authors	Original purpose of instrument	Population intended for
Cognitive ability	Wechsler Intelligence Scale for Children – fourth ed. (WISC-IV)	Wechsler, 2004	Full scale intellectual assessment	6 years to 16 year- olds
Mental health	Revised Children's Anxiety and Depression Scale (RCADS)	Chorpita, Yim, Moffitt, Umemoto& Francis, 2000	Children's Anxiety and Depression Scale	Average ability 8 to 18 year- olds *
	Beck Youth Inventories (BYI)	Beck, Beck, Jolly & Steer, 2005	Evaluates children's and adolescents' emotional and social impairment	Average ability 7 years to 18-year-olds
Trauma	Trauma Symptom Checklist for Young Children (TSCYC)	Briere, 2005	Evaluates acute and chronic posttraumatic symptomatology in young children	Average ability 3 years to 12-year-olds
	Trauma Symptom Checklist for Children (TSCC)	Briere, 1996	Evaluates acute and chronic posttraumatic symptomatology	Average ability 8 years to 16-year-olds
Miscellaneous	Strengths and Difficulties Questionnaire (SDQ)	Goodman, Meltzer & Bailey, 1998	Behavioural screening questionnaire	11 years to 16-year-olds. Noted that it is appropriate for children with mild learning difficulties.

Millon Adolescents Clinical Interview- (MACI)	Millon, Millon, Davis & Grossman, 1993	Identifies early signs of Axis I and Axis II disorders in adolescents	Average ability 13 years to 19-year-olds
Novaco Anger Scale and Provocation Inventory (NASI-PI)	Novaco, 2003	Anger experience and situations that provoke it	Average ability 9 years to 84-year olds
Parent and carer assessments			
Conners 3 rd edition short form	Conners, 2008	Attention deficit hyperactivity disorder assessment	6 years to 18-year-olds (completed by parents)
Revised Children's Anxiety and Depression Scale- parent version (RCADS- P)	Chorpita, Yim, Moffitt, Umemoto & Francis, 2000	Children's Anxiety and Depression Scale	8 to 18-year-olds (completed by parents)
Strengths and Difficulties Questionnaire – parent version (SDQ)	Goodman, 1997	Behavioural screening questionnaire	11 years to 16-year-olds (completed by parents)
Child Sexual Behavior Inventory (CSBI)	Friedrich, 1997	Assessment of a wide range of sexual behaviours as displayed by young person	2 years to 12-year-olds (completed by parents)

Note. * Found to be too developmentally advanced for use with young people with learning disabilities, but has been found to be useful for some children and young people with mild learning difficulties (Law & Wolpert, 2014).

For a typical case, up to nine assessments were available for use in cases of neurotypical young people (ages 11-17). These assessments cover a range of domains that include mental health, trauma, psychosocial functioning and characteristics of young person's sexual behaviours.

The service did not offer any instrument specifically developed or adapted for young people with IDD. Therefore, in the cases examined here where a young person had limited cognitive abilities the range of instruments was reduced significantly. A clinical judgement (led by consultant clinical psychologist) would have been made on each individual basis to decide, in the instance of IDD, if the young person could either be verbally supported to complete the assessment (usually by an assistant psychologist) or if they could be supported to complete the instrument independently.

Results

The MDT reports

The data extraction identified 19 cases of young people with ID/ASD/IDD who were assessed at *Service A* between 2012-2017. It was decided to only include full assessment cases; consultation and treatment cases were rejected (overall, very few treatment cases involved children and adolescents with ID/ASD/IDD⁵).

Demographic profiles

It was decided to include only cases where young people had ID/ASD/IDD and were aged between 12-17 years, at the time of referral. Although 'young people' refers to those aged 10 to 18 (and includes people up to 25 with special educational needs or a disability) and the age of criminal responsibility in the UK is 10, it is generally accepted across service providers that those under the age of 12, referred to HSB services, make up a distinct subgroup (Finkelhor, Ormord, & Chaffin, 2009). Specifically young children, where the onset of the behaviour is under the age of 11 have been identified to have different psychosocial and behavioural profiles to the adolescents (Vizard et al., 2007).

⁵ During the course of the data collection period this entailed only three cases and was linked to Malovic, Rossiter & Murphy (2018) study.

Subsequently, out of the 19 originally identified cases four cases were omitted as they related to children aged ≤ 11 year at the time of referral (age range 9-11). Fifteen cases remained and have been included as they related to adolescents at the point of referral (range 12-17). For more details in relation to the ages and gender of the cases see Table 12.

Table 12

The 19 IDD cases from Service A

<i>Diagnostic characteristics</i>		<i>Children*</i> <i>n=4</i>	<i>Adolescents</i> <i>n=15</i>
Age	<i>M_{age}</i> (range)	9.5 (9-11)	14.4 (12-17)
Gender	Male	2	14
	Female	2	1
Diagnosis	Autism Spectrum Disorder (ASD)	2	3
	Intellectual Disability (ID)	2	6
	Intellectual and Developmental disability (ID and ASD)	-	6

**Note.* these cases were not included in the data reported below

Out of the full cohort (15 cases), six had a full-scale IQ (FSIQ) score available, $Mdn = 68$, (scores range 40-109). In other instances, although a WISC-IV had been completed the FSIQ score was unavailable due to the variability found in the subcategories. People with ASD often present with uneven IQ profiles, due to variations across the different cognitive skills (usually across verbal and performance abilities), as measured by the WISC-IV subtests (Oliveras-Rentas *et al.*, 2012). Where the case had an ASD diagnosis, the presence of ID (and thereby categorisation as IDD case) was made only where either an alternative cognitive assessment (such as BAS3), was reported to be 'below average' or the subcategories of the WISC-IV were reported in the very low ranges, such as 2nd percentile (see Appendix I).

ID diagnoses were in some cases made at *Service A*, by reviewing existing files, completing clinical interviews and completing appropriate diagnostic assessment such as the WASI-IV. In most cases such processes were either carried out or overseen by the consultant clinical psychologist. In instances where the ID diagnosis was already present at referral to *Service A*, care was taken to accept it only if diagnosed in the previous 18 months (at most). ASD diagnosis were exclusively assessed and diagnosed

prior to referral to the NSPCC service, as this was not available at *Service A*. Finally, the notion of an IDD diagnosis, was not used at *Service A* rather it was applied by the researcher in cases where the young person had comorbid ID and ASD diagnosis.

Case profiles

Out of the 15 cases that qualified for inclusion, three cases related to young people with an ASD diagnosis (without comorbid IDs), six additional cases were identified as young people with an ASD and comorbid ID (IDD cohort), and six ID cases (without ASD) were also identified. The demographic characteristics of each of the subcategories such as age, gender and IQ scores are noted in Table 13.

Table 13

Characteristic details of the 15 intellectual developmental disability cases.

<i>Characteristics</i>	<i>ASD</i> <i>n= 3</i>	<i>ID</i> <i>n=6</i>	<i>IDD</i> <i>n=6</i>
Mean Age (range)	14 (12-15)	14.17 (12- 17)	15 (14-16)
Gender			
n male (% sample)	3 (100%)	6 (100%)	5 (83%)
n female (% sample)	-	-	1 (17%)
FSIQ profile			
Median FSIQ score	109*	70	53
n of cases with a complete FSIQ score	1	3	2
n of cases where data was too varied for a FSIQ score	2	3	4

Note. * not *M* as data for one case available only

Apart from the one case, the rest of the cohort (93%) were male. The age of referral was similar across the three groups, and this was not significantly different across the groups (as assessed by Mann-Whitney test). The IQ profiles demonstrated variation between the three groups, however, due to the variability in the WISC scores it was not possible to obtain a FSIQ score for all. The IQ data between the three groups was a study limitation.

Some points to note, although it appears the ASD cohort had the highest IQ score, this was based on the one case only and is therefore not a mean score. Closer inspection of the reports revealed the other

two ASD cases did not disclose a FSIQ score and instead commented on the variability of the individual cognitive profiles. As the researcher did not have access to the raw data, interpretations of these scores is limited.

The lowest group mean IQ score ($Mdn= 53$) was found in the IDD cohort, but critically this again was based on a very small sample size of two: One a 16-year-old girl (FSIQ=66) and one a 15-year-old boy (FSIQ=40). The ID cohort, with a mean FSIQ score ($Mdn= 70$), was composed of three adolescents.

The next area of exploration within the dataset, across the three cohorts was their own family compositions, the young person's own histories of victimisation and details of their index behaviours. Table 14 illustrates the number of incidents within each cohort, as counted by applying binary coding (not/present) for each case.

Table 14

The full Service A sample

Own experience and the index HSB displayed	Full sample n=15	ASD n= 3	ID n=6	IDD n=6
Gender (male)	14	3	6	5
Mean Age	14.4	14	14.17	15
ADHD	5	2	-	3
Socially isolated	2	1	1	-
Bullied	1	-	1	-
Parents separated	7	3	-	4
Looked After Child	4	-	2	2
Care of the extended family	4	-	2	2
Witnessed DV* at home	5	1	2	2
Victim of online grooming	1	-	1	-
Victim of sexual abuse	7	2	2	3
Victim of physical abuse	7	2	4	1
Victim of emotional abuse	3	1	1	1
Victim of neglect	6	-	4	2
Known use of pornography	9	3	4	2
Index behaviour contact	8	2	3	3
Index behaviour involving siblings	5	1	1	3

Note. *Domestic violence

Specifically, with the *Service A* cohort the cases can be reviewed on the basis of the young person's past experiences and their presentation upon service contact, and to review the service provisions in relation to their clinical profiles.

Service A data suggests that a third of the whole sample have an additional diagnosis of ADHD, with it being the most prevalent in the group where ASD is also present. A high rate of parental separation (46%) is evident across the overall cohort, with it being least prevalent in the cohort of adolescents with ID.

All those with ASD cohort (100%) had been noted as having experienced parental separation. Also, with the IDD group, two thirds (66%) of the sample had parental separation noted. Within the ID cohort, two thirds (66%) of the sample were victims of physical abuse and neglect, but abuse and neglect was common in all groups. More than half of the sample were noted to use pornography. Given the data here, exploratory analysis was completed to test for an association between the diagnostic cohort and parental separation. A Fishers exact test suggested there was a relationship between the cohort and presence of parental separation $X^2(2) = 9.25, p < .05$, with separation less likely to be reported within the ID cohort.

The data above can be reviewed in more detail via two main categories i) own victimisation and ii) index behaviour (that led to referral).

Own victimisation

It is important to note on the following data that information regarding the young person's experiences of victimisation was collected by means of two processes i) via reports as shared by external agencies during the initial case management meeting, including the wider professional network) and ii) via clinical interviews with the young person. Neither process is particularly objective, and both are subject to (un)standardised recording processes, and willingness to disclose. The data, therefore should be considered in the light of such limitations.

Table 14 illustrated that out of 15 cases, 13 (87%) had reported experiences of own victimisation in childhood, including experiences of different types of neglect, abuse and (witnessing) domestic

violence. Only in two cases (one ID and one IDD) was there no information relating to experiences of any victimisation.

Out of the 13 who had reported or had information present in their case files around own victimisation, on average this was at least two types of experiences, with the range being 1-4 experiences recorded. The two cases that had reported up to 4 types of experiences of victimisation, were both within the ID cohort. Sexual and physical abuse were the most frequently reported (46% of all the cases), followed by reports of neglect (40% of all the cases). A third of the whole sample reported witnessing domestic violence (DV) in the parental home.

Index offences

Overall, there was a high rate of pornography use across the cohort, with up to 60% of the whole sample admitting the use of it. A high rate (53%) of index behaviour, across the three cohorts, included physical contact with the victim. Within each cohort this equates to 66% of ASD cases and 50% of each of the ID and IDD cases. A third of the index behaviours (across the full sample) involved a sibling (as the victim). This was most frequently reported in the IDD cohort where 50% of the index behaviour involved a sibling.

Assessments

Next, the domains assessed and the instruments used in the IDD cases within *Service A* were reviewed. As previously noted, up to nine different instruments were available for use within the service. Table 15 illustrated the instruments reported as used within the three cohorts of young people with IDD.

Table 15

Tools recorded as completed across the 15 cases with IDD

Measure	ASD n= 3 (% of sample)	ID n=6 (% of sample)	IDD n=6 (% of sample)
RCADS self			
Did not complete	1 (33%)	2 (33%)	3 (50%)
Completed	2 (66%)	4 (66%)	3 (50%)

Normal range	-	4 (66%)	2 (33%)
Within the clinical threshold	2 (66%)	-	1 (16%)
RCADS parents			
Did not complete	2 (66%)	3 (50%)	3 (50%)
Completed	-	3 (50%)	3 (50%)
Normal range	-	1 (16%)	1 (16%)
Within the clinical threshold	-	2 (33%)	2 (33%)
Data missing	1 (33%)		
TSCC/ TSCYC self			
Did not complete	1 (33%)	2 (33%)	2 (33%)
Completed	2 (66%)	3 (50%)	4 (66%)
Normal range	1 (33%)	3 (50%)	1 (16%)
Within the clinical threshold	1 (33%)	-	3 (50%)
MACI self			
Did not complete	1 (33%)	3 (50%)	6 (100%)
Completed	2 (66%)	3 (50%)	-
Normal range	-	1 (16%)	-
Within the clinical threshold	2 (66%)	2 (33%)	-
SDQ self			
Did not complete	3 (100%)	4 (66%)	6 (100%)
Completed	0	0	0
SDQ parent			
Did not complete	3 (100%)	5 (83%)	5 (83%)
Completed	0	1 (17%)	1 (17%)
SDQ teacher			
Did not complete	3 (100%)	5 (83%)	5 (83%)
Completed	0	1 (17%)	1 (17%)

Note. RCADS= Revised Children's Anxiety and Depression Scale; TSCC/TSCYC= Trauma Symptom Checklist for Children / Trauma Symptom Checklist for Young Children; MACI= Million Adolescents Clinical Interview; SDQ= Strengths and Difficulties Questionnaire

Across the full sample of 15 cases, it is evident that both young people and their parents/ carers were provided with opportunities to complete a number of in-house assessment instruments. Information as to the nuances and reasons as to why the proportion of the completed assessments was low, was not available. There was no record of those cases who were offered but declined the opportunity to complete

assessments, or those who might have been supported but the assessment was incomplete (due to ability), or any other plausible reasons.

The data collected reported that apart from the WISC (where completed in-house), four assessment instruments were completed at most across the 15 cases. The instruments assessed four different domains that included mental health (depression and/or anxiety), trauma symptomology of young person, a clinical inventory (used for the purposes of identifying early signs of Axis I and Axis II disorders in adolescents) and the strengths and difficulties questionnaire.

Out of these four the assessment least likely to be completed was the SDQ, followed by MACI. Overall, around two thirds of cases completed a mental health assessment, both the self-report and parental reported versions. Out of the ones who completed the RCADS self-report measure, three (33%) young people, scored within the clinical threshold of a mental health diagnosis. Those within the IDD cohort were least likely to report a completed RCADS self-assessment (50% of the IDD cohort). None of the ID cohort met the threshold for diagnosis. The parent version of RCADS was completed by six cases, and 66% of those who completed it scored the young person within the clinical threshold for anxiety disorders.

The self-reported Trauma Symptom Checklist for (young) Children (TSCC/ TSCYC) was reported as completed by nine of the 15 cases. This was most likely to be either an ASD (66% of the cases) or IDD (66%) case. In 44% of the nine cases the young people met the clinical threshold for acute and chronic posttraumatic symptomatology. All of the ID young people who completed the assessment were recorded as within normal range.

The Millon Adolescent Clinical Inventory (MACI) assesses personality patterns as well as self-reported concerns and clinical symptoms. This was completed by five cases (either ASD or ID) out of which 80% (4 cases) were recorded within the clinical range, meaning they met the criteria for a diagnosis as assessed by MACI.

The Strengths and Difficulties Questionnaire (SDQ) is a brief emotional and behavioural screening questionnaire for children and young people. This was recorded as completed in two (13%) of the cases, and in both instances, it was completed by the parent/ carer and teacher. As this is considered a screening questionnaire it is known that the service did not prioritise its application.

Discussion

Summary of findings

The study was a case study of a service for young people with IDD who display HSB. They were all referred for assessments to a community-based specialist provider, *Service A*, as run by NSPCC. The aim of the study was to review the internal assessment provisions at the specialist HSB service as well as illustrating differences between the diagnostic cohorts, and their clinical profiles. The 15 cases identified were split into three diagnostic groups, those with an ASD diagnosis (3 cases), those with an ID diagnosis (6 cases) and those with a comorbid diagnosis of ID and ASD, the IDD group (6 cases). Multidisciplinary team reports were read and coded by the researcher using a binary coding system in accordance with the presence or absence of certain behaviours and/or experiences. *Service A* is a fair representation of a community-based specialist HSB service for young people, given that it is run by one of the largest children's charities in the UK. It is also a service that conducts its own research and delivers training as well as consultancy to a significant number of other agencies thereby impacting on wider practices and knowledge sharing.

Cognitive assessments

Overall, the data available in relation to the cognitive ability of the sample was limited, out of the 15 cases only six young people had a full-scale IQ score, although a cognitive assessment had been completed in all cases. As noted, this is not unusual in cases where a young person has ASD. Although not all had a FSIQ score, the MDT did report the qualitative descriptive categories of the young person profile (e.g. extremely low). The data in relation to the FSIQ scores was split between the three cohorts, however due to the low numbers available the results were not very informative.

The reports did demonstrate that at *Service A* cognitive tests were completed either in-house or by external organisations (prior to the case referral to the service). In cases where an assessment was completed in the young person's past, the decision to complete a more recent WISC-IV assessment was based on the recency of the past assessment (if completed less than 18 months prior, it tended to be accepted). This clinical decision was based on the understanding that children and young people's

cognitive profiles are still developing during adolescence, and cognitive abilities might either peak or plateau at different points in time.

Where IQ tests were accepted based on prior assessments the instruments used might not have been gold- standard WISC tools but instruments with an equivalent capability to estimate the cognitive ability of the testee. As an example, in some cases the British Ability Scales (BAS3) was used, with as a sole assessment of cognitive ability is not sufficient to diagnosed ID.

Although, the data offered from the MDT reports was limited, when compared to existing literature, what is remarkable is the consistency with which cognitive assessments were carried out by *Service A*. Issues in reporting accurate data in relation to IDD diagnosis and the subsequent impact this has on prevalence rates, was exemplified by the data as displayed in Table 3 (Chapter 2). The lack of appropriate assessments completed in- house, as well as incorrect and misleading labelling of diagnosis (i.e. reference to learning difficulties) will have an impact on the wider understanding of the IDD cohort, within this specific forensic group. With this in mind, clinical information as extracted from current MDT reports in relation to the IDD cohort, can be considered fairly representative of the cohort, albeit it would have also been subject to Type I error, had any inferential results been extracted.

Family compositions

In 46% of the cases, parents were reported as separated, those categorised as ID cases were least likely to report parental separation (0% of the cases). Just over a quarter (26%) were looked after children and the same proportion were in the care of the extended family (such as aunties and grandparents).

A third of the full sample reported witnessing domestic violence between the adults in their home. Existing literature suggests a high rate of parental separation and incident rates of domestic violence in the homes of young people who display HSB (Day, 1993).

Young people's own experiences of trauma and abuse

Where information was available about their trauma histories, it was on average two types of experiences. The majority (86%) of the cases had some trauma or abuse related experiences recorded.

In the current sample just under half (46%) of the full sample had a record of experiencing sexual and physical abuse with 40% also being victims of neglect. These rates are comparable to the figures

reported in larger case file review studies, such as the Hackett et al (2013) study of 700 case files who reported up to 50% of their full sample reported experiences of sexual abuse and up to 38% physical abuse, as well as the Richardson et al. (1995) study with rates being 41% and 55% equivalent. Others report lower rates such as in the Manocha and Mezey (1998) study of 51 case files where 29.4% of reports included sexual abuse and 23.5% physical abuse. Dolan et al. (1996) also reported similar rates with 25.5% recording experiences of sexual abuse and 30% of physical abuse.

However, as none of the studies above looked at specific experiences of the IDD populations in comparison to their full sample cohort, a study by Almond and Giles (2008) is a more fitting comparison. The authors explored differences between those in the ID and non-ID cohorts in young people who display HSB. They found in their sample that young people without ID were statistically more likely (6% vs 24%) to witness domestic violence in the home. Experiences of sexual and physical abuse between the groups was not significantly different but overall the rates were lower for the non-ID group (25% vs 33% for sexual abuse, and 31% vs 33% for physical abuse). The authors also had data on experience of neglect, which was not often recorded. In their sample of those with ID 35% experienced neglect, comparable to current study in which 40% of the sample recorded it.

On the whole, in the current study a large proportion of the sample (86%) had a record of experiencing some type of abuse or neglect in their own childhoods. This is a rather high figure and resonates with the Bladon et al., (2005) study that found similarly high (96.5%) rates of abuse experience in their sample.

Index behaviour

Overall, across the full sample 53% of the index behaviours suggested that offences against siblings were more often victims of childhood sexual abuse and were more likely to have a younger child in their families. Dolan, Holloway, Bailey, and Kroll (1996) reported a similar finding, in their comparison of adolescents who had sexually offended and had, or had not histories of their own abuse as well. They found a significant difference in incidents of sibling abuse between the two groups, such that the group where their own experience of abuse had been reported, were more likely to offend against a sibling.

This is an interesting finding of a potential relationship between own abuse and sibling-incest, that could be further explored in a future study of a larger sample of IDD adolescent offenders.

Within the current cohort 66% of the ASD sample was recorded as having engaged in contact-based index behaviour. This can only be compared to some of the existing literature on adult men with ASD who sexually offend, as no specific data exist yet, to the knowledge of the researcher on the adolescents with ASD who display HSB. Namely Heaton and Murphy (2013) reported in their follow-up of adult sexual offenders with IDD, who had undergone treatment, that men with ASD were less likely to engage in non-contact behaviours. Whereas in the current sample of adolescent ASD cases two thirds engaged in a contact behaviour. Furthermore, if the ASD cohort was to be combined with the IDD cohort (given that this is a sample of young people with both ASD and IDD) and the sample size increases to nine cases, 55% of the cohort is reported as engaging in contact index behaviours and 44% of these cases involved a sibling.

There is no existing empirical data comparing index offence types across IDD cohorts of adolescents. This finding is a novel one, and purely an observation at this point.

Known use of pornography was recorded in 60% of the full sample, and in 53% of the sample the index behaviour (for referral) was based on sexual behaviour of contact nature. Unfortunately, no record was made of how the young person might have accessed the pornographic materials.

Clinical assessments

A proportion (30%) of the full sample were reported to have a co-current diagnosis of ADHD. None of the young people within the ID category had an ADHD diagnosis. However, ADHD was not assessed internally at the service. The assessment practices, where completed internally within *Service A*, changed in accordance to the needs and cognitive profiles of the young person.

The MDT reports revealed that fewer assessments (four at most) were offered to young people with IDD than those without (up to nine instruments were available). Most of the instruments used would have had a demanding cognitive and processing load, relying on the person's understanding and processing of verbal and written information. In addition to this, some items within the instrument were

also rather abstract, an example includes a question from RCADS that asks the young person to score how much they agree with the following statement: '*I cannot think clearly*'.

The selection of instruments presented to the young person would have been done on an individual basis, and based on professional clinical judgment. The acting consultant clinical psychologist would take into account the cognitive abilities of the young person, so as not to overburden and overwhelm them with assessments and challenging questions.

Overall, however, across the full cohort of 15 cases there was little consistency as to which assessment tools were offered and recorded as completed, irrespective of some of the experiences the young person might have been subjected to. Though the data from self-reports suggests a large percentage (87%) of the sample recorded experience of abuse in their childhoods, only 60% of the cases were recorded as having completed the trauma assessment instrument. Out of those who completed the self-assessment for trauma (usually supported by a member of the *Service A* team), 44% scored within the clinical threshold for posttraumatic symptomatology. Of the five young people who also completed the MACI, with support, 80% of them met the threshold for Axis I and Axis II disorders.

Details of the mental health profiles across the three groups

ASD cohort. The data from *Service A* notes that out of the full ASD sample 2 young people were offered the opportunity to complete the RCADS anxiety and depression assessment. Although, there is an adapted version of the RCADS to accommodate characteristics of young people with ASD (the Anxiety Scale for Children, ASC-ASD) this was not available to the service. Instead, the general self-report RCADS was used, and interestingly both of the young people met the cut off criteria for psychopathology.

Within this cohort the one young person met the criteria for depression and the other for both anxiety and depression. The parental version of RCADS-P was also offered to one of the cases, but not the other (reasons for which are unclear), irrespective of which the parental scores were not recorded.

For the TSCYC measure, the one case met the threshold for anxiety, depression, anger, PTSD and sexual concerns. This was the same individual who met the clinical cut off on the RCADS self-

reported measure for both anxiety and depression. The other young person did not meet the threshold for any of the TSCYC subscales, and the scores were within the normal range.

Two of the young people with ASD also completed the MACI measure, with one presenting with elevated scores on the disclosure and debasement scales, as well as the self-demeaning, doleful, inhibited, oppositional, and borderline scales. The other young person had elevations within the peer insecurity scale, anxious feelings scale and depressive affect scale, but that same young person had not completed the RCADS nor MACI measures. None of the young people nor their parents, or teachers completed the SDQ questionnaires, as these were not offered.

ID cohort. None of the young people who completed the RCADS (66% of the sample), met the cut off for the clinical threshold for anxiety and/or depression. Conversely in two of those cases, the adult carers scored the young person as meeting the threshold for some of the subscales including generalised anxiety, depression, social phobia and OCD.

Five young people were offered the opportunity to complete the TSCYC measure. Four scored below clinical cut offs for any of the subscales, and one was completed by a grandmother, on behalf of the young person, and whose ratings did not meet the criteria either. One young person's scores were very high for the under-response scale, indicating he would have downplayed his difficulties in completing this questionnaire.

Three young people completed the MACI questionnaire, with one scoring within the normal range when compared to peers, and two meeting the criteria for a selection of subsets. One of these were the scores of a young person who achieved an extremely low disclosure score that is indicative of an adolescent who is defensive and unwilling to bring forth personal attributes and concerns. The other young person scored highly on confidence and outgoing within their emerging personality patterns scales, and disruptive behaviours as well as attention deficits within the current clinical signs scales.

The majority of the young people and their families, as well as teachers, did not complete the SDQ questionnaires, as these were not offered.

IDD cohort. Half the IDD sample was offered to complete the RCADS self-reported measure. In one case this resulted in scores that fell within the normal range. In this case the scores suggested the young person was in the borderline category for separation anxiety only. There was some variation in

who completed the RCADS parental version within the IDD cohort. In the three cases this was done by a grandmother, key worker and step-father. Their parental scores differed from the young people's, such discrepancies in scores have been found in previous research as well (see Hourigan, Goodman, & Southam-Gerow, 2011). Within the current cohort the results indicated that the responses of one of the young people placed them in the clinically significant range on the social phobia, depression, as well as total anxiety and depression categories. The second young person was scored as meeting the threshold for clinical cut-off for generalised anxiety disorder and obsessive-compulsive disorder. The TSCYC was completed by 50% of the sample by the young people, and in one case it was completed by a family member. One of the young person's scores was above clinical threshold for sexual preoccupation; the scores of all the other cases were within the normal ranges. None of the young people with IDD were offered the MACI assessment nor the SDQ.

Interpretations

These findings suggest that most young people with IDD at a community-based specialist service for HSB, have either an ID or IDD diagnosis rather than simply ASD. They are predominantly male and aged around 14 at the point of referral. The types of behaviours they display are difficult to separate meaningfully across categories of HSB, but a proportion were referred to the service on the basis of engaging in contact behaviours. A large proportion of the full cohort were reported as having had adverse childhood experiences.

Yet, from the clinical assessments offered, and at odds with how many reported experiences of abuse and neglect, not many of the young people, where assessed, met the criteria for mental health diagnosis. Plausibly this is because the assessment tools on offer were not adapted for the needs of the young people with IDD. Parental reports and assessments were more likely to score the young person over the clinical threshold for mental health needs, than self-report measures, but apart from the RCADS instrument, no others had validated parental response tools.

A high proportion (60%) of the *Service A* cases reported use of pornography, which in comparison to other empirical studies is higher than recorded previously. A 2016 UK survey found that 48% of 11–16-year-olds reported viewing pornography, with boys being approximately twice as likely as

girls to have actively searched for it (Martellozzo et al, 2016). The high rate of the ASD cohort admitting to viewing pornography (100%) might reflect the disinhibition young people with ASD have in relation to reporting what others might consider taboo or shameful behaviours. However, for some young people there may be a link between viewing pornography and subsequent inappropriate behaviour (Beech et al, 2008; Leukfeldt et al, 2014). This is a link that needs to be explored some more through rigorously designed studies. One UK study that explored both online-facilitated HSB and purely 'offline' HSB, found that a developmentally inappropriate use of pornography had a trigger effect for offline HSB in more than half of cases (Belton & Hollis, 2016). Overall, the use of and the impact of online pornography is still considered a fairly new area of research, in terms of young people, especially those known to forensic and specialist services, meaning as an area it requires a lot more empirical attention.

Previous studies, have also suggested the limited social networks for ID populations usually resulted in HSB being perpetrated against a narrow pool of victims (Almond & Giles, 2008), which might include siblings. Other studies have linked sibling abuse to the person's own experiences of abuse and neglect in the home (Worling, 1995). One common finding that appears to arise in cases of child sexual abuse (by adults) is that it will rarely be the only type of abuse experienced, in solidarity. Therefore, any hypothesised pathway to offending (or to displaying HSB in adolescence) becomes one of a complex nature, which if omitting the emotional and psychological impact such experiences might have had on the young person, would be unjust and a flawed representation. Severe maltreatment is associated with poorer emotional wellbeing, and delinquent behaviour (Radford et al., 2011).

Limitations

There are a multitude of limitations present in collecting data via case reports, some of which have been acknowledged already. As the study was based on file review it relied on accurate recording of information in files, which would have been contributed to by a number of different individuals and professionals over the years. This introduces the possibility of variation between the quality of reporting and human error.

For instance, during the process of data collection, it was noted on a number of occasions that the MDT reports would include information collected by services that had previous contact with the cases.

This, at times, included previous education psychologist, CAMHS or child psychiatrists' reports. Often however, during the course of the assessment process by the specialist team, it would be unearthed that diagnoses at times were conflicting, or even not shared with the family. For instance, in one case an ASD diagnosis was made but not shared with the family, when it came to the surface via the data gathering process for the MDT report, the independent diagnostic service retracted the diagnosis and re-evaluated the child. In another instance ID might have been strongly suggested by the wider service cohort, but the diagnosis had not been officially made.

Another limitation, of collecting data via case reports is that detailed information about the nature of reported maltreatment of the young person was not consistently available for these analyses.

Also, in the absence of a matched control group it was not possible to determine which characteristics are specific to those young people with IDD. Yet, it is known the level of victimisation experiences by these young people are higher than what national data suggests for young people across the UK currently (Radford et al., 2011).

Overall discussion

The two small- scale studies, as above explored the specialist service provisions and the characteristics of young people within the wider IDD cohort, who displayed HSB. The first study identified variations in assessment processes with clear evidence of poor consistency across service provisions. One aspect of such inconsistencies were differences across the IDD and non-IDD provisions, in that a bigger selection of assessment tools are typically available for non- IDD cases, including 'gold standard' assessments of mental health (Rojahn, Rowe, Kasdan, Moore, & van Ingen, 2011). The current studies, indicated that no equivalent gold standard tools are available for the IDD population (Aman, 1991; Sturmey, 2007). The wider implications of such practice are that, despite a number of both charity and statutory service recommendations, the holistic needs of the young people with IDD across specialist service for HSB, are not being assessed, and consequently not recognised. Data from Study 1 also suggested that there is a tendency to use risk assessment tools inappropriately as clinical indicators of the well-being of the young people.

Although the full sample was limited, variations in the service agencies that took part in Study 1, meant that some indication was provided in relation to specialist provision, across sectors. It is, however, a concern to find a lack of standardisation in assessment processes with a tendency to over-rely on risk assessments. Comprehensive, offence-specific assessments can have distinctive purposes at different stages in the legal process and/or management of a case. In cases where a young person has been sentenced this should incorporate a holistic process that considers pre-sentence (risk, placement and prognosis), post adjudication (treatment needs), pre-release or discharge (risk, placement, community safety) and monitoring (risk, ongoing treatment needs) (Worling & Langton, 2012). But holistic assessments of the wider needs of these young people are also crucial if any specialist interventions are to be efficient. It is not appropriate to ignore any of the experiences the young people might have had of childhood abuse and neglect, as they are significant contributors to long-lasting psychological problems (Browne & Finkelhor, 1986).

In Study 2, a large proportion of young people with IDD were found to have experienced abuse and neglect in their own childhoods, experiences that will have profound effects. A more recent study investigating the effects of child sexual abuse (CSA) on young people who go on to display HSB themselves, states that although the crossover from being a victim to being a perpetrator is low, some differences when compared to those without a history of sexual victimisation, were identified in relation to psychological functioning (Morais, Alexander, Fix & Burkhart, 2018). Young people with a history of CSA were found to be more likely to be diagnosed with major depression and posttraumatic stress disorder than those who did not report a history of CSA. It was also identified that a history of CSA was positively correlated with risk for sexually offending and with specific offence patterns and consensual sexual behaviours. Overall findings indicated that the individuals who experienced CSA had unique treatment needs, something that is not necessarily identified well in the IDD sample.

There was some evidence of services using the most appropriate risk assessment tool for an IDD population, the AIM2. However, in Study 1, same tool was repeatedly reported as used for assessments of wider domains of individual's functioning (from mental health to attachment). Apart from this being inappropriate practice, another important factor to mention is that risk assessments differ on one key aspect from other clinical assessments of well-being. Risk assessment tools do not require the person who

completes them to engage in an interview or conversation with the individual who is being assessed. They can be completed in isolation and on the back of existing reports relating to the case. Therefore, even if they are the ‘most’ appropriate of the assessments accessible at the service, solely relying on them for information will skew the data obtained.

The implications of the current studies, much like the one by Morais et al. (2018), are that past adverse experiences should bear a role in the consideration in the assessment of immediate needs and in treatment planning. It is not appropriate to treat the subsequent maladaptive behaviours in silos without considering the young people’s wider needs.

Finally, currently studying young people with ASD separately from those with other developmental disabilities should be pursued further, as it would improve the literature base. In agreement with Suttin et al. (2013), there is an indication, limited by the sample size that young people with ASD exhibit unique symptomatology that requires more focused and often adapted intervention programmes. Therefore, future research to determine the specific vulnerabilities and needs of young people with ASD who display HSB, for the purpose of guiding treatment interventions, should be prioritised.

Summary and future directions

The results, that emerged from the two studies here, deliver a strong argument for the need of holistic assessments in specialist service providers. Assessments that not only focus on the risk of the young person but also their wider psychosocial functioning are needed. There is existing evidence that such assessment practices are already in place for young people without IDD (as reviewed and published within a number of national reports), but with the two studies above, there is also evidence that these practices fail young people with IDD. Namely, although a large proportion of young people with IDD who present with HSB have had also adverse childhood experiences that will impact on their psychosocial functioning, services fail to assess for this adequately. Most services focus their assessments around risk instruments, and in cases where they also include assessments of wider domains, the tools that are used are inadequate.

In terms of future directions, these findings, although limited in some respects, make a clear argument for the development of assessment tools specifically for an IDD adolescent population, to be used within forensic, HSB services. Psychosocial assessments that aim to identify a wide range of needs and vulnerabilities, such as mental health, family and social circumstances are necessary. Assessment aims should include identification of the needs and vulnerabilities of the young people, which will offer the opportunity to identify factors that will need addressing within treatment. Treatment programmes that take into account young people's specific experiences are likely to result in better, overall outcomes for the young person's long-term wellbeing.

Chapter 5

Tool selection and adaptation.

Chapter overview

Results from Chapter 4, Study 1 indicate variations in assessment practices across service providers with differences in the types of tools utilised for assessing key domains in young people with IDD and HSB. Although most providers reported assessing a number of set domains across non-IDD cases, for example sexual knowledge, cognitive distortions, socio-affective functioning, attachment, victim empathy, and resilience, the utility of the majority of those tools were significantly limited, by not being psychometrically validated for adolescents with IDD, and by not targeting the topic participants thought. Study 2, illustrated that the abuse and neglect experiences of the young people, and their mental health, were not being assessed aptly by existing tools in services where they should be used. The proportion of young people whose MDT reports described experiences of maltreatment did not equal the proportion of the same cohort of young people who met the clinical cut off for some of the possible mental health issues experienced. This does not align with the current clinical understanding of the possible impact of neglect and abuse on children, in the short and long term, and therefore it was possible that these domains were not assessed as effectively, by the existing tools, in cases where the young person had IDD.

Having worked in a clinical capacity for a number of years and within a specialist HSB service, Vizard (2014) contends that assessments of young people with IDD who display HSB should be rooted in the same principles and practice which inform assessment of their non-IDD counterparts. In the same review Vizard (2014) also makes the point that assessment approaches should take into account take the wide range of co-morbid social, emotional, cognitive, neuropsychological and behavioural problems which the young people often present. The data from Study 1 and 2 in Chapter 4, however, suggest this is simply not the case in instances where young people with IDD were assessed at the services. Rather than assess the various domains individually (as was reported to be the practice for non-IDD cases) practitioners reported an over- reliance on risk assessment tools for IDD cases. In some instances, the

reported tools used for cases regarding young people with IDD, were instruments developed for adult men.

The following chapter will review and present what good practice means in terms of assessments within a specialist population, and it will present three tools, two of which are selected for adaptations in the current thesis, as assessment instruments for application within specialist HSB service providers.

Evidence Based Practice

In their scathing review of correctional practices, Gannon and Ward (2014) present a compelling argument that, as of late, practitioners across adult services, have become too focused on the Risk Need Responsivity (RNR) Model (Andrews & Bonta, 2010) due to an overarching pressure to meet the needs of risk and security-based policies of correctional systems. This is despite the wider systems understanding that the RNR model was never intended to replace correctional (meaning professionals trained and registered to conduct independent psychological practice within correctional settings) psychologists' governing models of clinical practice. Rather it was intended to offer policy makers' a focus for correctional policy in the form of programme selection (Andrews & Bonta, 2010). Gannon and Ward (2014) argue such oversight has led to unintended and unfortunate misalignment in service practice, by security and risk concerns becoming priorities as though they are therapeutic issues. Subsequently, the authors deduce this has led to correctional psychologists' understating the service users' wider needs as set out in Evidence Based Practice (EBP), the APA endorsed governing model of best practice in applied psychology, at least in the USA (Goodheart et al., 2006).

EBP sets out three principles that should be followed in applied clinical practice. They state: i) research evidence is considered a fundamental guiding tool to good practice, ii) clinical expertise and decision making should be used when applying research to clinical situations in which the research base is a poor fit or unavailable, and iii) client individuality in the form of preferences and values should be considered when allocating interventions (Lilienfeld et al., 2013). If applied appropriately EBP principles encourage and support standardised and defensible expert psychological practice that is aligned with mainstream psychology and incorporates client values and preferences. The role of the psychologist expands into an active practitioner who bridges the gap between research and practice through expert

interpretation, adaptation and application (Lilienfeld et al., 2013). The over-riding notion of EBP is that it promotes effective psychological practice, improves patient outcomes, and applies empirically supported principles of psychological assessment, case formulation and intervention, as well as relationships. By being over-reliant or too- focused on the RNR principles, specifically around treatment practices, psychologists are at a risk of prioritising security and risk concerns over therapeutic needs, which is in conflict with the EBP principles. Gannon and Ward's (2014) critical review provides a useful context for considering the role that assessments play in EBP within youth offending practices, in meeting the specific needs of young people with IDD within specialist HSB services. The results of the survey of specialist services (Chapter 4, Study 1) indicated that, due to a lack of alternative tools, assessments are focused around those that are available, although not always appropriate, and are primarily risk-focused instruments. This finding raises concerns as assessments are used to guide treatment planning; assessment instruments are part of the clinical formulation process. By relying primarily on risk assessment tools and forgoing a holistic approach to assessing the needs of the young person, service providers, commissioners and policy makers risk failing to understand the specific needs and vulnerabilities of those young people with IDD who display HSB. This in turn can lead to wider processing errors and managing case issues in terms of the criminal justice response, as suggested by Gannon and Ward (2014).

Characteristics of good assessments

Approaches to clinical assessments for young people who display HSB in specialist services might vary but should follow the general guidelines as set by professional bodies such as the British Psychological Society or APA. Good clinical assessment for young people should be based on the EBP model, and differ from adult practices, as the developmental differences between adolescents and adults affect offender needs, behaviour, culpability, and responsiveness to treatment (McCord et al., 2001; Rich, 2005).

O'Reilly (2001) reviewed and identified 18 features that should be present in good quality assessment practice of adolescents who display HSB. The author maintained that in hand with EBP, assessments need to be theoretically informed and guided by research, as well as aiming to build a holistic understanding of the young person's life and therapeutic needs. On the other hand, O'Callaghan

(2002) specifically focused on the assessment needs of young people with ID who display HSB, identifying nine key areas, the view being that all of these areas should be integrated into a formulation that in turn provides a basis of a treatment plan. The nine areas O'Callaghan (2002) identified are:

1 Biological family, meaning history of the family of origin. This was to include information on parents' and siblings' level of intellectual functioning; family attitudes towards sexuality (particularly in respect of the child with an ID); and current family relationships as well as level of contact.

2 Young person's health, that covers history of medical factors impacting on development. These might include brain trauma, and use of medication, in addition to information about specific known genetic conditions such as Fragile X, Down's syndrome, ASD etc.

3 Young person's developmental history. This was to include information on when developmental delay was identified and other behavioural problems that have been following a developmental trajectory.

4 Young person's care history. Information to be sought in relation to bonding and attachment experiences, any problems related to loss or separation (for example, respite, substitute or hospital care), any care concerns that might include abuse, neglect, trauma, and the response of parents to their child being identified as having an ID.

5 Young person's educational history. Include information around young person's attendance at mainstream or special school, details from the Statement of Special Educational Needs, with information about their academic and social experience of schooling to date, as well as behaviour within the school setting.

6 Assessment of general cognitive functioning, meaning a full-scale IQ assessment.

7 Social functioning. This was to be an assessment of young person's access to social networks, activities and opportunities, their relationships with peers, and adaptive behaviours.

8 Psycho-sexual history in relation to sexual maturity. An assessment was to include information about the psycho- sexual development of the young person including known experiences of sexual victimisation.

9 History of problematic sexual behaviour. This was to include detailed information about the range of behaviours demonstrated, be it exposure or contact offences with details of victims and their

relationship, alongside details of what responses adults and involved agencies made to problematic sexual behaviours to date.

An understanding, as provided through appropriate assessments, of presenting psychopathology was also considered an essential component of treatment planning (Erooga & Masson, 2006).

Psychometric assessments

The existing empirical research has evidenced the need for the use of psychometric assessments: as tools they provide users (be it clinical practitioners or services) with standardised comparison groups, normed samples for statistical comparisons and the ability to measure change pre and post intervention (Beech, Craig, & Browne, 2009). A range of sources of information can be used in an overall assessment process, including self-reports, behavioural observation, collateral information contained in documents shared by service providers who have had contact with the young person, and direct psychological testing. Arguably, objective instruments such as psychometric tests and questionnaires have more ability to provide accurate and reliable assessment of individuals than the more subjective methods, such as clinical interviews (British Psychological Society, 2016). Empirically based assessment methods involve using standardised procedures to collect, interpret and describe information with the aim of helping clinicians form judgments and make decisions about clients based upon replicated methodologically validated studies. Part of this process needs to focus on understanding the ecological systems (i.e. friends and family of the young person) that have shaped the young person's development and functioning and on which s/he continues to depend for structure, guidance and nurturance. Determining the YPs level of overall psychological, behavioural and social functioning, including their capacity of self-regulating his/her behaviour can help provide an understanding of their behaviour in a holistic framework.

In the area of forensic and mental health service provisions and research, there is no shortage of a range of psychometric assessment tools available for non-IDD populations; in contrast, as discussed, there is a paucity of such measures available for populations without IDD. The lack of an equal amount of resources and existing assessment measures for individuals with IDD has been observed as impeding accurate assessment and treatment provision aimed at positive change in this population (Craig &

Lindsey & Browne, 2010). Access to adapted tools for the IDD population, for use across specialist HSB services, has been slow to develop.

To the best knowledge of the author, at the time of writing, only two tools have been adapted for adolescents with IDD who present with HSB. The two tools focus on assessing offence specific features, which albeit an integral part of a clinical assessment, neither assess features of the young persons' socio-emotional domains. One tool is an adapted measure of cognitive distortions in young people with IDD (QACSO; Cygan, 2015) and the other is an assessment tool, of sexual knowledge and risk in young people with IDD (ASK-A; Richards, 2018). At the time of the data collection for the current project, the adapted QACSO for young people was published in a thesis, whereas the ASK-A was undergoing data collection. The author was made aware of the work through her affiliation with the Learning Disability Working Group (LDWG) as noted in Chapter 3 and further discussed below.

Therefore, a clear need for more adaptations of strength-based tools, as used in non- IDD populations, was presented.

Tools selected for adaptation

The rationale for choosing the three selected tools in the current thesis, two for adaptation and one for validation in an IDD sample, can be broadly categorised into the following five motives: i) the domains the three tools assess have been linked to the development and maintenance of HSB in adults with IDD (subsequently they are posited to play a role in adolescents with IDD), ii) two (out of three) measures selected are freely available, and therefore more likely to be used by service providers, iii) all three are in a self- report format, iv) all three are strengths based, and not risk focused, and v) they are already in circulation across specialist service providers (see chapter 4).

Information derived from the selected assessment tools, has the potential to offer insight into the young person's social and emotional functioning. Poor socio- affective functioning has specifically been suggested as a key component in the onset and maintenance of HSB (Keeling et al., 2009). The link between high emotional loneliness, social skill deficits and an increased risk of HSB (Becker & Abel, 1985), has been researched extensively within the adult (both IDD and non-IDD) populations. The role that social difficulties play in the development and maintenance of HSB is recognised within the

Integrated Theory of Sexual Offending (ITSO; Ward & Beech, 2006). Experiencing problems in areas such as emotional loneliness is suggested to clinically reflect a dysfunction in the motivation and emotional systems which, in turn, might lead to adult attachment problems (Ward et al., 1996). In the research on adult sexual offenders, both intimacy and loneliness have been found to be problematic (Seidman et al., 1994). Ward et al. (2000) postulated that the fear of rejection links intimacy and loneliness by preventing sexual offenders from seeking appropriate intimate relationships, leading to emotional loneliness.

It is also recognised that distal ecological factors such as adverse childhood experiences (especially such events as abuse, stress, and rejection) play a significant role in producing possible biochemical changes in the neuropsychological system that underlies and modulates attachment behaviours (Beech & Mitchell, 2005). Notably, Marshall (1989) suggested that parental attachment styles experienced during childhood impact on intimacy in adulthood, insofar as the development of an insecure attachment style can lead to relationship problems. For adults who display HSB this has been then associated with emotional loneliness, low self-confidence and poor social skills. Essentially, Marshall's (1989) hypothesis states that poor attachments and poor socio-affective functioning could be a potential pathway to offending. Experiences of maltreatment in childhood, such as negative family disruptions and experiences of violence and abuse may contribute to poor parental attachments and deficits in interpersonal functioning, which may, in turn, predispose to a coercive style of interpersonal interaction (Barbaree, Marshall, & McCormick, 1998). This in turn can lead to developmental problems in forming intimate relationships and low empathy in adulthood leading to social disability syndrome, as coined by Barbaree et al (1998), which results in deviant sexual interests and behaviours.

Studies have also linked individuals with IDD generally to poorer attachment, as well as poorer socio-affective functioning (Dagnan & Jahoda 2006; Dagnan & Waring, 2004) but not in the context of adolescents who display HSB. In childhood, low intellectual functioning has been identified as a risk factor for poor attachments, as a consequence of poor parenting (Baxter et al. 2000; Stolk & Kars 2000), sexual abuse (Lindsay et al. 2001) and physical abuse (Hayes 2002). Overall, empirical studies focusing on adults (with and without IDD) have identified loneliness and attachment as important factors in the development of HSB. However, the role of these factors in adolescents with IDD who display HSB is less

understood. How they might develop and when (if) they might come into play is less clear, which supports the need for further empirical work in studying these factors, which can only be done aptly by the use of appropriate assessment tools. Interestingly, more recent studies on the effects of, and the link between, adverse childhood experiences and latter externalising behaviours, suggest resilience has an important role to play (Fougere & Daffern, 2011).

The potential role of resilience as a protective factor needs to be better understood within the IDD population of young people within forensic services. Resilience as a concept has been suggested to be an umbrella term and a dynamic process associated with positive adaptation following exposure to adversity (Olsson et al., 2003). It does not imply an invulnerability to stress, rather an ability to recover from negative events. In terms of the role resilience plays in young people, this has been studied across a number of contexts including exposure to maltreatment (Collishaw et al., 2007), mental health (see Southwick, Litz, Charney, & Friedman, 2011) and being in care (see Hines, Merdinger, & Wyatt, 2005). Resiliency has been suggested to play a major role in models of risk and can improve the prediction of outcomes (Troy & Mauss, 2011). Empirical studies have reported that around 70% of children considered ‘at risk’ in fact achieve positive outcomes without major developmental disruptions (Ungar, 2004) indicating that a sole focus on risk factors does not provide an adequate model.

Furthermore, the tools chosen have been selected as they have a strength-based focused for assessments. Recent developments in the treatment and assessment of adolescents (with and without IDD) has shifted towards strength-based approaches, in part, perhaps, as a result of the Good Lives Model (Ward, 2002; Ward & Stewart, 2003). Resiliency in particular has the potential to highlight positive characteristics present in the young person, which in turn may inform strength-based interventions aimed at reducing recidivism rates and enhancing successful outcomes. The recently developed National HSB Framework (NSPCC, 2019) recommends the use of strength-based approaches for delivery of interventions.

In the current study, the decision was made to find and adapt assessment tools that were of a self-report nature, as the self-report format is best able to assess a person’s personal experiences (Kerns et al., 1996). Data, as collected in Chapter 4, suggested service providers currently use a variety of instruments in order to complete holistic assessment of the young people across HSB service providers. Some

instruments were self-report format and others engaged with the parent or caretaker. Amongst the self-reported instruments in circulation and use, were the *Revised University of California, Los Angeles Loneliness Scale* (UCLA-R) and *Kerns Security Scale* (KSS). These two instruments were used in order to assess some of the socio-affective domains that were listed as points of interest to practitioners in a range of HSB services, including residential, community based, forensic and charities.

However, neither the *Revised University of California, Los Angeles Loneliness Scale* (UCLA-R; Russell, Peplau & Cutorona, 1980) scale of loneliness, nor the *Kerns Security Scale* (KSS, Aspelmeier, Gentzler & Grabill, 2001) of attachment, have been adapted for use with adolescents with IDD. Equally so, there were no other adapted tools tapping into these areas of adolescent development, in use. In addition to this, a pre-existing measure of resilience (*Resiliency Scales for Children and Adolescents*; RCADS; Prince-Embury, 2008) was also reported as frequently used across teams.

Therefore, these three tools were selected, with two of them to be adapted and psychometrically tested for their applicability within a population of adolescents with intellectual and developmental disabilities, and the third assessed for its applicability within an IDD cohort.

Adapting tools

In developing or adapting assessment tools aimed at individuals with IDD a number of considerations need to be kept in mind. Executive function deficits, memory deficits, speech, language and communication deficits (Blasingame, Creeden & Rich, 2015) and difficulty comprehending more complex language are all challenges faced, in different ranges and degrees by individuals with IDD. In order to facilitate the person's understanding simple language and concepts are advocated (Clare, 1993; Kolton, Boer & Boer, 2001; Lindsey, 2002; Lindsey & Taylor, 2009). Psychometric tools and questionnaires need to be constructed or modified to use short sentences (Kolton, Boer & Boer, 2001), avoid the use of passive voice and negatives (D'Eath, Sixsmith, Cannon, & Kelly, 2005), but also preferably include visual reinforcement via the inclusion of signs, symbols, drawings or images which facilitate communication and convey meaning (Clare, 1993; O'Callaghan, 2004).

Some common response biases in respondents with IDD include a tendency to acquiesce (respond to most questions in the affirmative), and not respond truthfully due to a desire to please the

interviewer and provide what they think is the desired response (Cummins, 1997), but also in some instances there might be a tendency to nay-say (respond mainly in the negative) or to select the last option stated (D'Eath et. al, 2005). Additionally, research has also demonstrated that individuals with ID are at an increased vulnerability to suggestible responses to leading questions (Clare, 1993).

With this in mind, it is important to consider if a significant proportion of assessment tools used within services, might be inappropriate.

Overview of the tools

Background to the measurement of loneliness

Loneliness is a complex construct that is said to arise and be defined when there is an incongruity between an individual's actual and perceived expectation of their interpersonal relationships (Daniel Wayne Russell, 1982). As an emotion it is associated with negative affect and can result from an unfulfilled desire to have friends, an understanding of the gap between an actual and desired social status, and a lack of affective bonding (Bauminger & Kasari, 2000). It is a complex emotion that is intrinsically related to, and relies on, peer influences.

Two different forms of loneliness have been suggested as part of its theoretical formulation, emotional and socio- cognitive (Weiss, 1973). Emotional loneliness is a perceived lack of affective bonding with others, and it can lead to sadness, fear, restlessness, and feelings of emptiness. On the other hand, social-cognitive loneliness results from cognitive processes such as self-evaluation, self-perception, and social comparison. In children it will often arise from when social relationships are perceived as unsatisfactory, or when children do not have accessible social networks or peer groups. Unlike the sadness or emptiness arising from emotional loneliness, social cognitive loneliness gives rise to feelings of exclusion, meaninglessness, marginality, and boredom (Weiss, 1973). Research has found that school-aged children can understand both forms of loneliness, one in relation to being alone (i.e., absence of close and intimate relationships) and the other linked with being sad (Asher et al., 1984; Margalit & Levin-Alyagon, 1994; Renshaw & Brown, 1993).

The UCLA- R (Russell, Peplau, & Cutrona, 1980; Russell, 1996) is one of the most frequently used standardised self-report scales for an individual's subjective feelings of loneliness. It has been

validated across number of populations, including typical adolescents (Shaver & Brennan, 1991), sexual offenders with ID (Keeling, Rose & Beech, 2006) and general offenders in New Zealand (Hudson & Ward, 1997). The earlier versions of the scale were developed containing negative statements only, which was later revised and resulted in the current 20-item instrument (UCLA-R) with a more balanced question format (Russell et al., 1980).

Respondents read descriptions of subjective feelings of loneliness and are required to report how often they feel that which is described, e.g., “I feel left out”, and “I am unhappy being so withdrawn”. Each item is rated on a 4-point Likert scale according to the rate of frequency, ranging from never (1) to often (4). Ten items (1, 4, 5, 6, 9, 10, 15, 16, 19, 20) are reverse scored. The scale is not a diagnostic tool, and there is no official cut off score for loneliness, rather higher scores reflect greater levels of loneliness (Russell et al., 1980).

The UCLA-R has been found to have high internal consistency across various populations with Cronbach’s α ranging from 0.89–0.94 (Russell et al., 1980; Knight, Chisholm, Marsh & Godfrey, 1988). The majority of studies to date have tended to support the instrument’s reliability and construct validity by way of testing for significant correlations between the UCLA-R and alternative loneliness tools (Vassar & Crosby, 2008). More so, Vassar and Crosby (2008) also tested the aggregated estimate of the reliability of the scale over time and in a variety of populations by utilising a method referred to as reliability generalisation. The authors reviewed the mean internal consistency across a number of different study populations finding sizable variability of reported internal consistency. They identified four factors that impacted significantly on the variability of the reported coefficient alpha scores, i) score standard deviation, ii) article type, iii) adolescent sample, and iv) separation from a social network. Notably, studies applying the UCLA-R on adolescent populations tended to produce lower reliability estimates, yet the authors found the UCLA-R to be a widely used tool for assessment of loneliness in both children and adolescents (Vassar & Crosby, 2008).

Exploratory factor analyses (EFA) have supported both a two-factor and a three- factor structure of the UCLA-R scale. Some models have suggested the two-factor structure to be constructed around the positive and negative wording of the items (Knight, Chisholm, Marsh, & Godfrey, 1988) whereas others have found evidence of a three- factor structure (Shelvin et al., 2014), composed of isolation, relational

connectedness, and collective connectedness factors. Conversely, although the tool has been used as a measure of both emotional and social loneliness (for e.g. Ireland & Power, 2004; Vaux, 1988), the majority of the researchers on IDD offenders have utilised the UCLA-R scale as a one factor scale that measures the subjective feelings of loneliness (Keeling et al., 2007).

Background to the measure of secure attachment

Attachment theory (Bowlby, 1982) provides a conceptual framework for understanding and studying the nature and significance of child- mother bonds. To say that a child is securely attached to a caregiver signifies that the child is confident in the responsiveness and availability of that figure (Bowlby, 1977, 1979). Where and when the attachment figure is perceived as responsive to experiences of distress, the child is more likely to learn how to regulate his or her own distress using strategies that involve seeking support and comfort from the parental figure, which in turn results in the development of secure attachment (Ainsworth, 1979). On the other hand, if distress signals are met with insensitivity and inconsistency from the attachment figure, there is an increased likelihood that the child will learn to associate distress with aversive consequences, and might develop coping strategies, contributing to an insecure attachment. The frequency and intensity of attachment behaviour towards a primary caretaker declines with the age of the child (Bowlby, 1979), but the attachment bond is maintained well into adulthood (Ainsworth, 1990). Although the physical proximity to the caretaker becomes less important in adolescents, the attachment figure(s) become the primary providers of social support (Kerns et al., 2001a). Parents continue to play a significant role in protecting the child, with the attachment system becoming activated when an attachment figure perceives that the child is in danger or distressed (George & Solomon, 1999). The attachment figure therefore needs to be aware of the child's emotional needs. In adolescents, empirical studies have suggested the quality of attachment relationships is important as protective or risk factors for later psychological adjustment and for the quality of peer relationships (Batgos & Leadbeater, 1994; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993).

The Kerns Security Scale (KSS; Kerns et al., 1996; Kerns et al., 2001a) is a 15-item self-report questionnaire designed to measure children's own perceptions of attachment security in the caregiver relationship. Kerns et al. (1996) specified that items on the KSS tap the degree to which children and young people believe a selected attachment figure is responsive and available (e.g. 'some kids worry that

their mum/dad may not be there when they need her/him, but other kids are sure their mum/dad will be there when they need her/him'), and also their tendency to depend on the attachment figure in times of stress (e.g., 'some kids find it easy to count on their mum/dad for help, but other kids think it is hard to count on their mum/dad'), and children's reported ease and interest in communicating with the attachment figure (e.g., 'some kids like telling their mum/dad what they are thinking or feeling, but other kids do not like telling their mum/dad what they are thinking or feeling').

The response options are based on the Harter scale (Harter, 1982) in which children are presented with two possible responses and are asked to indicate which of the two responses they feel they belong more to; it is a forced-choice format. This is in order to decrease the child's likelihood of responding in a socially desirable manner (Harter, 1982). The scoring of KSS is done on a 1 to 4-point system (range: 15 to 60), with higher scores reflecting a more secure attachment. The KSS can be used to assess perceived attachment security both across childhood and adolescence (van Ryzin & Leve, 2012).

Although the scale is predominantly used as a single construct measure, Lieberman, Doyle, & Markiewicz (1999) demonstrated that KSS can be treated as two-factor scale with items arranged into the subscales of 'dependency' (e.g. whether a child finds it easy to trust his or her parent) and 'availability' (e.g. whether a child worries that a parent will not be there when needed). In such cases higher scores can reflect a greater dependency on parental help and greater availability of parental figures. Barcsi et al. (2017) on the other hand found support for a three-factor model composed of reliance, availability, and autonomy support factors.

Brumariu, Madigan, Giuseppone, Movahed Abtahi, and Kerns (2018) completed a recent meta-analysis for the purposes of evaluating the psychometric properties of the KSS in relation to a number of factors which included its stability over time and association with moderator variables. By stability over time, the authors specified it to be the attachment stability within childhood or from childhood to adolescence (towards a named caregiver). The effect size, which was transformed into correlations for the purpose of reporting mean effect sizes, was found to be moderate $r = .51$ [95% CI: 0.34–0.71]. Although significant correlations investigating association between security of attachment and a number of other factors were also identified the mean effect sizes were rather weak. The authors reported on an association between security of attachment and school adaptation ($k = 8$; $r = 0.25$; 95% CI: 0.21-.29),

emotional competence ($k = 14$; $r = 0.17$; 95% CI: 0.12-0.22), peer social competence ($k = 22$; $r = .20$; 95% CI: .14–.26), externalising behaviour ($k = 18$; $r = -.19$; 95% CI: -.15 to -.23), self-esteem ($k = 10$; $r = .31$; 95% CI: .20-.40) and internalizing behaviour ($k = 26$; $r = -.23$; 95% CI: -.17 to -.29).

Overall research suggests (e.g. Marshall, Serran, & Cortoni, 2000; Cortoni & Marshall, 2001) that issues in the development of early emotional attachment contribute to low emotional intelligence, reduced empathy for others, low self-esteem and emotional loneliness and a failure to establish intimate relationships in later life, suggesting it will be useful to explore this further in young people with IDD and HSB.

Background to the measure of resilience

Resilience is a multidimensional concept that includes an interplay between internal factors and the environment (Prince-Embury, 2010). It is considered to be dynamic, rather than fixed, making it flexible to the demands of different environments and it can adapt over time (Philippe et al., 2011). Historically, resilience was considered to be defined using a dichotomy, whereby individuals were seen to be either resilient or not (Naglieri et al., 2010). Via the use of Likert scales, however it is possible to conceptualise and analyse resilience in a graded manner, although this too has limitations, as use of Likert-based scoring in the measurement of resilience may increase acquiescence bias (Hjemdal et al., 2006). Self-reported measures of resilience provide access to the individuals' interpretation of their experience (Prince-Embury, 2006), albeit responses are then also more susceptible to distortions through socially desirable responding.

The Resiliency Scales for Children and Adolescents (RSCA; Prince-Embury, 2006) is a published measure, normed on an American population. It has a suite of three factors as measured by the three self-report scales: Sense of Mastery, Sense of Relatedness and Emotional Reactivity. The scales are devised to also be capable of computing a Resource and Vulnerability Index, which the author suggests is useful for screening purposes. The Resource Index is a combined score of the two strength-based scales into one, and it represents an estimate of the young person's personal strength or resources (Prince-Embury, 2011). The Vulnerability Index is calculated by subtracting the young person's Emotional Reactivity Scale from the Resource Index score. It is a summary score that represents children's personal

vulnerability as the relative difference between their combined self-perceived resources (the Resource Index) and their fragility as described by emotional reactivity (Prince-Embury, 2011).

In total there are 64 items which measure self-reported strengths and vulnerabilities related to resilience for children and adolescents aged 9 to 18 years. Each item is rated on a 5-point Likert scale, with response options ranging from 0 (never) to 4 (almost always). It is written at a third- grade reading level, corresponding to the level expected for a child of approximately 8-years old. The Mastery scale comprises the subscales Optimism, Self-Efficacy, and Adaptability. The Relatedness scale comprises of the subscales Trust, Support, Comfort, Tolerance, and the Emotional Reactivity subscale includes Sensitivity, Recovery, and Impairment.

The manual provides scale T-scores, cumulative percentages, and subscale scaled-scores for; males, females and the total sample. Scorings are differentiated between 9-11-year olds, 12-14-year olds and 15-18-year olds. Scale scores cannot be added to provide an overall measure of resilience, instead scores from all three scales contribute independently towards an individual's Resiliency Profile. Resiliency theory proposes that young people who perceive themselves as having sufficient personal resources will be more resilient and less likely to develop psychopathology, in contrast to those who experience themselves as having insufficient personal resources. For the 'Mastery' and 'Relatedness' scales high scores indicate resilient resources. For the 'Reactivity' scale, high scores indicate vulnerability. Furthermore, young people with high scores on the Resource Index are likely to be more resilient than those with low scores (Prince-Embury, 2011).

Alpha coefficients (α) ranges for the three sub-scales across age and gender groups between ages 9 and 14 are as following: Sense of Mastery Scale $\alpha = 0.85- 0.89$. Sense of Relatedness alpha $\alpha = 0.89- 0.91$. Emotional Reactivity $\alpha = 0.90- 0.91$. Test-retest reliability correlation coefficients for the three subscales scales ranged from $r = .79$ to $.95$.

Concurrent validity of the RSCA scores has been provided through correlational studies looking at the association between RSCA scores and the Beck Youth Inventories (2nd ed; Beck et al., 2005). Results suggest that the RSCA Vulnerability Index and Emotional Reactivity scores correlate strongly with measures of negative emotion, whereas RSCA Sense of Relatedness, Sense of Mastery, and the combined Resource Index correlate strongly with measures of self-esteem.

The RSCA was not adapted for this study, for two of reasons. Firstly it is written in 3rd grade reading level (equivalent to 8 year- olds), and it is a clinical and diagnostic tool that has been standardised on normative samples stratified by parent education level and race/ethnicity within age and gender groups, using T score metric, with the norms available by gender and within the mentioned three age-bands; 9 – 11, 12 – 14, 15 – 18. For these reasons, and because of the large body of existing published empirical work on the instrument specifically focusing on adolescents (that include clinical samples), it was decided to focus the current work on evaluating the instruments use in both a forensic and an IDD sample without adapting it.

In summary, the three tools in focus here were selected on the basis of both the published pragmatic understanding of current specialist service provisions, as well as the outcomes from Study 1 (within Chapter 4). The LDWG had been, and was at the time, in the process of supporting the adaptation of two offence specific instruments (QACSO; Cygan, 2015; ASK-A; Richards, 2018) for young people with IDD. It was clear from Study 1 that services were assessing young people with IDD across a number of wider domains, but that appropriate and adapted instruments were lacking. Empirical research had linked certain socio- emotional characteristics of young people (without IDD) to onset and maintenance of HSB (e.g Seidman et al., 1994; Keeling et al., 2009; Ward et al., 1996) but it had not possible to systematically explore this, in detail for the vulnerable IDD cohort. By focusing on the development of tools that would allow empirical study of the three domains, more could be added to our understanding of the role of distal ecological factors in young people with IDD who present with HSB.

Consulting with experts by experience and practicing professionals

In adapting the other two original tools (UCLA-R and KSS) for an IDD population three consultations were carried out during the course of 4 months. The three independent consultations involved i) the Tizard Researching Altogether Group (RAG), ii) the Learning Disability Working Group (LDWG) and, iii) a Speech and Language Therapist (J.B.). The three sources were each considered to be experts in their areas offering meaningful feedback and contribution towards tool adaptations. On the whole, the feedback received and processed concerned adjustments and adaptations to questionnaire items (organisation), formatting and item wording.

Tizard Researching Altogether Group. The RAG group was a working PPI (public and patient involvement) Tizard group made up of service users with IDD whose role included helping researchers in designing and running academic research. Five RAG members attended the present meeting where they were provided with the original and an adapted version of the two selected tools (UCLA-R and KSS). The RAG members were consulted in relation to the question and item wording, and the questionnaire response formats. In addition to the primary meeting, that led to subsequent alterations to the adapted questionnaires, the new versions of the tools were shared again with the members, for a final review. The RAG feedback primarily informed the new response format of the tools, and the wording of the reverse response items.

Learning Disability Working Group. LDWG is a multi- agency, working group of specialist clinical professionals whose purpose is to investigate, review, and adapt assessment tools to better assess risk and treatment outcomes for young people with IDD and problematic or harmful sexual behaviour. The group is composed of clinical and forensic psychologists representing a variety of agencies and organisations involved in assessments and treatment of young people, with and without IDD who display HSB. The group meets two to three times a year to review, investigate and adapt reliable tools to assess risk and treatment outcomes for young people with IDD and HSB. Further details in relation to the aetiology of the group, member details, and the organisations they represent can be found in *Appendix J*. The LDWG provided not only meaningful feedback on the planned modifications of the two assessment tools, but also their professional opinions on the tools selected for the current thesis. Overall, the group provided feedback around the layout and visual presentation of the questionnaires, as well as to some of the wording of the questions.

Speech and Language Therapist. A professional speech and language therapist who specialises in individuals with IDD was also consulted to feedback on the final version of the two adapted questionnaires. This resulted in the last minor modifications of the two questionnaires in relation to the wording in the adapted questionnaires, but with consideration of the need to adhere to the underlying constructs.

Copies of the original and the final versions of the adapted UCLA-R(A) and KSS(-A) are provided in *Appendix K*, in addition to a copy of the RSCA scales.

Adaptations

UCLA-R modifications

The new adapted version of the UCLA-R was re-named as UCLA-RA (A standing for adapted). From the feedback provided by the three consultations, the following modifications were made to the UCLA-R tool: i) the original Likert scale response format was changed to a continuous format, ii) the wording of items was revised and simplified, and iii) photo symbols were introduced to help with response comprehension.

i) The change in response format meant that the response options transformed from a 4-point Likert scale to 3-point scale. Where the original UCLA-R asked individuals how often they might report feeling a certain way ranging from ‘never’ to ‘often’, the adapted UCLA-RA was modified to ask if individuals agreed to statements made, with possible responses becoming ‘yes’, ‘don’t know’ and ‘no’.

This modification was supported by previous studies that have found more complex point rating scales to be confusing for people with an intellectual disability (Blasingame, 2018; Chachamovich, Fleck, & Power, 2009; Fang et al., 2011). Specifically, Fang et al. (2011) recommended reducing 5- point scales, for adults with ID, down to 3- point responses, to which they are more likely to respond more consistently.

ii) Based on the feedback from all three consultations the language of the original 20 UCLA-R items was reviewed and adjusted. Both RAG members and the specialist speech and language therapist helped refine the item wording of the adapted tools. Specifically, the aim was to make sure items were worded in a manner to increase the likelihood of independent questionnaire completion. Published guidance was also consulted to help formulate each question structure maximising its simplicity and avoiding the use of technical vocabulary (Finlay & Lyons, 2001). Additionally, the text was made larger to increase the accessibility of the measure (Stenfert-Kroese, 1997).

iii) Finally, three symbols (images) were added to the three responses in the adapted tools to help reinforce their meaning (thumbs up for ‘yes’, thumbs down for ‘no’ and a question mark for ‘don’t know’). Studies suggest that a large proportion of people with an IDD have skills in symbolic communication such as signs or picture symbols (Cameron & Murphy, 2007)

In order to examine the effectiveness of the changes above, the readability of the new and changed items were assessed using the Flesch formula (1948, cited in Ley, 1977). Microsoft Word is employed in calculating the formula by taking the average sentence length and number of syllables per 100 words into account, in order to provide an index of “reading ease”. This can range from a score of 0 (very difficult) to a score of 100 (very easy). The Flesch calculation produced a reading ease score of the UCLA-RA as “very easy” (90%).

KSS modifications

Permission to adapt the original KSS was sought and granted by the author Katherine Kern’s (email dated 13th February 2014, found in Appendix L). The new adapted version of the KSS was re-named to KSS-A (A standing for adapted). The meeting with the three consultee groups, resulted in a different set of adaptations for this tool. Across the groups the main limitation of KSS regarded the ambiguity of some of the items. For this reason, the modifications to the original KSS were i) introduction of vignettes, and ii) use of photo symbols.

i) The format of the adapted KSS-A was adjusted to include three adolescent characters (introduced at the start of the questionnaire) and vignettes. Characters were used in order to help with comprehension, and the use of vignettes allowed the question to be contextualised, removing some of the ambiguity. Therefore, each KSS-A question starts with one of characters telling the reader a short story that describes a scenario relating to the question in hand. An example:

Original KSS item: *‘Some kids feel like their mum butts in a lot when they are trying to do things or Other kids feel like their mum lets them do things on their own’* (two statements). In order to respond, the young person is required to decide which of the two statements they agreed with, and then they need to decide to what degree they agree or disagree with the statement.

Adapted KSS-A item (same as above): *‘Jamal and you are playing videogames. Jamal’s gran keeps walking into his room. Jamal tells you his gran usually bothers him a lot. Other times Jamal might try and help with the washing up or with folding washing, but his gran will try to help him. He wants to do things on his own’*. In order to respond, the young person is asked *‘Jamal asks you about you’*, the response new forced format becoming *‘Do you feel like your ____ doesn’t let you to do things on your*

own or *Do you feel like your ____ lets you do things on your own*'. As with the original version of KSS, the young person also needs to indicate how much they agree with their response by circling a dichotomous reply that is worded "a lot" or "a little".

These changes to the original KSS, were supported by published research that has established it can be challenging for people with IDD to understand contextual implications, and as an alternative it is recommended that questions refer to specific events, it being an approach that is considered more effective (Finlay & Lyons, 2001; Hurley, Levitas, Lucavalier & Pary, 2007). Research has also indicated that when asking about sensitive content it is considered more beneficial to ask about specifics rather than generalities (Finlay & Lyons, 2001).

ii) Each of the characters was accompanied by a drawn character representation as sourced in the Change Picture Bank©. Such visual cues can also be helpful with minimising response ambiguity.

Before young people responded to the KSS attachment tool, they were instructed to name the relationship they had with the caretaker they were closest to (e.g. mother, father, grandmother, auntie etc) and to think of that person in completing both the versions of the attachment scales. A proportion of young people in forensic settings named a unique caretaker relationship, such as adopted parent or foster carers, as they were not in contact with their biological family.

The Flesch formula (1948, cited in Ley, 1977) demonstrated the reading ease, of the adapted KSS-A to be "very easy" (90%).

Psychometric assessments of the adapted instruments

In order to evaluate the appropriateness of the adapted tools, as will be discussed in Chapter 6, the original and adapted instruments were subjected to psychometric assessments. Within psychometrics there are a number of principles whereby the quality, of a newly developed assessment is evaluated. These include i) reliability, ii) validity, and iii) freedom from bias. In addition to this, specifically in evaluating adaptations of existing instruments, it is of pertinence to also consider the tools factor structure. To this end, the following chapter presents tests evaluating the adapted instrument's reliability, validity, bias and Confirmatory Factor Analysis (CFA), these being compared to the original instruments, across four populations of interest.

Reliability. Reliability has traditionally and is still often referred to as an assessment of (an instrument's) consistency (Coolican, 2017), as it refers to the accuracy and precision of a measurement procedure (Thorndike, Cunningham, Thorndike, & Hagen, 1991). With regard to psychometric properties of psychological instruments, reliability is assessed with respect to the population assessed, as it "refers to the results obtained with an evaluation instrument and not the instrument itself" (p. 78, Gronlund & Linn, 1990). In essence it means that it is not the instrument itself that is assessed for reliability, rather the consistency at which an instrument performs in terms of the function of properties of the underlying construct being measured, the assessment itself, the cohorts being assessed, the testing environment, and the purpose of assessment. Assessing reliability of an instrument therefore becomes a process by which one evaluates the degree to which the instrument of interest is free from measurement error. Albeit error, or a degree of inconsistency is present in all measurement procedures, and therefore cannot ever be expected to be entirely eliminated.

Reliability has been assessed through a number of means, including test-retest, parallel test forms and by internal consistency testing. Cronbach's alpha (1951), is still one of the most widely used estimators of internal consistency, i.e. reliability of an instrument. While it has been subjected to some critique from increasing numbers of researchers (Leppink, 2019), alpha has also been used as a means of checking for unidimensionality, and validity. Internal consistency assesses the interrelatedness of a sample of test items, whereas unidimensionality refers to its homogeneity. A unidimensional measure is confirmed as such when it measures a single latent trait or construct. Internal consistency is a necessary but not sufficient condition for measuring homogeneity in a sample of instrument items (Tavakol & Dennick, 2011).

The acceptable value of Cronbach's alpha (α) does vary, but it has been proposed to range from 0.70 to 0.95 (Bland & Altman, 1997). The reasons for a low alpha value are varied but might include a low number of questions, poor interrelatedness between items, or heterogeneous constructs.

Validity. Validity traditionally has been viewed as a process by which an evaluation is made of if, and how well, an instrument is measuring an attribute it was developed to measure. The process entails appraising the relationship between the observed variables, and the latent attribute, that is of interest. This definition of "Is the test measuring what I think it is?", has however changed with time, and partly in

response to work by Cronbach (1971). Much in line with his work on reliability, Cronbach demonstrated that the focus of validity was actually the characteristics of the people assessed and the scores they obtained. Meaning the validation process is not an assessment of the tests integrity, rather it is about the inferences that can be made about the characteristics of the people who have produced those results. To validate a tool, is to demonstrate an instrument to be valid with a specific group of people in a specific context, in which they were tested. Consequently, it is amiss to ever claim a scale to be valid (Streiner & Norman, 2008).

Validity can be referred to as a unitary construct but it is often divided into three: content validity, criterion validity and construct validity.

Content validity is the degree to which the items on a scale are representative of the latent construct, the instrument seeks to measure, often assessing this is a non- statistical process and involves discussion with experts in the area.

Criterion validity is a process by which one evaluates a new instrument against an existing ‘gold standard’ version of that tool. It is demonstrated by assessing, via means of correlation the relationship between the scores from the two measurement procedures (Kimberlin & Winterstein, 2008). The process by which the relationship between two instruments, where both instruments are measuring the same construct, is assessed, is also a technique by which convergent validity and concurrent validity are tested (Polit, 2015).

Finally, construct validity is an all- encompassing term, that cannot be produced via a singular assessment or test, but rather is much like a never-ending evaluating process to which a measure or instrument is subjected to each time it is used. It has been subdivided into a number of subtypes including convergent validity, discriminant validity, trait validity etc. (Streiner & Norman, 2008).

Bias. Bias occurs when scores on an instrument change in accordance with group membership. An instrument is said to be biased when its use results in adverse impact on one or more groups when compared with others. Bias can be present in a multitude of forms, arising from participant related factors such as responder bias, to factors related to the tool composition and question characteristics, an example of which is intrinsic test bias. Specifically, pertinent to the current thesis is the level of agreement

between the two versions of the same scales, which can be assessed via a Bland-Altman plot (Altman & Bland, 1983).

Where correlations quantify the degree to which two variables are related, the Bland-Altman analysis uses a graphical approach (a scatter plot) to illustrate a quantified agreement between two quantitative measurements by constructing limits of agreement. These statistical limits are calculated by using the mean and the standard deviation (SD.) of the differences between two measurements. It is recommended that 95% of the data points should lie within $\pm 2SD$ of the mean difference (Altman & Bland, 1983). The analysis produces a scatter plot graph, in which the *Y* axis illustrated the difference between the two matching measurements ($A-B$), and the *X* axis characterises the average of these measures $((A+B)/2)$. Meaning, the difference between the two paired instruments is plotted against the mean of the two instruments. The first aspect to consider in evaluating agreement between the two instruments, has been recommended to be the average of the differences between the paired data (Giavarina, 2015). It is considered of interest to evaluate this difference at different magnitude of the measured variable, and if neither of the two methods is a point of reference, the difference should be compared with the mean of the two paired values. The role of the limits of agreement, on the other hand is to quantify the bias and a range of agreement, that represents 95% of the differences between one measurement and the other.

Confirmatory Factor Analysis. CFA was completed in order to assess the instruments pre-determined factor structure within the context of the current populations. The test allows for an assessment of how the tools perform in accordance with the pre-existing models. CFA in this context is considered a progression of Exploratory Factor Analysis, whose role is to identify the factor structure. CFA, on the other hand will aim to identify if the structure is maintained across different populations. The application of CFA requires a strong empirical and conceptual foundation to guide the specification and evaluation of the factor model. The new model was evaluated by goodness of fit tests and by the interpretability and strength of the resulting parameter estimates (Brown, 2006) it produced.

Summary

In this chapter three assessment instruments were selected for adaptation for use with an adolescent IDD population within HSB services. The instruments picked were selected as they assess particular psychological domains that have clinical value in specialist HSB services as identified in Chapter 4, Study 1. The specific areas of the tools selected are those of loneliness, secure attachment and resilience. Two of the tools required modification: the one of loneliness and the secure attachment measures. Both high levels of loneliness and poor attachment have been linked to offending behaviours within neurotypical populations, which, to date has not been sufficiently evaluated within an IDD adolescent population, providing a basis for the adaptation as above and in Chapter 6. Therefore, the instruments as selected were modified with help and feedback from service users as well as practitioners within the field.

The third tool, the resilience instrument was not modified but has been included because of the relevance of the concept to this group of young people, given the new, more strength-based practices that are being implemented within forensic, youth services. The resilience tool, although it has been used across number of providers and has been standardised with a number of different populations, has not been subjected to any psychometric testing within forensic, or IDD populations.

Chapter 6 will next present two studies that are concerned with the psychometric properties of all three instruments. The aim of the research was to have developed reliable adapted tools that could be applied within specialist services, and used to inform a strength-based, holistic practice for a specialist population.

Chapter 6

Psychometrics and validation of selected tools.

Chapter overview

Empirical studies (see review in Chapter 2) have found young people with IDD, in general, report higher rates of mental health symptoms, display poorer socio- affective skills and experience higher rates of adverse childhood events, than their non- IDD age- matched counterparts. National reports suggest the challenges associated with poor socio- affective skills, as exacerbated by high rates of mental health issues might be particularly pertinent in cases of young people who go onto engage in risky behaviours in adolescence such as harmful sexual behaviours (Ghani, 2016). Where young people with IDD present with HSB, they might be referred onto assessment and treatment services via either the criminal justice system or through health pathways. As the NSPCC HSB framework (2019) recognised, the exact pathway is determined on an individual basis, and there is little consistency across cases, and specifically across services. Crucially, however most service providers for young people with HSB accept referrals of young people with IDD, regardless of the ability of the services in supporting the young person adequately during the assessment processes. The consequences of which might have a bearing on the treatment provisions, as referrals lead to assessments, via case formulations, that in turn result in case reports which feed into treatment recommendations.

However, as illustrated by results in Chapters 3 and 4, specialist HSB service providers lack adequately developed, or modified assessment instruments for young people with IDD. In their place, as noted in Chapter 4 services report the use of risk assessment tools as the primary source of assessment information, specifically for the IDD cases. As such, providers fail to consider the full socioemotional profiles of young people with IDD who display HSB. This is not only at odds with the provisions that are in place for young people without IDD at the same service, but also with national recommendations and guidelines set by reviewing bodies, as well as clinical practice guidance as set up by BPS and APA.

In response to the current lack of appropriate, and adapted instruments, Chapter 5 presented three instruments selected for adaptation and modification in the current thesis. The tools selected, if deemed

appropriate, within the current chapter can be made available across the service networks and will allow for a broader assessment of psychosocial functioning of those adolescents with IDD within specialist HSB services.

The following chapter will present two studies: Study 3 details the psychometric validation of two adapted measures, the University of California, Los Angeles Loneliness Scale Revised (UCLA- R) and Kerns Secure Scale (KSS), and Study 4 will assess the utility of the Resiliency Scales for Children and Adolescents within an IDD and forensic adolescent population.

Aims

Two original aims of the Study 3 and Study 4 in the project as established at the outset of the work, had to be revised, in time, due to challenges encountered with data collection. However, all the aims are given in full here and adjustments in the aims are explained.

Aim 1: originally aim 1 was to compare the results of adolescents who display HSB against adolescents who display other types of risky behaviours (i.e. general delinquency but not HSB), on the two adapted measures across the two diagnostic cohorts (IDD vs. non-IDD). However, participant recruitment, across specialist HSB service providers, especially of young people with IDD proved to be problematic. Issues with access, drops in referral rates to specialist providers, changes in referral pathways, and challenges in (obtaining) a diagnosis led to adjustments in the study design. Consequently, instead of focusing solely on HSB services, participant recruitment was expanded to include participants across a range of forensic services.

Aim 2: the original aim 2 was to assess the test- retest reliability of the adapted measures by completing data collection at two time points (approximately two weeks apart) with a selection of participants. However, due to issues with access to service providers merely three participants were able to take part in the test- retest, subsequently the test-retest reliability was not completed.

In response to the above difficulties, the aims of the following chapter were reformulated as: i) examination of the psychometric properties of the modified measures, including proportional bias, ii) exploration of group differences between four cohorts (IDD, non-IDD, forensic and non- forensic), and iii) examination of the suitability of the RSCA measures for the IDD and HSB cohorts.

The revised and adjusted aims of Study 3 and 4 are therefore as follows:

Study 3. Explore the psychometric properties of the adapted measures (UCLA-RA and KSS-A) in comparison to the performance of the original versions of the measures (UCLA-R and KSS) across four participant cohorts (IDD, non-IDD, forensic and non- forensic). Explore the instruments' existing factor structure, via Confirmatory Factor Analysis (CFA), within the context of four cohorts, and assess the presence of proportional bias via Bland- Altman plots.

Study 4. Evaluate the reliability of the resiliency subscales across four participant cohorts (IDD, non-IDD, Forensic and non-Forensic). In addition to this, group differences were explored in relation to their performance on the subscales of RSCA.

The crucial differences of these aims from the original aims was that in Study 3 the group differences were tested between forensic and non- forensic participants (as opposed to HSB versus non- HSB), and test- retest analysis had to be dropped from the original aims.

Method

Design

This was a cross-sectional questionnaire-based study that applied correlation, regression and confirmatory factor analysis in order to investigate the suitability of the modified instrument across four cohorts. Proportional bias was assessed via the Bland-Altman plots.

Ethics and governance

In planning for and completing data collection for the current project, the code of ethics and conduct as set out by the British Psychological Association (BPS, 2009) was adhered to. The ethical principles of respect, responsibility, competence and integrity were observed.

The research materials were designed based upon feedback from service users as detailed in Chapter 5. The project was reviewed and approved by an NHS Research Ethics Committee (London - Camden & Kings Cross. Reference: 15 LO/0688). Local Research governance approval was obtained from the Oxleas NHS Foundation Trust (Appendix M). As challenges emerged in relation to recruitment, additional local approvals were obtained from a number of charity-based services, private organisations and specialist service providers, according to the ethical review processes of each organisation.

For data collection in educational settings approval was typically sought from Headteachers after local approval was obtained via the Tizard Research Ethics committee.

In due course, approval was also obtained from the National Offender Management Service, via the National Research Committee in order to include data collection at a youth offending institute (Appendix N). In total nine ethical committees granted approved for data collection across a range of sites and service providers.

Gaining consent- Forensic service providers. For adolescent participants under 16 years of age, not Gillick/Fraser competent, informed consent was obtained from next of kin of the participants, and assent from the adolescents. Where the adolescent was a Looked After Child the Local Authority was approached for consent. For adolescent participants under 16 years of age and Gillick/Fraser competent, informed consent was obtained from the adolescents themselves, using the accessible information sheets and consent forms. For adolescent participants over 16 years of age, informed consent was obtained from

adolescents themselves, using information sheets and consent forms. If they were deemed unable to consent due to a lack of capacity, a personal (or nominated) consultee as specified in the Mental Capacity Act (MCA, 2005), was sought.

Gaining consent- Non- forensic service providers. For adolescent participants aged 11-16, regardless of ability consent was sought with their parents/ legal guardians, and the young people provided assent in taking part. This decision was based on previous research within schools, and on the advice of headteachers, as this is often considered good practice and the preferred method, by most Heads of schools. For any capacitous adolescents aged 16+, consent was sought with them individually, but parents and guardians were sent information sheets about the study. For any non- capacitous adolescents aged 16+, consent was sought with parents and guardians, and the young people assented to taking part in the study.

Participants

Inclusion Criteria

The following inclusion criteria were applied to the study:

- i) Participants, male or female aged between (and inclusive of) 12 and 17 years (this was later adjusted to include participants aged 18 in YOI and those aged 11 in education);
- ii) Participants within the IDD cohort needed to have an ASD and/or intellectual disability diagnosis. This was defined by an existing clinical ID diagnosis, or where a full-scale IQ was present with $IQ \leq 75^6$ as measured by the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999) and in line with the BPS guidance on ID diagnosis, and/or an ADOS report for those with ASD;
- iii) Participants were only required to have the capacity to provide assent to take part in the study, as in most cases parents/ legal guardians provided the legally required consent for participation (further details are provided in the Ethics section);

⁶ In line with Whitaker's (2013) body of work, it is acknowledged that current IQ tests do not measure IQ to a level of accuracy of one point: there is a margin of error, typically considered to be five points either side of the obtained IQ, which should be taken into account when making a diagnosis of ID (the American Association on Mental Retardation, 2002).

iv) For participants in the forensic cohort, they need to have engaged in offending or problematic risky (where based in specialist services) behaviours (HSB or other), with any relevant criminal investigations completed.

v) For the non- IDD cohort, there was no record or clinical/ professional suspicion (if applicable) of the young person having ID or an ASD diagnosis;

Exclusion Criteria

Two exclusion criteria were applied:

i) Participants were excluded if there was a significant risk of psychological harm, identified, if exposed to the questionnaires (e.g. those with a severe history of sexual abuse themselves);

ii) Participants were excluded if they were unable to provide assent and/or relevant professionals felt that the participant did not fully understand the study information provided.

Site recruitment

Participants were recruited in two parts, i) the first part of recruitment focused on the specialist forensic and mental health service providers, this included the Youth Offending Institute (YOI), and ii) the second part of recruitment was completed at non- forensic services, i.e. secondary schools.

Recruitment was completed across eight sites in total. Five forensic sites and three non- forensic sites took part.

Recruitment of forensic samples. The forensic services that partook in data collection were located across the UK with provisions in South East, Midlands and West counties. Contact and service details of potential sites were obtained through various means including an (expired) Forensic Child and Adolescent Mental Health Service list as published by Dent, Peto, Griffin and Hindley (2013), the ySOTSEC-ID network collaborative, and a list of charity-based services in England (as devised through data collection in Chapter 4) with provisions for young people who display HSB. At the time of the project, no publicly available list of all forensic service providers within England, for young people who display HSB, was available for consultation.

Records showed that over 150 forensic professionals were contacted electronically with information sheets in relation to the project. Service managers and team leaders, where possible, were

contacted initially with a brief email informing them about the research. Subsequent interest in the study was expressed by over 30 sites. Where more information was requested this was provided via a meeting, phone call or by email. In instances where service wide consent had been granted by the manager, a presentation of the research study was made to the clinical and staff teams. Where a presentation was not possible, this information was disseminated by the team managers via a more detailed information sheet. Following this, 17 sites requested and received full study assessment packs.

However not all 17 sites decided to take part after receiving the comprehensive questionnaire packs. Services declined to take part, due to a number of reasons, including the demands data collection might have on staff, and young people. At four⁷ forensic sites staff and management consented to support the data collection. The clinical team was subsequently asked to identify and contact potential participants who matched the inclusion criteria. In the early stages of the project the focus was recruitment of young people with IDD who displayed HSB. This was later adjusted to include wider cohort of young people who display risky behaviours (as identified by specialist forensic services), in line with the recruitment challenges experienced.

Once potential young people were identified by the service team they were invited to participate in the study. Easy read information sheets and consent forms were made available to all the young people (see Appendix O). If the participant expressed an interest in taking part, they were invited to ask questions of the service team to help them decide. Those who opted to take part completed a consent form.

Following on from this, depending on the service provider, the researcher and a site representative agreed the next steps. Either the researcher, or the on-site team, supported the young person in completing the assessment packs.

One forensic service (service five), although expressing an interest in the project, declined to part take as a data collection site. Instead the site manager agreed to share some existing data, as collected in-house, with the researcher. Namely, the specialist community service for adolescents who display HSB, were unable to support data collection in relation to the modified and original scales (i.e. Study 3). But

⁷ A fifth forensic site agreed to support the research in a different capacity as detailed in Study 2.

the site had been assessing young people as referred to their service, using the RSCA instrument. The team agreed to share the data collected (in relation to cases that met the study inclusion criteria) on the RSCA instrument which made up part of the sample in Study 4. This is further detailed, including ethical considerations involved, in the method and results section of Study 4.

Recruitment of a non- forensic sample. The process for the second wave participants in secondary schools was similar to above. Details of local schools were obtained from online Kent County Council websites. The first stage involved electronically contacting Headteachers, of over 15 schools, with study information. Depending on the preference of the individuals, further information about the study was provided either in a meeting, via phone call or by email. Once consent from Headteachers was granted, a presentation regarding the study was made to the school staff and teachers. Three secondary schools⁸ consented to taking part in the recruitment for the project.

SENCO teachers were asked to identify young people in their classes who matched the inclusion criteria, and to invite them to participate in the study. Teachers would provide study information sheets and consent forms to individual pupils and their carers and/or parents. Consent and/or assent were sought from both young people and their carers and/or parents (as described above). In most cases this resulted in a whole class in a year group taking part (where consent was granted by parents).

The format of data collection was adjusted in line with needs, requirements and preferences of the school. The two data collection formats used were either i) the researcher attended a class and collected data in person, or ii) the teacher supported individual pupils in completing the assessment packs. In instances where either a service representative or a teacher supported the young people without the presence of the researcher, a training session was provided to the teacher, in how to administer the assessments without compromising the validity of the tools.

Participant characteristics

In its full capacity, participant recruitment was completed between December 2015 and January 2018. As noted in the section above, and illustrated in Table 16 and, due to issues in recruitment of HSB

⁸ Details of which are found in Table 21

sample, the original aims of the study were adjusted in November 2016, which meant an adjustment in the four original participant cohorts.

Table 16

Initial cohort characteristics with data collected between 2015-2016

Participant cohort	Number of young people	Mean age (SD)	Service type
IDD displaying HSB	2	16.50 (0.70)	Specialist HSB service
IDD displaying other types of offending behaviours	3	17.67 (0.58)	Specialist HSB service
Non- IDD displaying HSB	1	17.00*	Specialist HSB service
Non- IDD displaying other types of offending behaviours	1	18.00*	Specialist forensic service

*Note. *this is the age of the one participant.*

Despite considerable recruitment efforts participant recruitment became stagnant, as evident from Table 16, reasons for which were discussed above. In essence, one of the key causes for it was identified to be the requirement for a very niche population of young people with HSB.

In agreement with the PhD supervisory team, the HSB cohort was extended to include a more general forensic population of young people, as identified via participant's recruitment through specialist community based forensic services. By expanding the HSB cohort and recruiting forensic participants, by recruitment of a non- forensic population (which was signified by recruiting young people through educational providers).

The final sample of Study 3⁹ consisted of 65 adolescents, age range 11-18 years ($M = 15.09$, $SD = 2.19$), composed of 54 males (83%) and 11 females (17%), as detailed in Table 17 and grouped in accordance with the site of recruitment.

Table 17

Sample characteristics of the participant within Study 3 cohort across six sites

Sample sites	Number of young people	Mean age (SD)	Gender (male)	Young people with IDD
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⁹ Participants details for Study 2 are located in section 2 of the chapter.

Young Offending Institute (<i>n</i> =1)	19	17.32 (0.67)	19 (100%)	5 (26%)
Specialist Services (<i>n</i> =3 services combined)	11	16.21 (1.42)	11 (100%)	6 (55%)
Special Schools (<i>n</i> =2 schools combined)	21	13.67 (1.56)	16 (76%)	8 (38%)
Mainstream School (<i>n</i> =1)	14	13.29 (1.54)	8 (57%)	1 (7%)
Total	65	15.09 (2.19)	54 (83%)	20 (30%)

Exploratory data analysis was completed on the data within Table 17, checking for differences between sample sites. Kruskal- Wallis test of variance indicated that there were significant differences between the ages of the young people across the four data sample sites in Study 3 ($\chi^2(3, N= 65)= 41.01$, $p<.001$) with a mean rank age of 52.11 within the YOI cohort, 42.59 for the Specialist Services, 21.21 for the Specialist Schools and 17.21 for the Mainstream school. A Bonferroni post hoc test found a significant difference in ages between the Mainstream school and Specialist service cohorts ($p= .005$), Mainstream school and YOI cohorts ($p<.001$), Special School and Special service cohorts ($p= .013$) and Special school and YOI cohorts ($p< .001$).

A Fisher's exact test indicated a significant difference between the gender ($p= 0.002$) and the IDD and non- IDD distribution ($p= 0.055$), across the four data sample sites.

The overall impact of these factors (age, gender and cohort), in terms of the impact on the participant's scores, was further explored via the moderation analysis of Study 3 (see Moderation analysis).

Categorisation

The original intention was to divide the full sample into four mutually exclusive categories, as follows: i) non- IDD non- forensic cohort, ii) non- IDD forensic cohort, iii) IDD non- forensic cohort, and iv) IDD forensic cohort. As Table 18 illustrates, the grouping in accordance with these four cohorts resulted in unequal participant numbers, making it difficult to complete meaningful comparisons across the cohorts and thereby increasing the risk of Type II error occurring (as a result of the small numbers).

Table 18

Total sample size as split into four preliminary cohorts

Cohort	Number of participants N=65
Non- IDD non- forensic	26
Non- IDD forensic	19
IDD non- forensic	9
IDD forensic	11

Instead, it was decided to categorise the four cohorts based on the combination of two aspects i) the type of service location of participants, and ii) the diagnostic features of the young persons, thereby maximising the size of the cohorts. Accordingly, the grouping of the participants was: i) young people with Intellectual and Developmental Disability (i.e. IDD cohort), ii) young people without IDD (i.e. non-IDD), iii) young people recruited within forensic services (i.e. forensic cohort), and iv) young people recruited through schools (i.e. non- forensic cohort), see Table 19 for details.

Table 19

The four cohorts tested across the study

Cohort	n	Details	Recruitment site
IDD	20	Young people with an IDD diagnosis, where either ID or ASD has been diagnosed	Mixed (forensic and non- forensic)
Non- IDD	45	Young people without an IDD diagnosis	Mixed (forensic and non- forensic)
Forensic	30	Young people as recruited from specialist HSB service providers or youth offending institute	Forensic services; includes those detained by the MoJ, and those detained under MHA and Children's Act
Non- Forensic	35	Young people as recruited from educational service providers	Specialist and/or mainstream secondary schools

Of note, between the groups (non/IDD and non/Forensic) some cases overlap, a proportion of young people with IDD were based within forensic services, and a proportion were based in educational settings.

The full details of the study sample (across Study 3) identifying the recruitment site, the site categorisation and the cohort the participant might be identified through are illustrated in Table 20.

Table 20

Characteristics of the eight sites in Study 3 and Study 4

Site category	Participant n	Type of service	Participant cohort recruited
Study 3			
Forensic	19	Youth Offending Institute	Forensic, non-IDD and IDD
Forensic	6	Specialist HSB service provider	Forensic, non-IDD and IDD
Forensic	4	Specialist HSB service provider	Forensic, non-IDD and IDD
Forensic	1	Specialist HSB service provider	Forensic, non-IDD
Education	6	Special School	Non- forensic, non-IDD and IDD
Education	15	Special School	Non- forensic, non-IDD and IDD
Education	14	Mainstream school	Non- forensic, non-IDD and IDD
Total	65		

Thus, the final full sample of Study 3 was based on 65 participants as recruited across seven sites.

IDD cohort

The specific diagnostic distribution and features of the IDD sample across the services is illustrated in Table 21.

Table 21

The full sample of Study 3 participants split in accordance to their diagnostic categories.

Site (n of participants)	ID diagnosis n=6	ASD diagnosis n= 8	Comorbid diagnosis n= 6	No known IDD diagnosis n= 45
Young Offending Institute n=19 (forensic)	3	2	-	14
Specialist HSB Services n= 11 (forensic)	1	-	5	5
Special Schools n=21 (non- forensic)	1	6	1	13
Mainstream School n=14 (non- forensic)	1	-	-	13

The largest proportion (50%) of ID cohort, within the current study sample was based in the one youth offending institute, the largest (75%) cohort of the ASD population was based in the special schools, and the largest proportion (85%) of the cohort with a comorbid diagnosis was based across special HSB services. The majority (82%) of the IDD cohort ($n=9$) were male. As is evident, the split of those with and without- IDD within the specialist HSB services is close to even (54% and 46% respectively).

Procedure

Data collection was completed in person, with one to one support where necessary. A large proportion of data collection was completed by the researcher, although issues with accessing some of the specialist service providers meant a proportion of data collection was done by clinical staff at services. In Study 4 the data shared was historic, as it formed a part of the existing assessment practices of the service. This means the anonymised RSCA data, shared for the purposes of Study 4, was collected by the clinicians at the one specialist service.

For each participant a front sheet in relation to the person's demographic details, diagnosis, offence (where applicable) and additional information, was completed. Where recruitment was completed in forensic settings, the front sheet was completed with help from the clinical team, reports and case notes. Where data was collected in schools, the front sheet was completed by the schools' Special Educational Needs Coordinator (SENCO). The two front sheets did vary according to the service types,

due to ethical sanctions. In educational settings the ethics committee stipulated that it was not acceptable to ask if any problematic HSB behaviours had been noted, nor if the young person had wider mental health issues (apart from a diagnosis for ID or ASD).

At the start of each meeting with the participant the researcher (or a representative) reviewed the study information sheet with them, to ensure continued assent was granted. Participants were given another opportunity to ask questions and were informed that they could request a break or stop the assessment session at any time.

A block randomisation process was utilised in the administration of the assessment instruments, with order of presentation of the adapted and original instruments was administered at random. Each participant completed a demographic information sheet (5 mins), a UCLA-R emotional loneliness scale (both original and adapted), followed by Kerns Secure Scale (both KSS, the original and adapted), the RSCA scales, and an open questions feedback section. The details of all scales were provided in Chapter 5. The completion of the full assessment pack in one sitting lasted between 35- 75 minutes depending on the young person's abilities. Support for young people with IDD was available in terms of reading questions out loud. However paraphrasing questions to aid understanding was not permitted, but repetition was. If the young person did not comprehend the question, they were instructed to either answer it to the best of their understanding or to leave the item unanswered but accompanied by a question mark next to the question.

Study 3

Data Analysis

The analyses were carried out using SPSS package Versions 25, and 26 (2019, 2020; SPSS Inc., Chicago, Illinois, United States of America). Data collected from the questionnaires were entered into SPSS. The first step was to test the variables to explore the distribution and assess the underlying assumptions of parametric analysis. After which descriptive statistics were derived and presented, to help examine the distribution of the raw data, and identify any missing data and outliers.

In order to explore the psychometric properties of the instruments a set of reliability and validity analysis were run. Cronbach's alpha coefficients (Cronbach, 1951) were used to assess the internal consistency of the instruments, and Spearman's rank correlation (Spearman, 1904) was used to assess the convergent validity of the instruments. Bland-Altman plots (Bland & Altman, 1997) were derived, in order to examine proportional bias, and the a priori factor structure of the original and adapted scales was assessed via Confirmatory Factor Analysis (CFA).

Finally, a moderation analysis was completed in order to explore the interaction effects of gender, age and diagnostic group (IDD, non-IDD) on the instruments' score.

Data preparation

Outliers

Prior to analyses, the data collected were thoroughly inspected for outliers. Raw data (i.e. individual scores) distribution was visually inspected using histograms and box-plots. Preliminary normality analyses using a sample of 65 participants identified four outliers. Upon close inspection, the outliers were recognised as individuals who scored high or low on the measures, with no unusual scoring pattern detected. A decision was made to retain these cases as part of the data set.

Normality

Data collected were subjected to univariate normality testing using total scores of each scale. Normality assumptions were assessed using the Shapiro-Wilk test. This test was selected in lieu of Kolmogorov-Smirnov test, as Shapiro-Wilk has been reported more appropriate for small sample sizes

(Zimmerman, 2003). The null hypotheses stated the score distribution to be normally distributed, and this was not rejected for the original UCLA-R Total score ($p = .095$). The null hypotheses, was rejected for the remaining scores of all the instruments.

Missing Data

The SPSS command for Multiple Imputation and Pattern Analysis, as well as the Missing Completely at Random (MCAR) tests were utilised for reviewing missing data. This procedure allowed for a review of the extent of the missing values as well as analysis of patterns in the missing cases. If values are systematically different from cases without missing values, the results can be misleading. The process highlighted where the missing values were located, whether pairs of variables tended to have missing values in individual cases, and whether data values were extreme. Where MCAR significance falls $p > 0.05$ this indicates the missing values are to be considered as missing at random (SPSS, 2019).

All items across the four instruments were reviewed, these being the original UCLA-R, and KSS, the adapted UCLA-RA and KSS-A. Specific consideration was taken to review the any differences in the presence of missing data between the IDD and non-IDD populations, as that might be a limitation of the instrument. The threshold for detecting missing data was set to be very low at 1% (whereby the output reports any values where more than 1% of data is missing).

Original UCLA- R (N=65)

The original UCLA-R measure of loneliness performed well, overall. Less than 3% of all values, across the scale were identified as missing. The variable summary chart identified the variable and percentage of the most frequently missing values, this being Item 12 “My social relationships are superficial”. The missing value patterns showed the missing values to be organised in a random pattern, indicating no systematic patterns in the missing values. A Missing Values Analysis indicated that Little’s (1988) test of Missing Completely at Random (MCAR) was not significant, $\chi^2(254, N= 65) = 283.04, p= 0.102$.

IDD cohort (n=20)

Within the IDD cohort the original UCLA-R performed well for missing values, where 1.25% of all values, across the scale are missing. No specific variable was identified as most frequently missing and there appeared to be no systematic pattern to the missing values.

Non- IDD (n=45)

The missing data patterns for the non-IDD cohort mirror the results of the overall performance of the UCLA-R tool, with 2.8% of all values, across the scale identified as missing. The variable summary chart identified Item 12 “My social relationships are superficial” as the most frequently containing missing values. The missing values were not organised in a systematic pattern.

Adapted UCLA-R (N=65)

The adapted UCLA-R questionnaire overall, contained fewer missing values than the original version. Less than 0.5% of all values, across the scale were identified as missing. The variable summary chart did not identify any specific variables as most frequently missing, with also no pattern visible to the missing values. A Missing Values Analysis indicated that Little’s (1988) test of MCAR was not significant, $\chi^2(55, N= 65)= 53.10, p= 0.55$.

IDD cohort (n=20)

Within the IDD cohort no missing values were found within the adapted UCLA-RA.

Non-IDD cohort (n=45)

Within the non-IDD cohort the adapted UCLA-RA 0.56% missing values were found, across the scale. No specific variable was identified as most frequently missing, nor a pattern identified.

Original KSS (N=58)

The original KSS performed less well, overall. Around 13.9% of all values, across the scale were identified as missing. The variable summary chart identified 4 variables as containing the most frequently missing values, with Item 2 most frequent. Item 2 requires an agreement with either statements: “*Some kids feel like their mum butts in a lot when they are trying to do things*” or “*Other kids feel like their mum lets them do things on their own*”. There appeared to be no systematic pattern to the missing values. A Missing Values Analysis indicated that Little’s (1988) test of MCAR was not significant, $\chi^2(105, N= 58) = 120.37, p= 0.145$.

IDD cohort (n=20)

Within the original KSS, 10% of all values within the IDD cohort, across the scale were identified as missing. No specific variable was identified as most frequently missing. There appeared to be no systematic pattern to the missing values.

Non-IDD cohort (n=38)

Within the original KSS, 15% of all values within the non-IDD cohort, across the scale were identified as missing. Four variables were identified as most frequently missing, with Item 2 (as above) in the lead. There appeared to be no systematic pattern to the distribution of the missing values.

Adapted KSS-A (N=62)

The adapted Kerns Secure Scale performed better, overall. Around 6% of all values, across the scale were identified as missing. The variable summary chart identified one variable as containing the most frequently missing values, Item 7 most frequent. Item 7 requires an agreement with either statement: “Do you wish you were closer to your _____” or “Are you happy with how close you are to your _____”. A Missing Values Analysis indicated that Little’s (1988) test of MCAR was not significant, $\chi^2(117, N=62)=133.98, p=0.136$.

IDD cohort (n=20)

Within the adapted KSS-A, 6% of all values within the IDD cohort, across the scale were identified as missing. No specific variable was identified as most frequently missing. There appeared to be no systematic pattern to the missing values.

Non-IDD cohort (n=42)

Within the adapted KSS-A, close to 7 % of all values within the non-IDD cohort, across the scale were identified as missing. One variable was identified as most frequently missing,, Item 7 (as above) in the lead. There appeared to be no systematic pattern to the missing values.

Managing missing data

Across the UCLA-R original and adapted scales, where missing data was present it was treated as missing at random (and subject to listwise deletion). This decision was based on the finding that there was a low frequency of missing values across the items (as noted above).

However, given that the attachment measure KSS was subject to a significant proportion of missing data (up to 13% in the original scale and 6% on the adapted), as well as both diagnostic cohorts of young people, it was deemed necessary to manage it. Missing data within KSS were replaced using the Hot Deck imputation procedure (Myers, 2011). Hot deck imputation is a recognised and publicly utilised method for handling missing data, in which each missing value is replaced with an observed response from a respondent with similar characteristic on pre-determined anchor variables (i.e. anchoring variables). The two anchoring variables in the current study were i) site type (i.e. forensic or not) and, ii) IDD classification (i.e. if the young person was or was not classified as having an IDD).

Withdrawal

No participants with or without IDD withdrew from completing the questionnaires. But one participant opted out of completing the KSS and KSS-A scales due to a very turbulent relationship experienced with their primary carer. This was noted in the dataset.

Adapted UCLA-RA- calculating new mean

Total scores or averages for the measures were calculated according to the original test instructions. Where the scoring format was changed on a modified instrument, the new standardised scoring approach was developed (and detailed below). Due to the modifications made to the scoring of the adapted UCLA-RA measure, a new standardised mean was calculated for this instrument.

Calculating the new mean for adapted UCLA-RA

Within the original UCLA-R instrument each item is rated on a 4-point Likert scale according to the rate of frequency, ranging from never (1) to often (4). Although there is no clinical cut-off score for diagnosing loneliness, the tool was designed to have higher scores reflect greater levels of loneliness.

The modifications made to the original UCLA-R resulted in the Likert scaling being changed to an ordinal response format. The UCLA-RA has a 'Yes/No/ Don't know' scale, for which a new scoring approach mean needed to be calculated, so that higher scores on the adapted tool could also reflect greater levels of loneliness. In the same manner where higher scores, in the original scale are given to negative responses (which support the notion of loneliness) so has the adapted scale been formulated.

The scoring procedure for the adapted UCLA-RA became as following:

- *Yes* responses equal a score of 0
- *No* responses equal a score of 1
- *Don't Know* (DK) responses equal a score of 0.5

The new mean is calculated by adding up the total of 'No responses' (Σ_{no}) and multiplying them by score of 1. They are added up to the total of 'Don't Know responses' (Σ_{DK}) which are multiplied by score of 0.5. The sum of the two totals is then divided by total number of questions. With this the new UCLA-RA total mean formulae becomes:

$$N_{mean} = \frac{((\Sigma_{no} * 1) + (\Sigma_{DK} * 0.5))}{20 \text{ questions}}$$

Therefore, as with the original UCLA-R, in the new adapted tool, UCLA-RA the higher the new mean the lonelier the respondent is feeling. Some of the reasoning behind the notion of scoring DK responses is provided below. Ultimately, as it is uncertain why participants might have selected a DK response, their value is that of a half a response (in either direction).

The above approach to calculating the mean does, however present a potential limitation and a risk that DK responses caused a bias in the results.

In order to assess this, a sensitivity analysis, utilising Spearman's correlation was administered. The process required a second new mean to be computed, in which DK responses are omitted, as below

$$N_{mean} = \frac{(\Sigma_{no} * 1)}{20 \text{ questions} - \Sigma_{DK}}$$

The second new mean's association with the first mean (in which DK response are included) was assessed via a Spearman's correlation analysis, where a positive and significant result implies a mutual direction in the results, and a positive relationship between the two. The results of the Spearman's correlation analysis found the relationship between the two N_{mean} to be significant $\rho=.954, p<.001$.

'Don't know' responses within UCLA-RA

The meaning and the significance (both mathematical and clinical) of the '*Don't know*' (DK) response has been debated comprehensively in the statistical literature, and the value of capturing or

recording a DK response is a contentious topic. This is primarily because it is very difficult to (quantitatively) understand the meaning behind a respondent's selection of the DK response. Studies suggest that DKs might result for a number of reasons including ambivalence, question ambiguity, satisficing, intimidation, and self-protection. As a result, the argument is that data quality does not improve when such options are explicitly included in questions. However, research has also found that the DK option is often a preference of individuals with more limited cognitive skills (Krosnick, 1999).

The reason for the inclusion of the *Don't know* response option was the feedback as received from the consultancy groups (specifically RAG) but also the DK response is found in other adapted measures (for adult populations), for instance it is used in the QACSO, a measure of cognitive distortions in adults with ID who sexually offend. Therefore, DK was included as part of the UCLA-R modification, and its value will be considered within this chapter.

First, however it is important to consider how often the "Don't know" response was selected, and if this has a relationship with the presence of an IDD diagnosis. The *Don't know* responses, across the whole cohort, were not normally distributed ($Mdn=2$, range 0-17). Table 22 details the responses as provided across the IDD and non-IDD cohorts.

Table 22

Percentage frequency of "Don't know" responses to the question "do you agree with the following" on the UCLA-RA across the two cohorts

Item	Response	Percentage frequency to response IDD n=20	Percentage frequency to response Non-IDD n=45
I am good at telling what my friends and family are feeling	Yes	60	76
	No	15	11
	Don't know	25	11
I don't have many friends	Yes	70	73
	No	20	33
	Don't know	10	4
I don't have people to talk to when I feel sad or lonely *	Yes	70	71
	No	5	24
	Don't know	25	5
I don't feel lonely	Yes	55	42
	No	40	51

	Don't know	5	7
I have a group of friends who are nice to me	Yes	70	80
	No	20	13
	Don't know	10	7
My interests and hobbies are same as other people I know	Yes	40	60
	No	25	18
	Don't know	35	22
I have a friend who I can tell all my worries and secrets to	Yes	55	71
	No	25	22
	Don't know	20	7
Other people don't have the same interests and ideas like me	Yes	40	27
	No	25	36
	Don't know	35	38
I am a friendly person who likes to talk to lots of people	Yes	65	64
	No	25	24
	Don't know	10	11
When I feel worried or sad there are lots of people I can talk to	Yes	70	58
	No	25	29
	Don't know	5	11
I feel like other people leave me out	Yes	55	56
	No	30	27
	Don't know	15	13
When I feel sad I can talk to people I know, but I don't think they would help me	Yes	50	56
	No	30	24
	Don't know	20	20
My friends and family don't know me very well	Yes	65	60
	No	35	22
	Don't know	-	18
Most days I feel left out, like people forget I am around	Yes	65	67
	No	25	24
	Don't know	10	7
If I want to I have people I can always speak to or spend time with	Yes	80	76
	No	10	18
	Don't know	10	7
I have friends and family in my life who understand me	Yes	95	89
	No	5	9
	Don't know	-	2
I am unhappy because I don't talk to many other people	Yes	80	73
	No	10	22
	Don't know	10	4
I feel different to people around me	Yes	45	58
	No	50	38
	Don't know	5	4
If I feel happy or sad, I know there are people who I can talk to	Yes	70	76
	No	20	16
	Don't know	10	9

There are people who will help me if I have a problem	Yes	80	87
	No	10	9
	Don't know	10	4

Note. * Significant at <.05

Across the two cohorts, the frequency of *Don't know* (DK) responses varied. Within the IDD sample, the percentage frequency of DK response was equal to or above 25% in the following four items: *I am good at telling what my friends and family are feeling* (Item 1), *I don't have people to talk to when I feel sad or lonely (reversed)* (Item 3), *My interests and hobbies are same as other people I know* (Item 6), and *Other people don't have the same interests and ideas like me* (Item 8). Within the non- IDD sample, the percentage frequency of DK response above 25% was evident for one item only: *Other people don't have the same interests and ideas like me* (Item 8).

An exploratory chi-square test of independence was performed to examine the relation between responses to the questions and the IDD and non-IDD cohorts, on the UCLA-RA measure. A Pearson's chi-square test of independence was performed to test the potential association. The results of the Fisher's exact test found one significant correlation in the positive direction, on Item 3 (*I don't have people to talk to when I feel sad or lonely*) $X^2(2) = 8.27, p = .02$. The non-IDD cohort was more likely to not agree with this statement whereas the IDD cohort was most likely to responded "DK". No other association between diagnostic cohort and question responses, was found.

Participant characteristics according to the four study cohorts

The full IDD cohort

Out of the full sample of 65 adolescents, 20 young people (30%) were categorised as part of the IDD cohort. This cohort was made up of young people with either an ID, ASD and/or comorbid (ID and ASD) diagnosis. The categorisation was based on either a full- scale IQ (FSIQ) assessment score (where present), a confirmed ID diagnosis, or an ASD diagnostic report.

Out of the 20 young people within the IDD cohort, six participants had an ID diagnosis ($M_{age}=17.00$, $SD=0.89$), eight had an ASD diagnosis ($M_{age}=14.50$, $SD=2.33$), and six young people ($Mean\ age=15.67$, $SD=1.97$) had a comorbid ID and ASD diagnosis. Out of the full cohort of 65 participants, a FSIQ score, was available in seven cases, ranging from 44-83 ($M_{FSIQ}=68.29$, $SD=13.65$). Two cases had an IQ score that fell in the lower normal ranges of 82 and 83 respectively, these two cases were not included in the IDD cohort and were categorised as young people without an IDD. Unfortunately, for a large proportion of the IDD cases (12 cases, 62%) an exact FSIQ score was not shared nor made available to the researcher. However, based on clinical observations, and the young person's educational performances, it was decided to include them in the IDD cohort.

As illustrated by Table 17, 56% of the IDD cohort was recruited via the forensic services, and 44% via the non- forensic services. Notably, in the full sample, out of those in forensic services 23% were also within the IDD cohort, and of those in non- forensic services 36% were also within the IDD cohort.

In the following section the IDD cohort is broken down further, with details of each specific diagnosis as recorded.

Young people with ID. Six young people had an ID diagnosis, out of which a FSIQ score was available only for two young people. The two FSIQ scores were 70 and 72 respectively¹⁰. Five of the 6 (83%) were male, with one female (17%). Four of the young people with ID (67%) were located within forensic services with two (33%) recruited from non- forensic services (i.e. secondary schools).

¹⁰ In accordance with Whitaker (2013), the DSM-5 and the BPS, IQ scores should be interpreted with a margin of measurement error generally of five points, meaning that an intellectual quotient of up to -75 can indicate intellectual impairment (Cooper, Henderson, Jacobs & Smiley, 2016).

Young people with ASD. The eight young people in this category all had an official ASD diagnosis confirmed with the researcher. A FSIQ score was not available for any of the young people in the ASD cohort. Seven were male (87%) and one was female (13%). One quarter of the ASD cohort was recruited from forensic service and some three quarters from non- forensic services (i.e. secondary schools).

Young people with a comorbid ID and ASD. Six young people were in this category and all had a confirmed ID and ASD diagnosis. Three cases had details of a FSIQ where the $M_{FSIQ}=57.00$ ($SD=12.53$), with a range between 44-69. The majority (83%) were male, with one female (16%). The majority of the young people with a comorbid diagnosis (83%) were located within specialist HSB services with 17% recruited from non- forensic services (i.e. a secondary school).

The full non-IDD cohort

Forty-five young people were categorised into the non-IDD cohort. They were primarily male (80%) and had a $M_{age}=14.87$ ($SD=2.21$) years. Apart from the two FSIQ scores (in the 80 range), as discussed above, no data were available in relation to the cognitive performances of this cohort, a recognised limitation. Slightly more (58%) young people in the non-IDD cohort were recruited through non- forensic services, with 42% recruited from forensic services.

Forensic cohort

Out of the full sample of 65 participants, 30 young people (46%) were categorised as based in forensic services, and consequently they were the participants who made up the forensic cohort within the current study. Nineteen of these participants (63%), were recruited from secure accommodation for young people in custody (i.e. a youth offending institute), and 11 (37%) from statutory specialist services providers for HSB. The specialist service providers were a mix of both residential and community-based provisions. The forensic cohort was fully male (100%) with a $M_{age}=16.93$ ($SD=1.11$).

The details of the proportion of young people within the forensic services with a diagnosis were as follows: 13.3% had an ID diagnosis ($n=4$), 6.7% an ASD diagnosis ($n=2$), and 16.7% had a comorbid diagnosis ($n=5$). In total 37% of the participants ($n=11$) across the forensic cohort were also categorised as belonging in the IDD cohort.

Non- forensic cohort

Out of the full sample of 65 participants 35 young people (54%) were categorised as based in non- forensic services. Twenty-one, of the non- forensic participants were recruited from special secondary schools (60%), and 14 from mainstream secondary schools (40%). The average age of the cohort was $M_{age}=13.51$ ($SD=1.54$) yrs., with the majority male (67%).

The proportion of young people across the non-forensic services with a diagnosis was as follows: 5.7% had an ID diagnosis ($n=2$), 17.14% an ASD diagnosis ($n=6$), and 2.85% had a comorbid diagnosis ($n=1$). In total 25.71% of the participants ($n=9$) across the non- forensic cohort were also categorised as belonging in the IDD cohort.

A note on the HSB sample

An original aim of the study had been to focus recruitment on a target population of young people (with and without IDD) who display HSB. However, recruitment of this population proved to be very challenging, and despite a significant amount of effort, out of the full sample of 65 young people, a very small proportion ($n=9$, 14%) of the full IDD sample, displayed HSB as categorised by a specialist service provider (see Table 23). Out of the nine, all (100%) were based in specialist services.

In Study 3, out of the nine who display HSB, the average age was $M_{age}=16.22$ ($SD= 1.40$), with all being male. Two of the young people who displayed HSB had an ID diagnosis, one young person had an ASD diagnosis and one a comorbid ID with ASD, meaning that in total four participants (44%) with HSB (out of the total of 9 altogether with HSB) were part of the IDD cohort.

Given the small sample size of the HSB cohort, it was not considered to be large enough to undergo testing as an independent cohort within Study 3¹¹.

Table 23

Number of cases who displayed harmful sexual behaviours at each the four providers.

<i>Site</i>	<i>HSB n=9</i>	<i>No HSB on record n=55</i>
Young Offending Institute	3	15
Specialist Service	6	5
Special School	0	21
Mainstream School	0	14

¹¹ Study 4 on the other hand has an HSB cohort, as will be detailed later.

Additional diagnosis of those in the IDD cohort

Out of the 20 participants within the IDD cohort, 55% were reported to have additional diagnoses ($n=11$). These included a range of issues including ADHD, PTSD, ODD and additional social, emotional and mental health (SEMH) needs. In eight of the cases (40%) there were reports of the young person having been a victim themselves of neglect and/or abuse in their childhood. All eight of these cases were recorded as based within forensic services, with an even split between specialist HSB and YOI services.

Three young people within this cohort were also recorded as looked after children and one classified as a child in need.

Study 3 results

Reliability

Internal consistency reliability for the original and adapted instruments was measured in a number of ways: Cronbach's alpha (α) for each instrument, Cronbach's alpha for a measure if a single item if removed, the average inter-item correlation, the range of inter-item correlations, and the individual inter-item correlations of the instrument. Pearson's correlation coefficients (r) are reported.

Internal consistency

Hypothesis 1: the adapted versions of the instruments will perform equal to, or better than the original instruments on test of internal consistency.

Results, as found in Table 24 were interpreted according to the recommendations by Cicchetti and Sparrow (1990) who outline criteria for excellent ($\alpha = > .90$), good ($\alpha = .80 - .89$), fair ($\alpha = .70 - .79$) and unacceptable ($\alpha = < .70$) levels of internal consistency. George and Mallery (2003) suggest an alpha of $\alpha=.80$ is representative of good internal consistency and it should be the cut-off scale developers aim for.

Table 24

Internal consistency of the scales across the four participant cohorts

Alphas

Measure	Full sample	IDD cohort	Non-IDD cohort	Forensic cohort	Non- forensic cohort
UCLA-R	.85	.87	.85	.62	.91
UCLA-RA	.86	.84	.87	.79	.89
KSS*	.84	.87	.83	.84	.85
KSS-A*	.88	.88	.87	.89	.87

* *Note.* Hot deck data was utilised

The original UCLA- R (overall $\alpha = .85$) although across the full sample the instrument performed in the good category, it also performed at an unacceptable level within a forensic cohort. Specifically, the instrument performed in the excellent category ($\alpha = .91$) in the non- forensic cohort (i.e. across the school-based population) but in the unacceptable category in the forensic cohort ($\alpha = .62$). A more detailed table of the performance of the forensic cohort can be found in Appendix P.

The adapted UCLA-RA (overall $\alpha = .86$) performed in the ‘good’ category overall and in three cohorts and was just short of good in the fourth. It performed best within the non- forensic cohort ($\alpha = .89$), and poorest within the forensic cohort ($\alpha = .79$).

The original KSS (overall $\alpha = .84$) performed consistently, and on the whole achieved scores in the good category across the four cohorts.

The adapted KSS (overall $\alpha = .88$) also performed consistently, and overall achieved scores in the good category across the four cohorts.

Across the full sample, both the original and adapted versions of the instruments demonstrated alphas in the good category (range $\alpha = 0.84 - 0.88$). **Hypothesis 1** was supported. The results illustrate both original and adapted instruments demonstrate a good level of internal consistency across the full participant sample, with the adapted measures performing more consistently across the four cohorts.

Inter- item correlations

Cronbach’s alpha coefficient was used to assess the inter- item correlations across the original and adapted instruments. Clark and Watson (1995), advise average inter-item correlations should fall somewhere between $r = 0.15 - 0.50$.

Hypothesis 2. The adapted versions of the instruments will perform equal to, or better than the original instruments on test of inter- item correlations.

UCLA- R and UCLA-RA Two clusters of questions were created for both the original and adapted UCLA-R instruments. The clusters were composed of reverse scored items. Individual item-scale analyses by clusters, for both versions of instruments are Table Q1 and Table Q2 as found in Appendix Q.

The results indicate the original UCLA-R produced a number of positive and significant correlations, across both clusters. One item, item 4 (*I do not feel alone*) performed less well, with a range of inter-correlations $r = -0.012 - 0.132$, indicating no significant relationships. But overall, the scale performed well. Conceptually, the item makes sense with the question group and does not decrease the quality of the scale considerably.

The results indicate the adapted version of the UCLA-RA also produced a number of positive and significant correlations, across both clusters. Two items, item 2 and 8 performed less well. Item 2 (*I don't have many friends*) displayed no significant correlations with a range of inter-correlations of $r = 0.091 - 0.234$, whereas item 8 (*Other people don't have the same interests and ideas like me*) also did not reach any significant associations with a range of inter-correlations between $r = -0.016 - 0.125$. Overall, the scale performed well, with the two items remaining as they do not decrease the quality of the scale considerably

KSS and KSS-A Two clusters of questions were created for both the original and adapted UCLA-R instruments. The clusters were composed of reverse scored items. Individual item-scale analyses by clusters, for both versions of instruments are Table R1 and Table R2 as found in Appendix R.

Overall, the items on the original KSS produced a number of positive and significant correlations with a good range. One item, item 2 (*Some kids feel like their mum butts in a lot when they are trying to do things*) performed less well, with no significant correlations and a poor range $r = -0.084 - 0.221$, however as for the same reasons as above it was not removed from the instrument.

The adapted KSS- A also produced a number of positive and significant correlations with a good range. Item 6 (*Some kids do not really need their mum for much*) performed less well, with no significant correlations and a poor range ($r = -0.027 - 0.069$).

Overall **Hypothesis 2** was supported. The results illustrate both original and adapted instruments demonstrated a good range of inter- item correlations across the full participant sample. Where individual

items did not perform that well, these items were different across the two versions of the same instrument but their impact did not decrease the quality of the instrument, in question, considerably, therefore they remained in the scale.

Item- total correlations

Cronbach's alpha analysis and Pearson's correlation were used to assess the item-total correlations of the instruments. A number of markers have been suggested as cut off points of the corrected item-total correlations, adapted here are guidelines as suggested by Clark and Watson (1995). The researchers recommended that mean inter item correlation within the range of $r= 0.15- 0.20$ are appropriate for instruments that measure broad characteristics, and between $r= 0.40 - 0.50$ for those looking to assess narrower ones.

Hypothesis 3. The adapted versions of the instruments will perform equal to, or better than the original instruments on test of item- total correlations.

UCLA-R and UCLA-RA. The results of the item total correlations are illustrated in Table 25.

Table 25

Cronbach's alpha for the original UCLA-R and adapted UCLA-RA across the full sample

Item (original wording)	UCLA-R <i>n=47</i>		UCLA-RA <i>n= 62</i>	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I feel in tune with the people around me	0.566	0.843	0.360*	0.859
2. I lack companionship	0.324*	0.851	0.430	0.857
3. There is no one I can turn to	0.461	0.846	0.271*	0.862
4. I do not feel alone	-0.047*	0.869	0.367*	0.860
5. I feel part of a group of friends	0.731	0.833	0.433	0.856
6. I have a lot in common with the people around me	0.662	0.837	0.518	0.853
7. I am no longer close to anyone	0.248*	0.855	0.456	0.856
8. My interests and ideas are not shared by those around me	0.225*	0.855	0.002*	0.872
9. I am an outgoing person	0.130*	0.857	0.574	0.851
10. There are people I feel close to	0.662	0.838	0.506	0.853
11. I feel left out	0.489	0.844	0.585	0.850
12. My social relationships are superficial	0.263*	0.853	0.303*	0.862
13. No one really knows me well	0.445	0.846	0.529	0.853
14. I feel isolated from others	0.517	0.843	0.625	0.848
15. I can find companionship when I want it	0.445	0.846	0.546	0.853
16. There are people who really understand me	0.590	0.840	0.618	0.853
17. I am unhappy being so withdrawn	0.524	0.844	0.441	0.856
18. People are around me but not with me	0.369*	0.849	0.423	0.857
19. There are people I can talk to	0.648	0.839	0.569	0.852
20. There are people I can turn to	0.672	0.836	0.729	0.849

Note. *where item-total correlation is less than <0.40

Within the original UCLA-R items 7 items (2, 4, 7, 8, 9, 12 and 18) produced, what is considered poor to weak correlations (range $r = 0.05- 0.37$). However, *Cronbach's Alpha if Item Deleted* indicated that removing any one of the four items would only improve the overall α negligibly, therefore they remained in further analysis.

Within the adapted UCLA-RA scales the results indicated 5 items (1, 3, 4, 8 and 12) produced a range ($r= 0.00- 0.37$) of poor to weak correlations. However, the improvements on the overall α , with their removal would be negligible, therefore the items remained part of the instrument.

Hypothesis 3 was supported for the loneliness instruments. The results illustrate both original and adapted instruments demonstrated a good range of item- total correlations, across the whole sample. Three individual items (4, 8 and 12) performed, consistently poorly across both versions of the loneliness scale. Overall, the items producing weak correlations did not decrease the overall quality of the instruments, therefore they remained in the scale.

Given the poor performance on the internal consistency of the forensic cohort, specifically on the original UCLA-R instrument, an explorative Cronbach's item total analysis was completed with the aim to explore differences in r and α between the forensic and non- forensic cohorts (Table S1 in Appendix S). The non- forensic sample produced weak correlations in 4 items (4, 8, 9 and 12) with a range of $r=- 0.20- 0.34$. On the other hand, the forensic sample produced considerably weaker item- total correlations on 17 items (range $r= -0.01- 0.38$).

KSS and KSS-A

Table 26 illustrates the item total correlations on the full sample, between the original and adapted KSS-A scales. The word *mum* was used in the Table 26 as a representation of the most commonly listed attachment (care) figure.

Table 26

Cronbach's alpha for the original KSS and adapted KSS-A

Item (original wording)	<i>KSS original</i> <i>n=65</i>		<i>KSS adapted</i> <i>n=65</i>	
	Corrected	Cronbach's	Corrected	Cronbach's
	Item-Total Correlation	Alpha if Item Deleted	Item-Total Correlation	Alpha if Item Deleted
1. Some kids find it easy to trust their <i>mum</i>	0.602	0.826	0.635	0.866
2. Some kids feel like their <i>mum</i> butts in a lot when they are trying to do things	0.109*	0.855	0.344*	0.877
3. Some kids find it easy to count on their <i>mum</i> for help	0.484	0.833	0.625	0.864
4. Some kids think their <i>mum</i> spends enough time with them	0.459	0.834	0.560	0.868
5. Some kids do not really like telling their <i>mum</i> what they are thinking or feeling	0.611	0.823	0.592	0.865
6. Some kids do not really need their <i>mum</i> for much	0.343*	0.840	0.282*	0.882
7. Some kids wish they were closer to their <i>mum</i>	0.413	0.838	0.266*	0.882
8. Some kids worry that their <i>mum</i> does not really love them	0.608	0.827	0.603	0.865
9. Some kids feel like their <i>mum</i> really understands them	0.589	0.826	0.764	0.857
10. Some kids are really sure their <i>mum</i> would not leave them	0.361*	0.838	0.578	0.866
11. Some kids worry that their <i>mum</i> might not be there when they need her	0.557	0.827	0.571	0.867
12. Some kids think their <i>mum</i> does not listen to them	0.728	0.816	0.793	0.855
13. Some kids go to their <i>mum</i> when they are upset	0.467	0.834	0.603	0.865
14. Some kids wish their <i>mum</i> would help them more with their problems	0.414	0.836	0.382*	0.875
15. Some kids feel better when their <i>mum</i> is around	0.497	0.832	0.524	0.869

Note. *where item-total correlation is less than <0.40

In the original KSS scale only 3 items (2, 6 and 10), produced a weak item- total correlation (range $r=0.11- 0.34$). However, as indicated by the α score, the improvement on the overall scale would have been negligible if the items were deleted.

On the adapted KSS-A scale item- total correlations indicated poor correlations on 4 items (2, 6, 7 and 14) with a range of $r=0.26-0.38$. Again, the effect on the overall α was negligible, therefore the items remained a part of the adapted scale.

Hypothesis 3 was supported for the attachment instruments. The results illustrate both original and adapted instruments demonstrated a good range of item- total correlations, across the whole sample. Two individual items (2 and 6) performed consistently poorly across both versions of the attachment scales. The items producing weak correlations did not decrease the overall quality, however of the instruments, therefore they remained in the scale.

Validity

Validity of the original and adapted instruments was measured via a Spearman's rank correlation (ρ). Spearman's was utilised for testing the total and individual items correlations thereby assessing the convergent validity across the instruments. **Hypothesis 4**. The original and adapted versions of the instruments will demonstrate a strong association.

UCLA-R and UCLA-RA

Total score correlation. A positive and significant relationship was found between original UCLA-R total scores and the adapted UCLA-RA total scores ($\rho_s(62) = .723, p < .001$), 95% CIs [0.55, 0.84] taken as a medium effect size (> 0.5 , Cohen, 1988; 1992). The two tools share 58.83 % of the variance in the ranks.

Individual item correlations. A positive and significant relationship was found between most of the individual UCLA-R items and the adapted UCLA-RA items (13 items). A table (Table T1) of the Spearman's correlation between the individual items can be found in the Appendix T. The seven items that did not produce a significant correlation were items 3, 4, 7, 8, 12, 17 and 18 as detailed in Table 27. It is imperative to keep in mind that the response request changed from "Indicating how often each of the statements below is descriptive [of the person]" to "Do you [the person] agree [with the statement]".

Table 27

The wording of the seven items that did not produce a significant correlation between them

<i>Item wording within original instrument</i>	<i>Item wording within adapted instrument</i>
3. There is no one I can turn to	I don't have people to talk to when I feel sad or lonely
4. I do not feel alone	I don't feel lonely
7. I am no longer close to anyone	I have a friend who I can tell all my worries and secrets to
8. My interests and ideas are not shared by those around me	Other people don't have the same interests and ideas like me
12. My social relationships are superficial	When I feel sad I can talk to people I know, but I don't think they would help me
17. I am unhappy being so withdrawn	I am unhappy because I don't talk to many other people
18. People are around me but not with me	I feel different to people around me

KSS and KSS-A

Total score correlations. A positive and significant relationship was found between original standardised KSS total scores and adapted standardised KSS total scores ($\rho_s(65) = .747, p < .001$) 95% CIs [0.58, 0.87], meeting the criteria for a medium effect size (> 0.5 , Cohen, 1988; 1992). They share 55.80% of the variance in the ranks.

Individual item correlations. Table U1 Spearman's correlation between the individual items on the original and adapted KSS can be found in the Appendix U. A positive and significant relationship was found between the vast majority (14 items) of the individual KSS and the adapted KSS-A items. The correlation was not significant for item 2 (*mum butts in*), $\rho_s(65) = .145, p = .250$.

Hypothesis 4 was supported by the total score correlations for both loneliness and attachment scales. The total scores of the original and adapted versions of both of the instruments produced significant correlations of a medium effect size.

The majority (14 out of 15) of individual items, as compared between original and adapted KSS, also displayed a significant relationship. The individual item correlations did not perform as well, on the original and adapted UCLA-R scales, where only 13 out of 20 demonstrated a significant association.

Confirmatory Factor Analysis

The existing, underlying dimensionality of the original (and corresponding adapted) instruments were tested via Confirmatory Factor Analysis (CFA). CFA utilises pre-determined factor structure(s), meaning the model it tests is based on a pre-existing empirical and conceptual understanding. The acceptability of the newly specified model is evaluated by goodness of fit statistics and by the interpretability and strength of the resulting parameter estimates (Brown, 2006). As for the acceptable sample size the recommended ratios of number of people to numbers of measured variables often are within the range of 10 to 20 people per variable (Thompson, 2004). Specifically this stems from the work by Gorsuch (1983) who suggested that "an absolute minimum ratio is five individuals to every variable" (p. 332). Worthington and Whittaker (2006) note this has been widely cited in counselling psychology research through the years.

In the following data set, the factor structure of the original UCLA-R, the original KSS, and the modified UCLA-RA and KSS-A scales are tested. The procedure has been adapted from guidelines as published by Barcsi and colleagues (2017), Schreiber, Stage, King, Nora, and Barlow (2006) and Brown (2006). Eight sets of CFA were performed, with an aim to not only test the factor structures of the original instruments, within the context of the existing (full) sample, but also assess the same factor structure of the adapted instruments.

Criteria for comparing model- data fit in CFA

Five goodness-of-fit indices were applied to assess the degree of fit between the proposed models and the sample data: model specification, model estimation (fitting the model), evaluation of fit, model modification, and interpretation of loadings and related statistics. The goodness-of-fit indices include: (a) the χ^2 statistic; (b) the comparative fit index (CFI); (c) the Tucker-Lewis non-normed fit index (TLI); (d) the root mean square error of approximation (RMSEA); (e) the Akaike information criterion (AIC).

It is worth acknowledging that even though a non-significant p value of χ^2 corresponds to an acceptable fit, it is also known that the χ^2 statistic is very sensitive to sample size, it has been argued to be no longer a reliable basis for acceptance or rejection (Schreiber et al. 2006, Vandenberg 2006). Instead the CFI and TLI values can be used for interpretations, whereby values greater than 0.95 suggest an

acceptable fit (Byrne, 2016). Here the Tucker-Lewis non-normed fit index (Tucker & Lewis, 1973) measures the improved fit in a manner alike the CFI, but with an adjustment for the degrees of freedom in the model. For the RMSEA, a cut-off value ranging from 0.05 or lower indicates a good model fit and values up to 0.08 represent a moderate model fit (Brown, 2006). Finally, the Akaike information criterion (Akaike, 1974) was also included. When two models are compared on this statistics, smaller values suggest a better fit.

The following statistics and recommended cut-points (Maroco, 2010) were applied to evaluate overall model fit: Normed Chi-square ($\chi^2/df < 5$ = acceptable; Arbuckle, 2008), Comparative Fit Index (CFI $\geq .90$ = good; Bentler, 1990), Root Mean Square Error of Approximation (RMSEA $\leq .05$ = very good, $\leq .08$ = acceptable; $\leq .10$ = poor; Browne & Cudeck, 1993).

All of the eight CFA analyses were performed through the AMOS vs. 25 statistical packages.

Hypothesis 5: The model fit of the current original versions of the instruments will be in line with previous studies (Zakahi & Duran, 1982; Lieberman, Doyle, & Markiewicz, 1999; Shelvin, Murphy & Murphy, 2014; Barcsi et al., 2017).

Hypothesis 6: The overall model fit of the adapted instruments will be in line with the original versions of the tools.

Original UCLA-R

The original version of the UCLA was that of a unidimensional instrument of loneliness (Russell, 1982). Zakahi and Duran (1982) were one of the first to test its psychometric proprieties, including the dimensionality of the scale. The authors found the scale to be composed of two factors, intimate other and social network in a cohort of university students. It is suggested that one set of items relate to the intimate relationships and the other to a lack of group of friends (social network).

Later psychometric studies by Hartshorne (1993) and Kim (1997) proposed a three- factor model in samples of older participants in different countries. More relevant work was completed by Shelvin et al. (2014) who tested the three- factor model on a population of adolescents in Northern Ireland. Shelvin et al. (2014) found a three- factor model, composed of isolation, relational connectedness, and collective connectedness factors, to perform best. The authors specify the isolation factor captures feelings of aloneness and withdrawal. The relational connectedness correlates to more social aspects of loneliness

and refers to social networks with others, and the third factor, collective connectedness relates to group cohesiveness.

Analytical Plan

Two models of the original UCLA-R were tested in accordance with the findings of previous literature. Model 1 tested the two- factor structure in accordance with Zakahi and Duran (1982) study, and Model 2 tested the three- factor structure as established by Shelvin et al. (2014). A maximum-likelihood estimation procedure was run with estimate means and intercepts.

Original UCLA-R results

Prior to confirmatory factor analysis, the individual UCLA-R items were assessed and met the criteria for normality. The fit statistics for all models are reported in Table 30.

Two- factor model

Displayed in Figures 3 are the standardised factor loadings, that equate to the correlations between the latent variables. The covariance between the two latent variables is illustrated in the proposed two factor-model.

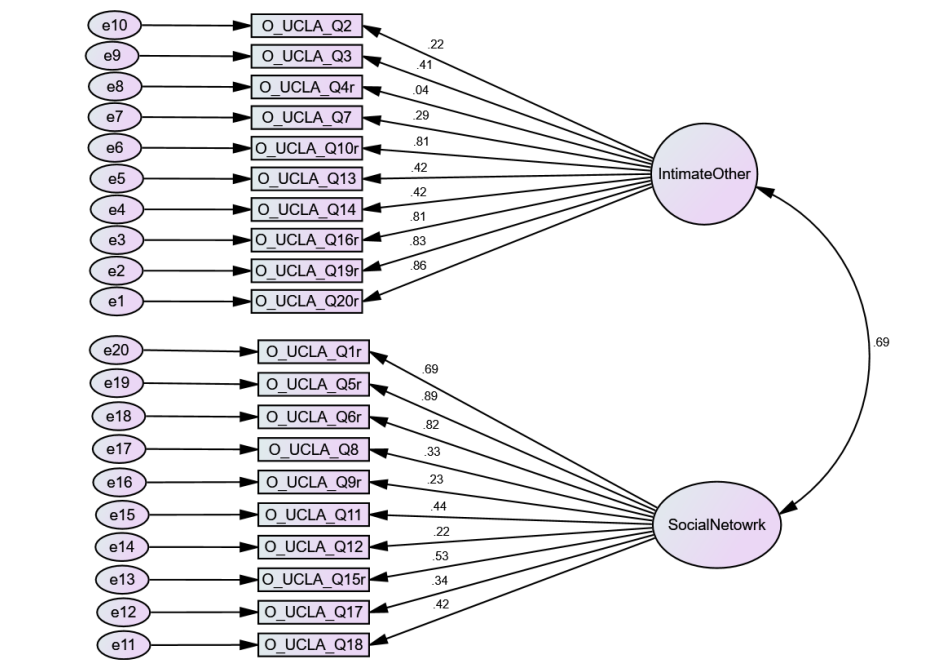


Figure 3.UCLA-R two factor model displaying standardised factor loadings

The significant factor loadings in the two- factor model are denoted by an asterisk in Table 28. As can be seen 14 out of the 20 items were statistically significant. The two factors are based on the a-

priori labelling, named Intimate Other, composed of 10 items, and Social Networks, composed also of 10 items.

In the Intimate Other 7 out of the 10 items loaded moderately (≥ 0.40) on their factor, with items 2, 4 and 7 producing the weakest factor loadings. As for the Social Networks 6 out of the 10 items loaded moderately onto the factor. The weakest loadings were from items 9 and 12.

For the overall model fit, the normed $\chi^2 = 1.414$ suggests a good fit of the model, to the data. However, given the limitations of the chi-square statistic other model estimates also need to be reviewed. The CFI is considered good when $\geq .90$, which is not achieved in the two-factor model, as is also supported by the poor performance on the TLI. On the RMSEA, a cut-off value ranging from 0.05 or lower indicates a good model fit with values of ≥ 0.08 representing a moderate model fit, which is achieved by the current the two-factor model of the UCLA-R scale.

Three-factor model

Displayed in Figure 4 are the standardised factor loadings, of the proposed three-factor model for the original UCLA-R scale.

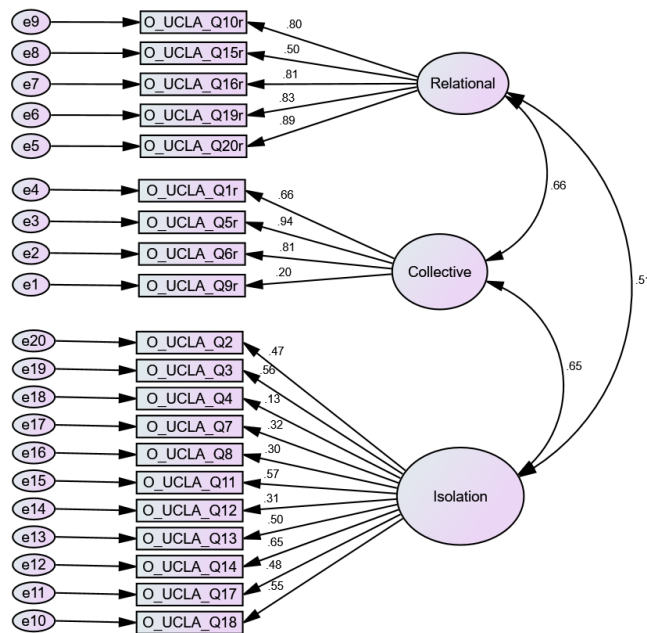


Figure 4. UCLA-R three factor model displaying standardised factor loadings

The labels of the three factors are Relational, Collective and Isolation loneliness. Table 28 displays the factor loadings for the model, with 16 out of the 20 items statistically significant.

All of the items loaded moderately (≥ 0.40) on the Relational factor, with 3 out of the 4 items also loading moderately on the Collective factor. Item 9 produced the weakest factor loading. Finally, 7 out of the 11 items loaded moderately on the Isolation factor, with items 4, 7 and 8 producing the weakest loadings.

In evaluating the overall model fit, the normed $\chi^2 = 1.233$ is suggestive of a good fit of the model, to the data. With a CFI= 0.899, the three- factor model performs very close to good, however the TLI does not reach its criteria to the same level. On the RMSEA, the model is close to meeting the cut-off value for a categorisation of a good fit (where $RMSEA \leq 0.05$ = very good).

Table 28

Factor Loadings of two models of the UCLA Loneliness Scale.

Item	Two-factor model		Three-factor model		
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 3
	Intimate Other	Social Network	Isolation	Relational	Collective
I lack companionship	.223		.470*		
There is no one I can turn to	.409*		.560*		
I do not feel alone	.042		.126		
I am no longer close to anyone	.287*		.321*		
No one really knows me well	.421*		.504*		
I feel isolated from others	.417*		.645*		
There are people I feel close to	.809*			.798*	
There are people who really understand me	.807*			.812*	
There are people I can talk to	.833*			.832*	
There are people I can turn to	.865*			.886*	
I can find companionship when I want it		.525*		.496*	
I am an outgoing person		.225			.196*
I feel in tune with the people around me		.691*			.661
I have a lot in common with the people around me		.816*			.814
I feel part of a group of friends		.894*			.937
My interests and ideas are not shared by those around me		.328*	.302*		
I feel left out		.437*	.569*		
My social relationships are superficial		.222	.307*		
I am unhappy being so withdrawn		.343*	.482*		
People are around me but not with me		.417*	.545*		
Factor covariances					
Factor 1	1.00		1.00		
Factor 2	0.69	1.00	.66	1.00	
Factor 3	--	--	.51	.65	1.00

Note. * $p < .05$.

Adapted UCLA-RA

Analytical Plan

The same two models as tested for the original UCLA-R were also assessed for the adapted UCLA-RA loneliness scales. Model 1 tested the Zakahi and Duran (1982) two- factor structure and Model 2 tested the Shelvin et al. (2014) three- factor structure. A maximum-likelihood estimation procedure was run with estimate means and intercepts.

Adapted UCLA-RA results

Prior to confirmatory factor analysis, the individual UCLA-RA items were assessed and met the criteria for normality. The fit statistics for all models are reported in Table 30.

Two- factor model

Displayed in Figures 5 are the standardised factor loadings, that equate to the correlations between the latent variables.

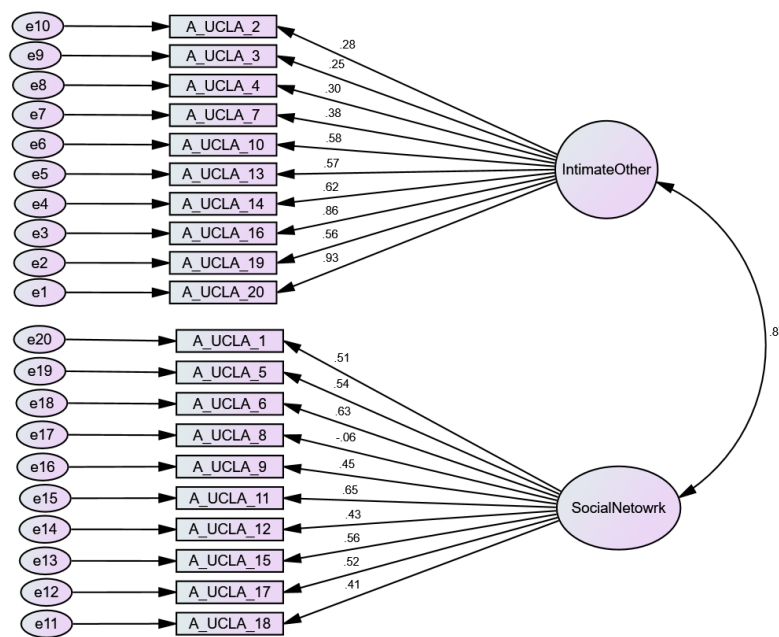


Figure 5.UCLA-RA two factor model displaying standardised factor loadings

The significant factor loadings in the two- factor model are denoted by an asterisk in Table 29.

As can be seen 14 out of the 20 items were statistically significant. The two factors are based on the a

priori labelling, as noted in the original UCLA-R named Intimate Other, composed of 10 items, and Social Networks, composed of 10 items.

In the Intimate Other 6 out of the 10 items loaded moderately (≥ 0.40) on their factor, with items 3 and 2 producing the weakest factor loadings. As for the Social Networks 9 out of the 10 items loaded moderately onto the factor. The weakest loadings were from item 8.

For the overall model fit, the normed $\chi^2 = 1.68$ suggests a good fit of the model, to the data. However, with the CFI $\leq .90$, and the poor performance on the TLI, as well as RMSEA the overall model failed to demonstrate a good fit.

Three factor model of adapted UCLA-RA

Displayed in Figures 6 are the standardised factor loadings, of the proposed three- factor model for the original UCLA-R scale.

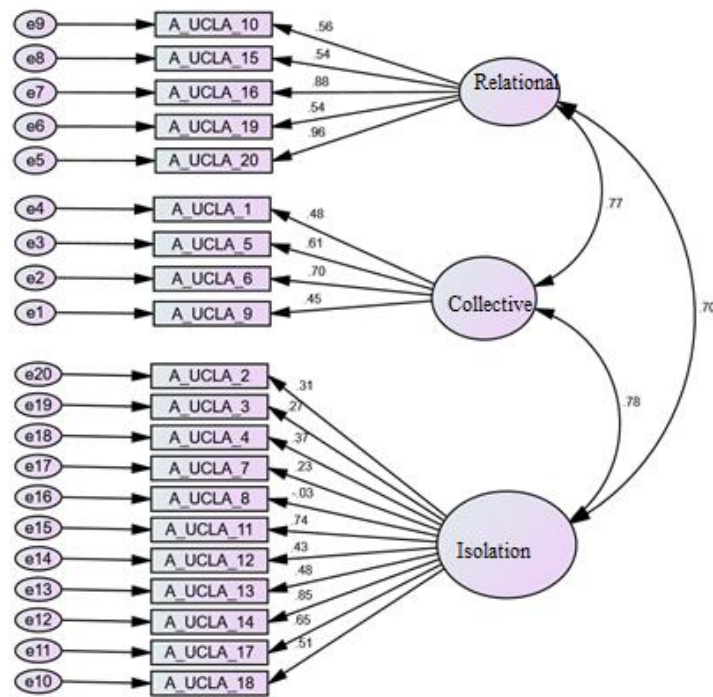


Figure 6. UCLA-RA three factor model displaying standardised factor loadings

The significant factor loadings in the three- factor model are denoted by an asterisk in Table 29. As can be seen 17 out of the 20 items were statistically significant. The three factors are based on the a priori labelling, as noted in the original UCLA-R scale, and they are named Isolation, Collective and Relational loneliness.

All of the items loaded moderately (≥ 0.40) on the Relational and Collective factors, with 5 out of the 7 items also loading moderately on the Isolation factor. Item 8 produced the weakest factor loading.

For the overall model fit, the normed $\chi^2 = 1.51$ suggests a good fit of the model, to the data. However, with the CFI $\leq .90$, and the poor performance on the TLI, as well as RMSEA the overall model failed to demonstrate a good fit.

Table 29

Factor Loadings of two models of the adapted UCLA-RA Scale.

<i>Item</i>	<i>Two-factor model</i>		<i>Three-factor model</i>		
	Factor 1 Intimate Other	Factor 2 Social Network	Factor 1 Isolation	Factor 2 Relational	Factor 3 Collective
I am good at telling what my friends and family are feeling		.506	.485		
I don't have many friends	.283				.307
I don't have people to talk to when I feel sad or lonely	.246				.267
I don't feel lonely	.302				.373
I have a group of friends who are nice to me		.545	.609		
My interests and hobbies are same as other people I know		.630	.703		
I have a friend who I can tell all my worries and secrets to	.378				.229
Other people don't have the same interests and ideas like me		-.060			-.031
I am a friendly person who likes to talk to lots of people		.450	.446		
When I feel worried or sad there are lots of people I can talk to	.576			.559	
I feel like other people leave me out		.654			.740
When I feel sad I can talk to people I know, but I don't think they would help me		.428			.434
My friends and family don't know me very well	.571				.478

Most days I feel left out, like people forget I am around	.619			.846
If I want to I have people I can always speak to or spend time with		.559		.541
I have friends and family in my life who understand me	.856			.878
I am unhappy because I don't talk to many other people		.516		.648
I feel different to people around me		.410		.512
If I feel happy or sad, I know there are people who I can talk to	.564			.543
There are people who will help me if I have a problem	.934			.956
Factor covariances				
Factor 1	1.00		1.00	
Factor 2	.871	1.00	.768	1.00
Factor 3	--	--	.775	.697

Note. * $p < .05$.

Overall, with the current sample the three- factor model fit of the original UCLA-R instrument could be considered adequate. In comparison to the two-factor model, the three- factor model produced a better fit for the current data, $\chi^2(df = 167) = 205.839$; CFI = .899; TLI = .873; RMSEA= .060. This is comparable to Shelvin et al. (2014) study that reported $\chi^2(df = 167) = 478.13$, $p < .05$; CFI = .980; TLI = .978; RMSEA = .054. Meaning that the best factor fit for the UCLA-R was the one tapping into isolation, relation and collective (sense of loneliness).

A similar trend towards a better model fit was also observed for the three- factor module of the adapted UCLA- RA scales. Although, the model did not meet the criteria for an adequate fit, $\chi^2(df = 167) = 252.388$; CFI = .786; TLI = .731; RMSEA= .089.

Table 30

Goodness of Fit Indices for two models of UCLA-R

	Goodness of Fit Index					
Models	χ^2	df	CFI	TLI	AIC	RMSEA
Model 1 (Two factor model)						
UCLA-R	239.012	169	.819	.775	361.012	.080
UCLA-RA	284.463	169	.711	.640	406.463	.103
Model 2 (Three factor model)						
UCLA-R	205.839	167	.899	.873	331.839	.060
UCLA-RA	252.388	167	.786	.731	378.388	.089

Note. CFI = comparative fit index; TLI = Tucker–Lewis index; AIC= the Akaike information criterion; RMSEA = root mean square error of approximation; CI = confidence interval

Kerns Secure Scale

Lieberman, Doyle, and Markiewicz (1999) were one of the first to examine Kerns Secure Scale in terms of its ability to measure two dimensions of attachment security in a sample of two adolescent populations. The results supported a two-factor model of the scale, composed of dependency and availability factors. The authors specified that the first factor, dependency, reflected whether adolescents themselves sought or valued parental help, whereas the second factor, availability, reflected whether they perceived parents as available.

A more recent paper by Barcsi et al., (2017) reviewed the factor structure in view of a Hungarian population of primary and secondary school aged children. The authors found support for a three-factor model composed of reliance, availability, and autonomy support. Barcsi et al., (2017) support the reliability of the dependency (same as reliance) and availability factors but they also specify a new factor labelled as autonomy support. Autonomy support involves feelings of self-reliance, in cases of when children are assumed as autonomous persons with personal wishes, motivations and roles, respected by the parents and admitted when seeking reunion with their own families.

Analytical Plan for the original and adapted KSS

Two models of the Kerns Secure Scale will be tested in accordance with the findings of previous literature. Model 1 will test the two- factor structure in accordance with Lieberman et al. (1999) study, and Model 2 will test the three- factor structure as established by Barcsi et al. (2017). The two version of the KSS the original and the adapted, were analysed separately.

Prior to confirmatory factor analysis, the individual KSS items were assessed for normality. The items exhibited considerable non-normality as measured by skew and kurtosis. The skewness statistic of four items (1, 3,8,10) falls outside of the recommended values of -2 and +2 (with mean of -2.118) and the multivariate non-normality, where kurtosis > 7 (Byrne, 2016). This was not an unexpected finding but the implications are that it is non-normally distributed data, which results in an inaccurate assessment of fit (particularly the chi-square test). The model may erroneously be rejected (Byrne, 2016).

Consequently, it was decided that the CFA would operationalise the raw data and utilise the Bollen-Stine bootstrap method using 2000 bootstrap samples (Bollen and Stine, 1992) with maximum

likelihood estimation. The CFA required an assessment of good model fit which was determined by a nonsignificant Bollen-Stine chi-square (χ^2) that was $p = .236$.

Original KSS results

Two-factor model

The standardised factor loadings for a two-factor model on the original KSS are shown in Figure

7.

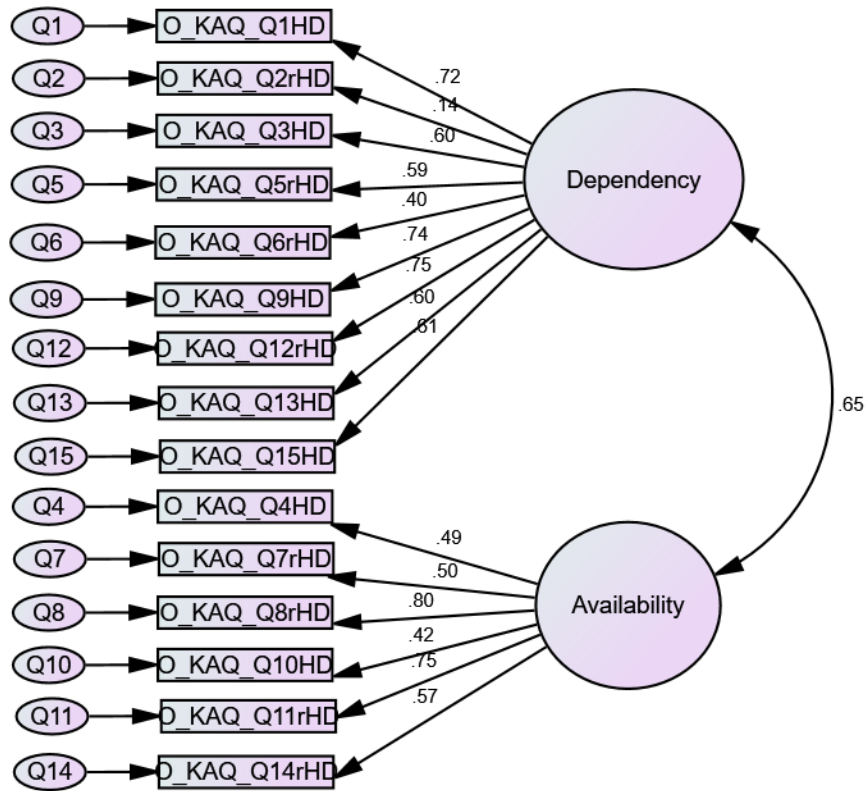


Figure 7. Original KSS two-factor model displaying standardised factor loadings

Table 31 displays the factor loadings outlining for the two-factor model of the original KSS. The two factors were labelled, Dependency and Availability. Overall, 14 out of the 15 items were found to be statistically significant. All apart from Item 2, the rest loaded moderately (≥ 0.40) onto the two factors.

The model fit indices are displayed in Table 33.

Three-factor model of original KSS

The standardised factor loadings for a two-factor model on the original KSS are shown in Figure 8.

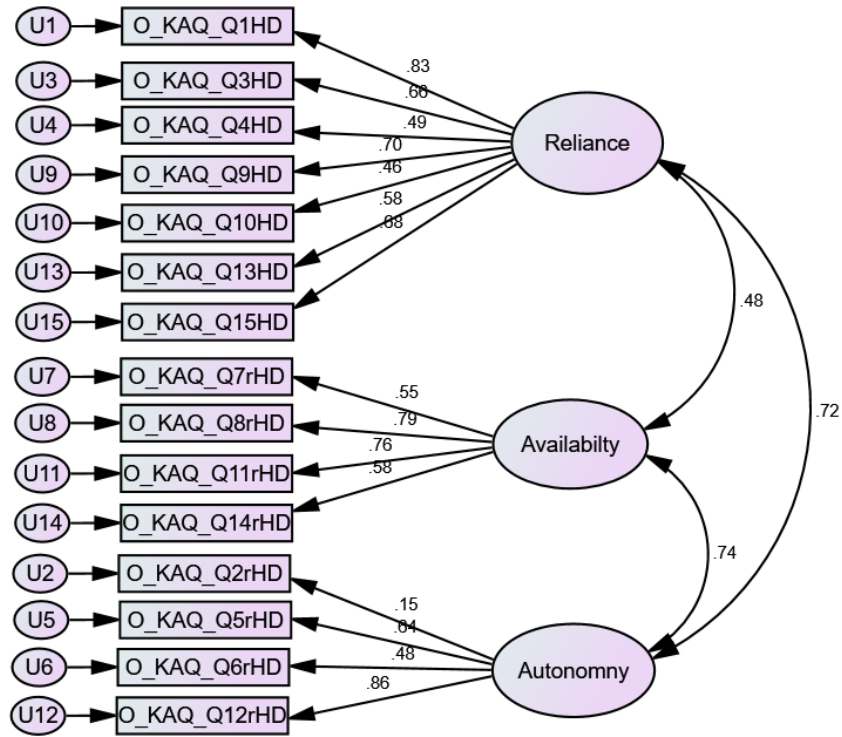


Figure 7.Original KSS three- factor model displaying standardised factor loadings

The three- factor model of the KSS was composed of Reliance, Availability and Autonomy. As displayed in table 31, the factor loadings were significant and of moderate size, apart from Item 2. Overall model 2 showed an improved fit to model 1, with almost all measures within acceptability and RMSEA on the verge of acceptability.

Table 31

Factor Loadings of two models of the original KSS

<i>Item</i>	<i>Two-factor model</i>		<i>Three-factor model</i>		
	<i>Factor 1 Dependency</i>	<i>Factor 2 Availability</i>	<i>Factor 1 Reliance</i>	<i>Factor 2 Availability</i>	<i>Factor 3 Autonomy</i>
Some kids find it easy to trust their mum	.720*		.826*		
Some kids feel like their mum butts in a lot when they are trying to do things	.143				.154
Some kids find it easy to count on their mum for help	.604*		.661*		
Some kids think their mum spends enough time with them		.486*	.491*		
Some kids do not really like telling their mum what they are thinking or feeling	.594*				.641*
Some kids do not really need their mum for much	.403*				.475*
Some kids wish they were closer to their mum		.502*		.552*	
Some kids worry that their mum does not really love them		.801*		.794*	
Some kids feel like their mum really understands them	.735*		.695*		
Some kids are really sure their mum would not leave them		.420*	.456*		
Some kids worry that their mum might not be there when they need her		.749*		.761*	
Some kids think their mum does not listen to them	.755*				.858*
Some kids go to their mum when they are upset	.596*		.579*		
Some kids wish their mum would help them more with their problems		.570*		.581*	
Some kids feel better when their mum is around	.610*		.675*		
Factor covariances					
Factor 1	1.00		1.00		
Factor 2	.65	1.0	.48	1.00	
Factor 3	-	-	.72	.74	1.00

Note. * $p < .05$.

Adapted KSS results

Two-factor model

Table 32 displays the factor loadings outlining for the two-factor model (made up of Dependency and Availability) of the adapted KSS-A.

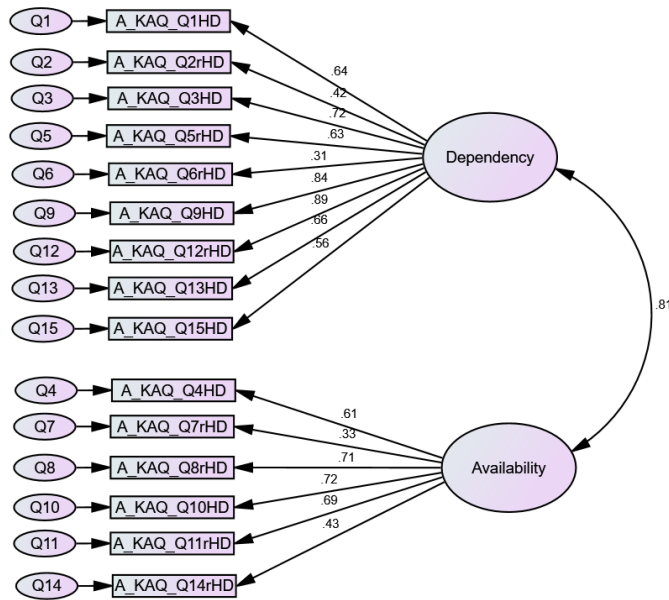


Figure 8.A two-factor model of the adapted KSS-A

As can be seen from Figure 10 all the 15 items produced a significant fit, with most (apart from item 7 and item 6 producing moderate factor loadings. Model 1 showed a fair fit, overall across the model indices.

Three-factor model

Figure 10 displays the factor loadings outlining for the three-factor model (made up of Reliance, Availability and Autonomy) of the adapted KSS- A.

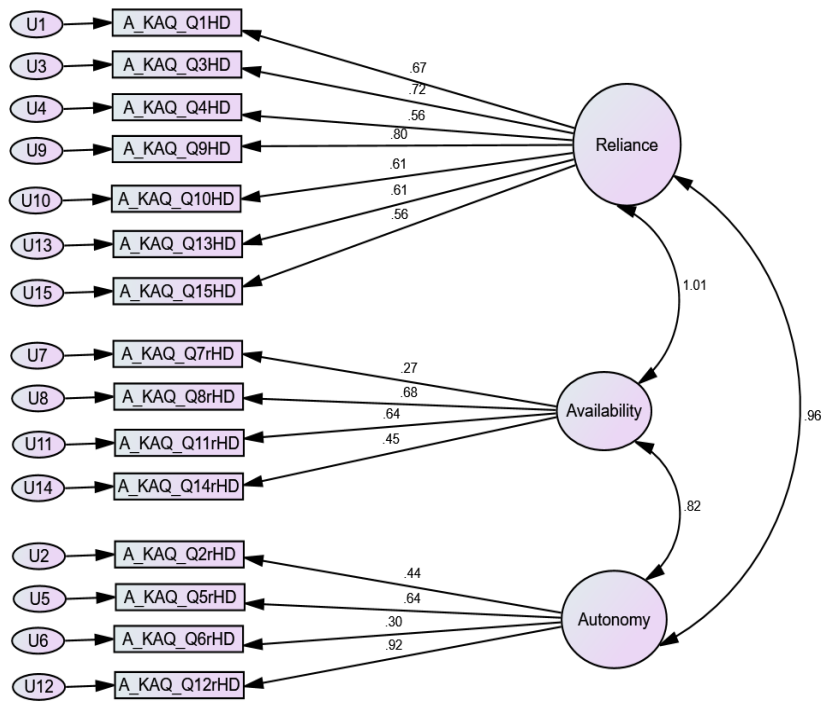


Figure 9.A three- factor model of the adapted KSS-A

As can be seen from Table 32 all, apart from items 7 and 6, factor loadings produced a significant fit, with most of a moderate size. However, model 2 achieved overall a poor fit with almost all indices outside of the parameters of acceptability. The standardised factor loadings for a two-factor model on the original KSS are shown in Table 32.

Table 32

Factor Loadings of two models of the adapted KSS-A

Item	Two-factor model		Three-factor model		
	Factor 1 Dependency	Factor 2 Availability	Factor 1 Reliance	Factor 2 Availability	Factor 3 Autonomy
Some kids find it easy to trust their <i>mum</i>	.643*		.666*		
Some kids feel like their <i>mum</i> butts in a lot when they are trying to do things	.418*				.440*
Some kids find it easy to count on their <i>mum</i> for help	.717*		.724*		
Some kids think their <i>mum</i> spends enough time with them		.614*	.563*		
Some kids do not really like telling their <i>mum</i> what they are thinking or feeling	.631*				.637*
Some kids do not really need their <i>mum</i> for much	.306*				.295*
Some kids wish they were closer to their <i>mum</i>		.327*		.269	
Some kids worry that their <i>mum</i> does not really love them		.713*		.682*	
Some kids feel like their <i>mum</i> really understands them	.836*		.804*		
Some kids are really sure their <i>mum</i> would not leave them		.722*	.612*		
Some kids worry that their <i>mum</i> might not be there when they need her		.686*		.644*	
Some kids think their <i>mum</i> does not listen to them	.895*				.919*
Some kids go to their <i>mum</i> when they are upset	.657*		.609*		

Some kids wish their <i>mum</i> would help them more with their problems		.432*		.449*	
Some kids feel better when their <i>mum</i> is around	.556*		.564*		
Factor covariances					
Factor 1	1.00		1.00		
Factor 2	.81	1.00	1.01	1.00	
Factor 3			.96	.82	1.00

Note. * significant factor loadings where $p < .05$.

Overall results of factor analysis

The three-factor model produced, overall, a better fit for the original KSS instrument, as supported by the results of the five indices of goodness of fit seen in Table 33. The results are comparable to Barcsi et al. (2017) who reported their three-factor model to be $\chi^2(df = 87) = 319.17$; CFI = .834; TLI = .799; RMSEA = .111.

On the other hand, the two-factor model was a better fit for the adapted KSS-A instrument, as indicated by the goodness of fit statistics. The two-factor model overall showed an adequate global fit between the proposed model and data, $\chi^2(df = 87) = 135.862$; CFI = .865; TLI = .837; RMSEA = .094.

Table 33

Goodness of Fit Indices for two models of adapted KSS

Models	Goodness of Fit Index					
	χ^2	df	CFI	TLI	AIC	RMSEA
Model 1 (Two factor model)						
KSS Original	159.167	89	.776	.735	221.167	.111
KSS Adapted	128.365	89	.891	.872	190.365	.083
Model 2 (Three factor model)						
KSS Original	133.627	87	.851	.820	199.627	.092
KSS Adapted	135.862	87	.865	.837	201.862	.094

Note. CFI = comparative fit index; TLI = Tucker–Lewis index; AIC= the Akaike information criterion; RMSEA = root mean square error of approximation; CI = confidence interval

Overall CFA results

Hypothesis 5 was supported. The overall model fit of both the loneliness and attachments instruments was found to be adequate for the original versions of the instruments. The performances of the instruments, in the context of the current full sample was in line with the pre-existing factor structures as developed in previous empirical studies.

Hypothesis 6 was supported for the adapted KSS-A instrument but not the adapted UCLA-RA instrument. The overall fit and the two-factor model of the adapted KSS- A were in line with the results of previously published structure. This was deemed an adequate global fit by the fit statistics, although it was not in line with the (better fit) factor performance of the original instrument within the same (current) sample. Conversely, the two models tested for the adapted UCLA-RA failed to meet the requirements for an adequate fit. The adapted UCLA-RA factor loading were not in line with existing published findings and it was not in line with the findings of the original versions of the scale, within the current sample.

Bland- Altman plots

In order to assess the level of agreement between two instruments and the presence of bias between mean differences, a Bland-Altman plot analysis was run. The Bland- Altman method retains the virtue of interclass correlations by separating the bias of the instruments from random error. The method is considered helpful in potentially alerting of systematic differences or systematic error.

The analysis indicates whether i) the relationship is linear, i.e. as scale A increases, does scale B show a proportional change; ii) there is a systematic difference, that is, do both scales A and B start at the same point and is the difference independent of the size of the values; and iii) the random difference is sufficiently small (Bland & Altman, 1983).

Hypothesis 7: The instruments will not display the presence of proportional bias as assessed via the Bland- Altman plots. The level agreement between the methods will be high.

Analytical Plan

The differences between two total scores (A-B) are plotted against the average of the two instruments (A+B/2). The adapted version of the instrument was subtracted from the original version for both the UCLA-R and KSS scales.

The red line indicates the mean of the paired differences, and its distance from zero provides an estimate of the bias between the two methods. The blue lines indicate the estimated limits of agreement as well as the confidence interval limits.

UCLA-R and UCLA-RA

The mean difference between the UCLA-R and UCLA-RA was small, at $M_{diff}=0.0406$ but the limits of agreement were rather wide 95% CIs [1.245; -1.164], as can be observed in Figure 11.

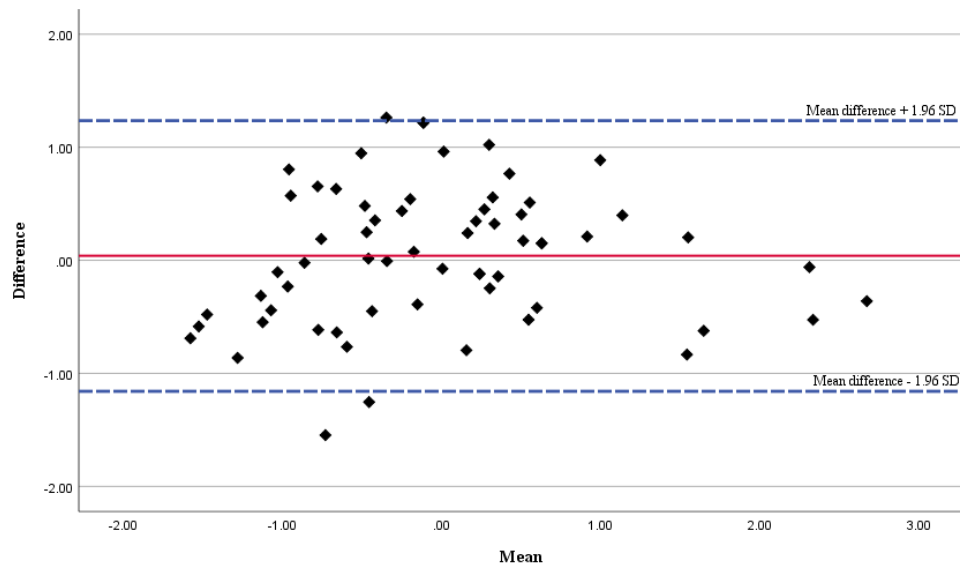


Figure 10. Bland-Altman plot demonstrating agreement levels between the UCLA-R and UCLA-RA scales

The Bland-Altman results suggest there is poor agreement between the UCLA-R and UCLA-RA instruments, however that poor agreement is not systematic because it occurs across the population. As evident from Figure 11, difference in values, resulting from the two versions increases in proportion to the average values.

KSS and KSS-A

The mean difference between the KSS and KSS-A was small, at $M_{diff} < 0.000$ but they produced wide limits of agreement 95% CIs [12.568; -12.568], as observed in Figure 12.

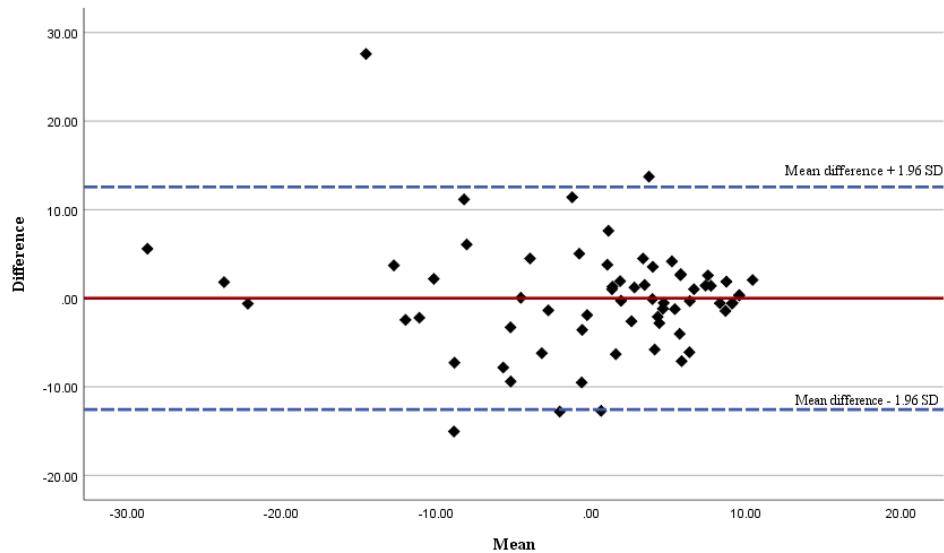


Figure 11. Bland- Altman plot demonstrating agreement levels between the KSS and KK-A scales

The Bland- Altman plot illustrated there is poor agreement between the KSS and KSS-A. Figure 12 illustrates that at lower values there is poor agreement but this agreement improves at higher mean values, suggesting the presence of systematic bias.

Hypothesis 7 was not supported. Some presence of proportional bias between each of the sets of the measures, was identified via the Bland- Altman plots. The level of agreement between the two versions of each tool, was also not high.

Moderation analyses

The results from the Kruskal- Wallis analysis (see Table 17), identified an association between the gender and age as variables across the four cohorts (IDD vs non-IDD, as well as forensic and non-forensic). Hence this provided the grounds for carrying out a moderation analysis to establish whether gender and age act as moderators in the relationship between self- perceived loneliness and attachment scores on the original as well as adapted instruments.

Prior to analysis being undertaken, multicollinearity and distribution diagnostics were run by analysing variance inflation factors (VIF; Myers, 1990). The VIF output suggested there no problems with multicollinearity across the variables. On the other hand, skewness was identified across the adapted

UCLA-RA (positive skew), the original KSS and adapted KSS-A (negative skew for both). The variables were managed as follows:

The positive skew within the adapted UCLA-R was adjusted via a logarithmical (\log^{10}) transformation, a process that normalises the distributions and equalizes the variances (Benoit, 2011).

The negative skew within the original and adapted KSS/A were managed via a reflection process followed by a square root transformation (Field, 2019). The three operations normalised the distributions as confirmed upon review.

Hypothesis 8 gender and cohort have a moderating role in the relationship between age and loneliness scores.

Hypothesis 9 gender and cohort have a moderating role in the relationship between age and attachment scores.

Analytic Plan

The data were analysed within SPSS v. 26 (2020), with the use of PROCSS v.3.5 micro (Hayes, 2020). Using Model 2, within PROCESS, a set of eight double moderation analysis were carried out separately, as presented below. In each analysis age was the independent variable; the moderators were gender and cohort (diagnostic or forensic); and the outcome was the version of the instrument (original or adapted, UCLA-R or KSS).

Original UCLA-R results

Diagnostic cohort

The predictors in each model for the outcome (score on the original loneliness scale) were young person's age, gender and diagnostic cohort (IDD and non-IDD). The purpose of the analysis was to control for the potential moderating effects of diagnostic cohorts and gender across the age of the young people.

The analysis indicated that just under 28% of the variation in the dependent variable (i.e., loneliness score on the original instrument) could be explained by the main and the interaction effects $R^2 = .28$, $F(5, 41) = 3.14$, $p = .017$. Table 34 displays the results of the UCLA-R.

Table 34

Results of Multiple Regression Analysis by IDD and non-IDD cohorts

	β	<i>SE</i>	<i>t</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>adj. R</i> ²
Overall model					3.143	5,41	.017	.277
Age	-3.01	.979	-3.08	.004				
Gender (Male)	-106.2	42.86	-2.48	.017				
Cohort (IDD)	-52.23	18.50	-2.82	.007				
Age* cohort	3.31	1.19	2.77	.008				
Age* gender	7.99	3.11	2.57	.014				

Note. The outcome variable was total UCLA-R score

Main effects

Age is a significant predictor of the logarithm of UCLA-R score, $b = -3.01$, $t(41) = -3.08$, $p = .004$. Gender predicts overall score on the original version of the UCLA-R loneliness scale $b = -106.2$, $t(41) = -2.48$, $p = .017$. Cohort is a significant predictor of the logarithm of UCLA-R score $b = -52.23$, $t(41) = -2.82$, $p = .007$.

Interaction effects

Age by cohort interaction predicted the original version of the logarithm UCLA-R loneliness scale $b = 3.31$, $t(41) = 2.77$, $p = .008$. The addition of the interaction $F(5,41) = 7.68$, $p = .008$, change $R^2 = .14$

Age by gender interaction predicted the original version of the logarithm UCLA-R loneliness scale $b = 7.99$, $t(41) = -2.57$, $p = .014$. Addition of the interaction $F(5,41) = 6.61$, $p = .014$, change $R^2 = .12$.

Forensic cohort

The predictors in each model for the outcome (score on the original loneliness scale) were young person's age, gender and forensic cohort (Forensic and non- Forensic). The purpose of the analysis was to control for the potential moderating effects of forensic cohorts and gender across the age variable.

The overall model was not significant ($R^2 = .15$, $F(5,41) = 1.47$, $p = .221$, with details of the main effects and interactions displayed in Table 35.

Table 35

Results of Multiple Regression Analysis by Forensic and non-forensic cohorts

	β	<i>SE</i>	<i>t</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>adj. R</i> ²
Overall model					1.47	5, 41	.221	.15
Age	-0.34	1.56	-0.22	.827				
Gender (Female)	-102.79	48.36	-2.13	.040				
Cohort (non- Forensic)	21.83	32.03	0.68	.499				
Age* cohort	-1.55	2.06	-0.75	.456				
Age* gender	7.80	3.53	2.21	.033				

Note. The outcome variable was total UCLA-R score

Main effects

Age did not predict the overall score on the original version of the UCLA-R loneliness scale $b = -0.34$, $t(41) = -0.22$, $p = .83$. Gender did predict overall score on the original version of the UCLA-R loneliness scale $b = -102.79$, $t(41) = -2.13$, $p = .04$. Cohort did not predict overall score on the original version of the UCLA-R loneliness scale $b = 21.83$, $t(41) = .68$, $p = .50$.

Interaction effects

Age by cohort interaction did not predict the UCLA-R score, $b = -1.6$, $t(41) = -0.80$, $p = .46$. Age by gender interaction did predict the UCLA-R score, $b = 7.80$, $t(41) = 2.21$, $p = .03$.

Adapted UCLA-RA*Diagnostic cohort*

The predictors in each model for the outcome (score on the adapted log transformed loneliness instrument) were young person's age, gender and diagnostic cohort (IDD and non-IDD).

The overall model was not significant, $R^2 = .114$, $F(5, 56) = 1.44$, $p = .224$. Table 36 displays the results of the adapted UCLA-RA.

Table 36

Results of Multiple Regression Analysis by IDD and non-IDD cohorts

	β	SE	t	p	F	df	p	adj. R ²
Overall model					1.44	5, 56	0.224	0.114
Age	-0.10	0.05	-2.11	.040				
Gender (Female)	-2.16	1.53	-1.42	.162				
Cohort (non- IDD)	-1.67	0.83	-2.00	.050				
Age* cohort	0.11	0.05	2.02	.049				
Age* gender	0.17	0.11	1.49	.142				

Note. The outcome variable for all regression was total log- transformed UCLA-RA score

Main effects

Age predicted overall score on the original adapted of the UCLA-RA loneliness scale $b = -.10$, $t(56) = -2.11$, $p = .04$. Gender did not predict overall score on the adapted version of the UCLA-RA loneliness scale $b = -1.16$, $t(56) = -1.42$, $p = .16$. Cohort predicts overall score on the adapted version of the UCLA-RA loneliness scale $b = -1.67$, $t(56) = -2.00$, $p = .05$.

Interaction effects

Age by cohort interaction predicted the UCLA-RA score, $b = .11$, $t(56) = 2.02$, $p = .049$. Age by gender interaction did not predict the UCLA-RA score, $b = .17$, $t(56) = 1.49$, $p = .14$.

Forensic cohort

The predictors in each model for the outcome (score on the adapted log transformed loneliness instrument) were young person's age, gender and forensic cohort (Forensic and non- Forensic).

The overall model was not significant ($R^2 = .09$, $F(5, 56) = 1.12$, $p = .36$, with details of the main effects and interactions displayed in Table 37.

Table 37

Results of Multiple Regression Analysis by Forensic and non- forensic cohorts

	β	SE	t	p	F	df	p	adj. R ²
Overall model					1.12	5, 56	.363	.091
Age	0.07	0.07	0.93	.357				
Gender (Female)	-1.96	1.65	-1.19	.239				
Cohort (non- Forensic)	1.25	1.38	0.91	.370				

Age* cohort	-0.06	0.09	-0.73	.472
Age* gender	0.15	0.12	1.21	.232

Note. The outcome variable for all regression was total log- transformed UCLA-RA score

None of the main effects, nor interactions were significant in this model.

Original KSS

Diagnostic cohort

The predictors in each model for the outcome (score on the original square root attachment instrument) were young person's age, gender and diagnostic cohort (IDD and non-IDD). The purpose of the analysis was to control for the potential moderating effects of diagnostic cohorts and gender across the age of the young people.

The overall model was not significant ($R^2 = .14$, $F(5, 56) = 1.86$, $p = .12$, with details of the main effects and interactions displayed in Table 38.

Table 38

Results of Multiple Regression Analysis by IDD and non-IDD cohorts

	β	SE	t	p	F	df	p	$adj. R^2$
Overall model					1.86	5, 56	.116	.142
Age	-0.03	0.11	-0.22	.825				
Gender (Female)	-2.24	3.99	-0.56	.577				
Cohort (non-IDD)	-2.63	2.01	-1.31	.197				
Age* cohort	0.19	0.13	1.50	.140				
Age* gender	0.15	0.30	0.49	.624				

Note. The outcome variable for all regression was total square root transformed KSS score

None of the main effects, nor interactions were significant in this model.

Forensic cohort

The predictors in each model for the outcome (score on the original square root attachment instrument) were young person's age, gender and forensic cohort (Forensic and non-Forensic).

The overall model was not significant ($R^2 = .16$, $F(5, 56) = 2.14$, $p = .07$, with details of the main effects and interactions displayed in Table 39.

Table 39

Results of Multiple Regression Analysis by Forensic and non-Forensic cohorts

	β	SE	<i>t</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>	adj. R^2
Overall model					2.14	5, 56	.074	.160
Age	0.39	0.17	2.35	.022				
Gender (Female)	-1.85	4.15	-0.45	.657				
Cohort (non- Forensic)	4.21	3.26	2.35	.202				
Age* cohort	-0.21	0.21	-1.04	.303				
Age* gender	0.11	0.31	0.35	.731				

Note. The outcome variable for all regression was square root transformed KSS score

Main effects

Only the one main effect, age, was significant, by contributing uniquely to the attachment score, $b = .39$, $t(56) = 2.35$, $p = .02$. No other significant effects were identified.

Adapted KSS-A*Diagnostic cohort*

The predictors in each model for the outcome (score on the adapted square root attachment instrument) were young person's age, gender and diagnostic cohort (IDD and non-IDD).

The overall model was not significant ($R^2 = .12$, $F(5, 56) = 1.46$, $p = .22$, with details of the main effects and interactions displayed in Table 40.

Table 40

Results of Multiple Regression Analysis by IDD and non-IDD cohorts

	β	SE	<i>t</i>	<i>p</i>	<i>F</i>	<i>df</i>	<i>p</i>	adj. R^2
Overall model					1.46	5, 56	.218	.115
Age	-0.01	0.13	-0.04	.970				
Gender (Female)	-5.45	4.71	-1.16	.251				
Cohort (non- IDD)	-2.11	2.37	-.89	.378				
Age* cohort	0.16	0.15	1.08	.285				
Age* gender	0.42	0.35	1.19	.238				

Note. The outcome variable for all regression was square root transformed KSS-A score

None of the main, or interaction effects in the model were significant.

Forensic cohort

The predictors in each model for the outcome (score on the adapted square root attachment instrument) were young person's age, gender and forensic cohort (Forensic and non-Forensic).

The model indicated that about 19% of the variation in the outcome variable (i.e., attachment score on the adapted instrument) could be explained by the main effects of age, $R^2 = .19$, $F(5, 56) = 2.70$, $p = .03$, with details of the main effects and interactions displayed in Table 41.

Table 41

Results of Multiple Regression Analysis by Forensic and non- Forensic cohorts

	β	SE	t	p	F	df	p	adj. R^2
Overall model					2.70	5, 56	.030	.194
Age	0.43	0.19	2.26	.028				
Gender (Female)	3.64	4.71	-0.77	.443				
Cohort (non- Forensic)	3.42	3.70	0.92	.360				
Age* cohort	-0.13	0.23	-0.55	.583				
Age* gender	0.27	0.35	0.76	.451				

Note. The outcome variable for all regression was log- transformed total KSS-A score

Main effect

Age predicted overall score on the adapted version of the KSS-R scale $b = .43$, $t(56) = 2.26$, $p = .03$. No other effects were identified.

Implications

Overall, the moderation analysis indicated the presence of interaction effects impacting on the scores of the loneliness and attachment instruments, for both the original and adapted versions.

Hypothesis 8 was supported, to some extent. The results suggested that the interactive effects of diagnostic cohort (IDD vs non- IDD) and gender, on the original loneliness scales depend on age. For the adapted loneliness instrument, an interactive effect of diagnostic cohort (IDD vs non- IDD) and age, was present effecting the outcome on the scale. Gender did not appear to moderate the relationship between age and UCLA-RA scores.

Hypothesis 9 was not supported. No evidence of a moderation effect of cohort or gender was identified for either original or adapted KSS instrument.

Discussion

The aim, of Study 3 was to explore the psychometric properties of the adapted measures (UCLA-RA and KSS-A) comparing their performances to the original versions of the measures (UCLA-R and KSS) across four participant cohorts (IDD, non-IDD, forensic and non- forensic). This was carried out by tests of reliability and validity and explored in more detail via Confirmatory Factor Analysis (CFA), Bland- Altman plots and multiple regression analysis.

The reliability assessments implied the adapted instruments performed equally well as the original tools, across the four current cohorts of participants. The outcomes across the tests of internal consistency, inter- item and item- total correlations suggests that the adapted instruments perform reliably (and mostly consistently in comparison to the original instruments) across the four cohorts identified in the study. Some variations in the inter-item and item total correlations were identified but these issues appeared to be present across both versions of the tools (original and adapted) within the four participant samples. The one surprising finding was that UCLA-R tool does not appear not to be appropriate for use within forensic settings, plausibly as the items pertain to feelings of isolation, relation and collective loneliness (as supported by the CFA).

The validity of the instruments was initially assessed via total score and individual item correlations. The results implied good performances across different versions of the instruments. This was further explored, via CFA, which tested the overall fit of existing models within the current (full) sample, across both the original and adapted versions of the instruments. The outcome of the CRA suggested both the original instruments, UCLA-R and KSS performed in line with the existing theoretical models. The identified factor structures were in line with the models as developed in previous studies (Zakahi & Duran, 1982; Lieberman, Doyle, & Markiewicz, 1999; Shelvin, Murphy & Murphy, 2014; Barcsi et al., 2017). The adapted KSS-A also performed, in agreement with the two- factor model as proposed for the original version. For these measures that fitted into the existing theoretical models, it can be suggested, they verified the existing factor structures of the instruments, within the full sample as made up of the four cohorts of young people.

For the original UCLA-R, the three- factor model produced better model for, within the current sample. This was found to be in line with the existing factor structure proposed by Shelvin et al. (2014), who assessed the instrument in a population of adolescents. This factor structure suggests the UCLA-R is composed of three latent variables that are isolation, relational and collective connectedness.

Feelings of aloneness and withdrawal are captured by the isolation factor, collective connectedness relates to group cohesiveness and the relational connectedness is thought to capture the social aspects of loneliness, in relation to social networks with others.

Conversely, the adapted UCLA-RA failed to meet the requirements for an adequate model fit, as assessed by the same two or three factor structure models (derived from the original version). The adapted UCLA-RA was not performing the same way as the original instrument, implications of which are that the adapted UCLA-RA is not measuring the same latent variables (as identified through the original version) and possibly not to the same degree as the UCLA-R.

For the original KSS instrument, also a three- factor model produced, overall a better fit, as based on the work by Barcsi et al. (2017). Suggesting, the original KSS items correlate with three main factors described as reliance, availability and autonomy in relation to a caretaker.

Reliance is suggested to reflect whether adolescents themselves sought or valued parental help, and availability, seeks to assess whether they perceived parents as available (Barcsi et al., 2017). Autonomy support involves feelings of self-reliance, in cases of when children are assumed as autonomous persons with personal wishes, motivations and roles, respected by the parents and admitted when seeking reunion with their own families. It is possible to postulate that the adapted KSS-A better responded to a two- factor model composed of dependency and availability (defined in the same manner as reliability and availability) (Lieberman et al., 1999) as it is an instrument adapted for young people with IDD, and those young people would be experiencing less autonomy than their non- IDD counterparts. This might be best explored in more detail, through additional data collection and further analysis, whereby the CFA performance can be compared across the two cohorts in a meaningful manner.

Bland- Altman plots were derived to assess for presence of proportional bias between the two versions of each instrument. The results were suggestive of some systematic differences between the UCLA-R and UCLA-RA, as well as KSS and KSS-A. The implications of the results being that the

agreement across the instruments was not very high across the sample. Some variation was present in how the young people were responding to the two different instruments.

The explorative Kruskal- Wallis analysis found significant differences between cohorts in age and gender distribution, the impact of which was further explored via a moderation analysis. The aim was to assess whether scores on the original and/or adapted instruments could be moderated by either gender or cohort inclusion (IDD/non-IDD or Forensic/ non-Forensic). The results implied that the diagnostic cohort (IDD and non- IDD) impacted on the outcome on the loneliness instruments, in accordance with the age of young person. Though, within the original UCLA-R instrument, gender was also identified as moderator, albeit not for the adapted UCLA-RA. On the whole, however all the models were weak, as indicated by $R^2 < 50\%$, implying the tested main and interaction effects were not accounting for majority of the variation in the dependent variable (i.e., instrument scores). Furthermore, no significant interaction effects were noted in the original and adapted KSS instruments.

The outcomes of Study 3 suggest that, overall, the adaptations made on the UCLA-RA were less successful than the changes made on the adapted KSS-A. The UCLA-RA was not as consistent in its assessments of reliability and validity. It also failed to follow in suit with the performance of the original tool, across the same populations. Implications of which might be that the alterations made to the adapted instrument had an impact on the instrument's validity, reliability and factor structure.

Generally, the adapted KSS-A performed more so, in line with the original version of the instrument (KSS) across the present assessments of reliability and validity, as well as factor structure. Arguably, less proportional bias was also identified between these two instruments, than the loneliness ones. Keeping in mind, these implications can only be made in the context of the current sample of participants. As was evident from the regression analysis, certain sample characteristics influenced the self- reported scores.

The suggested differences between the performance of the adapted UCLA-RA and KSS-A could be suggested as attributed to the scale of adjustments and changes made to the instruments. UCLA-RA underwent more of a change in its structure via the adaptations than did KSS-A. The adapted UCLA-RA included changes in the wording of its questions, as well as alternations to its question format, with this changing from a Likert scale to an ordinal answer format. The adapted KSS-A on the other hand, did not

change answer formats, rather it introduced short vignettes to help with understanding of the existing questions. The overall results from Study 3, would suggest that the adaptations to the original KSS were more successful, than those to the UCLA-R. Also, the adaptations to the KSS had less of an impact on the overall scale performance as assessed through the psychometric tests here.

Study 4

Aims and Data Analysis

The aims of Study 4 focused on exploring the reliability of the resiliency subscales across four participant cohorts (IDD, non-IDD, forensic and non- forensic), with a specific focus on the performance of the IDD cohort. In addition to this, group differences, in their performance on the subscales of RSCA, were explored.

In Study 4 the analyses were carried out using SPSS package Version 25 (2019; SPSS Inc., Chicago, Illinois, United States of America). Data collected from the questionnaires were entered into SPSS. The first step was to test the variables in how they met the assumptions for parametric analyses. After which descriptive statistics were presented, to help examine the distribution of the raw data, and identify any missing data and outliers.

Dataset

The participant dataset, for Study 4 and the RSCA analysis, is larger than for Study 3. One of the data collection sites, an HSB adolescent specialist community service, shared their RSCA dataset for analysis in the current thesis. The site supported the ongoing research but due to considerable internal assessment processes already in place, declined offering the whole assessment packs (as used in Study 3) to the young people at the service. In its place the team agreed to share, an anonymised RSCA dataset. The service had in the recent past started using the RSCA scales as part of their internal assessment procedures, and they had consequently accumulated some data they were able to share. In addition to providing the RSCA scores, for each participant, the site also completed a project specific information sheet that identified young people as having or not having an IDD (and gave basic demographic data such as age and gender, see Appendix V).

Ethics

As a private service, the data collection site, requested the researcher to share the existing Ethics application, and supplementary documentation as provided to the NHS Research Ethics Committee. The local team reviewed the approval as provided by London - Camden & Kings Cross (Reference: 15

LO/0688) and granted access to data collection as adjusted specifically for this site. Specifically, the team agreed to share with the researcher, a set of anonymised, existing resiliency profiles. No data collection was completed on-site by the researcher or any other individual representing the current research.

Participants

In addition to the 65 participants as identified and discussed in Study 3, the Study 4 dataset contained an additional 19 participants. The 19 additional participant's anonymised RSCA data were collected at a specialist community service for adolescents who display Harmful Sexual Behaviours (HSB) located in England. The full and final dataset for Study 4, focuses on the RSCA scales and pertains to 84 participants (see Table 42).

Table 42

Characteristics of the participants across Study 3 and Study 4

	Site category	Participant n	Type of service	Participant cohort recruited
Study 3				
	Forensic	19	Youth Offending Institute	Forensic, non-IDD and IDD
	Forensic	6	Specialist HSB service provider	Forensic, non-IDD and IDD
	Forensic	4	Specialist HSB service provider	Forensic, non-IDD and IDD
	Forensic	1	Specialist HSB service provider	Forensic, non-IDD
	Education	6	Special School	Non- forensic, non-IDD and IDD
	Education	15	Special School	Non- forensic, non-IDD and IDD
	Education	14	Mainstream school	Non- forensic, non-IDD and IDD
Total		65		
Study 4				
	Forensic	19	Specialist HSB service provider	Forensic, non-IDD and IDD
Total		84		

The age range of the 84 participants was 11-18-year-old ($M = 15.05$, $SD = 2.08$), with the majority being male (87%), and predominantly identified as white British (46%).

With the inclusion of the data from an HSB specialist service the spread of participants across the recruitment sites and the four categories changed, as detailed in the Table 43.

Table 43

Characteristics of the full sample of Study 4

Sample (and n of sites)	N	M_{age} (SD)	Gender (male)	Young people with IDD (% across full cohort)	Young people displaying HSB (% across full HSB cohort)
Young Offending Institute (n=1)	19	17.32 (0.67)	19	5 (6%)	3 (11%)
Specialist Services (n=3)	30	15.40 (1.73)	30	8 (9%)	25 (89%)
Special School (n=2)	21	13.67 (1.56)	16	8 (9%)	--
Mainstream School (n=1)	14	13.29 (1.54)	8	1 (1 %)	--
N total (% across full cohort)	84	15.05 (2.08)	73	22 (26%)	28 (33%)

The largest change, from Study 3, was the number of young people within the specialist service, which increased from 11 (Study 3) to 30 (Study 4). Within that cohort there was also an increase of young people with IDD (from 6 to 8 in total) and the number of young people displaying HSB (as recorded within specialist services) also increased from 9 to 28 in total (3x increase in sample size).

The full sample was split into the same four cohorts as in Study 3, the IDD, non- IDD, forensic and non- forensic cohorts. Overall an additional two young people were identified as belonging to the IDD cohort from the additional specialist service.

Young people displaying HSB

Twenty-eight young people (33%) out of the full sample of 84 young people, displayed HSB. All of those with HSB were sampled from specialist services.

Out of the total cohort of 28 young people who displayed HSB the average age was 15.32 ($SD=1.72$), all male¹², with six (21%) individuals also having an IDD diagnosis. The non-HSB sample ($n=56$) were predominantly male (80%), with 16 (29%) young people having an IDD diagnosis.

An exploratory Mann-Whitney test did not reject the Null Hypotheses of mean age across all 4 groups being equal ($U = 711.50, p = .487, r = .076$).

A Chi-square analysis found that there was a significant association between gender and HSB category $X^2(1) = 6.33, p = .013, V = .274$ with males being more frequent in the HSB cohort. A Chi-square test found no significant association between IDD classification and a record of HSB.

Data preparation

The RSCA instrument defines personal resiliency within children and young people, in terms of three core developmental constructs, composed of Sense of Mastery (MAS), Sense of Relatedness (REL), and Emotional Reactivity (REA) (Prince-Embury, 2007). Sense of mastery and sense of relatedness are considered to be protective factors whereas Emotional Reactivity is proposed as a personal risk factor. The overall score can provide a means by which the young person's resiliency profile is understood on the whole, whereas the subscale scores and subscale profiles provide more detailed information helpful for use in treatment planning and evaluation.

As the instrument is normed (using a generic population of adolescents), the three subscales can be examined with respect to each other using the *T*-score metric. Table 44 displays the *T* score ranges, across all three subscales.

Table 44

The MAS, REL and REA categorisations of scores

<i>Ranking</i>	<i>T score range</i>
High	≥ 60
Above average	56-59
Average	46-55
Below Average	41-45
Low	≤ 40

¹² All female participants remained categorised within the non- forensic (i.e. non- HSB) cohort as they were all recruited from educational sites.

For the MAS and REL scores in the average ranges and above, are suggested to indicate the young person experiences relative strength in these areas, with the scores in the below average categories indicating they do not.

For REA, on the other hand, scores in the average or above categories indicate the young person might be vulnerable. Below average scores on REA are indications of young person who does not have a vulnerability or issues in emotional reactivity.

The instrument also allows for the calculation of a young person's Vulnerability and Resource Indexes. The Indexes were developed in order to quantify the profile differences as found between the clinical and non-clinical samples of the adolescents.

The Vulnerability Index (VUL) is the standardised difference between the Emotional Reactivity *T*-score and the Resource Index, whereas the Resource Index (RES) is the standardised average of the Sense of Mastery scale and Sense of Relatedness scale *T*-scores. The scoring guide for the VUL and RES notes that a *T* score on the RES that is <45 is below average and *T* score <41 is low. A *T* score on the VUL that is ≥ 55 is above average and a *T* score ≥ 60 is high.

Normality

The assumptions of normality were assessed via the Shapiro- Wilk test. The Null Hypotheses that the scales are normally distributed, was not rejected for the Emotional Reactivity (REA) subscale ($p = .348$) and the overall Vulnerability Index (VUL index) score ($p = .221$). The Null hypothesis, that the scales are normally distributed, was rejected on the remaining subscales, Sense of Relatedness (REL), Sense of Mastery (MAS) subscale as well as the Resource Index (RES) score.

Missing data

The same approach to missing data analysis, as used in Study 3, was adapted for Study 4, with the threshold for detecting missing data set to 1%. A Multiple Imputation and Pattern Analysis was run within SPSS that identified and inspected the missing cases within the dataset. It was noted that one participant (as recruited within Study 3) opted out of completing the RSCA scales for unknown reasons.

The RSCA measure of resilience performed very well overall. Across the sub-scales 1.95% of all values are identified as missing. The variable summary chart did not identify a specific variable as the

most frequently missing. There appears to be no systematic pattern to the missing values. This was mirrored across both the IDD and non-IDD cohorts' data. Given the low frequency of missing values across the items, where missing data were present it was treated as missing at random across the analysis carried about below.

Study 4 results

Reliability

In line with the reliability analysis in Study 3, the current data set was subject to Cronbach's alpha and correlational analysis.

Hypothesis 10: The three RSCA subscales will show good internal consistency (above $r = .80$; Cicchetti & Sparrow, 1990) across the full sample, as well as the four cohorts.

Cronbach's alpha analysis was carried out and the results were interpreted according to the recommendations of Cicchetti and Sparrow (1990) who outline criteria for excellent ($\alpha = > .90$), good ($\alpha = .80 - .89$), fair ($\alpha = .70 - .79$) and unacceptable ($\alpha = < .70$) levels of internal consistency.

Cronbach's alpha scores are shown in Table 45 across the four groups.

Table 45

Cronbach's alpha scores across the RSCA subscales

Scale	Alphas				
	Full sample	IDD sample	Non-IDD sample	Forensic sample	Non- forensic sample
Sense of Mastery (MAS)	.92	.90	.93	.74	.95
Sense of Relatedness (REL)	.94	.92	.92	.88	.96
Emotional Reactivity (REA)	.93	.92	.93	.95	.92

The RSCA MAS subscales ($\alpha = .92$) demonstrated overall excellent internal consistency apart for one population, the forensic cohort who performed at the 'fair' level ($\alpha = .74$) in accordance with the Cicchetti and Sparrow (1990) criterion.

The RSCA REL subscales ($\alpha = .94$) demonstrated overall excellent internal consistency apart from the forensic population, who met the good criteria ($\alpha = .88$).

The RSCA REA subscales ($\alpha = .93$) demonstrated excellent internal consistency across all the cohorts.

Item- total correlations

Hypothesis 10: The item- total correlations will demonstrate good internal consistency across the IDD and non- IDD cohorts, by not containing items that fall below $r < 0.30$ (Boateng, Neilands, Frongillo, Melgar-Quiñonez, & Young, 2018).

Item- total correlations, between the IDD and non- IDD cohorts, were calculated using Cronbach's alpha analysis. The results of the analysis are displayed in Tables W1, W2 and W3, in the Appendix W.

Within the IDD cohort no items fell below $r < 0.30$ on the MAS subscale, with only one item (Item 17) doing so on the RES subscale ($r = .280$), and the one (Item 18) doing so on the REL ($r = .212$).

For the non-IDD cohort, the performances across the subscales were slightly different. On the MAS subscale the cohort produced one weak correlation (Item 4, $r = .266$), as did one item (7, $r = .266$) on the REL subscale. But on the REA subscale, three items produced poor associations. Item 4, in particular produced a correlation of $r = .007$, with items 5 ($r = .273$) and 18 ($r = .293$) just on the outside of acceptable limits. However, the deletion of any of these items would have negligible effect on the overall performance of the scale.

Overall **Hypothesis 10** was supported as the RSCA subscales demonstrated good to excellent levels of internal consistency both on the full sample and across the four cohorts. The Sense of Mastery results, for the forensic cohort suggested a less adequate outcome on the reliability analysis, 'fair' on Cronbach's alpha.

Group differences

The reason for exploring group difference between the current cohorts, was based on the knowledge that both i) a clinical and academic interest in the resiliency profiles of young people who display HSB was growing, and ii) specialist HSB service providers (within UK) were already assessing resiliency profiles of the young people in house (see outcomes of Chapter 4, Study 1). Therefore, the current study sought to investigate group differences across the RSCA.

Given the distribution of the data, most of the analysis was non- parametric. A Mann- Whitney U-test was completed for the subscales of Sense of Mastery (MAS), Sense of Relatedness (REL) and the Resource Index (RES) Index. Whereas, a t-test was completed for Sense of reactivity (REA) and the Vulnerability Index (VUL).

The group comparisons completed were those of IDD vs. non- IDD cohorts, Forensic vs. Non-Forensic cohort, and seeing as the HSB sample was larger in Study 4, a group comparison of HSB vs. Non- HSB analysis was completed.

To achieve a power of 0.8 and medium effect size a post hoc power analysis revealed 60 responses as necessary for avoiding type II error (Clarke-Carter, 2004).

Hypothesis 11: The subtests of the RSCA will identify group differences between the four samples.

Full sample scores

Before any tests of group differences were completed the scores of the full sample ($N= 84$) were aggregated and transformed into normed T scores. The descriptive data of the full sample across the three subscales and the two indexes can be found in Table 46.

Table 46

Mean T scores across the full cohort on the RSCA subscales

RSCA subscales	N	Full Sample ($N=84$) M (SD)
MAS	83	43.31 (11.99)
REL	83	43.08 (12.29)
REA	83	56.33 (12.12)
RES Index	82	44.34 (11.49)
VUL Index	84	56.25 (10.44)

With regards to the normed samples, as illustrated in Table 44, the current sample mean for the Sense of Mastery and the Sense of Relatedness subscales were in the below average category, with the mean scores on the Emotional Reactivity subscale in above average category. The Resource Index scores are categorised as below average and Vulnerability Index scores as above average.

IDD and non-IDD samples

To assess for group differences between the IDD and non-IDD cohorts group comparison analysis was completed for each subscale and index. Each of the three subscales as well as the two index scores were calculated and are illustrated in Table 47.

Table 47

The mean and median T scores across the IDD and non- IDD samples on the RSCA subscales

RSCA subscales	IDD Sample		Non- IDD Sample	Non-IDD Sample	
	N	Median (range)		N	Median (range)
MAS	22	45.50 (14- 58)	61	43 (12- 70)	
REL	22	45.50 (17- 59)	61	44 (4- 69)	
RES Index	22	45.50 (13- 59)	60	46 (10- 73)	
REA	22		61		56.75 (12.76)
VUL Index	22		61		56.31 (10.91)

A Mann-Whitney U tests was conducted to compare the scores on the MAS subscale between the IDD cohort ($Mdn = 45.50$) and the non- IDD cohort ($Mdn = 43$). The Mann-Whitney U tests indicated the differences were not significant ($U = 632.50, p = .691, r = .044$).

A 2-sided, Mann-Whitney U tests indicated that score on the REL subscales were not greater for the IDD cohort ($Mdn = 45.50$) than for the non- IDD cohort ($Mdn = 44$), ($U = 628.50, p = .661, r = .048$).

A 2-sided Mann-Whitney U tests indicated that score on the RES index were not greater for the non- IDD cohort ($Mdn = 46$) than for the IDD cohort ($Mdn = 45.50$), ($U = 657, p = .975, r = .003$).

The independent sample t-test did not reject the Null hypotheses that the average mean REA subscale scores are equal across IDD and non-IDD ($t(81) = -.534, p = .594, d = .139$).

An independent samples t-test was conducted to compare mean difference on the VUL index scores, between IDD ($M = 56.09$, $SD = 9.19$) and non-IDD ($M = 56.31$, $SD = 10.91$) cohorts. The independent samples t-test was found to be statistically non-significant ($t(82) = -.083$, $p = .934$, $d = .022$).

Forensic and non-forensic samples

To assess for group differences between the forensic and non-forensic cohorts, group comparisons were completed for each subscale and index. Each of the three subscales as well as the two index scores were calculated and are illustrated in Table 48.

Table 48

The mean and median T scores across the forensic and non-forensic samples on the RSCA subscales

RSCA subscales	N	Forensic	Forensic	N	Non- Forensic	Non- Forensic
		Sample Median (range)	Sample Mean (SD)		Sample Median (range)	Sample Mean (SD)
MAS	49	45 (25- 68)		34	42.50 (12- 70)	
REL	49	44 (21- 59)		34	45 (4-69)	
RES Index	49	46 (25- 62)		33	46 (10-73)	
REA	49		55.82 (11.52)	34		57.06 (13.07)
VUL Index	49		55.20 (8.55)	35		57.71 (12.60)

A Mann-Whitney U tests was conducted to compare the scores on the MAS subscale between the forensic cohort ($Mdn = 45$) and the non-forensic cohort ($Mdn = 42.50$). The Mann-Whitney U tests indicated the differences were not significant ($U = 740$, $p = .389$, $r = .095$).

A two-sided Mann-Whitney U tests indicated that score on the REL subscales were not greater for the non-forensic cohort ($Mdn = 45$) than for the forensic cohort ($Mdn = 44$), ($U = 813.50$, $p = .857$, $r = .02$).

A two-sided Mann-Whitney U tests indicated that score on the RES index were not greater for the forensic cohort ($Mdn = 46$) than for the non-forensic cohort ($Mdn = 45.50$), ($U = 798.50$, $p = .925$, $r = .010$).

An independent samples t-test was conducted to compare mean difference on the REA subscale, between forensic ($M = 55.82$, $SD = 11.52$) and non-forensic ($M = 57.06$, $SD = 13.076$) cohorts. The independent samples t-test was found to be statistically non-significant ($t(81) = -.457$, $p = .649$, $d = .101$).

An independent samples t-test was conducted to compare mean difference on the VUL index scores, between forensic ($M = 55.20$, $SD = 8.55$) and non-forensic ($M = 57.71$, $SD = 12.60$) cohorts. The independent samples t-test was found to be statistically non-significant ($t(55.76) = -1.02$, $p = .311$, $d = .233$). Levene's test rejected Null hypotheses of equal variances ($F = 6.05$, $p < .05$), therefore degrees of freedom were adjusted from 82 to 55.76.

HSB and non-HSB samples

To assess for group differences between the HSB and non- HSB cohorts, group comparisons were completed for each subscale and index. The HSB cohort ($n=28$) comprised of the young people who had displayed HSB, as detailed in the participant section. The non- HSB cohort ($n=55$) were the remaining young people from the full sample ($N=84$). The group means and mean ranks can be observed in Table 49

Table 49

The mean and median T scores across the HSB and non-forensic samples on the RSCA subscales

RSCA subscales	HSB		Non- HSB			
	N	Sample Median (range)	HSB Sample Mean (SD)	N	Sample Median (range)	Non- HSB Sample Mean (SD)
MAS	28	45 (25- 68)		55	43 (12- 70)	
REL	28	46 (23- 56)		55	43 (4- 69)	
RES Index	28	46.50 (29- 62)		54	46 (10- 73)	
REA	28		53.93 (9.29)	55		57.55 (13.24)
VUL Index	28		54.21 (8.44)	55		57.27 (11.23)

An independent samples t-test was conducted to compare mean difference on the REA subscale, between HSB ($M = 53.93$, $SD = 9.29$) and non-HSB ($M = 57.55$, $SD = 13.24$) cohorts. The independent samples t-test was found to be statistically non-significant ($t(72.77) = -1.44$, $p = .153$, $d = .39$). Levene's

test rejected Null hypotheses of equal variances ($F = 4.15, p < .05$), therefore degrees of freedom were adjusted from 81 to 72.77.

An independent samples t-test was conducted to compare mean difference on the VUL index scores, between HSB ($M = 54.21, SD = 8.44$) and non-HSB ($M = 57.27, SD = 11.23$) cohorts. The independent samples t-test was found to be statistically non-significant ($t(82) = -1.27, p = .208, d = .31$).

A two-sided, Mann-Whitney U tests was conducted to compare the scores on the MAS subscale between the HSB cohort ($Mdn = 45$) and the non-HSB cohort ($Mdn = 43$). The Mann-Whitney U tests indicated the differences were not significant ($U = 695.50, p = .472, r = .079$).

A two-sided, Mann-Whitney U tests indicated that score on the REL subscales were not greater for the HSB cohort ($Mdn = 46$) than for the non-HSB cohort ($Mdn = 43$), ($U = 749, p = .840, r = .022$).

A two-sided, Mann-Whitney U tests indicated that score on the RES index were not greater for the HSB cohort ($Mdn = 46.50$) than the non-HSB cohort ($Mdn = 46$), ($U = 717, p = .703, r = .042$).

Hypothesis 11 was not supported by the data. No significant group differences were identified on the scores of resilience across the subscales between the cohorts.

Discussion

The first aim, of Study 4 was to assess the RSCA instruments' reliability in the context of the full sample as well as the individual cohorts. The analysis of Cronbach's alphas and item and inter-item correlations supported hypotheses 10. Results suggested that the internal consistency of the RSCA instrument is of good to excellent quality within the current sample, this was in line with previous findings (Prince-Embury, 2008). The internal consistency of the instrument was tested across the four cohorts (IDD, non-IDD, forensic and non-forensic), most of which, apart from forensic cohorts performed in good to excellent categories.

A set of item-total correlations were completed to assess the internal consistency of the items across the IDD and non-IDD cohorts. The results of which found that overall, the items performed well across both cohorts. Some weaker correlations were identified for both cohorts, however none had a severe effect on the overall performance of the scale. The weakest item-total correlation ($r = .007$) was achieved within the non-IDD cohort on Item 4 (*I get very upset when things don't go my way*) of the

REA subscale. However, given the small impact the deletion of the said item would have on the overall scale α , it was decided to retain all items.

The second aim, of Study 4, examined group differences of the RSCA subscales and its index scores, across the cohorts. The scores indicated that, as a full sample the young people in this study scored below average on the Sense of Mastery and the Sense of Relatedness subscales. They also scored in the above average range on the Emotional Reactivity subscale. Their Resource Index scores were categorised as below average and their Vulnerability Index scores as above average.

Overall discussion

Summary of findings

In the two studies a number of validation and reliability assessments were completed in relation to three instruments, tools specifically selected for their use within forensic adolescent service provisions. Out of the three instruments, two (UCLA-R and KSS) were adapted for an IDD adolescent population, as detailed in Chapter 5. The third instrument (RSCA) was not modified given its already accessible format, as reported by the authors, for a young population (Prince-Embury, 2008).

Together, the instruments assess three psychosocial domains of adolescent development, emotional loneliness, attachment and resilience. These domains have a clinical function (that feed into identifying treatment needs) and they should therefore form a part of a holistic assessment process, within specialist service providers. Despite this, as illustrated by Chapters 3 and 4, assessments of these and other strength- based domains, form part of a less frequent assessment practice for young people with IDD, due to a lack of availability of instruments.

The instruments chosen for adaptation were the UCLA-R, and Kerns Secure Scale. The Resiliency Scales instrument was not adapted but its reliability was examined for application within an IDD adolescent population. Together these instruments were tested for their application within four populations, the IDD, the non-IDD, the forensic and non- forensic cohorts. Due to challenges encountered in participant access and recruitment, it was not possible to single out and test an HSB cohort.

Study 3 examined the performance of the adapted instruments, across a number of reliability and validity analyses, whereas Study 4 reviewed the reliability of the resiliency scales across a specific population and explored group differences in their performances.

Study 3 presented diverging results in terms of the validity, and reliability between the original and adapted loneliness and attachment instruments. On the assessment of reliability both the adapted and original UCLA-R, and KSS scales produced, overall, good internal consistency across the four cohorts, although the forensic cohort's reliability was rather weaker as found in the Cronbach's alpha analysis. The results of the confirmatory factor analysis, although overall supportive of existing theoretical models,

was not of a satisfactory level for the adapted UCAL-RA instrument. Furthermore, the Bland- Altman plots suggested the presence of proportional bias between the two versions of each instrument, with some variations in how the participants scored the two versions. The moderation analysis suggest that cohorts, and gender moderated the relationship between age and self-perceived loneliness, as well as age and attachment relationships.

On the other hand, the existing reliability of the RSCA subscales was supported across the four cohorts. The instrument performed in the excellent category, with a minor divergence created by the forensic cohort of young people on the Sense of Mastery subscale. The between group tests did not demonstrate any significant differences, between the cohorts as explored.

Interpretations

The current two studies, especially Study 3, sought and completed a set of analysis assessing the adapted instruments applicability beyond past works within the area. Namely, via the statistical methods employed within Study 3 a more in-depth evaluation of the two adapted scales and their applicability, as well as appropriates for use in IDD adolescent populations, was presented. The two directly comparative projects that also sought to adapt and evaluate the use of adapted instruments for young people with IDD who display HSB, have included the one focusing on an instrument of cognitive distortions (QACSO, Cygan, 2015), and the second on developing a measure of young people's relationships and sexual knowledge (ASK-A, Richards, 2018). Both did so, by carrying out only the more traditional tests of validity and reliability checks, and although they were successful in obtaining test- retest data, their respective statistical assessments were restricted to these psychometric evaluations. The current work, on the other hand addressed some of these limitations by including assessment of bias, evaluating the existing factor structures of the instruments and exploring the plausible interactions, at play within the data set obtained. Given this, the current studies have provided new boundaries which could and should be explored in future empirical work of psychometric assessments of adapted instruments.

As for the findings, by expanding beyond some of the more traditional means of assessing the reliability and validity of the adapted instruments, the instruments within the current thesis were evaluated in more detail offering some interesting findings and implications.

As noted by Vassar and Crosby (2008) the UCLA-R scale is widely used instrument for assessment of loneliness in both children and adolescents, yet studies have presented conflicting reliability results for these populations. Fluctuations in how the reliability of the instrument performs across populations have been documented. In the light of which, the finding in relation to the performance of the forensic cohort on the original UCLA-R within Study 3 were not surprising. This would suggest that for assessments of emotional and or social loneliness this instrument might not be best placed in forensic settings. Alternative instruments should possibly explore loneliness in the context of the incarnated or residential settings, these young people find themselves in, via question items that explore the impact of such circumstances, specifically.

Interestingly, the adapted UCLA-RA did perform better within this population but the outcomes of the confirmatory factor analysis, suggest that this might be because the adapted instrument is tapping into a different set of latent variables. This needs to be further explored in future work. Of note, Keeling, Rose, and Beech (2007) have suggested that majority of (adult) IDD research has primarily utilised the UCLA-R as a one factor structure scale, suggesting this might be a better fit for the adapted instrument.

The current study did offer some support towards the reliability and validity of the original KSS (Kerns et al., 2001b) in use of adolescents with and without IDD, as well as those in forensic and non-forensic settings. The existing three – factor structure (Barcsi et al., 2017) was also supported by the current findings of the CFA. Furthermore, the adaptation to the KSS-A did not appear to compromise the internal integrity of the instrument. Yet, it did respond better to the two factor structure (Lieberman et al., 1999), suggesting that it measures attachment in a different manner to the original instrument.

Although, proportional bias was present between the two version of the KSS, as well as UCLA-R, suggesting that young people were not answering the questions in quite the same manner, across the two versions. This, to some extent might be assignment to the fact that they possibly understood and answered the questions differently, according to their gender, and cohort.

Integral to the interpretation of the results across the two studies herein, is a requirement to first and foremost offer an acknowledgment of the implications the significant difference in age and gender, as present between the four cohorts. Although the initial intention was recruitment of matched pairs, across the four cohorts, due to a variety of challenges experienced and discussed earlier, it was not achieved,

leaving the raw data collected subject to unavoidable bias. The implications of this are discussed and managed within each data analysis section separately, but a summary is also offered below.

On average participants in the forensic cohort tended to be older than participants within the non-forensic cohort (i.e. those recruited through education providers). The oldest participants were recruited in the YOI, followed by the specialist HSB services, and interestingly the largest proportion of the IDD cohort (55% of full cohort) was based in these forensic settings. A number of reasons for this may be considered: the age of the young person might influence whether they are seen and receive a diagnosis, with older adolescents being more likely to get a diagnosis, or it might be an illustration of the over-representation of the IDD cohort within forensic settings, or finally it might be an expected outcome of one of the original aims of the study, later dropped (the original aim being to recruit participants with IDD from HSB specialist providers). A closer review of the recruitment sites of the IDD cohort illustrates that although the largest proportion was recruited from HSB services (due to intentional participant recruitment drive), whereby 54% of participants from HSB sites had an IDD diagnosis, the next largest proportion (38% as identified with IDD) were located within specialist schools. This means some overlap was present across the four cohorts, as debated earlier.

Additionally, the gender split was uneven across the four cohorts, as all the females were located within the non-forensic settings (cohort). The impact of these factors was explored in the moderation analysis, the results of which suggested both age and gender to influence the outcome on the instruments.

In considering participant characteristics, it was found that within the IDD cohort, over half (55%) were reported as having additional socio-emotional difficulties and diagnosis. This result is in line with the findings from both Chapter 4 and previous empirical studies (Emerson, 2003; Emerson, 2007). Furthermore, within the forensic cohort 20% of those with IDD self-reported being victims of abuse and or neglect. But this is a limited finding, and should be interpreted with some caution, as it was not possible to collect the same quality of information across all the recruitment sites. Namely, within the one mainstream school ($n=14$), the SENCO, despite copious reminders, did not complete the participant sheet in relation to the additional difficulties experienced by the young people.

Although the original KSS instrument presented some missing data requiring hot-decking imputation, an analysis of the missing data suggested there was no pattern to this (even between the IDD

and non- IDD cohorts). A hypothesised reason for this is suggested to be down to the layout of original KSS, which is of a format that is rather busy, with a number of items per page. Where a participant completes one question, and if they look away, they might miss their place on the page, and subsequently accidentally miss answering the next question. As part of the modification process, on the adapted version of KSS each question was deliberately placed on individual pages. The percentage of missing data for the adapted instrument was subsequently lower than the original instrument, but still some remained. Reasons for missing responses here might have included pages sticking together. With pages sticking together two items/ questions are easily overlooked.

Where the original UCLA-R was modified with feedback from experts by experience, the response format changed from a 4- point Likert scale to a yes/no and don't know (DK) categorical format. The inclusion of the DK responses is contested and the analysis of the responses on the adapted UCLA-RA suggests this response was used with some frequency by both the IDD and non- IDD cohorts. The highest frequency DK items (with $\geq 25\%$ of the respondents selecting it) were: *I am good at telling what my friends and family are feeling*, *I don't have people to talk to when I feel sad or lonely*, *My interests and hobbies are same as other people I know*, *Other people don't have the same interests and ideas like me*. These were items that tap into the isolation and collective loneliness factors in a three-factor model (Shelvin et al., 2014). Objectively they are also, predominantly questions in relation to the wider social networks of the young person, and require the person's assessments of others' impressions of themselves, which might be reasons for the frequent DK response. They might be challenging for the young persons to evaluate in terms of a definitive and categorical Yes or No response. Two (items 3 and 8) of these four items also produced particularly low ($r < .30$) inter- item correlations, lending evidence towards them being particularly difficult for young people, in the current sample, to assess.

Overall, the results from the analysis of the UCLA-R suggests that although loneliness is an important domain to assess, the UCLA-R might not be the best choice of instrument in forensic settings and instead other tools for assessing loneliness (perhaps with a different factor composition) should be considered. Furthermore, the adapted version, the UCLA-RA contains limitations in terms of its reliability and wider construct validity as assessed in the current sample.

The analysis of the reliability and validity of the KSS lend themselves to somewhat more clear implications. The results found that the adapted version of the KSS performed in line, and in the direction of the original, and the regression analysis supported the hypothesised ability of the adapted scores predicting the direction of the original, for all but one item.

The CFA findings support the use of the three- factor models for scoring the original UCLA-R and KSS instruments, in a heterogenous group of young people. The three factor models of both have been established in a number of previous studies using exploratory factor analysis (Barcsi et al., 2017; Shelvin et al., 2014) and have been replicated here. The adapted KSS- A, however produced a better fit within the two- factor model. Regrettably, the adapted UCLA-RA was not performing in the same manner as the original UCLA-R within current sample. The adapted instrument did not achieve a good fit model, the implications of which are that, as an instrument, it is not measuring the latent factors to the same degree as the original.

Finally, although no significant group differences were found on the RSCA scales, the overall results of the resiliency subscales suggested the current participants experience some challenges. The overall sample means on the sense of mastery and relatedness are in the 'below the average' category, with their emotional reactivity results within the 'above average' category. Their vulnerability index, as a sample, is above average and their resource index is below average. Overall, these results indicate that the sample, as a whole, had a poor resilience profile, they are classified as vulnerable to some extent with a low ability to access their resources at times of need. A potential reason for this, might have been down to the recruitment sites. Referring back to Table 42, it is clear that although some counter- balance was attempted via recruitment of participants from both forensic and educational provisions, what emerges is that the sample recruited via educational provisions was composed primarily of adolescents from special schools (only $n=14$ young people were from mainstream schools). This is of significance because, in the UK special schools specifically cater educational provisions for young people with additional needs and vulnerabilities in any of the following areas; communication and interaction, cognition and learning, social, emotional and mental health, as well as additional sensory and physical needs. The implications of which are that their resilience profiles should reflect these additional needs and vulnerabilities.

Limitations

A number of limitations will have impacted on the results and the possible data analysis of the current study. Small sample sizes represent one main and recurring challenges in conducting research with niche populations, and replication of findings is essential in validating the current findings.

Thus, the primary limitation of the study was the small and self-selected sample within. The small sample limits the generalisability of the results. Additional participants would have been involved in the two studies representing more variety of the service provisions.

Secondly, young people with IDD were somewhat under-represented (i.e., 31% of Study 3 and 26% in Study 4) and may have marginally biased the findings where the group comparisons were completed. What is more in the current study, due to challenges experienced with data collection it was not possible to undertake test- retest analysis, which may need to be addressed in future studies.

Some issues are also present in the design of the studies. It was not always possible for the researcher to collect the data, herself, due to variations in service access. Meaning it was not possible to know how much support and help some participants might have had in completing the instruments. Finally, the study could have benefited from employing a measure of social desirability. Assessment of socially appropriate responses are, in some instances integrated into instruments themselves (such as the Trauma Symptom Checklist; Briere, 2004) but it was not included in the data collection within.

Summary and future directions

In the two studies presented, two adapted instruments were evaluated for their reliability and validity and one assessed for its suitability for an IDD population. The results, suggest that some of the alternations were more successful than others, with the adapted attachment scale performing overall better than the adapted loneliness instrument. Moreover, the resilience scales appear to be suitable for use and application with young people with IDD. Together these assessments were able to evaluate the wider psychosocial functioning of young people within specialist services, they were especially intended for use within HSB provisions. As demonstrated in the earlier chapters, currently practices are too risk focused, especially when it comes to young people with IDD, as there is a stark lack of appropriate instruments to use for a holistic assessment. The analysis completed within Study 3 and 4, within Chapter 6, sought to

address this. The results are supportive of the use of the adapted attachment (KSS) instrument and the RSCA within such services. Less evidence, was found for the application of the original and adapted UCLA-R/A instruments.

Given these findings future empirical work, should focus on developing further instruments for the IDD populations. It is clear from the resilience outcome profiles, that this is a complex cohort. These are only the starting steps towards meeting the needs for these vulnerable individuals. Further assessments need to be adapted and/or developed to help inform appropriate treatment work, that will optimise the young person's long-term wellbeing and treatment outcomes.

Chapter 7

Implications and Future Directions.

Overview

In the final chapter of this thesis the findings of the literature reviews and empirical research conducted are summarised. In addition, the wider implications of the results for applied practice and future research is considered. Finally, included in the chapter are reflections of some of the challenges experienced and the broader limitations of research in this field.

Thesis Overview

Research has identified that a proportion of sexual offences are conducted by men with intellectual and developmental disabilities. Studies looking at childhood experiences of the men often report family discord, violence, poor parental control and neglect (Day, 1994; Fortune & Lambie, 2004). In addition to which, behavioural disturbances at school, psycho-social deprivation, and psychiatric illness are also frequently reported (Awad, Saunders & Levene, 1984; Caparulo, 1991; Winter, Holland, & Collins, 1997). Men with intellectual and developmental disabilities (IDD), unlike the men without IDD, tend to be less discriminating in their victim choice and appear to be more likely to assault those individuals who are accessible to them in terms of proximity and vulnerability (O'Callaghan, 1999; Langevin & Curnoe, 2008). Characteristics such as poor coping strategies (Lindsay et al., 2010) and mental health problems (Murphy, Holland, Fowler, & Reep, 1991) in men with IDD, have been postulated to predict later involvement with the CJS.

A proportion of adult men with IDD who sexually offend, have also reported engaging in sexually abusive behaviours before the age of 18 years, although with only a few being convicted of it (SOTSEC-ID, 2010). Recent national crime reports from England, indicate that the number of reported sexual offences against children, under the age of 18 within England had increased, with a proportion of incidents perpetrated by other children and young people. National children's charities estimate that between a quarter and a third of all sexual abuse in the United Kingdom involves children and

adolescents under the age of 18 as the alleged abusers (Hackett, Holmes, & Branigan, 2017). The exact prevalence rates of young people with IDD who display harmful sexual behaviours (HSB) is a contested topic, with most studies offering figures suffering from different methodological limitations. The general indication is that between 6-25% (Pullman & Seto, 2012; Vizard, Hickey, French, & McCrory, 2007) of young people who present with HSB and have been identified via CJS routes, have an IDD diagnosis.

Young people who present with HSB are different to adults who display HSB as they have different roles in society, different motivators behind their actions, as well as forces, factors, attitudes (Rich, 2009). Not only this but their sexual behaviour needs to be considered within their developmental context, which can give an indication of the motivations of such behaviour. Adolescence is a time during which drastic changes take place both physiological and psychological. Specifically, in instances where the young person has IDD, it leaves them more vulnerable to different forms of abuse and neglect.

In more recent national reviews of adolescents who display HSB, research has found, more often than not, family systems to be broken and children having a long-term history of severe neglect and abuse (Ghani, 2013; Alond et al., 2006; Alywin, Struder, Reddon & Clellannd, 2003; Barbree, Marshall & McCromick, 1998; NSPCC, 2016). Case file reviews, from specialist HSB service providers consistently find the majority (between 60-90%) of the young people (with and without IDD) referred to the service will have a history of at least one type of abuse or trauma in their childhood, examples including emotional abuse, severe neglect, sexual abuse, physical abuse, domestic violence, parental drug and alcohol use, and parental rejection (Hackett, Phillips, Masson, & Balfe, 2013; Vizard et al., 2007). Notably, some research has suggested ID adolescents to be more likely, than the non-ID group to have a history of sexual abuse, as victims (Lindsay, Law, Quinn, Smart, & Smith, 2001).

The types of behaviours and offences committed appear to be similar across the IDD and non-IDD cohorts. They both display a variety of behaviours in terms of range, with most of them, once they are in touch with specialist services, having engaged in more than the one type of behaviour. Although, IDD adolescents have been found to be more likely to engage in non-contact behaviours, and are less likely to engage in grooming behaviours (Gilby et al., 1989; Stermac & Sheridan, 1993; Fyson, 2007; Gilbey, Wolf & Goldberg, 1989; Almond & Giles 2008).

Notably, in comparison to the research on adults who sexually offend, and adolescents without-IDD, very little is known about those with IDD, apart from the fact they come into contact with specialist HSB services. The reason for a lack of clinical knowledge and understanding is down to, partly a lack of appropriate assessment instruments, which in turn means a weakness in the holistic understanding of the person and their circumstances, which lead them down set pathways to displaying HSB. This is despite data, on non- IDD cohorts leading to hypothesis such as there being an interaction between presentation of HSB in adolescents and wider vulnerabilities, as well as experiences of maltreatment (Clements, Holmes, Ryder & Mortimer, 2017). A lack of knowledge and understanding of IDD in mental health, care, education as well as the criminal justice settings, however is not a new national failing, as was demonstrated by Talbot (2007), and Emerson & Baines (2010). For a long time now, there are continual research findings showing that young people's needs are not met in services, contributing to the wider health inequalities across the UK for those people with IDD.

In order to assess the potential impact of such negative life experiences, it is important to explore and recognise the function of psychological assessments. Assessments completed in the context of specialist, applied services need to be robust, appropriate and adapted to the needs and vulnerabilities of the person they are assessing (Law & Wolpert, 2014). The data collected not only contributes towards the case formulation in a clinical sense and a study of treatment responsiveness factors, but also, helps expand our empirical understanding of the young person in the context of the HSB they displayed. It offers a means by which systematic data can be collected for the development of theoretical offence models. This in turn leads into informing better adapted and developed intervention and treatment programmes. Professional, clinical judgements are strongly mediated by construct validity of assessment instruments, as such instruments provide data on which clinical judgements are made (Haynes, Richard, & Kubany, 1995).

In order to find and collate all the adapted or specially developed assessment tools, and instruments for young people with IDD who display HSB, a systematic review was completed in Chapter 3. The focus of the review was on identifying strength-based tools, and moving away from a risk focused approach, as facilitated by an over- reliance on risk instruments. A limited practice that is often identified as prevalent in specifically forensic settings. But this was also driven by the knowledge that there already

existed risk assessment tools for young people with IDD who display HSB, as well as two instruments that were being developed at the same time as this thesis, focusing on the more offence or behaviour-based aspects. These included the AIM II a risk assessment instrument, the QACSO that explores cognitive distortions, and the ASK-A, a questionnaire exploring sexual knowledge and understanding of the young people with IDD. Although grey literature was not included in the systematic review, through access and communication with a national network of practitioners based in specialist HSB services in the UK, as well as communication with a specialist assessment focused development group (LDWG), the researcher was aware that no alternative tools were available. The systematic review identified no instruments that had been specifically adapted (or developed) for young people with IDD who display HSB and were available for use.

Consequently, as discussed in Chapter 4 a survey was developed exploring assessment practices of service providers who might receive referrals of young people displaying HSB. The aim was to explore how the young people with IDD within specialist forensic services were assessed, what tools were applied and for what purpose. The survey specifically enquired about the psychological domains assessed, and the corresponding tools utilised, by the service providers. The findings of Chapter 4, Study 1 suggested that provisions within specialist services were patchy with little consistency in internal assessment processes. Even though services reported receiving a significant number of referrals for young people with ID, ASD or IDD, they also appeared to neglect taking into account such young people's needs in their assessment practices.

The most unified practice reported across services was a focus on risk assessments with risk tools most consistently reported as utilised instruments. Conspicuously, risk assessment tools were also reported to be used in lieu of appropriate alternatives, supposedly to measure psychological constructs. Although services reported assessing for a variety of psychological domains, including resilience, loneliness, and attachment, their selection of tools failed to reflect such a holistic approach. Too frequently, the answers provided suggested the instruments applied were used for assessment of a variety and diversity of domains, which did not always correspond to the original purposes of the instrument(s) in question.

The issues with an over- focus on risk and risk tools has been acknowledged and discussed in the NICE guidelines looking at HSB in adolescents (2016), where it is stated that we still lack a fully validated model and framework for young people who present with HSB (NICE, 2016). An over- focus on risk might lead to an over-punitive or over-restrictive approach towards the individual, but also in their usual format, risk assessment tools do not engage with the person, but are constructed via a review of shared, multi- agency documentation and reports. Furthermore, not only does such a one-dimensional assessment approach not offer much insight into the strengths of the person, it also does not compare fairly to the large (in comparison) number of assessment instruments available for the non- IDD cohort.

As Lindsay et al. (2010) notes *“it is not unreasonable to assume that abuse and deprivation in childhood may be an indication of difficulties in attachment and family relationships”* (p 690), but results as above indicate that specialist provisions, currently fail to acknowledge this via their assessment practices. Consequently, any intervention work with young people with IDD, might fail to move away from significantly targeting the sexual behaviour and also focusing on the broader concerns within the child’s family and potentially unresolved trauma and abuse histories (NSPCC, 2019).

A second study, within Chapter 4, was completed with an aim to review the IDD young people’s psychopathology, with a closer look at how they were assessed in a specialist HSB service. The study was a retrospective case series based on a number of multi- disciplinary team reports in a single, leading specialist service. It was found that young people with IDD referred to the special HSB service were predominantly male and on average 14 years old at the point of referral. A proportion of the cohort were referred to the service on the basis of engaging in contact behaviours, and a large ratio of the cohort was found to have experienced adverse childhood experiences. On average most had experienced more than two types of traumatic childhood events, with the majority also having abuse related experiences. In terms of the number of assessments on average offered to the young people with IDD, it was found that around half of the instruments available to those without IDD were offered to those adolescents with IDD. The selection of instruments presented to the young person would have been decided on an individual basis, and based on professional clinical judgment. In analysing the cases included in the review it was clear there was little consistency as to which assessment tools were offered and recorded as completed, irrespective of some of the experiences the young person might have been subjected to.

Despite a significant proportion of young people having a record of abuse and neglect, only just over a half were recorded as having completed the trauma assessment instrument, with even fewer being offered to undertake an assessment of depression and anxiety. Reasons for this primarily pertained to the instruments being too complex and too wordy for the young people with IDD to engage with.

On the whole, the literature review, the systematic review and the data chapters 1 and 2, collectively presented an overview of the specific vulnerabilities of the young people with IDD who display HSB. Adolescents are different to adults who present with HSB, and their pathways to offending is less well understood. In comparison to their matched counterparts, those with IDD are more likely to have experienced abuse and neglect, but the impact of such experiences is less likely to be assessed within specialist services. Furthermore, there seem to be a lack of available and appropriate assessment instruments, for specialist service providers to utilise. In their place there appears to be an over-reliance on risk assessment tools, that although holistic in nature (such as AIM II) are limited, as discussed, and not intended for use in evaluating young people's socio-emotional wellbeing.

Given these findings, Chapter 5 described the process of adapting two existing tools focusing on the socio-emotional wellbeing of the young people. The two instruments were selected as loneliness and attachment were considered important aspects of the adolescents' well-being. In addition, it was known that there were already two tools in development, focusing on offence-specific aspects in relation to young people with IDD and HSB. These were instruments exploring the presence of cognitive distortions in young people with IDD (QACSO; Cygan, 2015) and their understanding of sexual behaviours and risk (ASK-A; Richards, 2018). Furthermore, findings from Chapter 4 indicated other psychological domains were being regularly assessed in services for adolescents without IDD, including those of emotional loneliness, attachment and resilience. For this reason, a tool of emotional loneliness (the UCLA-R) and measure of secure attachment (the KSS) were adapted whereas the resiliency tool (RSCA), was selected for an assessment of its suitability in use with an IDD population. Prior to trialling adapted instruments, service users with IDD, a speech and language therapist and a group of practitioners with a special interest in instrument adaptations for young people with IDD who display HSB, assisted with the adaptation of the instruments to be used (UCLA-R and KSS).

Chapter 6, subsequently detailed the psychometric analysis of the selected instruments via Study 3 and 4. The tools were tested extensively in a more detailed manner than previous publications had done, such as Cygan (2015), Richards (2018), and Keeling, Rose and Beech (2007). The instruments were subjected to assessments of validity, reliability, bias, and factor structure. Their utility was assessed across the IDD, non- IDD, forensic and non- forensic adolescent populations.

In summary, the analysis completed found the three tools performed at varying levels in terms of their adequacy for use both for IDD and forensic populations. Although the original loneliness instrument's reliability, overall, was good, it failed to perform adequately within a forensic cohort. Identified, were inconsistencies in how young people, based within forensic services, were responding to the items within the existing UCLA-R tool. This questioned its applicability and use within forensic services, a frequent practice as identified to occur across service providers (see Chapter 4, Study 1). Further data collection might offer more insight into the presence of nuances but it would appear, from the data collected, that adolescents within forensic settings were inconsistent in their responses to the questions on the UCLA-R. Although, the reliability of the instrument (within the forensic settings) improved with the adaptations made, its factor structure was not in line with the existing literature. The confirmatory factor analysis (CFA) data of the original UCLA-R, did find support for an overall better fit for a three- factor model, composed of Relational, Collective and Isolation factors. The change in the answer format, which meant that the adapted UCLA-RA became an ordinal scale, might have caused this deviation, needs to be further explored with additional data. Supportive of this was the outcome of the Bland- Altman plot looking at the agreement in scores across the original and adapted UCLA-R/A. The results are suggestive of a lack of agreement between the responses across the two instruments. Finally, the results of the moderation analysis indicated that the outcomes on the UCLA-R instrument between the IDD and non- IDD, as well as forensic and non- forensic cohorts, was influenced by the age and gender of each cohort.

As for the attachment tools, the original KSS produced good reliability scores, the sample also supported the three- factor model fit (reliance, availability and autonomy). In line with this, the adapted KSS-A was also of better quality as an adapted instrument, for both reliability and validity, although the CFA for the adapted KSS-A found support for the two-factor model (i.e. for the model that specifies

dependency and availability) rather than the three-factor model. Finally, overall, Bland-Altman plot suggested a better performance in terms of agreement in scores (as the mean increased so did agreement). The moderation analysis, suggested both versions of the instrument were influenced by the same variable, the young person's age.

Finally, Study 4 reported on an overall excellent reliability of the RSCA across the four formulated cohorts. This instrument appears to be appropriate for use with IDD adolescent populations. Moreover, although no group differences were identified, this might have been an outcome of the wider lack of variation in the sample. Namely, as detailed in the descriptive section of Study 4, a large number of participants were identified via special schools, schools which will specifically work with young people with various complex social and emotional needs, whose resilience profiles might be weaker.

Limitations

Limitations associated with each study are discussed in detail in each chapter there are, however, some limitations arising from the combined findings of the current thesis which require acknowledgment. Firstly, the present thesis, as well as other projects and published research in this field, has focussed on adolescent males who display HSB. Generalisability to children and females with IDD who might display HSB is not recommended and will require further empirical exploration. The behaviour of adolescent females with IDD who might engage in problematic behaviours, is even less studied and understood than the current, niche cohort. In addition, the present research, did not differentiate between on-line and in-person acts that might be considered risky or harmful, on the continuum of HSB. This is due to the variety of challenges experienced with participant recruitment but it would be worth exploring further. Access to and the potential negative impact of pornography online is a well-documented and growing concern, recognised across national children's agencies and charities. Much more research needs to be done in assimilating data and information in relation to the young people's use of such materials especially in instances where additional vulnerabilities are present, such as IDD and/or experiences of maltreatment.

Secondly, although the issue of the sample sizes was acknowledged within the separate studies above, it is important to discuss this challenge and its implications. Throughout the research journey of

the thesis the researcher made a significant effort in networking, disseminating information about the research and establishing professional partnerships. This was a process in which a consensus was voiced by professionals within HSB services, that there was an imperative need for adapted instruments and a significant demand for empirically validated instruments to become available for use in assessing young people with IDD. Professionals, across service provisions, independently from each other, voiced concerns around current lack of appropriate instruments and the impact this might have in their work with the vulnerable adolescents. Yet, once the opportunity, via current studies presented itself to support data collection, addressing this issue, the majority of the services declines to cooperate. In some instances, this might not have been through a fault of theirs. The national approach to specialist service provisions was undergoing changes, at different times of the data collection period. This might have meant changing from a Tier 4 to a more general service provider. On the other hand, there were a number of large services that declined taking part due to the professional commitment this might have entailed, in their opinions. Despite numerous attempts to collaborate, and find a solution in such instances, this did not materialise.

Relatedly, this presented various recruitment problems, resulting in small numbers of participants, especially for group comparisons in Study 3. Although this was addressed, at the time through creating a wider forensic cohort of participants, this in itself is problematic due to the limitations it creates for psychometric analysis. This is an inherent problem with research into such a protected, and hidden, population. However, in the light of the current work there might be an opportunity to carry on these research collaborations, in the future.

Finally, in the current thesis there was no opportunity to check if the UCLA-RA and RSCA instruments were sensitive to treatment change. This would entail evaluating an intervention programme specifically tailored for young people with IDD who display HSB, development work that that has only recently taken place the UK (see Malovic, Rossiter & Murphy, 2018).

Implications for Practice

The current thesis sought to explore, justify and adapt instruments for a forensic cohort (specifically focusing on those displaying HSB) of young people with IDD. It was evident that current

applied practice for adults with IDD was based on more empirical work and a better clinical understanding than the current practices were for adolescents. Although it is understood and agreed that individual with IDD process information, both written and auditory, differently to non- IDD individuals, the current studies suggest there are inconsistencies in how these specific needs of the young individuals with IDD are assessed and subsequently met within specialist services.

The outcome of the literature review, and the studies exploring current practices provided empirical and clinical evidence, supports the requirements and demands of the studied instruments. The empirical work on the adolescents was in its infancy, such that the current studies suggested an overlap in assessment practices for those with IDD and without IDD. The implications of this are that a lack of recognition is present in how additional vulnerabilities might impact on the presence of HSB, meaning young people's needs are not met, leading to practices that contribute to wider health inequalities often encountered in service delivery for individuals with IDD. The case study, and the data collected for the psychometric analysis of the instruments, supports the earlier findings of the IDD cohort being a particularly vulnerable group, in comparison to their non- IDD peers. Accordingly, this needs to be assessed, and explored in more detail within specialist service providers, to aid with the clinical understanding of the offence pathways, which might be different for those adolescents with and without IDD. The tools selected for an evaluation here stem from a drive to move towards a strength focused treatment and intervention within HSB service providers. The results suggest the adapted instruments for attachment and loneliness, as well as the application of the Resiliency Scales for Children and Young people (Prince-Embury, 2015), might be suitable for the IDD cohort in the specialist services. In hand with each other they can offer an opportunity for wider, more person focused clinical interviews, to take place. They are instruments that offered the young person an opportunity to engage in a self-assessment, and the information derived from them can help balance out the current over-reliance on risk assessment tools with young people with IDD.

Implications for future research

As a whole, the current thesis sought to present a strong theoretical argument, and empirical case for a need for adapted instruments within specialist HSB services that work with young people with IDD.

Access to such tools will help shift the current over focus on risk assessments that is specifically prominent in cases where the young person has IDD. It will also offer an opportunity to empirically explore the role and the function of abuse and neglect on those young people with IDD who display HSB. A standardised approach to assessments will also provide an enhanced understanding of what treatment needs these young people might have, which in time will support the development of more strength focused intervention programmes. Furthermore, by adapting assessment instruments to the needs of young people with IDD, there will be an opportunity to explore any differences in the profiles, and offence pathways, between those with and without IDD is created.

The implications of the current work, are that there is a need for adapted instruments, and much more research and work is needed to even out, the current inequality in terms of assessment procedures across the two cohorts (those with and without IDD).

Final Comments

We cannot help and support behavioural changes in young people on the basis of addressing their HSB only. As clinicians and practitioners within specialist services, where treatments are offered on the basis of (what should be holistic) assessments, we have to think about the young person in the context of their IDD, and any other vulnerabilities, such as a history of maltreatment. These are some of the foundations of meaningful, and person- centred work. Given the extent of developmental vulnerabilities and prior experiences, the welfare of young people who display HSB should be a primary concern. Interventions need to be targeting both the HSB but also addressing any other, general areas of unmet need. After all, adolescence is a period that entails ongoing development, growth and changes not only in a physical sense, but in terms of young people's personality and wellbeing.

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Appendix A

Chapter 3. Search terms for the systematic review.

Search Terms	Command	Subcommand	Variations on the search term
A) Cognitive disabil*	OR		pervasive developmental disord* retard* special need* handicap* learning disabil*
B) Development*	AND		disabil* delay* disord* limitation* imapair*
C) Intellect*	AND	OR OR OR OR	disabil* delay* disord* limitation* imapair*
D) Mental*	AND	OR OR OR OR	disabil* delay* disord* limitation* imapair*
E) Results from A	OR	OR OR OR OR OR	disabil* delay* disord* imapair* handicap* ill*
F) sex*	AND		B C D
G) adolescent*	OR	OR OR OR	offen* abus* harm* problem*

H) adapted	AND	young person young adult teen* youth young people juvenile
	OR	measure*
	OR	tool*
	OR	instrument
	OR	assessment
	OR	outcome

Complete Boolean search sequence:

E AND F AND G AND H

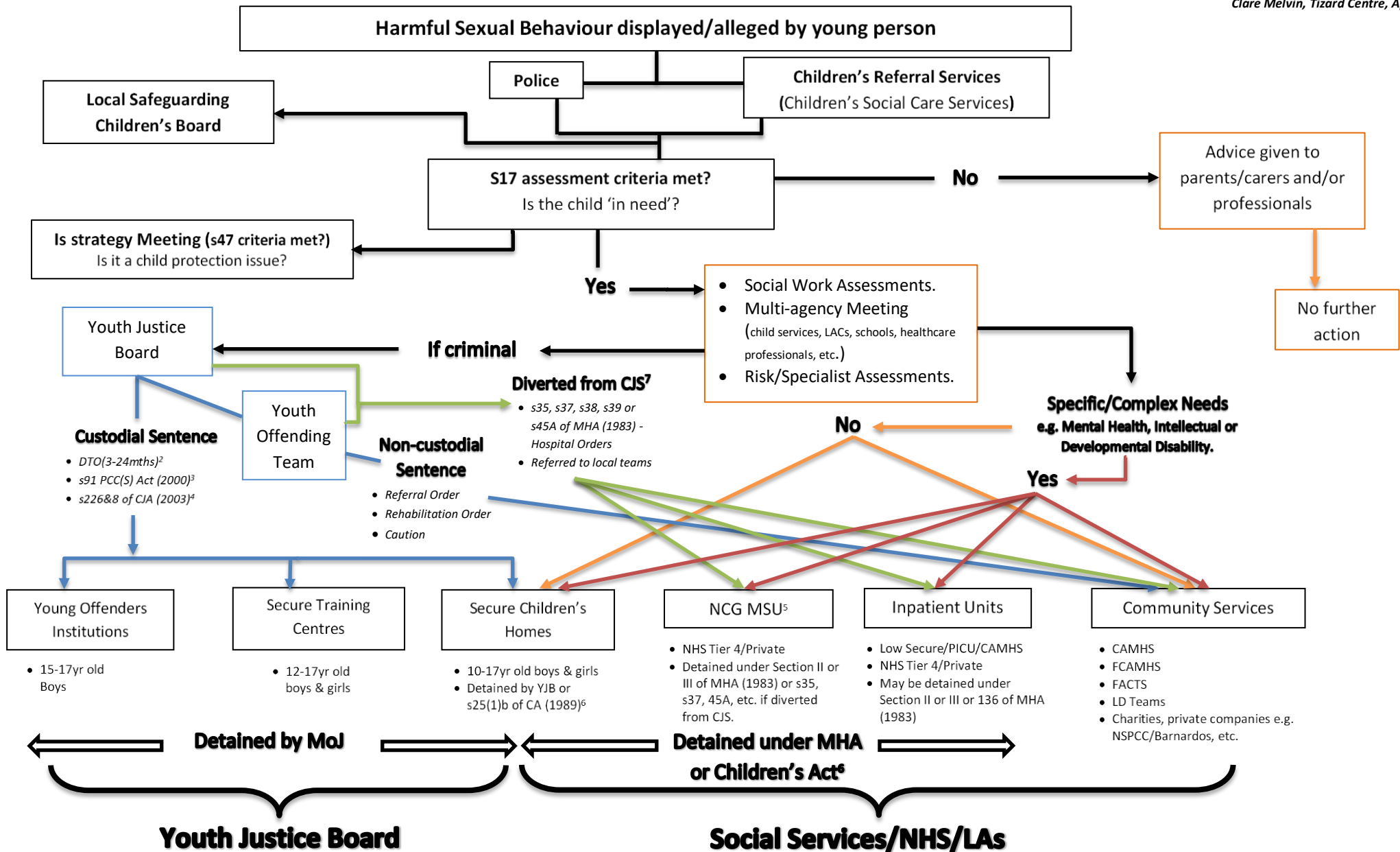
Appendix B

Chapter 3. Exclusion criteria of article from the systematic review.

- 1 non-ID
- 2 non-HSB
- 3 non- adolescents
- 4 non- Adapted Instrument
- 5 non- ID, non-HSB
- 6 non- ID non- adolescents
- 7 non-ID, non- Adapted Instrument
- 8 non-ID, non-HSB, non- adolescents
- 9 non-ID, non-HSB, non- adolescents, non- Adapted Instrument
- 10 non-ID, non-HSB, non- Adapted Instrument
- 11 non-HSB, non- adolescents
- 12 non-HSB, non- Adapted Instrument
- 13 non-ID, non- adolescents, non- Adapted Instrument
- 14 non- adolescents, non- Adapted Instrument
- 15 non- journal article

Melvin, C. (2016). Flowchart.

Clare Melvin, Tizard Centre, April 2016



Appendix C

¹Section 47 Children's Act (1989). Need for Child Protection meeting including - 3(a) *whether the authority should make any application to the court, or exercise any of their other powers under this Act* [or section 11 of the Crime and Disorder Act 1998 (child safety orders)], *with respect to the child.*

²*Detention and Training Order. Range between 4 and 24 months. Half time spent detained in custody and half served in community supervised by Youth Offending Teams (YOTs).*

³**Section 91 Powers of Criminal Court (Sentencing) Act (2000).** Power to detain for specified period; applies where a person aged under 18 is convicted on indictment of— (a) an offence punishable in the case of a person aged 21 or over with imprisonment for 14 years or more, not being an offence the sentence for which is fixed by law; or (b) an offence under section 14 of the Sexual Offences Act 1956 (indecent assault on a woman); or (c) an offence under section 15 of that Act (indecent assault on a man) committed after 30th September 1997.

⁴Sections 226 and 228 of Criminal Justice Act (2003). **s226 - Detention for life or detention for public protection for serious offences committed by those under 18 (1) This section applies where— (a) a person aged under 18 is convicted of a serious offence committed after the commencement of this section, and (b) the court is of the opinion that there is a significant risk to members of the public of serious harm occasioned by the commission by him of further specified offences. S228 - Extended sentence for certain violent or sexual offences: persons under 18, applies where— (a) a person aged under 18 is convicted of a specified offence committed after the commencement of this section, and (b) the court considers— (i) that there is a significant risk to members of the public of serious harm occasioned by the commission by the offender of further specified offences, and (ii) where the specified offence is a serious offence, that the case is not one in which the court is required by section 226(2) to impose a sentence of detention for life under section 91 of the Sentencing Act.**

⁵National Commissioning Group (NCG) Medium Secure Units (MSU)

⁶Section 25(1)b of Children's Act (1989). Stipulates that a child being looked after by the local authority may not be placed, and if placed, may not be kept in a secure accommodation unless it appears: That he/she has a history of absconding and is likely to abscond from anything other than secure accommodation; and if he/she absconds he/she is likely to suffer significant harm (Section 25(1)(a)); or if he/she is kept in anything other than secure accommodation he/she is likely to injure him/herself or other persons (Section 25 (1)(b)).

⁷The Youth Justice Board (YJB) and YOTs can divert individuals from the Criminal Justice System (CJS) to NCG MSUs and Inpatient Units for psychiatric treatment via hospitals and transfer orders under the MHA (1983) e.g. s35, s37, s37/41 or s47/49. Additionally can be diverted if the individual lacks *mens rea*.

****Sections 226 and 228 of Criminal Justice Act (2003).

Appendix D

Study 1. Example of the Service Questionnaire.

Section 1 – Your service

1. Please select the classification that best applies to your service:

- Low secure forensic in-patient unit
- Medium secure forensic in-patient unit
- Residential service
- Community-based service
- Youth offending team
- Other

If other, please specify below what type of setting you work in.

.....

2. Please select the sector that best applies to your service:

- Statutory service (NHS, local authority, social services, education)
- Private service (independent organisation)
- Voluntary service (registered charity)

3. What is your role within the service?

.....

4. Who else is part of your team (professionals/staff roles)?

.....

5. Please select the gender of the young people within your facility. Tick all that apply.

- Male

Female

Other

6. Please select the age range of young people within your facility. **Tick two boxes** to indicate both the **minimum** and **maximum** age:

Under 10 10 11 12 13 14 15 16 17 18 Over 18

		Not sure	Prefer not to say
7. How many young people do you currently support in your service in total?			
8. How many of the young people currently within your service have a diagnosis of both a Learning Disability and Autism Spectrum Disorder?			
9. How many of the young people currently within your service have a diagnosis of a Learning Disability? (without Autism Spectrum Disorder)			
10. How many of the young people currently within your service have a diagnosis of Autism Spectrum Disorder? (without a Learning Disability)			
11. Approximately how many young people with a Learning Disability and/or Autism Spectrum Disorder did your service support in 2017?			
12. Does your service assess for Learning Disabilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
13. Does your service assess for Autism Spectrum Disorder?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

	Young people with a Learning Disability/Autism Spectrum Disorder	Young people without a Learning Disability/Autism Spectrum Disorder
14. How many of the young people you support have been victims of abuse or neglect in any form?		
15. How many of the people you support are looked after children or adopted?		

Section 2 - Harmful Sexual Behaviour

16. Are any of the following behaviours present in **young people with a Learning Disability, Autism Spectrum Disorder or comorbid Learning Disability and Autism Spectrum Disorder** within your service? Tick all that apply.

	Young people with a Learning Disability	Young people with Autism Spectrum Disorder	Young people with a Learning Disability and Autism Spectrum Disorder
The use of sexually explicit words and phrases			
The use of sexual threats			
Exhibitionism (e.g. flashing)			
Voyeurism (e.g. peeping)			
Public masturbation			
Inappropriate sexual touching of others			
Forced penetrative sex with other children/adults (e.g. rape and/or oral sex)			
Sexual contact with others where there is a big difference in age or ability			
Sexual contact with family members			
Sexual contact with animals			
Accessing exploitative or violent pornography			
Taking and sending sexually provocative images of self or others			

Section 3 – Referral

Hackett (2010) proposed a continuum of sexual behaviours in children and young people, ranging from normal developmental sexual behaviours to harmful sexual behaviours.

Normal	Inappropriate	Problematic	Abusive	Violent
<ul style="list-style-type: none"> • Developmentally expected • Socially acceptable • Consensual, mutual, reciprocal • Shared decision making 	<ul style="list-style-type: none"> • Single instances of inappropriate sexual behaviour • Socially acceptable behaviour within peer group • Context for behaviour may be inappropriate • Generally consensual and reciprocal 	<ul style="list-style-type: none"> • Problematic and concerning behaviours • Developmentally unusual and socially unexpected • No overt elements of victimisation • Consent issues may be unclear • May lack reciprocity or equal power • May include levels of compulsivity 	<ul style="list-style-type: none"> • Victimising intent or outcome • Includes misuse of power • Coercion and force to ensure victim compliance • Intrusive • Informed consent lacking, or not able to be freely given by victim • May include elements of expressive violence 	<ul style="list-style-type: none"> • Physically violent sexual abuse • Highly intrusive • Instrumental violence which is physiologically and/or sexually arousing to the perpetrator • Sadism

17. Looking at the diagram, at what behavioural stage would your service start accepting referrals?

- Inappropriate
- Problematic

- Abusive
- Violent

Section 4 - Assessment

18. Does your service use any of the following standardised risk assessment tools for young people with a Learning Disability and/or Autism Spectrum Disorder that display harmful sexual behaviour?

- AIM2** (Assessment Intervention Moving on framework)
- MEGA** (Multiplex Empirically Guided Inventory of Ecological Aggregates for Assessing Sexually Abusive Adolescents and Children)
- J-SOAP-II** (Juvenile Sex Offender Assessment Protocol-II)
- ERASOR** (The Estimate of Risk of Adolescent Sexual Offense Recidivism)
- AssetPlus** (Youth Justice Board Assessment and Planning Interventions framework)
- Other

If other, please state which risk assessment tools are currently in use in your service.

.....

.....

19. Does your service conduct assessments for young people with a Learning Disability and/or Autism Spectrum Disorder that display harmful sexual behaviour with regards to the following categories?

Life goals and priorities	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, please state the name of your assessment tool.		
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house <input type="checkbox"/> Not sure
Sexual knowledge	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, please state the name of your assessment tool.		
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house <input type="checkbox"/> Not sure

Cognitive distortions / thinking styles that reinforce behaviour	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, please state the name of your assessment tool.			
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house	<input type="checkbox"/> Not sure
Victim empathy	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, please state the name of your assessment tool.			
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house	<input type="checkbox"/> Not sure
Emotional loneliness	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, please state the name of your assessment tool.			
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house	<input type="checkbox"/> Not sure
Attachment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, please state the name of your assessment tool.			
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house	<input type="checkbox"/> Not sure
Resilience	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, please state the name of your assessment tool.			
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house	<input type="checkbox"/> Not sure
Trauma	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

If yes, please state the name of your assessment tool.			
Is this tool developed/adapted for those with a Learning Disability or Autism Spectrum Disorder?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Is this tool a standardised measure or was it developed in-house?	<input type="checkbox"/> Standardised	<input type="checkbox"/> In-house	<input type="checkbox"/> Not sure
Other assessment for young people with a Learning Disability and/or Autism Spectrum Disorder and harmful sexual behaviours	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If yes, please state the name of the assessment tool and what it measures. If you have several others, please list them below.			
Name of tool:			
What it measures:			
Name of tool:			
What it measures:			
Name of tool:			
What it measures:			

20. Do you have any recommendations to improving any of these assessments, or any comments regarding their use?

- Yes
 No

If yes, please explain below.

.....
.....
.....
.....

Section 5 – Intervention

21. Which interventions are available in your service to **young people with a Learning Disability, Autism Spectrum Disorder or comorbid Learning Disability and Autism Spectrum Disorder** and display harmful sexual behaviours? Tick each box that applies.

	Young people with a Learning Disability	Young people with Autism Spectrum Disorder	Young people with a Learning Disability and Autism Spectrum Disorder	Not available
Individual cognitive behavioural therapy				
Group cognitive behavioural therapy				

Dialectical behaviour therapy				
Family therapy				
Community-based therapy				
If you have any other intervention options available to the young people you support, please state them below and tick who they are available to.				

22. Do you have any recommendations to improving any of these interventions, or any comments regarding their use/availability to young people with Learning Disabilities/Autism Spectrum Disorder that present harmful sexual behaviours?

- Yes
- No

If yes, please explain below.

.....

.....

.....

.....

Appendix E

Tizard Ethics Application.

SCREENING FORM FOR ETHICS SUBMISSION

Research title: An audit of assessment tools used across UK specialist services for adolescents with intellectual and developmental disabilities who display harmful sexual behaviours.

Status: Postgraduate

Researcher: [redacted]

Supervisor (for UG/PG students): Aida Malovic / [redacted]

1	Is this research going to be subject to NHS Local Research Ethics Committee or Social Care Research Ethics Committee approval? If No, proceed to question 2.	No
2	Does the research gather information from: <ul style="list-style-type: none"> • Children (under 16 years)? • Vulnerable adults <ul style="list-style-type: none"> - people with learning disabilities - people with ASD - people with mental health problems - prisoners and young offenders - elderly people • Staff • Carers 	No No Yes No
3	Does the research require a DBS check to be carried out? If yes, has the researcher applied for a DBS check or already obtains one?	No No
4	Does the research involve the use of materials or questions that could upset or offend participants? (e.g. asking people to talk about difficult life events)	No

I have answered NO to all the above categories (from Qs 2-3) and do not consider that this project needs to be submitted for more detailed ethical review.

I have answered YES to at least one of the categories and am submitting an application for departmental ethics approval.

If you have answered YES, please complete the attached Checklist. A number of documents are available on the T drive (only accessible to staff). Any required guidance for student applications is available on Moodle.

Signature (Supervisor/Staff)

[redacted]

Date: 13/12/2017

Signature (Student)

[redacted]

Date: 13/12/2017

The purpose of this screening is to ensure that the research will be ethical, maintain confidentiality and anonymity and will not cause harm.

ETHICAL REVIEW CHECKLIST

*Please note that when completing your proposal, you should use the proforma exactly as it is set out below. Please also ensure that your checklist has page numbers and the completed proforma should **not exceed 6 pages** excluding consent forms and other attachments. Please complete in plain English. Dissertation proposals should not be attached to the checklist.*

Section 1 Background including literature review and rationale for study including aims and objectives (and/or hypotheses or research questions) of the project (no more than 2 pages) *(the aim is what you will actually do in the study, and the objective is what you hope to achieve).*

The risks and needs of adolescents with intellectual and developmental disabilities (IDD) that present harmful sexual behaviour (HSB) are complex; established in terms of their cognitive impairment and potential vulnerability to abuse (NSPCC, 2003; Fryson, 2007). A traumatic up-bringing has been found to be closely linked to the presentation of HSB later in life (Vizard et al., 2007). Sex education for adolescents with IDD is often non-existent or of poor quality (McKibbin et al., 2017), and people with IDD are often seen to be void of sexuality, or in “developmental suspension” (Fairburn et al., 1995). An interaction between these factors may lead to sexual naivety in adolescents with IDD, contributing to subsequent manifestations of HSB.

This study will be using the definition of harmful sexual behaviour (HSB) that was developed by the NSPCC in which HSB is defined as: “*One or more children engaging in sexual discussions or acts that are inappropriate for their age or stage of development. These can range from using sexually explicit words and phrases to full penetrative sex with other children or adults*”. This study will be defining the term adolescent as between the ages of 10 and 17. This is in line with the WHO (2017) definition of adolescence which begins at 10 years old, and the NICE Guidelines (2016) which define a child as under the age of 10.

Assessment tools are used to evaluate individual characteristics, to inform intervention and to measure the effectiveness of treatment. In the UK, there is no collective framework to clinically assess adolescents with IDD that display HSB (Malovic et al., 2016). Assessments are determined by the type of service that the individual encounters; child welfare services, mental health services and the criminal justice system have different approaches to assessment (Smith et al., 2013), resulting in inconsistencies across services and across the UK as a whole.

From as far back as Gilby et al. (1989), it has been stressed that “The learning-disabled adolescent may require special considerations with respect to assessment”. Adolescents without IDD that present HSB have been found to be a heterogeneous population that can present unique characteristics (Almond & Giles, 2008), highlighting a need for a specialised assessment framework. This finding may be even more applicable to adolescents with IDD, as unique characteristics may interact with additional social and cognitive vulnerabilities.

The NICE Guidelines (2016) suggest clinicians can use the following risk assessment tools with adolescents with HSB; J-SOAP-II, ERASOR and The AIM model. However, these

assessments are not specifically designed for adolescents with IDD, and are primarily a measure of risk of recidivism. The NICE Guidelines (2016) cannot currently give any recommendations for wider clinical assessment tools, due to lack of evidence.

Contemporary research into offending populations stress that it is necessary to branch away from solely assessing for risk, and to focus on a strengths-based approach to rehabilitation. The Good Lives Model (GLM) focusses on an individual's interests, abilities and life goals to guide meaningful intervention (Ward & Gannon, 2006). Clinicians work collaboratively with the individual to assess how they can achieve their goals in a healthy way, without having to resort to harmful means. It is hypothesised that personal-fulfilment will lead to the reduction of criminal behaviours.

Robust, empirically-based, individualised assessments stemming from the GLM will in turn lead to working solutions for treating HSB in this sub-group. Malovic et al. (2016) confirmed the lack of published clinical assessment measures for adolescents with IDD and HSB, and stressed a need for specialised adapted measures for this population. Despite progress in the field with regards to the GLM, it seems this population are still being overlooked. Furthermore, there is also an incredibly limited body of research on adolescents with ASD that display HSB, this study will attempt to uncover if there are any differences in assessing this population.

Consequently, the research question for this study is: *What measures are UK-based specialist services using to assess adolescents aged 10-17 with intellectual and developmental disabilities that display harmful sexual behaviour?*

The aim of this study is to identify which assessment tools are currently being used in UK specialist services for adolescents with IDD and HSB.

The objectives of this study are; to assess whether there are any consistencies across services in relation to assessment tools used for those with ID and/or ASD and HSB, and to assess whether there are any links to assessments used and interventions provided.

Section 2 Conduct of Project

- a) Study Design. *Is your study qualitative or quantitative? What kind of sample (e.g. total population? random? convenience? or purposive?). Is your study mainly exploratory/descriptive or does it involve an intervention?*

This study is an audit of specialist services; it will collect data of a quantitative nature and will use a purposive sampling strategy. The data collected will be used to explore which assessment tools are currently in use for adolescents with IDD that present HSB.

This research will be defined as a Service Evaluation under NHS terms, as it will not be measuring quality of practice against a previously set framework. Service evaluations and audits are not considered research under current research practice guidance and therefore do not require REC or HRA approvals (See *Appendices 2-4*). Following consultation with the HRA, it was established that registration of the project with the local Research and Development offices will be sufficient (See *Appendix 5*).

Freedom of Information Act (2000) (FOI) requests will be made to NHS Trusts that provide specialist adolescent services. Questions that adhere to FOI specifications will be asked regarding demographic information of adolescents within the services they provide (Questions 5-15 and 18 of the questionnaire; see Section 5c). Additional information may be gathered by registering the project through each NHS Trust's service evaluation procedure and upon approval, sending the remaining questions directly to staff members within each service (see *Appendix 1*). Splitting the questionnaire in this way will help preserve NHS staff's valuable time and possibly increase response rate. Private services and charities will be approached directly with an invitation to complete all sections of the questionnaire.

- b) Location. *In what organisations and in what geographical areas will you be conducting your research?*

To gain the richest outlook of current practice, this study aims to contact as many specialist services across the UK as possible. These services will include; low secure forensic in-patient units, medium secure forensic in-patient units, residential services, community-based services, youth offending teams and other services for those with complex needs.

Potential services will be selected using an updated version of The Directory for High Risk Services (2010). Alongside this, a systematic search of the NHS Service Finder, the Care Quality Commission Service Directory and the Autism Services Directory from the National Autistic Society will be undertaken. These directories will be searched using the search terms "specialist", "residential" and "forensic", and using the limits for age and diagnosis where relevant to the database. The Youth Justice Board will also be approached to gather information on Youth Offending Services across the UK.

- c) Brief description of participants (and number). *Tell us how you will identify potential participants, approach them and recruit their participation. Who can and cannot take part i.e. what are your inclusion/exclusion criteria? How many do you hope to recruit and what will be their likely age/gender/ethnicity?*

The participants in this study will be staff members working within specialist services. I hope to receive 30-40 responses from different services across the UK. Data will be collected regarding their practice with adolescents between the age of 10 and 17, who have a diagnosis of intellectual disability or Autism Spectrum Disorder, according to either ICD-10 or DSM-IV/V diagnostic criteria and have been identified to present harmful sexual behaviour. The adolescents will be of any gender or ethnicity.

- d) Expected start date and duration

The project will begin data collection in April 2018 and will last for a duration of 4 months.

- e) Measures. *What measures e.g. questionnaires, interview schedules, observations etc will you use? Please make sure you give a rationale for the use of these particular measures. Provide full references for published measures and comment on whether they are designed for the population you are using them with. Also comment on how long your interviews/questionnaires are likely to take each participant to complete. If using a non-standardised questionnaire, please include an example of it (see 4c).*

Due to the novel nature of this study and limited research in this field, a questionnaire will be created for the purpose of this study. The questionnaire will comprise of a series of structured and semi-structured questions. Questions will be asked with regards to; demographic information of the young people (age, gender, diagnoses, behaviours), assessment tools and interventions currently in use within the service. No questions will be asked regarding specific individuals, the audit will only gather information with regards to the general approach within services towards young people with IDD and HSB as a cohort. (For a full copy of the questionnaire, please see section 5c).

Some of the information being requested may be available under the FOI Act and already in the public domain. Therefore, to avoid requesting duplicate information from health services, each Trust's site will be checked for previous FOI releases and service evaluations of HSB services for children before submitting a request. Questions from the questionnaire that fall under the FOI headings will be submitted to each NHS Trust in the FOI application. Questions will be asked with regards to types of services, number of young people they support, number of young people with IDD, ages/genders of the young people, and what assessments and interventions are provided for those that present HSB. Advice from the Information Rights & Compliance Team suggested that these requests will certainly be feasible if the questions are appropriately amended (See *Appendix 6*).

- f) Procedure. *How will you actually collect your data? And how will this be stored and how long for?*

NHS Trusts will be examined for the number of inpatient and community services available to young people with IDD and HSB, those with the greatest number of services will be approached. The relevant local R&D offices will then be contacted to register the project as a Service Evaluation. Services will then be approached electronically; an invitation to participate, followed by an information document will be sent via email outlining and explaining the purpose of the research. The staff member will be given the option to continue to take part in the questionnaire or to opt-out. Upon acceptance of participation, the online questionnaire will be presented. The questionnaire will be created using the software Qualtrics. Private services and charities will be approached directly with an invitation to complete all sections of the questionnaire.

FOI requests will correspond with the following categories: who and what NHS services do, what Trusts spend their money on, priorities are how Trusts are performing, how Trusts make decisions, policies and procedures, lists and registers and the services offered. The Freedom of Information Act does not change the right of patients to the protection of their confidentiality in accordance with the Data Protection Act (1998). FOI requests must be responded to within 20 working days.

The Qualtrics storage system is in line with the EU Safe Harbour legislation; despite Qualtrics being an international provider, all data will be collected and stored on UK servers. Data and passwords are all encrypted. Once downloaded, the data will be stored in line with The Data Protection Act (1998). All data files will be password protected and only accessible to the researcher.

- g) Analysis. *What kind of analyses do you plan to undertake? Statistical? Interpretative Phenomenological Analysis? Thematic Analysis? Grounded Theory? Other?*

Descriptive statistics will be analysed in SPSS to identify any trends that may arise. Trends will be considered in terms of whether tools correspond to type of service/location/diagnoses/interventions and any other factors that may arise. Correlational analysis may be used to identify any links between types of assessment and intervention methods.

Section 3 Ethical Considerations

- a) Will you pay participants for taking part in the research? State your rationale for paying/not paying and the likely impact on participation.

Payment will not be offered for participation in this research. As there is no monetary gain from participation, this will eliminate the possibility of coercion. The incentive for participation will be to contribute to research and to ultimately help their own and other specialist services in providing appropriate risk assessments for adolescents with IDD that present HSB.

- b) How do you intend to give feedback to participants (and, where relevant, other interested parties)?

A debrief sheet and feedback form will be presented after completion of the final question. The debrief sheet will reiterate the objectives of the study and will include the researchers contact information should they wish to find out more information or withdraw their data. Services will also be offered a summary of the findings at the end of the study. Through this, services will be able to see any similarities or differences in practice that may occur across the country. Dissemination may also involve publication of the findings and presentations at relevant conferences.

Feedback will not be required for FOI requests.

- c) How will you obtain informed consent from potential participants?

For information not obtained under FOI requests, staff members will be invited to take part in the study via email. Staff members will be presented with an information sheet in place of a separate consent form. The information sheet will ensure the staff member that their participation is voluntary, that any information they provide will be both anonymous and confidential, and that they have the right to withdraw their data at any point during or after completing the questionnaire.

The information sheet will explain that the staff member can withdraw their data at any point during the questionnaire by closing their browser or clicking the embedded 'withdraw' button which will end the questionnaire immediately. The information sheet explains that if the staff member wishes to withdraw their data after completing the questionnaire, they can contact the researcher with the given details.

By choosing to continue with questionnaire after reading the information sheet, consent is obtained by virtue of completion. The researcher's contact information will also be shared in the debrief sheet that is presented at the end of the questionnaire, should the staff member require further information or wish to withdraw their data at a later date. (For copies of the information and debrief sheets, please see Section 5a)

- d) How will you ensure that the identities of participants are kept confidential during the project, and in any subsequent data analysis, conference presentations and publications?

It is essential to retain participant anonymity, staff members will be ensured that all identifiers will be anonymous e.g. names of staff, name of service, addresses. The only indicator to the source of the data will be which region of the UK they have come from. Staff members will be made aware of this, and if this presents a problem they will be encouraged to withdraw. A unique code will be given to each service's response. One number of the unique code will identify this, for example; 1. South England, 2. Eastern England, 3. Midlands, 4. North England, 5. Scotland, 6. Wales, 7. Northern Ireland.

FOI Act requests will only provide anonymised data.

- e) Explain how you will meet the four main ethical principles of research,

- I. *Causing no harm: consider what risks or burdens (e.g. distress, embarrassment) your research could have for participants and how you can minimise these. Are there any risks for you as the researcher?*

A possible risk of distress to staff members may be if they have been victims to harmful sexual behaviour themselves. The information sheet provided prior to the questionnaire will inform staff of the nature of the study, facilitating their decision to take part or not. If staff do continue with the questionnaire, the feedback form after completion will give details of the ethics committee should they wish to discuss any concerns. As there is no direct contact with participants, there will be no risk to the researcher.

No risk to those completing FOI Act requests.

- II. *Doing good: consider what good could result for the participants and how the potential for good can be maximised.*

This study will allow beneficence by increasing the involvement of staff members in giving feedback on the assessment tools they use in their working practice. This study will give them a chance to express any comments, concerns or suggestions to improving current methods, safe in the knowledge that their opinions are anonymous and confidential. Staff will be aware that their data will be contributing to research that could improve assessment tools on a national level.

Data provided by the FOI will help improve transparency about numbers of young people with IDD within different types of services, possibly improving clarity regarding assessments and interventions for these young people. This will benefit the young people themselves by initiating possible organisational movement towards appropriate assessment frameworks.

- III. *Respect: consider how you will treat your participants with respect including giving them sufficient information and ensuring they are able to make their own choices about participating.*

Staff members will be supplied with an information sheet that will outline the nature of the study and reaffirming that the very completion of the questionnaire denotes their informed consent to participate. Staff will be assured that their data can be withdrawn at any time during or after the study without having to give reason.

IV. *Justice: consider the likely outcomes of your research and to whose advantage or disadvantage the results of the research might be put.*

The results of this study may have positive outcomes on both a clinical and academic level. As the literature on the subject of assessments for HSB in adolescents with IDD is sparse, this audit will guide future research in studying the effectiveness of current practice. It may also spark the development of a theoretical framework for creating appropriate adapted measures for these individuals, should it be deemed necessary. On a clinical level, it will show whether services are using similar or dissimilar practice and will ultimately help improve transparency, communication and collaboration between agencies and services to provide appropriate and effective assessments for these vulnerable individuals.

- f) Are there any power imbalances between researcher and participants that may make it difficult for participants to refuse their participation?

As there is no direct contact between the researcher and participants, there will be no power imbalance issues. Due to the quantitative nature of this study, “the division of roles between researcher and participant is dichotomous, unequivocal, constant, uniform, and predetermined” (Reason, 1994), meaning there will be no subjective perceptions affecting participation or response. Participants will be assured that they have the right to withdraw at any time, and due to the absence of any direct contact with the researcher, participants will not feel pressured in any way to participate.

FOI Act requests in line with normal duties.

- g) How the research will pay attention to cultural diversity: e.g. include the experiences of people from Black and minority ethnic communities; be respectful of cultural differences; provide appropriate interpreters where necessary (NB. researchers should note that this often involves more than simply finding someone who speaks the same language).

The adolescents within the services will be of all genders and ethnicities, and staff members will have experience with people from all backgrounds. No questions will be asked with regards to the staff member’s or the adolescent’s ethnicity, beliefs or cultural background. Unfortunately, this study does not have the funding to obtain translated versions of the questionnaire.

- h) Research involving human tissue or samples. The Human Tissue Act 2004 relates to ‘relevant material’, that is, material that consists of, or contains, human cells. A list of relevant material can be found by going to:

www.hta.gov.uk/sites/default/files/list_of_materials_considered_to_be_relevant_material_under_the_Human_Tissue_Act_2004

This research does not involve human tissue or samples.

Section 4 Security Sensitive Material

Does your research involve access to or use of material covered by the Terrorism Act?
Does the research have the potential to radicalise people who are vulnerable to supporting terrorism or becoming terrorists themselves?

No

The Terrorism Act (2006) outlaws the dissemination of records, statements and other documents that can be interpreted as promoting and endorsing terrorist acts. By answering 'yes' you are registering your legitimate use of this material with the Research Ethics Advisory Group. In the event of a police investigation, this registration will help you to demonstrate that your use of this material is legitimate and lawful).

Appendix F

HRA correspondence.

Correspondence with the HRA confirming that the project is not classed as research and thus does not require HRA or REC approval procedures.

From: [redacted]

Sent: Tuesday, March 6, 2018 3:24 PM

To: [redacted]

Subject: RE: HRA Service Evaluation/Audit Query

Dear Clare

It sounds as though your study doesn't fall under the definition of research. If you consider the study to be service evaluation or audit then there is no requirement to go through REC or HRA approval as both parts of the organisation only deal with research. Registering with local NHS offices would presumably be through the audit teams.

I hope this helps to clarify things. Do not hesitate to contact me if you have any further queries.

Best Wishes

Catherine [redacted]

[redacted]

From: [redacted]

Sent: 06 March 2018 13:40

To: [redacted]

Cc: Aida Malovic

Subject: HRA Service Evaluation/Audit Query

To Catherine,

I hope you do not mind me contacting you directly, you were kind enough to help me previously in understanding the HRA process when it changed over from IRAS.

I am currently involved in project looking for numbers of children and young people who display harmful sexual behaviours and wanted to clarify if it would fall under a service evaluation or audit, and what kind of HRA approval we require (a copy of the questionnaire is attached). We will be contacting services that are involved in the care and treatment of children who display harmful sexual behaviour e.g. CAMHS teams, inpatient services, etc. We have a brief questionnaire to be sent by email asking for anonymised data, mainly numbers of children in the service with a learning disability or autism who display HSB and what treatments and assessments are available/used.

Using the IRAS/HRA guidance 'Is my project research?' we have determined it falls within the remit of a service evaluation or audit and as such, does not need to go through the REC however, we have been advised that we will need to register the project with local NHS

offices and therefore potentially need to go through HRA. Would you be able to clarify this for us and what the process is.

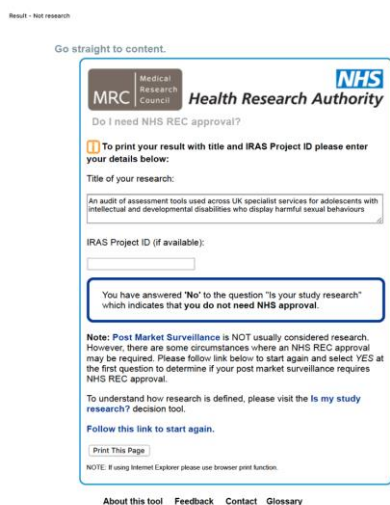
Many thanks in advance for any assistance or advice you can provide.

Best wishes,

Clare

[redacted]

Evidence from the HRA decision tool that states that this project does not require NHS approval. Sourced from <http://www.hra-decisiontools.org.uk/ethics/>.



Evidence from the HRA decision tool that defines this project as a Service Evaluation. Sourced from http://www.hra-decisiontools.org.uk/research/docs/DefiningResearchTable_Oct2017-1.pdf.

RESEARCH	SERVICE EVALUATION	CLINICAL/ NON-FINANCIAL AUDIT	USUAL PRACTICE (in public health including health protection)
The attempt to derive generalisable or transferable new knowledge to answer questions with scientifically sound methods* including studies that aim to generate hypotheses as well as studies that aim to test them, in addition to simply descriptive studies.	Designed and conducted solely to define or judge current care.	Designed and conducted to produce information to inform delivery of best care.	Designed to investigate the health issues in a population in order to improve population health Designed to investigate an outbreak or incident to help in disease control and prevention
Quantitative research – can be designed to test a hypothesis as in a randomised controlled trial or can simply be descriptive as in a postal survey. Qualitative research – can be used to generate a hypothesis, usually identifies/explores themes.	Designed to answer: "What standard does this service achieve?"	Designed to answer: "Does this service reach a predetermined standard?"	Designed to answer: "What are the health issues in this population and how do we address them?" Designed to answer: "What is the cause of this outbreak or incident and how do we manage it?"
Quantitative research – addresses clearly defined questions, aims and objectives. Qualitative research – usually has clear aims and objectives but may not establish the exact questions to be asked until research is underway.	Measures current service without reference to a standard.	Measures against a standard.	Systematic, quantitative or qualitative methods may be used.
Quantitative research – may involve evaluating or comparing interventions, particularly new ones. However, some quantitative research such as descriptive surveys, do not involve interventions. Qualitative research – seeks to understand better the perceptions and reasoning of people. Usually involves collecting data that are additional to those for routine care but may include data collected routinely. May involve treatments, samples or investigations additional to routine care. May involve data collected from interviews, focus groups and/or observation.	Involves an intervention in use only. The choice of treatment, care or services is that of the care professional and patient/service user according to guidance, professional standards and/or patient/ service user preference. Usually involves analysis of existing data but may also include administration of interview(s) or questionnaire(s).	Involves an intervention in use only. The choice of treatment, care or services is that of the care professional and patient/service user according to guidance, professional standards and/or patient/service user preference. Usually involves analysis of existing data but may include administration of simple interview or questionnaire.	Involves an intervention in use only. Any choice of intervention, treatment, care or services is based on best public health evidence or professional consensus. May involve analysis of existing routine data supplied under license/agreement or administration of interview or questionnaire to those in the population of interest. May also require evidence review.
Quantitative research – study design may involve allocating patients/service users/healthy volunteers to an intervention. Qualitative research – does not usually involve allocating participants to an intervention.	No allocation to intervention: the care professional and patient/ service user have chosen intervention before service evaluation.	No allocation to intervention: the care professional and patient/service user have chosen intervention before audit.	No allocation to intervention.
May involve randomisation.	No randomisation.	No randomisation.	May involve randomisation but not for treatment/ care/ intervention.
Normally requires REC review but not always. Refer to http://www.hra-decisiontools.org.uk/ethics/ for more information.	Does not require REC review.	Does not require REC review.	Does not require REC review.

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Appendix G

Tizard Ethics Approval.



Tizard Ethics Feedback Form

Student Name:	[redacted]
Supervisor:	Aida Malovic
Title:	_ An audit of assessment tools used across UK specialist services for adolescents with intellectual and developmental disabilities who display harmful sexual behaviours.
<p>The Chair of the Tizard Ethics Committee has considered the amendments to the above proposal. We confirm that this now has ethical approval.</p> <p>Signed: J.Ruffels Date: 04.04.18</p> <p>On behalf of Tizard Ethics Committee</p>	
Alterations approved by Supervisor	 Signature Date 26.03.18
Final approval On behalf of Tizard Ethics Committee	 Michelle McCarthy Signature Date 04.04.18

Appendix H

Study 2. Evidence of ethical application submission to NSPCC.

Appendix D - Ethics Full Review Application Form

NSPCC RESEARCH ETHICS APPLICATION FORM

1.	Date 08/12/2016
2.	Title of research project: Adolescents with Intellectual Disabilities who display harmful sexual behaviours: a clinical series study.
3.	Short name of research project (less than 80 characters) Adolescents with ID who display HSB
4.	Name of lead researcher Aida Malovic
5.	Position/ job title Assistant Psychologist at NCATS and a PhD Candidate at University of Kent, SSP55R.
6.	Contact details 079 38 619623 Email: Aida.Malovic@NSPCC.org.uk or a.malovic@kent.ac.uk
7.	Names and titles of other researchers Professor Glynis Murphy- academic supervisor Professor Simon Coulton- academic supervisor
8.	If this project is related to one previously reviewed by the NSPCC REC, please provide the name of the related project. This project is part of a PhD thesis, for which I have received NHS REC (now HRA) approval. The 'wider' PhD project aims to adapt and test assessment tools specifically for the adolescent ID population (for those who display HSB- harmful sexual behaviours) and that has received approval from NHS, NCMS and a selection of independent/ charity bodies as well (details below).
9.	Does the current study present more than 'minimal risk' and therefore require full ethical review? This study is seeking to review and extract data from historic cases (i.e. none ongoing) at the NCATS service, in relation to young people with ID (intellectual/ learning disabilities). Cases included will only be the ones that meet the inclusion criteria (see below Q14). The aim is to be able to comment on the characteristics of the young people with ID who display HSB, via a 'case series' project design.
10.	Is this application being submitted to another ethics committee or has the research

C:\Users\AID\Public\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.I55\95\WY\FResearch Ethics Committee Application Form Aida Malovic.docx 1

Notice of Application Outcome

From: [redacted]
Sent: 08 February 2017 18:10
To: [redacted]
Cc: [redacted]
Subject: RE: REC application form

Hello Aida

I am pleased to confirm that the chair and deputy chair of the NSPCC REC have reviewed the paperwork you sent through and have agreed for your research to proceed. This was on the basis that you have approval through NRES and your work is compliant with the data protection act.

I wish you well with your study and look forward to hearing how you get on

Best wishes

Richard

[redacted]

Head of Evidence team

NSPCC

[redacted]

Appendix I

Study 2. Details of the cognitive profiles of the NSPCC sample.

<i>Case</i>	<i>Age</i>	<i>Age of ASD diagnosis</i>	<i>FSIQ (WISC-IV)</i>	<i>Additional information where FSIQ not possible</i>	<i>Alternative assessment</i>	<i>Additional information of alternative assessment</i>
1	15	3 years old	109			
2	15	2 years old	Uninterpretable		BAS3	Quantitative Reasoning: 8 th percentile rank (low), Recognition of Designs: 14 th percentile rank (Very low), Pattern Construction: 2 nd percentile rank (very low)
3	15	7 years old	Uninterpretable	Function at the level of a moderate learning disability		
4	15	14 years old	40			
5	15	'when young'	Uninterpretable	Operates in the low average range. Processing speed was a relative weakness.		Attended SEND provisions in school until age of 14, now out of school
6	15	2 years old	66			
7	15	Date not specified, but diagnosis is	Not available	Verbal Comprehension Index: 0.1 percentile rank (extremely low), Perceptual Reasoning Index: 0.1 percentile rank (extremely low) Processing Speed Index: 7 th percentile (borderline)		

8	14	13 years old					Due to existing recent cognitive assessment WISC-IV was not administered again, score on Verbal Comprehension Index: in the borderline range.
9	15	FAO ASD (dates missing but diagnosis confirmed for both)	Not available	YP is not British		ABAS3	Overall score: borderline range

Note. YP= young person

Appendix J

Chapter 5. Details of the Learning Disability Working Group (LDWG).

Members and the Organisations They Represent

The founding members of LDWG were Stephen Barry, the Service Manager and Lead Clinician for Be Safe, Bristol, and Richard Beckett, Consultant Clinical and Forensic Psychologist, The Adolescent Sexual Offender Project (ASAP). Together they organised and invited professionals working in the area of assessments and treatment of adolescents with harmful sexual behaviours for an inaugural meeting of the LDWG on 4th June 2009. The aim of the event was to form a working group of specialist service providers whose purpose would be to examine, review and adapt reliable instruments to better assess risk and treatment outcomes for young people with IDD and HSB. The working group was joined, at the time by Kathryn Nichol, Be Safe; Bobby Print, Director, GMAP; Rachel Edwards Chartered Forensic Psychologist, SWAAY Child and Adolescent Services Ltd.

The LDWG works on the principle of members being able to make suggestions for new professionals (practitioners) to joining, which is discussed by the whole team. In time this resulted in the addition of two other individuals, Marilyn Sher, Chartered Forensic Psychologist, Adolescent Services, St Andrews Healthcare, and Rowena Rossiter, Consultant Clinical Psychologist from the Tizard Centre and Chair of the Young Sex Offender Treatment Services Collaborative - Intellectual Disabilities (ySOTSEC-ID).

The LDWG will meet, on average once every four months but this might vary. Over the years the group has been presented by the above-mentioned professionals as well as guests from other service providers such as NSPCC, Faithfull Trust and Barnardo's. On the whole, the LDWG have a wider range of skills and experience in the areas of treatment and assessment of adolescents with and without IDD who present with HSB.

Members who were involved with and provided feedback on the development of the adapted UCLA-R and KSS were:

- Stephen Barry, Principal Clinician, Be Safe, Bristol
- Sam Richards (Guest) Trainee Forensic Psychologist, Nottingham University
- Rachel Edwards Head of Community Based Services, Forensic Psychologist, SWAAY Child and Adolescent Services Ltd, Reading

- Helen Griffin Senior Practitioner and Head of Research, GMap
- Dr Emma Marks Chartered Forensic Psychologist, St Andrew's Healthcare, Northampton
- Dr Rowena Rossiter Consultant Clinical Psychologist of the Tizard
- Centre and Chair of ySOTSEC-ID
- Dr Mel Turpin Clinical Psychologist, Be Safe Bristol

Appendix K

Study 3. Example of Data collection Pack.



Your code

Your Ethnicity

Site Code:

Participant Code:



*Thank you for completing
these questionnaires, if you
have any questions please
ask an adult.*

REVISED UCLA LONELINESS SCALE

INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you.

Statement	Never	Rarely	Sometimes	Often
1. I feel in tune with the people around me	1	2	3	4
2. I lack companionship	1	2	3	4
3. There is no one I can turn to	1	2	3	4
4. I do not feel alone	1	2	3	4
5. I feel part of a group of friends	1	2	3	4
6. I have a lot in common with the people around me	1	2	3	4
7. I am no longer close to anyone	1	2	3	4
8. My interests and ideas are not shared by those around me	1	2	3	4
9. I am an outgoing person	1	2	3	4
10. There are people I feel close to	1	2	3	4
11. I feel left out	1	2	3	4
12. My social relationships are superficial	1	2	3	4
13. No one really knows me well	1	2	3	4
14. I feel isolated from others	1	2	3	4
15. I can find companionship when I want it	1	2	3	4
16. There are people who really understand me	1	2	3	4
17. I am unhappy being so withdrawn	1	2	3	4
18. People are around me but not with me	1	2	3	4
19. There are people I can talk to	1	2	3	4
20. There are people I can turn to	1	2	3	4

Instructions for the next two questionnaires

Please answer the question below. This might be your biological mum (or dad), foster mum (or dad), or someone else, but you need to pick just one person.

Who looks after you the most? (please tick)

Mum

Dad

Foster mum

Foster dad

Grandmother

Grandfather

Aunt

Uncle

Someone else. *Please write your relationship with them:*



When answering the next two questionnaires, you will see blank parts in **grey**; that's where you will need to be thinking about the person *who looks after you the most*.

Kerns Security Scale- adapted

You will now read a short story about 3 boys. I want to imagine you are a good friend with the boys. For each question the young person you have to:

- Decide which of the two statements in the thought bubbles you agree with
- Then select how much you agree.

There are only ever two choices to make and there are no right and no wrong answers.

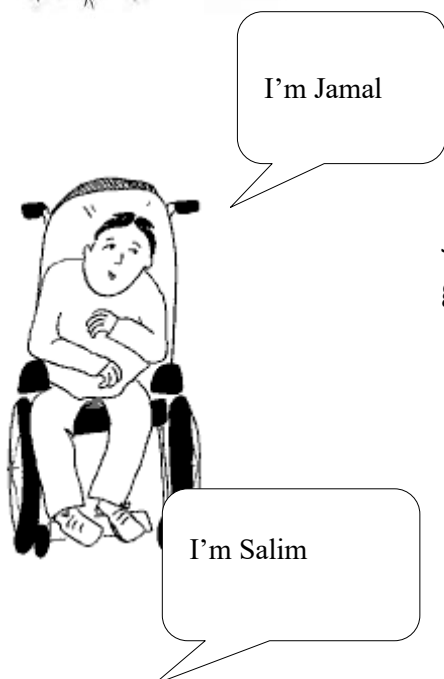
Please put a cross at each of your answers

All the grey boxes about *the person who looks after you the most*

Elliot, Jamal and Salim are 3 new boys at your school. You become good friends with them and you start hanging out and playing during the breaks.



Elliot lives with his mum and dad.



Jamal lives with his grandparents, gran and grandpa.



Salim lives with an adopted family.



One day Elliot tells you that his mum sometimes doesn't tell him the truth. Elliot found out some things she's told him are not true. Elliot tells you that he doesn't trust his mum.

Elliot asks you about you?

Do you find it
easy to trust your

?

OR

Do you find it
hard to trust your

?

How much:



A little

OR



A Lot



Jamal and you are playing videogames. Jamal's gran keeps walking into his room. Jamal tells you his gran usually bothers him a lot. Other times Jamal might try and help with the washing up or with folding washing, but his gran will try to help him. He wants to do things on his own.

Jamal asks you about you?

Do you feel
like your
doesn't let you to
do things on your
own?

OR

Do you feel
like your lets
you do things on
your own?

How much:



A little

OR



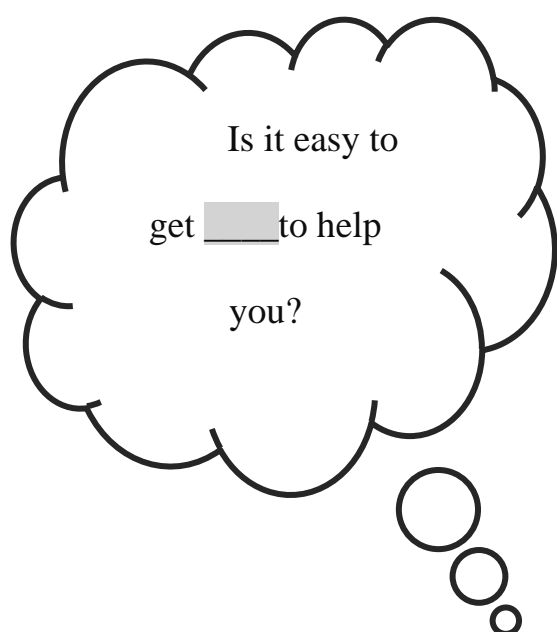
A Lot

=

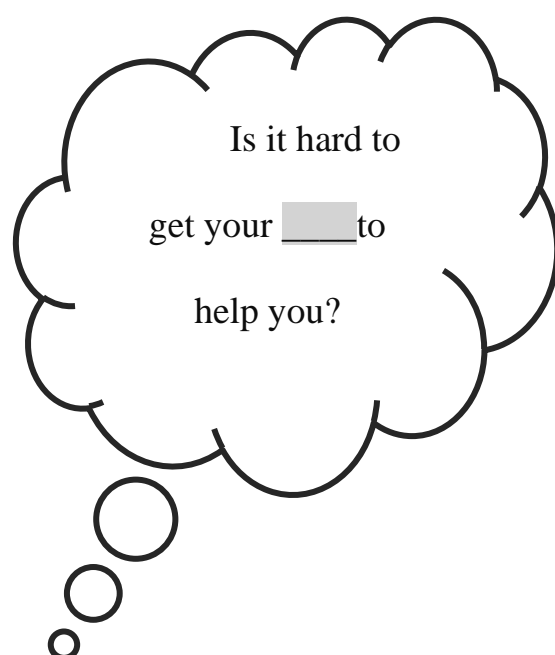


Salim is a very good student. Salim tells you that his mum helps him with lots of things including his homework. Salim says he can ask his mum for help with all kinds of things like making a sandwich, getting dressed and getting to places.

Salim ask about you?



OR



How much:



A little

OR

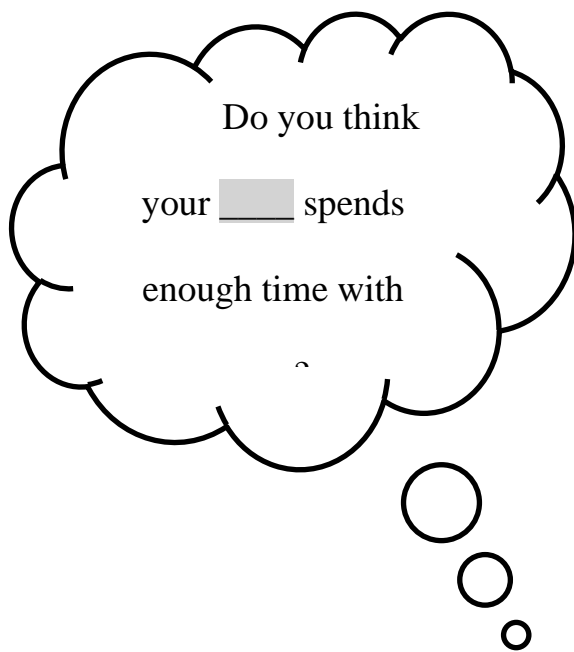


A Lot

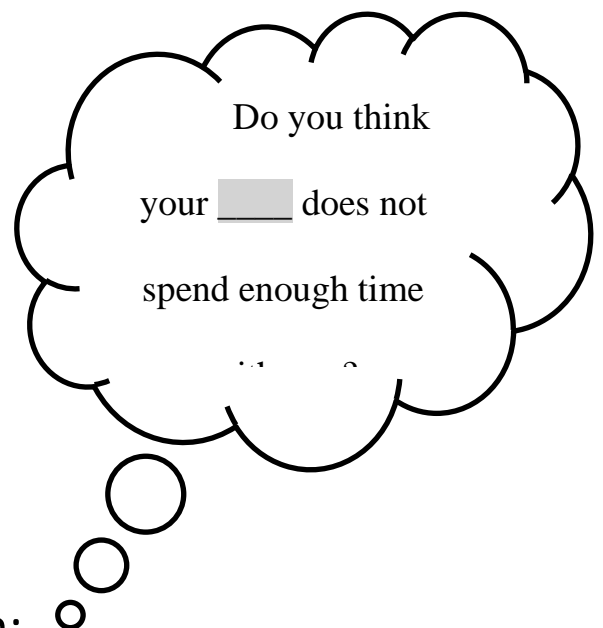


Elliot tells you that he likes having friends visit him. He tells you this is because his mum doesn't spend enough time with him. He feels lonely otherwise.

Elliot asks about you?



OR



How much:



A little

OR



A Lot



Jamal tells you he feels very sad thinking about his brother sometimes. His brother is away traveling. Jamal also tells his gran about his feelings. He doesn't mind telling her what he is thinking and feeling.

Jamal asks about you?

Do you find it
hard to tell your
what you are thinking
or feeling?

OR

Do you find it easy to
tell your what
you are thinking or
feeling?

How much:



little

OR



A Lot



Salim and you are watching a film at his house. Salim's mum put the film on. Salim's mum keeps coming in and asking you both if you want to eat anything, or drink anything. Salim tells you that he needs his mum for a lot of things.

Salim asks about you?

Do you not really
need your for
lots of things?

OR

Do you feel like you
need your for a
lot of things

How much:



little

OR



A Lot



Elliot is not close to his mum. This means Elliot doesn't spend much time with her, and he doesn't tell her much about what he is thinking or what he is feeling. Elliot also doesn't get many hugs or cuddles from her, but Elliot doesn't mind.

Elliot asks about you?

Do you wish you
were closer to your

_____?

OR

Are you happy with
how close you are to
your _____?

How much:



A little

OR



A Lot



Jamal is upset. He tells you that he had an argument with his gran last night. Jamal says that he worries that his gran doesn't really love him.

Jamal asks about you?

Do you worry that
your does not
love you?

OR

Do you feel really
sure that your
 loves you?

How much:



A little

OR

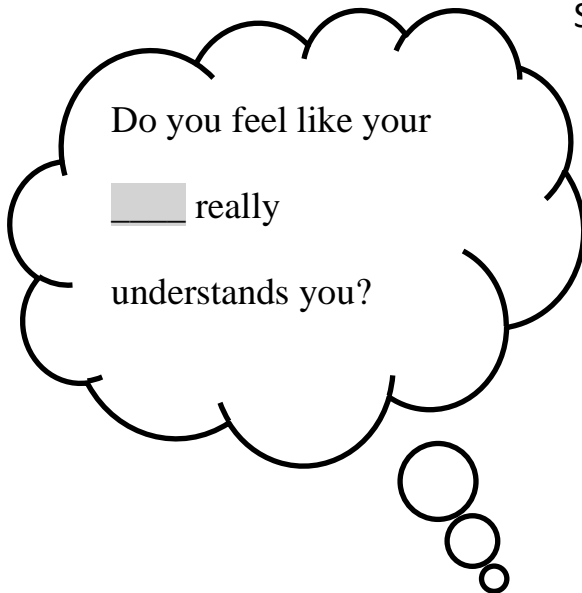


A Lot

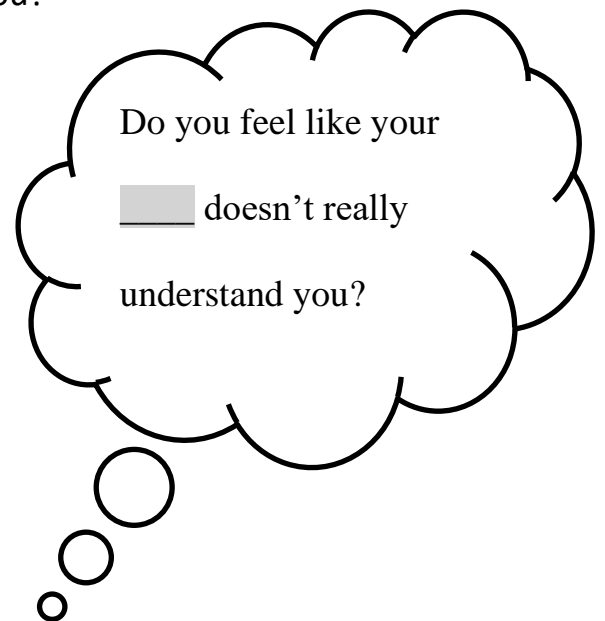


Salim puts on Facebook that he doesn't think his mum understands him. You ask him what this means. Salim says that to him it means Salim's mum doesn't understand his likes and his dislikes.

Salim asks about you?



OR



How much:



A little

OR



A Lot



Elliot tells you that sometimes his mum goes for long trips because of her work. He sometimes misses her, but he also knows she will be back. Elliot doesn't worry his mum would leave him, even if they argue.

Elliot asks about you?

Do you feel really
sure your would
not leave you?

Do you sometimes
wonder if you
might leave you?

OR

How much:



A little

OR

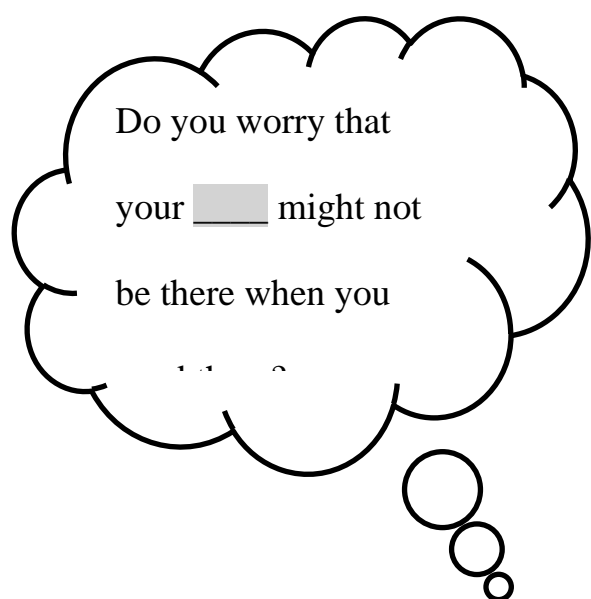


A Lot

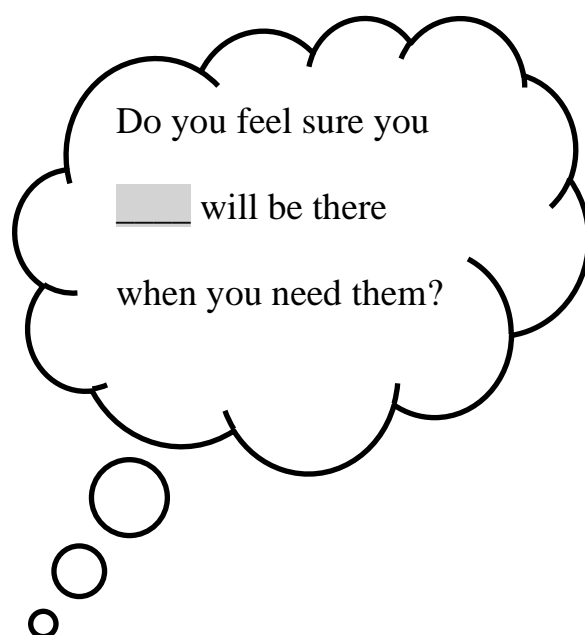


Jamal comes to school one day in a dirty school uniform. He doesn't bring his lunch with him either. Jamal gets upset. He tells you that his gran didn't prepare his lunch for him or cuddle him. Jamal says his gran isn't there when he needs her.

Jamal asks about you?



OR



How much:



A little

OR



A Lot



Salim tells you that he doesn't feel like his mum listens to him. Salim's mum will forget to buy his favourite juice in the shop, and she won't allow him to watch some TV shows. Sometimes Salim has to repeat himself to her.

Salim asks about you?

Do you feel like your
 doesn't listen to
 you?

OR

Do you feel like your
 does listen to
 you?

How much:



A little

OR



A Lot



Elliot's football team lost a game this weekend. Elliot was upset but it helped him to talk to his mum. He felt better afterwards. Elliot always goes to his mum when he is upset because he feels that she can help him.

Elliot asks how about you?

Do you go to speak to
your when you
are upset?

OR

Do you not go to
speak to your
when you are upset?

How much:



A little

OR

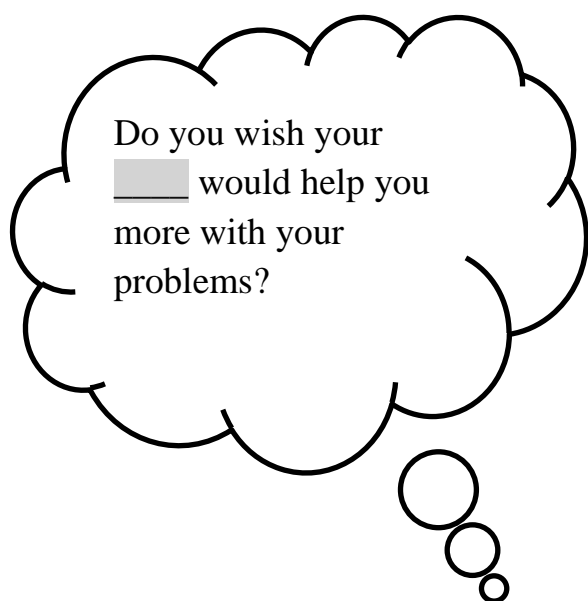


A Lot

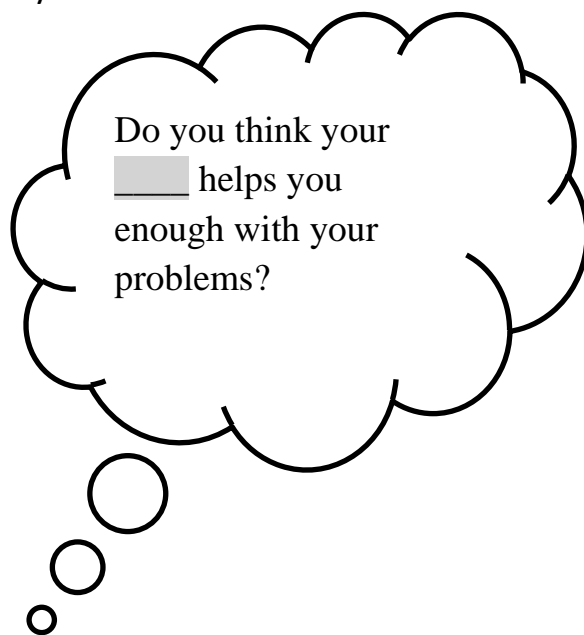


Jamal tells you that he feels sad and upset sometimes. Jamal tells you he would like to talk to his gran when he feels that way. But Jamal doesn't feel like his gran helps him enough with his problems.

Jamal asks about you?



OR



How much:



A little

OR

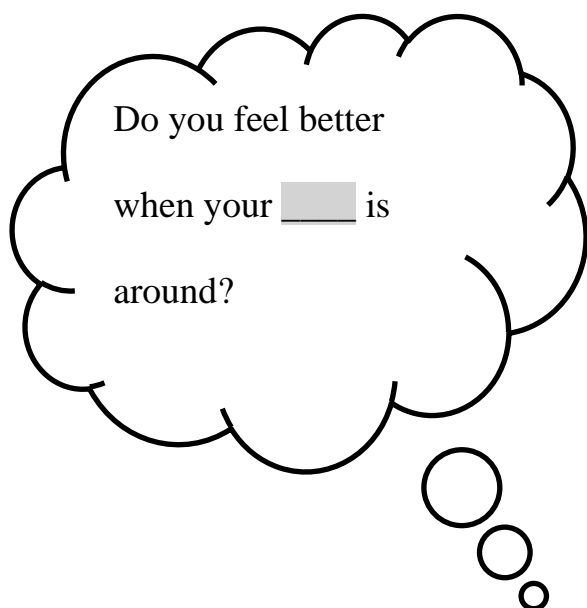


A Lot

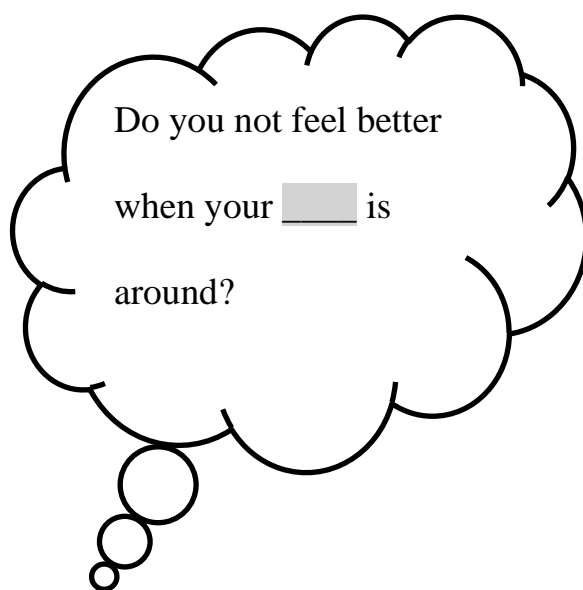


Salim is independent, he does quite a lot on his own. Salim might go food shopping and go for long walks on his own. Salim doesn't feel he needs his mum. Salim tells you he feels better when he is on his own.

Salim asks about you?



OR



How much:



A little

OR



A Lot

Kerns Security Scale

What I Am Like With My mo m

Instructions:

This questionnaire asks about what you are like with your mom (*the person who looks after you the most*)— like how you act and feel around them. Before we get to those questions, let’s try a practice question. Each question talks about two kinds of kids, and we want to know which kids are most like you. Decide first whether you are more like the kids on the left side or more like the kids on the right side, then decide whether that is sort of true for you, or really true for you, and circle that phrase. For each question you will only circle one answer.

Practice Question:

- | | | | |
|----|--|------------|---|
| | Some kids would rather play sports in their spare time. | BUT | Other kids would rather watch T.V. |
| | Really true
for me | | Sort of
true for me |
| | | | Sort of
true for me |
| | | | Really true
for me |
| 1. | Some kids find it easy to trust their mom | BUT | Other kids are not sure if they can trust their mom . |
| | Really true
for me | | Sort of
true for me |
| | | | Sort of
true for me |
| | | | Really true
for me |
| 2. | Some kids feel like their mom butts in a lot when they are trying to do things | BUT | Other kids are feel like their mom lets them do things on their own |
| | Really true
for me | | Sort of
true for me |
| | | | Sort of
true for me |
| | | | Really true
for me |
| 3. | Some kids find it easy to count on their mom for help | BUT | Other kids think it’s hard to count on their mom |
| | Really true
for me | | Sort of
true for me |
| | | | Sort of
true for me |
| | | | Really true
for me |
| 4. | Some kids think their mom spends enough time with them | BUT | Other kids think their mom does not spend enough time with them. |
| | Really true
for me | | Sort of
true for me |
| | | | Sort of
true for me |
| | | | Really true
for me |

5. Some kids do not really like telling their **mom** what they are thinking or feeling

Really true for me Sort of true for me

BUT

Other kids do like telling their **mom** what they are thinking or feeling.

Sort of true for me Really true for me

6. Some kids do not really need their **mom** for much

Really true for me Sort of true for me

BUT

Other kids need their **mom** for a lot of things.

Sort of true for me Really true for me

7. Some kids wish they were closer to their **mom**

Really true for me Sort of true for me

BUT

Other kids are happy with how close they are to their **mom**.

Sort of true for me Really true for me

8. Some kids worry that their **mom** does not really love them

Really true for me Sort of true for me

BUT

Other kids are really sure that their **mom** loves them.

Sort of true for me Really true for me

9. Some kids feel like their **mom** really understands them

Really true for me Sort of true for me

BUT

Other kids feel like their **mom** does not really understand them.

Sort of true for me Really true for me

10. Some kids are really sure their **mom** would not leave them

Really true for me Sort of true for me

BUT

Other kids sometimes wonder if their **mom** might leave them

Sort of true for me Really true for me

11. Some kids worry that their **mom** might not be there when they need her

Really true for me Sort of true for me

BUT

Other kids are sure their **mom** will be there when they need her.

Sort of true for me Really true for me

12. Some kids think their **mom** does not listen to them

Really true
for me

Sort of
true for me

BUT

Other kids do think their **mom** listens to them.

Sort of
true for me

Really true
for me

13. Some kids go to their **mom** when they are upset

Really true
for me

Sort of
true for me

BUT

Other kids do not go to their **mom** when they are upset

Sort of
true for me

Really true
for me

14. Some kids wish their **mom** would help them more with their problems

Really true
for me

Sort of
true for me

BUT

Other kids think their **mom** helps them enough.

Sort of
true for me

Really true
for me

15. Some kids feel better when their **mom** is around

Really true
for me

Sort of
true for me

BUT

Other kids do not feel better when their **mom** is around.

Sort of
true for me

Really true
for me

Date this was completed:

Resiliency Scales for Children and Adolescents©

This questionnaire has instructions on top of each page; please read them before you start answering the



Here is a list of things that happen to people and that people think, feel, or do. Read each sentence carefully, and circle the *one* answer (Never, Rarely, Sometimes, Often, or Almost Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3	4
1. Life is fair.	Never	Rarely	Sometimes	Often	Almost Always
2. I can make good things happen.	Never	Rarely	Sometimes	Often	Almost Always
3. I can get the things I need.	Never	Rarely	Sometimes	Often	Almost Always
4. I can control what happens to me.	Never	Rarely	Sometimes	Often	Almost Always
5. I do things well.	Never	Rarely	Sometimes	Often	Almost Always
6. I am good at fixing things.	Never	Rarely	Sometimes	Often	Almost Always
7. I am good at figuring things out.	Never	Rarely	Sometimes	Often	Almost Always
8. I make good decisions.	Never	Rarely	Sometimes	Often	Almost Always
9. I can adjust when plans change.	Never	Rarely	Sometimes	Often	Almost Always
10. I can get past problems in my way.	Never	Rarely	Sometimes	Often	Almost Always
11. If I have a problem, I can solve it.	Never	Rarely	Sometimes	Often	Almost Always
12. If I try hard, it makes a difference.	Never	Rarely	Sometimes	Often	Almost Always
13. If at first I don't succeed, I will keep on trying.	Never	Rarely	Sometimes	Often	Almost Always
14. I can think of more than one way to solve a problem.	Never	Rarely	Sometimes	Often	Almost Always
15. I can learn from my mistakes.	Never	Rarely	Sometimes	Often	Almost Always
16. I can ask for help when I need to.	Never	Rarely	Sometimes	Often	Almost Always
17. I can let others help me when I need to.	Never	Rarely	Sometimes	Often	Almost Always
18. Good things will happen to me.	Never	Rarely	Sometimes	Often	Almost Always
19. My life will be happy.	Never	Rarely	Sometimes	Often	Almost Always
20. No matter what happens, things will be all right.	Never	Rarely	Sometimes	Often	Almost Always

For T scores, see Table A.1.

TS

RS

REL

Here is a list of things that happen to people and that people think, feel, or do. Read each sentence carefully, and circle the *one* answer (Never, Rarely, Sometimes, Often, or Almost Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3	4
1. I can meet new people easily.	Never	Rarely	Sometimes	Often	Almost Always
2. I can make friends easily.	Never	Rarely	Sometimes	Often	Almost Always
3. People like me.	Never	Rarely	Sometimes	Often	Almost Always
4. I feel calm with people.	Never	Rarely	Sometimes	Often	Almost Always
5. I have a good friend.	Never	Rarely	Sometimes	Often	Almost Always
6. I like people.	Never	Rarely	Sometimes	Often	Almost Always
7. I spend time with my friends.	Never	Rarely	Sometimes	Often	Almost Always
8. Other people treat me well.	Never	Rarely	Sometimes	Often	Almost Always
9. I can trust others.	Never	Rarely	Sometimes	Often	Almost Always
10. I can let others see my real feelings.	Never	Rarely	Sometimes	Often	Almost Always
11. I can calmly tell others that I don't agree with them.	Never	Rarely	Sometimes	Often	Almost Always
12. I can make up with friends after a fight.	Never	Rarely	Sometimes	Often	Almost Always
13. I can forgive my parent(s) if they upset me.	Never	Rarely	Sometimes	Often	Almost Always
14. If people let me down, I can forgive them.	Never	Rarely	Sometimes	Often	Almost Always
5. I can depend on people to treat me fairly.	Never	Rarely	Sometimes	Often	Almost Always
6. I can depend on those closest to me to do the right thing.	Never	Rarely	Sometimes	Often	Almost Always
7. I can calmly tell a friend if he or she does something that hurts me.	Never	Rarely	Sometimes	Often	Almost Always
8. If something bad happens, I can ask my friends for help.	Never	Rarely	Sometimes	Often	Almost Always
9. If something bad happens, I can ask my parent(s) for help.	Never	Rarely	Sometimes	Often	Almost Always
0. There are people who will help me if something bad happens.	Never	Rarely	Sometimes	Often	Almost Always
1. If I get upset or angry, there is someone I can talk to.	Never	Rarely	Sometimes	Often	Almost Always
2. There are people who love and care about me.	Never	Rarely	Sometimes	Often	Almost Always
3. People know who I really am.	Never	Rarely	Sometimes	Often	Almost Always
4. People accept me for who I really am.	Never	Rarely	Sometimes	Often	Almost Always

For *T* scores, see Table A.1.

TS

RS

REA

Here is a list of things that happen to people and that people think, feel, or do. Read each sentence carefully, and circle the *one* answer (Never, Rarely, Sometimes, Often, or Almost Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3	4
1. It is easy for me to get upset.	Never	Rarely	Sometimes	Often	Almost Always
2. People say that I am easy to upset.	Never	Rarely	Sometimes	Often	Almost Always
3. I strike back when someone upsets me.	Never	Rarely	Sometimes	Often	Almost Always
4. I get very upset when things don't go my way.	Never	Rarely	Sometimes	Often	Almost Always
5. I get very upset when people don't like me.	Never	Rarely	Sometimes	Often	Almost Always
6. I can get so upset that I can't stand how I feel.	Never	Rarely	Sometimes	Often	Almost Always
7. I get so upset that I lose control.	Never	Rarely	Sometimes	Often	Almost Always
8. When I get upset, I don't think clearly.	Never	Rarely	Sometimes	Often	Almost Always
9. When I get upset, I react without thinking.	Never	Rarely	Sometimes	Often	Almost Always
10. When I get upset, I stay upset for about one hour.	Never	Rarely	Sometimes	Often	Almost Always
11. When I get upset, I stay upset for several hours.	Never	Rarely	Sometimes	Often	Almost Always
12. When I get upset, I stay upset for the whole day.	Never	Rarely	Sometimes	Often	Almost Always
13. When I get upset, I stay upset for several days.	Never	Rarely	Sometimes	Often	Almost Always
14. When I am upset, I make mistakes.	Never	Rarely	Sometimes	Often	Almost Always
15. When I am upset, I do the wrong thing.	Never	Rarely	Sometimes	Often	Almost Always
16. When I am upset, I get into trouble.	Never	Rarely	Sometimes	Often	Almost Always
17. When I am upset, I do things that I later feel bad about.	Never	Rarely	Sometimes	Often	Almost Always
18. When I am upset, I hurt myself.	Never	Rarely	Sometimes	Often	Almost Always
19. When I am upset, I hurt someone.	Never	Rarely	Sometimes	Often	Almost Always
20. When I am upset, I get mixed-up.	Never	Rarely	Sometimes	Often	Almost Always

For T scores, see Table A.1.

TS

RS

Thank you for

completing the



Appendix L

Katherine Kerns correspondence 2014.

KERNS, KATHRYN 10 February 2014 21:15 Aida Malovic RE: Security Scale measure Security Scale.doc

Hi Aida, I have attached the items from the measure. What types of adaptations or changes were you envisioning? Kathy

From: Aida Malovic

Sent: Monday, February 10, 2014 5:48 AM

To: KERNS, KATHRYN

Subject: Security Scale measure

Professor Kerns, I hope not to take up much of your time with the following query. I am a 1st year PhD student with Professor Glynis Murphy at the Tizard Centre in the UK. My project is regarding adolescents with intellectual disabilities who display sexually harmful behaviours, and as part of my research I am looking to adapt measures for use in this population; it is well recognised that there is a severe lack of them. I have identified a number of areas of interest one of which includes parental attachment in our ID population. To that effect I am contacting you in hope that you would be able to share a copy of your Security Scale measure with myself? I have read a number of articles on said scale and I would be curious to see if it might be applicable for my project. In addition I seek your approval to make any adjustments or adaptations if needed, with acknowledgement to yourself and your colleagues if the scale is used. PS I have also sent above query over Research Gate please ignore if you end up replying to this email first. Warmly, Aida

Aida Malovic [redacted]

Appendix M

Approval notice NHS Research Ethics Committee (Reference: 15 LO/0688).


Health Research Authority
NRES Committee London - Camden & Kings Cross
Room 001
Jarrow Business Centre
Rolling Mill Road
Jarrow
Tyne & Wear
NE32 3DT
Telephone: 0191 428 3444

19 June 2015

Miss Aida Malovic
PhD candidate
Tizard Centre
Tizard Centre, Woodlands, Giles Lane
University of Kent, Canterbury
CT2 7LR

Dear Miss Malovic

Study title: Adolescents with Intellectual Disabilities who display harmful sexual behaviours: adaptation of measures
REC reference: 15/LO/0688
IRAS project ID: 153594

Thank you for your letter of 15 June 2015, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair with Committee member Mary Watson.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact the REC Manager, Ms. Kirstie Penman, nrescommittee.london-camdenandkingscross@nhs.net. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

A Research Ethics Committee established by the Health Research Authority

Appendix N

Evidence of National Offender Management Service ethical approval.



National Offender Management Service
National Research Committee
Email: National_Research@noms.psi.gov.uk

21 July 2016

Confirmation of Approval – NOMS Research

Ref: NRC 2016-186

Title: Adolescents with Intellectual Disabilities who display harmful sexual behaviours: adaptation of measures

Dear Ms Aida Malovic,

Thank you for submitting the additional information and amended documents, and for addressing the outstanding issues we raised in our previous correspondence. After careful consideration your application to conduct research within ~~Cookham~~ Wood YOI has been **approved** by the Kent and Sussex Regional Forensic Psychology Service.

Also please note you should contact the Governor at ~~Cookham~~ Wood YOI to seek final approval prior to starting your research.

If you have any further questions please do not hesitate to contact us.

Yours sincerely

Jayne Corson
Trainee Psychologist
Kent, Sussex & Essex Forensic Psychology Services
Public Sector Prisons

Louisa Sutcliffe (Supervisor)
Registered Forensic Psychologist
Kent, Sussex & Essex Forensic
Psychology Services
Public Sector Prisons

Cc: National Research Committee

Appendix O




Example of Easy Read Information sheets and consent forms for young people.

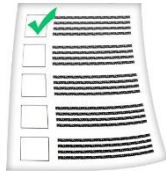
Participant Information Sheet



Title of Study: Risky behaviours in adolescents: adaptation of measures

Name of Researcher: Aida Malovic

	<p>You are being invited to take part in Aida's research.</p>
	<p>Aida is studying for her doctorate at the University of Kent.</p> <p>Aida's research is finding out about how adolescents think and feel.</p>
	<p>Aida has 5 questionnaires. She wonders if you would like to complete them?</p>



2 of the questionnaires are very similar to each other.



You can get help when completing the questionnaires.



What are the questionnaires about?





2 questionnaires ask about your everyday feelings and friendships.



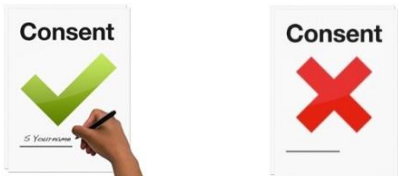

2 questionnaires ask about your relationship with people who support you.

1 questionnaire asks what your strengths are and what the positive things in your life are.



There are no right and wrong answers.

	<p>What happens if I say “yes” to doing the questionnaires?</p> <p>It means that a staff member or Aida will meet with you in a private place.</p> <p>No one else can listen to your answers there.</p> <p>They will support you in completing the questionnaires.</p>
	<p>Some people will be asked if they want to do the same questionnaires again up to 6 weeks' later. You can say no.</p>
	<p>What if I have difficult feelings when completing the questionnaire?</p> <p>If you feel upset, angry or uncomfortable you can talk to the person helping you or you can talk to another member of staff. We can try to help.</p>
	<p>Who might see my answers?</p> <p>Your answers will be private.</p> <p>But if your answers show you or someone else may be hurt, we might have to talk to someone, like your community nurse or social worker.</p> <p>We will tell you if we need to do this.</p>

	<p>Will other people know who I am?</p> <p>No, this is private information. Your name will be changed once Aida gets the questionnaires.</p> <p>Aida will change your name into a number so that no one will know who it is about.</p>
	<p>How long will the questionnaires take?</p> <p>It might take you up to 1 and half hours to complete all questionnaires in one go.</p> <p>Some do it quicker some do it slower.</p> <p>You can have breaks when you want.</p>
	<p>Do I have to take part in this?</p> <p>No, you do not have to take part in the research.</p>
	<p>What if I say “yes”, and then I want to stop?</p> <p>It is OK to stop. We will stop the questions, some of your answers might still be used but anonymised.</p>
	<p>What happens with my answers?</p>



No one will know you took part, because your name will not be used.

Aida will write about what she found out from everyone's answers.



Questions?

If you have any questions please ask the person who gave you this information.






What if I change my mind?

If you change your mind just tell the person who helped you with the questionnaire, or a member of staff.

You can withdraw from this study at any time, but if you have already completed questionnaires up to that point, we will keep this information in anonymised form for use in research.



Contact for further information:







 <p>Aida</p>	<p>If you have any questions about the study please ask the person reading this with you.</p> <p>Or, you can contact Aida below.</p>
	<p>Aida Malovic</p> <p>Tel: 01227 82 7758</p> <p>Email: am881@kent.ac.uk</p>
	<p>Or write to her at:</p> <p>Tizard Centre</p> <p>University of Kent</p> <p>[redacted]</p>






Consent/ assent form for participants



Please tick every box if you agree		✓
	<p>I have seen (or had read to me) the information sheet about the project Risky Behaviours in Adolescents: adaptation of measures vrs1.2 (dated 11/06/2015).</p>	
	<p>I asked all the questions I wanted to.</p>	
	<p>I have understood the information.</p>	
	<p>I discussed this study with someone else whom I trust.</p>	

	<p>I understand my answers will be private. My name will not be written down.</p>	
<p>Please tick every box if you agree</p>		
	<p>I understand that I can stop taking part in this research any time.</p>	
	<p>I understand that if my answers show that I or someone else may be hurt, we might have to talk to someone, like my community nurse or social worker.</p>	
	<p>I understand that even if I take part, I can withdraw from this study at any time. But if I have already completed questionnaires up to that point, Aida will keep this information in anonymised form for use in research.</p>	
	<p>I understand that some of my notes and data collected in the study may be looked at Aida and her supervisor. But this will be confidential information.</p>	

	<p>Tick this box if you want to know what the research findings are.</p>	
	<p>Tick this box if you agree to take part in the research.</p>	
	<p>Tick this box if you think you want to do these questionnaires again in couple of weeks' time. You can change your mind later.</p>	

	<p>Please can you sign your name below:</p>
	<p>Print name</p>
	<p>Signature</p>
	<p>Date</p>



Thank you

The person who explained this information needs to sign this form as well

Print name





Sign







Date

Participant Debrief Sheet

Title of Study: Risky behaviours in adolescents:
adaptation of measures

Name of Researcher: Aida Malovic

 <p>Aida</p> 	<p>Thank you for taking part in Aida's research.</p>
	<p>You have helped Aida find out more about loneliness and attachment in young people and how they feel about their care givers.</p>
	<p>Aida will find out how this is different between groups of young people.</p>

	<p>All the questionnaires are private.</p>
	<p>If there is anything you would like to talk about or if anything upset you from the questionnaires please tell Aida or a member of staff. We want to try and help.</p>
	<p>If you want to take part again Aida will be in touch in couple of weeks to ask you to complete some of these questionnaires once more</p>
	<p>You can withdraw from this study at any time, but if you have already completed questionnaires up to that point, we will keep this information in anonymised form for use in research.</p>
	<p>If you have any complaints, worries, or questions about this study, you can contact Aida or Glyn. See next page.</p>
	<p>General information</p> <p>There is a service young people can talk to privately called Childline.</p> <p>Their telephone number is: 0800 1111</p>



Contact for further information or any questions:



Aida Malovic

Tel: 01227 82 7758

Email: am881@kent.ac.uk



Or Aida's supervisor



Professor Glynis Murphy

Tel: 01227 82 3960

Email: G.H.Murphy@kent.ac.uk



Write to both at:

Tizard Centre

University of Kent

[redacted]

Appendix P

Cronbach's alpha for the original UCLA-R on the forensic and non- forensic cohort.

Item (original wording)	Forensic <i>n</i> =25		Non- Forensic <i>n</i> = 22	
	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
1. I feel in tune with the people around me	-0.014	0.63	0.71	0.905
2. I lack companionship	0.208	0.612	0.462	0.91
3. There is no one I can turn to	0.373	0.589	0.519	0.909
4. I do not feel alone	0.265	0.604	-0.202	0.929
5. I feel part of a group of friends	0.439	0.582	0.852	0.9
6. I have a lot in common with the people around me	0.349	0.593	0.834	0.901
7. I am no longer close to anyone	-0.179	0.673	0.672	0.906
8. My interests and ideas are not shared by those around me	0.046	0.632	0.335	0.914
9. I am an outgoing person	-0.103	0.647	0.226	0.915
10. There are people I feel close to	0.422	0.59	0.758	0.904
11. I feel left out	0.085	0.628	0.687	0.905
12. My social relationships are superficial	0.317	0.598	0.258	0.915
13. No one really knows me well	0.217	0.612	0.655	0.906

14.I feel isolated from others	0.315	0.598	0.64	0.906
15.I can find companionship when I want it	0.125	0.622	0.583	0.908
16.There are people who really understand me	0.234	0.609	0.77	0.903
17.I am unhappy being so withdrawn	0.311	0.603	0.597	0.907
18.People are around me but not with me	0.243	0.608	0.464	0.91
19.There are people I can talk to	0.465	0.581	0.772	0.904
20.There are people I can turn to	0.382	0.593	0.771	0.902

Appendix Q

Tables Q1- Q2.

The UCLA-R table split according to the two clusters

Item	1	4	5	6	9	10	15	16	19	20
1	1	0.116	.521**	.449**	0.085	.274*	.496**	.463**	.450**	.362**
4	0.116	1	0.062	0.072	0.106	0.085	0.132	0.021	-0.012	0.065
5	.521**	0.062	1	.696**	0.080	.452**	.383**	.416**	.405**	.520**
6	.449**	0.072	.696**	1	0.173	.392**	.354**	.378**	.293*	.440**
9	0.085	0.106	0.080	0.173	1	.439**	.276*	0.172	0.226	.300*
10	.274*	0.085	.452**	.392**	.439**	1	.275*	.537**	.629**	.693**
15	.496**	0.132	.383**	.354**	.276*	.275*	1	.383**	.452**	.370**
16	.463**	0.021	.416**	.378**	0.172	.537**	.383**	1	.775**	.727**
19	.450**	-0.012	.405**	.293*	0.226	.629**	.452**	.775**	1	.775**
20	.362**	0.065	.520**	.440**	.300*	.693**	.370**	.727**	.775**	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$. The grey boxes signify where item-total correlation is less than <0.15 .

Table Q1

The UCLA-R table split according to the two clusters

Item	2	3	7	8	11	12	13	14	17	18
2	1	.326*	0.247	-0.073	.272*	0.217	.326**	0.250	.395**	.284*
3	.326*	1	0.192	0.170	0.225	0.204	.283*	.507**	0.204	.303*
7	0.247	0.192	1	0.047	0.154	-0.070	.455**	0.076	0.129	0.041
8	-0.073	0.170	0.047	1	0.118	0.156	0.094	0.137	0.220	.325**
11	.272*	0.225	0.154	0.118	1	.298*	.393**	.343**	.279*	.305*
12	0.217	0.204	-0.070	0.156	.298*	1	0.015	0.115	0.237	0.243
13	.326**	.283*	.455**	0.094	.393**	0.015	1	0.247	0.220	0.234
14	0.250	.507**	0.076	0.137	.343**	0.115	0.247	1	.378**	.359**
17	.395**	0.204	0.129	0.220	.279*	0.237	0.220	.378**	1	0.194
18	.284*	.303*	0.041	.325**	.305*	0.243	0.234	.359**	0.194	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Table Q2

The UCLA-RA table split according to the two clusters UCLA-RA

Item	1	5	6	7	9	10	15	16	19	20
1	1	.334**	0.23	0.22	0.236	0.186	.394**	.308*	.307*	.418**
5	.334**	1	.535**	.333**	0.207	0.1823	0.2182	.413**	.350**	.446**
6	0.23	.535**	1	.278*	.300*	0.111	0.1923	.469**	0.228	.455**
7	0.22	.333**	.278*	1	.361**	.295*	.276*	.312*	.407**	.311*
9	0.236	0.207	.300*	.361**	1	.274*	.451**	.334**	.497**	.323**
10	0.186	0.183	0.111	.295*	.274*	1	.449**	.430**	.557**	.508**
15	.394**	0.218	0.192	.276*	.451**	.449**	1	.472**	.665**	.470**
16	.308*	.413**	.469**	.312*	.334**	.430**	.472**	1	.403**	.778**
19	.307*	.350**	0.228	.407**	.497**	.557**	.665**	.403**	1	.517**
20	.418**	.446**	.455**	.311*	.323**	.508**	.470**	.778**	.517**	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Table Q2

The UCLA-RA table split according to the two clusters

Item	2	3	4	8	11	12	13	14	17	18
2	1	0.112	0.234	0.125	0.204	0.091	0.19	0.206	0.213	0.199
3	0.112	1	0.142	-0.149	0.076	0.215	0.131	0.223	0.186	.262*
4	0.234	0.142	1	-0.038	.290*	-0.016	0.156	.292*	0.195	0.222
8	0.125	-0.149	-0.038	1	-0.016	-0.186	0.057	-0.06	0.025	0.057
11	0.204	0.076	.290*	-0.016	1	.318*	.294*	.660**	.401**	.345**
12	0.091	0.215	-0.016	-0.186	.318*	1	0.234	.342**	.366**	.320**
13	0.19	0.131	0.156	0.057	.294*	0.234	1	.345**	0.242	0.223
14	0.206	0.223	.292*	-0.06	.660**	.342**	.345**	1	.624**	.465**
17	0.213	0.186	0.195	0.025	.401**	.366**	0.242	.624**	1	.329**
18	0.199	.262*	0.222	0.057	.345**	.320**	0.223	.465**	.329**	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Appendix R

Tables R1- R2.

The KSS table split according to the two clusters

Item	1	3	4	9	10	13	15
1	1	.578**	.491**	.493**	.475**	.454**	.620**
3	.578**	1	.354**	.363**	.319**	0.236	.528**
4	.491**	.354**	1	.281*	.276*	.382**	.313*
9	.493**	.363**	.281*	1	.264*	.549**	.394**
10	.475**	.319**	.276*	.264*	1	0.236	.573**
13	.454**	0.233	.382**	.549**	0.236	1	.291*
15	.620**	.528**	.313*	.394**	.573**	.291*	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Item	2	5	6	7	8	11	12	14
2	1	0.166	-0.084	0.116	0.221	0.034	0.104	0.153
5	0.166	1	.338**	.449**	.284*	.398**	.493**	.395**
6	-0.084	.338**	1	.315*	0.236	0.194	.428**	0.015
7	0.116	.449**	.315*	1	.390**	.470**	.362**	.422**
8	0.221	.284*	0.236	.390**	1	.551**	.426**	.493**
11	0.034	.398**	0.194	.470**	.551**	1	.499**	.407**
12	0.104	.493**	.428**	.362**	.426**	.499**	1	.421**
14	0.153	.395**	0.015	.422**	.493**	.407**	.421**	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Table R1

The KSS-A table split according to the two clusters

Item	1	3	4	9	10	13	15
1	1	.332**	.419**	.458**	.354**	.429**	.356**
3	.332**	1	.282*	.567**	.461**	.391**	.351**
4	.419**	.282*	1	.393**	.434**	.345**	0.072
9	.458**	.567**	.393**	1	.370**	.499**	.342**
10	.354**	.461**	.434**	.370**	1	.322**	.391**
13	.429**	.391**	.345**	.499**	.322**	1	0.218
15	.356**	.351**	0.072	.342**	.391**	0.218	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Item	2	5	6	7	8	11	12	14
2	1	.271*	0.044	0.169	0.126	.338**	.398**	.270*
5	.271*	1	.319**	.249*	.356**	.263*	.586**	0.144
6	0.044	.319**	1	0.069	0.175	0.027	0.219	0.065
7	0.169	.249*	0.069	1	0.234	.366**	0.173	0.204
8	0.126	.356**	0.175	0.234	1	.459**	.517**	0.23
11	.338**	.263*	0.027	.366**	.459**	1	.535**	0.182
12	.398**	.586**	0.219	0.173	.517**	.535**	1	.302*
14	.270*	0.144	0.065	0.204	0.23	0.182	.302*	1

Note. *** = $p < .001$; ** = $p < .01$; * = $p < .05$ grey areas signify where item-total correlation is less than $<.15$

Appendix S

Table S1. Cronbach's alpha for the original UCLA-R on the forensic and non- forensic cohort

<i>Item (original wording)</i>	Forensic <i>n=25</i>		Non- Forensic <i>n= 22</i>	
	<i>Corrected Item- Total Correlation</i>	<i>Cronbach's Alpha if Item Deleted</i>	<i>Corrected Item- Total Correlation</i>	<i>Cronbach's Alpha if Item Deleted</i>
21. I feel in tune with the people around me	-0.014	0.63	0.71	0.905
22. I lack companionship	0.208	0.612	0.462	0.91
23. There is no one I can turn to	0.373	0.589	0.519	0.909
24. I do not feel alone	0.265	0.604	-0.202	0.929
25. I feel part of a group of friends	0.439	0.582	0.852	0.9
26. I have a lot in common with the people around me	0.349	0.593	0.834	0.901
27. I am no longer close to anyone	-0.179	0.673	0.672	0.906
28. My interests and ideas are not shared by those around me	0.046	0.632	0.335	0.914
29. I am an outgoing person	-0.103	0.647	0.226	0.915
30. There are people I feel close to	0.422	0.59	0.758	0.904
31. I feel left out	0.085	0.628	0.687	0.905
32. My social relationships are superficial	0.317	0.598	0.258	0.915
33. No one really knows me well	0.217	0.612	0.655	0.906
34. I feel isolated from others	0.315	0.598	0.64	0.906
35. I can find companionship when I want it	0.125	0.622	0.583	0.908

36. There are people who really understand me	0.234	0.609	0.77	0.903
37. I am unhappy being so withdrawn	0.311	0.603	0.597	0.907
38. People are around me but not with me	0.243	0.608	0.464	0.91
39. There are people I can talk to	0.465	0.581	0.772	0.904
40. There are people I can turn to	0.382	0.593	0.771	0.902

Appendix T

Table T1. Spearman's correlations for each individual item on UCLA-R and UCLA-RA.

Original UCLA-R items	Equivalent item on the adapted UCLA-RA ρ
1. I feel in tune with the people around me	.288*
2. I lack companionship	.447**
3. There is no one I can turn to	.131
4. I do not feel alone	.038
5. I feel part of a group of friends	.637**
6. I have a lot in common with the people around me	.538**
7. I am no longer close to anyone	.105
8. My interests and ideas are not shared by those around me	.177
9. I am an outgoing person	.393**
10. There are people I feel close to	.403**
11. I feel left out	.592**
12. My social relationships are superficial	.079
13. No one really knows me well	.438**
14. I feel isolated from others	.416**
15. I can find companionship when I want it	.339**
16. There are people who really understand me	.445**
17. I am unhappy being so withdrawn	.218
18. People are around me but not with me	.161
19. There are people I can talk to	.613**
20. There are people I can turn to	.536**

Note. ** $p < .01$; * $p < .05$

Appendix U

Table U1. Spearman's correlations for each individual item on KSSR and KSS-A.

Original KSS item	Equivalent item on the adapted KSS-A ρ
1. Some kids find it easy to trust their <i>mum</i>	.524**
2. Some kids feel like their <i>mum</i> butts in a lot when they are trying to do things	.145
3. Some kids find it easy to count on their <i>mum</i> for help	.281*
4. Some kids think their <i>mum</i> spends enough time with them	.267*
5. Some kids do not really like telling their <i>mum</i> what they are thinking or feeling	.418**
6. Some kids do not really need their <i>mum</i> for much	.524**
7. Some kids wish they were closer to their <i>mum</i>	.401**
8. Some kids worry that their <i>mum</i> does not really love them	.574**
9. Some kids feel like their <i>mum</i> really understands them	.367**
10. Some kids are really sure their <i>mum</i> would not leave them	.606**
11. Some kids worry that their <i>mum</i> might not be there when they need her	.352**
12. Some kids think their <i>mum</i> does not listen to them	.613**
13. Some kids go to their <i>mum</i> when they are upset	.569**
14. Some kids wish their <i>mum</i> would help them more with their problems	.356**
15. Some kids feel better when their <i>mum</i> is around	.400**

Note. ** $p < .01$; * $p < .05$

Appendix V

Example of Data Capture Sheet completed by Services.

Site Code:

Adolescents with Intellectual Disabilities who display
harmful sexual behaviours: adaptation of measures

Data Capture Sheet completed by Services

Please complete all four assessments if possible on the same day. However in some cases this might not be possible or desirable (by the young person) in which case complete below across all assessments

Date of Kern's Attachment Assessment original _____ adapted _____

Date of UCLA-R Assessment original _____ adapted _____

Date of Resiliency Scales Assessment _____

Has the young person consented to take part in the retest? _____

Is the young person being supported in completing the measures? _____

If so in what way _____

About the young person

Does the participant have any of the following assessments, and if so please tick the box and give details in the relevant sections

Intellectual disabilities (ID) **Date** _____ **Score** (of full assessment)

Where IQ score not available, please circle relevant category of ID

Borderline (IQ is 70-79)

Mild (IQ is 50-69)

Moderate (IQ is below 50)

Adaptive behaviours **Date** _____ **Instrument** _____

Autism **Date** _____ **Instrument** _____

Other health conditions (please specify) _____

No known conditions (circle if applicable)

Details of the type of risky/ challenging behaviours they have displayed in the past:

-
-
- Has the young person been a **victim themselves** of abuse in the past (violent or sexual) Yes
No
 - Has the young person taken part in **any interventions** (regarding their risky behaviours) Yes
No
 - Is the young person taking part in **any interventions right now** (regarding risky behaviours) Yes
No
 - Please provide information about the intervention/ programme they are/ have taken part in:

Participant number (completed by Aida):

Appendix W

Table W1. Cronbach's alpha for the MAS subscale.

Item (MAS subscale)	IDD cohort N=22		Non- IDD cohort N=56	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
	1.	.553	.924	.701
2.	.814	.919	.707	.895
3.	.688	.921	.489	.900
4.	.575	.924	.266*	.905
5.	.667	.922	.679	.894
6.	.480	.926	.376	.905
7.	.350	.928	.423	.902
8.	.590	.923	.702	.894
9.	.503	.925	.686	.894
10.	.522	.925	.374	.902
11.	.687	.922	.543	.899
12.	.684	.921	.585	.898
13.	.551	.924	.406	.904
14.	.560	.924	.430	.901
15.	.545	.924	.310	.904
16.	.493	.925	.491	.900
17.	.578	.924	.727	.893
18.	.823	.918	.572	.898
19.	.682	.921	.698	.894
20.	.640	.922	.691	.895

*Note.**where item-total correlation is less than <0.30

Table W2. Cronbach's alpha for the REL subscale.

Item (REL subscale)	IDD cohort		Non-IDD cohort	
	N=20		N=57	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1.	.516	.922	.579	.919
2.	.608	.920	.509	.920
3.	.522	.922	.474	.920
4.	.458	.923	.766	.916
5.	.536	.921	.437	.923
6.	.622	.920	.330	.922
7.	.362	.924	.266*	.925
8.	.623	.920	.897	.915
9.	.736	.918	.374	.922
10.	.514	.922	.347	.923
11.	.422	.923	.601	.918
12.	.538	.921	.497	.921
13.	.397	.924	.537	.920
14.	.475	.922	.762	.915
15.	.708	.919	.739	.916
16.	.542	.921	.729	.916
17.	.280*	.925	.481	.920
18.	.710	.918	.627	.918
19.	.531	.922	.461	.921
20.	.708	.918	.656	.917
21.	.686	.919	.640	.918
22.	.673	.919	.687	.917
23.	.452	.923	.569	.919
24.	.746	.918	.591	.919

*Note.**where item-total correlation is less than <0.30

Table W3. Cronbach's alpha for the REA subscale.

Item (REA subscale)	IDD cohort N=21		Non- IDD cohort N=59	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
	1.	.711	.930	.455
2.	.525	.933	.733	.912
3.	.490	.934	.714	.912
4.	.638	.931	.007*	.926
5.	.652	.931	.273*	.922
6.	.623	.931	.565	.916
7.	.836	.927	.571	.915
8.	.722	.929	.575	.916
9.	.741	.929	.589	.915
10.	.698	.930	.680	.913
11.	.711	.930	.865	.908
12.	.649	.931	.730	.912
13.	.555	.932	.655	.914
14.	.680	.930	.589	.915
15.	.729	.929	.475	.917
16.	.773	.929	.764	.912
17.	.520	.933	.524	.916
18.	.212*	.938	.293*	.922
19.	.420	.935	.832	.909
20.	.588	.932	.661	.913

Note.*where item-total correlation is less than <0.30