CHILDHOOD ABUSE AND ADVERSE EXPERIENCE IN ADOLESCENTS WHO HARM OTHERS

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Abstract

This thesis explores the effects of adverse childhood experience, including childhood abuse and neglect, on adolescents. More specifically, it explores these effects in relation to offending behaviour. A literature review considered research investigating differences between sexual and non-sexual offenders. More consistent differences were identified for adolescents who sexually offend against children, as opposed to those who offend against peers / adults, when compared to other groups of offenders. Studies in this area are, however, subject to methodological limitations. Following this, an empirical research project investigates the prevalence and characteristics of adverse childhood experience in a sample of mixed sex adolescents detained in a medium secure specialist psychiatric hospital, alongside psychopathological traits. Male sexual offenders differed from violent offenders on a number of variables, including experiences of sexual abuse and a diagnosis of a Learning Disability (LD). Then, a single case study is highlighted which investigates and demonstrates the influence of adverse childhood experience and cognitive impairment on vulnerabilities and offending behaviour in an adolescent male detained in the aforementioned secure psychiatric hospital. The effectiveness of the intervention, designed to address this individual's difficulties with emotional recognition and regulation, is demonstrated by changes in psychometric assessments scores and via clinical observation of behaviour. Finally, a critique is presented of the Coping Responses Inventory – Youth Form (CRI-Y) (Moos, 1993). This is a psychometric measure designed to measure styles of coping in adolescents. It is critically evaluated to demonstrate its psychometric properties, and its validity for clinical settings. This thesis emphasises the importance of considering developmental experience in the onset of offending behaviour, and the importance of engineering more comprehensive, systemic, and targeted early intervention programmes for individuals deemed at risk of committing particular offences or becoming delinquent in adolescence.

Preface / Overview

This thesis aims to explore the effects of childhood abuse and adverse childhood experience in terms of their application to offending behaviour in adolescence. Sexually offensive behaviours, violence, and general delinquency are considered. A developmental approach is used to consider the effects of such experiences on the onset of offending behaviour, such as by disrupting childhood attachments and causing vulnerabilities, including poor coping styles and poor interpersonal skills.

Chapter One explores and critically examines empirical studies that have investigated childhood abuse and adverse childhood experience in adolescents who have sexually offended against others whilst comparing them to adolescents who have either not done so, but have offended in another way, or who have not offended. This review used comprehensive search strategies and stringent inclusion criteria for studies conducted between 1975 and 2012. Methodological limitations of these studies are considered. This review informed Chapter Two's empirical research project's selection of variables pertaining to adverse childhood experience, and its classification of sexual offenders according to victim (i.e. offences against children or offences against peers / adults).

Chapter Two is an empirical research project that explores adverse childhood experience in a sample of inpatient adolescents who are detained in a specialist medium secure psychiatric hospital. A retrospective systematic file review of patient records was conducted to establish the presence of variables of interest. 45 adolescents (32 male and 13 female) consented to take part. Data were used to establish whether a relationship existed between adverse childhood experience and type of offences committed. Psychopathological traits upon detention in hospital were also observed amongst groups of offenders. A number of differences are identified between groups. Methodological limitations and

avenues for future research are discussed. Furthermore, clinical implications are also highlighted.

Chapter Three explores, in a single case study format, the assessment, formulation, and intervention for an adolescent male characterised by adverse childhood experience and cognitive impairment. This individual is detained in the same specialist secure hospital described above. A psychological formulation and discussion clearly highlights the influence of these factors on the onset and continuation of offending behaviour, as theorised in Chapter Two. The intervention used cognitive-behavioural affective education, simplified and collaborative functional analyses, self-monitoring of emotions, and the encouragement of adaptive coping skills to address risk-related difficulties.

Chapter Four provides a critique of the Coping Responses Inventory – Youth Form (CRI-Y) (Moos, 1993). This measure is critically evaluated in terms of its development, its psychometric properties, and normative data. Further application and research with adolescents who have offended against others is also considered, in light of theoretical literature pertaining to the influence of poor coping on vulnerabilities theorised to be present in some adolescent offenders, such as social isolation and sexual offending, as highlighted in previous Chapters.

Finally, Chapter Five concludes this thesis. It provides an overview and discussion of the work and findings presented in previous chapters, as well as considering how they influence each other. Limitations are noted, as well as considerations for further research and implications for practice.

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INTRODUCTION

1. Adolescence

Adolescence is noted to be a period of rapid biological, social, and psychological development that occurs in preparation for adulthood (Smith, Cowie & Blades, 2003). It is also thought to be a time of risk-taking (Arnett, 1999). Many highlight the influence of childhood experiences and their influence on development, and note the implications that a childhood characterised by abuse, neglect, or other adverse experience can have on the developing adolescent (for example: Carr, 2006; HM Government, 2013; Glaser, 2002; Kaplan, Pelcovitz, & Labruna, 1999; Schilling, Aseltine Jr, & Gore, 2007; Smith, Cowie & Blades, 2003). It is the exploration of these effects in relation to adolescent offending behaviour that form the basis of this thesis.

2. Childhood abuse and adverse experience

Childhood abuse and neglect, or exposure to such things, is believed to be a significant problem in today's society (Gralton, 2011; HM Government, 2013), and is perhaps a largely preventable one (van der Kolk, 2005). For the purposes of this thesis, definitions concerning abuse and neglect are taken from the UK Government's most recent 'Working Together to Safeguard Children' document (HM Government, 2013, pp. 85-86). Childhood sexual abuse, for example, involves the forcing or coercing of a child to take part in sexual activities. Physical abuse is defined as deliberately causing, or failing to prevent, physical harm. Emotional (or psychological) abuse is defined as persistent emotional maltreatment of a child which causes severe and persistent adverse effects on the child's emotional development. Neglect involves persistently not meeting the basic needs of the child. This can be either in a physical manner (i.e. not providing adequate food, clothing, and shelter) or an

emotional manner (i.e. not providing nurturance, or being unresponsiveness to emotional needs).

Adverse experience is defined throughout this thesis as a relatively out-of-the-ordinary event or events occurring during childhood development that can be considered to have had an adverse effect on an individual's development or psychological well-being. This can include witnessing or being exposed to salient and distressing events, such as domestic violence or pornography and sexual material at a young age. Naturally, an individual's interpretation of these events is important in terms of how they will be affected, and is expected to vary from person to person. The importance of factors that may influence interpretation, such as resilience and social support, are discussed further in forthcoming chapters. Evidence on the nature of adverse experiences was identified through a comprehensive review of the literature, and most are noted as being relatively well-known (Farrington, 2003). Experiences include factors affecting individual, familial, academic, and peer domains (see Farrington, 2003, for more details). Many of these factors reside within the familial domain, and include poor family cohesion as well as parental characteristics such as criminality, psychopathology, or substance use. Relationships with peers are also considered, such as associating with delinquent peers or experiencing social isolation. The links between adverse childhood experiences, including abuse, and negative consequences are noted and expanded on throughout this thesis, using a developmental approach.

3. Adolescent offending

Childhood abuse in all forms has potential long-term consequences for child and adolescent development, both psychologically and

behaviourally (Carr, 2006; HM Government, 2013). Experiences such as this are associated with maladaptive behaviour patterns such as male and female adolescent delinquency, aggression, and substance abuse (Kaplan, Pelcovitz & Labruna, 1999; Mersky & Reynolds, 2007; Widom, 1989). Adolescence is noted as being a time-period where offending behaviour has its widest prevalence (Farrington, 2003). Research into the development and onset of adolescent offending continues to grow and to explore different areas, however the importance of early experience, particularly adverse early experience such as childhood abuse, retains importance (Seto and Lalumière, 2010). This is explored here in more depth in Chapters One, Two, and Three.

Theories and studies of offending behaviour have long considered the influence of abuse and adverse experience in childhood. Several theories are often considered influential in the literature on this matter, including those with developmental and social learning principles. Widom (1989), for example, in a very early study on the matter identified that childhood abuse and neglect were more often present amongst adolescents who were delinquent or violent, and elaborated on the victim to offender cycle: that violence begets violence. These views on childhood victimisation and later offending (the 'victim to offender' cycle) have been echoed in other studies and reviews (e.g. Falshaw, Browne, & Hollin, 1996; Glasser et al., 2001), and the experience of being a victim of childhood sexual abuse in particular has been theorised to be a contributing factor in the commencement of sexual offending behaviour (Seto & Lalumière, 2010). Social learning principles, however, do not account for those who do not go on to commit offences or abuses of their own. Other factors are considered important. These include developmental factors such as better support and attachment to

family and peers, which may increase the resiliency of those victimised in youth (Burton, Shill & Miller, 2002).

Several influential theories of adolescent offending that incorporate developmental principles are considered briefly here, and along with further investigation into the effects of abuse and adverse experience are noted throughout the rest of this thesis. For example, the developmental model of delinquency (Patterson, DeBaryshe & Ramsey, 1990) explores how experiences such as victimisation can affect the developmental trajectory of delinquency and offending behaviour through early, middle, and late childhood. It emphasises that poor parent-child interaction and family relations, consisting of factors such as harsh discipline, go on to influence other domains of adolescent life such as poor peer relations and academic achievement. Elsewhere it is theorised that such things may be due to increased vulnerabilities such as poor social skills and poor behavioural inhibition (Marshall & Marshall, 2010; Miner et al., 2011). The model then demonstrates a progression to association with delinquent peers due to rejection by prosocial peers and academic failure, and then finally delinquency.

Furthermore, theories concerning adolescent sexual offending have also considered the importance of developmental experience, and often present similar trajectories. The work of Marshall and Barbaree (1990, as cited in Ward, Polaschek & Beech, 2005), for example, theorises that the onset of sexually offensive behaviour is as a result of a combination of early developmental experiences which are thought to lead to vulnerabilities, pubescent development in adolescence, and situational variables that decrease inhibition (e.g. a strong emotional state, or perceived rejection). These vulnerabilities are believed to affect a number of life domains, including peer relationships and individual factors such as the

management of aggression and coping style. Other theories of sexual offending, such as Ward and Beech's (2005) integrated theory, also highlight the concept of developmental experience and offence-related vulnerabilities whilst additionally considering the influence of other factors such as neurology and social environment. Whilst not developed to be applicable to an adolescent population, they provide a useful framework due to their consideration of developmental matters (Seto & Lalumière, 2010).

A large and more contemporary question within the field of adolescent offending concerns whether or not adolescents who commit sexual offences and those who do not differ from one another in terms of risk factors and intervention needs: whether they are generalists, committing a variety of offences and sharing characteristics, or whether they are specialists and engage is predominantly sexual offences. The specialist perspective of adolescent offending hypothesises that sexual offenders are subject to different characteristics and risk factors than other offenders, and therefore require different approaches concerning assessment, intervention, and risk management strategies (Pullman & Seto, 2012). Factors of both perspectives are believed to be relevant in that adolescent offenders may be similar in some ways but differ in others, perspectives are not mutually exclusive. This is explored further during this thesis.

Research in the area of adolescent offending and the effects of abuse and adverse childhood experience is of course not without its methodological limitations. These are expanded upon in Chapter One's literature review on the matter, and this thesis aims to address some of them.

4. This thesis

In summary, this thesis aims to explore the prevalence and characteristics of adverse childhood experience, including childhood abuse, in adolescents who have harmed others. This harm can be directly against the person, such as by violent offending or by sexual offending, or indirectly, such as by arson or theft. This topic has been chosen in part due to the ramifications that offending behaviour can have on the victim(s), society, and the family of the offender. Furthermore, increasing knowledge about the effects of childhood abuse, neglect, and adverse experience may lead to more comprehensive preventative measures and therapeutic treatment interventions. Most notably, increased knowledge in this area would contribute to the generalist and specialist perspectives and therefore may lead to more tailored procedures as required. As this thesis predominantly focuses on risk factors, these procedures could include earlier identification and early intervention programmes.

This thesis begins by exploring the empirical literature concerning differences and similarities regarding childhood abuse and adverse childhood experience between groups of adolescent offenders residing in a variety of settings. A systematic approach is used. When conducting scoping searches, no recent review was identified that focused extensively and specifically on the developmental aspects of adolescent sex offending, and that also compared sexual offenders with other adolescent populations. In empirical literature it can still remain relatively unclear what the importance of childhood experience is in the development of sexually offensive behaviours in adolescence, and how these experiences differ from other adolescents. Increased knowledge in terms of risk factors is vital. Previous literature reviews have also lacked observable quality assessment procedures. These are conducted here as it is also

important to consider the quality and methodology of studies conducted in this area.

The thesis then goes on to consider experiences, subsequent difficulties, and offending behaviour within a specific population of male and female high-risk adolescents. An empirical research project, presented in Chapter Two, and a single case study, presented in Chapter Three, investigate childhood experiences within an inpatient population who are detained in a medium security specialist psychiatric hospital. This is a high-risk population whose needs cannot be met within mainstream health services. This empirical project is unique in that this population is rarely researched, particularly within the United Kingdom. Furthermore, it presents an extensive focus on childhood development and considers psychopathology. Although much of the research on adolescent offending, particularly sexual offending, has focused on male adolescents this project choses to explore variables in a female sample as well. It is hoped that learning more about the presentation, difficulties, and developmental factors within these populations would also contribute to early intervention procedures, and if possible reduce risk to the point where secure services may not be needed. Additionally, methodological limitations noted through Chapter One's literature review are considered and addressed here. Notably, participants who have committed sexual offences are further separated into those who have committed crimes against children, and those who have committed crimes against peers or adults. Etiological pathways for offending are considered using a developmental approach. This is further expanded upon in Chapter Three's single case study.

This thesis then explores and critically evaluates the Coping Responses Inventory – Youth Form (CRI-Y) (Moos, 1993), an

assessment that is available to measure one of the theorised consequences of adverse experience: poor coping skills and maladaptive coping styles. This assessment is used within the aforementioned specialist secure hospital with some individuals, and is used as part of the assessment procedure in Chapter Three's case study. The psychometric properties and utility of this assessment are considered. It is believed to be the first time that it has been evaluated in such a way within the service.

An overview and discussion of this thesis is then presented, which considers the work and findings presented in previous chapters, as well as considering how they influence each other. Limitations are noted, as well as considerations for further research and implications for practice.

CHAPTER ONE

CHILDHOOD ABUSE AND ADVERSE CHILDHOOD EXPERIENCE IN ADOLESCENTS WHO SEXUALLY OFFEND AGAINT OTHERS COMPARED TO THOSE WHO DO NOT: A LITERATURE REVIEW FOLLOWING A SYSTEMATIC APPROACH

Abstract

A systematic approach was used to investigate childhood abuse and other adverse experiences in adolescent sexual offenders compared to adolescent non-sexual offenders or non-offenders. Four electronic databases and reference lists of relevant previous meta-analyses and reviews were searched. Relevant authors in the field were contacted for additional information. The studies identified were subject to inclusion and exclusion criteria. The quality of included studies was assessed using pre-defined criteria. Searches yielded fourteen thousand seven hundred and thirty eight hits. Of these, Fourteen thousand one hundred and ninety six irrelevant hits and three hundred and seventeen relevant duplicates were excluded. One hundred and eighty eight references that did not meet the inclusion criteria and thirteen inaccessible indexed theses were then excluded, leaving twenty four publications containing twenty three studies to be reviewed. The findings are mixed, and suggest correlation rather than causation. The twenty three included studies suggest that differences exist between adolescent sexual offenders and non-sexual offenders on experiences of sexual abuse and, indirectly, attachment style. Differences are also observed in family relationships and substance use or criminality. Differences are more consistently found for adolescents who sexually offend against children, as opposed to those who offend against peers or adults, when compared to other groups of offenders. However, these findings should be interpreted in light of methodological differences between studies, and the relatively small number of studies. Recommendations for future research are discussed.

1. Introduction

1.1. Background

The literature on adult sexual offenders highlights the importance of developmental experience and disrupted childhood attachment in relation to the commission of an offence (for example, Smallbone & Dadds, 1998). Whilst much of the literature has focused on adult sex offenders (Pullman & Seto, 2012), the commission of sexual offences by adolescents is becoming a dynamic aspect of research. The integrated theories of Marshall and Barbaree (1990, as cited in Ward, Polaschek & Beech, 2005) and Ward and Beech (2005) have introduced a focus on the developmental importance of early childhood experiences and childhood attachment. Marshall and Barbaree (1990, as cited in Ward, Polaschek & Beech, 2005) in particular hypothesise that sexually offensive behaviours develop as a result of a combination of early developmental experiences, leading to psychological vulnerabilities, and pubescent development in adolescence. In particular, poor attachment and a childhood characterised by abuse or other adverse experiences are thought to increase these vulnerabilities and the risk of the occurrence of sexually offensive behaviour, when combined with situational variables that decrease inhibition (Marshall & Barbaree, 1990, as cited in Ward, Polaschek & Beech, 2005; Marshall & Marshall, 2000).

1.2. Childhood Abuse

Out of all forms of childhood abuse, sexual abuse, involving the forcing or coercing of a child to take part in sexual activities, receives great attention in the literature on the development of sexually abusive behaviours. Seto and Lalumière (2010), in their

recent meta-analysis, found that 31 of the 59 total included studies explored it as a factor. Sexual abuse in childhood is a widely discussed factor in the development of both adolescent and adult sexual offending, with the hypothesis being that those who have experienced a history of abuse are more likely to engage in sexually abusive behaviours of their own in later life. Although this has received support in the literature (for example: Burton, Miller & Shill, 2002; Miner et al., 2011; Seto and Lalumière, 2010; Zakireh, Ronis & Knight, 2008), it is naturally important to consider that these data may only be relevant to those who have been discovered and convicted of sexual offences. As with most research within forensic populations, the possibility that offending individuals who remain undetected by the authorities differ in characteristics from those who are discovered should be considered.

Research findings when comparing groups of adolescent offenders on other forms of abuse and maltreatment show some similarities and some differences between groups, and have methodological issues such as small sample sizes (Jonson-Reid & Way, 2001). Physical abuse, defined as deliberately causing or failing to prevent physical harm, is often associated with externalising behaviour patterns such as adolescent delinquency, aggression, substance abuse and perpetration of physically abuse behaviour (Carr, 2006; Kaplan, Pelcovitz & Labruna, 1999). Emotional (psychological) abuse, defined as 'persistent emotional maltreatment of a child such as to cause severe and persistent adverse effects on the child's emotional development' (HM Government, 2013, p. 85), has potential long-term consequences for child and adolescent development, both psychologically and behaviourally. Neglect involves persistently not meeting the basic needs of the child, either in a physical manner (i.e. not providing adequate food, clothing, and shelter) or an emotional manner (i.e. not providing nurturance,

unresponsiveness to emotional needs) (HM Government, 2013, p. 86). Consequences of emotional abuse and neglect can include non-organic failure to thrive, low self-esteem, attachment disorders in childhood, and social impairment and social isolation due to longer-term difficulties in making peer and later intimate relationships (Carr, 2006; Kaplan, Pelcovitz & Labruna, 1999; Riggs, 2010).

1.3. Adverse Childhood Experience

A preliminary search of the literature echoed life domains identified in Farrington (2003) and Wanklyn et al. (2012), and in addition revealed that most adverse experiences, excluding experiences of abuse, relate to the family environment. Research on the family structure of adolescent sex offenders has thus far provided a variety of results, some showing differences between groups. Poor family cohesion has been found to be more associated with higher risk groups of adolescent sexual abusers (Smith et al., 2005), and sexual offenders who have also committed other non-sex crimes (e.g. violent crimes) (Butler & Seto, 2002; Wanklyn et al., 2012). Some, however, find that adolescents who sexually abuse others report higher family cohesion (Blaske et al., 1989) and lower levels of exposure to family dysfunction, such as parental criminality and socially deviant role models (Oliver, Hall & Neuhaus, 1993). Other studies note that other groups of adolescents have similar backgrounds, concluding that a dysfunctional family cannot be considered to be specific to adolescent sex offending and that other factors must be influential (van Wijk et al., 2007; Tidefors, Goulding & Arvidsson, 2011).

Exposure to or witnessing distressing and salient events, such as domestic or sexual violence within the family home or in the community, may increase the likelihood of the commission of similar

offences in the future (Awad & Saunders, 1991; Ford & Linney, 1995; Ward, Polaschek & Beech, 2005). Spaccarelli et al. (1997) note that a combined group of adolescent sex offenders reported greater exposure to domestic violence involving weapons, and also reported attitudes more accepting of sexual and physical aggression than a control group of non-violent and non-sexually violent adolescents. It has been previously hypothesised that many adolescent sex offenders begin to learn about and be exposed to sex at a young age (Longo, 1982). It is possible that early exposure to pornographic material may function as an exacerbating factor in the development of sexually abusive behaviours, particularly when the pornography involving children (Zakireh, Ronis & Knight, 2008), however this is disputed by some (Burton, Leibowitz & Howard, 2010).

1.4. A Developmental Approach

When considering the consequences that childhood abuse and maltreatment of all kinds may incur for the child victim in terms of their own potential future abusive behaviour, there are several theoretical models that are influential. One theoretical explanation, based in social learning theory principles, suggests that abusive adolescents may repeat what has been done to them or what they have observed via the process of modelling. This has received some support in the literature for sexual abuse in particular, when links between characteristics of victimisation and perpetration are explored (Burton, 2000; Burton, Shill & Miller, 2002). However, social learning theory principles do not explain why adolescents who have not experienced childhood sexual abuse, or witnessed sexual violence, go on to commit abuses of their own. It may be that they have experienced other adverse events that have led them on this developmental pathway. Similarly, not all victims of abuse or

adverse experience go on to become perpetrators of violent or sexually violent actions. It may be that these individuals have other factors that increase their resiliency, including developmental factors such as better support and attachment to their families (Burton, Shill & Miller, 2002).

Bowlby (1969) argued that attachment is a genetically predisposed relationship formed between an infant and its primary caregiver(s) in order to maximise chances of survival, and also to aid normal emotional and social development. It is thought to be evident across the entire lifespan, with initial childhood attachment behaviours being closely linked with later social interactions and intimate sexual relationships via internal working models that represent previous experiences and expectations of future important relationships (Bowlby, 1969, 1973, 1980). It is also thought to be related to psychological, social, cognitive, and behavioural factors of development (Ainsworth et al., 1978; Shapiro & Levendosky, 1999). Abuse and neglect are believed to have a negative influence on the types of attachments formed in infancy and childhood (Glaser, 2002), and all forms of insecure attachment are commonly found in children who have experienced abuse or neglect (Rosenstein & Horowitz, 1996). Problems with attachment have also been hypothesised in the literature as being a risk factor for the development of sexually offensive behaviours (Marshall & Barbaree, 1990, as cited in Ward, Polaschek & Beech, 2005). Whilst noted in the literature as a possible risk factor for perpetration of sexually abusive behaviours, poor attachment can also function as a vulnerability factor for other events, such as childhood sexual abuse (Hawkes, 2009; Marshall & Marshall, 2000; Smallbone & McCabe, 2003) and further adverse events in adolescence and adulthood. It is possible that such things are circular.

The concept of resiliency is linked to the ability to adapt positively to adverse experiences (Collishaw et al., 2007). Resiliency is a general term that is likely to be specific to each individual, and encompasses a number of contributing protective factors. For example, securely attached children have been shown to have higher resiliency (Urban et al., 1991). The importance of family background and parenting style has been highlighted, with safe, sensitive and reciprocal caring environments contributing to an ability to adapt (Collishaw et al., 2007; Marshall & Marshall, 2000; Romans et al., 1995). Highly vulnerable youth with sexually inappropriate behaviours have been shown to still be positively affected by the presence of positive family relationships or a supportive child welfare agency (Leon et al., 2008). Resiliency is also in part dependent on previous good experiences and their influence on self-esteem (Glaser, 2002). The higher an individual's resilience is, the better they will be able to adapt to and cope physically and psychologically with adverse events, and an insecure attachment is thought to negatively affect this (Marshall & Marshall, 2000). An insecure attachment can also affect the development of emotional regulation and recognition. Emotional responsiveness to the child's emotional signals is thought to be critical in how the child learns to organise and regulate emotional experiences (Brown & Wright, 2001; Hudson & Ward, 1997), and comforting negative states and sharing or enhancing positive states can help children to become aware of their internal emotional states (Riggs, 2010). In situations where a secure attachment is not formed, emotional regulation and personal autonomy may therefore prove to be problematic. Individuals may struggle to identify their emotions and become confused when in emotionally charged situations (Brown & Wright, 2001; Hawkes, 2009; Ward & Beech, 2006).

Interpersonal functioning and the ability to form relationships with others can also be affected (Marshall & Marshall, 2010). Securely attached children often show better social adjustment and competency in forming friendships (Urban et al., 1991), and are more likely to develop internal working models where they develop a positive view of relationships: viewing others as supportive and helpful, and to view themselves as worthy of this (Jacobson & Hoffman, 1997; Marshall & Marshall, 2010; Riggs, 2010; Ward et al., 1995). Via an insecure attachment, the development of a skewed internal working model of self and of relationships can encourage an avoidant or anxious-ambivalent interpersonal style, and an expectation of personal rejection (Miner et al., 2011) and poor coping skills, such as avoidant coping strategies (Crittenden, 1992; Shapiro & Levendosky, 1999). It can encourage the development of negative self-evaluative beliefs and negative evaluative beliefs of others as the individual feels that they are unworthy of love or respect (Carr, 2006; Riggs, 2010; Ward et al., 1995; Ward, Polaschek & Beech, 2005). These factors can result in social isolation and further social problems, which have been noted in sexually abusive adolescents (e.g. Miner et al., 2011). When considering relationships and the influence of the internal working model, these could take on coercive aspects (Crittenden, 1992) which can take on a sexual character, particularly after experiences of sexual victimisation (Hawkes, 2009).

Marshall and Barbaree (1990, as cited in Ward, Polaschek & Beech, 2005) hypothesise that adverse early experiences, including abuse, cause the victim to begin adolescence with a number of these deficits that make it harder to navigate the influx of hormones and stresses of adolescence. These factors, combined with the negative coping styles developed due to a lack of ability to self-soothe, have the potential to result in the commission of an offence (Marshall &

Barbaree, 1990, as cited in Ward, Polaschek & Beech, 2005; Marshall & Marshall, 2000; Ward, Polaschek & Beech, 2005).

1.5. Previous Reviews and Meta-analyses

Meta-analyses and literature reviews from the past decade were searched for and identified (please see Figure One for the search and study selection process). Preliminary searches identified 2 relevant reviews (van Wijk et al., 2006; Driemeyer, Yoon & Briken, 2011) and 1 relevant meta-analysis (Seto & Lalumière, 2010) that encompassed the variables of interest to the present review.

Van Wijk et al. (2006), a review of the literature on adolescent sex offenders from 1995-2005, explored the similarities and differences between adolescent sex offenders and non-offenders with respect to individual, familial and environmental characteristics. Whilst having clear and concise inclusion and exclusion criteria, they only examined published studies retrieved from two electronic databases. No quality assessment procedures were reported. Van Wijk et al. (2006) concluded that findings on the family backgrounds of adolescent sex offenders and non-sex offenders were mixed: initially there appear to be more similarities than differences however a wide range of variables included meant that systematic comparison was difficult. No studies investigating attachment were identified. Sexual abuse was found to be more common in groups of adolescent sex offenders.

A comprehensive meta-analysis by Seto and Lalumière (2010) has examined and reviewed the literature from 1975-2008 comparing adolescent sex offenders with non-sex offenders, focusing on the similarities between adolescent sex offending and "general delinquency" and on more specific explanations, such as sexual

abuse history and atypical sexual experiences. As this analysis only includes studies published or unpublished before 2008, it is worth investigating the extent to which the body of literature has developed since that time. This meta-analysis does have strict inclusion and exclusion criteria, however did not report any quality assessment procedures. It identified no studies using attachment as a variable. A higher prevalence of sexual abuse, physical abuse and emotional abuse was found adolescent sex offenders.

Driemeyer, Yoon and Briken (2011) addressed in a narrative review six main factors that have been the focus of much of the literature about adolescent sexual offenders, including aggressiveness and psychopathology, sexuality, and historical experiences of victimisation. Their review also explored limitations of current studies, and the importance of considering different study designs and the nature of populations that samples are taken from. The authors highlight the importance of studies containing data from non-delinquent adolescents, to determine the specificity of characteristics thought to be linked to adolescent sex offenders. The authors found that comparison studies exploring sexual victimisation provided inconsistent results, with some supporting and some not supporting differences between groups. This review, however, does not specify how studies were found nor what the search strategy was. It also includes studies both with and without a comparison group of non-sex offenders or controls, so it is difficult to infer differences and prevalence between different kinds of offenders.

No more recent review has been identified that focuses extensively and specifically on the developmental aspects of adolescent sex offending, comparing offenders with other adolescent populations. It still remains relatively unclear what the importance of childhood experience is in the development of sexually offensive behaviours in

adolescence, in terms of risk factors, and how these experiences differ from other adolescents. It is also important to consider the quality and methodology of studies conducted in this area, as previous work has lacked observable quality assessment procedures.

1.6. Aims & Objectives of This Review

This review's objectives were:

- To determine if adolescents who display sexually harmful or offensive behaviours differ from those who do not in terms of their experiences of previous abuse (including sexual, physical, and emotional abuse, and neglect).
- To determine if adolescents who display sexually harmful or offensive behaviours differ from those who do not in terms of adverse childhood experiences (for example, poor family relationships and environment, parental substance abuse, or witnessing domestic violence).
- To consider how these similarities or differences may contribute towards a developmental and attachment focused etiological approach to understanding adolescent sexually harmful or offensive behaviours.

'Adverse childhood experience' is defined here as an event occurring during the development of the adolescent that can be considered to have had an adverse effect on their development or psychological well-being. Adverse experiences of interest have been identified through initial scoping searches, and through reviewing the literature returned. The term 'adolescent' is used throughout this review, encompassing individuals aged 12 to 20 years. Following initial scoping searches, the decision was made to exclude studies

with female participants. The majority of sexual offences are committed by males, and there were too few studies with female participants that examined variables of interest to include in this review.

2. Methods

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (Moeher et al., 2009) guidelines were followed.

2.1. Sources of Literature

a) Searches of electronic databases and gateways were completed in December 2012 and January 2013:

- ProQuest: MEDLINE (1975 – January 2013)
- Ovid: MEDLINE (1975 –January 2013)
- Ovid: PsycINFO (1975 –January 2013)
- Web of Knowledge / Web of Science ((Science Citation Index Expanded (SCI-EXPANDED); Social Sciences Citation Index (SSCI); Arts and Humanities Citation Index (A&HCI); Conference Proceedings Citation Index — Science (CPCI-S); Conference Proceedings Citation Index — Social Science and Humanities (CPCI-SSH))) (1975 – January 2013)

b) In August 2012 the resources and conference abstracts of the Association for the Treatment of Sexual Abusers (ATSA) (http://www.atsa.com/) and the International Association for Treatment of Sexual Offenders (IATSO) (http://www.iatso.org/) were searched. The IATSO e-journal, Sex Offender Treatment (SOT) (http://www.sexual-offender-

treatment.org/), was also investigated. ATSA conference abstracts from 2011 and 2012 were able to be investigated; however abstracts presented before then were not able to be accessed. Also on this date, research reports of the National Society for the Prevention of Cruelty to Children (NSPCC) from 2008 – 2012 were searched and those with relevant titles read fully.

c) Reference lists of other recently conducted reviews and meta-analyses on adolescent sex offenders were hand searched.

d) Relevant authors were contacted between the 18th and 24th August 2012. They were asked if they had or knew of any published or unpublished studies covering comparisons between adolescent sexual abusers / offenders and adolescent non-abusers / offenders that may be useful to consider for inclusion in this present review. Nine authors and experts responded.

2.2. Search Strategy

A variety of search terms were used to maximise the search sensitivity. Similar search terms were applied to all databases. A variety of combinations of terms were used. The following provides a rough guide, for full details of search terms and syntax used please see Appendix One:

(adolescen$ / juvenile / young people)
AND (child$ abuse / sex abuse / physical abuse / emotion$ abuse / neglect) (trauma / violence / attachment / family / parent$ substance / parent$ crime / parent$ mental) AND
(sex offend$ / sex$ harm / rape / sex$assault)

2.3. Study Selection

Studies were screened with pre-defined inclusion and exclusion criteria (please see Table One) and those that met these inclusion criteria were selected for further quality assessment.

Studies that were published or indexed (in the case of dissertations and theses), from 1975 to 2012 were selected. Studies conducted before 1975 were excluded from this review as definitions of what constitutes sexually offensive behaviour and sexual deviance differ substantially from contemporary views and legislation. For example, homosexuality or promiscuity was often perceived as a form of sexual deviance or delinquency in official legislation, and in studies conducted at that time (Seto & Lalumière, 2010).

2.4. Quality Assessment

Quality assessment was completed with pre-defined criteria, which were based on the Critical Appraisal Skills Programme (CASP, 2010) checklists for case-control and cohort studies. These forms were then modified for cross-sectional studies. Please see Appendix Two for checklist templates.

2.5. Data Extraction

Data extraction was conducted on included studies using a pre-defined pro-forma, prior to data synthesis. Please see Appendix Three.

Table One: *Definitions of inclusion and exclusion Criteria (PECO)*

	Inclusion	**Exclusion**
Population	Male adolescents aged 12-19	a) Children (aged 0 – 11) b) Adults (over the age of 20) c) Females
Exposure	a) Childhood / early abuse b) Early adverse experience	Studies with no records of childhood abuse, early adverse experiences
Comparator	a) No noted abuse b) No noted early adverse experience c) Different forms of childhood abuse d) Different forms of early adverse experience	
Outcomes	Sexually abusive behaviour (as recorded via official police records, conviction records or self-report)	
Study Design	Cohort, Case-control, Cross-sectional	Reviews, Opinion papers, Case series
Date of publication	1975 – present day	Studies published or conducted before 1975

3. Results

3.1. Description of studies

The full search yielded 14, 738 results, 14, 653 of which were collected from electronic databases and 85 of which were collected from the reference lists of key articles and reviews, alongside attempted personal communication with 26 experts in the field of adolescent sex offending. 14, 196 irrelevant results and a further 317 relevant duplicates were excluded. 188 studies were excluded for not meeting the inclusion criteria. 1 relevant publication was included, and 13 duplicate and one irrelevant publication were excluded following personal communication with authors and experts. 13 indexed theses were excluded for not having enough information available in the required timeframe to accurately judge whether or not inclusion was appropriate. The remaining 24 publications, containing 23 studies, were chosen for inclusion in this review. Please see Figure One for details of the search and study selection process.

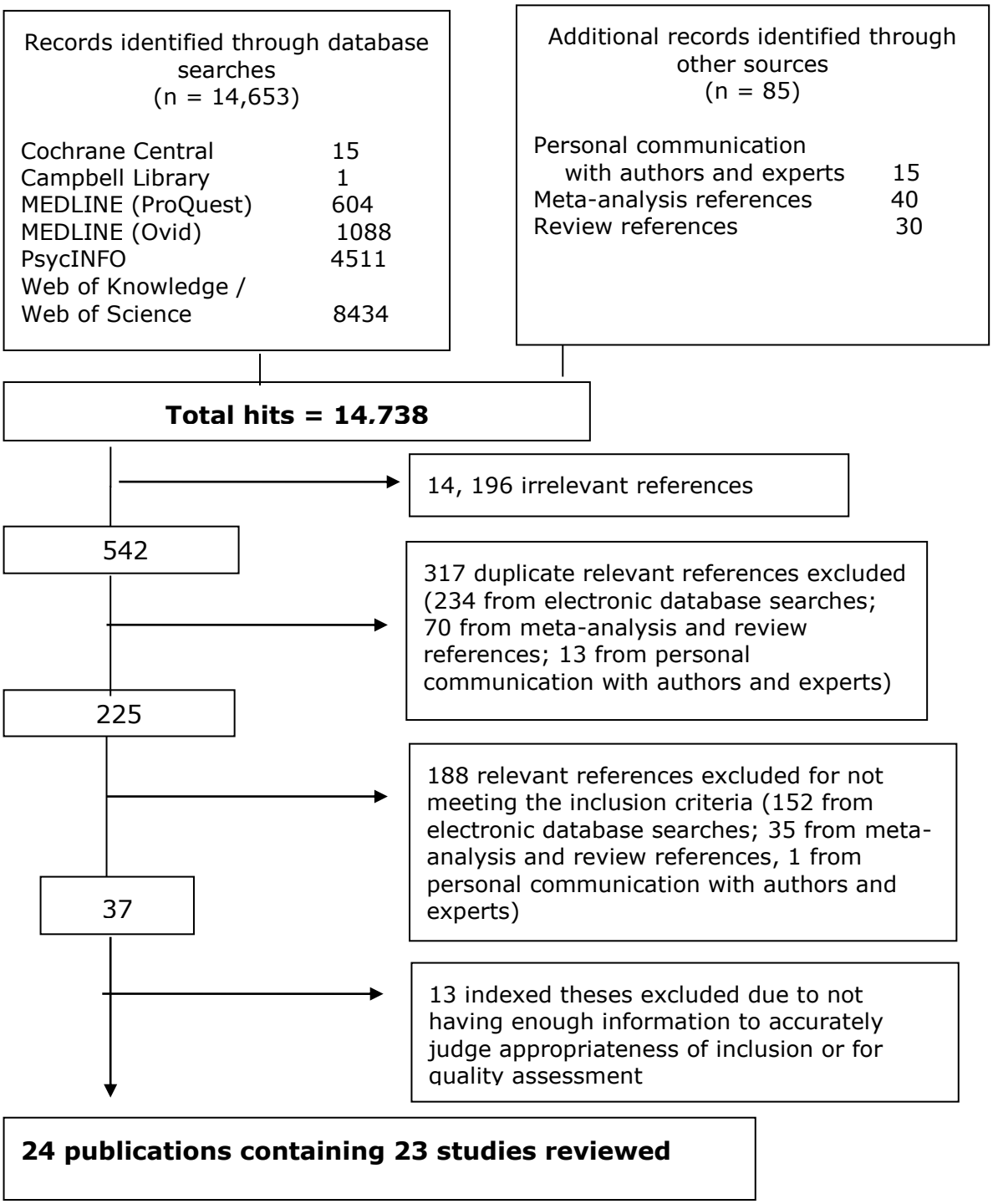


Figure One: *The search and study selection process*.

3.2. Characteristics of included studies

The total number of adolescent sex offenders across the included studies is 2013. The average sample size of adolescent sex offenders for all the included studies is 88 (*SD* = 82.24) and the number of participants ranged from 15 to 304. Eight studies separated their adolescent sex offender participants into groups according to their offence characteristics. Five studies included a group of adolescent sex offenders who offended against children, and a group that offended against peers or adults (Awad & Saunders, 1991; Ford & Linney, 1995; Miner et al., 2010; Miner et al., 2011; Netland & Miner, 2011). Netland and Miner (2011) also included a group of 'cross-over' offenders that have victims from both groups. Two studies (Butler & Seto, 2002; Wanklyn et al., 2012) included one group of adolescent pure sex offenders, and one group of 'sex-plus' offenders, who had committed both sexual offences and non-sexual offences. One study (Spaccarelli et al., 1997) included one group of adolescent offenders who had been adjudicated for one or more sex offences, and one group of adolescent offenders who had self-reported committing a sex offence. Burton, Miller and Shill (2002) and Zakireh, Ronis and Knight (2008) note that no significant differences were found between sex offenders who had committed different types of sexual offences, and therefore their samples were not differentiated in this way, however these calculations and distinctions were not made in the other 13 studies that did not differentiate between their samples of sex offenders.

The total number of adolescents included in comparison groups (i.e. non-sex offenders or non-offenders) in this review is 8234. The average sample size for comparison groups is much larger than the

average for groups of adolescent sex offenders (*M* = 358, *SD* = 1158.17), and ranged from 32 to 5778. Two studies utilised a group of non-offending adolescents as a comparison: Miner et al. (2011) used adolescents who were in treatment for substance misuse or mental health problems; and Blaske et al. (1989) used non-offending community adolescents in addition to comparison groups of violent and non-violent offenders. The remaining 21 studies used comparison groups of different offenders.

Some studies recovered from searches reported on overlapping data sets. Awad & Saunders (1991) was selected for inclusion over Awad, Saunders and Levene (1984) as the former included a larger sample of participants. Lewis et al. (1979) and Rubinstein et al. (1993) are both selected for inclusion in this review. Both of these studies used the same sample of adolescent offenders, however reported on different variables of interest for this review. Therefore they are combined as one study for the purposes of data synthesis and quality assessment. Fleming, Jory and Burton (2002) and Burton, Miller and Shill (2002) shared overlapping datasets. The former was chosen as it reported on more variables relevant to this review and had more equal sample sizes of sex and non-sex offenders, however received a much lower quality assessment score (22/54, with 7 'unclear' items) than the latter study (34/54, with 6 'unclear' items).

3.3. Quality of included studies

All studies used a cross-sectional design. It can be conducted with relative ease however it can only measure correlations rather than causal relationships. Although Lewis (1979) and Rubinstein (1993) (using the same sample and combined here as one study) employed a longitudinal design to investigate adult criminality, variables of interest to this review were only measured at the follow-up stage of

the study. All studies had a clearly focused and valid research question. The majority (21/23) of studies defined exposure clearly (i.e. the kind of childhood abuse or adverse childhood experience being measured) and described clearly how exposure was being measured. Two studies (Baker et al., 2003; Fagan & Wexler, 1988) reported on some variables which were not clearly defined ("suspected abuse" and "sibling abuse" respectively), and were therefore only included in data synthesis where variables were clearly defined and reported on. This is an area that quality could be improved in for future studies. The collection of data by researchers or assistants who were blind to study hypotheses and the group membership of participants was rare, and was only evidenced in three studies (Baker et al., 2003; Benoit & Kennedy, 1992; Miner et al., 2010). Information on demographic variables of groups, and their similarities or differences at baseline (point of entry into the study) was not always present. Only two studies (Burton, 2008; van Wijk et al., 2007) provided data that explored differences between study participants and non-participants. Methods of data collection varied across studies. Frequently self-report measures were not validated by file review, or vice versa (16/23 studies). However, 7 out of 23 studies used both self-report measures and file review to collect data (Fagan & Wexler, 1988; Ford & Linney, 1995; Lewis et al., 1979 and Rubinstein et al., 1993; Miner et al., 2011; Oliver, Hall & Neuhaus, 1993; Spaccerelli et al., 1997; van Wijk et al., 2007). The majority of studies (17/23) used a small number of sexually offending participants ($n \leq 100$), and small samples of non-sexually offending participants ($n \leq 100$) (12/23 studies). Other issues included the way in which authors recorded and dealt with possible missing information, attrition rates, and whether or not the influence of any confounding variables was taken into account when collecting data.

3.4. Descriptive data synthesis

There are 15 studies examining the prevalence and characteristics of childhood abuse and 17 examining adverse childhood experience. Only two studies exploring attachment style as a variable were found. These studies are also discussed below.

3.4.1. Childhood Abuse (15 studies)

Sexual abuse (15 studies)

11 studies demonstrated that sexual abuse and victimisation was significantly more frequently found in samples of adolescent sex offenders when compared to non-sex offenders (Awad & Saunders, 1991; Burton, 2008; Fagan & Wexler, 1988; Fleming, Jory & Burton, 2002; Ford & Linney, 1995; Lewis et al., 1979 and Rubinstein et al., 1993; Milloy, 1994; Miner et al., 2011; Truscott, 1993; van Wijk et al., 2007; Wanklyn et al., 2012; Zakireh, Ronis & Knight, 2008). Three studies provided non-supportive findings, and found no significant differences between groups with regards to prevalence or frequency of abuse (Benoit & Kennedy, 1992; Jonson-Reid & Way, 2001; Spaccarelli et al., 1997), which is perhaps surprising given the large sample size of Jonson-Reid and Way (2001). The combined studies of Lewis et al. (1979) and Rubinstein et al. (1993) noted that a history of sexual abuse was more frequently found in adolescent sex offenders, however they do not note if these differences were significant. Two studies (Awad & Saunders 1991; Ford & Linney, 1995) demonstrated that sexual abuse was more prevalent amongst adolescent child molesters, rather than adolescents who offended sexually against peers or adults.

Physical abuse (11 studies)

Four out of the 11 studies reported a higher prevalence of physical abuse amongst adolescent sex offenders compared to other groups (Awad & Saunders, 1991; Fleming, Jory & Burton, 2002; Spaccarelli et al., 1997; Wanklyn et al., 2012). The remaining seven studies (Benoit & Kennedy, 1992; Burton, 2008; Jonson-Reid & Way, 2001; Lewis et al., 1979 and Rubinstein et al., 1993; Miner et al., 2011; Truscott, 1993; Zakireh, Ronis & Knight, 2008) found no significant differences between adolescent sex offenders and non-sex offenders in terms of the prevalence of physical abuse.

Emotional (or psychological) abuse (5 studies)

Two supportive studies (Fleming, Jory & Burton, 2002; Wanklyn et al., 2012) found emotional abuse to be significantly associated with adolescent sex offender group membership. The remaining three studies found no significant differences between groups.

Neglect (5 studies)

Four studies provided support for differences between groups (Burton, 2008; Jonson-Reid & Way, 2001; Fleming, Jory & Burton, 2002; Miner et al., 2011). Two studies note that group of adolescent sex offenders were more frequently victims of neglect when compared to non-sex offenders (Fleming, Jory & Burton, 2002) those with mental health or substance use problems (Miner et al., 2011). Jonson-Reid and Way (2001) note that adolescents who were initially reported as victims of neglect with at least another 2 maltreatment reports were significantly more likely to belong to the adolescent sex offender group. Burton (2008) found significantly lower levels of physical neglect in adolescent sex offenders when compared to non-sex offending delinquents, which was noted was an unexpected result. Wanklyn et al. (2012) did not find significant differences between groups in experiences of neglect.

Please see Table Two for the characteristics and the findings of these studies.

3.4.2. Adverse Childhood Experience (17 studies)

All of these studies explored factors associated with family and family experiences, however some (5/17) explored also factors associated with exposure to pornography or violence.

Exposure to pornography (3 studies)

Findings on this factor are varied. Ford and Linney (1995) note that adolescent sex offenders differed in the age of their first exposure to pornographic magazines, with child molesters reporting more frequent exposure at an earlier age. Zakireh, Ronis and Knight (2008), on the other hand, note that adolescent sex offenders (both residential and outpatient) did not significantly differ from non-sex offenders (both residential and outpatient) in early exposure to pornography. However, residential sex offenders did differ significantly from residential non-sex offenders in their exposure to pornography with adult male and child content. Burton, Leibowitz and Howard (2010) note that adolescent sex offenders reported more frequent exposure to or use of pornography before the age of 10 and after the age of 10. However, they do not discriminate between 'exposure' to pornography (i.e. being shown pornography by someone else) and intentional use, meaning that differences may have been missed. Zakireh, Ronis and Knight (2008) also note that residential sex offenders differed from outpatient sex offenders in their early exposure to pornography by family members, which they suggest implies an impact on the severity of crimes committed.

Familial criminality (5 studies)

Two out of the five studies supported differences in this factor. Paternal criminal history was significantly associated with adolescents who sexually offend against children, when compared to other groups of non-offending adolescents and adolescents who sexually offend against peers or adults in Miner et al. (2011), however no differences were found for maternal criminality. Wanklyn et al. (2012) found that the presence of criminal family members significantly associated with group membership in their study, with more violent versatile sex offenders reporting when compared to pure sex offenders and violent non-sex offenders. Three studies did not support differences in maternal or paternal criminality (Ford & Linney, 1995; Netland & Miner, 2011; van Wijk et al., 2007).

Familial substance use (3 studies)

Maternal substance use was found to be significantly different between groups in two studies (Miner et al., 2011; Netland & Miner, 2011). Netland and Miner (2011) note that maternal substance use was common across all groups in their study, however cross-over sex offenders (with offences against children and against peers / adults) were significantly more likely to have a mother with substance abuse problems. Netland and Miner (2011) also found no significant differences in levels of paternal substance abuse across groups. Miner et al. (2011) note that sexually offending against children was significantly associated with parental drug abuse when compared to other groups of non-offending adolescents and adolescents who sexually offend against peers or adults. One study (van Wijk et al., 2007) found no significant differences between groups.

Familial psychopathology (3 studies)

One study (Netland & Miner, 2011) supported the notion of differences between groups and found that adolescent sex offenders were significantly more likely to have a mother with psychiatric problems. Both Awad and Saunders (1991) and van Wijk et al. (2007), however, did not support this and noted no significant differences between groups with regards to parental psychopathology. Whilst not directly referencing psychiatric problems, Blaske et al. (1989) noted that both mothers of adolescent sex offenders and the offenders themselves reported more neurotic symptoms such as ruminative-internalising symptoms than comparison groups.

Exposure to violence (3 studies)

Ford and Linney (1995) note differences across groups in the witnessing of parental violence in the home and total family violence, with child molesters consistently reporting witnessing more family violence than rapists and non-sex offenders. Two studies (Caputo, Frick & Brodsky, 1999; Lewis et al., 1979 and Rubinstein et al., 1993) did not support the view that there are significant differences between adolescent sex offenders and non-sex offenders with regards to witnessing familial domestic violence. Caputo, Frick and Brodsky (1999) do note almost statistically significant differences across groups in the witnessing of severe domestic violence. They also note that when the groups of adolescent sex offenders and violent offenders were combined into one group of contact offenders, and compared to the group of non-contact offenders, the difference in the rate of severe violence witnessed between groups was statistically significant. The authors suggest that this implies similarities between sexual and violent offenders, however combined these two types of offender into one

group without conducting further analyses to judge group homogeneity.

Relationships and family cohesion (6 studies)

This area is broad and encompasses a number of variables. Childhood attachment is not explored here. One study (van Wijk et al., 2007) notes no significant differences between sex offenders and non-sex offenders on parental characteristics such as marital conflicts. Five studies supported the notion of differences between groups. Baker et al. (2003) reported that the families of adolescent sex offenders have more family myths, more family lies, and exhibit more taboo behaviour than the families of their conduct disordered comparison group. Familial relationship problems are also noted by Fleming, Jory and Burton (2002) and Wanklyn et al. (2012) to be significantly associated with group membership, with higher levels of sex offenders evidencing problems than non-sex offenders. Butler and Seto (2002) report that sex-plus offenders had higher scores on family problems and peer relation problems than pure sex offenders, however no significant differences were noted between sex offenders and non-sex offenders for family problems. Blaske et al. (1989) noted that sex offending and non-offending adolescents reported significantly higher family adaptability and higher family cohesion than violent offenders. Wanklyn et al. (2012) also reported on several other significant findings associated with family factors. They noted that there were significant differences concerning involvement with alternative care and having an adolescent mother, with versatile violent sex offenders reporting higher levels than pure sex offenders and non-sex offenders. They did not find any significant differences on domains associated with peer relationships or schooling. Blaske et al. (1989) noted that violent offenders' relationships with peers were also characterised by high levels of

aggression, whereas sex offenders' were characterised by low levels of emotional bonding.

Please see Table Three for the characteristics and findings of these studies.

3.4.3. Attachment style (2 studies)

Whilst Fleming, Jory and Burton (2002) measure "family attachment" using a standardised instrument, this does not differentiate between attachment styles and instead categorises participants as having "high" or "low" attachment. Therefore it is not considered here as fully measuring attachment style. Similar methodology was used in both included studies (Miner et al., 2010; Miner et al., 2011), consisting of structured and semi-structured interviews constructed using items from widely used schedules such as the *History of Attachments Interview: Family Relationships Section (HAI)* (Bartholomew & Horowitz, 1999). Both identified significant differences between groups of adolescent sex offenders and non-sex offenders. Attachment anxiety (linked to an anxious ambivalent style) was found to be significantly associated with adolescents who sexually offend against children, when compared to comparison groups of non-sex offending delinquents (Miner et al., 2010) and adolescents in substance use or mental health programs (Miner et al., 2011). Interestingly, this was only linked to adolescents who sexually offend against children, with both studies finding no significant differences in this style between groups of adolescents who offend against peers or adults and comparison groups of non-sex offending adolescents. Miner et al. (2011) also note that both groups of adolescent sex offenders (those with child victims, and those with peer / adult victims) did not significantly differ from each other or the comparison group of adolescents in

mental health or substance use programs on an avoidant attachment style. The significance of these attachment styles in light of contemporary etiological theories of sexual offending are discussed below.

Table Two

Characteristics of studies examining prevalence and type of abuse in adolescent sex offenders and comparison group(s) (15 studies)

Study	Participants	Comparison	Age Range / Average age	Population	Exposure	Method	Quality Score	Findings
Awad & Saunders (1991)	94 sex offenders (49 sexual assaulters, 45 child molesters)	24 delinquent adolescents	*M*=14	Referrals from a family court clinic	Sexual abuse; Physical abuse	Interviews (with parents, family, and individually with adolescent) Self-report questionnaire	22/54 (4)	Sexual assaulters and child molesters reported higher rates of physical abuse then delinquents No significant difference between sexual assaulters and delinquents with regard to history of sexual abuse, sexual abuse significantly higher amongst child molesters
Benoit & Kennedy (1992)	50 sex offenders (child molesters)	50 non-sex offenders	12 - 18	Secure training school	Sexual abuse; Physical abuse	File review	34/54 (6)	Experiences of sexual abuse and physical abuse did not differ between groups
Burton (2008)	74 sex offenders	53 non-sex offending delinquents	*M* = 17	A large residential facility	Sexual abuse; Physical abuse; Emotional abuse; Emotional neglect;	Self-report (CTQ)	38/54 (3)	More sex offenders reported being sexually abused than non-sex offenders Lower levels of physical neglect in sex offenders

					Physical neglect			
Fagan & Wexler (1988)	34 sex offenders	208 non-sex offenders	*M* = 16	Five urban juvenile courts	Sexual abuse	File review Interview	23/54 (9)	Sex offenders more frequently victims of sexual abuse, according to CPS file review and corroborated by self-report.
Fleming, Jory & Burton (2002)	161 sex offenders	196 non-sex offenders	*M* = 17	One training school, one residential treatment centre; one group home	Sexual abuse; Physical abuse; Emotional abuse; Neglect	Self-report (CTQ; SAEQ)	22/54 (7)	Sex offenders more frequently reported sexual abuse, physical abuse, emotional abuse, and emotional neglect
Ford & Linney (1995)	35 sex offenders (14 rapists, 21 child molesters)	26 violent offenders	12 - 18	Four residential / evaluation facilities	Sexual abuse	File review Interview	41/54 (3)	Child molesters were more frequently victims of sexual abuse
Jonson-Reid & Way (2001)	304 sex offenders	3,091 violent and 2,687 non-violent offenders	11 - 18	Incarcerated adolescents	Sexual abuse; Physical abuse; Neglect	File review (investigated reports of abuse or neglect prior to offending)	34/54 (6)	No significant differences between groups in reports of physical or sexual abuse. Adolescents initially reported as victims of neglect with at least another 2 maltreatment reports likely to be sex offenders.
Lewis et	19 sex	58 non-sex	*M* = 15	Secure	Sexual	File review	23/54	Sexual assaulters were

al. (1979); Rubinstein et al. (1993)	offenders	offenders		correctional school	abuse; Physical abuse	Interview	(5)	more frequently sexually abused in childhood than non-sexual assaulters (not clear if significant) Physical abuse equally prevalent across groups
Milloy (1994)	59 sex offenders	132 violent offenders, 65 non-violent offenders	*M* = 16	Serving sentences in residential rehabilitation facilities	Sexual abuse	File review	32/54 (7)	Significantly more adolescent sex offenders noted to be a victim of sexual abuse compared to non-sex offenders
Miner et al. (2011)	247 sex offenders (157 child sex offenders, 90 peer or adult sex offenders)	95 non sex offenders (mental health / substance use)	13 - 18	Sex offenders from outpatient and residential treatment programs or probation departments; non-sex offenders from outpatient and inpatient psychiatry services	Sexual abuse; Physical abuse; Emotional abuse; Neglect	Semi structured attachment interview: developed from the HAI; MIDSA; File review	39/54 (4)	Sex offenders with child victims were significantly more likely to have been victims of child sexual abuse and neglect than those with mental health or substance use problems Physical abuse and emotional abuse not significantly predictive of perpetration of sex offences against children Sex offenders against peers / adults more likely to be sexually abused and exposed to neglect than

								comparison group
Spaccarelli et al. (1997)	50 sex offenders (24 adjudicated, 26 self-report)	160 non-sex offenders (106 violent offenders, 54 non-violent offenders)	12 - 17	Assessment section of a treatment and rehabilitation unit	Sexual abuse; Physical abuse	File review Self-report measures	26/54 (10)	No significant differences between groups in experiences of sexual victimisation Combined sex offender groups experienced more physical abuse than low violence controls
Truscott (1993)	23 sex offenders	130 non-sex offenders (51 violence offenders, 79 property offenders)	12 - 18	Adolescent offender assessment unit	Sexual abuse; Physical abuse	Interview	31/54 (8)	Experiences of sexual abuse varied across groups (SOs > VOs > POs), physical abuse did not
Van Wijk et al. (2007)	30 sex offenders	368 non-sex offenders	12 - 18	Youth detention centres	Sexual abuse	File review, structured interview	41/54 (3)	More sex offenders than non-sex offenders suffered sexual abuse
Wanklyn et al. (2012)	52 sex offenders (28 Pure Sex Offenders; 24 Versatile Violent Sex Offenders)	172 violent non-sex offenders	*M* = 17	Incarcerated adolescents in open custody facilities	Sexual abuse; Physical abuse; Emotional abuse; Neglect	File review	32/54 (6)	Experiences of physical, sexual and emotional abuse significantly associated with group membership (VVSOs > PSOs > VNSOs in each case). Experiences of neglect not significantly associated with group membership
Zakireh, Ronis &	50 sex offenders (25	50 non-sex offenders (25	13 - 19	Residential and	Sexual abuse;	Self-report (EAQ, MACI)	40/54	Residential sex offenders more likely to have

Knight (2008)	residential, 25 outpatient)	residential, 25 outpatient)		outpatient treatment centers	Physical abuse; Emotional abuse	Interview	(2)	histories of sexual abuse than all of the other groups of adolescent offenders in the study

Table Three

Characteristics of studies examining adverse experience in adolescent sex offenders and comparison group(s) (17 studies)

Study	Participants	Comparison	Age Range / Average Age	Population	Exposure	Method	Quality Score	Findings
Awad & Saunders (1991)	94 sex offenders (49 sexual assaulters, 45 child molesters)	24 delinquent adolescents	*M*=14	Referrals from a family court clinic	Parental psychopathology; Parental separation / disruption; Social isolation	Interviews (with parents, family, and individually with adolescent) Self-report questionnaire	22/54 (4)	Groups comparable on parental psychopathology and separation from parents / caregivers Child molesters more socially isolated than assaulters
Baker et al. (2003)	29 sex offenders	32 conduct disordered adolescents	12 – 17 (*M* = 14 at time of admission)	Adolescents from child welfare services	Family dysfunction (Family secrecy and deception)	File review (FDM, YCM)	30/54 (7)	Families of adolescent sex offenders have more myths, more lies, and more taboo behaviour
Blaske et al. (1989)	15 male sex offenders	15 violent offenders,	13 - 17	Selected from a larger	Family dysfunction	Self-report	37/56	Both mothers of adolescent sex

		15 non-violent offenders, 15 non-offending		sample of adolescent offenders; Arrest records examined	(Adverse peer and familial relations and characteristics)	(SCL-90-R, RBPC, FACES-II)	(7)	offenders and the offenders themselves reported more neurotic symptoms such as ruminative-internalising symptoms Sex offenders and non-offending adolescents reported higher family adaptability and higher family cohesion
Burton, Leibowitz & Howard (2010)	218 sex offenders	94 non-sex offenders (mixed)	*M* = 16	Six residential facilities	Exposure to pornography	Self-report	33/54 (4)	Sex offenders reported more frequent exposure to or use of pornography before and after the age of 10
Butler & Seto (2002)	32 sex offenders (20 only sex offenders, 12 sex-plus offenders)	48 versatile offenders, 34 non-aggressive offenders	12 – 16	Referrals to court clinic for assessment	Family and peer difficulties	Self-report (YO-LSI)	31/54 (4)	Sex offenders have lower scores on peer relations problems than non-sex offenders Sex-plus offenders had higher scores on family

								problems than sex offenders
Caputo, Frick & Brodsky (1999)	23 sex offenders	17 violent offenders, 29 noncontact offenders	13 - 18	Secure detention institution	Exposure to violence (domestic violence = DV)	Self-report (CTS, SATWS, SDS)	36/54 (5)	No significant differences across groups in the witnessing of DV or severe DV When sex offender and violence offender groups combined, differences in severe violence witnessed reaches statistical significance when compared to non-contact offenders
Fleming, Jory & Burton (2002)	161 sex offenders	196 non-sex offenders	*M* = 17	One training school, one residential treatment centre; one group home	Family relations and cohesion	Self-report measures	22/54 (7)	Sex offenders report less affirming communication, more incendiary communication, less family adaptability, less positive family environments, and less family attachment
Ford &	35 sex	26 violent	12 - 18	Four	Exposure to	File review	41/54	Groups differed in

Linney (1995)	offenders (14 rapists, 21 child molesters)	offenders		residential / evaluation facilities	violence; Exposure to pornography; Family criminality	Interview	(3)	witnessing or experiencing parental violence in the home and total family violence (Child molesters > rapists) Sex offenders were frequently exposed to pornographic magazines between 5 and 8 years old, with child molesters reporting more frequent exposure No significant differences in family criminality
Lewis et al. (1979); Rubinstein et al. (1993)	19 sex offenders	58 non-sex offenders	*M* = 15	Secure correctional school	Exposure to violence	File review Interview	23/54 (5)	Witnessing of extreme violence similar across groups (sex offenders > non-sex offenders)
Miner et al. (2011)	247 sex offenders (157 child sex offenders, 90 peer or adult	95 non sex offenders (mental health / substance use)	13 - 18	Sex offenders from outpatient and residential	Parental criminality; Parental substance use	File review, interview	39/54 (4)	Sexually offending against children significantly associated with parental problem behaviours

	sex offenders)			treatment programs or probation departments; non-sex offenders from outpatient and inpatient psychiatry services				(specifically maternal drug abuse, paternal criminal history, and paternal drug abuse) Paternal criminal history significantly related to adolescents with sex offences against children when compared to adolescents who offend against peers / adults
Netland & Miner (2011)	208 sex offenders (116 child sex offenders, 56 peer / adult offenders, 36 cross-over offenders) NB: cross over offenders have offences against	125 non-sex offending delinquents	13 - 18	Remedial delinquency and sex offender programmes	Parental substance use; Parental criminality; Parental psychopatholo gy	File review	38/54 (6)	Maternal substance use common across all groups Cross-over sex offenders significantly more likely to have a mother with substance abuse problems Sex offenders more likely to have a mother with psychiatric problems No significant

	children and peers/adults							differences in levels of maternal or paternal criminality No significant differences in levels of paternal psychiatric problems or substance abuse across groups
Oliver, Hall & Neuhaus (1993)	50 sex offenders	100 non-sex offenders (50 violent offenders, 50 non-violent offenders)	*M* = 15	Court assessment clinic	Family criminality	Self-report File review	22/54 (8)	Significant differences between groups (violent offenders > sex offenders > non-violent offenders)
Spaccarelli et al. (1997)	50 sex offenders (24 adjudicated, 26 self-report)	160 non-sex offenders (106 violent offenders, 54 non-violent offenders)	12 - 17	Assessment section of a treatment and rehabilitation unit	Exposure to violence	File review Self-report measures	26/54 (10)	No significant differences between combined group of sex offenders and violent offenders on exposure to violence Combined sex offenders group experienced more exposure to domestic

								violence
van Wijk et al. (2007)	30 sex offenders	368 non-sex offenders	12 - 18	Youth detention centres	Adverse family relations and characteristics	File review, structured interview	41/54 (3)	No significant differences between sex offenders and non-sex offenders on parental characteristics (psychopatholog y, substance use, marital conflicts, criminality)
Wanklyn et al. (2012)	52 sex offenders (28 Pure Sex Offenders; 24 Versatile Violent Sex Offenders)	172 violent non-sex offenders	*M* = 17	Incarcerated adolescents in open custody facilities	**Family domain**: familial criminality, parental psychopatholo gy, poor child-rearing methods, family relationship problems, family disruption or transition, involvement in alternative care, adolescent mother (<17 years);	File review	32/54 (6)	Extra-familial sexual abuse, family criminality, family relationships, involvement with alternative care, having an adolescent mother, significantly associated with group membership (VVSOs > PSOs > VNSOs) Precocious sexual behaviour increased the

					Peer & School domain: peer rejection, antisocial peer associates, poor school behaviour			odds of belonging to the PSO group over the VNSO group Precocious sexual behaviour as a child increased the odds of belonging to the VVSO group over the VNSO group
Zakireh, Ronis & Knight (2008)	50 sex offenders (25 residential, 25 outpatient)	50 non-sex offenders (25 residential, 25 outpatient)	13 - 19	Residential and outpatient treatment centers	Early exposure to pornography	Self-report measures MASA	40/54 (2)	Residential sexual offenders differed from outpatient sexual offenders in the earliness of their exposure to pornography by family members and their use of heterosexual materials Residential sex offenders differed from residential non-sex offenders in their exposure to pornography with adult male and child content Sex offenders did

							not significantly differ from non-sex offenders in early exposure to pornography

NOTE: CTQ = Childhood Trauma Questionnaire; CTS = Conflict Tactics Scale; EAQ = Early Abuse Questionnaire; FACES = Family Adaptability and Cohesion Evaluation Scale; FACI = Family Attachment and Changeability Index; FDM = Family Deception Measure; HAI = History of Attachments Interview; MACI = Millon Adolescent Clinical Inventory; MASA = Multidimensional Assessment of Sex and Aggression; MIDSA = Multidimensional Inventory of Development, Sex and Aggression; RBPC = Revised Behaviour Problem Checklist; SAEQ = Sexual Abuse Exposure Questionnaire; SATWS = Sexual Attitudes Towards Women Scale; SDS = Marlowe-Crowe Social Desirability Scale; SCL-90-R = Symptom Checklist-90-Revised; YCM = Youth Characteristics Measure; YO-LSI = Young Offender-Level of Service; *References for these measures can be found in the original articles*

4. Discussion

23 studies were identified in this literature review that compared adolescent sex offenders with other groups of adolescent offenders and / or with groups of adolescent non-offenders on childhood abuse and victimisation, and adverse experience in childhood. Some of the results have been echoed in past reviews and meta-analyses on the subject. The majority (12/15) of included studies reported significant differences between groups of adolescent sex offenders on levels of sexual abuse. It was also the variable that was most widely reported on. Findings on the matter of other forms of childhood abuse and adverse experience are more mixed, with some studies reporting significant differences and others reporting similarities. This may in part be due to the number of studies identified for inclusion in this review and the very broad areas investigated by these studies. Whilst comparisons between groups of adolescent sex offenders were not a focus of this review, studies involving groups of adolescents who sexually offend against children consistently found differences when compared to non-sex offenders than adolescents who sexually offend against peers or adults, suggesting different etiological pathways. Differences are found in areas such as early exposure to pornography (Ford & Linney, 1995), family criminality (Miner et al., 2011), and exposure to violence (Ford & Linney, 1995). Each variable of interest, with the exception of studies investigating childhood sexual abuse (n = 15), frequently had very small numbers of studies that investigated it ($n \leq 5$). Due to this, no conclusions can reliably be drawn with regards to adverse childhood experience, and these results should be interpreted with caution. However, this does highlight areas for future research, as discussed below.

Somewhat surprisingly, given the weight given to attachment in theories of sexual offending and the wider literature, studies directly measuring attachment style were found to be rare. Only one published study (Miner et al., 2010) and one government report (Miner et al., 2011) were identified that directly measured attachment style. Both studies demonstrated aspects of good methodology, and both studies used very similar methodology therefore increasing comparability between them. For example, Miner et al. (2011) relied on more than one form of data collection and where possible validated self-report measures by using comprehensive file review as well. Miner et al. (2010) employed methods such as independent coders for attachment style being blinded to group membership and study objectives, therefore reducing the possibility of results being subjected to detection or measurement biases. The anxious-ambivalent attachment dimension (relating to the adult preoccupied and fearful styles) is thought in these studies to be related to isolation from peers, having fewer friends, and difficulty relating to the opposite sex. Attachment anxiety is also characterised by a lack of personal autonomy, an expectation of personal rejection and a need for support from others (Carr, 2006; Miner et al., 2011). Therefore, such an attachment style indirectly contributes to the likelihood of the commission of a sexual offence by exacerbating these problems.

4.1. Methodological Considerations and Limitations of Reviewed Studies

Quality of studies included in this review is generally high. However, this could in part be due to the strict inclusion and exclusion criteria for this review. The study of all risk factors, not just developmental ones, presents a large number of methodological challenges (McMillan et al., 2008). Diverse methodologies have often been

employed by studies in the area of adolescent sex offending, a criticism that has been noted and explored in previous meta-analyses (Seto & Lalumière, 2010) and reviews (van Wijk et al., 2006; Driemeyer, Yoon and Briken, 2011). Although many of the included studies measured the same variables or used similar outcome measures (for example, interviews and self-report measures), comparisons between them are often difficult as different measures are used. This limits the amount of comparative inferences that can be made and limits them to more descriptive inferences (Burton, 2008). In particular, it may be possible that separate variables have been combined into one here due to the inconsistencies in measures used and the lack of clarity in defining some variables. For example, "exposure to violence", which is noted as an adverse experience above, could include both exposure to sexual violence and physical violence, or could involve directly witnessing it or just hearing it. However, there are too few studies to explore this fully.

The majority of studies included in this review utilised convenience samples of adolescent offenders and non-offenders. Studies using self-report methods, such as psychometrics or interviews, may at risk of self-selection or volunteer bias and social desirability. It may be the case that particular individuals may be more or less likely to select themselves for participation during recruitment, based in part on the image of themselves that they would like others to perceive. For example, potential participants with a history of sexual abuse may be less willing to participate in a study where contact with a researcher is necessary due to shame or a lack of trust. Recruitment of participants in the majority of the studies included in this review was the same across all of their groups and settings, however, so the influence of such volunteer bias is considered by Miner et al. (2010) to be unlikely to affect results. Random sampling, or

probability sampling, of participants from a variety of settings is needed in order to more representative of the wider population, and to tackle the problems associated with convenience sampling, such as a reduction in selection bias. In studies such as Burton (2008), significant differences were found between participants and non-participants, highlighting the fact that random sampling is needed. Most studies did not record differences between participants and non-participants. Other methods of reducing selection or volunteer bias could be to recruit all available subjects in a given time period within selected institutions, such as some studies included in this review. The representativeness of some samples can be questioned. Baker et al. (2003), for example, used adolescents from child welfare agencies, which suggests that all participants were involved with social services. Some studies, such as Butler and Seto (2002), use participants that were referred by courts for assessments. This in particular is open to referral bias, as it is not known what criteria the judges involved used to refer the adolescents to these services, and it is not known what differences there may be between those who get referred and those that do not. It is possible that sex offenders are more likely to be referred for treatment, as noted by van Wijk et al. (2007), because their crimes are viewed as more serious as they are sexual in nature, therefore potentially leading to an ascertainment bias. The majority of studies used samples of incarcerated adolescents as opposed to those in outpatient settings, a criticism noted by van Wijk et al. (2006) in their review of the literature. Levels of maladjustment are likely to be higher in incarcerated adolescents, or those in residential as opposed to outpatient community treatment programs, and they are likely to have committed more severe crimes (Burton, 2008). Zakireh, Ronis and Knight (2008) note in their study that groups of offenders (both sexual and nonsexual) also had significantly higher levels of non-sexual crimes than their outpatient counterparts. The perceived

dangerousness of an adolescent can influence the decision of whether or not to incarcerate them, therefore incarcerated groups may resemble one another more than community samples would (van Wijk et al., 2007). Data collected only from incarcerated adolescents cannot be considered to be wholly representative of the wider population, and is in turn difficult to generalise. Data collected from these adolescents is only representative of those that have been caught and charged with an offence (Awad & Saunders, 1991).

An interesting group comparison bias to be considered is the kinds of offences that groups have committed. Types of sex offenders, for example, include contact offenders (such as rapists, sexual assaulters, child molesters) and non-contact offenders (such as exhibitionists, internet offenders). The majority of studies included in this review did not specify and differentiate the kinds of offences that their sexually offending samples had committed. It is unclear if this is because there were no differences, or because analyses to calculate any differences were not completed. It may be that there are fundamental differences between types of sexual offender that we are not aware of. Groups of adolescent sex offenders were classified into groups based on their offences and ages of their victims (i.e. those who sexually offend against children, those who sexually offend against peers or adults) in five studies included in this review (for example, Miner et al., 2011). Studies included here have highlighted the need to classify groups of adolescent sex offenders and analyse them separately, due to the significant differences in variables of interest recorded between them. Another potential group comparison bias could be that groups of non-sex offenders may have unreported sex offences within them. Both Fleming, Jory and Burton (2002) and Spaccarelli et al. (1997) found that 20% and 14% respectively of their non-sex offending samples admitted committing a sexual offence that they had not been

adjudicated for. It is likely that samples of non-sex offenders in other studies have committed sexual offences that the researchers are unaware of, and therefore are in the wrong sample group, which could potentially alter results.

The majority of studies included in this review used one method of data collection. Relying on one form of data collection, such as self-report measures or file review, means that valuable data might be missed. Self-report is a method of data collection that is open to criticism. It is subject to social desirability. It may also be subject to interviewer bias, if interviewers are not blinded to the exposure and outcome of the study, as the interviewer may inadvertently coax participants to give certain information (Sica, 2006). Self-report can also be affected by environmental factors, such as the stage of treatment that the participant is in. The further along in treatment a participant is, the more willing they may be to disclose things such as sexual abuse due to learning more about it or developing a trusting therapeutic relationship with their care team. Validating self-report, if possible, by using additional methods of data collection such as systematic file review of official records is important. With file review alone, there is always the possibility that vital information is missed simply because it was not recorded in official records. For example, childhood abuse could be more prevalent amongst samples than noted in these studies because it was not recognised by relevant authorities or because it was not experienced by the adolescent. It is also difficult to identify the severity of, for example, adverse childhood experience from file review alone. This again highlights the importance of collecting data from a variety of sources if possible. Similarly, recording things dichotomously (i.e. present or not present) means that data may be missed. Using sexual abuse as an example. Burton, Miller and Shill (2002), sharing the same dataset as Fleming, Jory and Burton

(2002), explored variables in more detail and recorded some interesting results. In addition to noting that a significantly larger percentage of adolescent sex offenders reported sexual abuse and victimisation, they also reported significantly more severe victimisation and a longer duration of abuse than the non-sex offending comparison group. These are all interesting points, and highlight the need to investigate variables such as this in more detail rather than just marking them as present or absent.

5. Conclusions and Recommendations

It is hypothesised by some that all crimes committed against persons may share similar etiological characteristics (Jonson-Reid & Way, 2001). This review has, however, found a number of differences between adolescent sex offenders and non-sex offenders on variables pertaining to childhood abuse and adverse childhood experience. Unfortunately there is not enough evidence to suggest a causal link, due to the small number of studies reviewed. Rather, correlational relationships are implied. The variables considered here are hypothesised to have an effect on the development of sexually offensive behaviours by affecting childhood attachments, therefore indirectly contributing to factors such as attachment anxiety and social isolation from peers, poor resiliency and coping with regards to adverse events, poor interpersonal functioning, and problems with emotional recognition and regulation. Potential methodological problems of included studies have also been highlighted. This is of use to future researchers in terms of aiding the development of a more comprehensive research design.

This review may be prone to publication bias as no unpublished studies or theses were included in this review. 22 published studies and one published government report (Miner et al., 2011) are

included here. It may be that the results of unpublished studies differ to those presented in published articles. Despite this limitation, a stringent quality assessment process was employed, of which evidence is not visible in previous reviews and meta-analyses. It also adds to the literature by collating and synthesising available information on childhood risk factors for adolescent sexual offending using a developmental approach, highlighting areas and methodological considerations for future research, and providing an update to previous meta-analyses and reviews in this area. In addition to this, two studies have also been included here that explore attachment style, both of which suggest significant differences between child molesters and non-sex offenders.

One large question raised by this review concerns the measurement of attachment in adolescence, and why attachment itself is not widely investigated in this population. This may, in part, be due to complications in terms of measuring attachment as a construct. In childhood, attachment is generally measured by the observation of parent-child interactions and the assessment of their quality, whereas in adulthood interviews and self-report measures concerning more intimate relationships take precedent. It is questionable which relationship variables can be investigated to measure attachment in adolescence. However, research in this area is at present sparse, and measures examining past and current parent-adolescent relationships are criticised by some with regards to their construct validity (Rich, 2006). Some measures, such as the *History of Attachments Interview (HAI)* (Bartholomew & Horowitz, 1999), examine past and present relationships with both parents and peers, which may provide a more holistic and comprehensive assessment of attachment variables and additionally suggest directions for future research.

It is clear that further investigation and replicable research utilising standardised instrumentation and practice is needed in order to advance the fields of adolescent attachment and adolescent sexual offending. Research papers of high quality have the potential to influence many aspects of theory and practice, including assessments and prevention. It is worth investigating further whether early interventions targeted towards familial and interpersonal relationships can lessen some of the negative effects of disrupted attachment, for example by decreasing isolation and identifying sources of support and coping, in those who present with other risk factors contributing to the development of sexually harmful behaviour. Prevention programs, such as those for sexual abuse, via recognition of risk factors in the form of adverse experience and disrupted attachment may be beneficial. Furthermore, assessment measures can be developed that can aid the identification of individuals who are most at risk of committing a sexual offence during adolescence. It is of note that all studies included here utilised a cross-sectional design. Utilising a longitudinal study design could allow for examination of the full developmental pathway of sexually offensive behaviour, as opposed to observing the relationships between variables at one point in time as in cross-sectional research designs (Miner et al., 2011). Furthermore, longitudinal research could inform as to whether adverse childhood experiences can aid in predicting the onset of sexually harmful behaviour, rather than observing that it follows them (Seto & Lalumière, 2010). Further investigations into when events occur are also crucial in terms of windows of development, and would contribute to further understanding regarding when targeted interventions would be most effective. With further exploration, using a longitudinal research design with relevant variables, measures investigating the probability of recidivism may also be developed.

The influences of this literature review on this thesis' empirical research project

This literature review has influenced this thesis' empirical research project in a number of ways. Firstly, a review of the theoretical and empirical literature provided an excellent overview of the influence of adverse childhood experience on development, and how factors can contribute to the onset of offending behaviour in adolescence. Secondly, critically evaluating the empirical literature highlighted a number of methodological issues that were considered during the development of the research project, such as distinguishing between adolescents who have sexually offended against children and those who have sexually offended against peers / adults. Thirdly, this review provided a basis for the selection of variables pertaining to childhood abuse and adverse childhood experience that were explored during the empirical research project presented in Chapter Two.

CHAPTER TWO

A COMPARATIVE EMPIRICAL INVESTIGATION:

ADVERSE CHILDHOOD EXPERIENCE AND PSYCHOPATHOLOGY IN INPATIENT ADOLESCENTS WHO HAVE HARMED OTHERS

Abstract

This research aims to establish whether differences in developmental experience and psychopathological traits can be associated with offending behaviours as risk factors. A sample of 45 adolescents (32 male and 13 female) residing in a specialist medium secure psychiatric hospital consented to take part in the study. The sample consisted of several groups: male violent offenders (VO); male violent and sexual offenders (VSO) (themselves consisting of offenders against children and offenders against peers/adults); female violent offenders (FVO); and female non-violent offenders (FNVO). Variables pertaining to adverse childhood experience were identified via a literature review following a systematic approach. Data were collected using a pro-forma coding system via a retrospective systematic file review of hospital records. It was hypothesised that adverse childhood experience would be common across all participants, although childhood sexual abuse would be more common in adolescent sexual offenders. Chi-square analyses and Fisher's exact tests revealed a number of differences. Childhood sexual abuse, sexualised behaviours, social isolation, and a diagnosis of a Learning Disability all distinguished adolescent sexual offenders from violent offenders. Adolescents who sexually offended against children were further distinguished from those who offended against peers / adults by higher levels of childhood sexual abuse, sexualised behaviours, higher levels of poor academic achievement and poor school behaviours (e.g. truancy or aggression). Female violent offenders experienced higher levels of Social Services involvement as children than non-violent offenders. A developmental approach is considered to rationalise these results. Increasing knowledge in this area can contribute to early identification of at-risk individuals and more systemic early prevention or intervention programmes. The limitations of this study and avenues for future research are also discussed.

1. Introduction

Research investigating the commission of crime by adolescents is increasing in momentum (Pullman & Seto, 2012). Although a plethora of factors are thought to be involved, the literature continues to highlight the importance of developmental experience with regards to the commencement of criminal behaviour (for example, Patterson, DeBaryshe & Ramsey, 1990). This includes factors such as childhood abuse, disrupted attachment, and subsequently affected resilience (Marshall & Barbaree, 1990; as cited in Ward, Polaschek, & Beech, 2005; Ward & Beech, 2005; Marshall & Marshall 2000; Marshall & Marshall; 2010). Understanding more about this area, in both male and female offenders, is paramount to providing appropriate identification, assessment, and intervention to adolescents who harm others.

1.1 Generalist and specialist perspectives of adolescent offending

Some hypothesise that crimes committed against the person, including violence and sexual offences, may share a similar etiological pathway (Jonson-Reid & Way, 2001). This theory shares an ideology with the generalist perspective of adolescent offending. That is, that all offenders share the same versatile antisocial and criminal tendencies that also reflect wider problems with self-control, poor judgement, and an undesirable social environment; and thus may share risk factors and needs for risk management (Chaffin, 2008; Harris, Mazerole, & Knight, 2009; Pullman & Seto, 2012). The specialist theory on the other hand, more common in research involving adolescent sexual offenders (Harris, Mazerole, & Knight, 2009), subscribes to the view that adolescent sexual offenders engage in predominantly sexual offences, and are fundamentally different from non-sexual offenders. It also

hypothesises that they are subject to different risk factors and nuances than other offenders, and therefore require different interventions and risk management strategies (Pullman & Seto, 2012).

It is likely that there is an amount of overlap amongst the generalist and specialist perspectives, and that they are not mutually exclusive. Factors of both are believed to be relevant in that adolescent offenders may be similar in some ways but differ in others. A recent comprehensive meta-analysis on adolescent offenders identified that sexual offenders and non-sexual offenders shared many of the same characteristics and risk factors associated with general delinquency, such as early conduct problems, low intelligence, and antisocial personality traits (Seto & Lalumière, 2010). Furthermore, they were statistically similar in variables relating to the family domain, such as parental separation, parental substance use, and parental criminality. However, it is likely that a wide range of variables associated with family environments and relationships affects systematic comparison (van Wijk et al., 2006). Interestingly, sexual offenders who have additionally committed other crimes (e.g. violent crimes) have been noted to experience higher levels of familial disruption (Butler & Seto, 2002; Wanklyn et al., 2012). Seto and Lalumière (2010) highlighted several differences that were found, regarding atypical sexual interests (such as an interest in children) and variables particularly relating to childhood abuse, suggesting that sexual offenders may be specialist in some ways. Most notably, adolescent sexual offenders were found to unequivocally have experienced higher levels of childhood sexual abuse, a finding widely echoed in the literature (e.g. Burton, Miller & Shill, 2002; Miner et al., 2011; van Wijk et al., 2006). Therefore, they conclude that factors associated with general delinquency are not enough to explain why someone may commit a sexual as

opposed to a non-sexual crime. It is variables pertaining to early experience that are of interest to this particular study.

1.2 Adverse Childhood Experience

Adverse childhood experiences are defined here as an event occurring during childhood that can be considered to have had an adverse effect on development. This includes both physiological and psychological development and well-being. Characteristics and types of adverse experience, including childhood abuse, were identified through a comprehensive review of the literature. These are described in more detail below. An individual's interpretation of these events is important in terms of how they will be affected, and is expected to vary from person to person. Factors such as individual resilience and prosocial social support are believed to act as protective factors, and may limit poor outcomes. Nevertheless negative consequences of adverse childhood experience have been well documented. Broadly, these include poor mental health outcomes (Schilling, Aseltine Jr, & Gore, 2007), poor resiliency and self-esteem (Glaser, 2002), and social impairment and isolation (Carr, 2006; Riggs, 2010). Experiences have also been noted to affect individuals neurologically, in the areas of the brain that are associated with emotional regulation and executive function (Gralton, 2011).

Research has also shown that experiences, such as abuse, neglect, witnessing domestic violence, and family dysfunction, contribute to violent delinquency and substance abuse in later years (Kaplan, Pelcovitz & Labruna, 1999; Mersky & Reynolds, 2007) and are common in offending and/or inpatient populations (Dixon, Howie & Starling, 2004; Wanklyn et al., 2012). Adolescent inpatients who have experienced high levels of abuse have been noted to exhibit

higher levels of violent behaviour, impulsivity, substance misuse, and other psychopathological problems (Grillo et al., 1999). Experiences of childhood abuse have also been shown to contribute to trauma-related disorders in this population, in particular emotional abuse (Clare, Bailey & Clark, 2000; Sullivan et al., 2006) and sexual abuse (Sullivan et al., 2006). Involvement with Social Services have also been noted to be associated with violent behaviour in inpatient settings (Clare, Bailey & Clark, 2000). Some note that male adolescents who have experienced adverse events in childhood have been noted to be more likely to engage in antisocial behaviour than females (Schilling, Aseltine Jr, & Gore, 2007), however other research on gender differences emphasises the heterogeneity of adolescent samples, and provide different results with variables such as family violence (Sternberg et al., 2006).

When exploring developmental aspects of offending behaviour in adolescents, studies which utilise different groups and types of crime are beneficial in identifying variables relevant to the onset of offences and commission of particular types (Seto & Lalumière, 2010). Adolescent violent offenders, sexual offenders, and non-offenders are thought to differ on a number of variables including family dysfunction (Butler & Seto, 2002; Netland & Miner, 2011), the witnessing of domestic violence (Ford & Linney, 1995), and poor peer relationships and social isolation (Blaske et al., 1989; Miner et al., 2010). The literature has consistently shown that adolescents who offend sexually have more frequently experienced sexual abuse themselves (Burton, Miller & Shill, 2002; Miner et al., 2011; Zakireh, Ronis & Knight, 2008). Studies in this area are often associated with small samples sizes and mixed methodologies (Jonson-Reid & Way, 2001), factors that perhaps contribute to results that are at times conflicting. Nevertheless, adolescent offending is still a rapidly-developing area of research (Pullman &

Seto, 2012). Further understanding of developmental risk factors in crime, including childhood abuse and familial environment, is thought to contribute to accurate identification, risk management and intervention (Netland & Miner, 2011).

Some hypothesise that adverse childhood experience and abuse cause vulnerabilities and disrupt childhood attachments, which can lead to negative consequences (Glaser, 2002; Marshall & Marshall, 2000), attachment insecurity (Ward & Beech, 2005), and negative internal working models of self and others (Miner, 2011). Attachment theory, briefly, surmises that early childhood attachments are formed with caregivers in order to aid emotional and social development (Bowlby, 1969). They are also thought to be related to psychological, cognitive, and behavioural factors of development (Ainsworth et al., 1978; Shapiro & Levendosky, 1999), and furthermore are thought to be evident across the entire lifespan (Ainsworth et al., 1978). Safe, sensitive and reciprocal caring environments that contribute to secure attachment formation also contribute to an ability to adapt positively to adverse events (Collishaw et al., 2007; Marshall & Marshall, 2000; Romans et al., 1995), the development of adequate coping skills (Crittenden, 1992), and contribute to a positive sense of self and others via an internal working model (Jacobson & Hoffman, 1997; Miner et al., 2011). These internal working models are theorised to represent previous experiences and expectations of future important social interactions and intimate relationships (Bowlby, 1969, 1973, 1980), and are important for an individual to feel worthy of love and respect and to view others as supportive and helpful (Jacobson & Hoffman, 1997; Riggs, 2010; Ward et al., 1995). Furthermore, parenting practices that lead to a secure attachment also contribute towards adequate emotional regulation skills (Brown & Wright, 2001; Riggs, 2010), and social competence and adjustment (Urban

et al., 1991). Certainly, family background and parent interaction has often been highlighted as important in the theoretical literature on adolescent offending due its influence on attachment and further vulnerabilities (e.g. Marshall & Barbaree, 1990, as cited in Ward, Polaschek & Beech, 2005; Patterson, DeBaryshe & Ramsey, 1990; Ward & Beech, 2005). Marshall and Barbaree (1990, as cited in Ward, Polaschek & Beech, 2005) in particular, when discussing the onset of sexual offending, theorise that such behaviours develop as a result of a combination of adverse early developmental experiences that lead to vulnerabilities, pubescent development in adolescence, and situational variables that decrease inhibition. In addition to childhood abuse and victimisation, other variables need to be considered in the development of offending behaviour.

1.3 Psychopathology

It is noted by some that adolescent offenders are likely to have a number of mental health needs that require attention (Jonson-Reid & Way, 2001). Psychopathology is thought to be relatively common amongst adolescent and young adult offending populations when compared to the general population (Teplin et al., 2002; Copeland et al., 2007). Many delinquent adolescents who have been incarcerated are believed to have traits symptomatic of psychiatric disorders (Vermeiren, 2003), therefore leading some to theorise that psychopathology may not be useful as a variable in identifying differences between groups of offending adolescents (van Wijk et al., 2006). However, several studies have noted that there appear to be differences in psychopathology between groups of offenders. Often traits of psychopathology are explored rather than clinical diagnoses, perhaps leading to more variable and conflicting results.

Many studies exploring differences between groups of offenders do so using samples of male offenders rather than female (Vermeiren, 2003), and in groups of incarcerated adolescents (van Wijk et al., 2006). A significantly higher rate of adolescents of both genders with traits indicative of emerging personality disorder committed crime and violence than those without in a longitudinal study by Johnson et al. (2000), and were particularly indicative of future violent acts such as arson, vandalism and physical violence. A recent comprehensive meta-analysis identified that male adolescent sexual offenders reported more traits relating to anxiety, low self-esteem, and higher levels of social anxiety when compared to violent male offenders or non-offending controls, although concluded that they did not differ from non-sexual offenders on a wide range of psychopathological variables (Seto & Lalumière, 2010). Furthermore, some studies state that male violent offenders are more likely to have personality and behavioural problems than sexual offenders (e.g. Butler & Seto, 2002), however others note that male sexual offenders were more likely to have more social emotional disturbances (e.g. Jonson-Reid & Way, 2001). In female offenders, high levels of conduct disorder and substance misuse disorders, as well as emotional disorders such as depression and post-traumatic stress disorder, have been noted amongst delinquent and violent individuals when compared to a control group (Dixon, Howie & Starling, 2004). Experiences of trauma and adverse childhood experience were also noted to be more common amongst the offending group, particularly childhood abuse and victimisation and poor family cohesion (Dixon, Howie & Starling, 2004). This hints at a combination of factors, including adverse childhood experience, that contribute to group status that warrants further investigation.

Cognitive impairment, frequently known in the United Kingdom as a Learning Disability (LD), has also previously been noted to

sometimes act as a contributing factor in offending behaviour in adulthood and adolescence. This is believed to be due to a number of vulnerabilities inherent with impairment, including poor coping strategies and emotional regulation, as well as poor behavioural inhibition and impulsiveness (Carr, 2006; Attwood, 2007; Jones, 2007). Impulsiveness is thought to be a key component of much offending behaviour (Gottfredson & Hirschi, 1990). It is additionally thought that the impulsiveness associated with cognitive impairment may lead to more potential opportunistic offending in sexual offenders (Seto & Lalumière, 2010), however this is likely exacerbated by the difficulties with the formation of relationships and poor understanding of social nuances that these individuals often encounter (Carr, 2006). Several studies have identified that cognitive impairments more common amongst adolescent sexual offenders than amongst non-sexual offenders (Awad & Saunders, 1991; Ford & Linney, 1995), however a recent meta-analysis notes that cognitive impairment is overall not associated with a higher likelihood of sexually offensive behaviours (Seto & Lalumière, 2010). It is also of note that many other psychological disorders are more prevalent in individuals with cognitive impairment, such as Autistic Spectrum Disorder and particularly attention-deficit hyperactivity disorder (Carr & O'Reilly, 2005), so co-morbidity may play an important role and exacerbating factor, particularly in individuals who go on to offend again (Vermeiren, 2003).

Studies in this area are not without limitations. Many studies investigating psychopathology in adolescent samples are cross-sectional in design, meaning that it is difficult to make inferences with regards to which aspects of mental health may precede offending behaviour (Johnson et al., 2000). Similarly, there are discussions about how generalizable these results are to the general population as most studies involve incarcerated adolescents

(Copeland et al., 2007). Furthermore, psychopathological traits have often been identified through participant self-report (Seto & Lalumière, 2010), leaving studies open to bias. Nevertheless, in some cases there appear to be some links between adolescent psychopathology and offending behaviour, as briefly highlighted above. It is likely that this is exacerbated by adverse childhood experience (Dixon, Howie & Starling, 2004; Schilling, Aseltine Jr, & Gore, 2007).

1.4 Research aims and hypotheses

Many studies investigating adolescent offending behaviour, in particular sexual offending, use samples of incarcerated adolescents (van Wijk et al., 2006). Furthermore, most of the literature considers male offending behaviour. This study adds to the literature in that it explores a population rarely investigated in such research, that of specialist inpatient mental health in the United Kingdom, and additionally explores variables in a male and female sample. Identifying factors relating to adverse childhood experience, psychopathology, and offending behaviour in these populations can aid in risk management, and also in the provision of interventions for these individuals. Furthermore, this information may contribute to the development of more comprehensive early-intervention services for those deemed at risk, perhaps negating the need for secure services.

This research's aims and objectives are as follows:

- To determine the prevalence of harmful or offending behaviours, including violent and sexual behaviours, amongst male and female adolescent inpatients.

- To determine if adolescents who display harmful or offending behaviours differ amongst themselves and from those who do not in terms of their experiences of previous abuse (including sexual, physical, emotional abuse, and neglect) and in terms of adverse childhood experiences (for example, poor family relationships and disruptive family environment, witnessing domestic violence, or social isolation and poor peer relationships).
- To determine whether or not adolescents who display harmful or offending behaviours differ amongst themselves and from who do not differ in terms of psychopathological traits and diagnoses (including Learning Disabilities).
- To determine whether there are similarities or differences in terms of experience and psychopathology between adolescents who sexually harm or offend against children, those who sexually harm or offend against peers / adults, and violent offenders.

It is expected that adverse childhood experience will be common across all participant groups in this study. However, it is hypothesised that participants who have committed sexual offences will differ from other participants in some ways. We refer to all sexually offending participants as male from this point, as it is expected that there will be limited or no female adolescent sexual offenders within this sample, reflecting their relative absence in the literature on adolescent offending. Despite this, it is considered here that the investigation of the prevalence and characteristics of adverse childhood experience remain important areas of consideration amongst female offenders in secure services, particularly such a high-risk sample as that included here, as they may lead to more comprehensive interventions and early interventions. It is additionally hypothesised that male participants

who have committed sexual offences will be more likely to have experienced childhood sexual abuse than those who have not committed sexual offences, in accordance with the literature (for example: Burton, Miller & Shill, 2002; Miner et al., 2011; Seto and Lalumière, 2010; Zakireh, Ronis & Knight, 2008).

Due to the nature of the setting (a medium secure psychiatric hospital), all individuals will have some form of mental disorder or cognitive impairment. A search of the literature reveals that findings with regards to differences between groups of offending adolescents are inconclusive (Seto & Lalumière, 2010). Often traits of psychopathology are explored rather than clinical diagnoses. Offending adolescents are consistently noted to be more likely to exhibit psychopathological traits than non-offenders (Dixon, Howie & Starling, 2004; Johnson et al., 2000; Vermeiren, 2003), and therefore no hypotheses are made for this variable.

2. Method

2.1 Sample / Subjects

72 adolescents who were inpatients at a specialist medium secure psychiatric hospital were invited to take part in this study. These individuals had been detained under the Mental Health Act 1983 (Amended in 2007) or subject to an Irish Court Order. Due to the medium secure nature of this setting this detention is due to their being considered a risk of severe harm to others in the context of mental health difficulties. These individuals may also additionally pose a risk of harm to themselves. The final sample consisted of 45 adolescents and young adults (an overall response rate of 62.5%): 32 male (68% response rate) and 13 female (52% response rate). Participants were divided into groups primarily based on sex, and on

their offence histories before they were detained in hospital. These groups included (a) males who had committed violent offences (VO; *n*=17), (b) males who had committed violent and sexual offences (VSO; *n*=15), (c) females who had committed violent offences (FVO; *n*=8), (d) females who had not committed any violent or sexual offences (FNVO; *n*=5). All participants had been involved in additional non-violent or non-sexual offences, including property damage, offences relating to substance use, and arson. Violent offences included assault and battery. Sexual offences included rape and sexual assault. Participants who had committed sexual offences were further classified according to whether they had offended against children, or against peers and adults. In cases where this was not clear, child victims were defined as being at least four years younger than the offender and under 12 years of age. Adult victims were defined as being older than the offender by at least four years and additionally over 19 years of age. Peer victims are therefore defined as being within four years of age of the offender (either younger or older). These definitions are as recommended in papers such as Miner et al. (2011). There were no 'cross-over' offenders, those who had offender against both victim groups, within this sample.

2.2 Procedures

All available inpatient residents within the unit's Adolescent Service were invited to take part, following permission from their ward's Responsible Clinician and providing that they were considered by their Responsible Clinician and psychologist to have the capacity to provide informed consent. They were initially approached during their ward community meetings, with the consent of professionals involved. These are meetings held every week on the unit's wards, and provide an opportunity for inpatients and staff to discuss issues

in a supportive environment. The study and its aims were explained to all potential participants, and they were offered the opportunity to read the information sheet (see Appendix Four) and ask questions in a supportive environment. The inpatients were then informed that the researcher would be returning to the ward at a later date, with a member of the Psychology team whom they knew and trusted, should the wish to speak to her individually and discuss the study in more detail. Individuals who expressed interest in finding out more about the study and in participating were given a consent form (see Appendix Five) to fill out. This was explained to them by the researcher in detail, in order to ensure that consent was fully informed, and in the presence of an aforementioned familiar and supportive member of staff. Parental consent was additionally sought for potential participants who were under 16 years of age. On wards where inpatients were known to or worked directly with the researcher the initial approach of potential participants was conducted by assistant psychologists and psychologists not associated with this project. This was in order to avoid feelings of coercion and elements of social desirability during recruitment.

2.3 Materials

Demographic information of participants and information relating to childhood abuse and adverse childhood experience was explored via file review. Demographic information included age, sex, and ethnicity. A dichotomous coding system for the file review of relevant variables was created specifically for this project. Using dichotomy in research is noted as facilitating an approach that focuses on risk factors and prediction of delinquency by identifying groups that are vulnerable and possess several risk factors, and as simplifying meaningful results so that they can be more easily

understood (Farrington & Loeber, 2000). Relevant variables occurring in childhood, defined here as being between birth and 12 years of age, were marked as 'present' or 'not present'. Additional information, such as which parent was involved in cases of parental variables such as parental substance misuse, was recorded if necessary. An example of this coding system can be viewed in Appendix Six.

Variables relating to adverse childhood experience were established via a comprehensive literature review following a systematic approach. Six life domains were established, echoing and expanding on those identified in Farrington (2003) and Wanklyn et al. (2012): Childhood abuse, individual, family, academic, peer / friendship, and witnessing of violence domains. The 'childhood abuse' domain encompassed sexual abuse, physical abuse, emotional (or psychological) abuse, physical neglect, and emotional neglect. The 'individual' domain encompassed alcohol use, substance use, health problems, criminal involvement, conduct problems, overt sexualised behaviours, and exposure to sexual material (either pornography or sexual activity). The 'family' domain encompassed familial criminality, parental separation, Social Services involvement, being placed in alternative care, parental psychopathology, parental substance misuse, poor relationships with parents, and other familial disruptions. The 'academic' domain consisted of poor academic achievement, bullied at school, and poor behaviour at school (for example, truanting or being expelled). The 'peer / friendship' domain encompassed peer criminality, peer substance use, poor relationships with peers, social isolation, and being bullied by peers. Finally, the 'witnessing of violence' domain contains the witnessing familial violence, witnessing peer violence, witnessing community violence, and witnessing sexual violence variables.

Variables relating to psychopathology were identified following initial scoping searches of participant files, and are based on diagnosis upon admission and within hospital. These consisted of psychotic disorders, traits indicative of emerging personality disorder (including conduct disorder), attention deficit hyperactivity disorder (ADHD), affective disorders (such as depression or bipolar disorder), traits associated with anxiety, Autistic Spectrum Disorder (ASD), and Learning Disability.

File review is noted as being a good method of collecting data in that it avoids interviewer bias, self-report bias and social desirability. However, it can be criticised in that it may miss important information simply because it was not recorded in official reports. Psychometric measures were considered as a method of validating file review, such as the Trauma Symptom Checklist for Children (TSCC) (Briere, 1996) or the Childhood Trauma Questionnaire (CTQ) (Bernstein & Fink, 1997), however it was felt that these either considered symptoms of trauma rather than the experiences that caused them, or presented questions in an intrusive and abrupt manner. Similarly, interviews were considered to be too intrusive and time consuming in this instance, where resources to ensure minimal participant distress were limited. It is considered that dichotomisation of results may overly-simplify complex data available in such comprehensive files. However, this study aims to explore the prevalence of abuse and adverse experience. As interpretation of such events is a subjective and internal experience, unique to each individual, it would not be appropriate to record this information from file review alone. Therefore dichotomisation is considered a simplification of relevant data, and appropriate in this instance. Due to the sensitive nature of the experiences explored by this study, and the comprehensive nature of patient files and reports held by the hospital, it was

therefore felt that file review was an appropriate non-intrusive method of data collection for this study.

2.4 Ethical considerations

Before this study began, it was approved by a Research Ethics Committee and then by the hospital's local research and ethics department. Furthermore, discussions were had with each ward's Responsible Clinician and Psychologist in order to determine the best way to approach potential participants and to establish informed consent for access to their files and records.

2.5 Statistical Analyses

Statistical analyses were all conducted using the IBM Statistical Package for Social Sciences (SPSS), Version 21. Data relating to participant characteristics was initially explored pictorially and via descriptive statistics in order to establish whether it was normally distributed or was subject to skew and kurtosis. These explorations established that the data were not normally distributed, being more subject to kurtosis than to skew. Therefore non-parametric statistical tests, such as the Mann Whitney U test, were selected for use. Effect sizes (r) for these analyses were calculated manually. Analysis of variance (ANOVA) tests were not conducted due to unequal group sizes. Due to their nominal and categorical nature variables relating to adverse childhood experience and mental health were explored using chi-square analyses and, in cases where the number of frequencies in contingency table cells was below five, Fisher's exact tests. Effect sizes are recorded using the Cramer's V statistic. Follow up Fisher's exact tests were then conducted on the subcategories of male sexual offenders, using participants who

sexually offended against peers / adults and those who sexually offended against children.

Due to the number of statistical tests being performed on this dataset, with the critical *p* value set as 0.05, the possibility of inflation of the overall Type I error rate was increased. The Bonferroni correction method was considered in order to reduce this. Although this method reduces the probability of a Type I error (rejecting the null hypothesis, that there are no differences between groups, when it is true), it increases the chances of Type II errors (accepting the null hypothesis when in fact there are differences between groups) and also causes a loss of statistical power. Due to the fact that this sample is relatively small (consisting of 32 male and 13 female participants), using the Bonferroni correction would have increased the possibility of a Type II error by a large amount. Using male participants (n = 32) as an example, the Bonferroni correction would have increased the alpha *p* value to 0.001 due to the number of analyses conducted. With the aid of the statistical software package G*Power (Faul, Erfelder, Lang, & Buchner, 2007) it was calculated that this would increase the β-value to 0.95. As suggested in the literature, the relative seriousness of committing either a Type I or a Type II error was evaluated (Wuensch, 1994). In this instance, the possibility of a Type II error would be raised to an unacceptable level (95%). Therefore Bonferroni corrections are not used here, and the critical alpha value remains as $p < 0.05$. It is emphasised that results may need to be interpreted with caution as a result of this, however it is considered that such a high possibility of committing a Type II error in projects such as this may have serious implications in clinical practice and risk assessment. This could include, for example, not identifying an individual at risk of committing a sexual offence against a child due to not considering their unique risk factors.

3. Results

3.1 Participant characteristics

The sample was mostly White British (88.8%), with a small number being recorded as White Irish (8.88%) and one identifying as Afro-Caribbean (2.22%). All participants included in this study had been involved in some kind of offending behaviour, such as property damage, arson, or substance misuse. Participants were aged between 14 and 20 (M = 16.64, sd = 1.13). The Mann Whitney U test was used to explore potential differences between groups of participants. The ages of male participants (M = 16.91, sd = 1.17, Mdn = 17.00) differed significantly from the ages of female participants (M = 16.00, sd = .70, Mdn = 16.00), U = 102.5, z = -2.76, p = .005. The r statistic was calculated as r = -.41, indicating a medium effect size.

All 32 male participants had been involved in the commission of violent offences. Of these, 15 additionally committed sexual offences (46.87%): Six males had committed sexual offences against peers / adults, and nine had committed sexual offences against children. All male participants had been involved in minor offences, including property damage and substance misuse. The ages of male violent offenders (VO) (Mdn = 17.00) did not differ significantly from male violent and sexual offenders (VSO) (Mdn = 17.00), U = 106.5, z = -.83, ns, r = -.14.

Of the 13 female participants, eight were noted to have been involved in violent offences (FVOs) (61.53%) and five were noted to have not been involved in violent offences (FNVOs) (38.46%). All female participants had been involved in minor offences, including property damage and substance misuse. The ages of female violent

offenders (*Mdn* = 16.00) did not differ significantly from female non-violent offenders (*Mdn* = 16.00), *U* = 10, *z* = -1.16, *ns*, *r* = -.44.

3.2 Adverse childhood experience in male participants

Chi-square analyses and Fisher's exact tests identified a number of differences relating to childhood experience between VOs and VSOs. Please see Tables One and Two for full details of analyses conducted on male offender groups. Due to relatively small sample sizes of male and female participants logistic regression analyses were not conducted, as the validity of the model would be affected (Field, 2009). Similarly, gender differences were not explored due to uneven group sizing.

It was hypothesised that male participants who had committed sexual offences would be more likely to have experienced childhood sexual abuse than those who had not committed sexual offences. Analyses revealed that there was a significant association between childhood sexual abuse and male offender group ($p < .05$, one-tailed Fisher's exact test, Cramer's $V = 0.38$), suggesting that this hypothesis is valid. 46% of male sexual offenders (VSO) experienced childhood sexual abuse, compared to 11% of the violent offenders (VO). All sexual abuse was intrafamilial.

There was a significant association between the exhibition of sexualised behaviours as a child and whether or not male participants belonged in the sex offender group (VSO), x^2 (1) = 12.44, p = .001. The effect size for this finding, 0.64, was calculated using Cramer's *V* and is noted to be large (Cohen, 1988; 1992). This suggests that participants who had displayed sexualised behaviours as a child were more likely to have committed sexual

offences as an adolescent, with 80% of VSOs experiencing it compared to 17% of the VOs.

There was also a significant association between the experience of social isolation in childhood and male group membership, x^2 (1) = 6.51, $p < .05$, suggesting that male participants who were socially isolated as children were more likely to have committed sexual offences as an adolescent. Cramer's *V* was calculated as 0.45, denoting a medium to large effect size. Social isolation was relatively common across both groups, with 100% of VSOs were noted as being socially isolated, compared to 64% of VOs.

Follow-up analyses, including the subcategories of sexual offender, revealed further differences. Please see Table Two. There was still a significant association between childhood sexual abuse and group membership ($p = .007$, two tailed Fisher's exact test, Cramer's $V = 0.76$). The same results were observed with sexualised behaviours ($p < .044$, two tailed Fisher's exact test, Cramer's $V = 0.61$), poor academic performance ($p < .011$, two tailed Fisher's exact test, Cramer's $V = 0.73$) and poor school behaviour, such as expulsion or truancy ($p < .011$, two tailed Fisher's exact test, Cramer's $V = 0.73$). All of these factors distinguished adolescents who sexually harmed children from those who sexually offended against peers / adults. Participants who had sexually harmed children appeared to have higher levels of these experiences.

Table One: *Chi-square analyses and Fisher's exact tests of adverse childhood experiences across broad male offender groups*

	Offender Group				
Childhood Experience Variables	**VO (*n*=17)**	**VSO (*n*=15)**	**x^2 (1)**	***p***	**Cramer's *V***
Childhood Abuse					
Sexual abuse	2	7	-	.035*	0.38
Physical abuse	12	12	-	.691	0.10
Emotional abuse	12	7	1.89	.280	0.24
Physical neglect	7	7	0.09	1.00	0.05
Emotional neglect	9	5	1.24	.308	0.19
Individual Domain					
Alcohol use	4	2	-	.659	0.13
Substance use	4	2	-	.659	0.13
Health problems	0	3	-	.092	0.34
Criminal involvement	4	5	0.37	.699	0.10
Conduct problems	11	7	1.05	.476	0.18
Sexualised behaviours	3	12	12.44	.001**	0.64
Exposure to sexual material	3	5	1.04	.423	0.18
Family Domain					
Familial criminality	11	8	0.42	.720	0.11
Parental separation	7	8	0.47	.723	0.12
Social Services involvement	9	7	0.12	1.00	0.06
Placed in alternative care	6	4	0.27	.712	0.09
Parental psychopathology	5	6	0.39	.712	0.11
Parental substance use	9	11	1.41	.291	0.21
Poor parental relationship	11	7	1.05	.476	0.18
Other familial disruption	8	7	0	1.00	0.00
Academic Domain					
Poor academic achievement	11	11	0.27	.712	0.09
Bullied at school	4	6	1.00	.450	0.17
Poor behaviour at school	13	11	-	1.00	0.03
Peer / Friendship Domain					
Peer criminality	8	7	0	1.00	0.00
Peer substance use	7	3	1.66	.265	0.22
Poor peer relationships	13	12	-	1.00	0.04
Social Isolation	11	15	6.51	.019**	0.45
Bullied by peers	3	4	-	.678	0.10
Witnessing of Violence					
Witnessed familial violence	13	10	0.37	.699	0.10
Witnessed peer violence	4	0	-	.104	0.35
Witnessed community violence	3	0	-	.229	0.30
Witnessed sexual violence	0	1	-	.469	0.19

Note: VO = Male Violent Offender group; VSO = Male Sexual and Violent Offender group

Note: * = one-tailed significance at $p < .05$; ** = two-tailed significance at $p < .05$;

Table Two: *Fisher's exact tests of adverse childhood experiences across male sexual offender groups including subcategories*

	Offender Group				
Childhood Experience Variables	**VSO Child (*n*=9)**	**VSO Peer/Adult (*n*=6)**	***x*² (1)**	***P***	**Cramer's *V***
Childhood Abuse					
Sexual abuse	7	0	-	.007**	0.76
Individual Domain					
Sexualised behaviours	9	3	-	.044*	0.61
Academic Domain					
Poor academic achievement	9	2	-	.011*	0.73
Poor school behaviour	9	2	-	.011*	0.73

Note: VO = Male Violent Offender group; VSO = Male Sexual and Violent Offender group
Note: * = two-tailed significance at $p < .05$; ** = two-tailed significance at $p < .01$

3.3 Adverse childhood experience in female participants

There was a significant association between whether or not female participants had exhibited violent behaviour and whether they had experienced Social Services involvement in childhood. Female participants who had been involved in violent behaviour (FVO) were more likely to have had Social Services involvement ($p < .05$, two-tailed Fisher's exact test, Cramer's $V = 0.73$) than those who were involved in non-violent behaviour (FNVO). 85% of FVOs experienced childhood involvement with Social Services, compared to none of the FNVOs. Please see Table Three, below.

Table Three: *Fisher's exact tests of adverse childhood experiences across female offender groups*

	Offender Group				
Childhood Experience Variables	**FVO (*n*=8)**	**FNVO (*n*=5)**	**x^2 (1)**	***p***	**Cramer's *V***
Childhood Abuse					
Sexual abuse	4	1	-	.565	0.30
Physical abuse	7	2	-	.217	0.50
Emotional abuse	6	1	-	.103	0.53
Physical neglect	2	0	-	.487	0.33
Emotional neglect	5	2	-	.592	0.22
Individual Domain					
Alcohol use	4	1	-	.565	0.30
Substance use	4	0	-	.105	0.52
Health problems	0	1	-	.385	0.36
Criminal involvement	1	0	-	1.00	0.22
Conduct problems	1	0	-	1.00	0.22
Sexualised behaviours	3	1	-	1.00	0.18
Exposure to sexual material	0	0	-	-	-
Family Domain					
Familial criminality	4	0	-	.105	.527
Parental separation	4	2	-	1.00	0.09
Social Services involvement	6	0	-	.021*	0.73
Placed in alternative care	2	1	-	1.00	0.05
Parental psychopathology	2	3	-	.293	0.35
Parental substance use	5	2	-	.592	0.22
Poor parental relationship	5	1	-	.266	0.41
Other familial disruption	4	3	-	1.00	0.09
Academic Domain					
Poor academic achievement	4	1	-	.565	0.30
Bullied at school	2	0	-	.487	0.33
Poor behaviour at school	4	2	-	1.00	0.09
Peer / Friendship Domain					
Peer criminality	3	2	-	1.00	0.02
Peer substance use	3	2	-	1.00	0.02
Poor peer relationships	4	0	-	.105	0.52
Social Isolation	2	1	-	1.00	0.05
Bullied by peers	2	0	-	.487	0.33
Witnessing of Violence					
Witnessed familial violence	6	3	-	1.00	0.15
Witnessed peer violence	2	0	-	.487	0.33
Witnessed community violence	0	0	-	-	-
Witnessed sexual violence	0	0	-	-	-

Note: FVO = Female Violent Offender group; FNVO = Female Non-Violent Offender group

Note: * = two-tailed significance at $p < .05$;

3.4 Psychopathology in male participants

Chi-square analyses identified differences relating to Learning Disability (LD) between groups of male participants, x^2 (1) = 6.14, $p < .05$, Cramer's V = 0.32. This suggests that male participants who have been diagnosed as having a Learning Disability are more likely to have committed sexual offences than those who did not, with 73% of VSOs and 29% of VOs having a diagnosis recorded. Co-morbidity of mental illness and Learning Disability was frequent. Please see Table Four for full details of analyses regarding mental health in groups of male participants. Due to relatively small sample sizes of male and female participants logistic regression analyses were not conducted, as the validity of the model would be affected (Field, 2009). Similarly, gender differences were not explored due to uneven group sizing.

Table Four: *Chi-square analyses and Fisher's exact tests of mental health variables across male offender groups*

	Offender Group				
Mental Health Variables	**VO (*n*=17)**	**VSO (*n*=15)**	**x^2 (1)**	***P***	**Cramer's *V***
Psychosis	2	0	-	.486	0.24
Emerging Personality Disorder traits	4	2	-	.659	0.13
ADHD	1	2	-	.589	0.12
Affective disorders	2	0	-	.486	0.24
Anxiety traits	0	1	-	.469	0.19
Autistic Spectrum Disorder	6	7	0.42	.720	0.11
Learning Disability	5	11	6.14	.032**	0.31

Note: VO = Male Violent Offender group; VSO = Male Sexual and Violent Offender group

Note: ** = two-tailed significance at $p < .05$

3.4 Psychopathology in female participants

There were no significant differences observed between groups of female participants. This may have been in part due to the small sample size.

3.5 Statistical power

Power analyses were conducted with the aid of the statistical software package G*Power (Faul, Erfelder, Lang, & Buchner, 2007) and numerical information from Cohen (1988; 1992). It was established that a sample size of 88 participants would be required to achieve statistical power at the .8 level recommended by Cohen (1988; 1992) at a medium effect size (.3) level. Following data collection and statistical analysis, post-hoc power analyses were also calculated to establish statistical power achieved. Some of the literature theorises that reporting the estimated power of statistical analyses after they have been conducted, particularly when found to produce non-significant results, is not meaningful (Goodman & Berlin, 1994) However, it is also considered that a quantifiable measure of power may be useful and provide more information to readers of research projects (Onwuegbuzie & Leech, 2004; Wooley & Dawson, 1983). Controversially, reporting of post-hoc analyses is often requested of researchers by academic journals. In this instance, analyses may serve as a guide for recruitment for future expansions of this particular research project. Statistical power for significant results is considered and reported here.

For male participants (n = 32), with the alpha level noted as $p < .05$ (two-tailed), a medium effect size (.3) with chi-squared analyses can be calculated with .39 power. A large effect size (.5) can be calculated with .8 power. A small effect size (.1) can be calculated with .08 power. The average effect size of significant results obtained from groups of male participants was calculated as .44, using the Cramer's V statistic, denoting a medium to large effect size. Statistical power (1 – ß) for this sample size was thus calculated as .7, approaching the .8 power level recommended by Cohen (1988; 1992). For female participants (n = 13), with the

alpha level noted as $p < .05$ (two tailed), the effect size of significant results was calculated using the Cramer's *V* statistic as being .7. This denotes a large effect size. Statistical power was again calculated as .7.

Statistical power with Bonferroni adjustments was also calculated using G*Power, with the alpha level noted as $p < .001$. For male participants ($n = 32$) a significant result (two tailed) with a medium effect size would be calculated as having 0.05 power, meaning that the ß-value would be 0.95. This indicates that there would therefore be a 95% chance of committing a Type II error were Bonferroni adjustments to be used. For this reason, Bonferroni adjustments were not used in this instance.

4 Discussion

The aim of this research study was to establish whether there are similarities or differences between groups of male and female adolescents in an inpatient setting in terms of childhood abuse, adverse childhood experience, and psychopathological traits. In particular, whether experiences and traits can be identified as childhood risk factors for offending behaviour. Male violent offenders and sexual offenders were compared. Then subcategories of sexual offender, those who offend against children and those who offend against peers/adults were compared with violent offenders in order to further explore specialisation. Female participants, consisting of violent offenders and non-violent offenders, were compared on the same variables. A number of similarities and differences were found. This could be interpreted as support for both the generalist and specialist perspectives of adolescent offending. The heterogeneity of the sample is also emphasised.

4.1 Interpretation of findings

It was hypothesised that adverse childhood experience would be common with all participants, due to the nature of their detention in secure care and due to their mental health needs. This was supported, with all participants experiencing a number of variables in each domain, in accordance with the generalist perspective of adolescent offending.

Interestingly, all male sexual offenders identified in this study had additionally committed violent offences before their admission to secure care, resembling the versatile violent sexual offenders (VVSO) of Wanklyn et al. (2012) or the sex-plus offenders from

Butler and Seto (2002) and further supporting the generalist perspective. No "pure" sexual offenders were identified in this sample. This may be reflective of the high risk nature of adolescents admitted to this service. This may also explain some of the similarities between this sample's violent sexual offenders and violent offenders. Findings revealed that male adolescents who had committed sexual offences still differed from those who had not on a number of variables pertaining to early experience and one pertaining to psychopathology, supporting the specialist perspective. Participants who had committed sexual offences against children differed on variables when compared to those who had committed offences against peers / adults. This may suggest different etiological pathways, particularly as these differences lay in a number of life domains.

It was hypothesised that adolescent sexual offenders would have experienced higher levels of childhood sexual abuse than non-sexual offenders. This was supported, in accordance with the literature (Burton, Miller & Shill, 2002; Miner et al., 2011; Seto and Lalumière, 2010; Zakireh, Ronis & Knight, 2008). It is of note that adolescents who had sexually offended against children were statistically more likely to have been sexually abused themselves than those who offended against peers / adults, again echoing previous findings in the literature (Awad & Saunders, 1991; Ford & Linney, 1995). Similarly, sexual offenders were distinguished from purely violent offenders by the exhibition of sexualised behaviours in childhood (as in Wanklyn et al., 2012), also more common in those who sexually offended against children. Further analyses revealed that those who offended against children were also found to experience more difficulties in the academic domain, including poor school behaviour (resulting frequently in truancy or expulsion) and poor academic achievement. Social isolation was common

across all male offender groups, however was more consistently associated with sexual offenders. This is in accordance with the literature (Miner et al., 2010; Miner et al., 2011).

As expected, no female sexual offenders were identified in this sample. It was noted that Social Services involvement during childhood occurred more frequently with violent female offenders than with non-violent female offenders. Involvement with Social Services has previously been noted to be associated with criminal violence in male and female inpatients (Clare, Bailey & Clark, 2000). This could be indicative of a more disruptive family environment and higher severity of adverse experiences in the family home, however with so few female participants in this instance no conclusions can reliably be drawn. Nevertheless, implications for further research and assessment can again identified. It is considered here that research with female populations is needed for more tailored intervention and assessment.

Violent and sexually violent male offenders differed on the presence of a Learning Disability. In this sample, sexual offenders were more likely to be diagnosed with a Learning Disability. This finding is similar to some of the literature on adolescent offenders (Awad & Saunders, 1991; Ford & Linney, 1995). It is considered here that the adverse childhood experiences noted by participants (such as sexual abuse and social isolation) are compounded and exacerbated by the presence of such a cognitive impairment. Deficits in this area may lead to problems in rationalising and understanding adverse experiences, and coping with them in an adequate way. As noted above, cognitive impairment is associated with a number of difficulties such as poor planning and organising, poor emotional regulation and coping strategies, lack of insight, and poor behavioural inhibition and impulsiveness. Individuals with a

Learning Disability also frequently experience problems with the formation of social and intimate relationships, and furthermore may have poor understanding of social boundaries and social cues (Carr, 2006). It may be that these individuals are more likely to be rejected by their peers and potential intimate partners due to their difficulties, contributing to social isolation, and therefore be more likely to coerce or otherwise force others to engage in sexual activity with them due to their poor coping skills, lack of insight, and poor recognition of social boundaries and cues. This raises interesting questions and implications for intervention or prevention programmes concerning healthy relationships and social skills.

No other significant results were found regarding psychopathology. This could in part be due to the small sample size and the number of categories of diagnosis identified. It could also be theorised that there is a degree of variable overlap, as the social anxiety and low self-esteem identified in other studies as being characteristic of adolescent sexual offenders (e.g. Seto & Lalumière, 2010) may be represented here in the adverse experience variable of social isolation.

From a developmental perspective, it is considered here that adverse childhood experiences cause a negative impact on childhood attachments and resiliency, therefore creating vulnerabilities and affecting a number of life domains indirectly such as peer relationships, academic achievement, and coping style. One could observe from these results a hypothetical developmental trajectory in line with models of adolescent offending such as Patterson, DeBaryshe and Ramsey (1990). That is, poor parent-child interaction and family relations, important in the formation of attachment, go on to influence other domains of adolescent life such as poor peer relations and academic achievement due to

vulnerabilities such as poor social skills and poor behavioural inhibition. In the case of sexual offenders in this sample these vulnerabilities are more apparent and in more domains, particular in those who had committed offences against children. All sexual offenders in this sample were consistently noted to be more likely to have been a victim of intrafamilial sexual abuse than violent offenders, an experience that may have, amongst other things, affected the child's internal working model's view of relationships, self-worth, and intimacy (Miner et al., 2011). Sexual offenders were also noted to be more socially isolated in childhood. In the case of individuals who sexually offended against children, further difficulties such as poor academic achievement and poor school behaviour are likely to have exacerbated this social isolation, as such behaviour combined with poor social skills is unlikely to encourage prosocial peer relationships. All these experiences would have contributed to feelings of rejection and poor self-worth, and may have encouraged individuals to try and meet their attachment needs in inappropriate ways (Marshall & Barbaree, 1990, as cited in Ward, Polaschek & Beech, 2005; Marshall & Marshall, 2000; Miner et al., 2011). These effects are possibly compounded by the difficulties associated with poor cognitive functioning, including poor recognition of social boundaries and understanding of intimate relationships, which work together to lower inhibition and increase the likelihood of a sexual offence being committed.

4.2 Limitations of the present research

This study was conducted using a sample of adolescent inpatients detained in a medium secure psychiatric hospital. This is a specialist service, utilised by those whose needs cannot be met by mainstream NHS or community services, and therefore this population is considered atypical of adolescent offenders and

adolescents accessing mental health services. It is probable that this sample is representative of the population using such services, however it is unclear how generalizable the results of this study are to adolescents using other less specialist mental health services. Data collected from such adolescents cannot be considered to be wholly representative of the wider population, and therefore the importance of investigating a variety of settings is emphasised (Copeland et al., 2007). Nevertheless, this is a high-risk population that rarely has research conducted within it and it is beneficial to identify developmental risk factors that may aid in early intervention programmes before admittance to secure care. This population also provides data regarding psychopathology, however information regarding the onset of difficulties associated with this was not always clear and therefore data were recorded on the basis of mental state at the time of admittance to hospital. It would be beneficial in future, if possible, to explore this variable in relation to the onset of offending.

This study used retrospective systematic file review of hospital records as a method of data collection. As with all methods of data collection, this has its limitations. Although hospital records were comprehensive and included information from a variety of sources, there is a possibility that relevant information may have been missed simply because it was not recorded in official reports and chronologies. For example, variables pertaining to early experience may be more prevalent than noted in this study, but they were not reported to or recognised by the relevant authorities. Furthermore, it is difficult to quantify the severity of adverse experience from file review alone. Were systematic file review to be used again as a method of data collection during an expansion of this project, it would be beneficial to consider triangulation and cross-referencing throughout available documents. This would aid in establishing

whether information provided is the same across all disciplines. Despite these limitations, file review is not subject to environmental and social desirability factors that may affect other self-report forms of data collection, including self-selection bias, interviewer bias, and length of time in treatment (Sica, 2006). It is also provides a non-intrusive and way to collect data with minimal distress, and was therefore considered appropriate for this study and its available resources. Efforts were made where possible to minimise bias. All available participants within the timeframe of the study were approached for recruitment, and all were approached in the same manner in order to reduce selection and volunteer bias. It was not possible, however, to calculate whether there were differences between those who consented to participate and those who did not as all information required was held in patient files which could only be accessed with consent.

This study is limited by its relatively small sample size (n = 32 male and 13 female). It is possible that adolescents were reluctant to participate as they did not want someone they were unfamiliar with accessing their notes, although confidentiality was assured. This small sample size may have contributed to limited statistical power in analyses. Power analyses were conducted and it was established that a sample size of 88 participants would be required to achieve statistical power at the .8 level recommended by Cohen (1988; 1992) at a medium effect size (.3) level. At the adjusted $p < 0.001$ level following the Bonferroni correction, with statistical power again calculated as .8, 190 participants would be required to establish a medium effect size (.3). It is clear that larger sample sizes would improve the statistical power and the reliability of this study's results. Furthermore, they would allow for more statistical analyses to be conducted. Regression, for example, would allow for tests of predicative association between groups.

It should also be noted that this study's cross-sectional design limits the number of inferences that can be made. It is also noted that the decision not to use the Bonferroni correction may mean that results should be interpreted with caution. Causality is unable to be confirmed here, though recommendations are made for further research.

4.3 Implications for practice and future research

Exploring developmental risk factors has the potential for a number of benefits. Cross-sectional designs can merely observe that offending follows adverse childhood experiences, by looking at the data at one point in time, rather than aiding in prediction (Miner et al., 2011; Seto & Lalumière, 2010). Further research should explore adverse childhood experiences with a longitudinal design in order to establish whether they can aid in predicting which individuals are most at risk of the onset of offending. It is also vital to continue research with a number of comparison groups (i.e. one group of violent offenders, one group of non-violent offenders), something which is considered by some to previously been lacking (Zakireh, Ronis, & Knight, 2008). Furthermore, characterising offenders according to subgroups within their offence type, such as those who commit sexual offences against children and those who commit offences against peers / adults would be useful. This is important in order to determine specific factors that lead to the commission of different types of crime, and to lend further knowledge to the generalist or specialist perspective

Although this study uses data from a unique population, data collected from adolescents in prison or inpatient services is unlikely to be generalizable to the general population. It is therefore perhaps

unlikely to be able to inform us on who is at the highest risk of committing crime before it happens (Copeland et al., 2007). It would be beneficial to explore experiences in a community group of adolescents accessing mental health services in the UK (such as CAMHS – Child and Adolescent Mental Health Service) as a comparison. Unfortunately, this was not possible during this study's timeframe, however it is hoped that this can be achieved in the future. Such work would contribute to more thorough assessment measures, and early identification of at-risk individuals. Additionally, more work needs to be conducted regarding the onset of offending behaviour and psychopathological traits. Something that can also be achieved via a longitudinal design. It is also recommended that more research be conducted within an inpatient population, with male and female samples and using a variety of data collection methods to increase the validity of findings (e.g. self-report measures and file review), in order to learn more about these high-risk individuals and to learn more about psychopathology.

Theories on adolescent sexual offending in particular notes the influence of attachment theory and developmental experience (e.g. Marshall & Barbaree, 1990, as cited in Ward, Polaschek & Beech, 2005; Marshall & Marshall, 2000). Insecure attachments are thought to be common in those who experience abuse and neglect (Rosenstein & Horowitz, 1996) however studies investigating attachment in offending populations using validated and standardised measures are at present rare (Seto & Lalumière, 2010). Two recent studies (Miner et al., 2010; Miner et al., 2011) examined attachment in adolescent offenders using the *History of Attachments Interview (HAI)* (Bartholomew & Horowitz, 1999), a measure that examines past and present relationships with both parents and peers. Both studies noted that sexual offending against children was characterised by attachment anxiety. This is thought to

relate to fewer peer relationships, a lack of personal autonomy, and an expectation of rejection from others (Carr, 2006; Miner et al., 2011). More studies exploring attachment and its nuances would be beneficial in developing multi-systemic interventions to address different areas of difficulty. Furthermore, it would be of benefit to investigate whether interventions designed to address familial and interpersonal relationships can lessen some of the vulnerabilities caused by disrupted attachment, for example by developing social skills, decreasing isolation, identifying sources of support, and adaptive and prosocial ways of coping. These may be beneficial to those who present with other risk factors contributing to the onset of sexual offending.

4.4 Conclusions

This study is an initial exploration of adverse childhood experience and psychopathological traits using a sample adolescent inpatients detained in a specialist medium secure psychiatric hospital due to their risk of harm to others, and potentially their additional risk of harm to themselves. A number of similarities and differences were identified between male adolescent violent and sexually violent offenders, pertaining to childhood sexual abuse, sexualised behaviours, social isolation, and a diagnosis of a Learning Disability. Adolescents who sexually offended against children were in particular distinguished from other male participants on the variables of childhood sexual abuse, sexualised behaviours, poor academic achievement, and poor school behaviour. Differences relating to Social Services involvement were also identified between female violent offenders and non-violent offenders. These results lend support to both the generalist perspective of adolescent offending, in that all sexual offenders had additionally committed violent and property offences, and specialist perspective, in that

different adverse childhood experience and psychopathological traits distinguished sexual offenders from other participants. From a developmental perspective, it is considered that adverse childhood experiences contribute towards vulnerabilities increasing the risk of committing an offence.

Future research is encouraged with male and female samples to expand upon these findings in order to aid clinical practice with regards to early identification of at-risk individuals, and the construction of more comprehensive early prevention and early intervention programmes. In particular, longitudinal research with a variety of offender groups is recommended in order to further explore developmental pathways for violent and sexual offending, and to determine whether adverse childhood experience can aid in the prediction of at-risk individuals once they reach adolescence. These data can also be used to construct more comprehensive and targeted early interventions.

CHAPTER THREE

A SINGLE CASE STUDY INVESTIGATING EMOTIONAL RECOGNITION AND REGULATION IN AN ADOLESCENT CHARACTERISED BY ADVERSE CHILDHOOD EXPERIENCE AND COGNITIVE IMPAIRMENT

Abstract

This report details the assessment, formulation, and therapeutic intervention for an adolescent male with a history of adverse childhood experience and a range of offending behaviours including fire-setting, sexually inappropriate behaviour, and violence. At the time of writing this report Patient 1 is detained in a specialist medium secure psychiatric unit under Section 37 (hospital order) of the Mental Health Act. He was assessed with the Historical Clinical Risk Assessment (HCR-20), the Wechsler Adult Intelligence Scale (WAIS-IV), the Wide Ranging Assessment of Learning and Memory (WRALM-2), the Barratt Impulsiveness Scale (BIS-11), the Coping Responses Inventory – Youth Version (CRI-Y), the Culture Free Self-Esteem Inventory (CFSEI-2), and the Beck Youth Inventories (BYI-II). Behavioural Monitoring data and clinical observations from staff involved in Patient 1's care were also taken into account. Results indicated that Patient 1 had a number of deficits relating to cognitive functioning, memory, impulsiveness, and difficulties communicating to others and regulating emotional states and cognitions. Using these results and historical information pertaining to Patient 1's background, a psychological formulation was used to understand his current problematic behaviours in the context of these difficulties and adverse childhood experiences. In addition to this, functional analyses was constructed specifically with Patient 1 to be able to explore problematic and risk-related behaviours seen during his admission to secure services. Patient 1 engaged in a therapeutic intervention over a period of eight months which was designed to address his difficulties with emotional recognition and regulation, in addition to impulsive behaviours, and was tailored to his individual needs. The intervention consisted of cognitive-behavioural affective education, simplified and collaborative

functional analyses, and self-monitoring of emotional state and encouraging adaptive coping skills. Post-intervention psychometric results suggest that although Patient 1's motor impulsiveness decreased, his impulsiveness in other domains increased. Clinical observations and Behavioural Monitoring data support this, and suggest that Patient 1 has retained information learned during the course of the intervention. Patient 1 also received increased scores on all subscales of the BYI-II. Increased scores on post-intervention assessments may be due to increased awareness of affect and behaviour. Patient 1's progress and recommendations for further interventions are discussed in more detail.

Links with systematic review and empirical research paper

This case study provides an example of the effects of some of the variables identified in Chapter One's literature review and Chapter Two's empirical research project and their influence in an individual detained in the specialist medium secure psychiatric hospital identified in Chapter Two. Patient 1, the individual that this case study is centred on, is characterised by a number of adverse childhood experiences present in a number of life domains. He experienced a disrupted family environment, which involved domestic violence and parental psychopathology, social isolation and poor peer relationships, and poor academic achievement. Patient 1 was also physically and emotionally abused by his father. A number of these traits are identified in Chapters One and Two as being associated with individuals who have committed sexual and violent offences. Furthermore, he is subject to cognitive impairment, and is diagnosed as having a Learning Disability. Patient 1 has committed a number of offences, including sexual and violent offences, arson, and property damage. A developmental approach, as highlighted in previous Chapters, is used to create a psychological formulation of this individual's presenting problems and understand his difficulties whilst considering the impact of other factors, such as cognitive impairment. This case study also gives a level of insight into the presentations and needs of the young people who are detained in the specialist secure unit first described in Chapter Two's empirical research paper.

1. Introduction

Different emotional states are generally thought of as reactions to events that are deemed important to our welfare and our state of being, and consist of subjective experiences, physiological activity and subsequent behaviours (McClure et al., 2009). They are also thought to occur based on mental evaluative processes that occur so quickly that we are unaware of them (Ekman, 2003). Being able to interpret and express our own emotional states appropriately and effectively, as well as being able to accurately read emotional states in others, is believed to be an essential part of many aspects of individual functioning (Morris et al., 2007). This includes establishing and maintaining interpersonal relationships (McKenzie et al., 2000), and coping in stressful or emotionally charged situations (Brown & Wright, 2001). When an individual experiences an emotional state, a set of internal cognitive and physiological processes are thought to occur, along with impulses to act in a certain manner (Ekman, 2003). These processes are both internal and external, and are concerned with initiating, maintaining, and modulating aspects of the state: specifically, the occurrence, intensity, and expression. This is known as emotional regulation (Thompson, 1994). It may include processes such as how quickly an individual becomes aware of experiencing a particular state, how readily they can recognise and attribute a label and understanding to the state, and whether subsequent behaviours are instigated or ceased (Ekman, 2003).

Skills relating to emotional regulation, the expression of emotions, and the development of emotionally reciprocal relationships develop gradually from infancy (Saarni, 1999; McKenzie et al., 2000; Carr, 2006) and continues throughout the lifespan (McClure et al., 2009).

These skills are believed to, amongst other things, be essential to the formation of interpersonal relationships (Saarni, 1999) and cognitive tasks involving delayed gratification or inhibition (Thompson, 1994). Many theorists highlight the importance of a developmental approach and early experience (Carr, 2006; Morris et al., 2007; Riggs, 2010). Some childhood experiences, particularly those which disrupt childhood attachment, are believed to have an adverse impact on the development of skills relevant to emotional regulation and socialisation.

The tripartite model of the development of emotional regulatory skills and adjustment, developed by Morris et al. (2007) and presented pictorially below in Figure One, highlights several different areas within the family environment that are considered crucial. The strength in models such as this is that they consider aspects of different psychological theory: Attachment, social learning, and biological factors are all considered to interact together to contribute to the development of skills relating to emotional recognition and regulation.

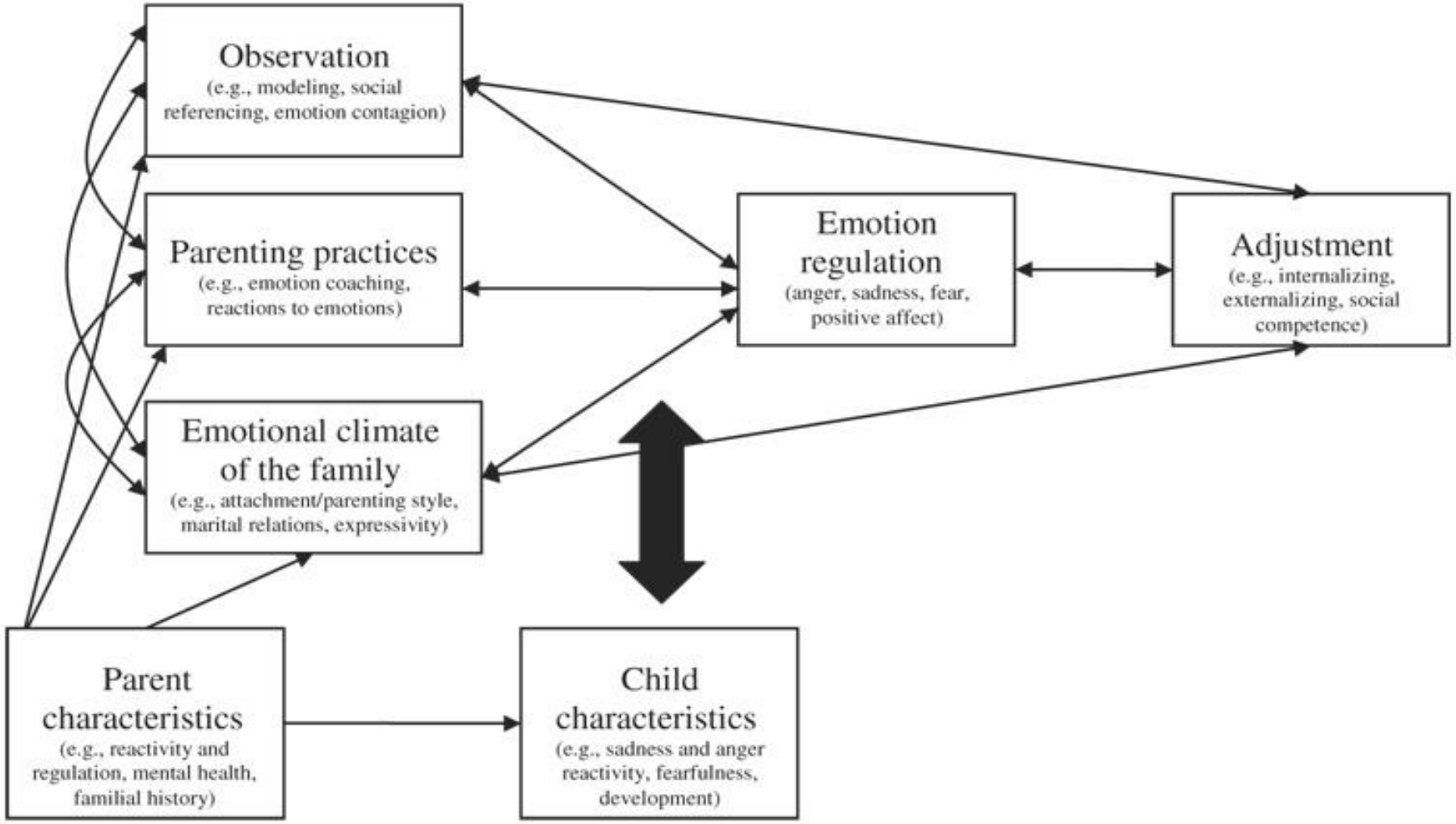


Figure One: The Tripartite Model of the Impact of the Family in Children's Emotion Regulation and Adjustment (Morris et al., 2007)

The development of emotional regulatory skills is thought to be, in part as noted above, based on learning and observation of others (see, for example, Bandura, Ross & Ross, 1963; Bandura, 1965). Behaviours and skills are hypothesised to be developed and learned via observation and modelling. Behaviours are observed in other people (models), learnt, and then sometimes imitated. By observing caregivers' displays of emotion, children and adolescents begin to learn what is appropriate and inappropriate in certain situations. Coping mechanisms for distressing or intense emotional states can also be observed. More contemporary theories of learning behaviour highlight the idea that early developmental experiences that are learned from can also act as vulnerabilities. These vulnerabilities can then affect the coping style and emotional responses to distressing life events (Mineka & Zinbard, 2006). This can relate to the observation of expression and control of emotion, such as anger. It is thought that these experiences can also act as invulnerabilities, if positive behaviours and coping mechanisms are learnt (Mineka & Zinbard, 2006).

Attachment is defined as a genetically predisposed relationship that is formed between an infant and its primary caregiver(s) (Bowlby, 1969). It is made in order to maximise chances of survival, and also to aid normal emotional and social development (Bowlby, 1969). It is thought to be evident across the entire lifespan, with initial childhood attachment behaviours being closely linked with later social interactions and intimate relationships via internal working models that represent previous experiences and expectations of future important relationships (Bowlby, 1969, 1973, 1980). The formation of attachment is in part based on the emotional availability, warmth, and consistency of control and support provided by caregivers to the developing child. Attachment is thought to be related to many psychological, social, cognitive, and

behavioural factors of development (Ainsworth et al., 1978; Shapiro & Levendosky, 1999), however for the purposes of this report only its relevance to the development of emotional regulation is focused on.

In order to regulate emotions children at first rely on their caregivers being attentive to their needs and soothing them in times of distress, however as they develop cognitively they learn self-soothing methods of their own (Carr, 2006). The emotional responsiveness of the caregivers to the child's emotional signals is thought to be critical contributing factor in how the child learns to organise and regulate emotional experiences, and learns to soothe themselves in distressing situations (Brown & Wright, 2001). Additionally, comforting negative emotional states and sharing or enhancing positive states can help children to become aware of their own internal emotional states (Riggs, 2010). In situations where caregivers are unavailable or unresponsive and therefore a secure attachment is not formed, emotional regulation and personal autonomy may therefore prove to be problematic. Individuals may struggle to identify and regulate their emotions and become confused when in emotionally charged situations (Brown & Wright, 2001).

Indeed, a secure attachment style has been linked to high emotional regulatory abilities (or "ego resiliency" in Kobak and Sceery, 1988), constructive coping strategies in children (Contreras et al., 2000) and lower negative emotional states in adolescents (Kobak & Sceery, 1988). In childhood relationships, where caregivers are only attentive to highly aroused emotional states, children can have a rapid rise in emotions, which makes them more difficult to soothe. This can lead to individuals more easily experiencing anxiety, frustration, or feelings of helplessness (Bergin & Bergin, 2009).

Additionally, the ability to self-regulate negative emotional states (e.g. anxiousness) when combined with the ability to delay gratification in childhood has been noted in later life as a protective factor against involvement in deviant activities, such as aggression and substance misuse, and personal and interpersonal difficulties, such as low self-worth, maladaptive coping, and peer rejection (Ayduk et al., 2000). It is hypothesised that the ability to delay gratification suggests an ability to attenuate to different internal cues, which can be used in order to regulate negative emotional states, and to use cognitive reappraisal strategies to logically analyse a situation. Although this study provides correlational conclusions, it suggests areas for further research. It is also highlighted that more longitudinal research is needed to explore this further (Morris et al., 2007).

In addition to attachment relationships, the temperament of the developing child and characteristics of caregivers are noted as contributing factors to the development of regulatory skills, as well as also affecting the development of attachment itself. Harsh and punitive parenting, for example, perhaps involving the minimisation and dismissal of the child's emotions when they are aroused, can influence the developing child by not allowing them to appropriately express and understand emotional states (Morris et al., 2007; Saarni, 1999). Furthermore the temperament of the child in terms of their reactivity to different emotional states, developmental stage, and attachment behaviours (e.g. intensive proximity seeking behaviours in an anxious-ambivalent style) may influence the reactions of their parents and exacerbating stress or negative affect, therefore eliciting more negative parental responses.

Of course, it is not just early experience that can influence the development of skills relating to emotional regulation. It is thought

that impaired executive function, often associated with planning and organising, can also affect the cognitive component of emotional control. This can lead to impulsive reactions to emotional cues or situations without considering the consequences or appropriateness of the emotion displayed (Attwood, 2008). Some individuals have also been noted to wrongly recognise and interpret emotions due to cognitive impairments (McClure et al., 2009), and to have difficulties naming specific emotions (Owen, Browning & Jones, 2001). However, research regarding emotional recognition in cognitively impaired populations is still relatively sparse. The normative process for developing skills relating to emotional recognition and regulation in cognitively impaired populations is unclear (McClure et al., 2009), and standardised assessments designed to measure emotional regulation are limited in both cognitively impaired and the general population (Gratz & Roemer, 2004; Morris et al., 2007). This has implications for assessment and intervention, and is highlighted as a need for further development. It is likely that adverse early experience exacerbates the difficulties faced by those with cognitive impairment, and indeed many of the social factors that impact on attachment such as disorganised caregiver behaviour or child abuse may also be considered risk factors for cognitive impairment (Carr, 2006).

Difficulties with emotional regulation and maladaptive coping mechanisms are noted as a contributing factor in offending behaviour. This includes sexual offending (Ward & Beech, 2005), fire-setting and angry affect or revenge (Swaffer & Hollin, 1995), and violence and reactive anger (Davidson, Putnam, & Larson 2000). Additionally, affective and behavioural instability, known as impulsiveness, is noted as a factor in many risk assessments for violent recidivism (e.g. Webster et al., 1997) and sexual recidivism (e.g. Worling & Curwen, 2001). It is also noted as a component of

poor emotional regulation (Thompson, 1994). Impulsiveness has been noted as a key component of criminal behaviour by Gottfredson & Hirschi (1990) in their general theory of crime (otherwise known as the 'self-control' theory of crime), which has received empirical support in literature reviews and meta-analyses (e.g. Pratt & Cullen, 2000) though is criticised by some for underestimating the complicated nature of self-control and it's development by focusing on parenting practices and forsaking the amount of influence that social learning and social context may have (Buker, 2011).

Of course, it is important to highlight that the commission of crime is a multi-factorial phenomenon, noted by many contemporary integrated theories of offending behaviour (e.g. Ward & Beech, 2005). Nevertheless, poor ability to recognise and regulate emotional states and inhibit behavioural responses appears to be a significant contributing factor in the commission of many offences. A developmental approach can be used to understand how early experience can contribute to the development of successful or maladaptive regulatory and coping strategies, and additionally to the development of offending behaviour. This is explored in the current report. This consists of assessment, formulation, and intervention with an individual characterised by adverse childhood experience contributing to current poor emotional recognition, regulation, and impulsiveness.

2. General Information

2.1 Ethical considerations

In order to retain anonymity, throughout this case study the patient will be referred to as 'Patient 1'. Information pertaining to Patient 1's psychosocial background and forensic history was obtained from a number of sources, including direct report from the patient during previous interviews and risk assessments. I was also involved in Patient 1's fortnightly ward round, and therefore had the opportunity to liaise directly with other disciplines involved in his care. Other information relevant to this case study was obtained through psychometric and neuropsychological assessment, extensive file review, and direct clinical observations of behaviour. Patient 1 consented to this intervention being written up as a report verbally and via a consent form, an example of which can be found in Appendix Seven.

2.2 Organisation details

The organisation in which this intervention took place is a specialist medium secure unit for adolescents and young adults from 12 years of age who present with challenging and / or offending behaviours, in the context of poor mental health. The male and female service users of the unit present with conditions relating to both Mental Illness and Developmental Disabilities, including Learning Disabilities and Autism Spectrum Disorder. The service additionally caters for service users who present with traits indicative of emerging personality disorder. Referrals for admission are received from many venues, including courts, other psychiatric units, prisons / young offenders' institutes, and community healthcare.

The unit operates a structured Risk Management Level (RML) scheme, which is altered depending on the levels of the service user's risk behaviours towards others and towards themselves, and the levels of safe and responsible behaviours evidenced. There are six levels within this scheme that range from immediate risk (Levels 1 and 2) to low risk (Levels 5 and 6). Each level has its own specific requirements and restrictions that are met to safely manage risks. As service users progress through the RML scheme, they are expected to demonstrate that they have increasing levels of internal self-management and responsibility alongside a decrease in risk and risk behaviours. Increased access to the unit grounds and eventually the community is given as the patients progress through the system.

Behavioural Monitoring data is a factor used to inform decisions relating to patient care and their RML. This serves as an overt recording of relevant observations, behaviour and incidents on the ward, and is used across the service that Patient 1 resided in at the time of this intervention. It is used by all members of the teams associated with the care of the service users, and acts as a recording of the service users' compliance with the rules and expectations of their ward. Rules are more concerned with risk behaviours, such as there being no physical aggression or verbal abuse, and expectations are concerned with day-to-day behaviours such as trying your best in sessions and using polite language. If the ward rules are broken then a review of the service user's RML may be initiated. Recordings are also made for incidents of deliberate self-harm (DSH) and other risk behaviours (ORB). The data also reflects their participation and engagement in therapeutic sessions, and patients can also earn stars that represent times when

they have gone over and above normal expectations during a session.

2.3 Patient introduction

Patient 1 is a 19 year old (18 at the time of intervention) Caucasian male who was admitted to the unit in June 2012 under Section 37 of the Mental Health Act (Hospital Order). He is diagnosed with a mild learning disability and hyperkinetic conduct disorder (according to the ICD-10). He was initially admitted to the male forensic admissions ward following a referral from court and an extensive history of antisocial and offending behaviour. He was transferred to the male rehabilitation ward shortly after admission due to safeguarding concerns about bullying from his peers.

2.4 Family history

Patient 1 is an only child. He has no history of physical health problems, however received input from health services from approximately aged 8 regarding difficulties with hyperactivity and behavioural problems. This consisted of medication. Patient 1 was left in the care of his father following an acrimonious split between his parents, whose relationship remains strained. This appears to cause some anxiety for Patient 1. Patient 1's main caregiver, his mother, left the family home following the dissolution of the parental relationship when Patient 1 was 8 or 9 years old. Patient 1's mother also experienced mental health problems relating to depression and anxiety following her divorce from Patient 1's father, and it is unclear how often she was involved with Patient 1's care.

Although there are no formal investigations by Social Services regarding Patient 1 experiencing abuse or neglect, there has been a

history of allegations made regarding violence and chaos in the family home. Reports were made of Patient 1's father being physically abusive towards Patient 1, including hitting him with a belt and a slipper. Patient 1 also began to smear faeces around the family home following arguments or altercations with his father. Patient 1 evidenced bruises and a lump on his head at several points after home visits, aged 13 after he had been voluntarily admitted into care, which were reported to Social Services. There were also concerns raised about inappropriate boundaries and emotional abuse within the family home. One incident involved Patient 1 sitting on his father's lap and licking his face like a dog, and another consisted of Patient 1's father being observed by Patient 1's mother to have squeezed Patient 1's nipples and making sexually inappropriate comments. It is reported that Patient 1 performed the same actions and made the same comments to his mother next time he saw her, and also to a nurse at the unit he was residing in at the time. Additionally, it has been queried whether or not Patient 1 witnessed domestic violence between his father and mother, including forced sexual intercourse, within the family home. It is felt by professionals involved in the care of Patient 1 that such events are likely to have occurred, and Patient 1's father has previously admitted to hitting his son with instruments other than his fists. However, no formal intervention procedures were followed.

Social Services became more involved and Patient 1 was voluntarily admitted into care aged 12 in 2007 due to his father finding his behaviour increasingly difficult to manage. There are reports of Patient 1 running away from home, and being abusive and violent when his needs were not immediately met. Additionally, Patient 1 began to develop an interest in fire-setting. Patient 1's behaviour continued to deteriorate still further once he was admitted into care, including fire-setting, absconsion, criminal damage, and violence

when boundaries were enforced. This behaviour lead to breakdowns in multiple placements before his admission to the unit in which he has resided since 2012.

2.5 Education history

Patient 1's educational history is disrupted and varied, and he has attended eight different schools and educational placements before admission to his current unit. It is apparent from educational reports that Patient 1 has had difficulties since he began school. He is noted to have displayed challenging behaviours since he was a toddler, leading to him often being kept separate from the other children at nursery. He was continually reported to be below his peers in terms of academic achievement, despite high levels of staff support. Aspects of Patient 1's behaviour consistently alluded in reports to include impulsiveness, rapid changes in affect and behaviour, absconsion from school, risky behaviour, and gravitating to and imitating the negative behaviour of peers. Particular incidents of note include running in to and lying down in roads, and threatening staff with cutlery or tree branches as weapons when he was aged 14. Since admission to secure care Patient 1 has mostly been keen to attend education sessions, however still sometimes finds it difficult to maintain concentration and attention.

2.6 Forensic history

Patient 1 has a substantial and varied forensic history. Patient 1 was admitted to medium secure care in June 2012 following difficulties in multiple previous placements. These problems included setting fires, sexually inappropriate behaviours, absconding, property damage, and assaulting staff. He has also been noted to be vulnerable to placing himself in danger due to his naivety and his

provocative behaviours. An example of this within his current secure placement would be to try to engage with his peers in an antagonistic manner, thus provoking them to verbal and physical aggression towards him. Additionally, there are records of Patient 1 running into or lying down in roads and setting fires within the family home whilst he resided in the community.

Patient 1 has previously been charged with criminal damage and shop-lifting, as well as assault. On occasion Patient 1 has also been reported to have been persuaded to shoplift alcohol for other children. It is of note that Patient 1 continued to engage in offending behaviours despite police involvement that resulted in supervision or referral orders.

An increase in Patient 1's aggressive and sometimes confrontational behaviour was noted when he was 13, though he has been noted as exhibiting it from a young age. He was arrested following an assault on a member of staff and threats to burn down the unit he was residing in. Reports from the same time also note that Patient 1 was threatening his father as well as kicking, punching, and throwing heavy objects at him. Aged 14 again assaulted staff at another placement, and he attempted to hit another member of staff with a vacuum cleaner, grab her breast, and bite her. Following this incident he was remanded in custody for a night. Aged 17 Patient 1 was arrested again after punching a member of staff several times who was trying to take a lit aerosol can from him. He also assaulted a peer following a disagreement about who would sit in the front of a car. He was again detained overnight in police custody after threatening to stab a member of staff who he had in a headlock at the time. Since admission to his current unit there have been no incidents of violence towards staff.

Patient 1 has a history of fire-setting behaviour in the family home and in subsequent care homes or residential services. He has previously set fires using a tea towel, and newspapers in an alleyway. Additionally he has previously used an aerosol can as a flamethrower and aimed it at staff. Patient 1 also set a fire in the garden of another care home using various materials, and refused to put it out. Furthermore, there was an incident where Patient 1 set fire to his father's door in the family home, as he wanted to be able to create a hole big enough to crawl through. Although this particular incident may be viewed as an attempt at problem solving rather than fire-setting behaviour, it is considered here within the wider context of Patient 1's history of affinity with fire, and is therefore included in his forensic history. There have been no recent incidents of fire-setting, as Patient 1 has not had access to incendiary materials.

Patient 1 is reported to have demonstrated sexually inappropriate behaviour from a young age, though not all incidents have been verified. This has included searching for pornographic material in public places, trying to sexually touch female staff in previous placements, exposing himself to staff in previous placements, and on two occasions exposing himself to young girls whilst in a community setting. There have been no verified reports of Patient 1 engaging in a reciprocal intimate relationship. Since admission to the current unit Patient 1 has grabbed female staff on several occasions, and additionally been involved in a safeguarding incident with a younger peer during which Patient 1 exposed himself and touched his peer's genital area.

2.7 Current presenting problems

Since admission to the unit in 2012, Patient 1 has presented with many problem behaviours. These include over-tactile behaviour with staff and peers, as well as impulsive and sometimes reckless behaviours. He will frequently act in a provocative and antagonistic manner towards peers (e.g. by saying overly sexualised comments or by insulting them). He can react with abusive language and aggression if boundaries are enforced. Patient 1 has experienced problems with interpersonal relationships throughout his life. He is highly suggestible, which leads to him being easily manipulated by older peers to act in an anti-social manner. Patient 1 will also engage in such behaviour of his own accord to try and gain the approval of his peers.

Patient 1 has previously experienced and continues to experience period of elation and impulsiveness, and appears unable to consider consequences until they have happened. This obviously has repercussions for himself and for any victims of his behaviours. Staff have noted that Patient 1 can appear confused and unable to communicate his emotional states, and that his behaviour is characterised by impulsive stimulation seeking and poor ability to delay gratification.

3. Assessment

During the assessment period Patient 1 appeared eager to complete the measures provided. Due to Patient 1's level of cognitive functioning, care was taken by the session facilitator to ensure that he understood the assessment procedure and the materials used. He read through the questions with the session facilitator in order to ensure that he understood the content and meaning of them, and was observed to be considering his responses. He also asked questions appropriately if he felt that he did not understand something. Information gleamed from these assessments went on to inform the intervention procedure, and to further inform Patient 1's structured professional judgement risk assessment for further violence and other offending behaviours.

Neuropsychological assessments (WAIS-IV and the WRALM-2) were completed in order to comprehensively assess Patient 1's cognitive functioning and memory, and to identify any areas of difficulty so that interventions could be tailored to his needs and information presented accordingly. Psychometric measures were used to provide supplementary data regarding Patient 1's impulsiveness (using the BIS-11), coping strategies (using the CRI-Y), self-esteem (using the CFSEI-2), and affective stability and disruptive behaviour (using the BYI-II). Clinical observation and Behavioural Monitoring data provided additional information. Please see Appendix Ten for pre-intervention raw data, and Appendix Nine for Behavioural Monitoring scoring criteria.

Assessment of Patient 1's capability of emotional recognition, regulation, and the communication of emotional states to self and others was mostly qualitative, consisting of clinical observation and involving consideration of his vocabulary used to describe emotions,

and the subtlety and variety in the way he expressed each emotional state (Attwood, 2008).

3.1 HCR-20 Risk Assessment for Violence – Version 2 (HCR-20) (Webster et al., 1997)

The HCR-20 is an assessment designed to gauge the probability of violent recidivism based on structured professional judgement (SPJ) principles, where clinical judgement is guided by set items concerning both static and dynamic factors. In the organisation where this intervention took place it is updated every six months after its initial completion, in order to reflect the dynamic and sometimes changing nature of relevant factors.

The HCR-20 consists of three sections, each of which contains different items relevant to violent recidivism. The first is 'historical factors', containing information relating to mostly static factors such as history of violence, early initiation of violence, early maladjustment, substance misuse, and prior supervision failure. The second is 'clinical factors'. This section consists of information pertaining to dynamic current factors such as lack of insight, impulsiveness, and responsiveness to treatment. The third section contains information relating to dynamic and future 'risk management factors', such as the feasibility of future plans, possible stressors that will be encountered by the patient, and potential lack of support. Risk scenarios are also constructed, to form an understanding of antecedents and consequences were future episodes of violence to occur. Please see Appendix Eight for a template used for the HCR-20.

This assessment was completed using previous psychological reports, previous social worker reports, educational reports,

correspondence, and structured interviews with Patient 1. Risk scenarios were formulated regarding Patient 1's risks of violent recidivism, fire-setting behaviour, sexually inappropriate behaviours, and absconsion. The HCR-20 identified a number of areas that need to be further assessed and addressed with regards to Patient 1's offending behaviour, both violent and otherwise. In particular, his lack of insight into his actions and their consequences and his impulsiveness were highlighted.

3.2 Wechsler Adult Intelligence Scale – Fourth Edition (WAIS-IV) (Wechsler, 2008)

The WAIS-IV is an individually administered test of a person's intellectual ability and cognitive strengths and difficulties. The assessment yields five composite scores: Verbal Comprehension Index, Perceptual Reasoning Index, Working memory Index, Processing Speed Index and Full Scale IQ. The assessment also yields a General Ability Index which is less sensitive to the influence of working memory and processing speed. Please see Table One for Patient 1's full results.

Patient 1's performance on this WAIS-IV placed him in the ***extremely low*** range of cognitive functioning. His FSIQ score of 64 falls at the 1st percentile with 99% of Patient 1's peers likely to receive higher scores on this assessment. A FSIQ of 69 indicates a mild learning disability in the ICD-10 diagnostic criteria, although an assessment of adaptive functioning is also required for a diagnosis to be made.

Results of this assessment indicate that Patient 1 is likely to have difficulties performing a number of tasks and following and understanding instructions presented to him verbally. Patient 1

would benefit from information being presented to him in a simplified manner and accompanied by pictures. Patient 1 may require instructions and conversations to be delivered slowly and repeated in a distraction free environment. Patient 1 is also likely to have difficulties expressing himself verbally and may require additional time and support to communicate his needs effectively. Additionally, he is also likely to display difficulties with non-verbal reasoning and problem solving and may require assistance when attempting to effectively problem solve.

Table One: Full WAIS-IV results, including subscales

Index/IQ Subtest	**Score**	**95% Confidence Interval**	**Percentile Rank**	**Descriptive Category**
Verbal Comprehension	70	65-75	2	Below Average
Similarities Vocabulary Information (Comprehension)	4 5 5 8			
Perceptual Reasoning	63	58-68	1	Lower Extreme
Block Design Matrix Reasoning Visual Puzzles (Figure weights) (Picture Completion)	4 3 4 4 5			
Working Memory	69	64-74	2	Lower Extreme
Digit Span Arithmetic (Letter- Number Sequencing)	4 5 3			
Processing Speed	79	74-84	8	Below Average
Symbol Search Coding (Cancellation)	7 5 9			
Full Scale IQ (FSIQ)	64	56-69	1	Lower Extreme
Global Ability Index (GAI)	63	54-65	1	Lower Extreme

3.3 Wide Ranging Assessment of Learning and Memory – Second Edition (WRALM-2) (Sheshlow & Adams, 2003)

The WRAML 2 is a standardised measure used to assess clinical issues relating to learning and memory functions/ The WRAML 2 is composed of six subtests that yield three indexes a) Verbal Memory Index, b) Visual memory Index and (c) Attention/Concentration Index. The WRAML 2 is most appropriately used to obtain a picture of a broad range of memory abilities in order to help to identify strengths and weaknesses.

The index scores form the General Memory Index which provides a composite of all memory functions assessed. Patient 1's General Memory Index of 63 (90% CI, 56-75) places him in the ***impaired*** range and suggests that 99% of his same age peers would perform better on this assessment than Patient 1. These scores indicate that Patient 1 will perform at much lower levels than his age group for tasks that involve verbal and visual memory skills, and for tasks that are dependent on contextualised and rote memory. According to these scores, he is likely to present with deficits that have a noticeable impact on demands that involve the use of memory.

When interpreting scores and discrepancies of the WRAML-2 assessment, it is important to consider behavioural and environmental factors. Patient 1's presentation on the date of testing is likely to have affected his performance, including factors such as his poor ability to sustain attention or to remain focused on a task without getting distracted. This is in line with Patient 1's clinical presentation and diagnosis of Attention Deficit Hyperactivity Disorder (ADHD), as well as his presentation on the unit. This will

have affected his scores on subtests, and thus the validity of his assessment. It is likely that his scores are not a true and accurate representation of his true abilities. It is therefore recommended that other measures of memory and executive functioning are applied with Patient 1.

3.4 Barratt Impulsiveness Scale – 11th edition (BIS-11) (Patton, Stanford, & Barratt, 1995)

The BIS-11 is a 30 item scale that assesses an individual's level of impulsiveness on a 4 point Likert scale from 1 (rarely or never) to 4 (almost always or always). It assesses impulsiveness in terms of three domains: Motor impulsiveness; Non-planning impulsiveness; and cognitive impulsiveness. Motor impulsiveness relates to levels of motor activity and the extent to which an individual acts without thinking. Cognitive impulsiveness assesses the tendency to make quick cognitive decisions. Non-planning impulsiveness measures the ability to consider and plan for the future.

Table Two: Pre-intervention BIS results

Subscale	Score Pre	Interpretation Pre
Motor Impulsiveness	28	Well above average
Cognitive Impulsiveness	27	Above average
Non-Planning Impulsiveness	20	Average

Patient 1's responses to the BIS indicate that he experiences ***above average*** levels of motor impulsiveness and ***above average*** levels of cognitive impulsiveness. These results are corroborated by observations of his behaviour pre-admission and on the ward, where

his levels of impulsiveness have been noted. Patient 1's score for non-planning impulsiveness was ***average***, which appears at odds with clinical observations and other assessments (e.g. the HCR-20) which suggest that Patient 1 is generally unable to understand the consequences and impact on his future that his behaviours can have.

3.5 Coping Responses Inventory- Youth Version (CRI-Y) (Moos, 1993)

This assessment is a measure of eight different coping responses to stressful life circumstances. These responses are measured by eight scales: Logical Analysis (LA); Positive Reappraisal (PR); Seeking Guidance and Support (SG); Problem Solving (PS); Cognitive Avoidance (CA); Acceptance or Resignation (AR); Seeking Alternative Rewards (SR); and Emotional Discharge (ED). The first four scales measure approach styles of coping, and the latter four scales measure avoidance styles of coping. The first two scales in each set measure cognitive coping strategies. The third and fourth scales in each set measure behavioural coping strategies.

The CRI-Y was administered to Patient 1 using the structured interview format. He described the problem / situation (focal stressor) as "coming to the unit [that he currently resides in], and feeling scared and upset".

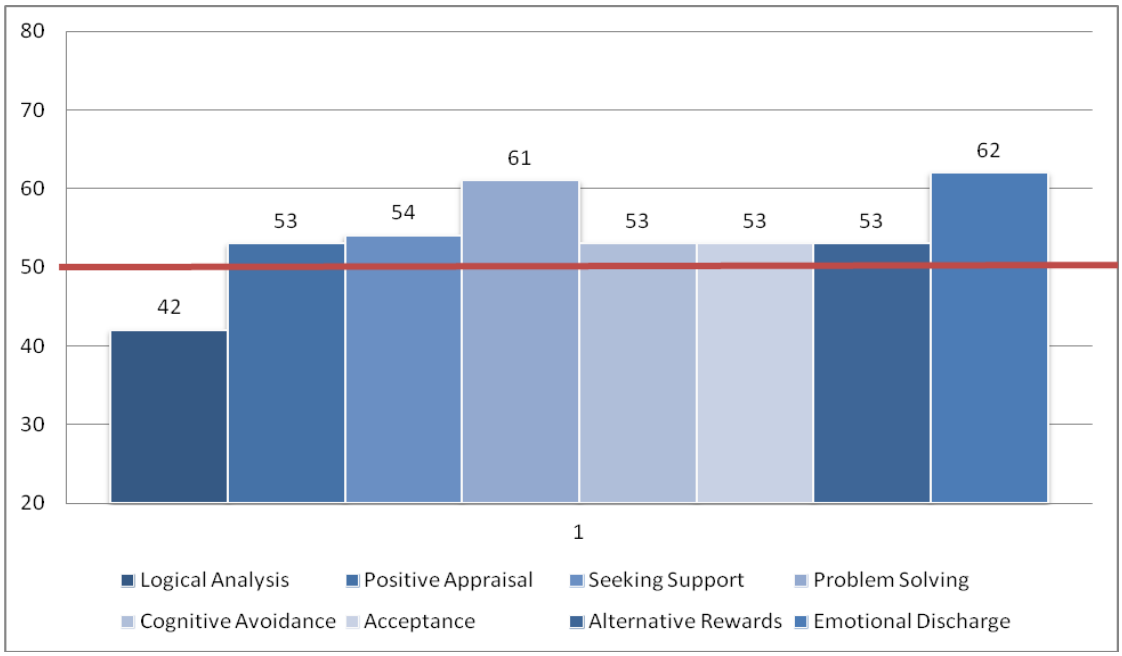


Figure Two*: Pre-intervention CRI-Y scores*

These results suggest that Patient 1 makes behavioural attempts to take action to deal directly with the problem, and behavioural attempts to reduce tension by outwardly expressing negative feelings as opposed to regulating them. Patient 1 scored below the average on logical appraisal. This suggests that Patient 1 does not make cognitive attempts to understand and to prepare mentally for a stressor or its consequences. Patient 1 reported average scores in other areas of cognitive coping styles, suggesting that he may tend to use behavioural methods as a way of coping and may act impulsively. This is corroborated by other assessments (e.g. BIS-11) and his behaviour on the ward.

3.6 Culture Free Self-Esteem Inventory – Second Edition (CFSEI-2) (Battle, 1993)

The Culture-Free Self-Esteem Inventories – Second Edition (CFSEI-2) is a 40 item forced choice (yes / no) assessment that consists of four subscales:

- *General self-esteem* refers to individuals' overall perceptions of their worth
- *Social self-esteem* refers to individuals' perceptions of the quality of their relationships with peers
- *Personal self-esteem* refers to individuals' most intimate perceptions of self-worth

This assessment also includes a *Lie subtest*, which consists of items that measure an individual's defensiveness as they respond to the assessment.

When the CFSEI-2 was administered to Patient 1 he began to answer the questions himself (self-report format) however soon asked the assessor to read them out for him so that he could answer. His results are presented below.

Table Three: Pre-intervention CFSEI-2 results

Self-esteem	Score	Interpretation
General	13	High
Social	5	Intermediate
Personal	3	Low
Lie Scale	7	Does not appear defensive
Total Score	21	Intermediate

Patient 1 scored 7 out of 8 on the Lie subtest. This suggests that he has not been responding defensively.

Patient 1's total score was 21 out of 32, suggesting an ***intermediate*** level of total self-esteem. Patient 1 received an ***intermediate*** score of 5 out of 8 for *social self-esteem* and a ***low*** score of 3 out of 8 on *personal self-esteem*, suggesting that Patient 1 experiences high difficulties with his perception of his own self-

worth, and intermediate difficulties with his perception of his social relationships. This is in keeping with observations of Patient 1's interpersonal relationships on the ward, where he is noted to be vulnerable and open to manipulation because of his desire to make and keep friends.

3.7 Beck Youth Inventory – Second Edition (BYI-II) (Beck, Beck, & Jolly, 2005)

This assessment comprises five self-report scales to assess the young person's experience of depression, anxiety, anger, disruptive behaviour and self-concept. Each inventory contains twenty statements about thoughts, feelings, or behaviours associated with emotional and social impairment in young people. Each item is rated on a four point Likert scale.

Table Four: Pre-intervention BYI-II results

Inventories	Score	T Score	Interpretation
Self-concept BSCI-Y	35	45	Average
Anxiety BAI-Y	16	55	Mildly elevated
Depression BDI-Y	13	54	Average
Anger BANI-Y	23	59	Mildly elevated
Disruptive behaviour BDBI-Y	14	58	Mildly elevated

The BYI-II assessment indicates that Patient 1's self-reported levels of anxiety, anger and disruptive behaviour are ***mildly elevated*** when compared to peers of a similar age. These results are in

keeping with clinical observations where Patient 1 has appeared anxious at times. Patient 1 also displays difficulties with anger management on occasions and disruptive behaviour on the unit.

4. Analysis and Formulation

4.1 Clinical / Criminogenic Formulation

Psychological formulations include both distal (predisposing) factors, which focus on developmental events that have occurred in the individual's childhood or adolescence, and related proximal factors that concern more immediate variables and environmental or social triggers (Lindsay, 2011). It incorporates personal and contextual predisposing factors, precipitating and perpetuating factors, as well as protective factors and an exploration of the consequences of behaviour (Carr, 2006). A psychological formulation was constructed concerning Patient 1's presenting problems. A pictorial example of this formulation can be found below, in Figure Three.

Frequently, formulations are developed collaboratively with the patient as this can strengthen the therapeutic relationship and aid in the patient's understanding and perception of their difficulties (Westbrook, Kennerley, & Kirk, 2011). In this particular case, the formulation was not developed in collaboration with Patient 1. There were several reasons for this. Firstly, it is at present unclear how much Patient 1 recalls of his childhood and how he has interpreted events such as the domestic violence between his parents and the physical abuse that he experienced. This has not yet been explored with him in an appropriate environment and therapeutic manner. Secondly, it is likely that Patient 1 would be unable to process the information presented to him in this format due to its abstract nature, and due to the thought processes that are necessary to link past experience with present actions. Therefore, this formulation was created for use amongst the MDT and nursing staff associated with Patient 1's care in order to provide greater understanding of his

needs and how they can be met. Collaborative functional analyses, which are short-term and relating to present actions, are presented in Tables Five and Six. These were created with Patient 1, and proved to be a simple and understandable way for him to think about his difficulties.

This formulation explores Patient 1's early experiences in terms of familial and social contextual factors, as well as personal factors, in order to understand how current presenting problematic behaviours and previous antisocial behaviour developed. Using a systemic developmental approach we can see how Patient 1's early experiences, combined with factors such as his level of functioning, have helped to shape these. Additionally, the use of the developmental model for antisocial behaviour (Patterson, Debaryshe, & Ramsey, 1990), outlined in Figure Four, can also help understand Patient 1's behaviour by exploring wider social context and developmental trajectory.

A relationship with and attachment to parental figures characterised by emotional warmth and availability, responsiveness and trust is believed to be important for adaptive adjustment and psychological resilience (Gullone & Robinson, 2005), as well as the development of a secure attachment. Patient 1 was raised in an environment that would have been at times distressing and chaotic. Additionally, he suffered the loss of his mother from the family home following dissolution in the marital relationship when he was eight years old. Patient 1's mother is reported to have "suffered a mental breakdown" relating to anxiety and depression shortly after this, and it was alleged by Patient 1's father that his mother regularly "drank to excess". These factors would have had an effect on the emotional availability of Patient 1's mother, and her involvement in his care. There are also reports of domestic violence between

Patient 1's father and mother, including forced sexual intercourse. It is unclear whether Patient 1 directly witnessed this, however it is likely that he would have observed the acrimonious relationship between his parents and at least heard incidents of violence. Furthermore, Patient 1's father is reported to have been physically punitive on a number of occasions. Authoritarian parenting is noted to contribute to an interpersonal style that is shy and reluctant to take initiative (Carr, 2006), and additionally Patient 1 would have witnessed his father's expression of angry affect and violence to him and to his mother as a way of coping with negative arousal.

In summary, Patient 1 experienced a stressful home environment that was high in expressed emotion and inappropriate boundaries, and would not have been conducive to a secure attachment and the resilience that it offers. Furthermore, due to Patient 1's level of cognitive functioning he would have struggled to rationalise his early experiences. Additionally, this contributes to difficulties such as poor ability to recognise changes in affect, lack of insight into behaviour, and a lack of behavioural inhibition. Although Patient 1's specific hypothetical insecure attachment style has not been tested, he craves attention from peers and adults and appears to be unable to derive comfort from it or sustain the relationships. Additionally, he exhibits a poor sense of self-worth and indeterminate views of others. It may be that Patient 1 developed an anxious-ambivalent or disorganised attachment style during childhood.

Patient 1's attachment needs and relationships with family and peers would have been affected by his childhood temperament, in turn affected by his level of cognitive functioning. Due to this and his behavioural problems Patient 1 performed poorly in educational settings, and experienced multiple placements. This is likely to have impacted upon his acquisition of knowledge and some skills. This

would also have made it difficult to form relationships and exacerbated feelings of rejection and poor self-worth, leading to a craving for acceptance and emotional fulfilment from peers and involvement in deviant activities to achieve this.

It is hypothesised that Patient 1's previous offending behaviour (including fire-setting and sexually inappropriate behaviour) and current problematic behaviours (including overly tactile behaviour and periods of elated affect) developed as a result of adverse childhood experience, contributing to attachment difficulties, poor cognitive functioning, poor self-esteem and poor emotional regulatory skills. Patient 1 craves to be accepted by a peer group, and is easily manipulated into deviant activities, perceiving this as acceptance and thus increasing his sense of self-worth and self-esteem. Additionally, due to Patient 1's emotional and attachment needs not being met by his parents or by a peer group, he has struggled to develop adequate emotional regulatory skills. Patient 1 is characterised by fluctuations in mood, in addition to impulsive and stimulation-seeking behaviours. He is regularly unable to delay gratification and control these, and undertakes deviant activities as a form or regulation. It is felt that Patient 1 lacks insight into these factors due to his level of functioning and his background. Therefore a main target for interventions is increasing Patient 1's insight, whilst taking into account how tasks will need to be adjusted for his level of functioning, before progressing to offence-specific interventions.

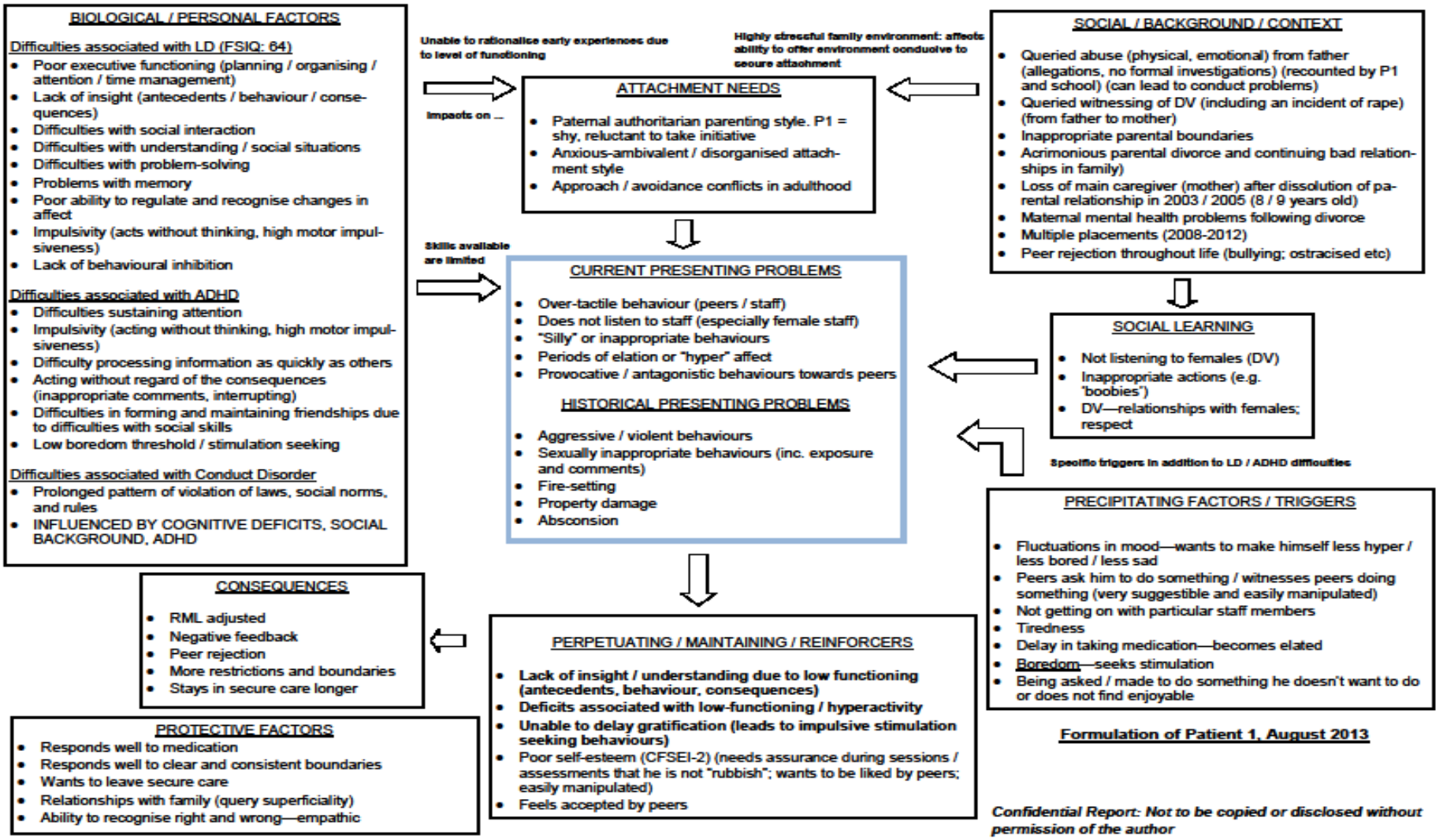


Figure Three: Psychological formulation of Patient 1's presenting problems

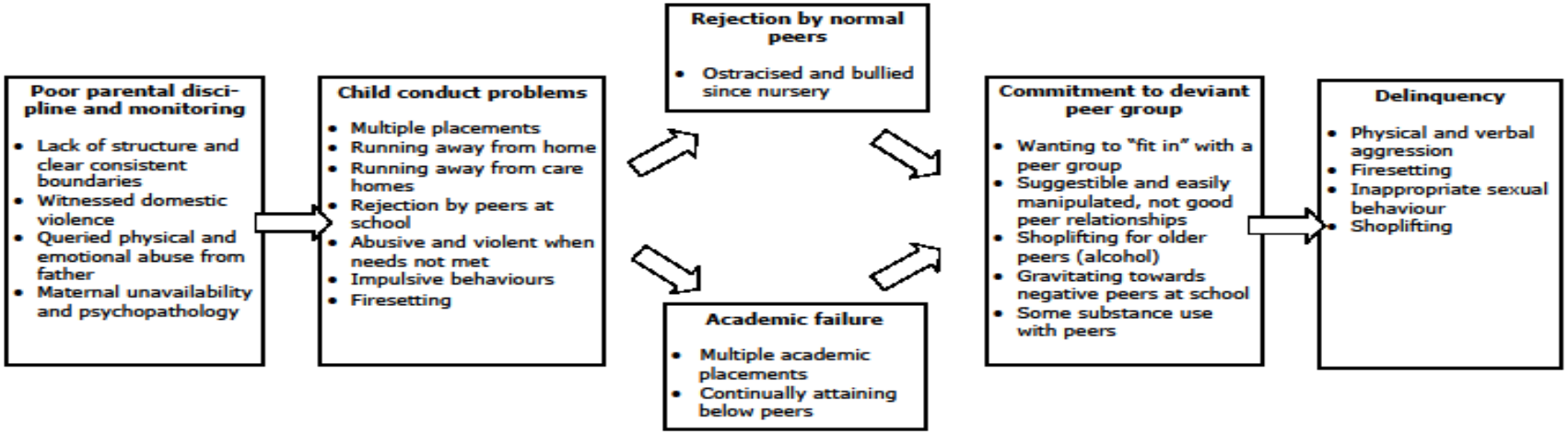


Figure Four: Based on the 'Developmental Model of Delinquency' (Patterson, Debaryshe, & Ramsey, 1990)

4.2 Functional Analysis

Functional analysis is a method of assessment which seeks to make an individual's behaviour understandable by taking into account relevant functional information, and providing an explanation of additional influential relevant variables (Lappalainen, Timonen, & Haynes, 2009). This takes the form of an A-B-C approach: that is, Antecedents (factors and events present or occurring before the behaviour), Behaviour, and Consequence (positive or negative, following the behaviour). Antecedents can consist of distal or proximal factors.

Simplified functional analyses were conducted in order to establish the functions of some of Patient 1's current behaviours using proximal factors. These were conducted in collaboration with the patient after basic work on identifying simple emotional states had been conducted using body outlines (described in more detail below). This was to ensure that he remained involved in his care and the structure of the intervention, as well as serving to encourage him to reflect on his behaviour and increase his understanding. Tables Four and Five below demonstrate two examples of these analyses, and are presented in Patient 1's own words. These analyses also aided in the construction of the psychological formulation of Patient 1's clinical needs, described above. Patient 1 was asked about his physical condition, emotional state, social interactions, and events external to the ward. How recently these events occurred were also discussed with him.

From discussion with Patient 1, it is clear that he was beginning to be able to note his emotional state as an influence in his behaviours. This was built upon in sessions, by further exploring physiological antecedents and consequences.

Table Five: Not listening to staff / Not complying with staff requests

Antecedent (A)	Behaviour (B)	Consequence (C)
Negative Antecedents ➢ Tired ➢ Sometimes you don't get on with some staff ➢ Sometimes I'm fed up (sometimes I can't get outside)	*Negative Behaviours* ➢ **Not listening to staff**	*Consequences* ➢ Get to go out even less ➢ Placed on 15s ➢ Prompted lots
Positive Antecedents ➢ Sweeties ➢ When I am in a good mood ➢ When I am happy ➢ When I think I will get praise	*Positive Behaviours* ➢ **Listening to staff**	*Consequences* ➢ Positive praise ➢ Don't get put on 15s ➢ Get to go out more ➢ Go up RMS levels

Table Six: Over-tactile behaviour (including play-fighting and hugging)

Antecedent (A)	Behaviour (B)	Consequence (C)
Negative Antecedents ➢ Hyper ➢ Not really thinking about what I am doing ➢ Heart going really fast ➢ Want something	*Negative Behaviours* ➢ **Touching people when they don't want to be touched**	*Consequences* ➢ Get a warning ➢ Maybe lose RMS levels ➢ Calmer
Positive Antecedents ➢ Not hyper ➢ Keep my hands in my pockets if I am hyper ➢ Stop and think	*Positive Behaviours* ➢ **Not touching people** ➢ **Using Quiet Room (low stimulus environment)**	*Consequences* ➢ Praise ➢ Get to go out in the hospital grounds more ➢ Keep RMS levels ➢ Calmer

4.3 Responsivity Issues

The Risk Needs Responsivity (RNR) approach (Andrews, Bonta & Hoge, 1990) has three core principles. These state that offence-related or offence-specific therapeutic interventions need to:

- *Risk principle*: interventions, in terms of intensity of assessment and management, should be aligned with the offender's risk of recidivism
- *Need principle*: interventions should focus on criminogenic needs, and target causal risk factors for offending behaviour
- *Responsivity principle*: interventions should be tailored to the needs of the offender, and be delivered in ways that maximise their effectiveness

More specifically, in terms of *Responsivity*, interventions need to be tailored to the offender's individual learning styles and abilities, as well as to their motivations and strengths (Hart & Logan, 2011). It is clear from the assessment process and from clinical observation that there were several issues which could have potentially impacted on Patient 1's engagement in and progress through treatment. In particular, his level of functioning and attention difficulties. The intervention took into account these responsivity issues, and was specifically tailored to Patient 1's needs. Sessions were very repetitive in nature, due to Patient 1's difficulties in sustaining attention and recalling information presented to him. Similarly, instructions and structured tasks were broken down into small manageable chunks. Much information was presented visually, and Patient 1 was encouraged to lead sessions by using his language and thoughts to complete work.

This intervention also took into account the principles of *Risk* and *Need*. Patient 1 is viewed by the professionals involved in his care as being a high risk of committing further offences due to his stimulation-seeking behaviour and poor ability to cope with delayed gratification. However, due to Patient 1's lack of insight and difficulties in understanding his own emotional and physiological states and recognising the differences between thoughts, emotions, and behaviours (as observed during Psychology group sessions), he has thus far not been ready for offence-specific interventions such as the ASOTG (Adapted Sex Offender Treatment Group) or substance misuse programmes due to hypothesised difficulties in grasping more abstract concepts. Therefore, it was felt that Patient 1 would benefit from completion of offence-related clinical work to increase his knowledge and understanding of clinical factors relevant to his offending behaviour, such as emotional recognition and regulation. Additionally, learning cognitive-behavioural principles of thoughts, emotions, and behaviours. Following this, he would be reconsidered for offence-specific group work.

5. Intervention

This intervention was designed specifically for Patient 1 on the basis of his individual needs, identified through clinical observation, assessment, and formulation, and empirical evidence. Sessions were interactive and used a variety of methods, and were presented in a dynamic and friendly manner to aid therapeutic rapport and engagement and also to take into account Patient 1's difficulties with attention and concentration. Sessions were schedules to last between 20 and 30 minutes. Weekly sessions were delivered on an individual basis. This intervention ended due to Patient 1 being assessed by and subsequently shortly moving in the near future to a new lower-security placement closer to his family, therefore further directions are highlighted towards the end of this report.

Affective education, focusing on increasing the patient's knowledge of emotional states and their relationship to thoughts and behaviours, uses a combination of discussion and tailored activities (Attwood, 2008). It has been noted to be a key component in interventions for individuals with developmental disabilities, including those with Asperger's syndrome (Attwood, 2008), co-morbid mood disorders, and impaired cognitive abilities (McClure et al., 2009). This intervention was based on cognitive-behavioural principles, featuring solution-focused elements. Cognitive Behavioural Therapy (CBT) is a collaborative therapeutic model that uses both cognitive principles, such as the idea that it is an individual's interpretation of events and emotions that is most important, and behavioural principles, such as that what we do influences our thoughts and emotions (Westbrook, Kennerley, & Kirk, 2011). There is a wide evidence base for the effectiveness and efficacy of interventions based on cognitive behavioural principles, for a wide range of psychological problems in both adolescence and

adulthood (Butler et al., 2006). Presenting issues can be thought of as interactions between thoughts, emotions, behaviour, and the wider environment. Certainly, this can be noted from Patient 1's analysis and formulation, in terms of stimulation seeking behaviours as a form of emotional regulation and in terms of negative thought processes contributing to poor attitude and interaction with others. As well as this, this intervention aimed to identify how Patient 1 perceives his emotional states and situations the evoke them. It was hoped that with increased understanding, Patient 1 would be better able to notice the salient cues that indicate emotional states and to express and communicate his emotions to others. Additionally, it was also hoped that Patient 1 would be better able to control the impulsive and stimulation-seeking behaviours that followed them, as outlined in his formulation above, by recognising his states and therefore seeking more appropriate ways of regulation.

It is felt by some that there are at least seven emotions with distinct facial expressions that are recognised almost universally. These include sadness, anger, fear, surprise, disgust, and happiness (Ekman, 2003). These emotions and others were explored individually with Patient 1, in order to avoid creating a dichotomous association of 'good' and 'bad' emotions and to increase Patient 1's awareness of the nuances and idiosyncrasies of each emotional state. For example, noting down that each emotion is likely to have different triggers, facial expressions, and physiological experiences associated with it. Outlines of bodies were used in sessions, on which Patient 1 could note down sensations, thoughts, and expressions that he experienced for each emotion. Antecedents and consequences were also explored. In addition to this, pictures of facial expressions were used so that Patient 1 could explore the emotional states of others.

It was noted that Patient 1 struggled with the vocabulary to express his emotional states, therefore the intervention also aimed to increase this by exploring the language that he may use to describe emotions. Similarly, care was also taken to allow Patient 1 to explore and express different levels of emotional states in his own words, such as 'pleased' and 'hyper (elated)'. Therefore, in some sessions a paper thermometer was used, on which Patient 1 could plot different levels of emotion using post-it notes.

A weekly emotions diary was introduced after nine sessions for Patient 1 to be able to continue self-monitoring, and also to provide more qualitative information. Self-monitoring is noted as being an effective way of treating some emotional states in cognitively impaired populations (Whitaker, 2001). Coloured stickers were used and placed on arrows to demonstrate high or low mood. Patient 1 established a key for each colour (e.g. orange = hyper etc), and would note down antecedents to each emotional state. He would then bring it to each weekly session to discuss. Patient 1 also completed simple functional analyses which were hoped would increase his understanding of the importance of emotional states in his actions. These are described in more detail above.

Towards the end of the intervention Patient 1 began to explore how other people might express particular emotions, how he could recognise this, and also continued to explore how they and he would respond in particularly emotionally salient situations. This was achieved by discussing hypothetical situations and writing things down. Material previously covered was also re-explored, and Patient 1 participated in small quizzes to gauge knowledge.

After completion of the intervention Patient 1 was presented with a series of prompt cards, consisting of facial expressions representing emotions discussed during sessions and of relevant "warning signs" that he was experiencing a particular emotional state.

In addition to individual work, Patient 1 also participated in a weekly Psychology core group. The core group is held weekly on the ward and all young people are expected to attend. Over recent weeks, the group has focused on the Think Good Feel Good programme, developed by Stallard (2003). Modules included recognising the difference between thoughts, feelings and behaviours, as well as identifying thinking errors and challenging these. More recently, the group has started to explore the Skillstreaming programme (based on a programme developed by Goldstein, 1999), which includes skills such as active listening and emotional expression. Patient 1 generally did not engage as well in these group sessions as he did in individual sessions. This may be due to several reasons, including being distracted by his peers and due to the lack of individual staff support to aid with complicated concepts.

Examples of worksheets and diaries used during the intervention can be found in Appendix Eleven.

6. Results

All assessments completed pre-intervention were repeated post-intervention with the exception of the neuropsychological assessments such as the WAIS-IV and the WRALM-2. This is in part due to their relatively stable nature, and additionally due to administration guidelines stating a minimum period necessary before re-administration. Patient 1's HCR-20 has also recently been updated, however as there were no changes observed in the rating of items and subsequent risk scenarios it is not reported here. Clinical observations and Behavioural Monitoring data is also summarised. During the post-assessment period Patient 1 appeared to be less eager to complete the measures provided. He did complete all that were given to him, however was less willing to read through them with the session facilitator first and stated that he understood most of the questions. He continued to ask the facilitator to clarify the meaning of some words or phrases appropriately. Please see Appendix Twelve for raw post-intervention data.

6.1 Barratt Impulsiveness Scale – 11th edition (BIS-11) (Patton, Stanford, & Barratt, 1995)

The BIS-11 is a 30 item scale that assesses an individual's level of impulsiveness on a 4 point Likert scale from 1 (rarely or never) to 4 (almost always or always).

Patient 1's scores post-intervention have increased for cognitive and non-planning impulsivity. They have decreased for motor impulsivity, though are still ***above average***, suggesting that Patient 1 may be trying to think more before he acts on impulse.

Table Seven: Post-intervention BIS results

Subscale	Score Pre	Score Post	Interpretation Pre	Interpretation Post
Motor Impulsiveness	28	22	Well above average	Above average
Cognitive Impulsiveness	27	28	Above average	Well above average
Non-Planning Impulsiveness	20	24	Average	Above average

Clinical change statistics have not been calculated for this assessment, as normative data relating to relating to individuals in secure settings or with mental health difficulties is unavailable.

6.2 Coping Responses Inventory- Youth Version (CRI-Y) (Moos, 1993)

The CRI-Y was again administered to Patient 1 using the structured interview format. Efforts were made to keep the focal stressor (or problem) as similar as possible to the pre-intervention stressor. Therefore Patient 1 chose the problem / situation of "moving to another placement" and noted that he was feeling worried about it.

These results demonstrate an increase in most methods of coping. These results suggest that Patient 1 is trying to making attempts to cognitively understand and prepare for the stressor. Furthermore, he is seeking support and alternative rewards, and is making behavioural attempts to reduce negative emotions by expressing them.

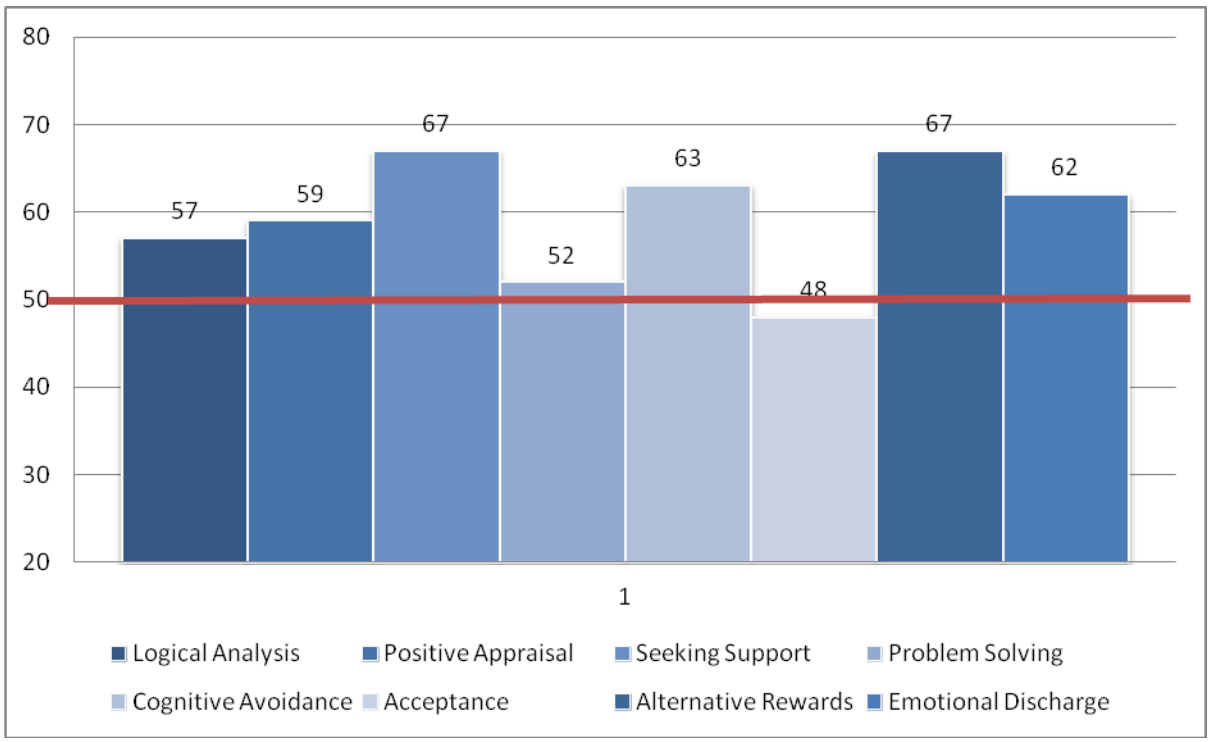


Figure Five*: Post-intervention CRI-Y scores*

6.3 Culture Free Self-Esteem Inventory – Second Edition (CFSEI-2) (Battle, 1993)

This is a 40 item forced choice (yes / no) assessment that consists of four subscales measuring general, social, and personal self-esteem. A lie subscale is also included.

Table Eight: Post-intervention CFSEI-2 results

Self-esteem	**Score Pre**	**Score Post**	**Interpretation Pre**	**Interpretation Post**
General	13	11	High	Intermediate
Social	5	6	Intermediate	High
Personal	3	5	Low	Intermediate
Lie Scale	7	8	Does not appear defensive	Does not appear defensive
Total Score	21	22	Intermediate	Intermediate

Patient 1's post-intervention scores have increased for *social* and *personal* self-esteem, changing the interpretation to ***high*** and ***intermediate*** respectively. Patient 1's total self-esteem score has increased by two points, however this is still interpreted as an ***intermediate*** score.

Clinical change statistics have not been calculated for this assessment, as normative data relating to individuals in secure settings or with mental health difficulties is unavailable.

6.4 Beck Youth Inventory – Second Edition (BYI-II) (Beck, Beck, & Jolly, 2005)

This assessment comprises five self-report scales to assess the young person's experience of depression, anxiety, anger, disruptive behaviour and self-concept. Each inventory contains twenty statements about thoughts, feelings, or behaviours associated with emotional and social impairment in young people. Each item is rated on a four point Likert scale.

Table Nine: Post-intervention BYI-II results

Inventories	Score Pre	Score Post	T Score Pre	T Score Post	Interpretation Pre	Interpretation Post
Self-concept BSCI-Y	35	30	45	39	Average	Much lower than average
Anxiety BAI-Y	16	24	55	63	Mildly elevated	Moderately elevated
Depression BDI-Y	13	17	54	58	Average	Mildly elevated
Anger BANI-Y	23	19	59	55	Mildly elevated	Mildly elevated
Disruptive behaviour BDBI-Y	14	20	58	66	Mildly elevated	Moderately elevated

Patient 1's post-intervention scores have increased for the BAI-Y, BDI-Y and BDBI-Y subscales. This suggests that Patient 1 experiences high levels of difficulties in these domains. Patient 1's score has decreased by four points for the BANI-Y subscale, however this still remains in the ***mildly elevated*** range.

Clinical change statistics have not been calculated for this assessment, as normative data relating to individuals in secure settings is unavailable. Although normative data relating to a clinical sample and matched control was available, it was based on individuals aged 7 – 14 years only. As Patient 1 was 18 at the time of assessment, it was felt these norms would not be relevant.

6.5 Clinical observation and Behavioural Monitoring data

Patient 1's Behavioural Monitoring data have been used here to provide a comparison of behaviours that violate the rules of the ward (generally relating to risk behaviours) and the expectations of the ward. Data are used from the time period before commencing the intervention (eight months) and from the time period during the intervention (eight months). Pictorial representations of this data is provided in Graph 3 and Graph 4 below.

During the intervention there were 35 recorded occasions where Patient 1 did not comply with the rules of the ward (230 previously). This involved behaviours such as invasion of staff or peer personal space (21 incidents, 105 previously), verbally abusive language (six incidents, 57 previously), and physical aggression towards property (three incidents, 32 previously). There was also one incident of sexually inappropriate language (24 previously), and no incidents of sexually touching another peer or staff member (7 previously).

There were 157 recorded occasions where Patient 1 did not comply with the expectations of the ward (627 previously). This involved behaviours such as not interacting politely with others (65 incidents, 324 previously), and not complying with reasonable staff requests (60 incidents, 284 previously).

Overall, there has been a marked decrease in undesirable behaviours, however Patient 1 exhibited more instances of not behaving sensibly when out in the unit grounds with staff (6 incidents, 3 previously), and not engaging well in educational or therapeutic sessions (23 incidents, 11 previously) during the eight months of intervention when compared to before. It is also of note that Patient 1 has begun to request to use the ward's de-escalation room on occasion, explaining to staff that he feels "hyper". All of these data will be re-analysed and compared with new data in the eight month period following the completion of the intervention, to see if Patient 1 maintains his behaviour using the skills he has learned.

Figure Six*: Behaviours not meeting the rules of the unit before and during intervention*

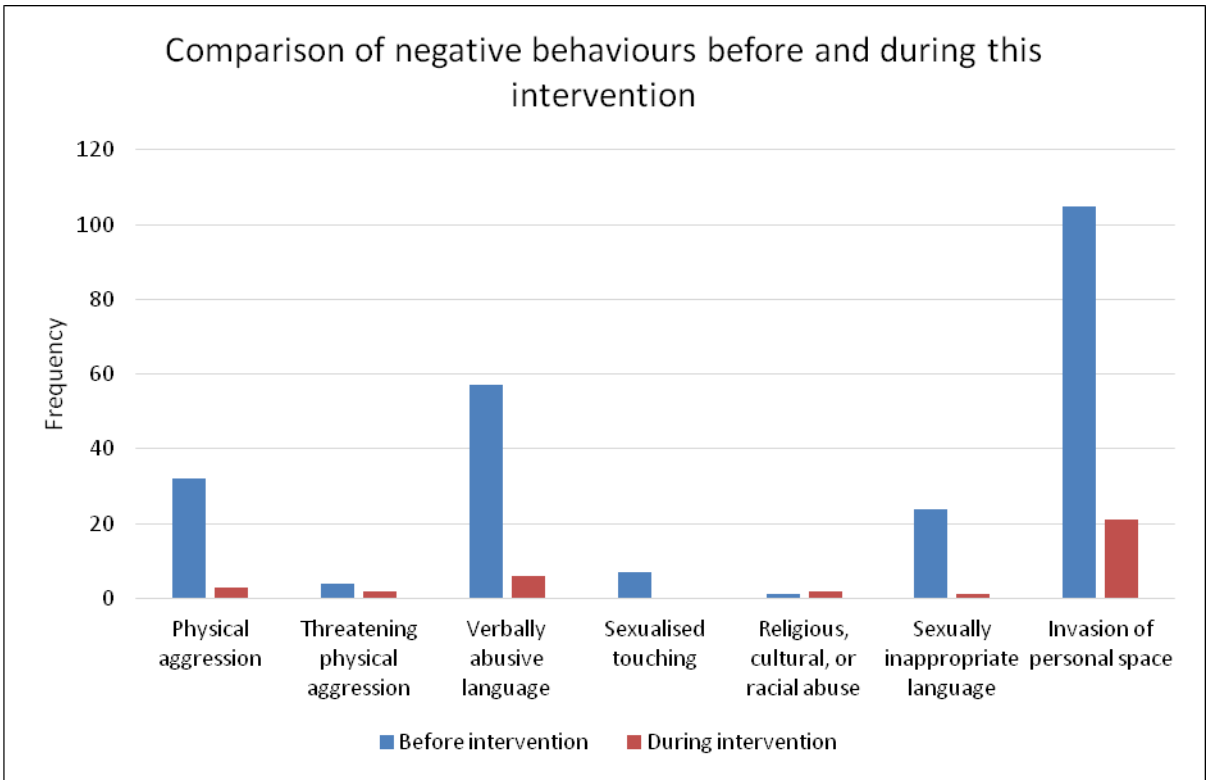
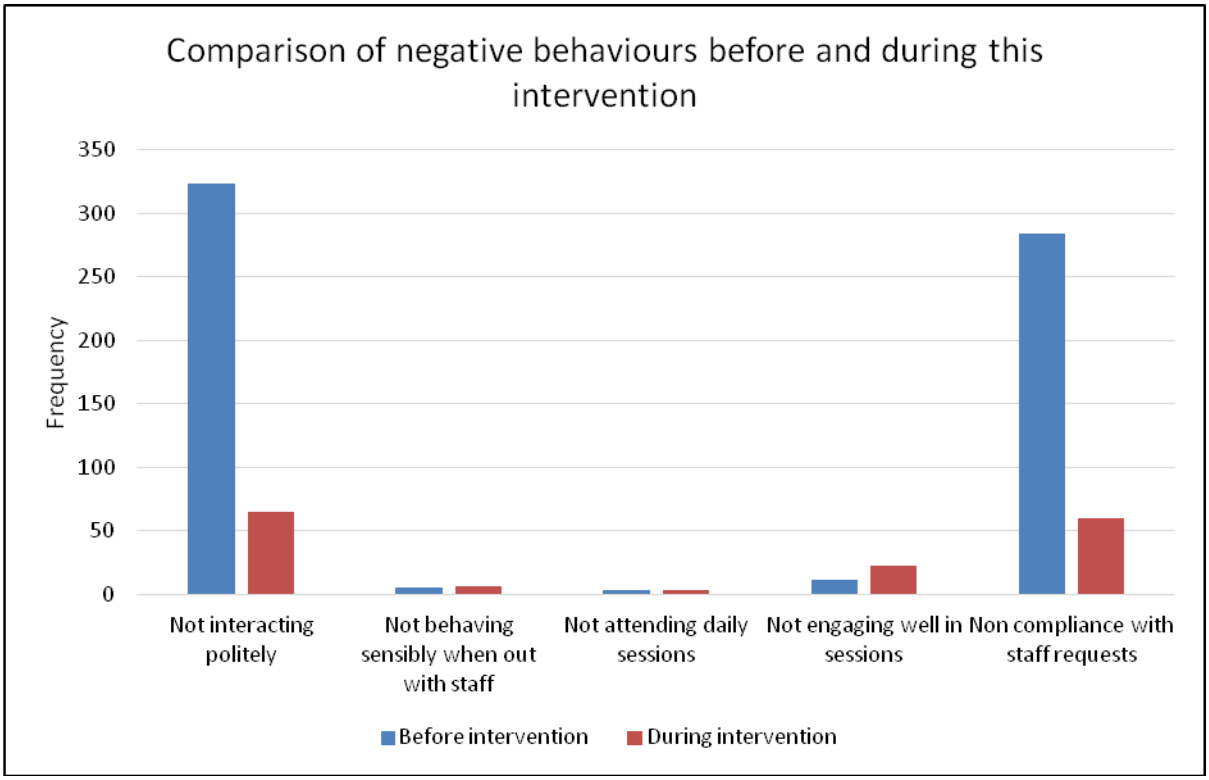


Figure Seven*: Behaviours not meeting the expectations of the unit before and during intervention*



7. Discussion

This report aimed to analyse the efficacy of a therapeutic intervention programme designed specifically for Patient 1, a young adult residing in a medium secure psychiatric unit. It was hoped that this intervention would increase Patient 1's understanding and awareness of emotional states, and use more adaptive ways of regulating them. It was also hoped that Patient 1 would show a reduction in impulsive behaviours due to this increased understanding and increased awareness of antecedents and consequences. Additionally, this intervention was designed to act as a precursor to offence-specific work, which Patient 1 will be re-assessed for once his understanding of basic principles has increased. Patient 1 demonstrated observable changes in his behaviour, and in some of his assessment scores. Most notably, it can be observed that Patient 1 exhibited a sharp decrease in behaviours that did not meet the expectations or the rules of the ward, including risk behaviours such as invading the personal space of others or sexually inappropriate behaviour. Furthermore, an increase in inhibition of negative behaviours was observed as Patient 1 sought adaptive ways of coping with emotional states (Thompson, 1994).

7.1 Psychometric assessment outcomes

Pre-to-post intervention scores on the BIS-11 suggested that Patient 1 feels he has improved in the domain of motor impulsiveness, denoting greater ability to inhibit behaviour, however he also self-reported increases in cognitive and non-planning impulsiveness. These results could be due to Patient 1 having a greater awareness of his behaviour and impulse control

difficulties. They could also have been affected by factors other than this intervention, including the incentive of a home visit after progressing through the RMS. Impulsiveness continues to be noted as one of Patient 1's difficulties in Care Programme Approach meetings, and will therefore continue to be addressed through therapeutic intervention.

The CFSEI-2 suggests that Patient 1 retains higher levels of *personal* and *social* self-esteem post-intervention. This may be due to him demonstrating more control over his impulsive and intrusive behaviours (such as invading his peers' personal space), which would influence his relationships on the ward. Clinical observation notes that Patient 1 does still have difficulties with his peer group, and remains easily influenced in order to gain approval. Indeed, on one occasion during the intervention Patient 1 had his RML adjusted accordingly from Level 4 to Level 3 (denoting an increase in risk) after he was encouraged to and subsequently imitated the behaviour of one of his peers by invading the personal space of another in an inappropriate manner. Therefore it is recommended that further individual or group work concerning social skills and interpersonal relationships is conducted with Patient 1.

Results for the BYI-II suggest that Patient 1 experiences greater difficulties relating to factors concerning anxiety and depression, and disruptive behaviour. This could be due to an increased awareness of emotional states and the contributing factors to them. It is also of note that at the time of assessment administration the ward that Patient 1 resides on was being affected by the unsettled behaviour of a peer, and Patient 1 may have been experiencing anxiety relating to this.

It is difficult to compare the results of the CRI-Y pre- and post-intervention due to the nature of the assessment and the necessary use of different focal stressors. To try and minimise the disruption this may cause, efforts were made to consider a focal stressor as similar as possible to the original, deciding on going to a new placement and not knowing what was going to happen. This stressor is particularly salient at present, as Patient 1 is also aware of his parents' stresses and emotions regarding his move to a potential new placement. Furthermore, there is some confusion as to where he will be placed and this is causing some anxiety. Patient 1 appears to have demonstrated an increase in most cognitive and behavioural methods of coping. This also relates to an increase in both approach and avoidance strategies, echoing Moos' (1993) assertions that adolescents who experience more pervasive stressors tend to employ more coping styles of all types. Patient 1 is most notably using more cognitive strategies such as Logical Analysis. This suggests that Patient 1 is trying to making attempts to cognitively understand and prepare for the stressor. He is also seeking support more frequently from others, something that is also noted in clinical observation. There has however been a reduction in acceptance (or resignation), suggesting that Patient 1 is not making cognitive attempts to react to this stressor by accepting it. Furthermore, there has also been a reduction in Problem Solving, suggesting that Patient 1 is not making many behavioural attempts to deal with the problem directly and is instead using strategies such as Seeking Alternative Rewards. These results could be due to Patient 1 seeking out more adaptive ways of dealing with negative emotions, and utilising the support network that he has available to him in secure care – something that he did not have to such an extent when living in the community.

7.2 Engagement in Intervention

Patient 1 appeared to enjoy individual time, and mostly complied with all the structured work asked of him, though did require prompting on occasion to commence or to stay on task. Frequently he would state that he was tired or bored, however often with encouragement settled to complete structured tasks. When instructions and tasks were broken down into very small and clear pieces Patient 1 tended to work well in sessions. They were scheduled for half an hour each time, and he could frequently maintain concentration for approximately 15 to 20 minutes, which was in contrast to his general presentation on the unit.

At times Patient 1 appeared motivated and engaged very well, and on other occasions he appeared to be unable to concentrate. Engagement in structured work was often dependent on the wider social context of the ward and Patient 1's family interactions. It is also of note that sessions occurred on the same day of his fortnightly ward round, and therefore Patient 1 was often anxious about the outcome of this. On occasions where Patient 1 was low in mood or preoccupied, less structured sessions were facilitated that focused on current difficulties and offered a supportive environment for discussion and problem-solving. It was felt that this was beneficial for Patient 1, as encouraging him to engage in structured activities may have affected his overall willingness to participate in the intervention and additionally may have produced work of poor quality.

Throughout the intervention Patient 1 struggled with discerning between thoughts, emotions, and behaviours, although this did improve. Nevertheless, this is an area that further intervention would be beneficial. This is discussed below. Patient 1 on occasion

expressed anxiety that he was going to give the "wrong" answer to a piece of work, and would say that he doesn't know rather than risk this. On these occasions he responded well to positive feedback and reassurance, and gradually came to be more confident in providing answers that he was unsure of for discussion. Despite this, in future interventions a social desirability measure such as the Paulhus Deception Scale (Paulhus, 1998) may be beneficial to administer, in order to help gauge the truthfulness of Patient 1's answers to psychometric assessment.

Patient 1 demonstrated good ability to identify how he may recognise emotional states in other people, for example that when people laugh this may imply that they are happy. This is an area in which many with cognitive impairments are believed to struggle (Attwood, 2008; McClure et al., 2009; McKenzie et al., 2000). However, it is interesting to note that frequently Patient 1 needed prompting in this task by highlighting specific people and asking how he would recognise that they were experiencing particular emotional states (e.g. "How could you tell if your mother was sad?") before providing a viable answer. This suggests an area of further exploration, in terms of generalising Patient 1's understanding, and also a potential interesting area of research amongst cognitively impaired populations.

7.3 Future directions

As Patient 1 has now completed work that was aimed at developing a basic understanding of cognitive-behavioural principles, it is felt that an adaptation of slightly more complicated programmes, such as Think Good Feel Good (Stallard, 2003), may be beneficial for Patient 1 in using cognitive strategies to regulate negative affect such as anxiety. Although Patient 1 has encountered this

programme before in a group setting, he mostly remained passive during sessions when individual staff support was not offered due to a lack of understanding and poor concentration. It may be that Patient 1, following this intervention, would engage well with Think Good Feel Good in individual sessions.

A collaborative approach involving members of the Occupational Therapy team may be beneficial to Patient 1, in order to introduce sensory approaches into this work. For example, via the use of programmes such as "How does your engine run?" (Williams & Shellenberger, 1996) which provide visual aids and simple language to aid understanding. Unfortunately this was not able to be organised during this intervention, due to staff availability. Should this work be undertaken in the future, then it is important to use the same language that Patient 1 used and learned during this intervention in order to ensure continuity and minimise confusion. Patient 1 may also benefit from the use of biofeedback programmes, such as the Relaxing Rhythms software which uses electrodes to measure galvanic skin responses (GSR), respiration, and heartbeat. Such programmes can aid individuals who struggle with emotional regulation by helping them learn to control their physiological responses in order to achieve the goals set by the programme.

In terms of interventions to address risk and offence related behaviours, Patient 1 has recently commenced a Moral Reasoning group as a precursor to the ASOTG programme. It was felt that Patient 1 had remained settled for a long enough period of time, and had additionally developed increased understanding of his own impulses and behaviour. Feedback from sessions facilitators suggests that Patient 1 is generally engaging well in the group, however can at times be tempted to remain passive and let his

peers dominate discussion. Patient 1 has shared that he find the topics discussed in the group, such as sexually appropriate and inappropriate behaviours, embarrassing and difficult to discuss. He has agreed to complete the current module, with a view to reviewing his attendance after this providing he has not moved to a new placement. It is still felt that Patient 1 would still struggle with more abstract concepts in offence-specific interventions, and therefore it is paramount that they be tailored to his needs in similar ways to this one. Patient 1 would benefit from interventions relating to fire-setting and interpersonal difficulties, which are related to his risk of further offending.

7.4 Other factors to take into consideration

The strengths of this intervention lie within the length of time that it continued for, and in its construction. This intervention was constructed for Patient 1 alone, and therefore other aspects of his difficulties were able to be explored. He was encouraged to think of more adaptive mood regulatory and coping skills, and explored some of the problem behaviours that he exhibits on the ward. Due to their tailored nature, sessions were designed to cover material in repetitive manner in order to aid with understanding and recall, and information was presented in short chunks and using a variety of structured tasks. Efforts were made to make tasks adolescent friendly, and pictorially wherever possible to reflect difficulties highlighted in assessment procedures. Additionally, empirical evidence was considered and therefore the intervention considered factors such as self-monitoring emotional states (Whitaker, 2001), and rating scales (such as the 'emotion thermometer') (Attwood, 2008).

Sessions were held with Patient 1 over a period of eight months, and he was able to build good therapeutic rapport. Therapeutic relationships are viewed by some as being a form of attachment relationship for the patient in that they involve interpersonal interaction and caregiving (Dozier & Bates, 2004), though the extent to which positive therapeutic relationships affect other interpersonal experiences needs further empirical evidence (Westbrook, Kennerley, & Kirk, 2011). It may, therefore, have been beneficial for Patient 1 to develop such a good rapport and positive relationship in an environment with appropriate and consistent boundaries. Patient 1 may also benefit from formal assessment regarding his hypothesised attachment style to parents and peers, such as via the *History of Attachments Interview (HAI)* (Bartholomew & Horowitz, 1991), so that future interventions can take into account any potential difficulties that may emerge and address these.

One difficult aspect of this intervention is that follow-up procedures will be unable to be implemented in the current setting because Patient 1 will shortly be moving to another service. However, clear recommendations have been made in professional reports for further work that needs to be completed with Patient 1, and handovers are extremely comprehensive. Patient 1 has thus far responded well to the relational, procedural, and physical security offered by the current setting, and to the clear structure and boundaries inherent in the unit.

Patient 1's recently updated HCR-20 risk assessment highlights that he continues to have limited insight with regards to his mental health difficulties and the impact of his behaviour upon others. He has reported that he does not know why he is in hospital and does not consider himself to be 'dangerous or violent', other than when

he sets fires. It is therefore imperative at present that he continues to reside in services with enhanced security and boundaries. It is felt that Patient 1 would easily begin to exhibit offending behaviours again, particularly as he has not yet completed any offence-specific interventions, should he have access to incendiary materials or should he experience a lack of supervision, boundaries, and clear consequences. Additionally, Patient 1 would be vulnerable to exploitation by delinquent peers, with whom he will try to 'fit in'. Patient 1 will continue to be supported in these matters whilst residing in secure care, and will be re-assessed for adapted offence-specific interventions.

CHAPTER FOUR

A CRITIQUE AND REVIEW OF A PSYCHOMETRIC ASSESSMENT:

THE COPING RESPONSES INVENTORY – YOUTH FORM (CRI-Y) (MOOS, 1993)

Abstract

This report aims to provide a critique and review of the Coping Responses Inventory – Youth Form (CRI-Y) (Moos, 1993). An overview of the measure is at first provided, including a summary of its development. The psychometric properties of the CRI-Y are then investigated. Reliability coefficients for wider coping domains (i.e. approach and avoidance or cognitive and behavioural domains) of the CRI-Y are noted to be high. However individual scales were found to demonstrate low to moderate reliability and internal consistency, a finding replicated in several other studies. Inter-scale correlations are mostly noted to be low although further investigation is recommended as two subscales had moderate to high correlations, suggesting that a different factor or dimension structure may be more plausible. Clinical utility, including accessibility and ease of use, and the need for further research with specific populations are then discussed. In conclusion, the CRI-Y is a psychometric measure that has a number of flaws. Similar flaws are however identified in other measures of adolescent coping, and the difficulties of defining and measuring coping as a construct are noted. Additionally, the difficulty of investigating such as a construct during adolescence, a period of rapid developmental and cognitive change, and the importance of context is highlighted.

1. **Overview and theoretical background**

It has been highlighted that there is a need to have a better understand how adolescents cope with stressful situations (Griffith, Dubow & Ippolito, 2000), and adolescence itself has been noted as a period of rapid developmental change and stress (Smith, Cowie & Blades, 2003). Coping is defined as strategic ways to cognitively and behaviourally manage the demands caused by stressful events (Lazarus & Folkman, 1984; Zeider & Endler, 1996; Carr, 2006). It can be described as an umbrella term, and incorporates a variety of terms, including strategies, tactics, responses, cognitions, or behaviour (Schwarzer & Schwarzer, 1996). The use of coping strategies in adolescence was developed as an area of research following explorations of resilience factors, and ways of identifying what factors affected developmental adjustments and outcomes after stressful life events (Ebata & Moos, 1991). Resiliency itself is linked to the ability to adapt positively to and therefore cope with adverse experiences (Collishaw et al., 2007), and is in part based on previous experiences and positive self-image (Glaser, 2002). Coping is recognised as being an important factor in stress-related physical and mental health outcomes (Taylor & Stanton, 2007). Coping strategies are thought to be consciously developed and used (Carr, 2006). Learning more about adolescent styles of coping, particularly amongst offending or delinquent adolescents, has ramifications for intervention programmes and psychoeducational treatment. More contemporary theories of coping and coping strategies have highlighted the fact that it is multifaceted, and Moos (1993) notes that two main conceptual approaches have been used in order to classify coping responses: those using the *focus* of coping (emotion-focused or problem-focused) (e.g. Lazarus & Folkman, 1984) and the *method* of coping (using cognitive or behavioural methods).

The *Coping Responses Inventory – Youth Form* (CRI-Y) (Moos, 1993) is designed to explore both of these approaches, and further classifies them into 'approach' or 'avoidance' responses. Approach responses are noted to generally consist of problem-solving methods of coping that include both cognitive and behavioural aspects, and focus on directly addressing a stressor or problem in order to resolve or control them. Avoidance responses, on the other hand, tend to consist of emotionally-focused methods of coping such as managing the emotional states associated with a stressor or problem, and avoidance techniques such as distraction or avoiding thinking about a stressor or problem. This is shown below, in Table One. Some coping strategies are considered to be maladaptive, such as an over-reliance on avoidance responses, and some are considered to be adaptive, such as logically analysing a stressor whilst seeking appropriate social support. Of course, coping mechanisms will vary depending on the type and severity of the stressor experienced.

The CRI-Y was designed to measure coping styles utilised by adolescents, aged between 12 and 18, in response to stressful or adverse life situations. A format for use with adults over the age of 18, the *Coping Response Inventory* (CRI), was also developed by the same author. The two versions of this assessment are noted to be conceptually comparable to each other, and differ only in the use of some of the language used in questions and normative data (Moos, 1993).

The CRI-Y explores coping strategies by asking the individual completing the test to think about a stressful event that they have experienced recently, and then proceeds to ask a number of questions concerning this event and how it was dealt with by the

individual. 10 questions are stressor appraisal items, which provide the examiner with information about how the stressor is perceived by the individual who experienced it. This includes appraisal items such as the stressor's novelty, predictability, and threat. Individuals who view their focal stressor as a challenge are more likely to use approach coping styles (Moos, 1993). The next 48 questions are "coping items", which explores how the individual manages the stressor. These are answered using a four-point scale, ranging from "No, not at all" (0 points) to "Yes, fairly often" (3 points). The assessment can also come in an Ideal form, which asks the individual being assessed to answer questions based on what they think is the best (or ideal) way of coping with a stressor. The CRI-Y can be administered as an 'actual' form, measuring how the adolescent appraised and dealt with a focal stressor, or an 'ideal' form, measuring what the adolescent feels the best way to appraise and deal with a focal stressor would be. This can be used to observe any discrepancies between actual and ideal or preferred coping styles, and from that suitable areas for intervention may be able to be identified. The assessment's professional manual details the development of the CRI-Y, which is discussed below, alongside instructions on how to administer and score it.

Table One: *The Coping Responses Inventory (Youth Form) Scales*

	APPROACH COPING RESPONSES	**AVOIDANCE COPING RESPONSES**
COGNITIVE	1. Logical Analysis 2. Positive Reappraisal	5. Cognitive Avoidance 6. Acceptance or Resignation
BEHAVIOURAL	3. Seeking Guidance and Support 4. Problem Solving	7. Seeking Alternative Rewards 8. Emotional Discharge

2. Development

The CRI-Y had five stages of development. It was developed via a conceptual framework concerning two domains: the focus of coping (i.e. approach or avoidance), and methods of coping (i.e. cognitive or behavioural) (see Lazarus & Folkman, 1984). The authors here used a variety of methods to develop initial coping domains. This included an extensive literature review of adolescent coping concepts, interviewing adolescents, reviewing descriptions of adolescents coping with life crises, and adapting items from the Adult Version of the Coping Responses Inventory. Then, 40 pilot interviews were conducted using "about 100" (Moos, 1993) items in 10 potential coping domains. From this, a refined questionnaire consisting of 72 items was developed and adapted to the reading level of adolescents aged 11-12 ('sixth grade'). It is notable that the CRI-Y was developed based on a hypothetical *a priori* conceptual framework, rather than through use of exploratory factor analysis to establish underlying constructs or factors. Psychometric assessments are frequently developed and the internal structure assessed through factor analysis (Carretero-Dios and Pérez, 2007), and it is considered by Kline (1999) to be "the heart of psychometrics" (p. 113). Many other measures of adolescent coping, such as the *Life Events and Coping Inventory* (LECI) (Dise-Lewis, 1988) or the *Adolescent Coping Scale (ACS)* (Frydenberg & Lewis, 1993), employ forms of factor analysis in their development. Therefore, it is unusual that it was not employed here. This theory-driven approach is noted by Schwarzer and Schwarzer (1996) as being a key part of coping-style assessment development, however these authors also note that a balance between theory and empirical evidence is rarely found in this area. This is considered further below.

The final 72 items of the CRI-Y, developed from the aforementioned conceptual pooling of items, were then administered to 315 adolescents in the first wave of a field trial. Focal stressors are limited to those experienced by adolescents within the last twelve months. Using real-life focal stressors, rather than hypothetical situations presents a more realistic representation of personal coping styles (Schwarzer & Schwarzer, 1996) as well as increasing the ecological validity of the assessment. Whilst an individual's responses to the CRI-Y can be categorised and classified according to their coping style, it appears to be difficult to do the same for the focal stressor that they pick at the beginning of the assessment. The authors of the CRI-Y offer ratings (or 'weightings') of the severity of focal stressors, partially adapted from a paper exploring life experiences and their significance as etiological factors in diseases amongst children (Coddington, 1972). Weights for further possible stressors were developed with the aid of independent raters, and Moos (1993) notes that these weights are preliminary and need more empirical development and evaluation. Although these weightings appear to be superficially helpful in determining the severity of stressors experienced by adolescents, they are narrow-ranging and the empirical base for them is uncertain. Furthermore, it should be considered that perception of a stressor is a highly subjective internal experience, and will ultimately vary across individuals depending on other factors such as resilience and availability of social support. Therefore, weightings as assigned by external raters may not be feasible and empirically sound. Nevertheless, this highlights an area for future research, and could lead to clearer and more empirically valid classifications.

In addition to collecting data from 'healthy' adolescents in this first wave of the field trial (n = 163), a number of studies have been completed during the development of the CRI-Y using data collected

from populations of conduct disordered adolescents (*n* = 58), adolescents with depressive disorders (*n* = 49), and adolescents with chronic (rheumatic) diseases (*n* = 45) (Ebata & Moos, 1991; Moos, 1993). This is recorded in the assessment's professional manual. The author notes that the research team tried to recruit adolescents from these groups who had a healthy adolescent sibling that would be willing to participate in the relevant study, due to their interest in comparisons between 'normal' adolescents and those with problems. In the CRI-Y professional manual, psychometric characteristics are reported based on data collected from these 315 adolescents in the first wave. The overall normative sample reported in the professional manual consists of 400 adolescents (179 males and 221 females), as 51 additional adolescents with rheumatic disease and 34 additional healthy siblings of these adolescents and were recruited. The manual makes clear the attrition rates of these waves of administration, and specifies which populations the samples came from. Normative samples should be a good reflection of the population which they are hypothesised to represent (Kline, 1999). Similarly, samples recruited for psychometric development should have similar characteristics to the population that the assessment will be used with (Carretero-Dios & Pérez, 2007). The normative sample reported in the professional manual consists of the samples recruited from several varied populations as described above, and also consist of male and female adolescents. A variety of sampling is important, and is thought likely to increase the representativeness normative sample, and therefore increase the validity of any interpretations from the use of the assessment. However, reporting surrounding the recruitment of samples in unclear, as is what populations are represented and to what extent. It may have been beneficial for the authors of the CRI-Y to include

normative data on each of their samples, in addition to a combined normative data set.

3. Reliability and Validity

The British Psychological Society (BPS) defines a psychological test or assessment as "any procedure on the basis of which inferences are made concerning a person's capacity, propensity or liability to act, react, experience, or to structure or order thought or behaviour in particular ways". According to the BPS and the *Standards for Educational and Psychological Tests* (AERA, APA, and NCME, 1999), psychological assessments (or psychometrics) need to strive to achieve a number of standards in their construction, evaluation, and supporting documentation. In addition to this, professionals using psychological assessments need to consider fairness in testing, and the responsibilities that testing involves. Assessments need to demonstrate that they are both reliable and valid: that their scores are as accurate and precise as they can be whilst taking into account degrees of error, and that their scores are a meaningful measurement of what the assessment has set out to measure whilst taking in account contextual factors.

The CRI-Y dedicates a number of pages in its professional manual in order to detail its psychometric characteristics and how the test's development has been tailored to achieve these. A recently updated annotated bibliography summarises research conducted using the *Coping Responses Inventory* (both youth and adult forms). This includes research conducted by the authors themselves as well as that conducted by other researchers, which consists of published studies and unpublished Doctoral dissertations or theses. The CRI-Y and adapted versions has been applied in research across cultures, including Australian (Eyles & Bates, 2005), Iranian (Aguilar-Vafaie,

2008), Latino (Crean, 2004) and Spanish (Fornns et al., 2005) youth. Findings from these studies, particularly those concerning the psychometric properties of the CRI-Y, provide further questions and suggestions for further validation. This is discussed in more detail below.

The Cronbach's alpha coefficient is considered by some to be the best index of reliability in terms of internal consistency (Kline, 1999). Internal consistency is a measurement based on correlations between scale items, and measures the extent to which items assess the same construct: in this case, coping styles. The internal consistency estimate of reliability of each scale in the CRI-Y was assessed using Cronbach's alpha, and was found in the majority of cases to be "moderate" (Moos, 1993). This was measured across the first two Waves of field trials during the development of the assessment. A Cronbach's alpha value of 0.7 or above is considered to be necessary for testing with individuals, and anything below is considered to be questionable or poor (Kline, 1999). Internal consistencies for only four scales out of eight have a coefficient value of 0.7 or above. This is highlighted in the professional manual. It is important to remember that internal consistency and reliability can be affected by context and the construct that they are measuring. Moos (1993) tries to justify the moderate internal consistency for some scale items by hypothesising that some coping responses may reduce stress, and therefore reduce the use of alternative coping strategies from within the same category of responses (i.e. approach or avoidant coping responses). This is thought by the author to place an upper limit on the internal consistencies of the CRI-Y scales. Psychometric qualities in terms of reliability and factorial validity were again assessed by Hamdan-Mansour et al. (2008). This study recruited a large number of adolescents (248 males and 376 females), which is a larger sample

than that reported in the CRI-Y professional manual (Moos, 1993). The sample used in this study, however, was recruited from rural high schools in the US, and does not encompass several different populations like Ebata and Moos (1991) and Moos (1993) in their research and tests concerning psychometric properties. The eight subscales of the CRI-Y were found to have moderate reliability and consistency (ranging from .47 to .70). Other studies, including Forns et al. (2005) with Spanish adolescents, replicate these results using factor analysis and find similar ranges of reliability coefficients. Moos (1993) reports that the wider domains of the CRI-Y, including approach and avoidance (.81 and .87 respectively) and cognitive and behavioural (.84 and .91 respectively) domains, were noted as showing good reliability coefficients. It was also noted that scores on the approach coping styles domain were positively related to the adolescents' perceived levels of social support, and that scores on the avoidance coping styles domain were positively related to the adolescents' use of alcohol and their experiences of depressive disorders. This finding echoes results found in studies exploring coping styles in adult samples using the adult form of the *Coping Responses Inventory* (Moos, 1990) (Avants, Warburton & Margolin, 2001; Billings & Moos, 1981; Evans & Dunn, 1995), and hints at least moderate predictive validity. Some studies finding support via factor analysis for the Moos (1993) theoretical components of approach and avoidant coping response factors (e.g. Eyles & Bates, 2005; Forns et al., 2005; Griffith, Dubow & Ippolito, 2000), however in some cases the distribution of specific coping scales did not fit the original CRI-Y model (Zanini et al., 2010).

The test-retest correlations and reliability of the CRI-Y were assessed using 254 out of the 315 adolescents who were recruited during the first wave of the field trial for the assessment, and are reported in the professional manual (Moos, 1993). Subscale scores

were found to be moderately stable across a 12 to 15 month period (Burgess & Haaga, 1998; Moos, 1993). The average correlation between the eight scales was *rs* = 0.29 for males and *rs* = 0.34 for female adolescents, values which are considered to be moderate to low. However, although the interval of time between applications of the assessment was beyond the minimum three month period recommended (Kline, 1999), it is possible that results may have been altered due to the fact that it was administered to adolescents. Childhood and adolescence are noted to be periods of rapid developmental and cognitive change, as well as a period of changes in life context (Smith, Cowie & Blades, 2003; Carr, 2006). Adolescents also vary in their rates of development into adulthood and in the way that they adapt to the stresses and challenges of this (Ebata & Moos, 1991). In addition to this, reporting in the CRI-Y professional manual does not detail whether or not the focal stressor described by the adolescents was the same when the test was re-administered. Coping styles may vary depending on the source of the stressor, or if the stressor develops or changes. Therefore interpretation of these values is difficult. The stability of the coping responses that were identified in adolescents is noted to be lower than that identified in healthy and depressed adults over a similar timeframe (Holahan & Moos, 1987; Moos, 1993), perhaps reflecting adolescent cognitive and developmental change. Other studies have highlighted that CRI-Y responses are stable over time at a group level, but with notable within-subject differences between males and females (Kirchner et al., 2010). It is also important to consider conceptual context and the inherent variability in coping with a continuous stressor. High test-retest reliability could be seen as a contradiction to this (Schwarzer & Schwarzer, 1996).

Moos (1993) further describes the development and revision of the CRI-Y, and describes how the authors feel that face and content validity has been achieved. In order to be retained for inclusion in the final version of the CRI-Y, items needed to have several qualities. In addition to having good face and content validity, items required a varied response distribution (i.e. items on which each point of the four-point scale were selected by different adolescents), a moderate level of internal consistency, and a minimisation of dimension overlap. This was obtained by combining dimensions that were conceptually similar. Due to these criteria, outlined in the professional manual, two initial coping dimensions or scales (Affective Regulation and Behavioural Withdrawal) were excluded, and the remaining eight retained to compose the final version of the CRI-Y, each consisting of six items. These coping dimensions are described above, in Table One. Inter-item correlations are not reported. However, inter-scale correlations are reported for both male and female adolescents, and are controlled for the type, severity, and appraisal of the focal stressor (Moos, 1993). Correlations between scales are low to moderate. The average correlation between approach and avoidance coping dimensions are r = .31 for male and r = .26 for female adolescents assessed. The inter-scale correlations between some scales, particularly between Logical Analysis and Problem Solving (r = .61), are rather high. This could indicate that there is possibly a different structure of dimensions or factors, and that some of the coping scales should be combined or excluded from the assessment. These correlations are highlighted in the CRI-Y professional manual by Moos (1993), who justify the retained eight-dimension factor structure by highlighting the benefits of differentiating between cognitive (Logical Analysis) and behavioural (Problem Solving) coping styles. Moos (1993) also highlights that coping styles are likely to differ among groups of adolescents, using differences in inter-scale correlations between

groups of males and groups of females as an example. These are plausible defences; however it is worth noting that several independent studies have failed to replicate the coping dimensions outlined in the CRI-Y (for example, Zanini et al., 2010).

4. Clinical utility

The CRI-Y has a number of points that make it useful in clinical work with patients. It has particular relevance in clinical or forensic work, both during initial assessment procedures and to aid in the construction of tailored therapeutic interventions. It can act as a way of measuring coping styles to many of the stressors that the young people in these settings encounter, such as those that may lead to self-harming or aggressive behaviours, and can be readily applied a number of times during the course of an intervention. The CRI-Y can also be re-administered to establish if the adolescent uses different coping strategies for different stressors or problems, and to compare current coping strategies with the strategies that may develop as a stressor or the intervention changes. It is also particularly accessible and easy to use with clients. It is beneficial to present the results of the assessment to clients, both verbally and pictorially, as a method of encouraging discussion and therapeutic engagement in terms of establishing areas for intervention.

Additionally, the measure is easy to score. A piece of software is available to score the assessment and to provide a summary report that can be presented to the adolescent who completed it. This report is stated to be based on empirical findings and other published information (Moos, 1993). However, if this software is not available, then it is relatively easy to write a report and present results to clients pictorially in the form of a graph. From personal experience, clients have responded very well to a graphical

representation of their results, and areas for intervention were able to be identified. For example, a client who describes bullying as a focal stressor (which ended in violence) with an extremely high reliance on Problem Solving and high reliance on Cognitive Avoidance could possibly benefit from an intervention tailored towards emotional regulation, thinking skills and behavioural modification. A graphical representation also allows the assessor to explain the different styles of coping, including the distinction between approach and avoidant styles and the distinction between cognitive and behavioural coping styles.

This assessment is structured in such a way that it can be administered in two formats. It can be used as a self-report measure, or it can be administered as a structured interview for those who have lower reading comprehension skills (i.e. below a 'sixth grade' level, which encompasses children aged 11-12 years old). The professional manual states that the psychometric properties of both the self-report and interview formats are similar and comparable. Specifically, the manual states that two groups of adolescents who were matched on age and sex were compared on self-report and interview via telephone. However, the manual does not state the number of adolescents who were recruited for these analyses, or the populations that these adolescents were recruited from. It is possible that the structured interview format is more subject to social desirability, in that respondents may wish to alter their responses to appear that they coped with a stressor more effectively than they did because an interviewer is present.

The structured interview format of the CRI-Y may work particularly well when working with clients who have a Learning Disability (LD) or are otherwise cognitively impaired. A rapport can easily be built, and the interview can be conducted at a pace comfortable for the

individual taking the assessment. It also provides said individual with the opportunity to explain the rationale behind their answers should they wish, which may provide additional observational material for the professional conducting the interview. However as the assessment has not been normed on adolescents with learning disabilities, although it is specified in the professional manual that the structured interview format is suitable for adolescents whose reading and comprehension skills are lower, it is difficult to establish whether or not the validity of their responses is affected by their impairment if the assessor has to explain the meaning behind some of the questions in order to increase the adolescent's understanding. This is an area that merits further investigation, alongside investigations into coping styles with delinquent or offending adolescents.

5. Comparison with other measures

It is considered here that it is difficult in some ways to compare the CRI-Y to other measures of coping and coping styles. Such assessments are designed to measure a concept that is acknowledged in the literature as having many varied definitions, and therefore being difficult to define empirically in terms of its dimensions and approaches (for example, style versus process) (Lazarus, 1993). However, some have attempted this.

Schwarzer and Schwarzer (1996), who conducted a critical review on assessments of adult coping styles, identify areas that are flawed in test development and implementation, mostly concerning the theoretical concept that coping is a multi-dimensional factor that should be assessed whilst a stressful encounter unfolds. A more recent critical review of adolescent coping scales has been conducted, and explores the basis of test development and

psychometric properties according to best practice and identified that all included six tests were severely lacking in several factors, mostly pertaining to the development and poor reporting of the included psychometric tests (Sveinbjornsdottir & Thorsteinsson, 2008). The main flaw of assessments pertaining to measure coping styles and strategies appears to concern the selection of coping dimensions or categories. As noted above, the factor structure and coping dimensions of the CRI-Y have not been replicated in independent studies on the matter (for example, Zanini et al., 2010). However, each of the coping scales reviewed in Sveinbjornsdottir and Thorsteinsson (2008) have failed to have their factor structure fully replicated by independent studies. Indeed, this flaw is one that has been observed in other scales such as *Kidcope* (Spirito et al., 1988) that were not included in the above review. This encourages questions about the content and construct validity of all coping scales, and not just the CRI-Y. Certainly, as previously discussed, concepts such as coping and resilience are highly subjective and unique to each individual. This may make it difficult to develop replicable factor constructs. Further exploration and development of the theoretical literature is needed, alongside further research into individual experience and factors that influence coping style.

The author of the CRI-Y advises on the use of supplementary assessments. The *Life Stressors and Social Resources Inventory – Youth Form* (LISRES-Y) (Daniels & Moos, 1990; Moos & Moos, 1992) has been used in associated research to measure the chronic stressors that adolescents experience in school, at home, with parents, siblings and friends, and with money. Responses to these, as measured by the CRI-Y, differed according to the perceived severity of these stressors (Moos, 1993). The LISRES-Y also measures social resources that adolescents feel that they are able

to draw on to manage life stressors. Social support is often noted as being an important factor in coping with stressors (Hernandez, Vigna & Kelley, 2010), and family support is noted to be associated with better adaptation to stressful situations, for example amongst adolescents with chronic disorders (Moos, 2002). Therefore, the use of a supplementary assessment such as the LISRES with the CRI-Y could prove useful in determining factors that contribute towards resilience and more adaptive forms of coping.

6. Conclusions

In conclusion, the *Coping Responses Inventory – Youth Form* (Moos, 1993) is an assessment that is identified here as having some flaws in terms of its psychometric properties. However it should be considered that context and underlying constructs may have an influence in this. Indeed, similar flaws to those described above have been identified in many other assessments designed to explore coping styles in adolescents (Sveinbjornsdottir & Thorsteinsson, 2008; Hernandez, Vigna & Kelley, 2010). These issues highlight the need for further research and empirical testing of assessments measuring styles of coping, particularly in identifying underlying factors, constructs and dimensions of coping using appropriate statistical methods, as well as investigating other aspects of coping such as factors that contribute to resilience in the face of stressful life situations. This could have implications in clinical practice working with young offenders developing adaptive prosocial coping mechanisms.

Implications of this critique on this thesis' case study and further empirical research work

This psychometric measure is widely used in the specialist service described in Chapters Two and Three. It was also used in Chapter Three's case study to assess to coping styles of an adolescent male who had a varied forensic history. This critique notes that the CRI-Y's psychometric properties are flawed in some respects, which has implications for whether this is the right measure for the service to be using. Nevertheless, these flaws appear to be present in other measures of adolescent coping style. This measure proves easy to use with patients and can be presented in a way that is easy for them to understand. This critique highlights the fact that more empirical research needs to be done in this field in order to construct more comprehensive and psychometrically sound assessments. It may lead to discussions within the specialist service about other psychometric assessments to use during assessment and intervention.

CHAPTER FIVE

GENERAL DISCUSSION

1. Summary of Findings

Childhood abuse and neglect, or other adverse childhood experiences such as witnessing domestic violence or experiencing social isolation from peers and intimate relationships, have a number of wide-ranging effects (Carr, 2006). Biological, psychological, and social development is noted to be affected (HM Government, 2013). Theoretical research has hypothesised and empirical research has noted that there are links between adverse childhood experience, including disrupted attachments, and later maladaptive behaviours and offending behaviour in adolescence and adulthood (Kaplan, Pelcovitz & Labruna, 1999; Mersky & Reynolds, 2007; Patterson, DeBaryshe & Ramsey, 1990; Smallbone & Dadds, 1998; Ward & Beech, 2005). This thesis aimed to explore some of these effects within offending adolescents, and how individuals who commit offences differ in experience from one another according to offence type. Other factors are also considered.

To begin with, Chapter One's literature following a systematic approach examines empirical research that has compared male adolescent sexual offenders with non-sexual offenders on variables pertaining to childhood abuse and adverse childhood experience. This review contributes to the overall thesis by firstly identifying that there are some differences between adolescents who sexually offend against others when compared to those who do not, suggesting that there are specialist aspects to their presentation. Offenders are noted to differ on experiences of sexual abuse and, indirectly, attachment style. Furthermore, differences were also observed in variables relating to the family domain. Differences are particular noted when sexual offenders are split according to type of victim (i.e. children or peers / adults), results that are reflected in some previous studies (e.g. Ford & Linney, 1995; Miner et al.,

2011) and meta-analyses (e.g. Seto & Lalumière, 2010). It is of note that a limited number of studies were identified that met the stringent inclusion criteria and quality assessment procedures. Methodological difficulties, such as varied use of instruments to measure abuse and adverse experience, contributed to this and made comparison between studies difficult.

This review of the literature aided in the selection of variables for this thesis' empirical research project, which is presented in Chapter Two. Variables were organised to reflect the life domains identified in this review and some other studies (e.g. Farrington, 2003; Wanklyn et al., 2012). Furthermore, the methodology constructed with the limitations identified in this Chapter's review in mind. The findings of this review provide notable suggestions for further research. For example, studies conducted with validated measures or interviews regarding attachment style and its effects. They also have clear implications for the development of early prevention or intervention mechanisms such as identification, assessment, and risk management.

Chapter Two is an empirical research project that aimed to establish the prevalence and characteristics of adverse childhood experience in a sample of adolescent inpatients detained in a specialist medium security psychiatric hospital. Psychopathological traits were also considered. This study used a retrospective systematic file review of patient records to collect data, using a coding system developed for this project. These records encompassed police, social work, health, and school reports, as well as risk assessments completed whilst in hospital. Naturally, as identified in Chapter One, this method of data collection may lead to missing information. However, it also is not affected by biases and social desirability pressures inherently present in self-report measures. Furthermore, it was considered a

minimally intrusive way to collect data. Were systematic file review to be used again as a method of data collection during an expansion of this project, it would be beneficial to consider triangulation and cross-referencing throughout available documents. This would aid in establishing whether information provided is the same across all disciplines.

Male adolescent violent offenders and violent / sexual offenders were compared, as were female adolescent violent offenders and non-violent offenders. As expected, no female sexual offenders were identified. Interestingly, all male sexual offenders had additionally committed violent offences so no "pure" sexual offenders were identified. This may be reflective of the high risk nature of adolescents detained in this specialist hospital, and may also explain some of the similarities between this sample's violent sexual offenders and violent offenders. Despite a high prevalence of adverse childhood experience and childhood abuse across all participants, a number of differences between groups of offenders were identified. As hypothesised and identified in Chapter One childhood sexual abuse distinguished adolescent sexual offenders from violent offenders. Additionally, sexualised behaviours as children, social isolation, and a diagnosis of a Learning Disability also distinguished them as separate. It was established in Chapter One that particular differences were noted in adolescents who sexually offended against children when compared to those who offended against peers / adults, and this was reflected in this Chapter's empirical project. Male adolescents who sexually offended against children were further distinguished from other male offenders by higher levels of childhood sexual abuse, sexualised behaviours as children, higher levels of poor academic achievement and poor school behaviours (e.g. truancy or aggression).

Due to the number of statistical analyses conducted in Chapter Two's research project, the possibility of using the Bonferroni correction was considered in order to reduce the possibility of committing a Type I error (i.e. stating that there were differences between groups, when in fact these results were down to chance). However, using this method, in combination with a relatively small sample size, would increase the possibility of committing a Type II error exponentially. As suggested in the literature, the relative seriousness of committing either a Type I or a Type II error was evaluated (Wuensch, 1994). It was considered that, in this instance, the possibility of committing a Type II error and missing significant differences between groups was too high. It was also considered that the possibility of committing a Type II error (i.e. stating that there were no differences between groups, when in fact there were) in projects such as this may have more serious implications due to the possibility of, for example, not identifying an individual at risk of committing a sexual offence against a child due to not considering their unique risk factors.

Using the developmental perspective presented throughout this thesis, it is considered in this empirical project that adverse childhood experiences contributed towards vulnerabilities increasing the risk of committing offences, exacerbated by the presence of psychopathological traits. Recommendations for further research are also discussed, alongside methodological limitations that reflect those identified in Chapter One's review of similar empirical research studies. It is also noted that this high-risk population is considered atypical of adolescent offenders and adolescents accessing mental health services, and although results are unlikely to be generalizable to other populations it is vital to keep investigating individuals such as these in order to provide more

targeted intervention programmes that may be implemented before admission to secure care.

Chapters One and Two present a review and study of the effects of adverse childhood experience on the development of offending behaviour, and consider other factors, such as disrupted childhood attachments and psychopathology. Chapter Three contributes further to our understanding by presenting a single case study that demonstrates these effects alongside investigating the efficacy of a therapeutic intervention conducted with an adolescent male characterised by adverse childhood experience and cognitive impairment, factors which are considered to exacerbate each other. This case study also provides an example of the difficulties and presentations of many of the individuals residing in the specialist service discussed in Chapters Two and Three.

The subject of the case study, Patient 1, presented with a varied forensic history including arson, violence, property damage, and sexual assault. Patient 1 experienced physical and emotional abuse in the family home, which was also characterised by domestic violence. Furthermore, he performed poorly at school and was ostracised by his prosocial peers throughout childhood and early adolescence. Due to these experiences Patient 1 often lacked the appropriate skills needed to navigate emotional difficulties and stressful situations. A psychological formulation is presented that explored Patient 1's early experiences in terms of familial and social contextual factors, as well as personal factors, in order to understand how his presenting problematic behaviours in secure care and previous offending behaviour developed. Using a systemic developmental approach it is noted Patient 1's early experiences, combined with factors such as his level of functioning, have helped to shape his offending behaviour and current presentation.

Additionally, the use of the developmental model for antisocial behaviour (Patterson, Debaryshe, & Ramsey, 1990), is also presented to help understand Patient 1's behaviour by exploring wider social contexts and developmental trajectory. These two figures serve to highlight the impact of Patient 1's experiences in childhood on the development of psychological vulnerabilities and offending behaviour, including via poor self-esteem, poor emotional regulation, poor cognitive functioning, and maladaptive coping styles.

The intervention discussed in this Chapter was developed to address Patient 1's difficulties with emotional recognition and regulation, and was constructed through a review of the literature and on Patient 1's individual needs. Assessment consisted of clinical observation by staff working with Patient 1, as well as a number of neuropsychological and psychosocial measures. Patient 1 was identified as perceiving his relationships with peers as poor, having high levels of impulsiveness, and having poor coping mechanisms when dealing with emotional states and stressful situations. The intervention consisted of cognitive-behavioural affective education, simplified and collaborative functional analyses, and self-monitoring of emotional state and encouraging prosocial adaptive coping skills. It was tailored to account for his level of cognitive functioning. Collaborative functional analyses were also constructed specifically with Patient 1 so that he could explore problematic and risk-related behaviours seen during his admission to secure services. This case study ends with a discussion about future directions to take with Patient 1's care, including engagement in offence-specific programmes, and other factors to take into consideration, such as possible assessment for attachment style.

Finally, Chapter Four provides a critique of a psychometric measure used as part of assessment during Chapter Three's case study. This critique examines the Coping Responses Inventory – Youth Form (CRI-Y) (Moos, 1993). Chapter One identified, using a developmental approach and a review of the theoretical literature, that adverse childhood experience can lead to the development maladaptive coping strategies and poor management of stress (Crittenden, 1992; Shapiro & Levendosky, 1999). This is again highlighted in Chapter Three. Although this measure does not specifically investigate maladaptive coping as a consequence of adverse childhood experience, the CRI-Y is used as part of assessment procedures regularly within the specialist medium secure psychiatric hospital for adolescents described in Chapters Two and Three. It is particularly used to identify situations leading to deliberate self-harming or aggressive and violent behaviour.

The CRI-Y was noted to have average psychometric properties for reliability and validity: Reliability coefficients for wider domains, such as the cognitive and behavioural domains or the approach and avoidance domains, were noted to be high, however between individual scales reliability and internal consistency was noted as low to moderate. This may in part to be because of difficulties inherently present in measuring coping as a stable construct. Concepts such as coping, coping style, and resilience are highly subjective and unique to each individual, as noted throughout this thesis. Certainly, similar flaws have been identified in other measures of adolescent coping style (Sveinbjornsdottir & Thorsteinsson, 2008). This Chapter highlights the importance of further research in this area to develop standardised measures of coping with good psychometric properties, whilst taking into account the period of rapid cognitive and developmental change that adolescence is noted to be (Smith, Cowie & Blades, 2003; Carr,

2006). As noted in previous Chapters, it is thought that maladaptive coping strategies, caused in part by the lack of ability to self-soothe, can contribute to the commission of an offence (Davidson, Putnam, & Larson, 2000; Marshall & Marshall, 2000; Swaffer & Hollin, 1995). It is possible that, with further research, measures of coping such as the CRI-Y could be used to investigate coping styles in offending situations with a relevant focal stressor, and perhaps alongside other psychometrics measuring constructs such as impulsiveness or social competency and esteem. This would have implications for interventions with offending or aggressive populations. Furthermore, longitudinal studies with measures of coping may lead to increased knowledge concerning how adverse childhood experience impacts on coping style and ability to self-soothe.

2. Implications for clinical practice and further research

Chapters One and Two of this thesis established that when experiences of childhood abuse and other adverse childhood experiences are explored there are differences between male adolescents who sexually offend against children when compared to those who offend against peers or adults, and violent offenders. Chapter Two also established that cognitive impairment (Learning Disability) also distinguished male sexual offenders from non-sexual offenders in a sample of high-risk inpatients. However, due to the nature of the methodological limitations inherently present in investigating developmental aspects of adolescent offending and maladaptive behaviours, as highlighted throughout this thesis, these results are limited in terms of the number of inferences that can be made. These limitations are noted in many studies of risk factors, not just those relevant to adolescent offending (McMillan et al., 2008). It is clear that further research is required in order to

increase understanding in this area. This thesis notes a number of areas which can be explored, some of which are summarised briefly here.

Most studies are notably cross-sectional, including that which is presented in Chapter Two, and can therefore only make correlational assumptions based on identification of variables at one point in time, after an offence has been committed. Nevertheless, Chapter Two provides initial insight in the histories and presentations of a relatively unique population in specialist services. Furthermore, it compares different groups of offenders, something which is considered by some to previously been lacking (Zakireh, Ronis, & Knight, 2008). It additionally highlights the difficulties of conducting research investigating these variables. Further studies should aim to develop these initial findings, using a variety of methods and larger samples from a variety of settings. Longitudinal studies, for example, though perhaps more draining on resources and with higher attrition rates, would permit inferences to be made about full developmental and etiological pathways. This, in turn, could inform as to whether adverse childhood experiences can aid in predicting the onset of offending and sexually harmful behaviour, rather than merely observing that it follows them. Longitudinal research may also contribute to greater understanding of during which developmental period intervention would be most beneficial.

This thesis utilises a developmental approach, and considers the importance of childhood attachment and its nuances. The links between attachment and offending behaviour remain unclear. As noted in Chapter One, studies directly measuring attachment style have been found to be rare, despite its prevalence in theories of offending. Attachment and its influence on different areas of functioning is considered to be evident across the lifespan

(Ainsworth et al., 1978), however research in this area and adolescence is at present sparse. Furthermore, measures examining past and current parent-adolescent relationships can be criticised with regards to their construct validity (Rich, 2006). Some measures, such as the Inventory of Parent and Peer Attachment (IPPA-R) (Armsden & Greenberg, 1987) do purport to measure attachment with important figures, however only classify into 'low' or 'high' relationship quality rather than attachment style as defined in the theoretical literature (e.g. Ainsworth et al., 1978) or in other measures (e.g. *History of Attachments Interview: Family Relationships Section (HAI)* (Bartholomew & Horowitz, 1999)) used in studies such as Miner et al. (2011). More research investigating the attachment styles of adolescents, and the benefits and difficulties that these encourage, is necessary. From a clinical perspective, it would be beneficial to assess this in order to provide more tailored treatment interventions whilst building an appropriately boundaried and reciprocal therapeutic relationship. This would be particularly needed in clinical work with difficult populations with complex needs and histories of abuse or other adverse experience, such as that described in Chapters Two and Three.

Furthermore, more research is needed to look at possible protective factors that may mediate the effects that abused or neglected children experience, and factors that minimise the possibilities of developmental deficits and later delinquent and adult criminal behavior (Widom, 1989). Certainly, much of the theoretical literature highlights the importance of factors such as resilience and good parent-child relationships, contributing to more adaptive and prosocial coping methods (e.g. Collishaw et al., 2007; Marshall & Marshall, 2000; Leon et al., 2008; Romans et al., 1995). Early interventions targeted towards familial and interpersonal

relationships may hypothetically lessen some of the negative effects of abuse and of disrupted attachment, for example by decreasing isolation and identifying sources of support and adaptive coping methods, in those who present with other risk factors contributing to the development of offending behaviour. It would be beneficial to investigate this further, and note how these and other factors lead to reduced risk.

3. Conclusions and recommendations

This thesis aimed to increase understanding regarding adverse childhood experience, including childhood abuse, and its effects on the development and onset of adolescent offending behaviours, including violent and sexual offending. This work also seeks to distinguish similarities and differences between male adolescent sexual and non-sexual offenders, considering both the generalist and specialist perspectives of adolescent offending. It was concluded that there is support for both perspectives, however male adolescents who sexually offend against children exhibit more differences in their adverse childhood experiences than those who offend against peers or adults and non-sexual offenders. Developmental experience and its links to adolescent offending remains a key area for research in males and females due its potential wide-ranging effects, including potentially preventing harm before it occurs via early identification of individuals at risk of committing an offence. Furthermore, this thesis specifically investigates these matters in a population rarely investigated: that of high-risk adolescents within medium security specialist services. It is considered that further research using populations such as this may lead to more comprehensive early identification and interventions that can be implemented to reduce risk of harm to others to a level where admission to secure care is not necessary,

enabling attachments to family members to be maintained. Nevertheless, the importance of collecting data and knowledge from a range of populations, including community settings, is also discussed. It is acknowledged there are a number of difficulties in conducting research in the area of adolescent offending, and with using a developmental approach to do so. These are highlighted throughout, and the importance of addressing them is emphasised. Suggestions for progression are also made, including measurement of attachment style and further investigation into coping styles, their development, and their links to offending.

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APPENDICES

Appendix One: Literature review search strategies

Cochrane Central (1975 – dates of search, completed on 20 June 2012)

1. adolescent OR adolescence OR juvenile OR young people in title abstract keywords and sex* offen* OR rape OR sex* assault OR sex* harm in title abstract keywords and child abuse OR sex abuse OR physical abuse OR emotion abuse OR psychological abuse OR neglect in title abstract keywords or early experience OR trauma OR violence OR family OR parent* substance OR parent* crime OR parent* mental in title abstract keywords from 1975 to 2012 in Cochrane Reviews (15 results from 680969 records)

Campbell Library (2002 – 2012) (completed on 25 June 2012)

1. (adolescent) AND (sex) AND (offend) (no hits)
2. (juvenile) AND (sex) AND (offend) (no hits)
3. adolescen* OR juvenile OR young people in keywords AND sex* offen* OR rape OR sex* assault OR sex* harm in keywords AND child abuse OR sex abuse OR physical abuse OR emotion abuse OR psychological abuse OR neglect in keywords (no hits)
4. adolescen* OR juvenile OR young people in keywords AND sex* offen* OR rape OR sex* assault OR sex* harm in keywords AND early experience OR trauma OR violence OR family OR parent* substance OR parent* crime OR parent* mental in keywords (1 hit)

PROQUEST: MEDLINE (1975 – July 2012, completed 25 June 2012, 26 June 2012, 26 July 2012)

1. ab(adolescent) Date: after 1975 (108695)
2. ab(adolescence) Date: after 1975 (22931)
3. ab(juvenile) Date: after 1975 (44317)
4. 1 OR 2 OR 3 (162839)
5. ab(sex offending) Date: after 1975 (294)
6. ab(sex offender) Date: after 1975 (1127)
7. ab(sex offence) Date: after 1975 (560)
8. 5 OR 6 OR 7 (1411)
9. 4 AND 8 (255)
10. 9 AND ab(attachment) Date: after 1975 (4)
11. 9 AND ab(attachment disorder) Date: after 1975 (1)
12. 9 AND ab(abuse) Date: after 1975 (58)
13. 9 AND ab(family) Date: after 1975 (38)

14. 9 AND (ab(family violence) OR ab(domestic violence)) Date: after 1975 (8)
15. 9 AND ab(trauma) Date: after 1975 (6)
16. 9 AND ab(development) Date: after 1975 (24)

PROQUEST: MEDLINE (1975 – January 2013, completed on 7th January 2013)

1. ab(adolescent) Date: after 1975 (104477)
2. ab(adolescence) Date: after 1975 (21824)
3. ab (juvenile) Date: after 1975 (41083)
4. ab (young people) Date: after 1975 (23660)
5. ab(sex abuse) OR ab((emotional abuse OR psychological abuse)) OR ab((emotional neglect OR physical neglect)) OR ab(physical abuse) OR ab(childhood abuse) Date: After 1975 (17982)
6. ab((adverse child experience OR early adverse experience)) OR ab((trauma OR child trauma)) OR ab((domestic violences OR family violences)) OR ab((parental substance abuse OR parental substance use)) OR ab((parent mental illness OR parent mental health)) OR ab((criminal parents OR crime AND parents)) OR ab((family relations OR parent relations)) OR ab((parent alcohol use OR parent drug use)) Date: after 1975 (145940)
7. ab((sex offending OR sex offence)) OR ab(sex assault) OR ab((sex harm OR sexually abusive behavior)) OR ab(rape) Date: after 1975 (5491)
8. 1 OR 2 OR 3 OR 4. Date: after 1975 (175042)
9. 8 AND 5 AND 7. Date: after 1975 (140)
10. 8 AND 6 AND 7. Date: after 1975 (70)

OVID: MEDLINE (1975 – August 2012, completed on 28 July 2012, 5 August 2012, 10 August 2012)

1. adolescen$.ab (112689)
2. juvenile.ab. (35783)
3. sex$ offen$.ab. (1548)
4. 1 and 3 (190)
5. 2 and 3 (144)
6. attachment.ab. (59139)
7. 4 and 6 (3)
8. 5 and 6 (1)
9. attachment disorder.ab. (81)
10. 4 and 9 (0)
11. 5 and 9 (0)
12. family.ab (430096)
13. 4 and 12 (33)

14. 5 and 12 (27)
15. violence.ab (19141)
16. domestic violence.ab. (2756)
17. family violence.ab. (690)
18. 15 or 16 or 17 (19125)
19. 4 and 18 (10)
20. 5 and 18 (22)
21. trauma.ab. (110964)
22. 4 and 21 (6)
23. 5 and 21 (4)
24. abuse.ab. (61648)
25. 4 and 24 (54)
26. 5 and 24 (32)
27. develop$.ab (2177025)
28. 4 and 21 (39)
29. 5 and 21 (31)

OVID: MEDLINE (1975 – January 2013 completed on 5th January 2013)

1. exp (Adolescent Development/ or exp Adolescent Attitudes/ (1927)
2. exp Juvenile Delinquency/ (3062)
3. exp Child Abuse/ (13410)
4. exp Sexual Abuse/ (10774)
5. exp Physical Abuse/ (0)
6. exp Emotional Abuse/ (0)
7. exp Emotional Abuse/ (0)
8. exp Child Neglect/ (13410)
9. exp Early Experience/ or exp Childhood Development/ or exp Risk Factors/ or exp Emotional Trauma/ or exp Stress/ (409255)
10. exp Trauma/ (315909)
11. exp Drug Abuse/ or exp Parent Child Relations/ (180442)
12. exp Childhood Development/ or exp Parental Attitudes/ or exp Parent Child Relations/ or exp Family Relations/ or exp Parental Characteristics/ or exp Risk Factors/ or exp Mental Healthy/ or exp Emotional Disturbances/ (456176)
13. exp Exposure to Violence/ or exp School Violence/ or exp Domestic Violence/ or exp Violence/ (45545)
14. exp Juvenile Delinquency/ or exp Perpetrators/ or exp Sex Offenses/ or exp Sexual Abuse/ (13618)
15. exp Juvenile Delinquency/ or exp Sexual Abuse/ or exp Sex Offenses/ or exp Rape (13618)
16. 1 or 2 (4948)
17. 3 or 4 or 5 or 6 or 7 or 8 (18932)
18. 9 or 10 or 11 or 12 or 13 (915488)

19. 14 or 15 (13618)
20. 16 and 17 and 19 (360)
21. 16 and 18 and 19 (1877)
22. exp Perpetrators/ or exp Sex Offenses/ or exp Sexual Abuse/ or exp Victimization (14305)
23. exp Sex Offenses/ (10774)
24. 22 or 23 (14305)
25. 16 and 17 and 24 (239)
26. 16 and 18 and 24 (253)
27. exp Rape/ (2965)
28. exp Sex Offenses/ (10774)
29. 22 or 23 or 27 or 28 (14305)
30. 16 and 17 and 29 (239)
31. 16 and 18 and 29 (253)

OVID: PsycINFO (1975 – August 2012, completed on 11th August 2012)

1. adolescen$.ab (132483)
2. juvenile.ab. (14401)
3. sex$ offen$.ab. (5856)
4. 1 and 3 limit to yr =”1975 – 2012” (770)
5. 2 and 3 limit to yr =”1975 – 2012” (554)
6. attachment.ab. (23318)
7. 4 and 6 (29)
8. 5 and 6 (35)
9. attachment disorder.ab. (289)
10. 4 and 9 (2)
11. 5 and 9 (2)
12. family.ab limit to yr =”1975 – 2012” (179425)
13. 4 and 12 (155)
14. 5 and 12 (111)
15. violence.ab (42127)
16. domestic violence.ab. (6117)
17. family violence.ab. (2008)
18. 15 or 16 or 17 limit to yr =”1975 – 2012” (441202)
19. 4 and 18 (78)
20. 5 and 18 (52)
21. trauma.ab. limit to yr =”1975 – 2012” (30535)
22. 4 and 21 (40)
23. 5 and 21 (27)
24. abuse.ab. limit to yr =”1975 – 2012” (76043)
25. 4 and 24 (249)
26. 5 and 24 (136)
27. develop$.ab limit to yr =”1975 – 2012” (599117)
28. 4 and 21 (232)
29. 5 and 21 (160)

OVID: PsycINFO (1975 - January 2013, completed on 3rd January 2013)

32. exp (Adolescent Development/ or exp Adolescent Attitudes/ (40373)
33. exp Juvenile Delinquency/ (15336)
34. exp Child Abuse/ (21501)
35. exp Sexual Abuse/ (21276)
36. exp Physical Abuse/ (4642)
37. exp Emotional Abuse/ (1793)
38. exp Emotional Abuse/ (1793)
39. exp Child Neglect/ (2935)
40. exp Early Experience/ or exp Childhood Development/ or exp Risk Factors/ or exp Emotional Trauma/ or exp Stress/ (189185)
41. exp Trauma/ (45336)
42. exp Drug Abuse/ or exp Parent Child Relations/ (132447)
43. exp Childhood Development/ or exp Parental Attitudes/ or exp Parent Child Relations/ or exp Family Relations/ or exp Parental Characteristics/ or exp Risk Factors/ or exp Mental Health/ or exp Emotional Disturbances/ (235703)
44. exp Exposure to Violence/ or exp School Violence/ or exp Domestic Violence/ or exp Violence/ (51408)
45. exp Juvenile Delinquency/ or exp Perpetrators/ or exp Sex Offenses/ or exp Sexual Abuse/ (55339)
46. exp Juvenile Delinquency/ or exp Sexual Abuse/ or exp Sex Offenses/ or exp Rape (40702)
47. 1 or 2 (54591)
48. 3 or 4 or 5 or 6 or 7 or 8 (35870)
49. 9 or 10 or 11 or 12 or 13 (455828)
50. 14 or 15 (55339)
51. 16 and 17 and 19 (977)
52. 16 and 18 and 19 (4734)
53. exp Perpetrators/ or exp Sex Offenses/ or exp Sexual Abuse/ or exp Victimization (50194)
54. exp Sex Offenses/ (26323)
55. 22 or 23 (50194)
56. 16 and 17 and 24 (747)
57. 16 and 18 and 24 (1132)
58. exp Rape/ (4563)
59. exp Sex Offenses/ (26323)
60. 22 or 23 or 27 or 28 (50194)
61. 16 and 17 and 29 (747)
62. 16 and 18 and 29 (1132)

Web of Knowledge / Web of Science (1975 – dates of search, completed 14th August, 6th January 2013)

1. Topic=(adolescent) OR Topic=(adolescence)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 2,207,965)
2. Topic=(juvenile)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 375,521)
3. Topic=(young people)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 96,159)
4. #3 OR #2 OR #1
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 2,612,600)
5. Topic=(child abuse) OR Topic=(childhood abuse)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 85,618)
6. Topic=(sexual abuse)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 49,606)
7. Topic=(physical abuse)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 38,142)
8. Topic=(emotional abuse) OR Topic=(psychological abuse)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 33,298)
9. Topic=(physical neglect) OR Topic=(emotional neglect)
   DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 13,836)
10. #9 OR #8 OR #7 OR #6 OR #5
    DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 140,851)
11. Topic=(adverse child experience) OR Topic=(adverse early experience) OR Topic=(adverse early event) OR Topic=(adverse child event)
    DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 88,188)
12. Topic=(trauma) OR Topic=(child$ trauma) OR Topic=(traumatic event)
    DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 467,611)
13. Topic=(domestic violence) OR Topic=(family violence) OR Topic=(witness$ violence)
    DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 30,617)

14. Topic=(parent$ substance use) OR Topic=(maternal substance use) OR Topic=(paternal substance use)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 14,806)
15. Topic=(parent$ crim$) OR Topic=(maternal crim$) OR Topic=(paternal crim$)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 1,993)
16. Topic=(parent$ mental illnes) OR Topic=(maternal mental illness) OR Topic=(paternal mental illness) OR Topic=(parent$ mental health) OR Topic=(maternal mental health) OR Topic=(paternal mental health)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 28,693)
17. Topic=(parent$ alcohol use) OR Topic=(maternal alcohol use) OR Topic=(paternal alcohol use) OR Topic=(parent$ drug use) OR Topic=(maternal drug use) OR Topic=(paternal drug use)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 86,205)
18. Topic=(family relations) OR Topic=(parent relations) OR Topic=(parent child relations)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 153,436)
19. #18 OR #17 OR #16 OR #15 OR #14 OR #13 OR #12 OR #11
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 837,076)
20. Topic=(sex$ offen$)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 128)
21. Topic=(sex offence) OR Topic=(sexual offence) OR Topic=(sex offend) OR Topic=(sexual offend)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 9,981)
22. Topic=(rape)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 42,553)
23. Topic=(sex assault) OR Topic=(sexual assault)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 12,157)
24. Topic=(sexually harmful) OR Topic=(sexual harm) OR Topic=(sexually harmful behavior)
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 3,518)
25. #24 OR #23 OR #22 OR #21 OR #20
DocType=All document types; Language=All languages; Timespan=1975-2013; (Approx. 61,346)

26. #25 AND #10 AND #4
    Refined by: Databases=(WOS); Timespan=1975-2013; Search language=Auto (2150)
27. #25 AND #19 AND #4
    Refined by: Databases=(WOS); Timespan=1975-2013; Search language=Auto (1351)
28. #25 AND #4
    Refined by: Databases=(WOS); Timespan=1975-2013; Search language=Auto (4933)

Appendix Two: Quality Assessment form

a) General / Cross-Sectional Studies

Question	Y (2)	P (1)	N (0)	U	Comments
Study question / Study population					
Is the question clearly focused and appropriate?					
Is (are) the study population(s) adequately described?					
Is the sample size justified?					
Sampling bias (Comparability of Subjects) Selection (allocation) bias					
Is adolescent sex offender group representative? Or special in some way?					
Is the comparison group(s) representative? Or special in some way?					
Are there specific inclusion criteria for all groups?					
Are there specific exclusion criteria for all groups?					
Are these criteria applied equally to all groups?					
Were groups similar at baseline with regards to demographic factors (age, gender etc)?					
Are confounding variables mentioned? Are they controlled / adjusted for?					
Detection / Measurement bias (Exposure / Outcome)					
Is exposure clearly defined?					
Is measurement of exposure standard, valid and reliable? (if relevant)					
Was exposure measured in the same way across groups?					
Was exposure assessed by assessors who are blind to exposure or co-intervention					

status?					
Are outcomes clearly defined?					
Is measurement of outcomes standard, valid and reliable? (if relevant)					
Were outcomes measured in the same way across groups?					
Were outcomes assessed by assessors who are blind to exposure or co-intervention status?					
Attrition bias					
Were participants who agreed to participate similar to those who declined?					
Were drop-out / non-completion rates recorded?					
Were participants who did not complete similar to those who completed?					
Were reasons for this similar across groups?					
Was there any attempt to statistically account for missing data?					
Statistical analyses					
Were statistical analyses appropriate?					
Were confounding variables assessed / taken into consideration?					
Is there any missing data? Is it explained and accounted for?					
Were the conclusions of the study supported by the results, with any limitations / biases taken into consideration?					

a) Additional points for Case Control studies

Question	Y (2)	P (1)	N (0)	U	Comments
Are cases defined explicitly					

and precisely, with a clearly focused issue being examined?					
Do cases and controls come from the same population?					
Is the population clearly defined?					
Were cases recruited in an appropriate and acceptable way?					
Were controls selected in an appropriate and acceptable way?					
Are the controls similar to cases, except without the outcome of interest?					
Do groups have equal opportunity for exposure?					
Was exposure accurately measured to minimise bias?					
Does the exposure precede the outcome of interest?					
Are confounding variables recognised and steps taken to adjust for them?					

b) Additional points for Cohort studies

Question	Y (2)	P (1)	N (0)	U	Comments
Was the cohort recruited in an appropriate and acceptable way?					
Was exposure accurately measured to minimise bias?					
Was outcome accurately measured to minimise bias?					
Was the follow up period clearly defined?					
Was the follow up period an appropriate length of time?					
Were those followed up the same as those who were not?					
Was an acceptable					

proportion of the cohort was followed up? (Note what proportion)					
Was the follow up of subjects 'complete' enough? (What about attrition / those not followed up: explanations?)					

Based on the following references:

Critical Skills Appraisal Programme (CASP) (2010). Making sense of evidence about clinical effectiveness: 11 questions to help you make sense of a case control study. http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Case-Control_Appraisal_Checklist_14oct10.pdf

Critical Skills Appraisal Programme (CASP) (2010). Making sense of evidence about clinical effectiveness: 12 questions to help you make sense of a cohort study. http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Cohort_Appraisal_Checklist_14oct10.pdf

Appendix Three: Data extraction form

General information

Date of data extraction:

Author:

Article title:

Reference Manager ID:

Identification of the reviewer:

Notes:

Re-verification of study eligibility

Population:
- Adolescents (aged 12-19) Y N ? Notes:

Exposure:
- Childhood abuse Y N ? Notes:
- Adverse experience Y N ? Notes:

Comparator:
- No childhood abuse Y N ? Notes:
- Different abuse Y N ? Notes:
- No adverse experience Y N ? Notes:
- Different experience Y N ? Notes:

Outcome (tick):
- Sexually offensive behaviour (official records) ( )
  (self-report) ( )
- Details of offence(s):

Specific Information

Study characteristics

Aim / objectives of study:

Study design:
Study inclusion criteria:
Study exclusion criteria:
Recruitment procedures used (details of blinding etc):

Participant characteristics

Number of participants enrolled:
Number of participants completed:
Age:
Gender:
Ethnicity:
SES:
Any other information:

Population characteristics

1. Target population (describe)
2. Target population setting (e.g. secure unit)
3. Were exposure group and other groups comparable?

Exposure

1. Childhood abuse: Y N ?
2. Type of abuse (circle):

Sexual Physical Emotional Neglect

3. Perpetrator(s) of abuse:
4. How was this measured?
5. If tool(s) were used, were these validated?
6. If self-report, how was the validity of this maximised?
7. Notes

8. Early adverse experience: Y N ?
9. How was this measured?
10. If tool(s) were used, were these validated?
11. If self-report, how was the validity of this maximised?
12. Notes (i.e. kinds of experiences?)

13. Outcome(s) measured: Y N ?
14. Notes
15. What mediating variables (if any) were investigated? (i.e. protective factors / resilience)

Outcome

1. What was measured? (i.e. type of offence)
2. How was this measurement taken (e.g. self-report, official records)?
3. If self-report, how was the validity of this maximised?
4. If official records, what records were these? Valid?
5. Was risk of further offending assessed?
6. Drop out rates and reasons for drop out:
7. Notes

Results / Analysis

1. Unit of assessment / analysis:

2. Statistical techniques used:
3. Are the techniques used appropriate? Y N
4. Are stats adjusted for confounding variables? Y N

5. Is any missing data dealt with in analyses? Y N

6. Is any missing data explained? Y N

7. Any additional outcomes recorded? Y N
   Please provide details:

1. Overall study quality (please circle): ***Good*** ***Satisfactory*** ***Poor***

   Notes

Appendix Four: Participant Information Sheet

Participant Information Sheet
(Draft Version 4.0, Final Version 2.0: 4th June 2013)

Title of Study: Adverse experience and mental health in adolescents who harm others

Rebecca Doyle is a Trainee Forensic Psychologist who is doing her Doctorate at the University of Nottingham. She has worked in CAMHS before, and is currently working here at the unit. She would like to invite you to take part in her research study. Research is something that is done a lot in places like the unit, and it can help us find out new information to make things better for people like you.

Before you decide if you want to take part, it would be good if you knew a bit about why this research is being done and what it would involve for you. The researcher (Rebecca) or one of your care team will go through the information sheet with you, and answer any questions you have. You can talk to other people about the study if you wish. Ask us if there is anything that is not clear.

Why is this research being done?
The researcher hopes to find out information about things that happen to us when we are young, and how this can make us who we are when we are teenagers like you. She wants to know if there is anything that happens more often in childhood to teenagers who hurt other people. This hurt could be due to sexual behaviours or being violent, or it could involve hurting people indirectly due to things like stealing or setting fires. The researcher also wants to know a little bit more about how people's mental health can affect things. If we find out more about things like this, then we can make services better for teenagers in the future, and work out how to support them before and after bad things happen.

Why have I been invited?
You are being invited to take part because you are a teenager who is living in the unit. You may or may not have hurt somebody in some way. We are inviting everyone in the Adolescent Service to take part. The researcher is also going to ask some people who are living in the community if they would like to take part, to see if there any differences.

Do I have to take part?
Not if you do not want to! It is up to you to decide whether or not to take part. Whether or not you do decide to take part, your care and time at the unit will

not be affected and will carry on as normal. If you do decide to take part you will be given this information sheet to keep and be asked to sign a CONSENT FORM.

What will happen to me if I take part?

In order to find out some more information, the researcher would like to read your files that the unit has. If you decide that you would like to take part, then you can tick some boxes on the CONSENT FORM to say that it is OK for The researcher to do this. When the researcher reads them, she is going to use some tickboxes in order to record whether or not certain things happened to you when you were younger. She will also make some notes if you have been diagnosed with anything to do with mental health. It will look a little bit like this:

EXAMPLE CHECKLIST

	Present	Not Present
Was bullied in school	✓	
Saw someone else get bullied		✓

There is nothing else that you will need to do other than have a think about whether or not you would like to take part in the study. This is what we are asking you now.

What bad things might happen if I take part?

It is understandable if you feel uncomfortable about letting someone you don't know read your files. You can talk to the researcher about this, or someone else that you know and trust, such as a member of your care team. We can try and help you feel better. The researcher isn't going to tell anyone anything private about you or anything that you have done. Remember, you don't have to say yes if you do not want to!

What are the good things about taking part?

The information we get from this study may help people like you understand themselves a bit better, and help us to develop better support and services for them in the future.

What happens when the research is finished and it stops?

This piece of research will finish when the researcher has finished collecting data from the files of people who have said that it is OK for her to do so. When this research study has finished, the researcher will write up what she found in a big report. If you like, she can write you a little summary so that you can know

what she found out as well. There is a little section on the CONSENT FORM that you or your parents can tick if you would like this to happen.

What if there is a problem or I don't want to take part anymore?
If you have a worry about any aspect of this study, you can tell your care team that you would like to speak to the researcher, who will do their best to answer your questions. The researcher's contact details are given at the end of this information sheet. If you decide to change your mind, you can withdraw (say no) at any time and without giving a reason. No one will be angry at you if this happens. Data that has been collected so far may not be able to be erased.

If you feel that you would like to make a complaint about the conduct of this research, because for example you feel that you have been unfairly treated, then you either speak to the researcher (Rebecca) who can advise you on the next step, or you can contact someone who is not involved in this project using the details below. [Details to vary according where participants are recruited from. Discussions to be held with Local Collaborators / Research departments to ascertain who the most appropriate contact point is]

Will other people find out about my information? Will it be kept private?
One important thing that all people who do research think about is confidentiality. Confidential means 'private'. In this case, it means that when your files are being read, the researcher will not tell anyone what is in them. When she records data from them your name will not be included so that no one else will know that this data has come from your files. This also means that, when the research is finished, it will not have any personal details in it so that no one will know where the information has come from. This is very important. We will follow ethical and legal practice, and all information about you will be handled in confidence and kept private. All information which is collected about you during the course of the research will be kept **strictly confidential**, stored in a secure and locked office, and on a password protected database. Any information about you which leaves the unit will have your name and address removed (anonymised) and a unique code will be used so that you cannot be recognised from it.

If you join the study, some parts the data collected for the study may be looked at by authorised people from the University of Nottingham who are organising the research. They may also be looked at by authorised people to check that the study is being carried out correctly. This data will not have your name on it, and no-one will know that it is yours. Everyone has a duty of confidentiality to you as a research participant (this means that we won't tell anyone anything private about you) and we will do our best to meet this duty.

Your personal data (name and address) will be kept for about 3 months after the end of the study so that we are able to contact you about the findings of this study (unless you told us that you do not wish to be contacted). All other data, which will have been made so no-one can tell that it is yours, will be kept securely for 7 years. After this, your data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your confidentiality, only members of the research team will have access to your personal data, and no-one will be able to tell that it is yours (it will have been "made anonymous").

What will happen to the results of the research study?
This research project is going to be written up as a report for the researcher's Doctoral thesis, once she has finished collecting data. As information that has been collected will have been made anonymous, no one will know that it has come from you. If you would like to be sent a summary of what was found, then you can tick a little box on the CONSENT FORM.

Who is organising and funding the research?
This research is being organised by the University of Nottingham and is being self-funded.

Who has reviewed the study?
All research is looked at by independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given favourable opinion by Nottingham Research Ethics Committee 2. The University of Nottingham and the unit have both said that it is OK, too.

Further information and contact details
If you would like to talk to the researcher about this study then you can ask a member of your care team to email her with any questions you have. Here are her email addresses:

Thank you for taking the time read this Information Sheet.

Rebecca Doyle
Trainee Forensic Psychologist
Institute of Work, Health & Organisations
University of Nottingham, UK
Email: lwxrld@nottingham.ac.uk; rdoyle@standrew.co.uk

This research is being supervised by Professor Kevin Browne. His contact details are as follows:

Professor Kevin Browne
Professor of Forensic Psychology and Child health
Institute of Work, Health & Organisations
University of Nottingham, UK
Email: kevin.browne@nottingham.ac.uk

Please speak to a member of your care team if you would like to speak to the researcher or her Supervisor

Appendix Five: Participant Consent Form

CONSENT FORM FOR PATIENTS OVER 16

Title of Project: **Adverse experience and mental health in adolescents who harm others**

Name of Researchers: **Rebecca Doyle,** supervised by **Professor Kevin Browne**

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated 4th June 2013 (version 2.0) for the above study. I have had the opportunity to think about all the information, ask questions and have had these answered enough to make me happy. ☐

2. I understand that I do not have to say yes and take part in this study if I don't want to: my participation is voluntary. I understand that I am free to change my mind and withdraw at any time without saying why if I don't want to, and without my medical care or legal rights being affected. ☐

3. I understand that relevant data collected during the study may be looked at by people from the University of Nottingham, from regulatory authorities (like the people who said this project was OK, the Research Ethics Committee) or from the NHS Trust, where it is relevant to my taking part in this research. I think that this is OK, and give permission for these people to have access to my anonymised data. ☐

4. I agree to take part in the above study. ☐

Only sign if you want to take part in the study

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent.	Date	Signature

I would like to know about anything that this study finds out ☐

Appendix Six: File Review Coding System

File Review Coding System

Date of File Review:

Participant number:

Organisation data collected from:

Gender:

Age:

Ethnicity (if known):

Group Membership:

Offence Type(s) (if relevant):

Notes:

Experiences of Abuse (occurring before 12 years of age)

	Present	Absent	Notes / Details (e.g. relationship to perpetrator (familial/non-familial))
Sexual Abuse			
Physical Abuse			
Emotional Abuse			
Physical Neglect			
Emotional Neglect			

Adverse Childhood Experiences (occurring before 12 years of age)

Individual Domain

	Present	Absent	Notes / Details (if relevant)
Alcohol use			
Substance use			
Health problems			
Criminal involvement			
Conduct problems			
Sexualised behaviours			
Exposure to pornography			

- **Other notes:**

Familial Domain

	Present	Absent	Notes / Details (if relevant)
Familial criminality			
Parental separation			
Involvement with Social Services			
Involvement with alternative care			
Parental psychopathology			
Parental substance misuse			

Poor relationship with parents			
Other familial disruption			

- **Other notes:**

Academic Domain

	Present	Absent	Notes / Details (if relevant)
Poor academic achievement			
Experiences of school bullying			
Poor school behaviour			***(give examples. e.g. truancy or expulsion)***

- **Other notes:**

Peers / Friendship Domain

	Present	Absent	Notes / Details (if relevant)
Peer criminality			
Peer substance use			
Poor relationships with peers			
Social isolation			
Peer bullying			

- **Other notes:**

Witnessing / Exposure to Violence

	Present	Absent	Notes / Details (if relevant)
Witnessed family violence			*(e.g. perpetrator / victim; severity)*
Witnessed peer violence			
Witnessed community violence			
Witnessed sexual violence			

- **Other notes:**

Psychopathology

Yes **No**

Age of onset:

Diagnosis (if any) (include traits):

Assessment Details:

Notes / Details:

Learning Disability (if relevant)

Yes **No**

Assessment Details:

Notes / Details:

Offence Details (if relevant)

Notes:

Appendix Seven: Consent form for case study participation

Consent Form for Case Study participation

Hello. Becky would like to write a report about her work with you. This is part of her training to become a Psychologist. She is going to talk to you a little bit about the report and what will be in it now, and then you can ask her lots of questions if you would like to.

After this has happened, please read the statements below. If you agree with them please sign on the dotted line if you want to say yes to this report being written.

- I understand that this report will be anonymous (my name won't be in it)
- I understand that this report will only be shown to Becky's supervisor and maybe some other people at the University of Nottingham
- I understand that I don't have to say "yes" to this report being written
- I understand that I can change my mind at any time about this report being written
- I understand that I can ask any questions that I want
- I consent ("say yes") to this report being written

Signed: ……. Date: ……..

Appendix Eight: HCR-20 report template

(Anonymised)

STRUCTURED RISK ASSESSMENT

Historical Clinical Risk Assessment Version 2 (HCR-20), (Webster, Douglas, Eaves and Hart 1997) was used as a framework for considering issues relating to *****'s risk. It is designed to assist professional evaluators in assessing, and making judgements about, a person's risk for violence. The HCR-20 is divided into three sections, all looking at the presence and relevance of major risk factors, including historical, clinical and risk management factors. The HCR-20 also looks at possible risk scenarios and case management strategies.

OVERVIEW

Background Information:

Reason for assessment

A risk assessment has been completed in order to evaluate *****'s current level of risk of violence, formulate appropriate risk management plans and to identify key areas he needs to work on in order to reduce his risk.

Sources of Information Reviewed

The historical information for this report has been gained from the following sources: ****

HISTORICAL FACTORS

Within this section the historical factors are rated as present, partially present or absent.

The historical risk factors identified as present or partially present in *****'s past are particularly relevant in terms of the likelihood of increasing his risk of further violent behaviour:-

H1- Previous Violence – Present

Violence is defined as actual, attempted or threatened harm to a person. For a present rating there need to have been three or more acts of violence or one serious act of violence.

Sexually Inappropriate Behaviour:

H2- Young Age at First Violent Incident - Present

This item refers to an onset of violence under the age of twenty in order to attract a present rating.

H3- Relationship Instability - Omit
This item refers to the person's ability to form and maintain stable long term non-platonic relationships.

H4- Employment Problems - Omit
*This item cannot be rated due to ***** having limited opportunity to access employment.*

H5- Substance Use Problems - Absent
This item assesses impairment in functioning in the areas of health, employment, recreation and interpersonal relationships which is attributable to substance misuse.

H6- Major Mental Illness - Absent

H7- Psychopathy - Omit
This rating is made on the basis of a formal assessment of psychopathy using either the PCL-R or PCL-SV

H8- Early Maladjustment – Present
This item taps maladjustment at home, school or in the community before the age of 17.

Home:

School:

Community:

H9- Personality Disorder – Not Present
This item is rated based on a formal diagnosis of personality disorder or the presence of personality disorder traits

H10- Prior Supervision Failure – Possibly Present
This factor refers to failure to comply with conditions for supervision and/or treatment in any institutional or community mental health or correctional setting.

CLINICAL FACTORS
Within this section the clinical factors are rated as present, partially present or not present at all.
The clinical risk factors identified as present or partially present currently are particularly relevant in terms of the likelihood of increasing *****'s risk of further violent behaviour:-

C1- Lack of Insight - Present
The degree to which the individual fails to acknowledge and comprehend his / her mental disorder and its effects on others.

C2- Negative Attitudes - Present
The item refers to current negative attitudes towards others, social agencies and organisations. The item relates to the extent of which entrenched antisocial and negative attitudes and beliefs are present.

C3- Active Symptoms of Major Mental Illness – Absent
This item assesses both positive and negative symptoms of mental illness, with particular attention given to threat/control override symptoms.

C4- Impulsivity – Present
This item refers to dramatic hour-to-hour or day-to-day fluctuations in mood or general demeanour.

C5- Unresponsive to Treatment – Possibly Present
Item refers to how an individual is responding to current attempts at remediation or treatment.

RISK MANAGEMENT FACTORS

The following items centre on forecasting how ***** will adjust to future circumstances. These items are therefore discussed in speculative terms. Each item is rated as present, possibly present or absent.

R1- Plans Lack Feasibility – Absent
Item refers to the ability of the individual to accept and make use of treatment. Family and peers are considered in relation to providing assistance within this.

R2- Exposure to De-stabilisers – Possibly Present
Item refers to situations in which the individual could be considered vulnerable and may trigger a violent episode. This can include the presence of weapons, substances or a victim group and is related to a lack of professional support.

R3- Lack of Personal Support – Possibly Present *Refers to the presence of peers and relatives and their assistance in maintaining a plan and support.*

<u>R4- Non-compliance with Re-mediation Attempts</u> – Possibly Present

Item refers to a motivation and willingness to succeed and comply with medication and other therapeutic regimes. The potential for violence would seem to be reduced if the individual can accept and conform to agree-upon rules.

<u>R5- Stress</u> – Possibly Present

Refers to a forecasting as to what sources of stress the individual is likely to encounter and how he / she may cope with these.

<u>Risk Summary and Scenarios</u>

A number of risk factors have been identified for *** and therefore his risk of future violence is currently considered to be **moderate** to **high**. Risk scenarios are not a projection about what will happen, rather a projection about what could happen in particular circumstances:-

Scenario One: Aggression

Scenario Two: Arson

Scenario Three: Vulnerability to being victimised

Scenario Four: Sexually assaultive behaviour

Scenario Five: Absconding

Appendix Nine: Behavioural Monitoring scoring criteria

RECORDING KEY FOR MONITORING WARD RULES, COMMUNITY EXPECTATIONS, SELF HARM, AGGRESSION AND OTHER RISK BEHAVIOURS

WARD RULES

R1 (+code)	no physical aggression to other people or property
R2 (+code)	no threatening of physical violence to other people or property
R3	no verbally abusive language towards others
R7	no sexualised touching between young people or staff e.g. direct touching of groin, breast, leg etc.
R8	no racial, religious or cultural abuse
R9	no derogatory or inflammatory about patient's relatives.
R10	no sexually inappropriate language (or gestures) towards others
R11	no sexualised comments about patient's relatives.
R12	no invading personal space (include hugging)

SELF HARM (DSH)

A CUTTING	**G** HITTING/PUNCHING SELF
B HEADBANGING	**H** HITTING/PUNCHING WALLS
C LIGATURE	**I** BURNING SELF
D RE-OPENING WOUNDS	**J** OTHER (SPECIFY INC. THREATS)
F INGESTION W USING WEAPON	**K** INSERTION

AGGRESSION R1 AND R2

S TOWARDS STAFF	**O** TOWARDS OTHERS
P TOWARDS PATIENT	**PR** TOWARDS PROPERTY

OTHER RISK BEHAVIOURS

FOR EXAMPLE ABSCONDING (OR ATTEMPTED), INCITING OTHERS TO BEHAVE IN AN UNSAFE MANNER, SECRETING OR STORING MEDS AND OTHER MISCELLANEOUS BEHAVIOURS WHICH DO NOT COME UNDER THE RULES OR EXPECTATIONS SHOULD BE CODED AS **O.R.B.** AND DETAILS RECORED IN FULL ON THE DAILY PROGRAMME SHEET. OTHER BEHAVIOURS THAT SHOULD BE LISTED AS O.R.B WILL INCLUDE THE USE OF INTOXICATING SUBSTANCES, THE BRINGING OF KNIVES, RAZOR BLADES OR SHARP ITEMS ONTO THE WARD, THE BRINGING OF MATCHES OR LIGHTERS, OR CONSUMPTION OF CIGARETTES ONTO THE WARD.

ORB1 REFUSED MEDICATION	**ORB4** BULLYING
ORB2 PLAY FIGHTING	**ORB5** OTHER (PLEASE SPECIFY)
ORB3 SEXUAL ACTS	

COMMUNITY EXPECTATIONS

E1	Interact with others in a polite and courteous manner
E2	Behave sensibly and safely whenever you are out with staff, e.g. on outings and trips
E4	Keep your room and the ward clean and tidy
E5	Attend to your personal hygiene and laundry regularly
E6	Contribute to the community on the ward by helping with ward jobs
E7	Attend your timetabled sessions
E8	Take part as best you can in sessions
E10	Remain with the areas of the ward to which you are permitted (risk level)
E11	Make sure you ask permission before taking or using other peoples or hospital property
E12	Comply with reasonable staff requests

Appendix Ten: Pre-intervention psychometric raw data

E.W July 2012 1/8/12

MOTOR IMPULSIVENESS (Jm)		COGNITIVE IMPULSIVENESS(Jc)	
2	2	3	2
9	3	4	3
14	2	6*	3
15	2	7*	3
18	3	10*	3
20	4	12	2
21	3	13*	3
23	4	16	3
26	2	19*	3
29	3	27	2
TOTAL	28 Well above Average	TOTAL	27 Above Average
NON PLANNING IMPULSIVENESS (Jnp)			
1*	3		
5*	3		
8*	3		
11*	2		
17*	2		
22*	1		
24*	1		
25	3		
28	1		
30*	1		
TOTAL	20 Normal		

* Reverse Item

For Example, a rating of 3 for question no. 6* would be entered above as 2 (see below)

Client rating (for reversed items)	1	2	3	4
Reverse Score	4	3	2	1

Scoring sheet for impulsivity

I-YOUTH ANSWER SHEET

Form: Actual ___ Ideal ___

[redacted]

le in School ______ __ _____ Ethnic Group WB

t 1

ribe the problem or situation: Coming to SAH. Not allowed to have a [ciga]rette. Didn't know what it was going to be like. Being [tol]d he was coming here in court : here or prison. Court [illegible] damage and stuff. Missed family — really [illegible]

(margin: scared, shocking, [illegible], scared, sad, upset)

= Definitely No **MN** = Mainly No **MY** = Mainly Yes **DY** = Definitely Yes

		DN	MN	MY	DY
1.	Have you ever faced a problem like this before?	DN	MN	(MY)	DY
2.	Did you know this problem was going to happen to you?	DN	(MN)	MY	DY
3.	Did you have enough time to get ready to deal with this problem?	DN	MN	(MY)	DY
4.	When this problem happened, did you think of it as a threat?	DN	(MN)	MY	DY
5.	When this problem happened, did you think of it as a challenge?	DN	(MN)	MY	DY
6.	Was this problem caused by something you did?	DN	MN	MY	(DY)
7.	Was this problem caused by something someone else did?	(DN)	MN	MY	DY
8.	Did anything good come out of dealing with this problem?	DN	MN	MY	(DY)
9.	Has this problem or situation been worked out?	DN	MN	(MY)	DY
10.	If the problem has been worked out, did it turn out all right for you?	DN	MN	MY	(DY)

2

N = No, Not at all **O** = Yes, Once or twice **S** = Yes, Sometimes **F** = Yes, Fairly often

1: 0 (1) 2 3	2: 0 1 2 (3)	3: 0 (1) 2 3	4: 0 1 2 (3)	5: 0 (1) 2 3	6: 0 (1) 2 3	7: 0 1 2 (3)	8: 0 1 (2) 3
9: 0 (1) 2 3	10: (0) 1 2 3	11: 0 (1) 2 3	12: 0 (1) 2 3	13: 0 (1) 2 3	14: 0 (1) 2 3	15: 0 (1) 2 3	16: (0) 1 2 3
17: 0 (1) 2 3	18: 0 (1) 2 3	19: 0 (1) 2 3	20: 0 1 2 (3)	21: 0 1 2 (3)	22: 0 (1) 2 3	23: 0 (1) 2 3	24: 0 1 (2) 3
25: 0 (1) 2 3	26: 0 (1) 2 3	27: 0 1 (2) 3	28: 0 1 (2) 3	29: 0 (1) 2 3	30: 0 (1) 2 3	31: 0 1 2 (3)	32: 0 1 (2) 3
33: 0 1 (2) 3	34: 0 1 (2) 3	35: 0 (1) 2 3	36: 0 1 (2) 3	37: 0 (1) 2 3	38: 0 1 (2) 3	39: 0 (1) 2 3	40: 0 1 (2) 3
41: (0) 1 2 3	42: 0 1 (2) 3	43: 0 1 (2) 3	44: 0 1 (2) 3	45: 0 1 (2) 3	46: 0 1 (2) 3	47: 0 (1) 2 3	48: 0 1 2 (3)
6	9	8	13	9	8	10	11
LA 42	PR 53	SG 54	PS 61	CA 53	AR 53	SR 53	ED 62

Total the circled item scores within each column and record the totals in the space provided at the bottom of each column.

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. CFSEI-2

	Yes	No
1. Do you have only a few friends?	☑	☐
2. Are you happy most of the time?	☑	☐
3. Can you do most things as well as others?	☑	☐
4. Do you like everyone you know?	☐	☑
5. Do you spend most of your free time alone?	☑	☐
6. Do you like being a male? / Do you like being a female?	☑	☐
7. Do most people you know like you?	☑	☐
8. Are you usually successful when you attempt important tasks or assignments?	☑	☐
9. Have you ever taken anything that did not belong to you?	☐	☑
10. Are you as intelligent as most people?	☑	☐
11. Do you feel you are as important as most people?	☑	☐
12. Are you easily depressed?	☐	☑
13. Would you change many things about yourself if you could?	☐	☑
14. Do you always tell the truth?	☑	☐
15. Are you as nice looking as most people?	☑	☐
16. Do many people dislike you?	☐	☑
17. Are you usually tense or anxious?	☐	☑
18. Are you lacking in self confidence?	☐	☑
19. Do you gossip at times?	☑	☐
20. Do you often feel that you are no good at all?	☐	☑
21. Are you as strong and healthy as most people?	☑	☐
22. Are your feelings easily hurt?	☐	☑
23. Is it difficult for you to express your views or feelings?	☐	☑
24. Do you ever get angry?	☑	☐
25. Do you often feel ashamed of yourself?	☐	☑
26. Are other people generally more successful than you are?	☐	☑
27. Do you feel uneasy much of the time without knowing why?	☐	☑
28. Would you like to be as happy as others appear to be?	☑	☐
29. Are you ever shy?	☑	☐
30. Are you a failure?	☐	☑
31. Do people like your ideas?	☑	☐
32. Is it hard for you to meet new people?	☐	☑
33. Do you ever lie?	☑	☐
34. Are you often upset about something?	☑	☐
35. Do most people respect your views?	☑	☐
36. Are you more sensitive than most people?	☑	☐
37. Are you as happy as most people?	☑	☐
38. Are you ever sad?	☐	☑
39. Are you definitely lacking in initiative?	☐	☑
40. Do you worry a lot?	☑	☐

General = 13 - high - T=53 - 51%
Social = 5 - intermediate - T=39 - 13%
personal = 3 - low - T=43 - 29%
Lie = 3 - above average - T=56, 69%

(21)
Intermediate

For Office Use Only After All Testing Is Complete

When the booklet is returned, ensure that all items are completed. Follow the instructions below to score the inventories.

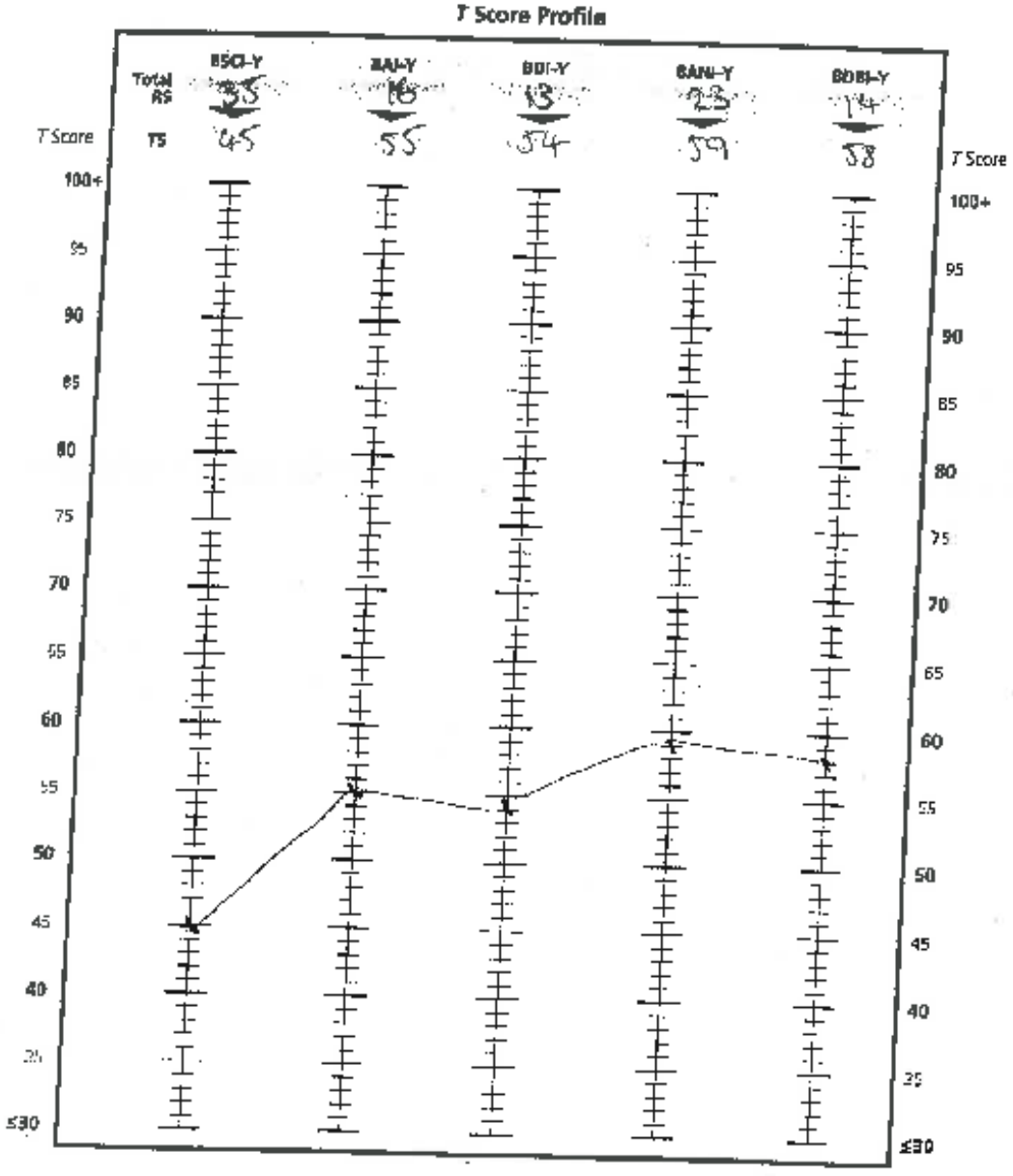
Starting on page 2, total the value of the responses for all 20 items of the inventory. Record the total raw score in the box at the bottom of the page. Repeat this for pages 3–6.

Transfer each total raw score to the total raw score box (in the row labeled Total RS) for the inventory.

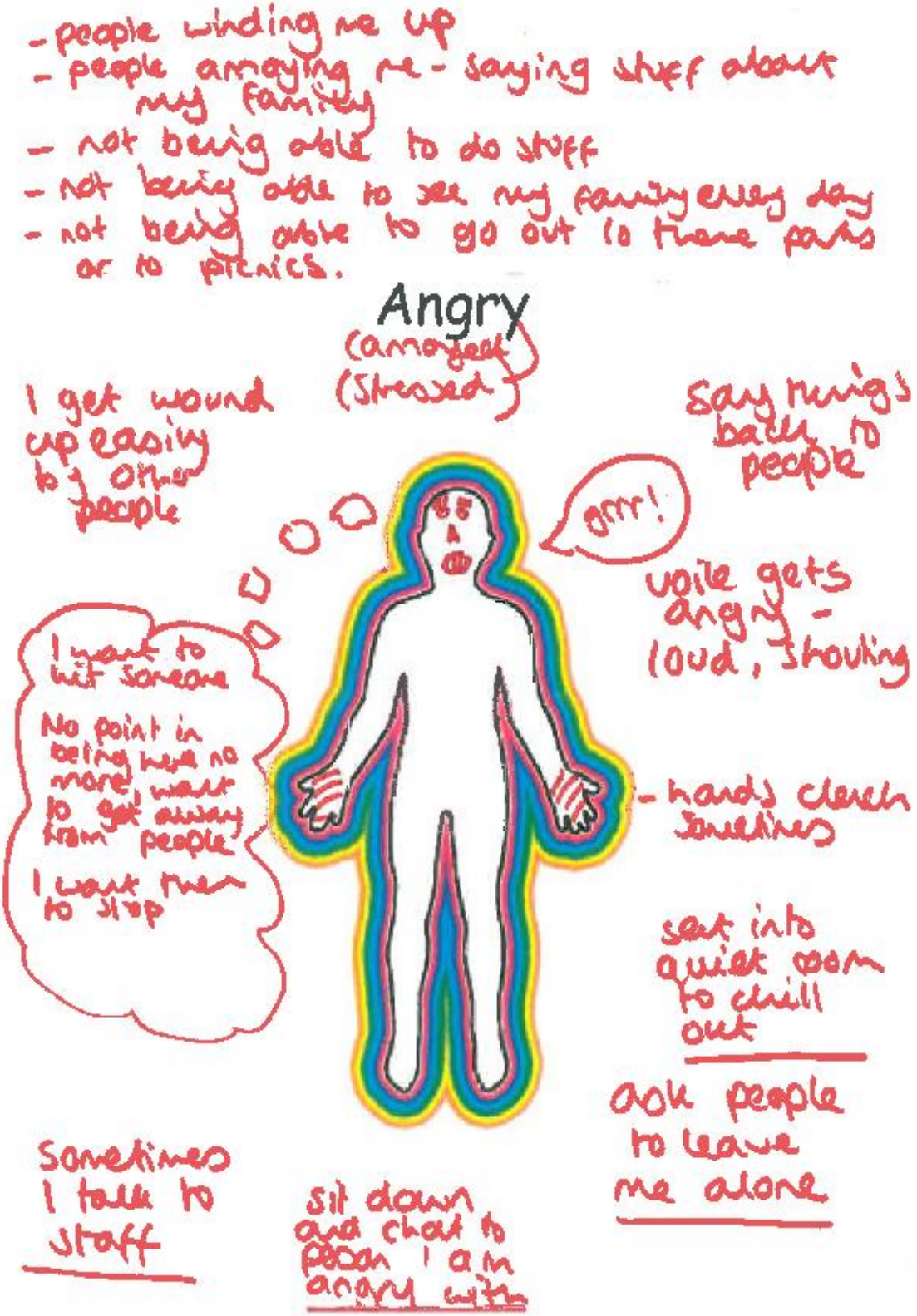
Use Tables A.1–A.3 to convert the raw scores to *T* scores. The tables are presented age-by-sex across the five inventories.

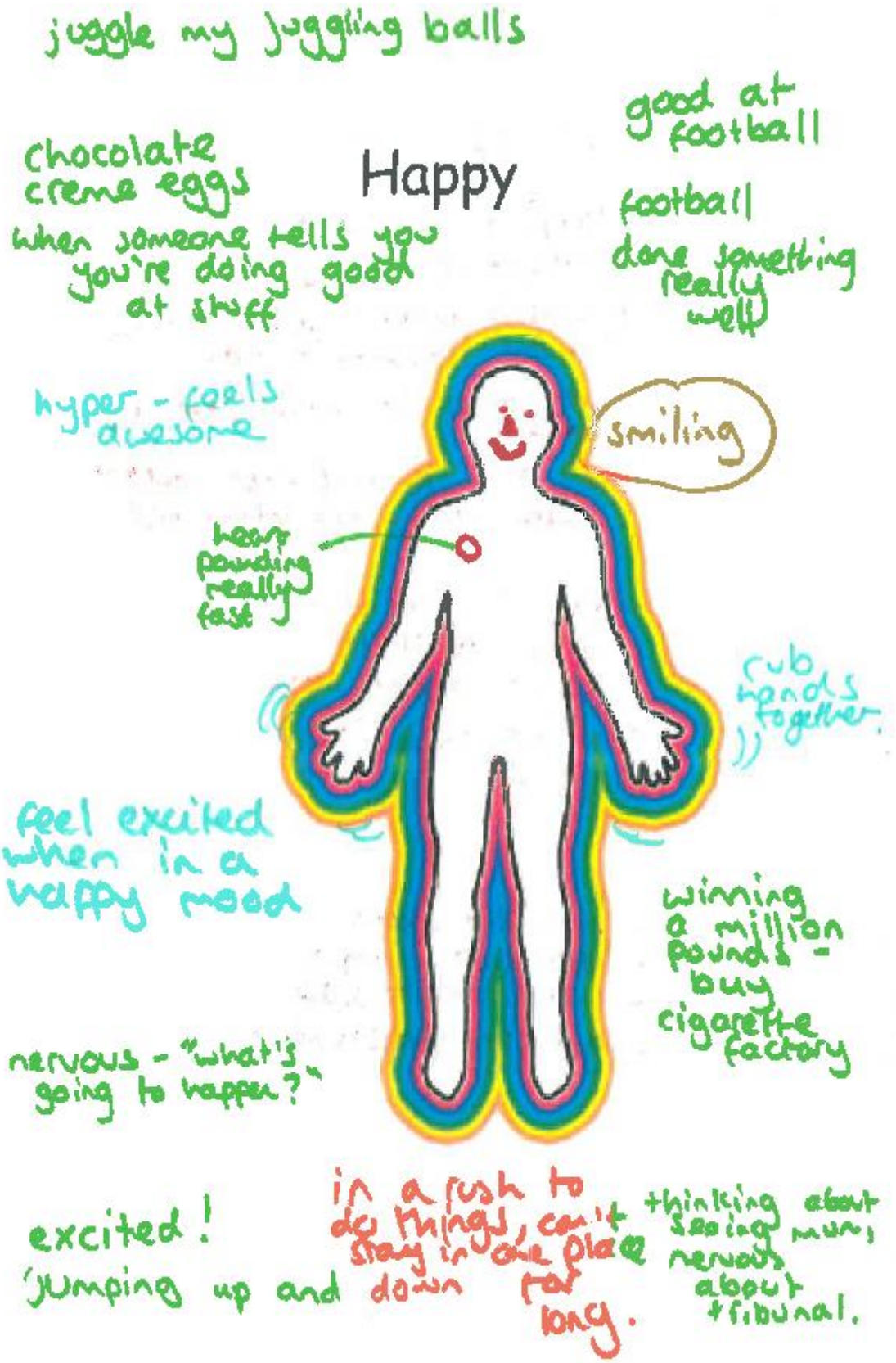
Enter the *T* score for each inventory in the corresponding *T* score box (in the row labeled *TS*). The profile can be plotted after the *T* scores are obtained.

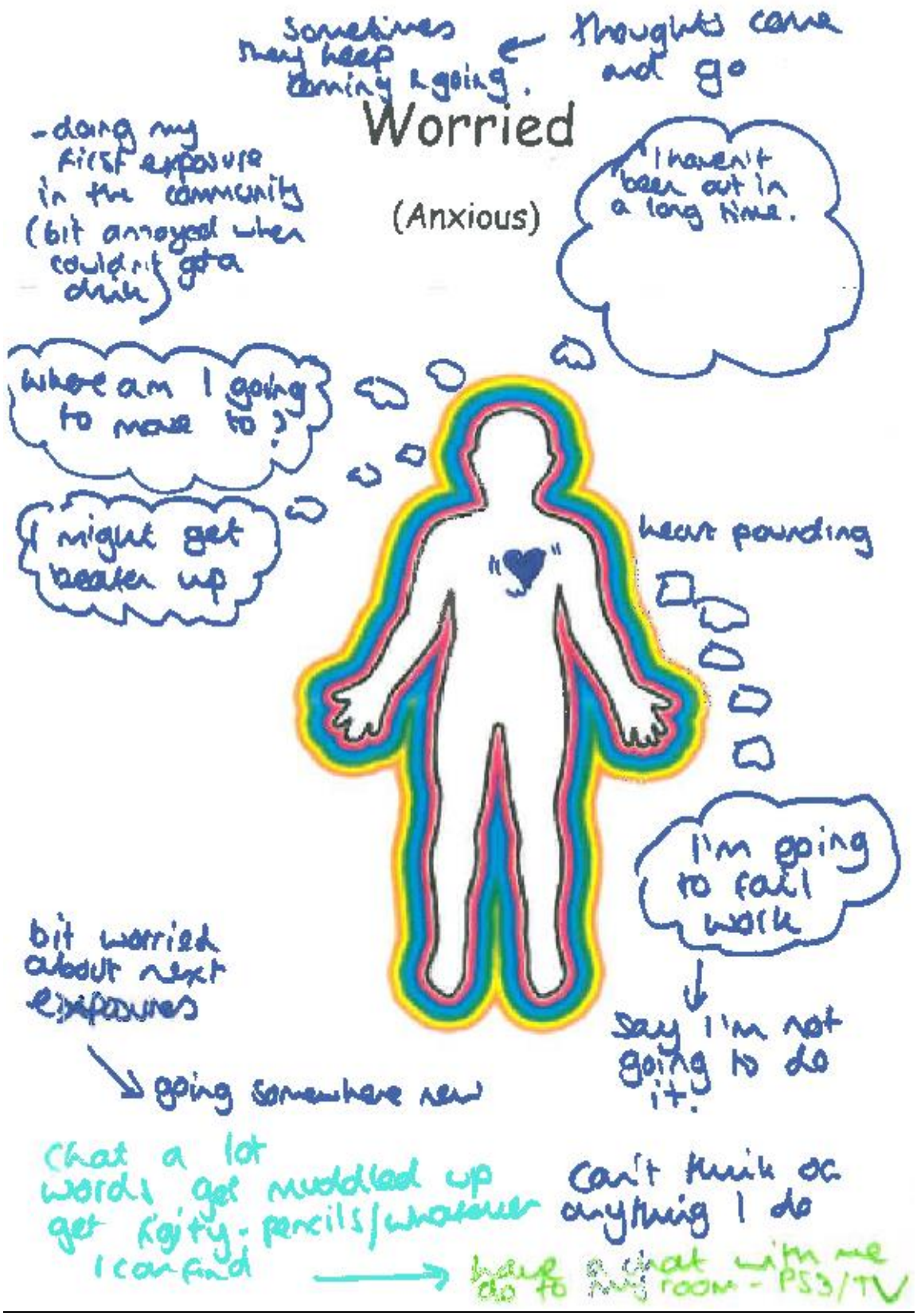
T Score Profile



Appendix Eleven: Examples of materials used during intervention


- people winding me up
- people annoying me - saying stuff about my family
- not being able to do stuff
- not being able to see my family every day
- not being able to go out to fun parks or to picnics.
Angry
(annoyed (Stressed)
I get wound up easily to other people
Say things back to people
grrr!
voice gets angry - loud, shouting
I want to hit someone
No point in being here no more! want to get away from people
I want them to stop
- hands clench sometimes
sent into quiet room to chill out
ask people to leave me alone
Sometimes I talk to staff
sit down and chart to show I am angry with


juggle my juggling balls
good at football
chocolate creme eggs
Happy
football
when someone tells you you're doing good at stuff
done something really well
hyper - feels awesome
smiling
heart pounding really fast
rub hands together
feel excited when in a happy mood
winning a million pounds - buy cigarette factory
nervous - "what's going to happen?"
excited!
jumping up and down
in a rush to do things, can't stay in one place for long.
thinking about seeing mum; nervous about tribunal.


Sometimes they keep coming & going.
Thoughts come and go
Worried
(Anxious)
- doing my first exposure in the community (bit annoyed when couldn't get a drink)
I haven't been out in a long time.
where am I going to move to?
I might get beaten up
heart pounding
I'm going to fail work
bit worried about next exposures
going somewhere new
say I'm not going to do it.
Can't think of anything I do
Chat a lot words get muddled up get agity. pencils/whatever I can find
help do to my room - PS3/TV

HAPPY/ HIGH

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

******'s Mood Diary**

Dates:

LOW


***'s Emotions


I am feeling … Other words for this feeling are … I can tell I feel this way because … These things make me feel this way …	I am feeling … Other words for this feeling are … Other people can tell I am feeling this way because … I can tell that other people are feeling this way because …

Appendix Twelve: Post-intervention psychometric raw data

Post

acts w/o thinking

makes quick cognitive decisions

MOTOR IMPULSIVENESS (Im)		COGNITIVE IMPULSIVENESS(Ic)	
2	2	3	3
9	3	4	2
14	2	6*	4
15	2	7*	3
18	2	10*	3
20	1	12	2
21	2	13*	3
23	3	16	2
26	2	19*	3
29	3	27	2
TOTAL	22 above average	TOTAL	28 well above average
NON PLANNING IMPULSIVENESS (Inp)			
1*	3		
5*	2		
8*	3		
11*	2		
17*	2		
22*	3		
24*	3		
25	3		
28	2		
30*	2		
TOTAL	24 above average		

— not concerned about the future

* Reverse item

For Example, a rating of 3 for question no. 6* would be entered above as 2 (see below)

Client rating (for reversed items)	1	2	3	4
Reverse Score	4	3	2	1

Scoring sheet for impulsivity

CRI-YOUTH ANSWER SHEET

Form: Actual _____ Ideal _____

Name ______________________ Date ____ / ____ / ____ Sex ____ Age ____

Grade in School? __________ Ethnic Group __________

Part 1

Describe the problem or situation: waiting to find out about my next placement. I don't know what is happening. I feel naffed off.

DN = **Definitely No** **MN** = **Mainly No** **MY** = **Mainly Yes** **DY** = **Definitely Yes**

	Question	Answer
1.	Have you ever faced a problem like this before?	DN MN MY DY — NS
2.	Did you know this problem was going to happen to you?	DN MN (MY) DY
3.	Did you have enough time to get ready to deal with this problem?	DN (MN) MY DY
4.	When this problem happened, did you think of it as a threat?	(DN) MN MY DY
5.	When this problem happened, did you think of it as a challenge?	DN (MN) MY DY
6.	Was this problem caused by something you did?	DN MN (MY) DY
7.	Was this problem caused by something someone else did?	(DN) MN MY DY
8.	Did anything good come out of dealing with this problem?	DN MN (MY) DY
9.	Has this problem or situation been worked out?	(DN) MN MY DY
10.	If the problem has been worked out, did it turn out all right for you?	DN MN MY DY —

Part 2

N – No, Not at all (0) **O** – Yes, Once or twice (1) **S** – Yes, Sometimes (2) **F** – Yes, Fairly often (3)

1: 0 1 (2) 3	2: 0 1 (2) 3	3: 0 1 2 (3)	4: 0 (1) 2 3	5: 0 1 (2) 3	6: 0 1 (2) 3	7: 0 1 2 (3)	8: 0 1 (2) 3
9: 0 1 (2) 3	10: (0) 1 2 3	11: 0 1 (2) 3	12: 0 1 (2) 3	13: 0 1 (2) 3	14: (0) 1 2 3	15: 0 1 (2) 3	16: (0) 1 2 3
17: 0 1 (2) 3	18: 0 (1) 2 3	19: 0 1 2 (3)	20: 0 1 (2) 3	21: 0 1 2 (3)	22: (0) 1 2 3	23: 0 1 (2) 3	24: 0 1 (2) 3
25: 0 1 (2) 3	26: 0 1 2 (3)	27: 0 1 (2) 3	28: (0) 1 2 3	29: 0 1 (2) 3	30: 0 1 (2) 3	31: 0 1 (2) 3	32: 0 1 (2) 3
33: 0 1 (2) 3	34: 0 1 2 (3)	35: 0 1 2 (3)	36: 0 1 (2) 3	37: 0 1 (2) 3	38: 0 (1) 2 3	39: 0 1 (2) 3	40: 0 1 (2) 3
41: 0 1 (2) 3	42: 0 1 2 (3)	43: (0) 1 2 3	44: 0 1 (2) 3	45: 0 1 (2) 3	46: 0 (1) 2 3	47: 0 1 2 (3)	48: 0 1 2 (3)
12	12	13	9	13	6	14	11
LA 57	PR 59	SG 67	PS 52	CA 63	AR 48	SR 67	ED 62

Total the circled item scores within each column and record the totals in the space provided at the bottom of each column.

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CFSEI-2
post

	Yes	No
1. Do you have only a few friends?		
2. Are you happy most of the time?		
3. Can you do most things as well as others?		
4. Do you like everyone you know?		
5. Do you spend most of your free time alone?		
6. Do you like being a male? / ~~Do you like being a female~~?		
7. Do most people you know like you?		
8. Are you usually successful when you attempt important tasks or assignments?		
9. Have you ever taken anything that did not belong to you?		
10. Are you as intelligent as most people?		
11. Do you feel you are as important as most people?		
12. Are you easily depressed?		
13. Would you change many things about yourself if you could?		
14. Do you always tell the truth?		
15. Are you as nice looking as most people?		
16. Do many people dislike you?		
17. Are you usually tense or anxious?		
18. Are you lacking in self-confidence?		
19. Do you gossip at times?		
20. Do you often feel that you are no good at all?		
21. Are you as strong and healthy as most people?		
22. Are your feelings easily hurt?		
23. Is it difficult for you to express your views or feelings?		
24. Do you ever get angry?		
25. Do you often feel ashamed of yourself?		
26. Are other people generally more successful than you are?		
27. Do you feel uneasy much of the time without knowing why?		
28. Would you like to be as happy as others appear to be?		
29. Are you ever shy?		
30. Are you a failure?		
31. Do people like your ideas?		
32. Is it hard for you to meet new people?		
33. Do you ever lie?		
34. Are you often upset about something?		
35. Do most people respect your views?		
36. Are you more sensitive than most people?		
37. Are you as happy as most people?		
38. Are you ever sad?		
39. Are you definitely lacking in initiative?		
40. Do you worry a lot?		

For Office Use Only After All Testing Is Complete

the booklet is returned, ensure that all items are completed. Follow the instructions below to score ventories.

rting on page 2, total the value of the responses for 20 items of the Inventory. Record the total raw score the box at the bottom of the page. Repeat this for ges 3–6.

nsfer each total raw score to the total raw score box the row labeled Total RS) for the inventory.

Use Tables A.1–A.3 to convert the raw scores to T scores. The tables are presented age-by-sex across the five inventories.

Enter the T score for each Inventory in the corresponding T score box (in the row labeled TS). The profile can be plotted after the T scores are obtained.

T Score Profile