AN INVESTIGATION INTO THE PRESENTATION OF TRAUMA IN ADOLESCENTS WITH A DEVELOPMENTAL DISABILITY AND PSYCHOLOGICAL TREATMENT OF TRAUMA IN ADOLESCENTS

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Abstract

This thesis provides an investigation into the presentation and treatment of childhood maltreatment in adolescents, with a key focus on adolescents with developmental disabilities (DD). A range of methods, including an empirical study, a systematic review, a single case study and a critical evaluation of a psychometric assessment were used to explore this field. The empirical study explores the presentation of childhood maltreatment in a cohort of adolescents with and without DD, within a specialist inpatient setting. The systematic review investigates the effectiveness of psychological treatments for adolescents with a history of childhood maltreatment. The case study explores the effectiveness of an Adapted Sex Offender Treatment Programme (ASOTP) at reducing the risk of sexual re-offending, for a male adolescent with DD and a history of childhood maltreatment. The critical evaluation of the Trauma Symptom Checklist for Children (TSCC) (Briere, 1996) focuses on evaluating the reliability, validity and applicability of the measure for use with adolescents in secure psychiatric settings. The preliminary results of the empirical study found no significant differences between both groups for the dependent measures, however data trends suggested that adolescents with DD display a higher frequency of problematic behaviours. They also displayed some trauma symptoms and emotions more frequently compared with adolescents without DD. The findings of the systematic review were unclear due to methodological issues and bias, however the review showed that Cognitive Behavioural Therapy was not effective at reducing depression but Attachment Based Family Therapy may be an effective intervention for reducing depression and suicidal ideation in adolescents. The case study found that the ASOTP was not effective at reducing the Client's risk of re-offending. The Client did not engage well with the work and the reasons for this are discussed in relation to the Client's history of maltreatment and development of personality disorder traits. In the critical evaluation of the TSCC, it is recognised that the TSCC is a strong measure of trauma, however it has not been validated or standardised for use with children/adolescents with DD. The thesis concludes that there are many avenues of research about maltreated adolescents with DD which need to be explored. This research field needs to be substantially developed before clinicians can reap the beneficial clinical implications of the research.

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GLOSSARY OF TERMS

ABFT	Attachment Based Family Therapy
ADOS	Autism Diagnostic Observation Schedule
ASD	Autism Spectrum Disorder
ASOTP	Adapted Sex Offender Treatment Programme
BASC-2	Behavioural Assessment System for Children (2nd edition)
BYI	Beck Youth Inventories-2nd Edition
BMD	Behavioural Monitoring Data
CAPS-CA	Clinician-Administered PTSD Scale for Children and Adolescents
CBT	Cognitive Behavioural Therapy
CDI	Children's Depression Inventory
CITES-R	Children's Impact of Traumatic Events Scale—Revised
CPTSDI-P	Childhood PTSD Interview-Parent
DD	Developmental Disabilities
DICA	Diagnostic Interview for Children and Adolescents
EFT	Emotional Freedom Techniques
EMDR	Eye Movement Desensitisation and Reprocessing (therapy)
EMS	Early Maladaptive Schemas
GLM	Good Lives Model
HIT	How I Think Questionnaire
ICD-10	International Classification of Diseases- version 10
IPAT	The Institute for Personality and Ability Testing (IPAT)
IPDE	Interpersonal Personality Disorder Examination - Abbreviated (DSM-IV version)
ITSO	Integrated Theory of Sexual Offending
K-SADS	Kiddie-Schedule for Affective Disorders and Schizophrenia
OSIQ-R	Offer Self-Image Questionnaire- Revised
MMPI	Minnesota Multiphasic Personality Inventory
NAS-PI	Novoco Anger Scale and Provocation Inventory

NFQ	Nightmare Frequency Questionnaire
NDQ	Nightmare Distress Questionnaire
PIY	Personality Inventory for Youth scales
PSS-SR	Self-Reported PTSD Symptom Scale
PTSD	Post-Traumatic Stress Disorder
QACSO	Questionnaire on Attitudes Consistent with Sexual Offending
RC	Responsible Clinician
RCMAS	Revised Children's Manifest Anxiety Scale
RRFT	Risk Reduction Family Therapy
RSVP	Risk for Sexual Violence Protocol
SCL-90-R	Symptom Checklist-90-Revised
SIQ	Suicidal Ideation Questionnaire
SIQ-PW	Suicidal Ideation Questionnaire- Past Week
SPSI	Social Problem Solving Inventory
TSCC	Trauma Symptom Checklist for Children
UCLA	University of California at Los Angeles
WAIS-IV	Wechsler Adult Intelligence Scale (4^{th} edition)
YSRP	Youth Self Report and Profile

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GENERAL INTRODUCTION TO THESIS

Childhood maltreatment is a global problem, with seriously detrimental health outcomes (World Health Organisation (WHO)). In 1999, the WHO Consultation on Child Abuse Prevention drafted the following definition of child abuse after having collated definitions of abuse from 58 countries: *''Child abuse or maltreatment constitutes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power".* Specifically, this thesis focuses on the following types of child maltreatment: physical abuse, sexual abuse, neglect and negligent treatment, emotional abuse (including witnessing domestic violence) and peer rejection. WHO (2002) reported prevalence rates for childhood physical abuse of 4.9% (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998) to 64% (Ketsela & Kedebe, 1997) and rates for childhood sexual abuse of 20% among women and 5-10% among men (Finkelhor, 1994a, 1994b). The rates of childhood emotional, psychological abuse and neglect varied depending on the aspect of the abuse documented (e.g. 15-44% for calling the child names and 3-54% for cursing at the child) (Ramilo, Madrid, & Amarillo, 2000). Rates of witnessing domestic violence were not documented. WHO (2002) states that psychiatric disorders and suicidal behaviour forms a significant portion of the global burden of disease. Additional adverse psychological and behavioural effects of childhood maltreatment include: alcohol and drug abuse, cognitive impairment, delinquent, violent and other risk-taking behaviours, depression and anxiety, developmental delays, eating and sleep disorders, feelings of shame and guilt, hyperactivity, poor relationships, poor school performance, poor self-esteem, Post-Traumatic Stress Disorder (PTSD), psychosomatic disorders, suicidal behaviour and self-harm.

One of the factors that may increase the likelihood of childhood maltreatment is the presence of a disability, particularly a developmental disability (DD). A developmental disability is defined by the Federal Developmental Disabilities Assistance and Bill of Rights Act as *"severe, chronic conditions that 1) are attributable*

to mental and physical impairments or both; 2) are manifested before age twenty-two; 3) are likely to continue indefinitely, 4) results in substantive limitations in three or more major life activity areas, such as self-care, receptive and expressive language, learning, mobility, self-direction, capacity for independent living and economic self-sufficiency; and 5) require a combination and sequence of special interdisciplinary or generic care treatment or other services that are of extended or lifelong duration". This definition is preferred over the use of the term 'intellectual disability' because developmental disabilities take into account the daily living (adaptive) functioning of an individual as well as intellectual functioning. Some research has demonstrated that there is an increased risk of maltreatment in children with developmental disabilities (Jones et al., 2012; Mansell, Sobsey, & Moskal, 1998; Mandell, Walrath, Mateuffel, & Pinto-Martin, 2005; Reiter, Bryen, & Shachar, 2007; Skarbek, Hahn, & Parrish, 2009; Sulivan & Knutson, 1998; 2000). However, prevalence rates of maltreatment within this population are difficult to document due to a range of methodological difficulties. Hibbard and Desch (2007) stated that these difficulties include: the failure of child protective workers to document and recognise disabilities, variations in the definitions employed by researchers and the lack of a consistent means to classify maltreatment. Little is known about the presentation of maltreatment in adolescents with developmental disabilities for similar reasons. Newman, Christopher, and Berry (2000) have noted that existing research has a number of methodological issues and focuses predominantly on adults with developmental disabilities. These issues include: very little empirical research using a comparison group, imprecise operational definitions of 'abuse' and 'developmental disabilities', the use of non-validated assessment measures and the use of informant measures (completed by parents or keyworkers) which do not indicate internal subjective experiences that could be crucial for correct diagnosis (Sequiera, & Hollins, 2003). Thus, this is a research area which needs to be developed substantially.

Some researchers have found that the effects of childhood maltreatment are similar for adolescents with developmental disabilities, compared with adolescents without developmental disabilities. These difficulties include aggressive behaviours, inappropriate anger, poor self-esteem, nightmares, inappropriate sexual remarks,

reduced self-care, withdrawal at school/work, self-abuse, withdrawal into fantasy and higher rates of psychiatric diagnoses. However, this research has specifically focused on the effects of childhood sexual abuse in adolescents with developmental disabilities (Akbas et al., 2009; Mansell, Sobsey, & Moskal, 1998; Soylu, Alpaslan, Ayaz, Esenyel & Oruc, 2013). This demonstrates the paucity of research which investigates and compares symptoms of a wider range of maltreatment in adolescents with developmental disabilities. The clinical implications for conducting such research are far reaching and could affect assessment, diagnosis and treatment of trauma in this population. It is important when assessing adolescents with developmental disabilities that we know what types of emotional and behavioural problems to look out for. This could improve the accuracy of diagnosis and therefore increase the likelihood of appropriate types of treatment being offered to this population. It could also possibly influence future design of treatment in order to increase the effectiveness of interventions offered to adolescents with developmental disabilities.

Given the paucity of research about adolescents with developmental disabilities, it is not surprising that there is currently no research which investigates the effectiveness of psychological interventions for childhood maltreatment within this population. Therefore, it is useful to assess which interventions are the most effective in populations of adolescents without developmental disabilities, particularly when considering that many interventions for adults with developmental disabilities are adapted versions of existing interventions (e.g. Adapted Sex Offender Treatment Programme, Cognitive Behavioural Therapy). One of the most comprehensive ways to assess the availability and quality of evidence when investigating the effectiveness of treatment is by a systematic review. It is ethically important that clients receive the best available treatment, this includes psychological interventions with the best available evidence which can also impact on decisions for services and policies. Such a review can also highlight where further research is needed in the future.

Thesis structure:

The main aim of this thesis is to investigate the presentation and treatment of the effects of childhood maltreatment in adolescents, with a prominent focus on adolescents with developmental disabilities. In doing so, it also aims to highlight contemporary issues in this field where further research is needed. The thesis comprises four main chapters including an empirical study, a systematic review, a single case study and a critical review of a psychometric measure. These chapters are sufficiently varied in focus and method to stand as independent studies.

Chapter 1 documents a piece of empirical research which investigates symptoms of childhood maltreatment in adolescents with and without developmental disabilities, within a specialist inpatient service. Research into this topic is scant despite the important clinical implications of improving the effectiveness of assessment, diagnosis and treatment. This is a contribution to the small body of existing literature and a starting point for further research within this specific inpatient population.

In Chapter 2, a systematic review is presented which investigates the effectiveness of psychological interventions at reducing harm resulting from maltreatment in adolescents. Despite there being a wealth of systematic reviews with a broad focus on the effectiveness of psychological interventions for a wide variety of types of trauma in children and adolescents, there are no specific reviews for adolescents with a history of maltreatment. Thus, the systematic review highlights the necessity of separating adolescents from children and adults and separating interpersonal trauma from inadvertent harm (e.g. natural disasters) when evaluating the effectiveness of psychological interventions. It also critically highlights methodological issues within existing studies and makes recommendations for future research.

Chapter 3 outlines a single case study which assesses the effectiveness of an adapted psychological intervention at reducing the risk of re-offending in an adolescent male with developmental disabilities and a history of childhood maltreatment. The case study highlights the importance of considering the effects of childhood maltreatment when facilitating such interventions. The assessment, formulation, treatment and

evaluation are presented alongside relevant research literature and then future treatment recommendations are made.

Chapter 4 critically evaluates the Trauma Symptom Checklist for Children (TSCC; Briere, 1996), a psychometric measure designed for assessing symptoms of trauma in children and adolescents. This psychometric was used throughout the thesis in Chapters 1, 3 and in research included in the systematic review in Chapter 2. It is critically evaluated in terms of its validity, reliability, applicability to populations in psychiatric services and its clinical use compared with other measures of similar constructs for children and adolescents.

Finally, Chapter 5 concludes the thesis by presenting a discussion of the findings in relation to the specific aims of the thesis: 1) to explore the effects of childhood maltreatment in an inpatient population of adolescents with and without developmental disabilities; 2) to evaluate the effectiveness of psychological treatment at reducing the harm of childhood maltreatment in adolescents; 3) to evaluate the effectiveness of a psychological intervention to reduce the risk of re-offending in an adolescent with developmental disabilities; 4) to critically evaluate the TSCC and compare it with other measures of the effects of trauma in children and adolescents. The clinical implications of the research and future recommendations for research in this field are then discussed.

CHAPTER 1

A comparison of trauma symptoms and problematic emotions and behaviours in adolescents with and without Developmental Disabilities.

ABSTRACT

The main aim of the research was to gain clarification on any differences in the prevalence of trauma symptoms and problematic emotions and behaviours displayed in a population of adolescents with and without developmental disabilities (DD), within a specialist inpatient service. **The method** involved collecting data from 38 inpatients (24 with DD and 14 without DD, 28 males, 10 females). All participants had a history of childhood trauma including sexual, physical and emotional abuse, neglect, witnessing domestic violence and peer rejection. Most participants (n = 36) had a history of repeated childhood trauma. The data collected included behavioural monitoring data (observational data), file review data and two psychometric questionnaires (the Trauma Symptom Checklist for Children and the Becks Youth Inventory-Second Edition). **The results** showed no significant differences between adolescents with and without DD for the dependent measures. However, descriptive data showed that adolescents with DD scored higher for a number of trauma symptoms and emotions and displayed higher frequencies of problematic behaviours than adolescents without DD. Significant gender differences were found for adolescents without DD. Males scored higher than females for self-esteem and females scored higher for depression and anxiety than males. Females also displayed some problematic behaviours more frequently than males. The prevalence of psychiatric diagnoses was more varied for males with DD. No males in the sample were given a diagnosis of PTSD. However, both groups of females were given similar rates of diagnoses of PTSD (33.31% with DD; 37.5% without DD). Additionally, significant findings were found for the impact of different types of trauma on adolescents with DD compared with adolescents without a DD. Overall, the results suggest that adolescents with DD struggled more significantly to cope with the

effects of trauma. However, the results could also be largely related to having difficulties associated with having a DD. This cannot be distinguished without the use of a control group. Future research is needed in this area to develop these initial findings.

INTRODUCTION

It has been commonly stated in the literature that people with Developmental Disabilities (DD) (including those with Learning Disabilities (LD) and Autism Spectrum Disorders (ASD)) may be a group at greater risk for victimisation and the psychological trauma that can result from such victimisation (Cooper, Smiley, Morrison, Williamson, & Allan, 2007; Fenwick, 1994; MacHale & Carey, 2002; Turk, Robbins, & Woodhead, 2005; Sullivan & Knutson, 1998). This is supported by research by Reiter, Bryen, and Shachar (2007) who found that adolescents with LD experienced more abuse compared with peers without LD. In addition, a meta-analysis by Jones et al. (2012) demonstrated that children with mental illness or DD experienced more types of violence than children with other types of disabilities such as physical or sensory disabilities. Many papers which aimed to investigate the prevalence and/or the presentation of PTSD in people with DD have numerous methodological issues (outlined in the General Introduction) and focus predominantly on adults with DD, many of which are now dated (Newman, Christopher, & Berry, 2000). In short, the research on the prevalence and presentation of trauma-exposed individuals with learning disabilities and/or DD is very much in its infancy.

The research into the effects of trauma on individuals with DD is also in its infancy. A recent systematic review by Wigham, Hatton and Taylor (2011) highlighted that the empirical literature connecting adverse life events and PTSD in people with DD is unsubstantial (Doyle & Mitchell, 2003; Sequiera, & Hollins, 2003; Martorell, & Tsakanikos, 2008). Whilst there is some research about how trauma presents in adults with DD, there is little empirical research which states how trauma presents in adolescents with DD. The most relevant studies (Akbas et al., 2009; Mansell, Sobsey, & Moskal, 1998; Soylu, Alpaslan, Ayaz, Esenyel & Oruc, 2013) have all focused on the effects of sexual abuse in children and adolescents with and without DD and none were conducted in the UK. Mansell et al. (1998) compared symptoms of sexual abuse between children with and without DD, referred from a treatment centre in Canada. The authors found that both groups of children exhibited similar rates of

dominant and aggressive behaviours, inappropriate anger, poor self-esteem and nightmares. However, they also found that children with DD presented with a higher frequency of inappropriate sexual remarks, reduced self-care, withdrawal at school/work, self-abuse and withdrawal into fantasy ($p < .05$) than children without DD. This may represent differences in responses to sexual abuse. However, this information was taken from notes from counselling sessions, therefore no structured assessments were used to measure the effects of abuse. Akbas et al. (2009) recruited children and adolescents (aged 7-18 years) with and without DD from a child and adolescent psychiatric outpatient clinic in Turkey. They found that those with DD had a significantly higher rate of diagnoses (more than one diagnosis), Major Depressive Disorder, Adjustment Disorder and suicide attempts, than those without DD but they did not assess for other effects of sexual abuse. Soylu et al. (2013) included sexually abused children (aged 6–16 years) with and without DD, referred to three different child mental health units in Turkey. Soylu et al. also assessed for rates of psychiatric disorder between children with and without DD. They found rates of Conduct Disorder were significantly greater in adolescents with DD and found that those with DD had higher rates of psychiatric disorders generally. Adolescents with DD also had higher rates of Acute Stress Disorder or PTSD. Major Depressive Disorder was observed to have developed more frequently in girls. These results were only based on cases where sexual abuse involved penetration and psychiatric diagnoses were not made with structured evaluations. All three studies demonstrate that there is a lack of research which investigates the impact of different types of maltreatment in adolescents with and without DD. There is a clear need for more research in this field.

Research into the presentation of trauma in adolescents with DD has important implications for assessment, diagnosis and ultimately treatment of trauma in this population. In a literature discussion, Doyle and Mitchell (2003) emphasise that PTSD is particularly difficult to diagnose in people with DD because the diagnostic criteria were developed for those with a standard intellectual function. In addition, the criteria were not developed on the basis of research on young people or children with PTSD (Briere, 1988; Cole & Putnam, 1992; Scheeringa, Zeanah, Drell, & Larrieu, 1995; Scheeringa, Zeanah, Meyers, & Putnam, 2003; Summit, 1983; Yule, 1994). The

same symptoms may not be present in young people, or they may manifest themselves differently depending on age (Yule, 1994). This is important to consider when researching adolescents with DD. The person's ability to understand the importance of the event is central to the effects the trauma may have. If developmentally a person's ability to process information cognitively and emotionally is compromised, this may affect their response to trauma. As a result, the whole question of how PTSD manifests itself amongst people with developmental disabilities is confusing (Doyle & Mitchell, 2003). PTSD symptoms amongst people with DD may be missed during assessment if the assessor is already attributing behavioural symptoms as challenging behaviour (Doyle & Mitchell, 2003). This may be even more complicated in adolescents, who are already in an important stage of development. It is recognised that adolescence is a "window of opportunity to effect positive changes in adolescent psychological and physical Health" (Werkele, Waechter, Leung, & Leonard, 2007). Adolescence is a time when young people are more able to examine past patterns of behaviour and it is a time when earlier forms of adaptation or coping are carried forward as options for behaviour (Werkele et al., 2007). There exists an opportunity to engage young people in new developmental challenges and opportunities to learn more adaptive, healthy behaviours, which is particularly important among adolescents with a history of maltreatment (Werkele et al., 2007). It is important to consider how to effect this change with adolescents with DD and a good starting point is better recognition of symptoms of maltreatment within this population.

In terms of research into the effects of maltreatment on populations of children or adolescents without a developmental disability, many studies find problems with unmodulated aggression and impulse control (e.g. Cole & Putnam, 1992; Steiner, Garcia, & Matthews, 1997; Van der Kolk, 2005); attentional and dissociative problems (Teicher, Andersen, Polcari, Anderson, Navalta, & Kim 2003); and difficulty negotiating relationships with caregivers, peers and subsequently, marital partners (Finkelhor, Hotaling, Lewis, & Smith, 1989). Terr (1991) found that in children and adolescents who had experienced physical or sexual abuse, PTSD manifested itself as chronic depression, attention deficit disorder, generalised anxiety, conduct disorder

and sleep disturbance. Research has also found gender differences in the presentation of trauma in adolescents. Research has found that female adolescents are more frequently diagnosed with PTSD than males (Breslau, Davis, Andreski, & Peterson, 1991; Giaconia et al., 1995; Mueser, & Taub, 2008; Singer, Anglin, Song, & Lunghofer, 1995; Tolin, & Foa, 2006). Furthermore, research has demonstrated that female adolescents have greater symptom severity of post-traumatic stress than males (Flannery, Singer, & Wester, 2001; Hukkelberg, 2014; Springer, & Paggett, 2000). It is unknown whether these gender differences exist in adolescents with DD.

There is very little research on the emotions and behaviours of adolescents with DD within inpatient services. This is likely to be for reasons such as limited provision of inpatient services for adolescents with DD and co-morbid mental health issues and/or behavioural problems. Professor Allington-Smith (2006) has highlighted this issue in her paper in which she states *"In-patient services are currently a scarce resource and as a result many children with a learning disability are inappropriately placed with private organisations or in secure social services accommodation. Ideally, each region should have an in-patient unit"*. In addition, concerns over conducting research with vulnerable populations may have led to less research in this area. It is important however that research is conducted in order to ascertain the needs of this vulnerable population and potentially enhance future services, including effective identification and prevention of abuse.

To date, no research has used a sample of adolescents with and without DD, within an inpatient service, with a history of maltreatment and investigated differences in emotions and behaviour between these two groups. This is important when considering that these young people have been admitted to an inpatient service due to their very high levels of self-harm, challenging and aggressive behaviours, which are deemed to need managing in such a secure setting. By investigating this topic, it is hoped we can gain some clarification on any differences in the prevalence of types of trauma symptoms, emotions and behaviours which we would expect to observe as stated in previous papers, such as that by Akbas et al. (2009), Mansell, et al. (1998) and Soylu, et al. (2013). This would be a starting point for future research and could also guide criteria for diagnoses of adolescents with and without DD who have

experienced maltreatment. The results could also possibly influence design of future treatments.

In the current study, the definition of a developmental disability is one defined by the Federal Developmental Disabilities Assistance and Bill of Rights Act (outlined in the General Introduction). This study also focuses on a history of childhood or adolescent maltreatment (physical abuse, sexual abuse, neglect and negligent treatment, and emotional abuse (including witnessing domestic violence in the current study)) (World Health Organisation). Peer rejection was also included in the definition due to the detrimental effects that have been observed clinically in adolescents with a history of peer rejection. This is also recognised by McCreary, (1999) as an important form of "non-contact abuse".

Current Research Aims

The aim of the research is to investigate whether there are any differences in the prevalence of trauma symptoms and problematic emotions and behaviours displayed in a population of adolescents with and without DD, within a specialist inpatient service. Specifically, the following research hypotheses will be investigated:

1) To investigate differences in trauma symptoms, problematic emotions and problematic behaviours between adolescents with and without Developmental Disabilities (DD).

2) To investigate whether adolescents with DD display more aggressive and self-harm behaviours than adolescents without DD.

3) (a) To investigate differences in trauma symptoms and problematic emotions and behaviours in males and females with DD.

   (b) To investigate differences in trauma symptoms and problematic emotions and behaviours in males and females without DD.

4) (a) To investigate the prevalence of all diagnoses between adolescents with and without DD in a secure hospital sample.

(b) To investigate the prevalence of diagnoses of Post-Traumatic Stress Disorder in adolescents with and without DD in a secure hospital sample.

5) (a) To investigate the relationship between types of trauma experienced, reported trauma symptoms and emotions and behaviours displayed for both groups.

(b) To investigate differences in the prevalence of reported trauma symptoms, problematic emotions and problematic behaviours displayed by adolescents with and without DD for types of trauma experienced.

METHOD

Ethical Considerations

Ethical approval was sought and given from the South Birmingham Research Ethics Committee.

An assessment of the capacity of the young people to assent (aged 18 years or less) and consent (aged 18 years or more) was facilitated by the Responsible Clinician (RC) on each ward. If the RC deemed that the adolescent did not have the capacity to make an informed decision about taking part in the study, then the adolescent was not invited to take part in the study. The RC was also approached to assess whether there were any other objections with the adolescents taking part.

Consent (for those under 18 years) was sought from a person with Parental Responsibility (parents, guardians or the local authority in the case of a looked after child). A letter was sent to the person with parental responsibility along with an information sheet and the letter requested that the parents, guardians, local authority representative or external social worker, sign and return the consent form enclosed if they were happy for the adolescent to take part in the study (see Appendices 4-6).

Assent was sought from adolescents aged 18 years or less in addition to consent by a person with parental responsibility. Consent was sought from the adolescent themselves if they were aged 18 years and over. The information sheet was given to those wishing to participate (see Appendices 8-9).

Participants

The inclusion criteria were as follows:

Male or female adolescents between the ages of 13 -21 years who are detained as inpatients under the Mental Health Act (1983) at a secure psychiatric hospital in the UK. Adolescents under the age of 18 years where the person holding parental responsibility/their external social worker has given consent for participation and the young person has given informed assent. Adolescents whose RC does not have any objections about their participation can be included. Adolescents with a reading age of 8 years and above. Adolescents with a history of psychological trauma (including sexual, physical and emotional abuse, neglect, witnessing violence and peer rejection).

The exclusion criteria were as follows:

Adolescents with brain injury and adolescents with active symptoms of psychosis.

A total of 38 adolescents detained as inpatients under the Mental Health Act (1983) were recruited from the adolescent service in a secure psychiatric hospital in the UK. The participants consisted of 28 males and 10 females (Mean age=17.11; *SD*=1.30; range = 14–20).

Procedure

An index group of adolescents with developmental disabilities were compared with a comparison group of adolescents without developmental disabilities. The data collection took a period of nine months. The study was introduced to the adolescents in a weekly community meeting. Those who wished to take part and had given consent/assent (in addition to parental consent being obtained) were read the participant information sheet. A participant information sheet was designed

specifically for those with DD with the use of simple language and pictures to aid understanding of the information given (Appendix 1.6). If they still wished to take part, they were asked to complete the Trauma Symptom Checklist for Children (TSCC) and the Becks Youth Inventory (BYI) with the help of a member of the psychology team if they had not already completed these as part of routine assessment in the service (usually completed with the assistant psychologists who have been trained and guided with facilitating the psychometric measures). These psychometric measures were chosen because they are designed for children aged 8-18 years and use simple language. They have been found to be clinically useful for collecting data about internal experiences when working with adolescents with and without DD. The use of self-report questionnaires were chosen as opposed to qualitative data to reduce the potential risk of researching a sensitive topic. It is felt this benefit outweighed the cost of self-report bias that can occur when using questionnaire measures. A file review was conducted to collect existing completed psychometric measures (TSCC, BYI), demographic information (including the presence and type of diagnosis of DD and other diagnoses) and categorical information about the adolescent's trauma history (presence of type of trauma and whether these types of abuse have been experienced more than once). Information about history of maltreatment was taken from professional reports, such as risk assessments. Physical abuse was recorded if information was found about the child experiencing actual or potential physical harm due to the actions of another person. It is recognised that emotional abuse is intrinsic with other types of abuse, therefore this type of abuse was recorded if information was found about verbal abuse, harsh punishment and criticism, in addition to other types of abuse. Neglect was recorded when there was information about the caregiver not meeting the child's basic needs (e.g. safety, warmth, food, and nurturance). Sexual abuse was recorded as present if information was found about the child taking part or being forced into any sexual activity. Witnessing domestic violence was recorded when there was information about the child witnessing violence from any person in the household. Peer rejection was recorded if information was found about the child experiencing rejection by peers. Twelve weeks of Behavioural Monitoring Data (BMD) was collated and used as a dependent measure.

Out of the total service population (n=75), 38 agreed to take part, therefore 50% of the potential sample declined to take part. Reasons for declining included adolescents not wishing to take part, people with parental responsibility declining to give consent and adolescents not having the capacity to participate.

Measures

The Trauma Symptom Checklist for Children is a 54 item self-report which evaluates posttraumatic distress and related symptomatology. The items of the TSCC are explicitly written at a level thought to be understood by children eight years of age or older. The 54 items yield two validity scales (Underresponse and Hyperresponse) and six clinical scales (Anxiety, Depression, Anger, Posttraumatic Stress, Dissociation, and Sexual Concerns). Please see Appendix 3.2 for details.

The Becks Youth Inventories (second edition) comprises five self-report scales to assess the young person's experience of depression, anxiety, anger, disruptive behaviour and self-concept. Please see Appendix 3.2 for details.

Behavioural Monitoring Data (BMD)

The behavioural monitoring data is observational data collected by staff. This data is recorded routinely on a daily basis by multi-disciplinary staff. The information includes 10 categories of expectations the young people should meet, e.g. "interacting with others in a polite and courteous manner" and recordings for all types of aggression, inappropriate sexualised behaviour, deliberate self-harm and any other behaviours considered a risk (see Table 1.1). The categories of expectations and behaviours are the same for all wards within the service. All staff receive mandatory training for recording behavioural monitoring and clear guidelines are provided for the coding of behaviours observed. The data is transferred to a database by the assistant psychologist assigned to each ward within the unit. This allows for any incorrect coding to be corrected. In addition, the adolescents' electronic notes are read to ensure that all incidents have been recorded. Behavioural monitoring data was collected and summarised over a 3 month period.

Behavioural Monitoring

Table 1.1 *Behavioural monitoring codes and descriptions for observed behaviour*

Code	Behavioural observation- 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
E3	Keep your room and the ward clean and tidy
E4	Attend to your personal hygiene and laundry regularly
E5	Contribute to the community on the ward by helping with ward jobs
E6	Attend your timetabled sessions
E7	Take part as best you can in sessions
E8	Remain with the areas of the ward to which you are permitted (risk level)
E9	Make sure you ask permission before taking or using other peoples or hospital property
E10	Comply with reasonable staff requests
Code	Behavioural observation- Ward Rules
R1/S/P/O/PR	No physical aggression towards staff/peers/others/property
R1W	No physical aggression using a weapon
R2/S/P/O/PR	No threats of physical violence towards staff/peers/others/property
R2W	No threats of using physical violence with a weapon
R7-VC/S/P	No sexualised comments towards staff/peers
R7-NC/S/P	No sexualised behaviours involving non-contact (e.g. invading personal space)
R7-T/S/P	No sexualised touching towards staff/peers
R7-E/S/P	No sexualised exposure towards staff/peers
R7EP	No sexualised exposure towards peers
R8	No religious, cultural or racial abuse
Code	Deliberate Self-Harm
DSH A	Cutting
DSH B	Head-banging
DSH C	Ligature
DSH D	Re-opening wounds
DSH E	Ingestion
DSH F	Hitting/punching self
DSH G	Hitting/punching walls
DSH H	Burning self
DSH I	Other (please specify) e.g. hair pulling
DSH J	Insertion
Code	Behavioural observation- Other Risk Behaviours
ORB1	Refusing medication
ORB2	Play fighting
ORB3	Bullying
ORB4	Other (please specify) e.g. verbal abuse, attempts to self-harm

Note: These codes are used when observed behaviour breaks the ward rules or does not meet expectations.

Reliability of Behavioural Monitoring Data

The reliability of the staff recordings for the behavioural monitoring data was checked from both adolescents units with the use of one hypothetical scenario which detailed common behaviours displayed on the unit including not meeting expectations, verbal threats of aggression, aggression towards property and inappropriate sexualised behaviour (see Table 1.2). 14 members of staff who are responsible for recording behaviours completed the scenarios. Correct responses were coded as 1 and incorrect as 0. Table 1 shows that the percentage of staff accurately identifying behaviours was high in both units. Inter-rater reliability statistics such as Cohen's Kappa could not be used due to the number of raters exceeding n =2. Please see Table 1.1 for the codes and their corresponding descriptions of risk behaviours and expectations.

Table 1.2 *Percentage of behaviours correctly identified by raters working in the service for adolescents with DD and raters working in the service for adolescents without DD*

Behaviour	**Correct ratings in the service for adolescents with DD (%) (n = 7)**	**Correct ratings in the service for adolescents without DD (%) (n = 7)**
E10	100	100
R2-S	85.7	85.7
R1-PR	85.7	85.7
R1-P	85.7	100
R8	85.7	100
R7-ES	100	100

Test-retest reliability was demonstrated by re-administering the hypothetical scenario to three staff members three weeks following the initial administration. 100% agreement rates were identified between initial and follow up recordings.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS) version 18 was used for all statistical analysis.

Statistical Power

The sample size required for Cohen's (1992) recommended power of 0.8 was calculated for testing for differences between two independent groups, using G*power (Faul, Erdfelder, Lang & Buchner, 2007). A sample size of 70 (35 in each group) were needed to detect a large effect size (.8). This analysis also showed that for correlation analysis, a total sample size of 34 was required to detect a large effect size (.5). When using statistical tests for differences between groups for more than one dependent variable, the analysis using G*Power (Faul, Erdfelder, Lang & Buchner, 2007) for Eta squared (percentage of variation explained), revealed that a sample size of 6 was required to detect a medium effect size (.6), and a sample size of 8 required for a large effect size (.138).

RESULTS

Sample Characteristics

The percentages of types of trauma experienced are illustrated in Figure 1.1 and Figure 2.2. Chi- square tests revealed only one significant relationship, with more adolescents with DD experiencing repeated peer rejection than adolescents without DD, Fisher's Exact Test p =.021, phi =.41. The data trends show that adolescents with DD experienced more sexual abuse and witnessed domestic violence more often than adolescents without DD. Peer rejection and neglect were experienced at a similar rate for both groups and adolescents without DD experienced more physical and emotional abuse (Figure 1.1). The data trends also show that adolescents with DD experienced more repeated peer rejection and witnessed domestic violence more repeatedly than adolescents without DD. Rates of repeated neglect were experienced similarly for both groups. Adolescents without DD experienced more rates of repeated physical, emotional and sexual abuse (Figure 1.2). Two adolescents did not have a history of repeated childhood maltreatment. The percentages of diagnoses for the study sample are presented in Table 1.3.

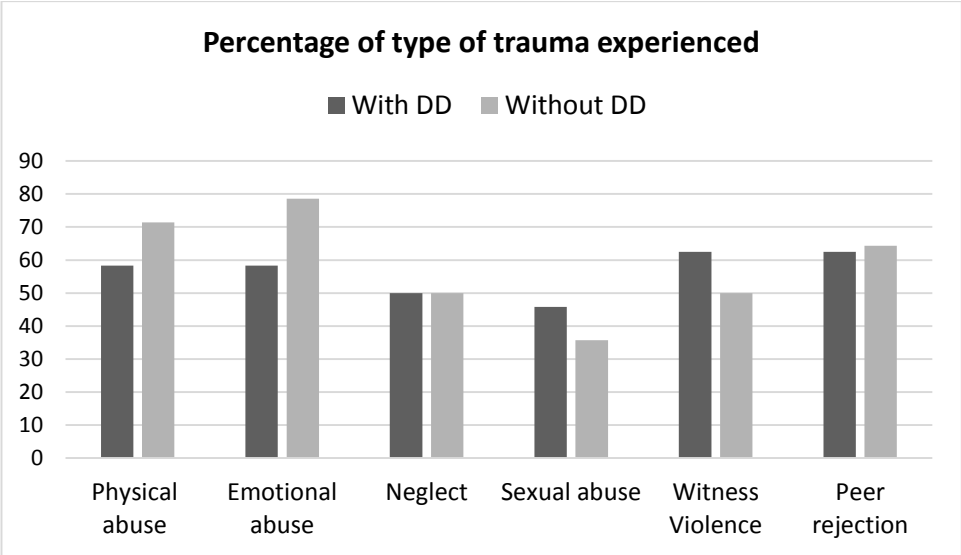

Figure 1.1 Percentage of types of trauma experienced (n = 38)

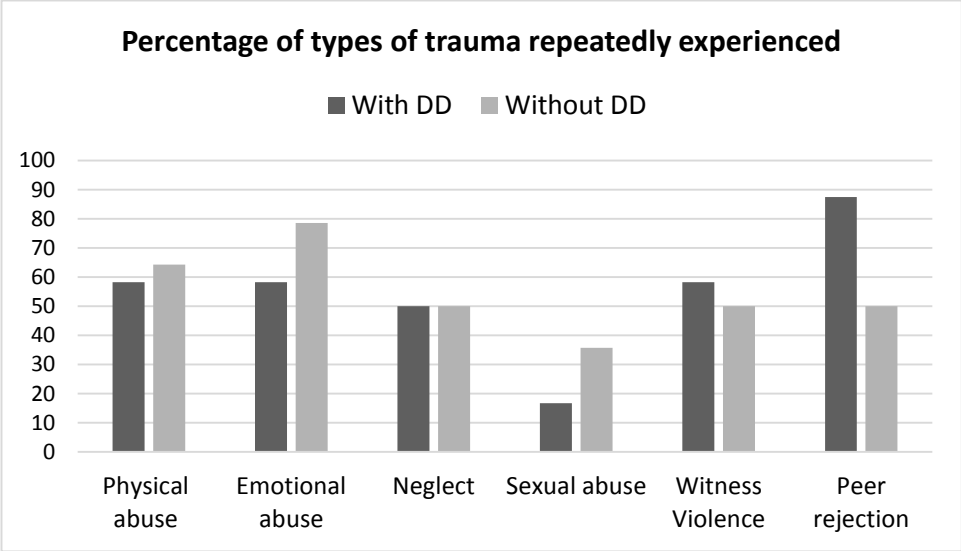

Figure 1.2 Percentage of types of trauma repeatedly experienced (n =38)

Table 1.3 shows that the most prevalent diagnoses for the whole study sample were Mild Mental Retardation (20.28%), Autistic Disorder (18.92%) and Hyperkinetic Conduct Disorder (12.17%). Males with DD generally had more varied psychiatric diagnoses (12 diagnoses) and a higher rate of co-morbid diagnoses (up to five diagnoses per person) than males without DD. Females with and without DD had similar amounts of varied diagnoses and similar rates of co-morbid diagnoses (up to three diagnoses per person). Males and females without DD each had a total variety of five different types of diagnoses. Males with DD received more different types of diagnoses (12 diagnoses) than females with DD (4 diagnoses).

Table 1.3. *The percentages of types of diagnosis (International Classification of Diseases-version 10 (ICD-10)) for the study sample (n = 38)*

Diagnosis Type (ICD-10)	Total Diagnoses	Males with DD (n=21)	Females with DD (n=3)	Males without DD (n=7)	Females without DD (n=7)
Conduct Disorder unspecified onset	9.46	6.12	0	22.23	12.5
Hyperkinetic Conduct Disorder	12.17	18.37	0	0	0
Hyperkinetic Disorder unspecified	2.70	4.08	0	0	0
Mild Mental Retardation	20.28	26.53	33.31	0	0
Moderate Mental Retardation	2.70	2.04	16.69	0	0
Autistic Disorder	18.92	28.58	16.69	0	0
XYY Syndrome	2.70	4.08	0	0	0
Paranoid Schizophrenia	1.35	2.04	0	0	0
Emotionally Unstable Personality Disorder	1.35	2.04	0	0	0
Mixed Disorders of Conduct and Emotions	9.46	0	0	44.44	25
Bipolar Affective Disorder	1.35	0	0	11.11	0
Depression	1.35	0	0	11.11	0
Major Depressive Disorder Single Episode Severe with Psychotic Features	1.35	0	0	0	12.5
Anorexia Nervosa	1.35	0	0	0	12.5
Epilepsy	1.35	2.04	0	0	0
Post-Traumatic Stress Disorder	8.11	0	33.31	0	37.5
Atypical Parenting Situation	1.35	0	0	11.11	0
Combined motor and vocal tic disorder (de la Tourette's syndrome)	1.35	2.04	0	0	0
Generalised Anxiety Disorder	1.35	2.04	0	0	0
TOTAL PERCENTAGE	**100**	**100**	**100**	**100**	**100**

Note: all diagnoses for each individual were recorded.

Assessing for bias in the recruited sample

There was a significant difference between the mean ages of the service population (*M* = 16.53, *n* =75) and the study sample (*M* = 17.11, *n* = 38), *p* = .016. The study sample were older than the service sample. This is likely to be the result of more adolescents aged 18 and above consenting to participate in the study than adolescents under the age of 18 years. No significant differences were found between the study sample and the service population for diagnosis of DD or frequency of males and females.

Preliminary Analyses

When assessing for the normality of the data using the 'Explore' function in SPSS, the findings indicated that the continuous variables for the TSCC, the BYI and Behavioural Monitoring Data were not distributed normally (positively skewed). As a result, non-parametric tests were used. Statistical analyses were conducted using Chi-square test to assess for significant relationships and Mann-Whitney U test to assess for significant differences between males and females. This was to ascertain whether data for males and females in the sample could be combined during inferential statistical analyses to increase statistical power.

A Chi-Square test revealed a significant relationship was found between males and females for history of repeated trauma, with 50% of females experiencing repeated sexual abuse compared with 14% of males, Fisher's Exact Test *p*=.036, phi =.023. A Mann-Whitney U test was used for the dependent measures and revealed a significant difference between males and females on the Becks Youth Inventory scores, with females scoring lower than males on the self-concept scale *U*= 30.500, *z* =-3.63, *p*=.001, *r* =0.59 and scoring higher than males on the depression scale *U* = 67.500, *z* = -2.41, *p*=.016, *r* =0.39.

Table 1.4 shows the significant differences found between males and females for the behavioural monitoring data (see Table 1.1 for codes and descriptions)

Table 1.4. *Significant differences between males and females for the behavioural monitoring data*

Dependent Measure	Mean Rank	Median	*p*
BYI: Self-Concept Scale			
***Males* (n=28)**	23.41	43.50	.000
***Females* (n=10)**	8.55	28.00	
BYI: Depression Scale			
***Males* (n=28)**	16.91	58.00	.016
***Females* (n=10)**	26.75	73.00	
Behavioural Monitoring Data E2			
***Males* (n=28)**	21.46	.00	.022
***Females* (n=10)**	14.00	.00	
Behavioural Monitoring Data R7VCS			
***Males* (n=28)**	21.29	.00	.032
***Females* (n=10)**	14.50	.00	
Behavioural Monitoring Data E6			
***Males* (n=28)**	16.05	1.50	.001
***Females* (n=10)**	29.15	7.50	
Behavioural Monitoring Data E8			
***Males* (n=28)**	16.95	.00	.008
***Females* (n=10)**	26.65	1.50	
Behavioural Monitoring Data E10			
***Males* (n=28)**	17.25	7.00	.036
***Females* (n=10)**	25.80	19.50	
Behavioural Monitoring Data R1-S			
***Males* (n=28)**	16.54	.00	.001
***Females* (n=10)**	27.80	2.00	
Behavioural Monitoring Data ORB1			
***Males* (n=28)**	16.29	.00	.000
***Females* (n=10)**	28.50	1.00	
Behavioural Monitoring Data ORB4			
***Males* (n=28)**	17.25	3.00	.037
***Females* (n=10)**	25.80	13.00	
Behavioural Monitoring Data DSH C			
***Males* (n=28)**	17.61	.00	.003
***Females* (n=10)**	24.80	.00	
Behavioural Monitoring Data DSH B			
***Males* (n=28)**	16.38	.00	.000
***Females* (n=10)**	28.25	1.00	
Behavioural Monitoring Data DSH E			
***Males* (n=28)**	18.50	.00	.016
***Females* (n=10)**	23.30	.00	
Behavioural Monitoring Data DSH F			
***Males* (n=28)**	18.50	18.50	.016
***Females* (n=10)**	22.30	23.30	
Behavioural Monitoring Data DSH J			
***Males* (n=28)**	17.50	17.50	.000
***Females* (n=10)**	25.10	25.10	

Descriptive Data

Please see Appendix 1.1 for the descriptive data.

For the TSCC scales, adolescents with DD scored higher on the Anxiety, Dissociation, Dissociation Fantasy, Sexual concerns and Sexual preoccupation scales than adolescents without DD. Adolescents without DD scored higher on the Depression, Anger, Post-Traumatic Stress, Dissociation-Overt and Sexual Distress scales than adolescents with DD. For the BYI scales, adolescents with DD scored higher on the Anxiety, Anger and Disruptive Behaviour scales than adolescents without DD. When males were analysed separately, males with DD scored higher on the BYI Depression scale and scored lower on the BYI Self-Concept scale than males without DD.

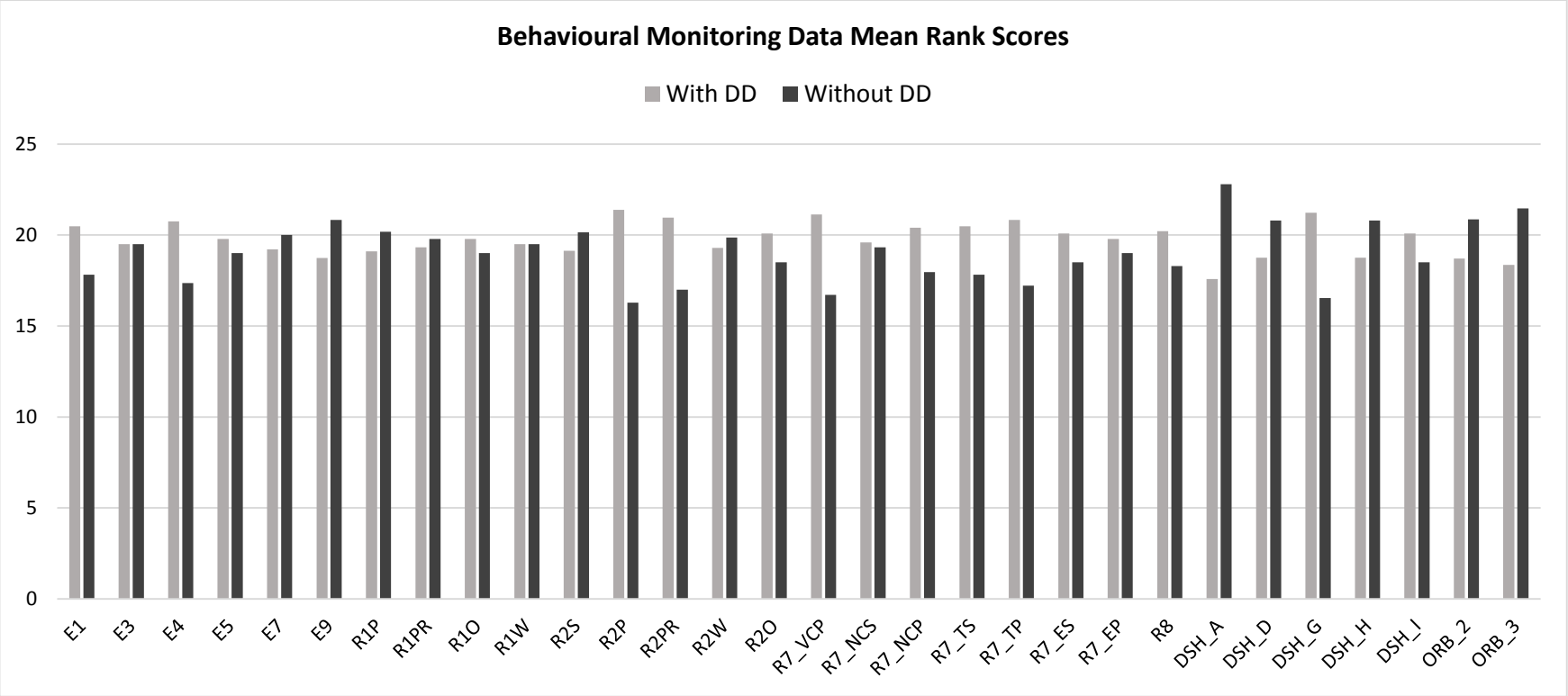

Figure 1.3 Mean Rank behavioural monitoring scores for both groups of adolescents (n = 38)

Descriptive data, illustrated in Figure 1.3 shows the largest differences where adolescents with DD scored higher than adolescents without DD, were for not meeting the following expectations: E1 and E4 and for the following risk behaviours: R2P, R2PR, R7VCP, R7NCP, R7TS and R7TP. In terms of self-harm, adolescents with DD scored large differences for DSH G compared with adolescents without DD. The largest differences where adolescents without DD scored higher than adolescents with DD, were for the expectation E9, for other risk behaviours including ORB2, ORB3 and for self-harm including DSH A, DSH D and DSH H.

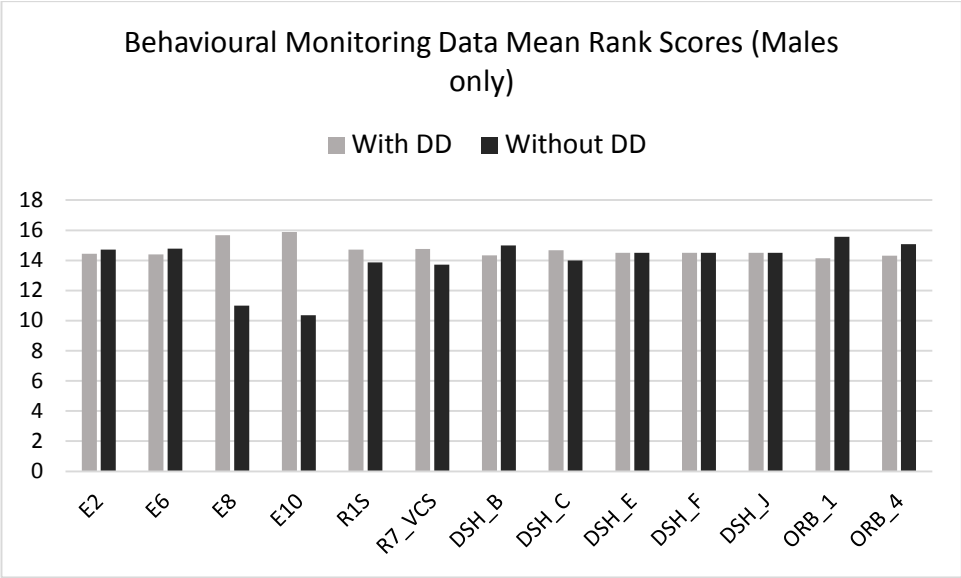

Figure 1.4 Mean Rank behavioural monitoring scores for male adolescents (n = 28)

Descriptive data illustrated in Figure 1.4 shows that when males were analysed separately, the largest differences for males with DD compared with males without DD were for not meeting the expectations E8 and E10.

Analysis Overview

Missing data was excluded pairwise for the relevant statistic to minimise loss of data. Throughout statistical analyses, males and females were analysed separately for the dependent variables where a significant difference or association between them was found. This was in order to control for gender as a confounding variable. Females with DD could not be analysed separately due to the small number (*n*=3). Where assumptions were violated for a given statistic, alternative significance values were used to correct for this. Mann-Whitney U test was conducted to test for significant differences between groups and Chi-square test was used to test for significant relationships between categorical variables.

Hypothesis 1

No significant differences were found between adolescents with and without DD for trauma symptoms (measured by the TSCC), emotions and behaviour (measured by the BYI) or observed behaviours (measured by BMD).

Hypothesis 2

No significant differences were found between adolescents with and without DD for frequency of aggressive and self-harm behaviours (measured by BMD).

Hypothesis 3a)

Significant differences in trauma symptoms and problematic emotions and behaviours between males and females with DD could not be tested for due to the small number of females with DD in the sample (*n* = 3).

Hypothesis 3b)

Significant differences in trauma symptoms and problematic emotions and behaviours between males and females without DD were found. Please see Appendix 1.2 for descriptive details. Males scored higher than females for the BYI Self-Concept scale *U* = 5.000, *z* = -2.49, *p* = .013, *r* = 0.67. Females scored higher than males on the BYI Anxiety scale *U* = 7.000, *z* = -2.24, *p* = .025, *r* = 0.50 and on the BYI Depression scale *U* = 8.500, z = -2.50, *p* = .040, *r* = 0.67.

Females scored higher than males on Behavioural Monitoring Data for not meeting the expectations 'attend your timetabled sessions' (E6) *U* = 5.500, *z* =-2.44, *p* =.015, *r* = 0.65, 'remain in areas of the ward in which you are permitted' (E8) *U*= 3.500, *z* = -3.00, *p* =.003, *r* =0.80 and 'Interact with others in a polite and courteous manner' (E10) *U*= 9.000, *z* = -2.00, *p* =.050, *r* =0.53. Additionally, females scored higher than males for frequency of aggression towards staff (R1S) *U*= 10.000, *z* = -2.05, *p* =.040, *r* =0.59 and self-harm in the form of head-banging (DSH B) U =10.000, z = -2.11, *p*=.035, *r* = 0.56.

Hypothesis 4a)

The prevalence of all diagnoses between adolescents with and without DD in the study sample is presented in Table 1.3.

Hypothesis 4b)

The prevalence of diagnoses of Post-Traumatic Stress Disorder in adolescents with and without DD in the study sample is presented in Table 1.3. There was a higher

prevalence of PTSD diagnoses for females without a developmental disability (37.5%) than females with a developmental disability (33.31%). No males were given a diagnosis of PTSD.

Hypothesis 5a)

A Multiple Regression analysis could not be facilitated to investigate the relationship between types of trauma experienced, reported trauma symptoms and emotions and behaviours displayed for both groups. Only non-parametric tests were appropriate to use with the data and there is no non-parametric equivalent of this test.

Hypothesis 5b)

Tables 1.5, 1.6 and 1.7, summarise the significant differences in the prevalence of reported trauma symptoms (measured by the TSCC), problematic emotions and behaviours (measured by the BYI) and observed behaviours (measured by BMD) displayed by both groups for types of trauma experienced.

Table 1.5. *Significant findings between type of trauma and the dependent measures for adolescents with DD*

Dependent measure	Mean rank	Median	*p*	Effect size
TSCC Anger				
Physical abuse (n=13)	8.81	50.00	.039	*r* = 0.45
No physical abuse (n=8)	14.56	55.00		
TSCC Sexual Concerns				
Physical abuse (n=13)	8.81	44.00	.038	*r* = 0.45
No physical abuse (n=8)	14.56	73.50		
TSCC Sexual Preoccupation				
Physical abuse (n=13)	8.58	42.00	.021	*r* = 0.50
No physical abuse (n=8)	14.94	63.00		
BYI Anger				
Physical abuse (n=14)	15.71	61.00	.008	*r* = 0.58
No physical abuse (n=10)	8.00	52.50		
BYI Disruptive Behaviour				
Physical abuse (n=14)	15.79	61.00	.007	*r* = 0.55
No physical abuse (n=10)	7.90	53.50		
Behavioural Monitoring Data (E9)				
Neglect (n= 12)	14.50	.00	.033	*r* = 0.44
No neglect (n = 12)	10.50	.00		
Behavioural Monitoring Data (R1-PR)				
Neglect (n= 12)	15.58	2.50	.030	*r* = 0.44
No neglect (n = 12)	9.42	.50		
Behavioural Monitoring Data (R2-P)				
Neglect (n= 12)	15.42	2.00	.036	*r* = 0.43
No neglect (n = 12)	9.58	.50		
Behavioural Monitoring Data (R7-TP)				
Neglect (n= 12)	15.50	.50	.006	*r* = 0.56
No neglect (n = 12)	9.50	.00		
Behavioural Monitoring Data (R7-VCP)				
Neglect (n= 12)	14.96	.50	.034	*r* = 0.43
No neglect (n = 12)	10.04	.00		
Behavioural Monitoring Data (R7-VCP)				
Sexual abuse (n=8)	15.73	1.00	.010	*r* = 0.52
No sexual abuse (n=13)	9.77	.00		
Behavioural Monitoring Data (ORB 2)				
Witnessing violence (n=15)	9.43	.00	.002	*r* = 0.63
Without witnessing violence (n=9)	17.61	2.00		

Males with DD were analysed separately to test for significant differences between type of trauma experienced and scores for the dependent measures where differences between genders were found (Table 1.6).

Table 1.6. *Significant findings between type of trauma and the dependent measures for males with DD*

Dependent measure	Mean rank	Median	*p*	Effect size
BYI Depression				
Physical abuse (n = 13)	13.35	64.00	.027	*r* = 0.48
No physical abuse (n = 8)	7.19	55.00		
BYI Self-Concept				
Physical abuse (n = 13)	8.58	36.00	.022	*r* = 0.50
No physical abuse(n = 8)	14.94	47.00		
BYI Depression				
Emotional abuse (n= 13)	13.31	61.00	.030	*r* = 0.48
No emotional abuse (n= 8)	7.25	53.00		
BYI Self-Concept				
Neglect (n= 11)	7.86	38.00	.015	*r* = 0.53
No neglect (n = 10)	14.45	52.00		
Behavioural Monitoring Data (E8)				
Neglect (n= 11)	13.32	1.00	.031	*r* = 0.47
No neglect (n = 10)	8.45	.00		
BYI Self-Concept				
Witnessing violence (n = 14)	13.64	49.00	.006	*r* = 0.60
Without witnessing violence (n = 7)	5.71	32.00		
Behavioural Monitoring Data (R7-VCS)				
Sexual abuse (n = 8)	13.94	1.00	.048	*r* = 0.43
No sexual abuse (n = 13)	9.19	.00		

Table 1.7 summarises the significant differences between type of trauma experienced and dependent measures scores (BYI, TSCC, and BMD) for adolescents without a developmental disability. Analyses for physical and emotional abuse and for TSCC scores in relation to a history of peer rejection could not be facilitated due to small numbers (n <5). Similarly, separate analyses for males could not be facilitated for variables where differences were found between males and females due to the small sample size of male adolescents without DD (n = 7).

Table 1.7. *Significant findings between type of trauma and dependent measures for adolescents without DD*

Dependent measure	Mean rank	Median	*p*	Effect size
TSCC Anxiety				
Witnessing violence (n= 7)	4.57	46.00	.028	*r* = 0.63
Without witnessing violence (n =5)	9.20	69.00		
Behavioural Monitoring Data (E1)				
Neglect (n= 7)	4.86	8.00	.018	*r* = 0.63
No neglect (n = 7)	10.14	37.00		
Behavioural Monitoring Data (ORB3)				
Neglect (n= 7)	5.07	.00	.020	*r* = 0.62
No neglect (n = 7)	9.93	1.00		
Behavioural Monitoring Data (R2-P)				
Sexual abuse (n=5)	5.00	.00	.052	*r* = 0.52
No sexual abuse (n=9)	8.89	1.00		

DISCUSSION

The main aim of the research was to investigate whether there are any differences in the prevalence of trauma symptoms and problematic emotions and behaviours displayed in a population of adolescents with and without developmental disabilities, within a specialist inpatient service. In summary, the sample characteristics showed adolescents with DD had reportedly experienced more sexual abuse and witnessed more domestic abuse than adolescents without DD and had experienced significantly more repeated peer rejection and more repeatedly witnessed domestic violence than adolescents without DD. The results for hypothesis one showed no significant difference between adolescents with and without DD for the dependent measures, therefore hypothesis two was not supported. However, descriptive analyses showed that adolescents with DD scored higher for a wide range of problematic behaviours and for some trauma symptoms and emotions compared with adolescents without DD. The results for hypothesis 3b showed a number of significant gender differences for adolescents without DD, with regards to females experiencing more difficult emotions and displaying a number of problematic behaviours more frequently than males. The findings for hypothesis 4a showed that males with DD received a wider variety of diagnoses than females with DD and males without DD. Males and females without DD received the same total of types of different diagnoses. Results for hypothesis 4b showed that only females received a diagnosis of PTSD and the percentages of females with and without DD who had a diagnosis of PTSD were similar. The results for hypothesis 5b showed that adolescents with DD and a history of physical or emotional abuse scored significantly higher for emotions on the BYI than those without a history of physical or emotional abuse. A significantly higher frequency of problematic behaviours were recorded for adolescents with DD and a history of neglect or sexual abuse than for those without a history of neglect or sexual abuse. For adolescents without DD, those with a history of neglect or sexual abuse displayed significantly fewer problematic behaviours than adolescents without a history of neglect or sexual abuse. In addition, adolescents without DD but with a history of witnessing domestic violence scored significantly lower for anxiety on the TSCC than adolescents who had not witnessed domestic violence.

Interpretation of findings

The maltreatment history of the sample showed that both groups of adolescents experienced a great amount of trauma and only differed with experiencing more of particular types of trauma, as opposed to adolescents with DD experiencing more trauma overall. This reflects the finding by Jones et al. (2012) who in their meta-analysis found that studies implemented in hospital settings had significantly higher estimates of prevalence of any type of violence compared with other settings.

The results of hypothesis 1 found no significant differences between the two groups for symptoms of trauma and problematic emotions and behaviours. Therefore, hypothesis 2 was not supported. However, the descriptive data showed that adolescents with DD scored higher for a wide range of problematic behaviours, for all outcomes on the BYI (and scored lower for self-concept) and scored higher for anxiety, dissociation, dissociation-fantasy and sexual concerns/preoccupation on the TSCC than adolescents without DD. Some of the results from this study were similar to that found by Mansell et al. (1998) who found that children with DD presented with a higher frequency of inappropriate sexual remarks (found in the current study towards staff (R7VCS) and peers (R7VCP)), reduced self-care (recorded as E4 in the current study) and withdrawal into fantasy (recorded as a higher frequency of Dissociation-Fantasy in the current study). In contrast, Mansell et al. (1998) found higher rates of withdrawal at school/work and self-abuse for children with DD in their study, whereas the current study found that only some types of self-harm were more frequent in adolescents with DD. Adolescents without DD displayed slightly more withdrawal at school (recorded as E6 and E7 in the current study). In addition, Mansell et al. (1998) found similar rates of dominant and aggressive behaviours for children with and without DD, whereas the current study found higher rates of particular types of aggression in adolescents with DD (especially verbal threats of violence towards property and peers and slightly higher rates of violence towards staff and 'others') than adolescents without DD. Mansell et al. (1998) also found similar rates of anger and poor self-esteem for adolescents with and without DD, whereas the current study found a lower rate of self-esteem and higher rate of anger (BYI) in adolescents with DD. Overall, the current study suggests that adolescents

with DD present with more problematic behaviours and emotions than adolescents without DD. This could be a result of poor coping abilities for distress related to their history of maltreatment or related to the environmental stress of a secure unit. However, these difficulties could also be related to having a developmental disability per se.

The results of hypothesis 3b found that for adolescents without DD, females showed poorer self-esteem, higher scores for depression and anxiety and displayed more aggression towards staff and more self-harm in the form of head-banging than males. This could suggest that female adolescents may have more severe adverse emotions and behaviours than males in relation to a history of trauma, which is supported by prior research findings that female adolescents have greater symptom severity for post-traumatic stress (Flannery, Singer, & Wester, 2001; Hukkelberg, 2014; Springer, & Paggett, 2000).

The results of hypothesis 4a found that males with DD generally had more varied psychiatric diagnoses and a higher rate of co-morbid diagnoses (up to five diagnoses) than males without DD. This suggests that there may be a higher prevalence of developmental disabilities in males than females. This finding is supported by a systematic review of epidemiological surveys of Autistic Disorder and Pervasive Developmental Disorders worldwide (Elsabbagh, et al., 2012). Akbas et al. (2009) and Soylu et al. (2013) also found higher rates of psychiatric diagnoses (more than one diagnosis) in adolescents with DD in their studies. Dissimilarly to Soylu et al. (2013), the current study found that males and females without DD had higher rates of Conduct Disorder than males and females with DD. This is likely to be due to use of ICD-10 diagnosis criteria which excludes people with pervasive developmental disabilities when diagnosing a person with Conduct Disorder.

The results of hypothesis 4b suggest that females are more frequently diagnosed with PTSD than males, regardless of whether they have DD or not. This fits in with wider research which has found that female adolescents who are exposed to violence are more likely than male adolescents to develop PTSD symptoms (Breslau et al.. 1991; Giaconia et al., 1995; Mueser, & Taub, 2008; Singer et al., 1995; Tolin, & Foa, 2006). Giaconia et al (1995) found that males reported fewer PTSD symptoms despite

both genders experiencing similar types of interpersonal trauma. The results of this study could suggest that males report fewer PTSD symptoms regardless of whether they have DD or not, leading to lower rates of PTSD diagnoses for males.

The findings for hypothesis 5b for adolescents with DD and a history of physical abuse were mixed, showing significantly lower scores for Anger, Sexual Concerns and Sexual Preoccupation on the TSCC than those without a history of physical abuse. This could be a result of adolescents with a history of physical abuse experiencing fewer types of other abuse, such as sexual abuse (the data showed 14/24 experienced physical abuse and 6/14 experienced sexual abuse in addition to physical abuse). However, this contrasted with higher scores on the Anger and Disruptive Behaviour scales of the BYI. Therefore this could suggest that adolescents with DD struggled to complete the TSCC, perhaps due to the more abstract nature of its statements compared with the BYI. Adolescent males with DD and a history of emotional abuse showed significantly higher scores for Depression on the BYI suggesting that this type of abuse may contribute significantly to the presentation of depression in adolescent males with DD. Adolescent males with a DD and a history of neglect scored significantly lower for self-esteem and significantly higher for not staying in areas of the ward in which they are permitted. This could suggest that this type of abuse may significantly contribute to low levels of self-esteem in this population and that neglected adolescents with DD may struggle to follow rules that were not implemented in their past due to neglect. Adolescents with DD and neglect scored significantly higher for displaying behaviours including taking/using other people's property without permission, violence towards property, verbal threats of violence towards peers and sexualised comments and touching of peers. This could suggest a general pattern of behaviour that adolescents with DD may have learned to use to exist and defend themselves in a previous environment of neglect and may suggest difficulty with following new rules in a secure environment. In addition, the majority of adolescents with DD who experienced neglect also experienced sexual abuse (8/12), which is likely to be related to learning inappropriate sexualised behaviour and displaying this on the ward. This idea is supported by the next finding that adolescents with DD and a history of sexual abuse displayed more inappropriate

sexualised behaviours (comments towards peer and staff) than adolescents without a history of sexual abuse. Males with DD and a history of witnessing violence scored significantly higher for self-esteem but significantly lower for displaying play-fighting behaviour than those without a history of witnessing violence. This could be related to these adolescents having lower rates of other types of abuse such as sexual abuse (9/15 adolescents who witnessed domestic violence did not have a history of sexual abuse) which may impact on self-esteem more than witnessing violence. In addition, adolescents with DD had a significantly greater history of experiencing repeated peer rejection, which in addition to poor social skills may make them less likely to play-fight with their peers. There is no existing literature that explores the way adolescents with DD cope with different types of childhood maltreatment and this is an area of research that needs to be developed.

For adolescents without DD, those with a history of neglect displayed significantly fewer incidences of being impolite and of bullying others than those without a history of neglect. This could suggest that unlike adolescents with DD, adolescents without DD have learned behaviours that aid attachment to caregivers and peers and follow the ward rules in order to get their needs met more effectively. Similarly, for adolescents with a history of sexual abuse, significantly fewer incidents of verbal abuse towards peers were recorded. This could be because many of these adolescents had also experienced peer rejection (3/5) and may have learned that exacerbating peer rejection leads to consequences of them less effectively getting their needs met (due to the risk management system being more rigorously applied to those displaying risk behaviours, such as leave outside the unit being suspended). There is some support for this style of coping (engagement/approach coping) in the literature on adolescents (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Adolescents with a history of witnessing domestic violence had significantly lower levels of anxiety than those without a history of witnessing violence. This could suggest that their anxiety levels may have become de-sensitised generally as a way of coping, including for events that would be construed as anxiety provoking for adolescents without a history of witnessing violence. There is some

support for this style of coping (disengagement/avoidance coping) in the literature on adolescents (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001).

Strengths and limitations of the current study

This is the first study in the UK to investigate the difference between symptoms of maltreatment and presenting emotions and behaviours in adolescents with and without developmental disabilities, in a specialist secure inpatient service. Its findings are a useful exploratory analysis of an undeveloped research area. The use of a comparison group is a strength of the study because it better allows to assess for cause and effect of childhood maltreatment across both groups as opposed to only assessing for the presence and strength of relationships between factors. Adolescents with developmental disabilities within an inpatient service are some of the most vulnerable adolescents in the country. It is important that this population is included in research about adolescents with trauma so that the effects of maltreatment can be more effectively identified. Services and treatment for trauma in this population can then be developed more effectively due to a better ability to assess 'what works'.

There are a number of limitations to the study, the first is that it has a small sample size. This was predominantly due to the poor uptake of participants, for reasons such as difficulty obtaining consent from people with parental responsibility, a lack of capacity or disinterest from the adolescents. However, the participants did not differ significantly from the rest of the adolescents in the service with the exception of age, showing limited selection bias. Therefore, the findings of this study are largely applicable to adolescents within specialist inpatient services. The difficulty with obtaining consent was often due to the rigorous ethics procedure employed to protect the participants, however there was no attrition of those who wished to participate. The small sample size led to an inability to test hypothesis 3a, 5a and some of hypothesis 5b due to a small number of female adolescents with DD participating. The small sample size may also have prohibited testing of hypothesis 5a. This meant that the study could not test for how different types of trauma were related to the outcomes in the two groups, therefore the cumulative effect of trauma in both populations is unknown. This led to different types of trauma potentially

confounding the findings when testing hypothesis 5b. Other confounding variables could also have impacted on the results such as the different ward environments of the adolescents with and without developmental disabilities. It is also important to consider that the constructs the psychometric questionnaires and behavioural monitoring data measured may have skewed the data, thereby making non-parametric tests the only viable analysis. A key limitation of the study is the lack of a control group. A control group of non-maltreated adolescents with and without developmental disabilities would help determine the effects of trauma on the population in the study as opposed to the possible adverse effects of having a developmental disability. However, it would be very difficult to find such a control group in inpatient settings. Finally, there was a limitation with the use of psychometric measures that have not been normed or validated for adolescents with a developmental disability. Currently, there are no such psychometrics, therefore the results of carefully chosen psychometric measures (simple language, short statements, and reading age of 8 years and above) that are routinely used in clinical practice were felt to be most appropriate. This facilitated data collection about the adolescents' internal experiences as opposed to relying entirely on informant data which is often the case in this research area.

Future Research

It is important that research continues to be facilitated with adolescents with and without a developmental disability in inpatient services, especially when considering that these young people have been admitted to an inpatient service due to their very high levels of self-harm, challenging and aggressive behaviours. This research needs to be expanded and replicated in order to gain clarity about the different ways that adolescents with and without developmental disabilities with history of childhood maltreatment present with symptoms of trauma. It is especially important that we continue to use comparison and control groups. Only with rigorous and methodologically sound research can we start to build an understanding of how mental health and behavioural difficulties present in adolescents with developmental disabilities as an expression of trauma. This understanding would be clinically useful in helping to accurately identify diagnoses, particularly those of

posttraumatic stress, which would guide services towards the use of the most applicable and effective interventions for this population and an ability to better assess the effectiveness of the treatments.

Conclusion

This exploratory research has highlighted a number of differences in the presenting problems of adolescents with and without developmental disabilities. It has also highlighted gender differences in adolescents without developmental disabilities. Tentative links have been made with regards to how some types of trauma may impact on adolescents with a developmental disability. The findings suggest that these adolescents express a wide range of problematic behaviours in relation to their history of maltreatment and may struggle to adapt to a new environment and make associations between their behaviour and the consequences (e.g. ward rules), compared with adolescents without a developmental disability. However, without a control group it is difficult to ascertain which difficulties adolescents may present with wholly in response to having a developmental disability. Future research should build upon these initial findings to clarify the expression of trauma in this vulnerable population.

CHAPTER 2

The effectiveness of psychological treatments on reducing the psychological harm of childhood maltreatment in adolescents: A Systematic Review.

ABSTRACT

This review examines the effectiveness of psychological treatments for reducing the sequelae of childhood maltreatment in populations of adolescents. Inclusion criteria were randomised control, case control and cohort studies, studies investigating psychological treatments for childhood maltreatment and studies using populations of adolescents aged 12-19 years. Medline, EMBASE, PsycINFO, PsycARTICLES, Web of Science, ASSIA and three thesis portals were searched. Four experts were contacted and the reference lists of seven systematic reviews, two meta-analyses and six relevant reviews were searched. The number of hits was 43,039, from which 32,910 duplicates were removed, 10,093 irrelevant references removed and 25 papers excluded for not meeting the inclusion criteria. Fourteen studies were included in the review. The review included 415 participants. The types of interventions included were Cognitive Behavioural Therapy (CBT), Family Therapy, Psychoeducational/Psychotherapeutic Group Therapy, Imagery Rehearsal, Prolonged Exposure and Emotional Freedom Techniques (EFT). Overall, the results suggested that CBT did not significantly reduce outcomes of childhood maltreatment in relation to depression, compared with comparison groups. Psychoeducational/Psychotherapeutic Group therapy gave mixed results, significantly reducing some but not all trauma symptoms. All other interventions were found to be significantly effective at reducing outcomes of childhood maltreatment including depression, Post-traumatic Stress Disorder (PTSD), suicidal ideation, behavioural problems, frequency/distress of nightmares and intrusive memories and avoidance symptoms when compared with control/comparison groups. Overall, only two studies were assessed as having low risk of bias in every domain. As a result, the effectiveness of treatment for childhood maltreatment in

adolescents is largely unknown. Of particular concern is the presence of selection bias which reduces the applicability of the results to 'real life' samples of adolescents, who often present with multiple, complex arrays of difficulties.

INTRODUCTION

Childhood maltreatment is a worldwide problem which causes a number of adverse effects, including varying degrees of Post-traumatic Stress, with high personal and health costs (Gillies, Taylor, Gray, O'Brien, & D'Abrew, 2012). Childhood maltreatment includes sexual, physical and emotional abuse and neglect. It also includes witnessing domestic violence, with domestic violence defined as "past or present physical and/or sexual violence between former or current intimate partners, adult household members, or adult children and a parent" (Sugg, Thompson, Thompson, Maiuro, & Rivara, 1999). The most commonly researched forms of maltreatment, are sexual abuse, physical abuse and neglect (Boxer & Terranova, 2008). As mentioned in Chapter 1, research into the effects of maltreatment on children and adolescents has found negative outcomes such as suicidal tendencies (Brown, Cohen, Johnson, & Smailes, 1999), risky sexual behaviours (Rotheram-Borus, Mahler, Koopman, & Langabeer, 1996; Fergusson, Horwood, & Lynsky, 1997), unmodulated aggression and impulse control (e.g. Cole & Putnam, 1992; Kaufman & Cicchetti, 1989; Steiner, Garcia, & Matthews, 1997; Van der Kolk, 2005), substance use (Harrison, Fulkerson, & Beebe, 1997), attentional and dissociative problems (Teicher, et al., 2003), internalizing disorders (e.g. depression and anxiety) (Toth, Cicchetti, & Kim, 2002), PTSD (Finkelhor, Ormrod, Turner, & Hamby, 2005) and difficulty negotiating relationships with caregivers and peers (Finkelhor, Hotaling, Lewis, & Smith, 1989).

This systematic review focuses on childhood maltreatment because research has found that people exposed to intentional trauma (defined as acts that involve the deliberate infliction of harm, such as childhood and adolescent maltreatment (Santiago, et al., 2013), have worse health outcomes and higher sustained prevalence of PTSD than people who have experienced harm that was inadvertent (Lange, Rietdijk, Hudcovicova, van de Ven, Schrieken, & Emmelkamp, 2003; Matthieu, & Ivanoff, 2006; Santiago, et al., 2013; Van der Velden et al., 2006). Research has found that violent or sexual (intentional) trauma such as physical abuse by a relative, rape and sexual abuse are associated with the highest rates of PTSD symptoms compared

with unintentional traumas, such as the death of a loved one, natural disasters and injuries (Copeland, Keeler, Angold, & Costello, 2007). As outlined earlier, the outcomes of childhood and adolescent maltreatment are serious, particularly violence directed towards self and others, which can result in psychiatric hospitalisation of children and adolescents (Boxer, & Terranova, 2008). Additionally, the literature has increasingly recognised that childhood trauma may moderate responses to therapy, such as CBT, for trauma related problems e.g. depression. Asarnow et al. (2009) found that abuse history moderated response in the treatment of resistant depression in adolescents, whereby teens with an abuse history responded more poorly to the CBT conditions compared with their non-abused counterparts. This finding has also been supported by Shirk, Kaplinski, and Gudmundsen, (2009) who found that depressed adolescents with a history of childhood trauma were less likely to respond to school-based CBT. It therefore becomes important to consider not only which psychological treatments are offered to such populations, but how effective these treatments are at reducing psychological harm resulting from childhood maltreatment.

In order to locate relevant research studies and establish the feasibility of the review, a scoping exercise was carried out (27th and 28th of December 2013). The Cochrane Library, Campbell Library and Medline (Ovid) were searched and Google search engine.

Four systematic reviews were identified, three of which were identified from the Cochrane Library. Parker and Turner (2013) sought to include randomised and quasi-randomised trials which compared psychoanalytic/psychodynamic therapy with treatment as usual or no-treatment/a waiting list control for children and adolescents who had experienced sexual abuse. The authors excluded a total of 25 studies and did not identify any studies that met the inclusion criteria for their review, highlighting a need for research in this domain. Gillies, et al. (2012) included randomised controlled trials of psychological therapies that were compared with a control, pharmacological therapy, or other treatments, in children or adolescents exposed to a traumatic event (including unintentional trauma as well as childhood maltreatment) or diagnosed with PTSD. Gillies, et al. (2012) included 18 studies in

their review. The types of psychological therapies documented were CBT, psychodynamic and narrative therapy, supportive counselling, exposure-based, eye movement desensitisation and reprocessing (EMDR) therapy. The results of the studies showed that across all psychological therapies, there were significantly reduced symptoms of PTSD, anxiety and depression compared with a control group after one month. It is unknown whether the effects lasted over a longer time period. CBT showed the best evidence of effectiveness. No study was rated as a high risk for selection bias, however a minority were rated as high risk for attrition reporting and most studies were rated as an unclear risk for selection, detection and attrition bias. Macdonald et al. (2012) included randomised or quasi-randomised controlled trials of CBT compared with treatment as usual, with or without a placebo control, for children and adolescents who had experienced sexual abuse. Macdonald et al. included 10 studies in their review. The primary outcomes were depression, PTSD, anxiety and child behaviour problems. The results of the review demonstrated that CBT may have a positive impact on the outcomes of child sexual abuse, however most results were not statistically significant. Macdonald et al. stated that the reporting of studies was generally poor and most studies reported results for study completers rather than for those recruited. All the studies were reviewed as having 'high risk of bias' in relation to the blinding of outcome assessors or personnel; most studies did not report on these, or other issues of bias. Only four studies were reviewed as 'low risk of bias' with regards to sequence generation and only one study was reviewed as 'low risk of bias' in relation to allocation concealment. Wethington et al. (2008) included studies which evaluated interventions, were conducted in high-income economies, were published up to March 2007 and included children and adolescents who were exposed to individual/mass, intentional/unintentional, or manmade/natural traumatic events. Seven types of interventions were evaluated: individual CBT, group CBT, play therapy, art therapy, psychodynamic therapy, and pharmacological therapy for symptomatic children and adolescents, and psychological debriefing, regardless of symptoms. The primary outcome measures were indices of depressive disorders, PTSD, anxiety, internalising and externalising disorders and suicidal behaviour. Wethington et al. used "Community Guide" methods to assess the quality of the studies included. Under these guidelines, studies

classified as having greatest design suitability were those in which data on exposed and control groups were collected prospectively. Study execution was penalised for limitations in sampling, population and intervention description, exposure or outcome measurement, analytic approach, control or confounding, completeness and length of follow-up and other biases. Wethington et al. (2008) included 31 studies in their review. The results showed that evidence was insufficient to determine the effectiveness of art therapy, play therapy, psychodynamic therapy, pharmacologic therapy, or psychological debriefing in reducing psychological harm. However, the results showed 'strong evidence' that individual and group CBT can decrease psychological harm among symptomatic children and adolescents exposed to trauma.

None of the systematic reviews outlined earlier were able to answer the current research question, largely due to their differing inclusion criteria. Two of the systematic reviews only investigated one type of childhood maltreatment (sexual abuse) (Macdonald et al., 2012; Parker & Turner, 2013) and the study by Wethington et al. (2008) is now dated. The majority of the systematic reviews outlined above included studies with combined populations of children and adolescents. However adolescence is a time which is marked out as different from childhood, with specific developmental tasks such as romantic relationships, individuation, career choice and vocational training (Matulis, Resick, Rosner, & Steil, 2013). It is recognised that PTSD symptomatology may vary greatly among children and adolescents, depending upon the traumatic event itself, its severity, duration, and the child's developmental age at the time of the trauma (Anderson, 2005). In addition, the way in which a child re-experiences and manifests their feelings of distress related to a traumatic event is likely to change as they age and mature (Perrin, Smith & Yule, 2000). Furthermore, a history of childhood sexual abuse is a significant predictor of sexual and physical revictimisation (Barnes, Noll, Putnam, & Trickett, 2009), therefore, adolescents may have experienced more revictimisation than children. Despite no studies fitting Parker and Turner's (2013) inclusion criteria, the authors identified the importance of using subgroup analyses for children and adolescents to see if there are differences in response to Psychoanalytic/psychodynamic psychotherapy. None of

the other identified systematic reviews have conducted such a subgroup analysis. Moreover, many of the current systematic reviews have assessed treatment effectiveness for children and adolescents who have experienced many different types of trauma including intentional trauma (e.g. maltreatment) and inadvertent trauma (e.g. accidental injury). The results of the effectiveness of psychological interventions for trauma in existing reviews may therefore be confounded by factors such as the mix of populations and types of trauma.

Objective

The objective is to ascertain the effectiveness of psychological interventions in terms of reducing the psychological harm associated with childhood maltreatment in adolescents. Adolescents have specifically been chosen because past reviews have tended to cluster 'children and adolescents' together (Rees, Gorin, Jobe, Stein, Medforth, Goswami, 2010) but adolescence is a markedly different time from childhood.

METHOD

Search Strategy:

The search strategy involved an electronic search of six bibliographic databases including Medline, EMBASE, PsycINFO, PsycARTICLES, Web of Science and the Applied Social Sciences Index and Abstracts (ASSIA). Three thesis portals; DART: Europe E-thesis, Nottingham E-thesis and Birmingham E-thesis were also searched. Additionally, the reference lists of seven systematic reviews, two meta-analyses and a further six relevant reviews were hand searched. Attempts were made to contact four experts to request of unpublished literature and current studies. No restrictions were made regarding publication date, language or country of origin. The following search terms were used and modified where appropriate to meet the searching requirements of each database:

(Child* Abus*) OR (Childhood Trauma) OR (Child* neglect) OR (Emotion* Abus*) OR (Emotional Trauma) OR (Physical Abus*) OR (Sex* Abus*) OR (Victimi*ation) OR (Child Neglect) OR (Rape*) OR (Domestic* Violen*) OR (Posttraumatic Stress Disorder) OR (Posttrauma* Stress) OR (Cruelty) OR (PTSD*) OR (mistreat*) OR (maltreat*) OR (cruel*) AND (Intervention*) OR (Response to Intervention) OR (Group Intervention) OR (Family Intervention) OR (School Based Intervention) OR (Early Intervention) OR (Outpatient Treatment) OR (Treatment Outcomes) OR (Symptoms Based Treatment) OR (Treatment*) OR (Treatment Effectiveness Evaluation) OR (Therapy) OR (Narrative Therapy) OR (Ericksonian Psychotherapy) OR (Humanistic Psychotherapy) OR (Brief Psychotherapy) OR (Experiential Psychotherapy) OR (Analytical Psychotherapy) OR (Individual Psychotherapy) OR (Interpersonal Psychotherapy) OR (Psychodynamic Psychotherapy) OR (Expressive Psychotherapy) OR (Supportive Psychotherapy) OR (Adlerian Psychotherapy) OR (Group Psychotherapy) OR (Integrative Psychotherapy) OR (Psychotherapy) OR (Eclectic Psychotherapy) OR (Eye Movement Desensitization Therapy) OR EMDR*) OR (Supportive Therapy) OR (Emotion Focused Therapy) OR (Cognitive Therapy) OR (Schema Therapy) AND (Adolescent*) OR (Youth*) OR (Young Person) OR (Juvenile*) OR (Young Adult*) OR (Young People) OR (Teen*) OR (Children*).

Specific search syntax for each database may be obtained on request.

Inclusion and Exclusion Criteria:

Participants: Male and female adolescents aged 12-19 years with a history of childhood/adolescent maltreatment (sexual, physical, emotional abuse, neglect and exposure to domestic violence).

Adolescents with a history of accidental trauma (e.g. injury), natural disasters or community violence/war were excluded.

Intervention: Psychological treatments which target the psychological harm of childhood maltreatment. Only psychological treatments that targeted the young person (which could also include their family) were included and could be a group or individual intervention.

Comparators:

a) Adolescents who have not received psychological treatment (waiting list) or have received less treatment, or 'treatment as usual'.

b) Adolescents who have received an alternative form of treatment (other than psychological treatment) such as art or music therapy.

Outcomes:

Outcomes included self-report measures of trauma symptoms and behavioural problems (e.g. substance misuse and self-harm), symptoms and diagnoses of PTSD and other disorders such as depression and anxiety, psychometric measures of trauma symptoms, measures of psychosocial functioning (e.g. self-esteem) and behavioural rating scales/measures.

Study Design:

Randomised control studies, case control studies and cohort studies were included due to better quality design compared with cross-sectional studies.

Study Selection

After the full search, relevant titles were obtained followed by relevant abstracts. The inclusion criteria was applied to all the papers with relevant abstracts and those not meeting the criteria were excluded. The authors of the studies were contacted wherever clarifications were needed. Studies were omitted from the review if no reply was received within two months.

Quality Assessment

Quality assessment was guided by checklists for three types of study design (see Appendix 2.8) which assessed clarity of aims and research questions, sampling techniques used, methodological quality (reliability of measures) and sampling techniques used. The quality of the studies included was assessed by a second reviewer for 20% of the studies to check for inter-rater reliability. The overall quality of the studies was assessed based on the presence of different types of bias, including sampling and selection bias, measurement bias for treatment and outcomes and publishing bias.

RESULTS

The search yielded a total of 43,039 hits. Thirty-two thousand nine hundred and ten duplicates were removed and an additional 10,093 irrelevant references were excluded. This left 39 potential relevant papers, however a further 25 papers were excluded because they did not meet the inclusion criteria (n = 23) or could not be located (n = 2). Twenty- three papers were excluded due to: a lack of a comparison/control group (n = 11), inclusion of types of trauma such as natural disasters, accidental injury and war (n = 10), and inclusion of treatment that did not target trauma symptoms (n = 2). Please see Figure 2.1 for an illustration of the study selection process. Fourteen studies were included in this review (refer to Table 2.1).

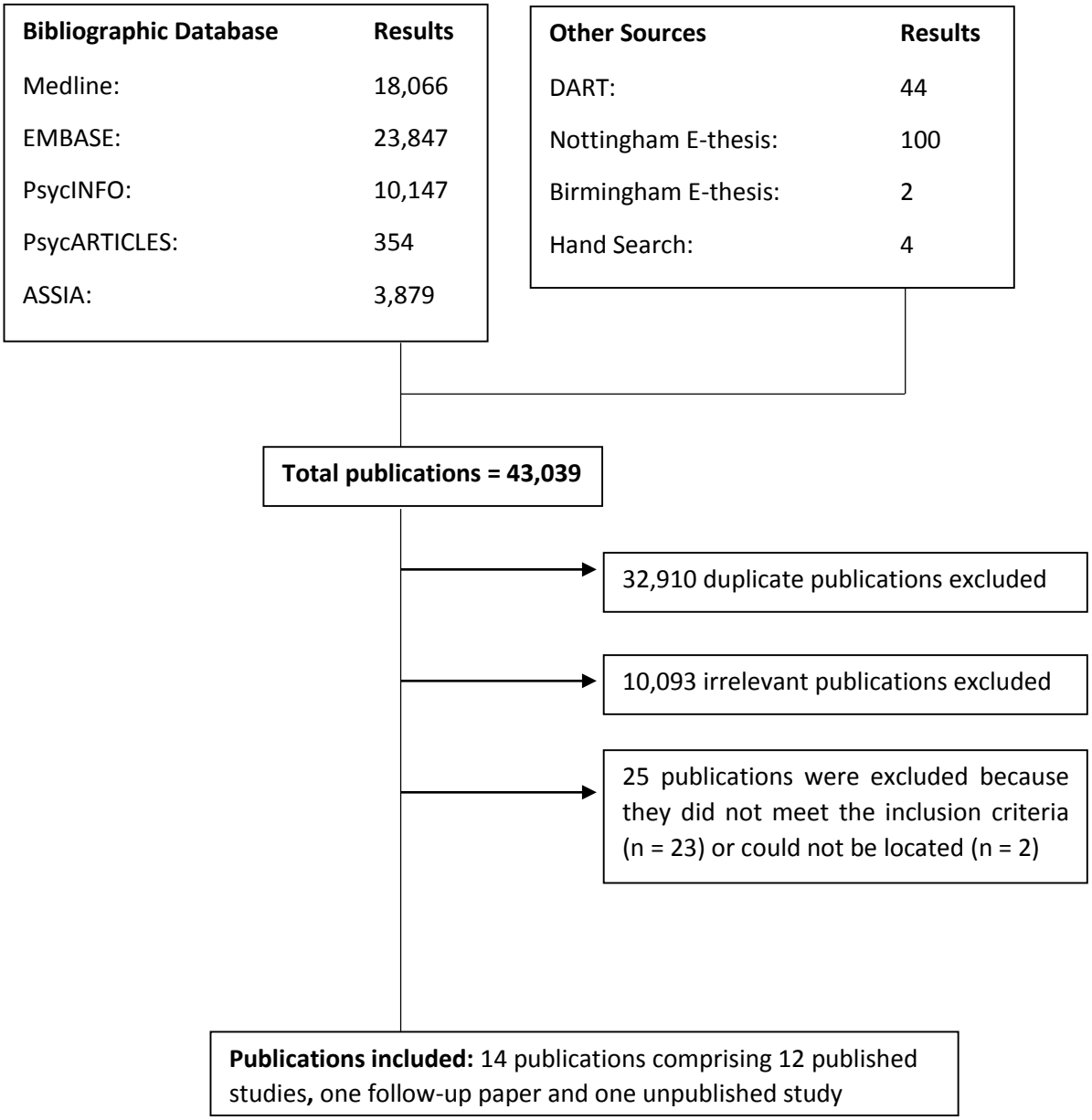

Figure 2.1. Search results and study selection

Study Design

Nine studies used a Randomised Control Trial design. Four studies used a quasi-experimental design ((Krakow et al., 2001; Tourigny et al., 2005; 2007; Verleur et al., 1986). Nine studies used a comparison group and four studies used a control group (please see Table 2.1 for characteristics of studies).

Type of Publication

Thirteen studies were published in journals. One study was a follow-up paper (Tourigny, 2008) for a study by Tourigny et al. (2005) and one was an unpublished dissertation (Baker, 1985).

Location of studies

Ten studies were conducted in the USA (Baker, 1985; Barbe et al., 2004; Danielson, et al. 2012; Diamond, et al., 2012; Foa, et al., 2013; Krakow, et al., 2001; Lewis et al., 2010; Shirk, et al., 2014; Thun, et al., 2002; Verleur et al., 1986), two studies were conducted in Canada (Tourigny, & Hebert, 2005; Tourigny et al., 2007) and one study was facilitated in Peru (Church et al., 2012).

Participants

In total, 415 participants were included in the review. The number of participants ranged from 13 (Thun et al., 2002) to 61 (Foa et al., 2013). Nine studies focused solely on females (Baker, 1985; Diamond et al., 2012; Foa et al., 2013; Verleur et al., 1986; Krakow et al., 2001; Thun, et al., 2002; Tourigny & Hebert, 2005; Tourigny, et al., 2007). Only one study focused solely on male adolescents (Church et al., 2012). The remaining studies included both males and females. However, for some studies, it is unclear how many males and females were included in the relevant analyses (when focusing on adolescents with a history of maltreatment) (Lewis et al., 2010; Barbe et al., 2004). All participants were between the ages of 12 and 18 years. The predominant type of trauma experienced by the participants was sexual abuse with 12 of the studies solely focusing on this type of childhood maltreatment, excepting Shirk et al., (2014) and Church et al., (2012) who also included physical, verbal/emotional (psychological) abuse, witnessing family violence and neglect.

The inclusion criteria were for age, diagnostic criteria e.g. for Major Depressive Disorder (MDD) (Barbe et al., 2004; Lewis et al., 2010), a depressive disorder (major depressive disorder, dysthymic disorder or depressive disorder—not otherwise specified) (Shirk et al., 2014), PTSD or sub-threshold PTSD (Foa et al., 2013), history of abuse (Baker, 1985; Church et al., 2012; Danielson et al., 2012; Shirk et al., 2014; Thun et al., 2002), gender e.g. males (Church et al., 2012) and females (Baker, 1985;

Foa et al., 2013) and evidence of sustained symptoms (Lewis et al., 2010; Krakow et al., 2001).

The most frequent exclusion criteria were developmental disorders (Foa et al., 2013; Lewis et al., 2010; Shirk et al., 2014; Danielson et al., 2012; Diamond et al., 2012), severe mental health impairment (Tourigny et al., 2005; 2007) including bipolar disorder (Barbe et al., 2004; Foa et al., 2013; Lewis et al., 2010; Shirk et al., 2014; Danielson et al., 2012; Diamond et al., 2012), psychosis (Barbe et al., 2004; Diamond et al., 2012; Foa et al., 2013; Shirk et al., 2014;), thought disorder (Lewis et al., 2010), suicidality/attempts (Foa et al., 2013; Lewis et al., 2010; Shirk et al., 2014), conduct disorder (Foa et al., 2013; Lewis et al., 2010) and substance abuse (Barbe et al., 2004; Lewis et al., 2010; Shirk et al., 2014). Additional exclusion criteria included concurrent pharmacological treatment, particularly if this was initiated recently to study recruitment (Church et al., 2012; Diamond et al., 2012; Foa et al., 2013; Lewis et al., 2010) and current, recent or needed psychiatric inpatient care (Diamond et al., 2012; Foa et al., 2013) which extended to prior psychiatric diagnoses for Church et al., (2012). Krakow et al., (2001) only stated inclusion criteria. Baker, (1985) excluded males because the majority of the referrals were females. Tourigny et al., (2007) and Verleur et al., (1986) did not state inclusion nor exclusion criteria for their participants.

For this reason, subgroup analyses on populations of adolescents with developmental disabilities or adolescents within inpatient settings could not be facilitated.

Interventions

Please see Table 2.1 for characteristics of studies. The majority of the studies documented that the treatments delivered were manualised (Church et al., 2012; Danielson et al., 2012; Diamond et al., 2012; Foa et al., 2013; Lewis et al., 2010; Shirk et al., 2014; Tourigny, et al., 2005; 2007), demonstrating standardised forms of intervention. Some studies documented monitoring of the fidelity of treatment via video recording or tape recording of treatment sessions which were randomly selected and assessed for treatment integrity by trained/expert raters (Danielson et

al., 2012; Foa et al., 2013; Shirk et al., 2014). Barbe et al., (2004) stated in their paper that treatment was videotaped but it is unknown whether the tapes were selected randomly when assessed for fidelity. Church et al., (2012) documented that treatment fidelity was only monitored during training about how to facilitate the treatment. Other studies did not document whether their treatments were manualised (Barbe et al., 2004; Krakow, et al., 2001; Thun et al., 2002; Verleur, et al., 1986) or assessed for integrity (Diamond et al., 2012; Krakow, et al., 2001; Tourigny, et al., 2005; 2007; Thun et al., 2002; Verleur, et al., 1986). Three studies documented good attendance rates for interventions ranging from 80 – 100% (Diamond et al., 2012; Tourigny, et al., 2005; 2007).

Measures of maltreatment exposure

Only two studies provided a definition for the type of maltreatment included in their study. Danielson et al., (2012) defined child sexual abuse as "unwanted/forced vaginal or anal penetration by an object, finger, or penis; oral sex; or touching of one's genitalia" and used recollection of child sexual abuse as the measure for maltreatment. Thun et al., (2002) defined sexual abuse as "having a sexual experience with someone at least five years older if the subject was 13 or younger, or having a sexual experience with someone 10 years older if the subject was 14 or older". Table 2.2 illustrates the exposure measures and studies which used these measures.

Measures of treatment outcomes

Treatment outcomes were measured using a variety of measures. Two studies used a measure which assessed for presence of clinical diagnoses (the Kiddie-Schedule for Affective Disorders and Schizophrenia; K-SADS) (Barbe et al., 2004; Foa et al., 2013). Four studies used measures which assess for PTSD symptoms e.g. University of California at Los Angeles (UCLA) PTSD Index for DSM-IV (Danielson et al., 2012), PTSD Symptom Scale Self- report (PSS-SR) (Krakow et al., 2001), Child PTSD Symptom Scale (CPSS interview & self-report) (Foa et al., 2013) and Impact of Events Scale (Church et al., 2012). Five studies used measures which assess for symptoms of depression e.g. Children's Depression Inventory (Danielson et al., 2012; Foa et al., 2013), The

Children's Depression Rating Scale- Revised (Lewis et al., 2010), and Beck Depression Inventory-2nd Edition (Diamond et al., 2012; Shirk et al., 2014). Two studies used measures to assess for specific symptoms of trauma such as suicidal ideation (using the Suicidal Ideation Questionnaire (SIQ) and the Scale of Suicidal Ideation- Past week (SIQ-PW)) (Diamond et al., 2012) and nightmares (using Nightmare Frequency Questionnaire (NFQ) and the Nightmare Distress Questionnaire (NDQ)) (Krakow et al., 2001). Two studies used measures of psychosocial functioning such as the Coopersmith Self Esteem Inventory (Verleur et al., 1986) and the Offer Self-Image Questionnaire- Revised (Thun et al., 2002). Three studies used the Trauma Symptom Checklist for Children (TSCC) (Tourigny et al., 2005; 2007) to assess for a range of trauma symptoms. Three studies used behavioural ratings such as the Behavioural Assessment System for Children (BASC-2) (Danielson et al., 2012), The Youth Self-Report and Profile (YSRP) (Tourigny et al., 2005; 2007) and the Self-Injurious Behaviours Questionnaire (Tourigny et al., 2005; 2007). Please see Appendix 16 for the authors of these outcome measures.

Table 2.1. *Characteristics of included studies*

Study	Design	Type of childhood maltreatment	Mean Age (years)	No. of Males & Females	Treatment(s)	Treatment format	Treatment Length	Sample size	Follow up length
Baker (1985)	RCT	Sexual abuse	14.69	Males 0 Females 39	**Treatment** Rogerian group therapy **Comparison** Rogerian 1:1 therapy	Group versus individual	2.5 months	**Group** 24 **Individual** 15 **Total** 39	0 months (after 6-10 week therapy)
Barbe et al., (2004)	RCT	Sexual abuse	15.7	Males 53 Females 54	**Treatment** CBT **Comparison** (NST)	Individual	3-5 months	**CBT** 6 **NST** 4 **Total** 10	0 months (after 3-5 month group)
Church et al., (2012)	RCT	Physical, sexual, psychological, abuse & neglect	13.9	Males 16 Females 0	**Treatment** (EFT) single session **Control** No Therapy	Individual	1 hour	**Treatment** 8 **Control** 8 **Total** 16	1 month (after single session)
Danielson et al. (2012)	RCT	Sexual abuse	14.80	Males 12% Females 88%	**Treatment** RRFT **Comparison** Usual Care	Individual	8.5 months 5 months	**Treatment** 15 **Comparison** 15 **Total** 30	6 months
Diamond, et al. (2012)	RCT	Sexual abuse	15.1	Males 0 Females 19	**Treatment** ABFT **Comparison** Usual Care	Individual	3 months	**Treatment** 19 **Comparison** 11 **Total** 30	1 month

Note: Risk Reduction Family Therapy – (RRFT), Attachment Based Family Therapy- (ABFT).

Table 2.1. *Characteristics of included studies (Continued)*

Study	Design	Type of childhood maltreatment	Mean Age (years)	No. of Males & Females	Treatment(s)	Treatment format	Treatment Length	Sample size	Follow up length
Foa, et al. (2013)	RCT	Sexual abuse	15.3	Males 0 Females 61	**Treatment** Prolonged E. **Comparison** S. Counselling	Individual	3.5 months for both groups	**Treatment** 31 **Comparison** 30 **Total** 61	12 months
Krakow, et al., (2001)	Quasi-experimental	Sexual abuse	15.6	Males 0 Females 19	**Treatment** Imagery Rehearsal **Comparison** Usual Care	Group	3 months	**Treatment** 9 **Comparison** 10 **Total** 19	0 months (after 12 week group)
Lewis et al., (2010)	RCT	Sexual abuse	14.6	Males 196 Females 231	**Treatment** CBT **Comparison** Pill Placebo Combination Fluoxetine	Individual	3 months	**CBT** 10 **Fluoxetine** 9 **Placebo** 9 **CBT & Fluoxetine (combination)** 38 **Total** 10	0 months (after 12 week group)
Thun, et al., (2002)	RCT	Sexual abuse	M=? Ages 16-18	Males 0 Females 13	**Treatment** Psycho-therapy & Psych-Ed **Control** No Therapy	Group	3 months	**Treatment** 6 **Comparison** 7 **Total** 13	0 months (after 12 week group)
Tourigny (2008)-follow up of 2005 study	Quasi-experimental	Sexual abuse	14.6	Males 0 Females 42	**Treatment** Psych-Ed **Control** No therapy	Group	5 months	**Treatment** 27 **Control** 15 **Total** 42	6 months after group ended

Note: Prolonged Exposure (Prolonged E.), Supportive Counselling (S. Counselling), Psychoeducational (Psych-Ed).

Table 2.1. *Characteristics of included studies (Continued)*

Study	Design	Type of childhood maltreatment	Mean Age (years)	No. of Males & Females	Treatment(s)	Treatment format	Treatment Length	Sample size	Follow up length
Tourigny, et al.(2005)	Quasi-experimental	Sexual abuse	14.6	Males 0 Females 42	**Treatment** Psych-Ed **Control** No therapy	Group	5 months for both groups	**Treatment** 27 **Control** 15 **Total** 42	0 months (after 5 month group)
Tourigny & Hebert (2007)	Quasi-experimental	Sexual abuse	14.9	Males 0 Females 55	**Treatment** Psych-Ed Open Group **Comparison** Psych-Ed Closed group **Control** No therapy	Group	5 months for both groups	**Open Group** 13 **Closed Group** 29 **Control** 13 **Total** 55	0 months (after 5 month group)
Shirk, et al. (2014)	RCT	Physical, sexual, verbal/emotional abuse, witnessing family violence	15.5	Males 7 Females 36	**Treatment** Modified CBT **Comparison** Usual Care	Individual	3 months for both groups	**Treatment** 20 **Comparison** 23 **Total** 43	1 month
Verleur et al. (1986)	Quasi-experimental	Sexual abuse (incest)	M =? 13-17	Males 0 Females 30	**Treatment** Psychotherapy **Control** No group therapy	Group	3.5 months for both groups	**Treatment** 16 **Control** 14 **Total** 30	0 months (after 6 month group)

Study Quality

Note that the study by Tourigny (2008) is a six month follow-up study to Tourigny et al. (2005). The study quality and ratings of bias for the 2008 study remained the same as for the 2005 study with the exception of risk of attrition.

All the studies had small sample sizes. For some statistical analyses, small sample size is likely to have made it difficult to detect a difference in outcome scores for the treatments.

See Table 2.3 for an overview of risk of bias ratings for the included studies.

Selection Bias

The majority of the studies were assessed as having a high risk of selection bias (Barbe et al., 2004; Church et al., 2012; Danielson et al., 2012; Krakow et al., 2001; Shirk et al., 2014; Thun et al., 2002; Tourigny et al., 2005; Tourigny & Hebert, 2007; Verleur et al., 1986). This was for reasons such as having strict exclusion criteria that would exclude traumatised adolescents with difficulties representative of this population in real life (e.g. excluding one gender, ongoing abuse, substance misuse, psychiatric hospitalisation and self-harm behaviours). Many studies did not document a power calculation to assess for how many participants and controls were needed to reach statistical power. Many randomised studies did not conceal allocation of participants to treatment/control/comparison groups. Three studies used an inappropriate control group which consisted of those who declined to participate and/or those who dropped out and therefore contained confounding variables (Krakow et al., 2001; Tourigny et al., 2005; Tourigny & Hebert, 2007). It was often unclear (undocumented) whether allocation of participants was concealed in the RCT designs.

Two studies (Baker, 1985; Verleur et al., 1986) were assessed as having unclear risk for selection bias. For Verleur et al. this was due to reporting bias (details not documented). For Baker (1985), selection bias was unclear because there were a number of advantages to their selection procedure (referrals made from child protection services, concealed allocation, comparison and treatment groups selected from same population) and a number of disadvantages (males were excluded for an

inappropriate reason (too few of them) and it was unclear whether a power analysis was conducted).

Three studies were assessed as having low risk of selection bias (Diamond et al., 2012; Foa et al., 2013; Lewis et al., 2010). Allocation of participants was concealed in two studies (Foa et al., 2013; Lewis et al., 2010) and unclear in the third study (not documented in Diamond et al., 2012). All three studies randomised participants from one population into treatment groups, comparison or control groups, which enabled comparable potential confounding variables. All three studies documented detailed exclusion criteria and the reasons for this which were appropriate (ethical). All three studies conducted power calculations to calculate the treatment and control sample sizes needed to reach statistical power. Lewis et al., (2010) was the only study to have published a detailed protocol.

Measurement bias for maltreatment exposure

Table 2.2 illustrates key psychometric properties of the measures for exposure to maltreatment and the studies which used these measures.

Six studies were rated as having high risk of bias for measurement of exposure. This was often due to use of dichotomous measurement of exposure e.g. yes/no answers for questions pertaining to the adolescent's recollection of child abuse (Barbe et al., 2004; Danielson et al., 2012; Foa et al., 2012). Such measurements were uncorroborated by other measures or other people. In addition, important details about the adolescent's experience of abuse were not collected which may impact on the severity of the trauma, such as being re-victimised. Some studies used a measure with unclear psychometric properties (Thun et al., 2002) or used a psychometric measure that was not validated on an adolescent population (Krakow et al., 2001). Three studies appeared to use the same person to administer the measures, such a clinical interviewer, clinical staff or select graduates and counsellors (Barbe et al., 2004; Danielson et al., 2012; Foa et al., 2013) and some of these were documented as being external to the study (Barbe et al., 2004; Foa et al., 2013). One study appeared to have let the adolescents administer themselves the questionnaires which could have resulted in variation in the way the self-report was administered

e.g. less concentration/care used in answering the questions (Krakow et al., 2001). Another study used no measure to capture information about exposure to abuse (Church et al., 2012).

Six studies were rated as having unclear risk of bias for measurement of exposure to maltreatment. This is for reasons such as unclear documentation about who administered the measure (Shirk et al., 2014) and the measure being uncorroborated with other measures or people (Shirk et al., 2014; Tourigny et al., 2005; Tourigny & Hebert, 2007). In the papers by Baker (1985) and Verleur et al., (1986) it is unclear how they collected their data about abuse history, unclear who collected this information and no measure appeared to have been used to collect data. The psychometric properties of the measure used by Tourigny et al., (2005) and Tourigny and Hebert, 2007) were also unclear.

Only two studies were rated as having low risk of bias for measuring exposure to abuse (Diamond et al., 2012; Lewis et al., 2010). Both studies used interview measures with good psychometric properties. Both studies used independent evaluators to administer the interviews. Lewis et al., (2010) did not corroborate their measure, however Diamond et al., (2012) corroborated their measure with the adolescent and parent version of the DISC-IV and also included other measures to gather detailed information about exposure to maltreatment.

Table 2.2. *Quality assessment of measures used for maltreatment exposure*

Measures of maltreatment exposure	Validated/ normed on adolescents	Good reliability	Validity measure in the tool	Studies using measure
Trauma Experiences Screening Interview- child version (TESI-C) (National Centre for PTSD/Dartmouth Child Trauma Research Group, 1996)	✓	✓	X	Shirk et al., (2004)
Sexual Experience Survey (SES) (Koss & Oros, 1982)	X	✓	X	Krakow et al., (2001)
Kiddie-Sads- (K-SADS) PTSD module by adolescent and parent (Kaufman et al., 1997)	✓	✓	X	Lewis et al., (2010)
Reasons for Suicide Measure (Diamond & Wintersteen, 2007) (unpublished manuscript)	?	?	?	Diamond et al., (2012)
Diagnostic Interview Schedule for Children – (DISC-IV) (Shaffer, Fisher & Lucas, 1997)	✓	✓	X	Diamond et al., (2012)
Personal History Questionnaire (adapted from Finkelhor's (1979) questionnaire (Thun et al., 2002)	?	?	?	Thun et al., (2002)
Sexual Abuse Rating Scale (SARS) (Friedrich, 1992)	?	?	?	Tourigny et al., (2005), Tourigny & Hebert, (2007)

Measurement bias for outcome (treatment effectiveness)

Please see Appendix 2.6 for an overview of the quality of the treatment outcome measures used in the included studies.

Seven studies were rated as having high risk of bias for the treatment outcome measures. For some studies it was unclear if the assessors had been blinded to the groups they were assessing (Shirk et al., 2014; Tourigny et al., 2005; Tourigny & Hebert, 2007; Verleur et al., 1986) and other studies documented that they had not used blinding (Church et al., 2012; Krakow et al., 2001). Six studies had a short follow-up (0-1 month) (Church et al., 2012; Krakow et al., 2001; Tourigny et al., 2005; Tourigny & Hebert, 2007; Verleur et al., 1986). For Three studies, it was unclear who administered the measures (Church et al., 2012; Shirk et al., 2014; Verleur et al., 1986). For four studies, the measures were self-administered which could have

resulted in variation in the way the self-report was administered or incomplete data (Krakow et al., 2001; Tourigny et al., 2005; Tourigny & Hebert, 2007). All six studies did not corroborate the self-report measures with other measures or responses from other people (e.g. parents). One study did not identify confounding variables between the treatment and control group (Verleur et al., 1986). Tourigny et al., (2005) found differences between the treatment and control group but did not control for these confounding variables in their statistical analyses. This was rectified in their next study (Tourigny & Hebert, 2007). Two studies used a measure which was not normed/validated on an adolescent population (Church et al., 2012; Krakow et al., 2001).

Two studies were rated as having unclear risk of bias for measuring treatment outcome. For both studies, it was unclear whether the assessors were blind to the groups (Danielson et al., 2012; Thun et al., 2002). It was also unclear who administered the measures for one study (Danielson et al., 2012). In the study by Danielson et al., (2012), confounding variables were identified but not controlled during their statistical analyses. However, Danielson et al., (2012) corroborated one self-report measure with one completed by a parent. In addition, their measures had good psychometric properties, one measure included a validity scale and they also included a long follow-up period of six months. Thun et al., (2002) did not corroborate their self-report measure which also did not include a validity scale and they used a short follow-up period. However, Thun et al., (2002) did identify and control for confounding variables, used external administrators for the measure and the measure had good psychometric properties.

Five studies were rated as having a low risk of measurement bias for outcome. These studies had none of the issues stated above, except for: the use of a short follow-up period (Baker, 1985; Barbe et al., 2004; Diamond et al., 2012; Lewis et al., 2010), the absence of validity scales within the measures used (Baker, 1985; Barbe et al., 2004; Diamond et al., 2012; Foa et al., 2013; Lewis et al., 2010) and Baker, (1985) and Barbe et al., (2004) did not corroborate their measures. It is unclear whether Baker (1985) was blind to the different groups.

Attrition bias

Two studies (Thun et al., 2002; Tourigny, 2008) were rated as having high risk of bias for attrition. The attrition rate was high in Thun et al.'s study considering it was a small sample (n = 13). The experimental group was reduced from 6 adolescents to four adolescents due to one terminating from the group and one being referred for individual counselling. The effects of attrition were only mentioned in terms of the small sample size. In the follow-up paper by Tourigny (2008), there was a high attrition rate of 26% (11/42) consisting of adolescents who could not be contacted at a six month follow-up. They stated this group did not differ statistically on the dependent measures from those who were included in the follow-up.

Five studies were rated as having unclear risk of bias for attrition. Foa et al., (2013) did not document the characteristics of the adolescents who did not complete treatment therefore the effects of this are unknown. Foa et al., documented attrition for treatment completion, however all participants were used in the statistical analyses. Tourigny et al., (2005) and Tourigny and Hebert, 2007) documented those who dropped out of treatment (six and three respectively), however these adolescents were then included in the control group. The characteristics and impact of these adolescents on the findings were stated in relation to the confounding variables between the treatment and control group. Danielson et al., (2012) reported their attrition rate (two dropped out) however they considered treatment completers to be adolescents who had completed 5/7 treatment components. They did not document the characteristics or impact of the adolescents who dropped out of the study. Shirk et al., (2014) accounted for their attrition and had a small attrition rate (four adolescents dropped out) but they did not document the characteristics or impact of these adolescents.

Seven studies were rated as having low risk of bias for attrition. Five studies has no attrition (Baker, 1985; Church et al., 2012; Diamond et al., 2012; Lewis et al., 2010; Verleur et al., 1986). Lewis et al., provided Adjunctive Services and Attrition Prevention (ASAP) sessions which were available to manage "clinical emergencies, premature termination, dropping out, and referral of family members to treatment in a way that is consistent across sites and subjects". Barbe et al., (2004) had a small

rate of attrition (8 adolescents dropped out) and characteristics of these adolescents were compared with those that continued with treatment. Krakow et al., (2001) had a large attrition rate of 8 adolescents from their statistical analyses due to unreturned questionnaires. Nonetheless, they accounted for the attrition and documented the characteristics of this group and its effect.

Table 2.3. *Risk of bias for included studies*

Study	Selection Bias	Measurement bias for exposure to maltreatment	Measurement bias for outcome (treatment effectiveness)	Attrition bias
Baker (1985)	Unclear	Unclear	Low	Low
Barbe et al., (2004)	High	High	Low	Low
Church et al., (2012)	High	High	High	Low
Danielson et al., (2012)	High	High	Unclear	Unclear
Diamond et al., (2012)	Low	Low	Low	Low
Foa et al., (2013)	Low	High	Low	Unclear
Krakow et al., (2001)	High	High	High	Low
Lewis et al., (2010)	Low	Low	Low	Low
Shirk et al., (2014)	High	Unclear	Unclear	Unclear
Thun et al., (2002)	High	High	Unclear	High
Tourigny (2008) follow-up study	High	Unclear	High	High
Tourigny et al., (2005)	High	Unclear	High	Unclear
Tourigny & Hebert (2007)	High	Unclear	High	Unclear
Verleur et al., (1986)	Unclear	Unclear	High	Low

Overall, only two studies were assessed as having low risk of bias in every domain (Diamond et al., 2012; Lewis et al., 2010). Eleven studies had a high or unclear risk of selection bias, twelve studies had a high or unclear risk of exposure measurement bias and nine studies had a high or unclear risk for outcome measurement. Attrition bias was rated as low for seven studies.

Effects of interventions

See Appendices 2.0-2.5 for details of the results.

Cognitive Behavioural Therapy (CBT)

See Appendix 2.0 for details of the results. Three studies used CBT as their experimental treatment group (Barbe et al., 2004; Lewis et al., 2010; Shirk et al., 2014). All three studies used measures of depression for their outcome. Two studies compared their treatment group with a comparison group of another treatment (Barbe et al., 2004; Lewis et al., 2010). Barbe at al., found no significant difference between rates of Major Depression for those in the CBT group compared with adolescents in the Non-Directive Supportive Therapy group. Similarly, Lewis et al., found no significant difference for the treatment by time interaction for CBT or the Pill Placebo, combination (CBT and Fluoxetine) or fluoxetine groups on Children's Depression Rating Scale (CDRS) scores. Moreover, Lewis et al. found increased effect sizes in the Fluoxetine, combination and the placebo group respectively when compared with CBT. Shirk et al., found no significant difference for Beck Depression Inventory (BDI) scores between the Modified CBT group and Usual Care but found a significant reduction in depression scores for both groups between pre- and post-treatment times.

In these three studies, CBT did not effectively reduce the psychological harm of childhood maltreatment in relation to outcomes of depression when compared with comparison/control groups. The quality of the studies did not appear to influence the direction of the findings because the best quality study (Lewis et al., 2010) found no significant results for CBT. This corroborated the findings of the poorer quality studies.

Family Therapy (FT)

See Appendix 2.1 for details of the results. Two studies used types of Family Therapy as their experimental treatment group (Attachment Based FT, Diamond et al., 2012; Risk Reduction FT, Danielson et al., 2012) and compared them with Usual Care. Both studies used measures of depression (Appendix 2.6). Diamond et al., (2012) found a significant increase in post-treatment depression remission rates for the ABFT group

on the Becks Youth Inventory. Similarly, Danielson et al., found a significant reduction in depression scores on the Child Depression Inventory for the RRFT group from pre-treatment to follow-up times.

Danielson et al., also used measures of PTSD and behavioural problems. The authors found a significant decrease in the parent rated UCLA PTSD outcome and the Internalising scale of the Behavioural Assessment System for Children (BASC) between pre- and post- treatment times for RRFT. There was no significant difference between RRFT and Usual Care for the adolescent rated UCLA PTSD scores or for the Externalising scale of the BASC. Both RRFT and Usual Care resulted in significantly reduced adolescent rated UCLA PTSD scores and Externalising BASC scores between pre and post- treatment times.

Diamond et al., also used measures of suicidal ideation (Appendix 2.6). Diamond et al., found a significant reduction in suicidal ideation questionnaire scores from pre to post-treatment for ABFT and a significant increase in suicidal ideation remission rates for ABFT at post-treatment.

In these two studies, Family Therapy was effective at significantly reducing the psychological harm of childhood maltreatment in relation to outcomes of depression, PTSD, suicidal ideation and suicidal ideation remission rates and behavioural problems when compared with comparison groups. However, adolescent rated PTSD scores and Externalising symptom scores were lowered across the treatment and comparison group. The direction of the results does not appear to have been influenced by study quality because the results from the study of high quality (Diamond et al., 2012) corroborated results found by Danielson et al., (2012).

Psychoeducational/Psychotherapeutic Group Therapy

Please note that Tourigny (2008) is a follow-up study to the Tourigny et al. (2005) study. See Appendix 2.2 for details of the results.

Five studies used Psychoeducational/Psychotherapeutic Groups for their experimental treatment group and compared these with control/comparison groups (Baker, 1985; Thun et al., 2002; Tourigny et al., 2005; Tourigny & Hebert, 2007; Verleur et al., 1986) Tourigny & Hebert also compared their experimental group with

a comparison group but found no significant differences between the two groups for all outcome variables. Three studies used measures of psychosocial functioning (Appendix 2.6). Thun et al., (2002) found no significant difference between the treatment group and the control group for Offer Self-Image Questionnaire- Revised (OSIQ-R) scores. In addition, there was no significant difference between pre- and post- treatment scores for either group. Mean scores for the OSIQ-R scales remained stable for both groups, however there was a trend of decreased self-reliance for the control group over time. Baker (1985) compared group treatment with a comparison group of individual therapy and found a significant increase in self-concept scores for the group treatment compared with individual therapy. No significant differences were found between group/individual treatment for anxiety or depression, however the data showed a trend with group treatment decreasing anxiety scores more than individual treatment. Verleur et al., (1986) found a significant increase in self-esteem scores between pre- and post- treatment times for both the treatment and control group. Three studies used measures of trauma symptoms and behavioural problems. Tourigny et al., (2005) found a significant decrease between the pre- and post-treatment scores for the treatment group for all the TSCC scales with the exception of the Sexual Preoccupation scale. At a six month follow-up, Tourigny (2008) found a significant decrease between the pre- and post- treatment scores for the treatment group for all the TSCC scales, suggesting that the treatment effects were maintained. Similarly, Tourigny and Hebert (2007) found a significant difference for the treatment group (lower scores) for each of the TSCC scale scores with the exception of the Anger scale. For behavioural outcomes, Tourigny et al. (2005) found a significant decrease for the treatment group for Internalising and Externalising Behaviour scores and for Social Withdrawal scores. They found no significant difference between the groups for aggression, delinquent or for self-injurious behaviour. At a six month follow-up, Tourigny (2008) found a significant decrease for Internalising and Externalising behaviours and for Social Withdrawal for the control group but not the treatment group. Tourigny (2008) also found a significant decrease in self-injurious, delinquent and aggressive behaviour for the control but not for the treatment group, suggesting that these treatment effects were not maintained. Tourigny and Hebert (2007) found a significant decrease for the treatment group for Internalising Behaviour and Social

Withdrawal scores and for self-injurious behaviour but no significant difference for aggressive or delinquent behaviour.

These five studies found that Psychoeducational/Psychotherapeutic Groups had mixed effects for reducing the psychological harm of childhood maltreatment. Some symptoms of trauma and behavioural problems were significantly reduced (except some OSIQ measures: impulse control, self-reliance, body image and self-confidence) and self-esteem was significantly increased, compared with control groups. Positively, some treatment effects (significantly lower TSCC scores) were maintained at a six month follow-up, however, this was not found for some of the behavioural measures. It is difficult to assess whether study quality influenced the direction of the results because the quality of the studies was mixed. *Imagery Rehearsal*

Only one study used Imagery Rehearsal as its experimental group (Krakow et al., 2001) and compared this with a comparison group of Usual Care. Krakow et al., used measures for specific trauma symptoms (Nightmares) and for PTSD symptoms (Appendix 2.6). From pre to post treatment the authors found a significant reduction in the number of nightmares experienced per night and in the average nightmare distress scores for the treatment group. The authors found no significant difference between the two groups for pre and post- treatment Self-Reported PTSD Symptom Scale (PSS-SR) scores.

Despite only one study using this type of therapy, the results suggest that Imagery Rehearsal is effective at reducing the psychological harm of childhood maltreatment in relation to frequency of nightmares and nightmare distress, however not for other PTSD symptoms. The risk of bias for this study was high in several domains, therefore the validity of these findings is questionable.

Prolonged Exposure Therapy

One study used Prolonged Exposure therapy and compared it with Supportive Counselling (Foa et al., (2013). Foa et al used a measure for depression and found a significant reduction in depression scores for Prolonged Exposure compared with Supportive Counselling (Appendix 2.4). However, both groups scored significant reductions in depression scores between pre- and post- treatment times. Foa et al

also found a significant reduction in self-reported and Interview scores of PTSD for Prolonged Exposure compared with Supportive Counselling. There was also a significant increase in percentages of lost diagnosis of PTSD for the Prolonged Exposure treatment group compared with Supportive Counselling. There were significant differences for both groups between pre and post- treatment scores for all three PTSD measures.

Overall the results suggest that Prolonged Exposure is more effective than Supportive Counselling at significantly reducing depression, PTSD symptoms and PTSD diagnoses. The risk of bias for this study was variable throughout the domains assessed therefore the validity of the findings is questionable.

Emotional Freedom Techniques (EFT)

Only one study used EFT as their experimental group and compared this with a control group (Church et al., 2012). Church et al. used a measure of trauma symptoms (Appendix 2.5) and found a significant decrease between pre and post treatment times for the total score on the Impact of Events scale for the EFT group, compared with the control group. Similarly, they found a significant decrease between pre and post treatment times for intrusive memories and avoidance symptom scores for the EFT group, compared with the control group.

This suggests that EFT is an effective therapy for significantly reducing symptoms of trauma including intrusive memories and avoidance symptoms. The risk of bias for this study was high in several domains, therefore the validity of these findings is questionable.

DISCUSSION

The findings of this review suggest that CBT does not effectively reduce some psychological harm (symptoms and rates of diagnoses for depression) in adolescents with a history of childhood maltreatment. All studies had a small sample size that is likely to decrease statistical power and thereby decrease the ability of the studies to detect a significant difference. In addition, Barbe et al. did not report in detail their findings for the subsample who had experienced childhood abuse (no means reported). Barbe et al. and Shirk et al. were rated as having high or unclear risk in many domains which could have impacted on the validity of their results, however Lewis et al. was rated as having a low risk of bias in each domain and still found a greater decrease in depression scores for the pill placebo, combination and fluoxetine groups, compared with the CBT group. It could be that the risk of bias in each domain has made the findings unclear, but the results may also fit in with literature that suggests CBT is a less effective treatment for people who have a history of abuse (Asarnow et al., 2009; Shirk et al., 2009).

This review suggests that Family Therapy is effective at significantly reducing outcomes of depression, PTSD, suicidal ideation and suicidal ideation remission rates and behavioural problems in adolescents with a history of childhood maltreatment, when compared with comparison groups (Danielson et al., 2012; Diamond et al., 2012). Adolescent rated PTSD scores and Externalising symptom scores were reduced across the treatment and comparison group in the study by Danielson et al. However, Danielson et al. was given high or unclear ratings of risk in each domain, which may have impacted on the validity of the results. Nonetheless, Diamond et al. was given low ratings for risk in all domains and found Attachment Based Family Therapy to be effective at increasing rates of remission for depression and suicidal ideation in adolescents with childhood trauma.

This review highlights unclear findings for the effectiveness of Psychoeducational/Psychotherapeutic Groups. Some symptoms of trauma and behavioural problems were significantly reduced and self-esteem was significantly increased, compared with control/comparison groups. However other symptoms

such as sexual preoccupation and anger on the TSCC, IPAT anxiety and depression scores and all of the OSIQ measures: impulse control, self-reliance, body image and self-confidence, were not significantly reduced (Baker, 1985; Thun et al., 2002; Tourigny et al., 2005; Tourigny & Hebert, 2007; Verleur et al., 1986). Positively, Tourigny (2008) found all scores for the TSCC subscales were significantly reduced six months after therapy. However, Tourigny, (2008) also found better results for behavioural outcomes in the control group compared with the treatment group, suggesting that the effects of treatment may not last for behavioural outcomes. The validity of these results is highly questionable due to each of the studies receiving high or unclear risk of bias in every domain (except for Baker, 1985 who had low bias for outcome measures and attrition). In particular, the papers by Tourigny et al. (2005) and Tourigny and Hebert (2007) used control groups consisting of adolescents who dropped out or were considered unsuitable, thereby confounding the results.

This review only found one study which assessed the effectiveness of Imagery Rehearsal for reducing the psychological harm of childhood maltreatment (Krakow et al., 2001). This study suggested that Imagery Rehearsal is effective at reducing the frequency and distress of nightmares, but not effective for reducing other PTSD symptoms. This study was rated as having a high risk of bias in each domain except attrition bias. Of concern was the control group which consisted of adolescents who did not wish to take part. This is likely to confound the results.

Similarly, the review only found one study which assessed the effectiveness of Prolonged Exposure therapy. Foa et al., (2013) found that Prolonged Exposure was more effective than Supportive Counselling at reducing depression, PTSD symptoms and PTSD diagnoses. The study was rated as low risk for selection bias and low risk for attrition and had the largest sample size. In addition, it was more effective than a comparison therapy which highlights its strength.

Last, this review found one study which assessed the effectiveness of Emotional Freedom Techniques therapy (Church et al., 2012). Church et al. found that EFT therapy was effective at reducing symptoms of trauma including intrusive memories and avoidance symptoms. However, this study was rated as having high risk of bias in every domain except attrition bias. Of note was the measurement of outcomes

for childhood maltreatment (Impact of Events Scale) which was not validated/normed on adolescents and may have confounded the results.

This is the first systematic review to focus on the effectiveness of psychological interventions for childhood maltreatment in adolescents. The review covers a wide range of literature sources, covering a total of 10,129 hits (when excluding duplicates). In addition, the inclusion/exclusion criteria dictate a minimum study quality with regards to the studies including a control/comparison group and included a wide range of outcome measures. The narrative synthesis when assessing for study quality also enables this review to assess in detail the strengths and weaknesses of the included studies. This is particularly important when a review includes a small number of studies. The majority of existing reviews have combined populations of children and adolescents when assessing effectiveness of interventions and have also often combined the types of trauma experienced which makes it difficult to assess which interventions are effective for which populations and types of trauma. The specificity of this review has offered the opportunity to critically analyse the effectiveness of interventions for specific types of interpersonal trauma within a particular population.

The specificity of this review is both a strength and a limitation. This review found a small number of studies that fit the inclusion criteria, which resulted in a small amount of studies and participants available to assess the effectiveness of different types of interventions. For three types of intervention, the effectiveness was assessed by only one study. This limitation, combined with the methodological bias of the studies, decreased the validity and reliability of the results making it unclear which interventions are truly effective. A subgroup analysis for adolescents with developmental disabilities and/or adolescents within inpatient settings could not be facilitated due to the small amount of studies included. However, it is likely that these subgroup analyses could not have been facilitated even with a larger number of included studies due to the strict eligibility criteria for many studies. Most studies stated that they had excluded adolescents with a developmental disability and adolescents who were admitted, had been recently admitted or required admitting

to inpatient units. This severely limits the applicability of the findings in this review to a real life sample of adolescents with a history of childhood maltreatment.

CONCLUSION

This review has highlighted unclear findings for the effectiveness of treatments for childhood maltreatment in adolescents. The two best quality studies (Lewis et al., 2010; Diamond et al., 2012) have found that CBT may not be effective at treating the effects of childhood maltreatment (Lewis et al., 2010), but Attachment Based Family Therapy may be effective at treating the sequelae of childhood abuse (Diamond et al., 2012). The other intervention studies have methodological bias that limits the generalisability and validity of the findings. This demonstrates the need for more high quality research in this area. Of particular concern are the limitations with the generalisability of the findings to 'real life' samples of adolescents with a history of childhood abuse, who often present with a varied array of complex difficulties. This is a research field which is still in its infancy, yet it is very important to consider how we reduce the impact of childhood abuse in adolescence because adolescence is thought to be a "window of opportunity for positive change in mental health" (Wekerle, Waechtera, Leunga, & Leonard, 2007) and could reduce mental health difficulties that often continue into adulthood.

CHAPTER 3

The importance of considering childhood maltreatment: A case study evaluating the effectiveness of the Adapted Sex Offender Treatment Programme with an adolescent male

ABSTRACT

This case study evaluates the effectiveness of the Adapted Sex Offender Treatment Programme (ASOTP) in terms of reducing a male adolescent's risk of sexually re-offending. Client W is a 19 year old male diagnosed with Autism Spectrum Disorder (ASD), Hyperkinetic Disorder and low-average cognitive abilities. Client W was also assessed as having a probable diagnosis of narcissistic personality disorder. Client W has an extensive forensic history including sexual offences towards females. He also has a history of childhood maltreatment. This case study discusses some of the research literature in relation to the prevalence of victimisation in children with DD (particularly with ASD) and some research literature in relation to childhood maltreatment, personality development and sexual offending. The complex array of factors that contributed towards Client W's sexual offending are then highlighted using the Integrated Theory of Sexual Offending (Ward & Beech, 2006) and brought together in a CBT psychological formulation. Client W completed an adapted version of the ASOTP on a 1:1 basis. This case study reflects on the difficulties both clients and practitioners can face when structured offence work is completed prior to work which aims to resolve difficulties associated with childhood maltreatment. The case study highlights some of the ASOTP treatment modules which target some of Client W's difficulties associated with a history of childhood maltreatment and his DD. The effectiveness of the ASOTP was evaluated using psychometric assessments and qualitative assessment by the clinicians, including a post-treatment relapse prevention interview. The results of the psychometrics were mixed, showing no change, some improvement and some deterioration. The relapse prevention

interview showed that Client W had gained little insight into his risk of sexually offending and how to improve/manage this risk in the future. The Client's difficulties with engaging with the work are discussed in relation to his personality traits and DD. Recommendations are made which place emphasis on the importance of completing work related to childhood maltreatment, prior to completing future offence related work.

Ethical Considerations

The following case study is based upon a factual account of the assessment and intervention of a 19 year old adolescent male admitted to a psychiatric secure hospital for young people with developmental disabilities under the Mental Health Act (1983). The assessments and intervention undertaken were part of the client's treatment plan. The clients Responsible Clinician deemed the client to have capacity to consent and the Trainee gained the client's consent for the use of his information to write the case study. To maintain anonymity the identity of the client has been concealed.

Client Introduction

For the purpose of this case study and protecting the client's anonymity the Client is referred to as "Client W".

Client W is a 19 year old male with a diagnosis of Childhood Autism and Hyperkinetic Disorder. Client W's diagnosis of Autism was confirmed at his current placement by the Autism Diagnostic Observation Schedule (ADOS) assessment. His cognitive ability was assessed by the Wechsler Adult Intelligence Scale (WAIS-IV) and although his full scale IQ could not be interpreted, his General Ability Index score was 88, categorising his intellectual ability as Low Average with specific language deficits. The results of the Interpersonal Personality Disorder Examination (IPDE) assessment indicated a 'probable' diagnosis of narcissistic personality disorder for Client W.

Client W has a reported history of childhood maltreatment including sexual abuse, physical abuse and emotional abuse as well as neglect, peer rejection and witnessing domestic violence. The history of maltreatment is highlighted further on in the case study as part of Client W's risk assessment of sexual offending.

Client W has a longstanding history of displaying challenging and aggressive behaviours from a very early age and it is reported that his aggressive, sexualised and impulsive behaviours prevented him from accessing main stream secondary school. This was likely to be related to his difficulties associated with ASD and Hyperkinetic Disorder such as difficulty socialising with others. It is reported that Client W was aggressive towards his mother and towards peers. There are several reports of Client

W being sexually and non-sexually verbally abusive to staff whilst in secure placements, in addition to displaying inappropriate sexualised behaviours, such as simulating masturbation in front of care staff and members of the public and touching his genitals. There is also a report of Client W grabbing a male member of staff's hand and placing it on his genitals before asking the staff member if he wanted to have sex with him.

Convictions

Client W has received seven convictions of sexual assault or offences that were sexual in nature. These were committed between 2008 and 2010. In 2008 Client W sexually offended on five occasions in the community, which involved him exposing himself to a female passer-by (lifting up his shirt), slapping an unknown female adult on the bottom (two separate occasions involving two different women), slapping an unknown female child (12 years old) on her bottom twice and kissing an unknown nine year old girl on the lips and cheeks. In August 2010, Client W was charged for touching a female care worker on the buttocks whilst in a secure placement (please see Appendix 3.0 for details). He was made subject to a Youth Rehabilitation Order with the requirement to attend an Attendance Centre for a period of 12 months. Client W has also received convictions for attempted theft of a cycle, theft of a mobile phone, shoplifting, property damage, criminal damage and use of racially threatening/and or abusive language (see Appendix 3.0 for details). In 2011 Client W was transferred from a secure children's home to a specialist inpatient service for further assessment and treatment for his challenging and sexualised behaviours.

INTRODUCTION

Developmental Disabilities

The term 'developmental disability' (DD) is often used in the USA and Canada. In the current study, the definition of developmental disability is one defined by the Federal Developmental Disabilities Assistance and Bill of Rights Act outlined in the General Introduction. Some well-known developmental disabilities include Autism, Down's syndrome, Cerebral Palsy, and Hyperkinetic Disorder (International Statistical Classification of Diseases (ICD-10) (World Health Organisation, 2004).

Prevalence of victimisation in children with Developmental Disabilities

The research literature has commonly stated that people with DD (including those with LD and ASD) may be a group at greater risk for victimisation and the psychological trauma that can result from victimisation (Cooper, Smiley, Morrison, Williamson, & Allan, 2007; Fenwick, 1994; MacHale & Carey, 2002; Sullivan & Knutson, 2000; Sullivan & Knutson, 1998; Turk, Robbins, & Woodhead, 2005; Westcott & Jones, 1999).

In a systematic review and meta-analysis by Jones et al. (2012) the prevalence of violence against children with disabilities was investigated. Seventeen studies were selected from 10,663 references. Reports of 16 studies provided data suitable for meta-analysis of prevalence. Children with a range of disabilities were included in the studies and they were grouped according to the following disabilities: intellectual impairments; disability associated with mental illness; physical impairments; and sensory impairments. The key outcomes of interest were physical violence; sexual violence; emotional (or psychological) abuse; neglect; and any violence (all categories of violence, abuse, and neglect combined).

The meta-analysis showed that pooled prevalence estimates were 26.7% (95% CI 13.8–42.1) for combined violence measures, 20.4% (13.4–28.5) for physical violence, and 13.7% (9.2–18.9) for sexual violence. Significantly higher estimates of prevalence of any violence were reported in studies implemented in hospital settings than in other settings. In addition, estimates of prevalence of sexual abuse were higher in

studies of children with mental or intellectual disabilities than with other impairments.

Jones et al (2012) note some limitations to this systematic review. First, they noted significant heterogeneity between all of their pooled estimates. Wide variation in the characteristics of studies is likely to have contributed to the lack of clarity. One of the challenges is variation in the operational definitions of disability and the variety of methods used to validate disability, shown by the wide range of disability types, categories and methods used in the included studies. Similar inconsistencies were noted within definitions and methods of measurement of violence, particularly sexual violence. Second, only one study included in the systematic review investigated prevalence within a whole population sample. The lack of whole-population studies has been criticised because selected populations and settings might introduce bias, overestimating the level of violence in children with disabilities. This was demonstrated by significantly higher estimates of prevalence of any violence reported in studies done in hospital settings than in other settings.

This is the first review to provide pooled estimates of the prevalence of violence perpetrated against children with disabilities and it has provided evidence that out of 16 studies, the most prevalent type of violence was for combined measures of violence, followed by physical then sexual violence, with higher estimates of violence present in hospital settings than other settings. Although the results need to be considered in light of the limitations, a meta-analysis offers a concise way of presenting combined findings, thereby yielding a larger sample size and increased statistical power compared with single studies. It also allows the reader to consider the findings in light of the presence of bias in the data synthesis (Borenstein, Hedges, & Rothstein, 2007).

To date, only one study has investigated the prevalence of sexual abuse in a sample exclusively including children with ASD. Mandell, Walrath, Manteuffel, Sgro and Pinto-Martin (2005) researched psychosocial correlates of abuse in a sample exclusively involving children with a diagnosis of ASD. Mandell et al. (2005) used data collected in the USA from the congressionally mandated national evaluation of the Comprehensive Community Mental Health Services for Children and their Families

Program (n=9,313). Of the total sample, 156 children were diagnosed with ASD, comprising 108 males and 48 females. The rates of abuse and problematic behaviours were examined using caregiver reports from clinical interview. A total of 69.2% (n = 108) of their caregivers reported no abuse, and 14.1% (n = 22) reported physical abuse only; 12.2% (n = 19) reported sexual abuse only and 4.4% (n = 7) reported physical and sexual abuse. The researchers found that physically abused children were more likely to have engaged in sexual acting out or abusive behaviour, had made a suicide attempt, or had conduct-related or academic problems. Sexually abused children more likely had engaged in sexual acting out or abusive behaviour, suicidal or other self-injurious behaviour, had run away from home, or had a psychiatric hospitalisation. There is a clear limitation with the method of data collection due to bias including a high possibility that the children's caregivers were unaware of all circumstances of sexual abuse (Sevlever, Roth & Gillis, 2013), or the possibility that caregivers were underreporting abuse, especially when considering that the perpetrators of maltreatment of children both with and without disabilities are often immediate family members (Hershkowitz, Lamb, & Horowitz, 2007; Sullivan & Knutson, 1998; Sullivan and Knutson, 2000). There is also the potential for the caregiver to have under or over reported problematic behaviours displayed by the child. Despite the methodological limitations, this research reflects the historical factors (alleged physical and sexual abuse) and current presenting problems (sexual acting out and abusive behaviour) of client W.

Childhood maltreatment, personality development and sexual offending

According to Young, Klosko and Weishaar (2003), psychopathology including narcissistic personality traits results from activating Early Maladaptive Schemas (EMS). Young et al., (2003) (page 7) define EMS as *"Broad, pervasive themes or patterns comprised of memories, emotions, cognitions and bodily sensations regarding oneself and one's relationship with others. Developed during childhood or adolescence, [they are] elaborated throughout one's lifetime, and [are] dysfunctional to a significant degree".* The authors hypothesise that EMS originate from 'toxic childhood experiences' that prevent a child's core emotional needs from being met in an adaptive manner (Young et al., 2003). Such experiences in Client W's childhood

include traumatisation/ victimisation and emotional deprivation and are detailed in his risk assessment. Narcissism is therefore a response to feelings of worthlessness, the unconscious basis of narcissistic self-grandiosity. In people with narcissistic personality disorder, this commonly results in the use of avoidant coping skills (e.g. avoiding situations in which the individual may feel they and their abilities are inferior to others) and overcompensating coping skills (e.g. asserting superiority over others 'using and abusing' others). Some researchers have suggested that people with this diagnosis are at increased risk of committing sexual offences. This is due to interpersonal problems such as a grandiose sense of self-importance, their conviction that they are "in the right", and their unwillingness to respect the needs of others. Such sexual offences may be understood as vindictive rage in response to personal insults and as an almost obsessive desire to make sexual conquests without recognising and respecting the feelings and needs of potential partners (Kernberg, 1998; Livesley, 2001). For Client W, his personality traits combined with deficits in the ability to empathise with others associated with ASD contribute to his risk of offending by having poor victim empathy.

Dudeck, Spitzer, Stopsack, Freyberger and Barnow, (2007) investigated risk factors for sexual offending. Their sample consisted of 51 male inpatients at two maximum security forensic hospitals in Germany. A total of 19 sexual offenders were compared with 32 non-sexual offenders. Personality disorder diagnoses and childhood maltreatment were assessed by experts. They found that narcissistic personality disorders were significantly more frequent in sexual offenders than in the comparison group. Narcissistic personality disorder had been diagnosed in 7 of the 19 sexual offenders (36.8%), but in only 3 of the 32 non-sexual offenders (9.4%). Moreover, sexual offenders had been sexually abused as children significantly more often (26.3%) than the non-sexual offenders (3.1%). Their findings indicate that sexual victimisation in childhood might be an important risk factor for sexual offending in later life (however it should also be noted that the majority of male victims of child sexual abuse do not become sexual offenders, as found in a longitudinal study by Salter et al., (2003), where out of 244 victims, only 26 went on to sexually offend). As a result, the authors suggest that therapeutic interventions for

offenders which focus on their childhood sexual abuse (trauma-based therapy approaches) might improve their psychosocial well-being and functioning and decrease their risk of offending. Therapeutic interventions for personality disorder might also be helpful, such as dialectical behaviour therapy (DBT; Linehan, 1993) or transference-focused psychotherapy (TFP; Clarkin, Kernberg, & Yeomans, 1999).

Young, Klosko and Weishaar (2003) also highlighted the difficulties with working with people diagnosed with a personality disorder and they name these difficulties as 'characterological problems'. Traditional treatment programmes (such as CBT) make a number of assumptions that people with characterological problems often do not meet. One of these is compliance with treatment. Often people with a personality disorder fluctuate in their motivation levels and are unwilling or unable to comply with the treatment. Another assumption is that the person can access their cognitions and emotions and communicate these to the therapist. Often people with characterological problems are unable to do this, largely due to a wish to avoid looking at their emotions and thoughts and they can also avoid many situations that are essential to their progress. In addition, many of their distorted thoughts and self-defeating behaviours are very difficult to change via short-term therapy. Traditional therapies also often assume that the person can engage in a collaborative relationship with the therapist within a few sessions. However, people with characterological problems often have difficulty in forming therapeutic alliance and have had dysfunctional interpersonal relationships early on in life. In the case of people with a narcissistic personality disorder, they are often frequently disengaged or hostile, making collaboration with the therapist very difficult.

The Integrated Theory of Sexual Offending

The Integrated Theory of Sexual Offending (ITSO) by Ward and Beech (2006) has been included in this case study because it emphasises the importance of developmental factors (genetic predispositions and early experiences) in sexual offending and the authors have attempted to relate the theory to people with DD (Keeling, Rose, & Beech, 2009). This is particularly important in this case study because the client concerned is an adolescent with diagnoses of DD (ASD and

Hyperkinetic disorder) and has a history of childhood abuse and a history of displaying sexually harmful behaviour. The ITSO helps highlight the factors that are relevant for Client W's formulation in relation to his risk of sexually offending.

The ITSO argues that there are three causal factors (biological, ecological and psychological) that, when combined, lead to clinical problems and can help us understand sexual offending.

Biological Factors

This factor highlights that individuals enter the world with various genetic advantages and disadvantages (Ward, Polaschek, & Beech, 2005) and that genetic determinants may result in a pre-disposition to seek basic goods (Ward & Beech, 2006). For individuals with a DD, biological factors are likely to be pertinent due to the biological nature of inherited difficulties and developmental difficulties during pregnancy (Keeling, Rose, & Beech, 2009) that likely predisposes these individuals to other combined difficulties, such as cognitive processes and dysfunctional motivation. The Theory proposes that these combined difficulties (genetic, motivational and cognitive) lead an individual to meet their sexual needs in socially unacceptable ways via sexual offending (Ward & Beech, 2006).

The Ecological Niche

This factor highlights the importance of both early developmental experiences (distal factors) and personal circumstances (proximal factors). Ward and Beech (2006) suggest that the major causal factors leading to sexual offending may lie within the person's social, cultural and personal circumstances, as well as the physical environment (Ward, Polaschek, & Beech, 2005), rather than with the person. Distal factors are pertinent to people with DD because they may be particularly vulnerable to poor developmental experiences such as sexual and physical abuse which is highlighted by the literature on the prevalence of abuse in children with DD (e.g. Jones et al. 2012). In terms of proximal factors, Lindsay (2005) discussed that a lack of engagement with society, as a result of negative influences, may place someone at risk of offending. This example of a proximal factor could be further exacerbated

by the experience of stigmatization and social isolation for people with developmental disabilities (Dagnan & Jahoda 2006).

The Psychological System

Ward, Polaschek, and Beech, (2005) hypothesised that impairment in both the biological and ecological systems could lead to a significant impact on an individual's psychological system. This system consists of neurological functioning (Ward & Beech, 2006), with three interlocking neuropsychological systems.

1) *The motivational/emotional system*

This is the neuropsychological manifestation of maladaptive motivations and emotions which result from an individual's genetics, culture and personal experiences. Ward et al. (2005) proposed that early developmental experiences significantly affect the likelihood of forming maladaptive motivation and emotions, which create a vulnerability to seeking emotional gratification in inappropriate ways. Therefore, deficits in the motivation／emotional system may be important features in the aetiology of sexual offending by people with DD due to their vulnerability to significant negative distal and proximal factors (e.g. poor developmental experiences, stigmatization). Social difficulties also represent a dysfunction in this system and clinical symptoms can include emotional loneliness, inadequacy, low self-esteem, and suspiciousness (Ward & Beech 2006). Social difficulties experienced by people with developmental disabilities are well-documented (e.g. Dagnan & Waring 2004; Lindsay, 2005), such as the difficulties that people with ASD experience (e.g. social, communication, and possible cognitive deficits) which could increase the likelihood of some individuals committing a sexual offence (Sevlever, Roth, & Gillis, 2013). Therefore, social difficulties may represent a significant clinical symptom for sexual offenders with DD.

The perceptual and memory system

This is where schemas are stored. Problems in the perceptual and memory system can lead to maladaptive beliefs, attitudes, and problematic interpretations of social encounters (Ward & Beech, 2006). Presence of

maladaptive beliefs that are frequently available to guide information processing are likely to cause the activation of problematic goals and emotions, which in turn make it difficult for a person to effectively control their sexual behaviour. These are formerly known as offence supportive cognitions (Thornton, 2002) and cognitive distortions (Abel et al., 1989). Cognitive distortions have been consistently identified and addressed in the treatment of sexual offenders with DD (e.g. Lindsay 2005; Lindsay & Smith 1998; Rose et al. 2002). Early Maladaaptive Schemas which influence the development of problematic personality traits could be included in this system.

2) *The action selection and control system*

This system relates to an individual's ability to formulate an action plan and achieve the related goals. Problems in this area relate to self-regulation difficulties, such as poor problem-solving, and impulsivity and represent a vulnerability to sexual offending (Ward & Beech, 2006). Keeling & Rose (2005) proposed that sexual offenders with DD would be more likely to offend via pathways characterized by poor self-regulation, however, empirical research is needed to clarify the relevance of the action selection and control factor for this population.

Strengths of the ITSO

Ward and Beech (2006) suggested that the ITSO provides a conceptual framework to unify other theories and generate novel research hypotheses. One strength of this theory is that it has strong unifying power due to its linking of concepts from biology, psychology, and neuroscience (Seto & Lalumiere, 2010). It also draws on a range of sexual offending theories that are currently accepted (Ward & Beech, 2006). Last, theories of sexual offending are resources that spell out the aims of intervention, the nature of therapeutic practices and instruct practitioners how to work with abusive individuals and their families. In this way, the ITSO can be used as a comprehensive framework for case formulation which includes the developmental factors that make individuals vulnerable to committing a sexual offence (Ward & Beech, 2006).

Limitations of the ITSO

In order to apply this theory specifically to sexual offenders with developmental disabilities (DD), future research needs to identify which aspects of this theory are more salient. It is possibly for this reason that the theory does not define or specify some of its factors, such as exactly which genetic pre-dispositions could be involved in sexual offending by people with DD or how sexual problems such as paraphilic sexual interests or excessive sexual drive or sexual preoccupation arise from the other problems they considered in people with DD (Seto & Lalumiere, 2010).

ASSESSMENT

Assessments applied to aid psychological formulation and treatment planning

Please refer to Appendix 3.2 for a full description of the assessments.

Risk for Sexual Violence Protocol (RSVP)

Please refer to Appendix 3.2 for details of this assessment.

Sexual Violence History factors rated as present in relation to Client W's risk of sexual violence include:

- Chronicity of sexual violence
- Diversity of sexual violence
- Escalation of sexual violence
- Physical coercion in sexual violence
- Psychological coercion in sexual violence

Psychosocial adjustment factors rated as present in relation to Client W's risk of sexual violence include:

- Extreme minimisation or denial of sexual violence
- Attitudes that support or condone sexual violence
- Problems with self-awareness

- Problems with stress or coping
- *Problems resulting from child abuse:*

  Client W's early life was characterised by adversity. His mother reported to have experienced depression in the months following his birth and has physical disabilities requiring the use of a wheelchair. The relationship between his mother and biological father was short lived, ending prior to his birth. Since the age of four, Client W experienced periods in care (one weekend a month) and these often broke down due to his difficult behaviour. It was reported that Client W was physically abused by his mother and stepfather and witnessed domestic violence from his step-father towards his mother (e.g. witnessed his mother being pushed down the stairs in her wheelchair), with the incidents appearing to increase by the age of seven resulting in Client W being placed in foster care aged seven years. After several breakdowns of foster care placements, he moved to a Children's Home and then to a further care home. It is also reported that at the age of five Client W may have been the victim of sexual abuse from his neighbour. Client W's mother reported leaving him with her male neighbour. On return, the neighbour said he had had a bath with Client W and later admitted this again when he was arrested. Client W complained of rectal pain the next morning and refused to use the toilet. It is reported that Client W started to masturbate the following day. It is also recorded that Client W entered a period of encopresis for one year and he would at times smear faeces on the wall and his clothing.

  In individual psychology sessions, Client W said he remembers 90% of what happened and that these memories come flooding back when people talk to him about his own sexual offending. Previously Client W had said to a doctor that he remembered little of the event but did remember the perpetrators face and house.

Mental disorder factors rated as present in relation to Client W's risk of sexual violence include:

- Sexual deviance
- Major mental illness (Autism)
- Problems with substance use
- Violent or suicidal ideation

Social adjustment factors rated as present in relation to Client W's risk of sexual violence include:

- Problems with intimate relationships
- Problems with non-intimate relationships
- Non-sexual criminal activity

Manageability factors rated as present in relation to Client W's risk of sexual violence include:

- Problems with planning
- Problems with treatment
- Problems with supervision

Summary of risk of sexual violence

The following dynamic (changeable) factors were considered the most significant risk factors in relation to Client W's future risk of sexual violence: Impulsivity (problems with planning), problems with self-awareness, problems with stress and coping, problems with non-intimate and intimate relationships and attitudes that condone sexual violence. These are the factors that interventions should target to lower the risk of Client W sexually offending in the future. Client W was assessed by the RSVP as being at High Risk of sexual violence if he were to be unsupervised in a community setting.

It is important to note that on scales which measure socially desirable responding, Client W's responses indicated that he may not always be providing a completely accurate account, therefore the psychometrics need to be interpreted with caution. The Personal Reaction Inventory explores response bias and Client W scored much

higher than the normal range for response bias. The psychometrics that have been used were chosen because clinically they are straightforward for adolescents to complete (particularly those with a DD) due to their suitability for children aged 8-17 years. It is recognised that there are no psychometric measures that measure emotions, behaviour and symptoms of trauma, that are validated/normed on a population of adolescents with DD.

The Trauma Symptom Checklist for Children (TSCC)

This measure was completed by Client W in 2011.

Results:

- Underresponse and Hyperresponse scales: Client W scored T-score 46 and T-score 47 respectively categorising his responses as valid (not under-reporting or over-reporting).
- The three scales that indicated clinically significant results were the Post-Traumatic Stress, and Dissociation-Fantasy scales. Client W scored T-score 74, and 70 respectively. Client W also scored in the sub-clinical range for the Dissociation scale. All other scale scores were categorised in the non-clinically significant range.

The Beck Youth Inventories (second edition) (BYI-II)

This measure was completed with Client W in August 2011.

Results:

- Self-Concept Inventory: This Inventory assesses the young person's cognitions of competence, potency, and positive self-worth. Client W scored a T-score of 48 which categorised him in the 'average' range.
- Anxiety Inventory: This inventory reflects children's and adolescents' specific worries about school performance, the future, negative reactions of others, fears including loss of control, and physiological symptoms associated with anxiety. Client W scored a T-score of 78 which categorised him the 'extremely elevated' range
- Depression Inventory: This inventory allows for early identification of symptoms of depression. It includes items related to a child's or adolescents

negative thoughts about self, life and the future, feelings of sadness and guilt, and sleep disturbance. Client W scored a T-score of 64 which categorised him in the 'moderately elevated' range.

- Anger Inventory: This inventory evaluates a child's or adolescent's thoughts of being treated unfairly by others, feelings of anger and hatred. Client W scored a T-score of 74 which categorised him in the 'extremely elevated' range.
- Disruptive Behaviour Inventory: This inventory identifies thoughts and behaviours associated with conduct disorder and oppositional-defiant behaviour. Client W scored a T-score of 59 which categorised him in the 'mildly elevated' range.

Interpersonal Personality Disorder Examination (IPDE) - Abbreviated (DSM-IV version)

Please refer to Appendix 3.2 for a full description of the IPDE interview

Summary of IPDE findings

Informant information from the Assistant Psychologist did not differ greatly from that provided by Client W. Client W scores categorised him as having a 'probable' diagnosis of narcissistic personality disorder (and the confidence rating was categorised as 'high'). During the interview, Client W demonstrated some signs of a grandiose sense of self-worth, explaining to the interviewer some of his skills. He presented as slightly grandiose during the interview, correcting the interviewer's use of language and blaming the interviewer when he was unable to understand a question. Client W also stated that other people have made previous comments about him having an inflated sense of self-worth and that others put him on a pedestal. Informant information confirmed that Client W tends to discuss career goals beyond his abilities. Additionally, Client W demonstrated a belief that he is superior to his peers in terms of his intellectual abilities and he believes his peers are envious of him. There is also evidence of Client W manipulating staff for personal gain. Both Client W and the informant reported that he has difficulties empathising and understanding the feelings of others.

Narcissistic Personality disorder is descriptive of traits including a grandiose sense of self-importance whereby they may exaggerate achievements and talents, have preoccupation with fantasies of unlimited success, a belief that the individual is unique and can only be understood by special or high status people, the need for admiration, a sense of entitlement, a degree of exploitation of interpersonal relationships in an instrumental sense, and a lack of empathy. Client W has demonstrated behaviour consistent with these underlying traits and historically has exploited interpersonal relationships for his own needs and can at times demonstrate a sense of entitlement.

Psychological Formulation of offending and problematic behaviours

The following formulation is based on the Cognitive Behavioural Therapy (CBT) model. This model draws on cognitive and behavioural theory in order to understand the client's presenting problem behaviour and it is based on an emerging shared understanding of what caused and maintains the presenting problem (Dudley & Kuyken, 2006). CBT formulations are always evolving as new information emerges and are therefore always provisional (Dudley & Kuyken, 2006). This model includes comprehensive information about factors that increase vulnerability to the current problem behaviour, a description of the problem behaviour, factors that triggered the problem behaviour, maintain the problem behaviour, and protective factors that increase resilience and strength to help decrease the problem behaviour (Dudley & Kuyken, 2006).

Pre-disposing Factors- (Biological Factors in the ITSO)

-Developmental disabilities (Autism Spectrum Disorder and Hyperkinetic Disorder).

-Mum experienced post-natal depression (potential weak early attachment to mum).

Precipitating Factors

<u>External Factors (distal factors) (Ecological Niche in the ITSO):</u>

-physical abuse (repeated intrafamilial)

-witnessing domestic violence from step-dad to mum

-mum's physical disabilities (likely impacting on ability to protect Client W and herself)

-sexual abuse (one occasion by extra-familial person)

-multiple placements (likely to lead to difficulty forming and maintaining attachments to others)

-poor academic achievement and peer rejection

-lack of appropriate intimacy and sexual experiences with others

<u>Internal Factors (proximal factors) (Psychological System in the ITSO):</u>

-impulsivity (associated with Hyperkinetic Disorder)

-difficulty making and maintaining relationships with others (associated with ASD, narcissistic traits related to personality development in the face of adversity)

-difficulty with linking his behaviour with consequences of actions (associated with ASD)

-little empathy or remorse for his behaviour (associated with ASD and narcissistic traits)

-rigid/concrete thinking patterns (associated with ASD)

-increase in hormones in teenage years (puberty- increased sexual drive/desire)

-difficulty with identifying and regulating his emotions (associated with ASD and childhood maltreatment)

-attitudes supportive of sexual offending (e.g. "*"everyone is sexually inappropriate", "I'm not causing any harm", "it was done to me"*)

Presenting Problems

-sexual offending (touching others, exposure, sexual comments)

-violence towards others (kicking, punching, pushing, reportedly trying to strangle a peer)

-impulsive behaviour (commenting and acting without regard for the consequence)

-non-violent offending (verbal abuse, acquisitive crimes, property damage)

-poor social skills (difficulty with making and keeping friends and relating to others)

-Substance use (cannabis)

Perpetuating Factors

-development of problematic personality traits (Narcissism) which negatively impacts on his ability to form and sustain relationships in addition to his ASD

-impulsivity

-lack of insight into his own difficulties (associated with Narcissistic traits and ASD)

-difficulty with regulating his emotions (particularly anger, sadness and anxiety)

-maladaptive coping behaviours

-small social support network (family have little contact with him)

-substance use

Protective Factors

-increased positive contact with family

-some use of staff support

-engagement in activities on the ward and in some structured sessions (Occupational Therapy, education)

-development of hobbies

The ITSO and the CBT model have been used as a method to identify and combine Client W's vulnerabilities, presenting difficulties, factors that maintain the difficulties and protective factors into a psychological formulation. This aids understanding of which dynamic (changeable) factors should be addressed in an intervention in order to lower his risk of sexually offending in the future. One of the clearest ways to represent this information in relation to Client W's most recent offence is via a Functional Analysis (see Table 3.1).

Functional analysis of Index Offence using the Antecedent-Behaviour-Consequence (ABC) Model

The assessment information was collated to form an A-B-C functional analysis for client W's index offence to help summarise some of the key risk factors that led to one of his sexual offences. This helps to highlight the risk factors that should be targeted to reduce client W's risk of offending in the future.

Table 3.1. *Antecedent, behaviour and consequence of Client W's most recent sexual offence*

Antecedents	Behaviour	Consequence
> Problems with planning (impulsivity) > Problems with stress and coping > Sexual arousal > Grandiose personality traits (sense of entitlement) >Problems with intimate relationships (heightened by his diagnosis of ASD and associated poor social skills)	Intentional sexual touching of female care worker.	- Convicted in August 2010 and made subject to a Youth Rehabilitation Order with the requirement to attend an Attendance Centre for a period of 12 months. - Positive reinforcement of the behaviour due to sexual gratification gained by the offence.

The CBT formulation and Functional Analysis highlighted that Client W needed an intervention that would address his difficulties in relation to proximal factors (impulsivity, relationship difficulties, problems with understanding consequences, problems with identifying and regulating his emotions, lack of insight into his own difficulties, unhealthy coping strategies and attitudes supportive of sexual offending) as well as distal factors (development of problematic personality traits, small social network).

INTERVENTION

The Adapted Sex Offender Treatment Programme (ASOTP)

This programme is designed for adults with a learning disability who have committed sexual offences. The programme is suitable for adult men whose IQ falls within the Mild Learning Disability/Borderline range of functioning (IQ. <80). Client W was deemed suitable for the adapted programme due to his diagnosis of developmental disabilities and General Ability Index which was categorised as "low average" (GAI =

88). The ASOTP was further adapted to be suitable for Client W's difficulties associated with his Autism Spectrum Disorder.

The aim of the programme is to:

- Reduce Pro-Offending/ distorted thinking
- Increase skills in problem solving and self-management
- Develop effective relationship skills
- Improve understanding of legal/ illegal sexual behaviour
- Increase awareness of victim harm
- Increase awareness of individual risk factors and development and practice of coping skills in order to reduce re-offending.

Client W completed the ASOTP on a 1:1 basis with a qualified Clinical Psychologist and Assistant Psychologist (both female) over a one year period. He commenced the work in a group setting, however due to high anxiety and problematic behaviours being displayed which disrupted the group, it was felt that 1:1 sessions would meet his needs more effectively. It is important to note that client W did not wish to complete work about his past abuse and he had not completed work specifically around his personality traits prior to the ASOTP.

Prior to commencing the ASOTP, Client W completed psychoeducational work about his diagnosis of an Autism Spectrum Disorder (ASD) and how this impacts on him. Client W engaged with this work on a 1:1 basis with the Assistant Psychologist, however he struggled to identify with the information and to accept that he has some difficulties associated with ASD.

Pre and Post- intervention assessments were completed and are presented in Table 3.2. Please see Appendix 3.2 for details about the psychometrics used.

Table 3.2. *Pre- and post- ASOTP scores*

Psychometric	**Date**	**Pre- treatment Outcome**	**Date**	**Post- treatment Outcome**	**Interpretation**
Beck Youth Inventories-II	Aug 2011	Anger- extremely elevated. Anxiety- extremely elevated. Depression – moderately elevated. Disruptive behaviour- mildly elevated. Self-Concept- average.	Sept 2012	Anger- moderately elevated. Anxiety- moderately elevated. Depression – mildly elevated. Disruptive behaviour- moderately elevated. Self-Concept- above average.	Positive change for Anger, Anxiety and depression (reduction in score) and increased score for self-concept. Negative change for increase in score for disruptive behaviour.
How I Think Questionnaire	Aug 2011	Scored in the non-clinical range on all scales but scored in the borderline clinical range for blaming others, assuming the worst and opposition defiance.	March 2013	Scored in the non-clinical range on all scales.	Positive change for all scales.
Questionnaire on Attitudes Consistent with Sexual Offending	Oct 2011	High levels of cognitive distortions on voyeurism, stalking and sexual harassment. Some items were endorsed on the offences against children and exhibitionism scale.	March 2013	High levels of cognitive distortions on voyeurism scale. Endorsed one item on the rape scale. Endorsed no items of offences against children. Reduced scores on stalking, sexual harassment and exhibitionism.	No change on voyeurism scale. Negative change - endorsed one item on the rape scale. Positive change- on offences against children scale. Positive change on stalking, sexual harassment and exhibitionism scales.
Novoco Anger Scale-Provocation Inventory	Nov 2011	Scored in the average range across all scales. Scored in the high range for anger regulation.	Feb 2013	Scored in the average range across all scales. Scores increased for the arousal scale. Scores decreased on the behavioural scale.	No change.
Social Problem Solving Inventory	Jan 2012	Scored in the high average range for impulsiveness and avoidance coping styles. Scored as average in all other domains.	March 2013	Scored in the average range for all domains. Scores reduced for impulsiveness and avoidance coping styles.	Positive change- average across all domains.

Client W completed psychoeducation about sex and the law in order to improve his knowledge in these areas. It has been recognised that sex offenders with intellectual disability typically have a lack of social sexual knowledge (Hayes, 1991), therefore this is important to improve, however improvement in knowledge was not assessed after the psychoeducation module. Client W then completed offence focused modules in the ASOTP such as the CBT model of his offences and Finkelhor's (1984) Four Steps model of offending. Despite Client W not wanting to complete any formal work about his past abuse, other modules of the ASOTP are designed to treat many difficulties highlighted in the ITSO (e.g. self-regulation difficulties, such as poor problem-solving, emotion regulation and impulsivity). Many of these difficulties overlap with those found in populations of children and adolescents with a history of childhood maltreatment, such as problems with unmodulated aggression and impulse control (e.g. Cole & Putnam, 1992; Steiner, Garcia, & Matthews, 1997; Van der Kolk, 2005); attentional and dissociative problems (Teicher, et al., 2003); difficulty negotiating relationships with caregivers and peers, (Finkelhor, Hotaling, Lewis, & Smith, 1989), attention deficit disorder, generalized anxiety and conduct disorder (Terr, 1991).

As a result, this case study will focus on the modules of the ASOTP that aimed to increase Client W's ability to cope with difficulties associated with his history of childhood maltreatment and his developmental disabilities.

Client's presentation

Client W presented with frequent difficulties with engaging with the work. Many of these difficulties related to his personality traits such as grandiosity. Client W was at times inappropriate with the facilitators, displaying therapy interfering behaviours by making inappropriate sexualised comments about the facilitators' appearance and being overly tactile. Client W appeared to frequently avoid the work by changing the topic, over-disclosing personal information (testing the therapeutic boundaries of the facilitators) and by acting with some hostility by making sarcastic comments. The facilitators designed and used prompt cards with Client W with the aim of re-directing Client W back to the work and found that this strategy worked well to minimise his avoidant behaviours. At times client W was unfocussed within the

sessions, needing a lot of prompts to try to concentrate on the topic or questions at hand and some session content needed to be repeated. The client was encouraged to use sensory coping strategies to lower his levels of arousal so he could concentrate better, which worked well. Client W often presented with concrete thinking which is associated with his ASD and he had difficulty inferring meaning from some of the scenarios he was given when discussing safe and abusive sexual behaviour. During the final sessions of the treatment programme, Client W presented as resistant to engage fully with the relapse prevention interview and appeared to make light of this process. His comments and behaviour suggested that he did not wish to think about his risk of sexual offending which indicated that he still presents with a considerable risk of offending in the future.

Coping skills work

One of the treatment topics encouraged Client W to design a Toolkit to help him with his self-management and self-regulation skills, with the aim of helping him to cope with risky situations that increase his likelihood of sexually offending. The emotions that were key factors in Client W's sexual offending were anger, anxiety and feeling sexually aroused. Client W was able to identify helpful thoughts as part of his coping skills which included thinking about the consequences of his actions. He struggled to think about how the victim would feel (likely associated with his ASD and narcissistic personality traits). Another coping skill included 'escaping the situation'. Client W was able to name a few appropriate strategies such as walking away and going home, however he also named unrealistic ones such as 'going to a shooting range or the pub'. Client W was able to name a few people he could talk to as a positive way to cope with a risky situation and his feelings, such as his mum, doctors, family and friends. He found it difficult to acknowledge that he has struggled to talk to people in the past. Last, Client W named some people that he might find helpful to listen to, such as psychologists, staff, doctors and friends. He was able to name the difficulties he has with listening to others and how this could be an obstacle to him using this coping skill.

Good Lives Model work

The Good Lives Model (GLM; Ward & Gannon, 2006; Ward & Stewart, 2003) is a theory of rehabilitation with a viewpoint that offenders are human beings with essentially similar needs and aspirations to people who do not offend. The GLM is based around two core therapeutic goals: to promote human goods and to reduce risk. Therefore, a major aim is to equip the offender with the skills, values, attitudes, and resources necessary to lead a different kind of life, one that is personally meaningful and satisfying and that does not involve inflicting harm on others.

The 'goods' that Client W identified as being of value to him and that he felt would be important to possess in the future included 'feeling ok', 'relationships', 'independence' and 'physical/sexual needs'. For each of the identified needs, Client W was asked how these may not have been met in the past (relating this to experiences of maltreatment), how he would like to meet these needs in the future and possible obstacles. In terms of feeling ok, Client W said that in the past he felt angry, horny and stressed and that his behaviour was bad. He acknowledged that he now uses more positive coping skills such as learning to ignore comments, counting to ten and talking to his mum more. In the future he said he wants to feel happy. He could not identify obstacles to this need but said that talking about his offences might not make him feel ok. In terms of relationships, Client W acknowledged that in the past he was not close to his mum, could not get on well with others including carers and that people ignored him. He said he now feels that he has good working relationships with staff, has friends and has a better relationship with mum. In the future, Client W identified that he wants to see more of his family, have a girlfriend/wife, keep in contact with some people from his current placement and have friends. Obstacles to this that Client W identified included reoffending (going to prison and being isolated again), his behaviour (staring, saying inappropriate things), not being able to communicate with other people and being immature. For independence, Client W stated that in the past he could not go out by himself because he had staff with him all the time. In addition, Client W said he had a tag put on him until he went to court which limited his independence. He recognised that this need is currently being met more often by him having leave (including a female

escort) and being able to do his washing and tidy his room. In the future, Client W states that he wants to be able to travel, to cook for himself and go where he wants. Future goals included gaining unescorted leave and going to university. However, some of his initial future goals were very unrealistic and changed frequently such as wanting to be a deep sea diver. In terms of physical/sexual needs, Client W voiced that he has always been healthy but that his sexual needs were not met. He described always being very horny and aroused which contributed to his offending. Client W stated that he now knows how to relieve himself appropriately and in the future he can masturbate in appropriate places. He also acknowledged that having a partner would help meet these needs. Other needs that Client W identified as being met at his current placement included 'finding meaning' via meditation and reading, and 'being good at something' which includes ceramics, workshop and reading. Client W completed work which helped him identify the coping skills he would need to use to overcome possible obstacles so that he can meet his future 'goods'.

Life Map

Client W did not complete trauma work prior to starting the ASOTP and did not wish to talk much about his negative life experiences. He frequently made reference to his experience of sexual abuse, however when approached for an individual session to discuss the possible effects of this, Client W said that he feels he does not want to "open up Pandora's box", suggesting he was not ready for such work. However, he did draw a life map which included his childhood memories (positive and negative) up until his current admission to the hospital. Client W completed this in some detail. This life map was used as part of the Good Lives Model work to help identify when particular needs were not being met in the past and how this contributes to Client W's risk of offending. This was also used to help Client W identify the goods he wishes to possess in the future and how to achieve these in a positive manner.

Outcome of the intervention

The post-treatment psychometric scores were mixed with some improvements, some static scores (no change) and some negative changes (see table 3.2). Generally, they suggested that Client W still has some offence supportive attitudes and difficulty with regulating his behaviour and anger but has improved in terms of problem

solving, negative attitudes and showed some improvement for other offence supportive attitudes. In terms of assessing Client W for his risk of sexually reoffending, this was continually assessed throughout the treatment programme based on how well he engaged with the work, his understanding of his risk and how to reduce this risk and based on his thoughts, attitudes and behaviours for the duration of the ASOTP (both within and outside sessions).The relapse prevention interview highlighted that Client W had engaged quite superficially with the work and that he still had outstanding treatment needs in terms of his understanding of his risk of sexually offending in the future and how to realistically manage these risks. It was apparent that Client W was resistant to thinking about his risk of reoffending and often became defensive in relation to this.

DISCUSSION

This case study was based on an intervention with a 19 year old male with a diagnosis of ASD, Hyperkinetic Disorder and a probable diagnosis of narcissistic personality disorder. The client has a history of maltreatment and offending behaviour, particularly sexual offending. The case study assesses how the complex interplay of biological and environmental factors has contributed towards his sexual offending. There is a particular focus on components of the ASOTP which aim to address some of the clients difficulties related to his childhood experiences, such as poor problem solving and self-management, use of negative coping skills and poor interpersonal skills (also related to his developmental disabilities).

This case study has included some of the literature pertaining to the prevalence of victimisation in children with Developmental Disabilities, particularly the prevalence of abuse in children with Autism Spectrum Disorder (ASD). The research highlighted that significantly higher estimates of prevalence of any violence were reported in studies implemented in hospital settings than in other settings, thereby suggesting that participants from hospital settings had experienced higher rates of any type of violence than participants in other settings. In addition, estimates of prevalence of sexual abuse were higher in studies of children with mental or intellectual disabilities than with other impairments (Jones et al., 2012). Such findings are demonstrated in the history of Client W. Research by Mandell, Walrath, Manteuffel, Sgro and Pinto-Martin (2005), which exclusively used a sample of children with ASD, found that physically abused children were more likely to have engaged in sexual acting out or abusive behaviour, had made a suicide attempt, or had conduct-related or academic problems. Sexually abused children more likely had engaged in sexual acting out or abusive behaviour, suicidal or other self-injurious behaviour, had run away from home, or had a psychiatric hospitalisation. Again, this research related to Client W's history of maltreatment and subsequent offending behaviour. This case study also included literature which relates to childhood maltreatment, development of personality disorder and sexual offending. The literature by Young, Klosko and Weishaar (2003) suggests that narcissistic personality traits results from activating

Early Maladaptive Schemas which result from early traumatic life experiences that prevent a child's core emotional needs from being met in an adaptive manner. Some researchers suggested that narcissistic traits may put someone at higher risk of sexually offending as a result of the negative manner in which they attempt to get their needs met (Kernberg, 1998; Livesley, 2001). Indeed, research by Dudeck et al. (2007) found that narcissistic personality disorders were significantly more frequent in sexual offenders than in the non- sexual offending comparison group and that sexual offenders had been sexually abused as children significantly more often than the non-sexual offenders. The authors suggested that therapeutic interventions which take into account childhood trauma and interventions for personality disorder might be helpful to improve the offender's psychosocial well-being, functioning and their risk of offending. Some of the difficulties of engaging people with a personality disorder are highlighted by Young, Klosko and Weishaar (2003) and are important to consider when facilitating an intervention with this population. Many of the difficulties highlighted in this literature pertain to Client W's engagement in the intervention.

The Integrated Theory of Sexual Offending (Ward & Beech, 2006) is also considered in the case study in relation to the complex interplay of difficulties Client W presents with and how these contribute towards his risk of sexually offending. This theory was chosen because of its ability to capture many factors pertinent to the difficulties of individuals with developmental disabilities which likely contribute towards their risk of sexually offending. It was used when formulating Client W's psychological CBT formulation. Together, the ITSO, CBT formulation and Functional Analysis highlighted that Client W needed an intervention that would address his difficulties in relation to proximal factors (impulsivity, relationship difficulties, problems with understanding consequences, problems with identifying and regulating his emotions, lack of insight into his own difficulties, unhealthy coping strategies and attitudes supportive of sexual offending) and distal factors (development of problematic personality traits, small social network). The ASOTP was chosen because it targeted many of the dynamic factors that contribute towards Client W's risk of sexually offending in the future.

The assessments used included standardised psychometric assessments. It should be noted that the only assessment standardised on a population for people with a learning disability is the QACSO, however Client W presented with low average cognitive abilities and therefore these tools are more clinically applicable than for those with a definite learning disability and are routinely used within the service. The RSVP was also used to assess Client W's risk of sexual offending. It includes childhood sexual abuse as a risk factor for sexual offending. The TSCC identified some clinically significant scores for Client W for the Post-Traumatic Stress and the Dissociation-Fantasy scales, indicating existing symptoms of trauma. In addition, the BYI administered prior to the intervention identified elevated scores for anger, anxiety, depression and disruptive behaviour.

Client W had not completed any psychological work about his childhood trauma, therefore this case study focuses on the components of the ASOTP that aim to help individuals cope with some of the difficulties they have which are associated with both biological vulnerabilities (e.g. developmental disabilities) and environmental factors such as a history of maltreatment, with the aim of reducing their risk of sexually offending. The components of the intervention described in this case study include coping skills work and the Good Lives Model work that client W completed.

The post-intervention psychometric assessment findings were mixed, with results that showed improvement, deterioration and no change (see table 3.1). The post-intervention relapse prevention interview also showed little change in Client W's awareness of his risk and how to reduce his risk of sexually offending in the future. This suggested that further treatment with regards to his risk of offending would need to be completed in the future.

Considerations

Throughout the ASOTP it was apparent that there were a number of difficulties Client W had with engaging in the intervention. Many of these difficulties related to his developmental disabilities, such as concrete thinking patterns, difficulty with understanding the thoughts, feeling and intentions of others, attentional problems,

impulsivity, difficulty linking his behaviour with consequences and little empathy for others. These difficulties were recognised and helped via further adaptations to the programme, including 1:1 sessions, sensory strategies and the use of prompt cards. Client W's engagement is complicated further by his probable diagnosis of narcissistic personality disorder. Many of the difficulties outlined by Young et al., (2003) in working with people with a personality disorder were present throughout the ASOTP work. Client W demonstrated interpersonal difficulties with the facilitators (over-disclosing information, pushing therapeutic boundaries by inappropriate sexualised behaviour and/or avoidance behaviours), overcompensatory behaviours such as grandiose statements and unrealistic goals and fluctuating levels of motivation to complete the work. Such difficulties are understandable when considering that narcissistic traits are a person's response to feelings of inferiority, vulnerability and worthlessness (Young et al., 2003). Therefore, psychological work which triggers early maladaptive schemas (such as the ASOTP where the person is encouraged to think about their offence behaviour and their past experiences) is likely to result in maladaptive coping responses such as avoidance and/or hostility which interferes with the work and the therapeutic alliance. The recommendations from the case study therefore mainly relate to Client W's characterological difficulties. It should be noted that there is pressure from the commissioners that fund the clients' beds in hospital for them to complete offence related work and for this work to be completed prior to clients turning 18 years of age, where they are then moved on, often to Adult Services. There is a difficult balance between recognising a client's treatment needs and having the time and resources within a service to complete these treatment needs.

Recommendations

1. Long term therapy to help Client W understand his development of narcissistic personality traits and resulting use of negative coping skills (mainly avoidance) and how to manage these. This could be done via therapy such as Schema Therapy, however this would need to be adapted for his cognitive abilities and with his developmental disabilities in mind. Client W may not be ready to engage with this work until his self-esteem increases via

other types of therapy (Occupational Therapy, Music Therapy) or until he presents with a higher level of motivation to engage with psychology.

2. After having built up a therapeutic relationship, Client W could start to explore his history of maltreatment and how this led to him getting his needs met in a negative way, including sexual offending and general offending. This would include work about how to get his needs met in a positive manner.
3. Client W should complete further offence related work to increase his understanding and acceptance of his risk of reoffending and how to reduce this risk.

CHAPTER 4

A Critical Evaluation of the Trauma Symptom Checklist for Children (TSCC)

INTRODUCTION

This review examines The Trauma Symptom Checklist for Children (TSCC), a psychometric assessment by Briere (1996). This assessment measures symptoms of trauma in children and adolescents who have experienced traumatic events. Accordingly, the TSCC pertains to the literature about types of trauma, the effects of childhood trauma and prevalence rates of childhood victimisation. At the time the assessment was developed, some identified traumatic events included natural disasters (Green et al., 1991), physical and sexual child abuse (Browne & Finkelhor, 1986; Kiser, Heston, Millsap, & Pruitt, 1991; Lanktree, Briere, & Zaidi, 1991), witnessing spousal violence (Kashani, Daniel, Dandoy, & Holcomb, 1992), physical and sexual assault by peers or other non-caretakers (Boney-McCoy, & Finkelhor, 1995; Freeman, Mokros, & Poznanski, 1993; Singer, Anglin, Song, & Lunghofer, 1995), war (Baker, 1990; Sack, Aangel, Kinzie, & Rath, 1986), and other stressful life events including parental divorce or hospitalisation of a family member (Evans, Briere, Boggiano, & Barrett, 1994).

Research by Boney-McCoy and Finkelhor (1995) about prevalence of childhood victimisation, found that in a sample of 2000 young people aged 10-16, 40% of the sample had experienced victimisation and found that aggravated assault (with a weapon or causing injury), simple assault (without a weapon and without injury) and any sexual assault, were the most prevalent types of victimisation (12%, 11% and 10% respectively). More recent research which asked a US sample of 15,197 young adults about experiences of childhood maltreatment (including neglect) found that supervision neglect was most prevalent (reported by 41.5% of respondents),

followed by physical assault (28.4%), physical neglect (11.8%), and contact sexual abuse (4.5%) (Hussey, Chang, & Kotch, 2006).

In terms of the impacts of trauma on children, particularly interpersonal violence and child abuse, this includes: Posttraumatic stress and dissociation including attentional problems (Teicher, Andersen, Polcari, Anderson, Navalta, & Kim 2003), anxiety and depression (Lanktree, Briere, & Zaidi, 1991; Hussey, Chang, & Kotch, 2006; Toth, Cicchetti, & Kim, 2002), anger and aggression (Hussey, Chang, & Kotch, 2006; Shakoor & Chalmers, 1991), school related difficulties and behavioural problems (Hurt, Malmud, Brodsky, & Giannetta, 2001), reduced self-esteem (Turner, Finkelhor, & Ormrod, 2010), increased substance use (Hussey, Chang, & Kotch, 2006) and particularly in sexual abuse victims, sexual symptoms and age-inappropriate sexual behaviour (Friedrich, 1993, 1994; Gale, Thompson, Moran, & Sack, 1988).

The purpose of creating the assessment was to assess trauma and its impact on children. At the time of development, there were few multiscale tests of childhood posttraumatic symptomology available to clinicians and researchers and no childhood trauma measures that were standardised on large samples of boys and girls from the general population. Briere's main aim was to address the dearth of general trauma assessment instruments for children. Specific aims were to develop an assessment that: (a) evaluates children's responses to unspecified traumatic events in a number of different symptom domains, (b) is standardised on a large sample of economically and racially diverse children from urban and suburban environments and (c) that provides norms according to sex and age.

The TSCC will be reviewed in terms of how it compares with other tools with similar aims, its scientific properties including its reliability and validity, the normative sample it includes and its applicability for use with adolescents in a secure psychiatric setting.

Overview of the TSCC

The TSCC is a published self-report measure of posttraumatic distress and related psychological symptomology. It is intended for use in the evaluation of children who have experienced traumatic events including childhood physical and sexual abuse,

victimisation by peers, major losses, the witnessing of violence done to others and natural disasters.

The TSCC is appropriate for use with male and female children from ages 8 - 16 years. However, during the validation studies, the results showed that adolescents aged 17 years can be given the TSCC and compared with adolescent norms (13-16 years) with a slight (2-point) downward adjustment of the Anger scale for females.

The tool was designed to be suitable for the shorter attention span of children, particularly those with psychological trauma; therefore it consists of a relatively small number of particularly trauma-responsive items. The full version consists of 54 items that yield two validity scales, six clinical scales, and eight critical items (See Table 4.1 for the scales and item content measured in each scale). Specifically, the TSCC attempts to measure and interpret a child's level of trauma symptomatology. The items are contained in a test booklet in which the child directly writes their responses. The child is presented with a list of thoughts, feelings, and behaviours and is asked to mark how often each of these things happens to him or her. Each item is rated on a 4-point scale anchored at 0 (*never*) and 3 (*almost all of the time*). The full TSCC requires 15-20 minutes to complete for most children and can be scored in approximately 5-10 minutes. The TSCC also has a version which makes no reference to sexual issues (TSCC-A) which was developed to address the concerns of some individuals who feel that children might be upset by reference to sexual issues in a psychological test.

The TSCC materials include the Professional Manual, a 37 page document which includes information needed for administration, scoring and interpretation of the tool, the TSCC booklet and the age and sex-appropriate profile forms which allow raw-score conversion to *T* scores. There is a profile form for younger males (aged 8-12 years) and for older males (13-16 years). Similarly, there is a profile form for younger females (8-12 years) and older females (13-16 years). A graph of the profile may be drawn to visually represent the respondent's scores relative to the normative sample.

The TSCC can be administered and scored by individuals who do not have formal training in clinical psychology, counselling psychology, or related fields. However, the interpretation of the TSCC scores requires graduate training in Psychology, Counselling, Social Work, Psychiatry, or a closely related field, as well as relevant training in the interpretation of psychological tests at an accredited college or university.

Table 4.1. *Item Content for the Validity and Clinical Scales*

Scale	Item Content
Validity	
Underresponse	Reflects a tendency towards denial, a general underendorsement response set, or a need to appear unusually symptom free.
Hyperresponse	Indicates a general overresponse to TSCC items, a specific need to appear especially symptomatic, or a state of being overwhelmed by traumatic stress.
Clinical	
Anxiety	Generalised anxiety, hyperarousal and worry; specific fears (e.g. of men, women, or both); of the dark; of being killed); episodes of free-floating anxiety; and a sense of impending danger.
Depression	Feelings of sadness, unhappiness, and loneliness; episodes of tearfulness; depressive cognitions such as guilt and self-denigration; and self-injuriousness and suicidality.
Anger	Angry thoughts, feelings, and behaviours, including feeling mad, feeling mean, and hating others; having difficulty de-escalating anger; wanting to yell at or hurt people; and arguing and fighting.
Posttraumatic Stress (PTS)	Posttraumatic symptoms including intrusive thoughts, sensations and memories of painful past events; fears; nightmares and cognitive avoidance of painful feelings.
Dissociation (Overt Dissociation and Fantasy subscales)	Dissociative symptomology including derealisation; emotional numbing; one's mind going blank; pretending to be someone else or somewhere else; day dreaming; dissociative avoidance and memory problems.
Sexual Concerns (Sexual Preoccupation and Sexual Distress subscales)	Sexual thoughts or feelings that are typical when they occur earlier than expected or with greater than normal frequency; negative responses to sexual stimuli; sexual conflicts and fear of being sexually exploited.

Since the assessment has been developed, it has been extensively used, evaluated, or described in at least 89 published studies. Many of these studies have used the TSCC to measure trauma symptoms resulting from sexual abuse (Bal, Bourdeaudhuij, Crombez, & Van Oost, 2004; Bal, Van Oost, & Bourdeaudhuij, 2003; Bolen, & Lamb,

2007; Cohen, Mannarino, & Knudsen, 2005; Cyr, McDuff, Wright, Thériault, & Cinq-Mars, 2005; Daigneault, Cyr, & Tourigny, 2007; Daigneault, Tourigny, & Hébert, 2006; Fricker, & Smith, 2001; Kaplow, Dodge, Amaya-Jackson, & Saxe, 2005; McCrae, Chapman, & Christ, 2006; Shaw, Lewis, Loeb, Rosado, & Rodriguez, 2001). Other studies have used the TSCC to measure trauma symptoms resulting from violence exposure (Singer, Anglin, Song, & Lunghofer, 1995), emotional trauma (Song, Singer, & Anglin, 1998), marital violence (Saltzman, Holden, & Holahan, 2005) natural disasters (Hestyani, 2006) and physical illness (Barakat, Kazak, Meadows, Casey, Meeske, & Stuber, 1997; Kazak, Barakat, Meeske, Christakis, Meadows, Casey, Penati, & Stuber, 1997). Some studies have focused on the use of the TSCC in different populations including adolescent inpatients (Atlas, & Ingram, 1998; Blinder, Cumella, & Sanathara, 2006; Dyl, Kittler, Phillips, & Hunt, 2006; Friedrich, Gerber, Koplin, Davis, Giese, Mykelbust, & Franckowiak, 2001; Sadowski, & Friedrich, 2000), different cultures (Li, et al., 2009; Nilsson, Wadsby, & Svedin, 2008; Ozer, & McDonald, 2006; Sebre, et al., 2004), runaway/homeless adolescents (Thompson, 2005; Thompson, Maccio, Desselle, & Zittel-Palamara, 2007) and adolescents in foster care (Taussig, & Talmi, 2001) and residential treatment settings (Brady, & Caraway, 2002). The TSCC has also been used in a number of studies as an outcome measure for treatment effectiveness in children and adolescents with a history of trauma (Cohen, & Mannarino, 2000; Kolko, Baumann, & Caldwell, 2003; Lanktree, & Briere, 1995a; Greenwald, 2002; Najavits, Gallop, & Weiss, 2006).

Comparison with other measures

At the time of the TSCC's development, only specific measures of trauma-related psychological disturbance were available, such as the Child Sexual Behaviour Inventory (Friedrich et al., 1992), the Children's Post Traumatic Stress Disorder Inventory (Saigh, 1989), the Child Post-Traumatic Stress Reaction Index (Pynoos et al., 1993) and the Child Dissociative Checklist (Putnam, Helmers, & Trickett, 1993). Other measures tended to focus on one type of abuse, particularly sexual abuse, such as the Sexual Abuse Fear Evaluation (Wolfe, & wolfe, 1986) and the Children's Impact of Traumatic Events Scale-Revised (Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991). Despite the TSCC fulfilling the need for a general measure of trauma symptoms in

children and adolescents, some measures of trauma have positive attributes which are absent in the TSCC. For example, the TSCC only looks at the individual's current presentation, whereas many existing tools comprehensively capture the youth's history of trauma as well as their current presentation e.g. the Adolescent Self-Report Trauma Questionnaire (Horowitz, Weine & Jekel, 1995), the Childhood PTSD Interview-Child (CPTSDI-C; Fletcher, 1996), the Children's PTSD Inventory (Saigh, 1996) and the UCLA PTSD Index for DSM-IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998). In addition, some measures include informant knowledge from clinicians and parents about the youths trauma in addition to self-rated information, thereby giving more range and depth of information compared with the TSCC e.g. The Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA; Newman et al. 2004), the Diagnostic Interview for Children and Adolescents (DICA; Reich, Leacock, & Shanfield, 1994), the UCLA PTSD Index for DSM-IV (Child, Adolescent, and Parent) (Pynoos, Rodriguez, Steinberg, Stuber, and Frederick, 1998) and the Childhood PTSD Interview-Parent (CPTSDI-P; Fletcher, 1996).

Normative data for the TSCC

The normative sample consists of 3,008 children combined from three nonclinical samples: (a) 2,399 school children participating in a Case Western Reserve study of the impacts of neighbourhood violence in six different urban and suburban locations in Illinois and Colorado (Singer, Anglin, Song, & Lunghofer, 1995), (b) 387 school children who were part of a larger University of Colorado study in the effects of stressful life events in several Colorado communities (Evans, Briere, Boggiano, & Barrett, 1994) and (c) 222 children at the Mayo Clinic in Minnesota (Friedrich, 1995). This sample represents gender (53% female) and race (44% Caucasian, 27% Black and 22% Hispanic). Analyses on the demographic variables found both age and sex to be important variables on which to standardise TSCC scales. Normative data were derived for each scale and subscale in the TSCC based on four age by sex combinations (males, 8-12 and 13-16 years, and females 8-12 and 13-16 years). It should be noted that only one normative subsample (Friedrich, 1995) contained (unpublished) data on the Sexual Concerns scale, therefore the sample number was

smaller (222 respondents). This sample consisted solely of Caucasian children so no analyses of potential race effects could be performed.

Reliability of the TSCC

Internal Consistency measures how well the scores for individual items on the instrument correlate with each other, therefore we would expect that scores measuring a single construct would correlate highly (have high internal consistency) (Cook & Beckman, 2006). An analysis of reliability for the TSCC scales in the normative sample showed high internal consistency for five of the six clinical scales (α range from .82 to .89) and the remaining clinical scale (Sexual Concerns) was moderately reliable (α = .77). The four clinical subscales varied in reliability with Overt Dissociation and Sexual Preoccupation having relatively high internal consistency (α =.81 in each instance). The shorter scales of Dissociation-Fantasy and Sexual Distress were somewhat less reliable (α=.58 and .64 respectively). The two validity scales, Underresponse and Hyperresponse, had α coefficients of .85 and .66 respectively. The reliability of the clinical subscales for internal consistency was also generally high in several other samples (three samples from a Child Abuse Centre, Elliott & Briere, 1994; Lanktree & Briere, 1995b; Nelson-Gardell, 1995). The subscales and validity scales had yet to be formalised at the time of these studies so reliability coefficients for these indices were not determined. However, a later study by Sadowski and Friedrich (2000) demonstrated that the individual TSCC scales and subscales had moderate to high internal consistency in a clinical sample of psychiatrically hospitalised adolescents (Dissociation Fantasy: α= .71, Overt Dissociation: α= .88, Sexual Distress: α=.73, Sexual Preoccupation α=.78).

Validity of the TSCC

"Validity describes how well one can legitimately trust the results of a test as interpreted for a specific purpose" (Cook & Beckman, 2006). In terms of scale intercorrelations, the clinical scale and subscale intercorrelations in the normative sample ranged from .19 (Sexual Distress with Anger, as expected) to .96 (Overt Dissociation and Dissociation, as expected). The Underresponse validity scale was negatively correlated with all clinical scales, ranging from -.22 with Sexual Distress to -.61 with Posttraumatic Stress. As expected, the Hyperresponse validity scale was

least correlated with the Underresponse scale (r = -.16) and it was most correlated with the Overt Dissociation subscale (*r* = .56).

Convergent and Discriminant validity were assessed in order to evaluate the construct validity of the TSCC. Many studies have suggested that the TSCC scales covary in expected ways with other available measures, correlating most with scales sharing similar content (convergent validity) and correlating least with scales of less similar content (discriminant validity). In a study by Sadowski and Friedrich (2000), the TSCC was used in a sample of 119 hospitalized adolescents, including 32 sexually abused teenagers. The sample also completed the Beck Depression Inventory (Beck & Steer, 1987), Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1983), the Adolescent- Dissociative Experience Scale (Armstrong, Putnam, & Carlson, 1990), the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway & McKinley, 1943), Rorschach (Exner, 1990), and the Family Environment Scale (Moos & Moos, 1976). The validity of each of the six TSCC scales and four subscales was determined. Independent measures of depression, anxiety, anger, and dissociation correlated significantly with the TSCC scales. Similarly, Friker and Smith (2001) found that the TSCC validity scales were moderately correlated with the Personality Inventory for Youth scales (PIY; Lachar, & Gruber, 1995) that measure similar constructs. The TSCC clinical scales were also more sensitive to PTSD status than the PIY clinical scales in a sample of 41 children with a history of sexual abuse. Last, Crouch, Smith, Ezzell, and Saunders, (1999) examined convergent and discriminant validity between the Children's Impact of Traumatic Events Scale—revised (CITES-R) and the TSCC in a sample of 80 sexually abused children. Convergent and discriminant validity between the CITES-R post-traumatic stress measure and the TSCC clinical scales were demonstrated. In addition, the CITES-R Eroticism scale was significantly associated with the TSCC Sexual Concerns scale (especially the Preoccupation subscale), but was unrelated to the other TSCC clinical scales. These findings suggest that the TSCC is a valid measure of posttraumatic distress and related symptomatology with clinical samples. It is important to bear in mind that in the following study using a non-clinical sample, the clinical subscales were not yet created, therefore equivalent validity data on the subscales is not available. In a study by Evans et al, (1994), the authors

reported on a study of 422 children (387 of whom were part of the TSCC normative sample) and found that the TSCC-A scores were correlated with the CDI and the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978). The RCMAS was most correlated with the TSCC Anxiety and Depression scales as would be expected based on the RCMAS items.

In order to demonstrate construct validity the TSCC should also demonstrate scale scores that are (a) higher in samples of children with histories of stressful or traumatic events, (b) increase in the presence of severe trauma, and (c) decrease in response to therapeutic interventions that aim to treat trauma-related distress.

Some studies using clinical samples have demonstrated good construct validity of the TSCC in relation to point (a). Sadowski and Friedrich (2000) found that the Posttraumatic Stress scale of the TSCC significantly discriminated the sexually abused group from the remainder of the sample. Similarly, Elliott and Briere (1994) found that in a sample of 399 children, sexually abused boys and girls scored higher on each of the TSCC scales compared with children without a sexual abuse history. In addition, they found that those who had disclosed sexual abuse had relatively high TSCC scores whereas those who denied abuse (despite it being documented by medical findings or perpetrator confession), had low scores on the TSCC which were even lower than scores of non-abused children. This finding is important because it highlights that an absence of symptoms on the TSCC does not rule out sexual abuse. It is therefore very important that the TSCC is used in conjunction with other standardised tests and is not used as a standalone assessment tool.

Two studies demonstrate the TSCC's sensitivity to measuring severity of trauma (point (b)). Smith, Swenson, Hanson, and Saunders (1994) with a sample of 103 children and adolescents, hypothesised that the type of trauma as well as its characteristics, would correlate with TSCC scales in meaningful ways. As hypothesised, each of the six clinical scales was related to specific aspects of childhood trauma. Posttraumatic Stress, Anxiety and Dissociation were related to life events that involved perceptions of life threat and sexual abuse victims who had experienced penetration had higher Sexual Concern scores than those without such experiences. Similarly, Briere and Lanktree (1995) found that sexual penetration was

most associated with TSCC scales reflecting trauma and sexual distress: Posttraumatic Stress, Sexual Concerns and Dissociation.

Three studies also support point (c), showing that the TSCC can measure decrease in trauma related distress in association with treatment for trauma resulting from sexual abuse. In a study by Lanktree and Briere (1995), they found that therapy designed to reduce the impacts of sexual victimisation was associated with reductions in TSCC scores in 105 sexually abused children. Furthermore, this reduction was time-specific: After 3 months of treatment, all TSCC scales but Sexual Concerns had decreased significantly; after 6 months, children remaining in therapy had further reductions in Anxiety, Posttraumatic Stress, Depression and Sexual Concerns; After 9 months Anxiety and Posttraumatic Stress continued to decrease and those still in treatment at one year showed further decrements in Anxiety, Depression and Posttraumatic Stress. In a more recent study, Cohen, Mannarino, and Knudsen (2005) conducted a 1 year follow up of a Randomised Controlled Trial on the effects of Trauma Focused Cognitive Behaviour Therapy in a sample of 82 children with a history of sexual abuse. They used the TSCC and other measures to evaluate symptomatology. The 49 children who completed the treatment showed significant improvement in their scores on the Anxiety, Depression, Sexual Concerns, and Dissociation scales of the TSCC from pre-treatment to a six month follow up. From pre-treatment to a 12 month follow up, the children showed significant improvement in their scores on the PTSD and Dissociation scales of the TSCC. Last, Najavits, Gallop, and Weiss, (2006) conducted a Randomised Controlled Trial of Seeking Safety therapy for 33 adolescent outpatient girls with PTSD and substance use disorder. They found a significant decrease in scores on the Sexual Concerns and Sexual Distress scales of the TSCC when comparing pre-treatment, end of treatment and 3 month follow up scores.

The literature providing support for the construct validity of the TSCC is quite large and more recent examples of support for validity have been used where possible, however it should be noted that the validity section of this review includes one poster session (Smith, Swenson, Hanson & Saunders, 1994) and one unpublished study (Briere & Lanktree, 1995). These studies were referenced in the professional manual

as examples of validity but are unavailable so could not be assessed in terms of their results and methodological rigour.

SUMMARY AND RECOMMENDATIONS

Overall the TSCC has demonstrated that it is an adept assessment tool for measuring posttraumatic distress and related psychological symptomatology in children and adolescents. It has demonstrated good reliability through its moderate to high levels of internal consistency in the normative sample (Evans, Briere, Boggiano, & Barrett, 1994; Friedrich, 1995; Singer, Anglin, Song, & Lunghofer, 1995) and clinical samples (Elliott & Briere, 1994; Lanktree & Briere, 1995b; Nelson-Gardell, 1995; Sadowski & Friedrich, 2000). The TSCC has also demonstrated good convergent and discriminant validity with other psychometric measures (Crouch, Smith, Ezzell, & Saunders, 1999; Friker & Smith, 2001; Sadowski & Friedrich, 2000). In addition, the TSCC has demonstrated an ability to identify individuals with a history of trauma from those without (Elliott & Briere, 1994; Sadowski & Friedrich, 2000), demonstrated sensitivity to measuring severity of trauma (Briere & Lanktree, 1995; Smith, Swenson, Hanson, & Saunders, 1994) and demonstrated the ability to measure a decrease of symptomatology in response to therapeutic interventions that aim to treat trauma-related distress (Cohen, Mannarino, & Knudsen, 2005; Lanktree & Briere, 1995; Najavits, Gallop, & Weiss, 2006). Another strength of the TSCC is the validity scales which help clinicians and researchers identify social desirability bias in responses which helps reduce this common concern with the use of psychometric measures. In addition, the TSCC is supported by a large research base of published studies that have used the TSCC to measure symptoms of traumatic distress related to different types of trauma such as sexual abuse, violence exposure, marital violence, emotional abuse, natural disasters and physical illness, in a wide range of samples including clinical samples such as children/adolescents in psychiatric hospital settings and different cultures. This is largely due to the TSCC being designed to measure trauma symptomatology for unspecified traumatic events, therefore the assessment has been successful at fitting into many applied fields.

Despite its many strengths, the TSCC also has some limitations. Although the TSCC assesses for a large range of types of trauma it does not explicitly include childhood neglect. Neglect is an important form of trauma to consider, particularly when considering that research has shown neglect to be one of the most prevalent types of childhood trauma (De Bellis, Hooper, Spratt, & Wooley, 2009; Hussey, Chang, & Kotch, 2006), with negative impacts including lower neurocognitive outcomes and academic achievement (De Bellis, Hooper, Spratt, & Wooley, 2009), increased risk for delinquency and violent behaviour (Maxfield & Widom, 1996), PTSD (Widdom, 1999) and Major Depressive Disorder (Widdom, White, Czaja, & Marmorstein, 2007). There are also some limitations when considering the normative sample. Whilst it is positive that the normative sample is large and considers a range of demographic variables, only one normative subsample (Friedrich, 1995) contained (unpublished) data on the Sexual Concerns scale, which was restricted in both sample number and race (all Caucasian). Therefore when comparing the scores from other samples on the Sexual Concerns scale with the normative data, it is unknown whether demographic variables impact on these scores, potentially making the norms for this scale less valid in other populations. In addition, the normative sample does not include clinical samples. Therefore, clinical samples such as children/adolescent psychiatric inpatients often score in the clinically significant range for symptoms of trauma, which is generally expected in such a population due to high prevalence rates of trauma. This can make a comparison group of the general population less informative than a comparison group with norms provided by clinical samples. Last, as with all psychometric measures, the TSCC is still vulnerable to social desirability bias which was highlighted in research which found that children who denied abuse (despite it being documented by medical findings or perpetrator confession), had even lower scores on the TSCC than non-abused children (Elliott & Briere, 1994). Therefore, as the manual states, it is very important that the TSCC is used in conjunction with other standardised tests and is not used as a standalone assessment tool.

It is apparent that the TSCC is a useful, reliable and valid general measure of trauma symptomatology in children and adolescents which has been evidenced by a

substantial body of research. It would be useful in the future to develop a psychometric measure to measure trauma symptomology in children and adolescents with developmental disabilities (including learning disabilities). There currently exist no such measures for this population, largely due to the research field being underdeveloped in identifying symptoms of trauma in this population. The TSCC would be a useful tool to use in the development of such a psychometric due to its simple language and small number of items. An adapted version would need to include more visual representations of the information, particularly in relation to the likert answer scale which could be quantified by pictures. There are also difficulties that could occur from the way the items are currently worded as statements. Young people with an Autism Spectrum Disorder who have rigid thinking patterns may better understand explicit instructions such as 'how often do you…' before giving statements such as "have bad dreams or nightmares".

CHAPTER 5

GENERAL DISCUSSION

This thesis aimed to broadly investigate the presentation and treatment of the effects of childhood maltreatment in adolescents, with a prominent focus on adolescents with developmental disabilities. More specifically, it investigated the presentation of trauma in adolescents with and without developmental disabilities, evaluated the research literature about the effectiveness of psychological interventions at reducing the harm of trauma in adolescents, provided a case study which investigated the effectiveness of an intervention with an adolescent with a history of maltreatment who has been diagnosed with developmental disabilities, and critically evaluated a popular measure of trauma symptoms for children and adolescents. The results of these investigations continue to highlight, in line with the current research literature, that adolescents with developmental disabilities are a sparsely studied population. The research on treatment of adolescents without developmental disabilities with a history of maltreatment was also limited. As a result, this thesis is an important contribution to the research field and has implications for future research.

Summary of findings and implications:

The findings of Chapter 1 are preliminary investigations that contribute towards a small amount of existing research that investigates how childhood maltreatment presents itself in adolescents with developmental disabilities and compares this with adolescents without developmental disabilities. Overall, the study highlighted a number of differences in the presenting problems of adolescents with and without developmental disabilities, with adolescents with developmental disabilities displaying a greater frequency of problematic behaviours. It also highlighted gender differences in adolescents without developmental disabilities, such as female adolescents displaying more severe adverse emotions and behaviours in relation to maltreatment than males. Cautious links were made about how some types of trauma impact on adolescents with developmental disabilities. The findings may

suggest that adolescents with developmental disabilities express a wide range of problematic behaviours in relation to their history of maltreatment and then struggle to adapt to a new environment and make associations between their behaviour and the consequences or struggle to control behavioural impulses. Adaptive behaviour difficulties are documented in research which recognises people with developmental disabilities often have poor executive functioning. Executive functions are a set of cognitive abilities that control and regulate other functions and behaviours (Welsh, Pennington, & Groisserc, 1991). Executive functions encompass strategic planning, flexibility of thought and action, generation of new responses, inhibition of inappropriate responses and concurrent remembering and processing (Friedman et al., 2006; Pennington & Ozonoff, 1996). Executive functioning deficits have been described in developmental disorders, which are often characterised by low adaptive level. For example, attention, cognitive flexibility, inhibitory control and working memory deficits are reported in individuals with attention and hyperactivity disorders (Abad-Mas et al., 2011; Corbett, Costantine, Hendren, Rocke, & Ozonoff, 2009; Sergeant, Geurts, & Oosterlaan, 2002) and inhibition of responses and planning impairments are described in children with Autism (Hill, 2004; Kenworthy et al., 2005; Rinehart, Bradshaw, Moss, Brereton, & Tonge, 2001; Robinson, Goddard, Dritschel, Wisley, & Howlin, 2009).

Chapter 1 emphasises that without a control group it is difficult to ascertain which difficulties adolescents may present with wholly in response to having developmental disabilities and which difficulties are exacerbated or have resulted from a history of maltreatment. For this reason, future research should build upon the initial findings of Chapter 1 to clarify the expression of trauma in this vulnerable population. However, it is also important to note the difficult balance between conducting research which is methodologically very strong and the clinical practicalities of researching a clinical population for whom there are few standardised measures (and no standardised measures of trauma). Nonetheless, such difficulties do not justify leaving such a population out of the research field, especially when these young people have been admitted to a specialist inpatient service due to their very high levels of self-harm, challenging and aggressive

behaviours. With progress in this research domain, increased understanding will be clinically useful in helping to accurately identify diagnoses, particularly those of posttraumatic stress. This will then guide services towards the use of the most applicable and effective interventions for this population and an ability to better assess the effectiveness of the treatments. Until then, clinicians will have to be guided by a mixture of research about the effectiveness of interventions for trauma in adolescents without developmental disabilities and possibly the limited research about the expression of trauma in adults with developmental disabilities. This is in addition to clinicians adapting their work in line with the cognitive difficulties (such as executive functions) that people with developmental disabilities possess and continuing to evaluate the effectiveness of this in order to increase the effectiveness of their clinical work.

Chapter 2 highlighted that it was not feasible to conduct a systematic review into the effectiveness of psychological interventions for maltreatment in adolescents with developmental disabilities because there is currently no research on this subject. Instead, it was hoped that a subgroup analysis could be included on this population. The scoping exercise highlighted that prior systematic reviews had not answered the research question in Chapter 2 because they reviewed both children and adolescents, despite these populations being markedly different with different needs and probable different expressions of trauma. Prior reviews also included a variety of types of trauma from interpersonal trauma to inadvertent trauma (e.g. accidents, natural disasters) which have been found to differ in terms of the severity of adverse outcomes (Lange, Rietdijk, Hudcovicova, van de Ven, Schrieken, & Emmelkamp, 2003; Matthieu, & Ivanoff, 2006; Van der Velden et al., 2006). As a result, Chapter 2 documents the first systematic review to focus on the effectiveness of psychological interventions to reduce harm resulting from childhood maltreatment in adolescents.

Overall, the results of the review suggested that CBT did not significantly reduce outcomes of childhood maltreatment in relation to depression, compared with comparison/ control groups. This was found by one of the best quality studies (Lewis et al., 2010; Diamond et al., 2012). However, the other best quality study, found that Attachment Based Family Therapy may be effective at treating the sequelae of

childhood abuse (Diamond et al., 2012). Psychoeducational/Psychotherapeutic Group therapy gave mixed results, reducing some but not all trauma symptoms. All other interventions were found to be significantly effective at reducing outcomes of childhood maltreatment including Post-traumatic Stress Disorder (PTSD), suicidal ideation, depression, behavioural problems, frequency/distress of nightmares and intrusive memories and avoidance symptoms when compared with control/comparison groups. Nevertheless, all these interventions studies have methodological bias that limits the generalisability and validity of the findings. Of particular concern are the limitations with the generalisability of the findings to 'real life' samples of adolescents with a history of childhood abuse, who often present with a varied array of complex difficulties. This resulted from the strict exclusion criteria for the majority of the studies. The specificity of the review is both a strength and a limitation. Only a small number of studies fitted the inclusion criteria, which resulted in a relatively small amount of studies available to assess the effectiveness of different types of interventions. This limitation, combined with the methodological bias of the studies, decreased the validity and reliability of the results which makes it unclear exactly how effective these interventions are. This demonstrates the need for more high quality research in this area.

The importance of considering the impact of childhood maltreatment on future risk of re-offending is explored in Chapter 3, which using a case study investigated the effectiveness of an intervention to reduce the risk of sexual re-offending in a male adolescent with developmental disabilities. The psychological formulation which was informed via a range of assessments, showed the complex interplay of biological and environmental factors that contributed towards Client W's sexual offending. The presentation of Client W's trauma sequelae is highlighted throughout the case study and the contribution of trauma to his risk of sexually re-offending is explored in relation to development of a probable diagnosis of narcissistic personality disorder. Client W had not completed any psychological work about his childhood trauma, therefore the case study focused on the components of the ASOTP that aim to help individuals cope with some of the difficulties they have which are associated with both biological vulnerabilities (e.g. developmental disabilities) and environmental

factors, such as a history of maltreatment, with the aim of reducing their risk of sexually offending. Particular consideration is given to the impact of Client W's personality traits on his engagement with the work. The results of the psychometric assessments were mixed but the post-intervention relapse prevention interview showed little change in Client W's awareness of his risk and how to reduce his risk of sexually offending in the future. This suggested that further treatment with regards to his risk of offending would need to be completed in the future. The majority of the characterological difficulties outlined by Young et al., (2003) in working with people with a personality disorder were present throughout the ASOTP work. Client W demonstrated interpersonal difficulties with the facilitators, avoidance and overcompensatory behaviours and fluctuating levels of motivation to complete the work. These difficulties are understood in the context of narcissistic traits forming a person's response to feelings of inferiority, vulnerability and worthlessness (Young et al., 2003). As a result, it was recommended that Client W completes long term therapy to help him understand the development of narcissistic personality traits and ways to manage these so that he can engage better in therapy that explores his history of maltreatment which contributed towards his sexual offending. After this, additional offence focused work was recommended for the future. In line with the rest of the thesis, there is currently no research about the effectiveness of psychological interventions aimed at people with developmental disabilities and a diagnosis of personality disorder. This is likely to be associated with a key issue outlined in Chapter 1: the difficulty with accurately diagnosing mental health problems in people with a developmental disability. Alexander and Cooray (2003) documented that diagnosis of personality disorder in people with developmental disabilities is contentious due to a lack of standardised assessments and cognitive/communication difficulties that lead to complications when ascertaining appropriate symptoms and diagnosis criteria. This thesis demonstrates difficulties when working with an adolescent with developmental disabilities and a probable diagnosis of personality disorder that are comparable with difficulties that have been documented when working with adults with a personality disorder and typical cognitive functioning (Young et al., 2003). This warrants further investigation into the effectiveness of such treatments with this population.

A popular measure which was used throughout the case study in Chapters 1, 3 and in research included in Chapter 2 was critiqued in Chapter 4 and the TSCC was found to generally be a strong psychometric measure. Overall, the TSCC has demonstrated that it is an adept assessment tool for measuring posttraumatic distress and related psychological symptomatology in children and adolescents. It has been evidenced in a large base of published research. The TSCC has shown good reliability in the normative sample (Evans, Briere, Boggiano, & Barrett, 1994; Friedrich, 1995; Singer, Anglin, Song, & Lunghofer, 1995) and more importantly for this thesis, in clinical samples (Elliott & Briere, 1994; Lanktree & Briere, 1995b; Nelson-Gardell, 1995; Sadowski & Friedrich, 2000). The TSCC has also shown good validity, including convergent and discriminant validity, sensitivity to measuring severity of trauma and a decrease of symptomatology in response to therapeutic interventions that aim to treat trauma, as well as sensitivity at discriminating children/adolescents with and without a history of trauma. One of its main strengths is its inclusion of a validity scale which help clinicians and researchers identify social desirability bias in responses and reduces this common concern with the use of psychometric measures. However, the TSCC has not been standardised or validated for use with populations of children or adolescents with developmental disabilities. The TSCC was used in Chapters 1 and 3 because the TSCC is chosen as the most appropriate measure in light of there currently existing no measures of trauma which are standardised for adolescents with developmental disabilities. This problem is largely due to the research field being underdeveloped in identifying symptoms of trauma in this population. The TSCC was used in this thesis due to its practical strengths, (simple language, short statements, and reading age of 8 years and above). However, it is still possible that the abstract nature of the statements could lead to difficulties with understanding the items. The TSCC would be a useful tool to use in the development of a psychometric for children/adolescents with developmental disabilities due to its simple language and small number of items. An adapted version would need to include more visual representations of the information, particularly in relation to the likert answer scale which could be quantified by pictures. Alas, this cannot be developed until this research field is strongly advanced.

Conclusion

This thesis is concluded with the finding that adolescents with developmental disabilities and a history of maltreatment display a higher frequency of problematic behaviours and some trauma symptoms and emotions compared with adolescents without developmental disabilities. The findings also showed that it is unclear how effective interventions for trauma are within populations of adolescents who have experienced childhood maltreatment. The case study highlighted the importance of taking into account the effects of trauma on personality development which can impact on the engagement of work which aims to reduce the risk of re-offending. The case study also highlighted important aspects of adapting the work to the capabilities of an adolescent with developmental disabilities. Last, the critical evaluation of the TSCC recognised that the TSCC is a strong measure of trauma which can be used with clinical populations, however it has not been validated or standardised for use with children/adolescents with DD.

The key finding is that this is a research field that needs to be substantially advanced: we know little about the effects of maltreatment in adolescents with developmental disabilities. This thesis argues the importance of studying what can be a difficult population to investigate due to their vulnerability. More questions have been raised from the Chapters in this thesis than answered, as it often the case with research. However, it has given valuable avenues for future researchers to explore and provided interesting preliminary findings. The practical implications of advancing this research field are far reaching and very valuable: we need to strive harder to provide and evidence the best treatment possible for these young people.

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Appendix 1.1

Descriptive data for the dependent variables

Mean Rank of TSCC scores for young people with and without a developmental disability (Yes n=21, No n=12, Total n= 33).

Trauma Symptom Checklist for Children Scales	DD present yes/no	Mean Rank
Anxiety T-score	yes	17.90
	no	15.42
Depression T-score	yes	16.76
	no	17.42
Anger T-score	yes	15.31
	no	19.96
Post-Traumatic Stress T-score	yes	16.79
	no	17.38
Dissociation T-score	yes	17.14
	no	16.75
Dissociation-Overt T-score	yes	16.55
	no	17.79
Dissociation Fantasy T-score	yes	18.12
	no	15.04
Sexual Concerns T-score	yes	17.05
	no	16.92
Sexual Preoccupation T-score	yes	17.86
	no	15.50
Sexual Distress T-score	yes	15.88
	no	18.96

Mean Rank scores of BYI for adolescents with and without a developmental disability (Yes n=24, No n= 14, Total n= 38).

Becks Youth Inventory Scales	DD present (yes/no)	Mean Rank
Anxiety	yes	20.65
	no	17.54
Anger	yes	20.35
	no	18.04
Disruptive Behaviour	yes	20.21
	no	18.29

Mean Rank scores of BYI for males with and without a developmental disability (Yes n=21, No n= 7, Total n= 28).

Becks Youth Inventory Scales	DD present Yes/no	Mean Rank
Depression	yes	15.55
	no	11.36
Self-concept	yes	14.19
	no	15.43

Mean Rank scores of behavioural monitoring data for adolescents with and without a developmental disability (Yes n= 24 No n=14).

Behavioural Monitoring Data	DD present yes/no	Mean Rank
E1	yes	20.48
	no	17.82
E3	yes	19.50
	no	19.50
E4	yes	20.75
	no	17.36
E5	yes	19.79
	no	19.00
E7	yes	19.21
	no	20.00
E9	yes	18.73
	no	20.82
R1P	yes	19.10
	no	20.18
R1PR	yes	19.33
	no	19.79
R1O	yes	19.79
	no	19.00
R1W	yes	19.50
	no	19.50
R2S	yes	19.13
	no	20.14
R2P	yes	21.38
	no	16.29
R2PR	yes	20.96
	no	17.00
R2W	yes	19.29
	no	19.86
R2O	yes	20.08
	no	18.50

Behavioural Monitoring Data	DD present yes/no	Mean Rank
R7_VCP	yes	21.13
	no	16.71
R7_NCS	yes	19.60
	no	19.32
R7_NCP	yes	20.40
	no	17.96
R7_TS	yes	20.48
	no	17.82
R7_TP	yes	20.83
	no	17.21
R7_ES	yes	20.08
	no	18.50
R7_EP	yes	19.79
	no	19.00
R8	yes	20.21
	no	18.29
DSH_A	yes	17.58
	no	22.79
DSH_D	yes	18.75
	no	20.79
DSH_G	yes	21.23
	no	16.54
DSH_H	yes	18.75
	no	20.79
DSH_I	yes	20.08
	no	18.50
ORB_2	yes	18.71
	no	20.86
ORB_3	yes	18.35
	no	21.46

Mean Rank scores of behavioural monitoring data for males with and without a developmental disability (Yes n= 21, No n= 7).

Behavioural Monitoring Data	DD present Yes/No	Mean Rank
E2	yes	14.43
	no	14.71
E6	yes	14.40
	no	14.79
E8	yes	15.67
	no	11.00
E10	yes	15.88
	no	10.36
R1S	yes	14.71
	no	13.86
R7_VCS	yes	14.76
	no	13.71
DSH_B	yes	14.33
	no	15.00
DSH_C	yes	14.67
	no	14.00
DSH_E	yes	14.50
	no	14.50
DSH_F	yes	14.50
	no	14.50
DSH_J	yes	14.50
	no	14.50
ORB_1	yes	14.14
	no	15.57
ORB_4	yes	14.31
	no	15.07

Appendix 1.2

Descriptive data for Hypothesis 3b: Males and females without a developmental disability

Dependent measure	Mean rank	Median	*p*
BYI Self-Concept			
Males (n=7)	10.29	44.00	.013
Females (n=7)	4.71	29.00	
BYI Anxiety			
Males (n=7)	5.00	44.00	.025
Females (n=7)	10.00	68.00	
BYI Depression			
Males (n=7)	5.21	55.00	.040
Females (n=7)	9.79	77.00	
Behavioural Monitoring Data E6			
Males (n=7)	4.79	3.00	.015
Females (n=7)	10.21	13.00	
Behavioural Monitoring Data E8			
Males (n=7)	4.50	.00	.003
Females (n=7)	10.50	2.00	
Behavioural Monitoring Data E10			
Males (n=7)	5.29	2.00	.050
Females (n=7)	9.71	8.00	
Behavioural Monitoring Data R1-S			
Males (n=7)	5.43	.00	.040
Females (n=7)	9.57	2.00	
Behavioural Monitoring Data DSH-B			
Males (n=7)	5.43	.00	.035
Females (n=7)	9.57	1.00	

Appendix 1.3

Address

Dear Date

My name is Donna Morris and I work as an Assistant Psychologist in the Adolescent Service at X. I am also a Trainee Forensic Psychologist and I am studying for a Doctorate of Forensic Psychology at Nottingham University. As part of my thesis I am conducting a study to explore the differences in responses to trauma between adolescents detained under the Mental Health Act with and without a Developmental Disability.

I would like to use some information from patient files and notes as data for my study. The information I am interested in is demographic details such as age, gender, developmental disability and diagnosis and types of abuse experienced. In addition, I am interested in the results from two assessments of emotions, experiences and behaviours. Many of the patients will have already completed these assessments routinely as part of their care and are familiar with them. If they have done these assessments already I would like to ask for their permission to use this data. If they have not completed these assessments, I would like to ask them to complete the two questionnaires so I can use the results. All information that is used will be made anonymous so no-one will be able to identify people that have participated in the research.

I am writing to you as your child (or the child you hold parental responsibility for) is under 18 years of age and therefore cannot consent to take part in the study by themselves. I would ask you to consider the information I have given you about the study and to read the copies of the information sheets included. I have included one sheet with detailed information for you and a copy of the sheet which will be given to the young people. If you are happy for your child to participate in this study, please can you sign the enclosed consent form and return it in the stamped addressed envelope. If you have any questions, please do not hesitate to contact me to discuss this further. Many thanks for your time.

Donna Morris (Trainee Forensic Psychologist)

Telephone: Example Email: Example

Appendix 1.4

Participant Information Sheet – Parent/Guardian

(Final version 1.0: 15.02.13)

Title of Study: A comparison of trauma symptoms and problematic emotions and behaviours in adolescents with and without Developmental Disabilities.

Name of Chief Investigator: Professor Kevin Browne (Professor of Forensic Psychology & Child Health)

Name of Primary Researcher: Donna Morris (Trainee Forensic Psychologist)

Name of co-investigator: Dr Lucy Adamson (Chartered Forensic Psychologist)

We would like to invite the child you have parental responsibility for to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for your child. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study if you wish. Ask us if there is anything that is not clear.

What is the purpose of the study?

This study is looking at whether young people with a developmental disability (such as an Autism Spectrum Disorder or a learning disability) respond to traumatic life experiences in a different way to young people who do not have a developmental disability. This study is looking at whether people display emotions and behaviour differently depending on whether they have a developmental disability or not.

At the moment there is no research about this topic; no-one has investigated how traumatic life experiences affect young people with and without a developmental disability.

This research will form part of the thesis for the Primary Researcher (Donna Morris) which contributes towards her Doctorate in Forensic Psychology.

Why has my child been invited?

Your child is being invited to take part because they are currently a service user at St. Andrew's Healthcare and we are interested in all young people that are aged 13-17 years old with your child's life experiences. As your child is under 18 years of age, we also require your consent for them to take part in this study. We are inviting at least 70 participants like your child to take part.

Does my child have to take part?

It is up to you to decide whether or not your child should take part. If you do decide that they can take part you will be given this information sheet to keep and be asked to sign a consent form. We will also provide your child with an information sheet and ask them to sign an assent form if they are happy to take part. If you and your child decide to take part you are both still free to withdraw at any time before the data is analysed and without giving a reason. This would not affect your child's future care.

What will happen to my child if they take part?

If you choose for your child to take part, they will be asked to complete two questionnaires which could take up to 1 hour 25 minutes. These questionnaires can be completed at different times and on different days when it suits your child best. We would also like to access the information from your child's patient notes and file to be included in the study (for example their name, gender, diagnosis, and types of negative life experiences).

Expenses and payments

Participants will not be paid to participate in the study.

What are the possible disadvantages and risks of taking part?

Young people such as your child are used to completing questionnaires as part of their care and most will be familiar with the questionnaires. Occasionally some individuals may become distressed during or after completing a self-report questionnaire. Therefore, appropriate members of staff will be informed of when your child is going to complete the questionnaires so they can provide the appropriate support and supervision usually available during completion of assessments. In addition, your child can always stop completing the questionnaire at any time.

What are the possible benefits of taking part?

We cannot promise that the research will help your child, but it is hoped the results of this study will help young people in the future. Taking part in this study will help us have a better understanding of the way different young people react to their life experiences and this can help us give them the treatment they need.

What happens when the research study stops?

At the end of the study we will make sure that everyone whose information has been used will get the chance to find out what the research found. If you would like to know, then tick the box on the consent form. The results will be written up as part of the Primary Researcher's (Donna Morris) thesis for her Doctorate.

What if there is a problem?

If you are worried about anything in this study please contact the researchers, whose details are provided at the end of this information sheet. If you remain unhappy and wish to complain you can do this by speaking to your child's care co-ordinator or ward manager. If any information during this study suggested that your child's care has not been of a high standard, the researcher would have to tell their supervisor.

Will my child's taking part in the study be kept confidential?

We will follow ethical and legal practice and all information about your child will be handled in confidence.

If your child joins the study, some parts of their notes/file and the data collected for the study will be looked at by authorised persons 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. All will have a duty of confidentiality to your child as a research participant and we will do our best to meet this duty.

All information which is collected about your child 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 your child which leaves X will have your child's name and address removed (anonymised) and a unique code will be used so that your child cannot be recognised from it.

None of your child's personal details will be stored. If you would like to know the results of the research then this will be passed on to X who can pass on this information. All research data will be kept securely for 7 years. After this time your child's data will be disposed of securely. During this time all precautions will be taken by all those involved to maintain your child's confidentiality, only members of the research team will have access to your child's personal data.

What will happen if my child doesn't want to carry on with the study?

You or your child may decide to withdraw (stop taking part) from the study at any time before the data is analysed. If your child stops taking part, their care will carry on as normal. Your child's information will be taken out from the study.

What will happen to the results of the research study?

The results of the research will be typed up to form part of the Primary Researcher's thesis. This will form part of her Doctorate. It is possible that the results of the study will be published in a journal; however your child will not be identified in any journal or publication because your child's information is confidential and will have been anonymised (see above).

Who is organising and funding the research?

This research is being organised by the University of Nottingham and is being funded by the Primary Researcher (Donna Morris).

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the National Research Ethics Service and X Research & Development Department.

Further information and contact details

Primary Researcher:

Donna Morris

Trainee Forensic Psychologist

Work phone: 01604614529

Email: lwxdmmo@nottingham.ac.uk

Chief Investigator:

Professor Kevin Browne

Phone: 0115 8466623

Course Director – Doctorate Forensic Psychology

B22, Institute of Work, Health & Organisations

University of Nottingham

Wollaton Road

Nottingham

NG8 1BB.

Email: Kevin.Browne@nottingham.ac.uk, lwzkdb@nottingham.ac.uk

Please note a copy of the participant information sheet that your child will receive has been included for your information.

Appendix 1.5

Parental Responsibility Consent Form

(Final Version 1.0 15.02.13)

Title of Study: **Trauma, Emotions and Behaviour**

Please initial box

Name of Child:

1. I confirm that I have read and understand the information sheet version number (insert here) dated (2013) for the above study and have had the opportunity to ask questions. ☐

2. I understand that my child's participation (or the participation of the child I have parental responsibility for) is voluntary and that he/she is free to withdraw at any time before the data has been analysed, without giving any reason, and without his/her medical care or legal rights being affected. I understand that should he/she withdraw then the information collected will not be used in the research. ☐

3. I understand that relevant sections of my child's medical notes (or the medical notes of the child I have parental responsibility for) and patient file may be looked at by the researcher collecting data for this study. I give permission for the researcher to have access to his/her records and to collect, store, analyse and publish information obtained from his/her file including that about types of abuse experienced. I understand that his/her personal details will be kept confidential. ☐

4. I agree that my child (or the child I have parental responsibility for) can be approached to see if they would assent to the researcher using results from two questionnaires if this is available, or to see if they would assent taking part in the study by completing two questionnaires about emotions, experiences and behaviours. ☐

5. I would like to know the results of this study (optional). If yes, please provide the address you would like the report sent to on the following page. ☐

Name of Parent/Guardian/Social Worker	Date	Signature
_____	_____	_____

3 copies: 1 for parent, 1 for the project notes and 1 for the medical notes.

Appendix 1.6

Information Sheet

(Final Version 1.0 – 15th February 2013)

Study Title – Trauma, emotions and behaviour.

Information about the study

What is the purpose of this study?

Donna Morris is a Trainee Forensic Psychologist working at Malcolm Arnold House. She is doing some research as part of her Doctorate at the University of Nottingham. Research is a way we try to find out the answers to questions.

Donna is trying to find out whether young people with a Developmental Disability (such as Autism or a learning disability), react to trauma (difficult life experiences) differently than young people without a Developmental Disability.

To do this, we need young people like you to take part in the study.

Ok, so what information do you want?

If you agree to take part, you will be asked to complete two questionnaires which ask about your thoughts, feelings and experiences.

You will also be asked if you agree for the researcher (Donna) to have information from your file about your life experiences (such as bullying and abuse). A member of your care team can get this information instead of the researcher. The researcher **does not want details** about these experiences, but does want to know if these experiences have happened in your life and if they have happened more than once.

Last, the researcher would ask if it is ok to have some of your behavioural monitoring data.

Why have I been chosen?

You have been asked to take part because you are currently a service user at St. Andrew's Healthcare and we are interested in all young people that are your age (13-17 years old) with your life experiences. This project would like to include everybody in your age group as you are all important to this study.

Do I have to take part? 

No, it is your choice. If you decide you do not want to take part in the study, nothing will happen to you and your care will carry on as normal.

If you choose to take part, you will be given this information sheet to keep and you will be asked to sign a form to say you want to take part (an assent form). You may decide to withdraw (stop taking part) from the study at any time. If you stop taking part, no-one will be cross with you and your care will carry on as normal. Your information will be taken out from the study.

What will happen to me if I take part?

If you choose to take part, you will be asked to complete two questionnaires. These questionnaires can be completed at different times and on different days. You will be asked if you agree for information from your patient notes and file to be included in the study (for example your name, gender, diagnosis, and types of negative life experiences). You will not be required to do anything other than complete the questionnaires.

How will taking part in the study help me? We cannot promise that the research will help you, but it is hoped the results of this study will help young people in the future. Taking part in this study will help us have a better understanding of the way different young people react to their life experiences and this can help us give them the treatment they need.

Contact Details

Please feel free to talk about this research with people like your family, friends or staff. The assistant psychologist or the psychologist on your ward will be able to answer any questions you may have or they can contact the researcher to ask any questions you may have before you decide whether or not to take part in the research.

What if there is a problem?

If you are worried about anything in this study please tell the person who has asked you to take part. If you remain unhappy and wish to complain you can do this by speaking to your care co-ordinator or ward manager. If any information during this study suggested that you care has not been of a high standard, the researcher would have to discuss this with their supervisor.

I don't want everyone knowing my information.

Your details will be kept private if you choose to take part in the study. Some information from your notes and file is needed by the researcher. The person who looks through your file to get this information will be someone who already works with you and your data will be kept private and safe (in a locked drawer). Only Donna will know the information given. Once she has the information she needs she will anonymise it.

This means Donna will delete people's names so that no-one will know whose information it is. When the research is completed it will not have anyone's personal information in, and no-one will know where the information has come from.

If you give us information that may harm you or other people the appropriate hospital policy will be followed. This means sharing the details with other people for example staff. If you do give any such information you will be told that this will happen.

What happens at the end of the study?

At the end of the study Donna will make sure that everyone whose information has been used will get the chance to find out what the research found. If you would like to know, then tick the box on the consent form. You can get a consent form from the person reading this to you.

The results will be written up as part of Donna's thesis (a big project) for her Doctorate.

Did anyone check that Donna's research is OK to do?

Before any research can happen it has to be checked out by a group of people called a Research Ethics Committee. They make sure the research is fair and safe to do. This research has been checked by the National Research Ethics Service and X Research & Development Department and they have said it's ok to do.

You do not have to decide straight away if you wish to take part, you will be contacted again in a couple of days. Thank you for your time.

Appendix 1.7

Participant Assent Form – Under 18 years

Title of Study: Trauma, Emotions and Behaviour

Hello,

If you wish to take part in the study, you will need to provide your assent to do so. This means you need to show you agree to take part. Please read the sentences below and put your initials in the boxes. This is to show that you understand the information that has been given to you and understand which information will be used in the study.

- I have read (or had read out to me) the information sheet. ☐
- I understand what the research is about. ☐
- I have been able to ask questions about the research and I am happy with the answers I have been given. ☐ ☐
- I give my permission for someone I work with to look at some of my clinical notes and case file and for them to give the researcher (Donna) the relevant information including information about types of negative life experiences. I understand that my name will not be used in the research.
- I understand that I can change my mind about taking part and can stop taking part in the study at any time without giving a reason. I understand that if I stop taking part before the data is analysed then the information collected will not be used in the research. ☐
- I understand that my treatment on the unit will not change if I take part or not. ☐
- I have already completed the questionnaires and agree for my questionnaire data to be used. ☐
- I agree to complete two questionnaires about emotions, behaviour and experiences. ☐
- I agree to take part in the research ☐
- I would like to know the results of the study (optional) ☐

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking assent	Date	Signature

Appendix 1.8

Participant Consent Form - 18 years and over

Title of Study: Trauma, Emotions and Behaviour.

Hello,

If you wish to take part in the study, you will need to provide your consent to do so. This means you need to show you agree to take part. Please read the sentences below and put your initials in the boxes. This is to show that you understand the information that has been given to you and understand which information will be used in the study.

Name of Participant: **Please initial box**

1. I have read (or had read out to me) the information sheet. ☐

2. I understand what the research is about. ☐

3. I have been able to ask questions about the research and I am happy with the answers I have been given. ☐

4. I understand that I can change my mind about taking part and can stop taking part in the study at any time without giving a reason. I understand that if I stop taking part before the data is analysed then the information collected will not be used in the research. ☐

5. I understand that my treatment on the unit will not change if I take part or not. ☐

6. I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from The University of Nottingham, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. I understand that my name will not be used in the research. ☐

7. I agree to complete two questionnaires about emotions, behaviour and experiences, or if I have already completed these in hospital, I give permission for this information to be used in this study. ☐

8. I would like to know the results of this study (optional). ☐

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

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

Appendix 2.0

Results for Cognitive Behavioural Therapy

Study	Sample analysed	Outcomes	Significance
Barbe et al., (2004)	Adolescents with a history of sexual abuse (n= 10)	K-SADS Rates of Major Depression (%) post-treatment **CBT** 40% **NST** 50%	No Sig. between groups at post-treatment (*p* not stated).
Lewis et al., (2010)	Adolescents with a history of child sexual abuse (n = 38)	Children's Depression Rating Scale-Revised (CDRS-R) approximate adjusted total score *Pre-treatment* **CBT therapy** 65 **Placebo Group** 64 **Combination** 67 **Fluoxetine** 56 *Mid-treatment* **CBT therapy** 53.5 **Placebo Group** 42.5 **Combination** 38 **Fluoxetine** 38 *Post-treatment* **CBT therapy** 50 **Placebo Group** 39 **Combination** 33 **Fluoxetine** 35	No sig. for treatment x time interaction for any condition (*p* = .092). **Cohen's *d* (effect size):** CBT vs placebo x time interaction = 0.81 (better outcome in placebo group). CBT vs Combination x time interaction = 1.09 (better outcome in the combination group). CBT vs Fluoxetine x time interaction = 1.29 (better outcome in the Fluoxetine group).
Shirk et al., (2014)	Whole sample (n = 41)	Beck Depression Inventory-II mean score *Pre-treatment* **Modified CBT** 29.85 **Usual care** 32.21 *Post-treatment* **Modified CBT** 16.81 **Usual care** 13.76 *Follow-up* **Modified CBT** 23.28 **Usual care** 15.24	No sig. for scores between the Modified CBT group and Usual Care (*p* = .81). There was a significant reduction in scores for both groups between pre- and post-treatment scores (*p* <.001). Cohen's *d* = .16 favouring Usual Care.

Appendix 2.1

Results for Family Therapy.

Study	Sample analysed	Outcomes	Significance
Danielson et al., (2012)	Whole sample (n = 30)	<u>UCLA PTSD Adolescent mean score</u> *Pre-treatment:* **RRFT** 40.0 **Usual care** 35.6 *Post-treatment:* **RRFT** 17.9 **Usual care** 22.9 *Follow-up:* **RRFT** 20.4 **Usual care** 23.8 <u>UCLA PTSD Parent mean score</u> *Pre-treatment:* **RRFT** 42.8 **Usual care** 26.5 *Post-treatment:* **RRFT** 15.9 **Usual care** 20.7 *Follow-up:* **RRFT** 20.5 **Usual care** 19.8 <u>Child Depression Inventory mean score</u> *Pre-treatment:* **RRFT** 61.7 **Usual care** 52.9 *Post-treatment:* **RRFT** 48.1 **Usual care** 47.6 *Follow-up:* **RRFT** 47.0 **Usual care** 48.4 <u>BASC Internalising mean score</u> *Pre-treatment:* **RRFT** 68.1 **Usual care** 56.6 *Post-treatment:* **RRFT** 53.7 **Usual care** 50.4 *Follow-up:* **RRFT** 52.3 **Usual care** 49.0 <u>BASC Externalising mean score</u> *Pre-treatment:* **RRFT** 67.4 **Usual care** 60.9 *Post-treatment:* **RRFT** 57.4 **Usual care** 54.8 *Follow-up:* **RRFT** 53.5 **Usual care** 55.7	No sig. difference for treatment group (p = .422) Significant difference from pre-treatment to follow-up for both groups (p <.001). Significant reduction in scores for RRFT (p = .018). Significant difference from pre-treatment to follow-up for RRFT (p <.001). Significant reduction in scores for RRFT (p = .034). Significant difference from pre-treatment to follow-up for RRFT (p <.001). Significant reduction in scores for RRFT (p = .004). Significant difference from pre-treatment to follow-up for RRFT (p <.001). No sig. difference for treatment group (p = .166). Significant difference from pre-treatment to follow-up for both groups (p <.001).

Note: Risk Reduction Family Therapy (RRFT), Behavioural Assessment System for Children (BASC-2).

Study	Sample analysed	Outcomes	Significance
Diamond et al., (2012)	Those with a history of sexual abuse (n = 30)	<u>Suicidal Ideation Questionnaire (SIQ-JR) Remission rates (%)</u> *Mid--treatment* **ABFT** 61.1 **Enhanced UC** 27.3 *Post-treatment* **ABFT** 82.4 **Enhanced UC** 36.4 *Follow up* **ABFT** 62.5 **Enhanced UC** 37.5 <u>Scale of Suicidal Ideation- Past week Remission rates (%)</u> *Mid-treatment* **ABFT** 33.3 **Enhanced UC** 37.5 *Post-treatment* **ABFT** 69.2 **Enhanced UC** 11.1 *Follow-up* **ABFT** 78.6 **Enhanced UC** 50.0 <u>Beck Depression Inventory - Remission rates (%)</u> *Mid-treatment* **ABFT** 17.7 **Enhanced UC** 0 *Post-treatment* **ABFT** 47.1 **Enhanced UC** 9.1 *Follow-up* **ABFT** 64.7 **Enhanced UC** 12.5	Significant increase in post-treatment suicidal ideation questionnaire score remission rates for ABFT (p = .02). Odds Ratio (OR) = 8.11. Significant increase in post treatment suicidal ideation remission rates for ABFT (p = .007). OR = 17.99. Significant increase in post treatment depression remission rates for ABFT (p = .05). OR = 8.99.

Note: Attachment Based Family Therapy (ABFT).

Appendix 2.2

Results for Psychoeducational/Psychotherapeutic Group Therapy.

Sample analysed: Whole sample (n = 39).

Study	Outcomes	Significance
Baker (1985)	<u>Self-Concept mean score</u> *Pre-treatment* **Group therapy** **1:1 therapy** 3.88 3.87 *Post-treatment* **Group therapy** **1:1 therapy** 5.79 4.47 <u>IPAT Anxiety mean score</u> *Pre-treatment* **Group therapy** **1:1 therapy** 4.58 5.47 *Post-treatment* **Group therapy** **1:1 therapy** 4.38 4.47 <u>IPAT Depression mean score</u> *Pre-treatment* **Group therapy** **1:1 therapy** 5.74 5.47 *Post-treatment* **Group therapy** **1:1 therapy** 4.29 4.47	Sig. increase between pre and post- treatment self-concept scores for the group treatment ($p < .01$) No sig. differences were found between the group and individual treatments for pre and post anxiety scores. No sig. differences were found between the group and individual treatments for depression scores. A larger decrease is demonstrated for group treatment between pre and post- treatment scores.

Note: IPAT (Institute for Personality and Ability Testing).

Sample analysed: Sample after attrition (n = 11).

Study	Outcomes	Significance
Thun, et al., (2002)	<u>Offer Self-Image Questionnaire- Revised (OSIQ-R) Impulse Control mean score</u> *Pre-treatment* **Group therapy** **Control group** 46.75 48.43 *Post-treatment* **Group therapy** **Control group** 55.75 52.57 <u>OSIQ-R Self-confidence mean score</u> *Pre-treatment* **Group therapy** **Control group** 50.50 47.57 *Post-treatment* **Group therapy** **Control group** 52.50 52.29 <u>OSIQ- R Self-reliance mean score</u> *Pre-treatment* **Group therapy** **Control group** 45.00 56.29 *Post-treatment* **Group therapy** **Control group** 45.50 50.14 <u>OSIQ-R Body image mean score</u> *Pre-treatment* **Group therapy** **Control group** 38.50 48.71 *Post-treatment* **Group therapy** **Control group** 42.00 51.00	No sig. differences were found between the treatment and control group for all measures. No sig. differences were found between pre- and post - treatment scores for either group for all measures. Mean scores for the OSIQ-R scales remained stable for both groups, however there was a trend of decreased self-reliance for the control group over time.

Sample analysed: Whole sample (n = 40)

Study	Outcomes	Significance
Tourigny et al., (2005)	<u>(TSCC) Total mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 69.7 60.9 *Post-treatment:* **Closed Group** **Control Group** 46.3 62.3 <u>(TSCC) Anxiety mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 13.0 11.4 *Post-treatment:* **Closed Group** **Control Group** 7.9 12.4 <u>(TSCC) Depression mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 13.9 14.1 *Post-treatment:* **Closed Group** **Control Group** 9.0 13.2 <u>(TSCC) Dissociation mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 11.7 10.1 *Post-treatment:* **Closed Group** **Control Group** 8.4 9.4 <u>(TSCC) Posttraumatic Stress mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 16.7 15.0 *Post-treatment:* **Closed Group** **Control Group** 10.9 16.6 <u>(TSCC) Anger mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 10.8 9.8 *Post-treatment:* **Closed Group** **Control Group** 5.8 9.4 <u>(TSCC) Sexual Preoccupation mean score</u> *Pre-treatment:* **Closed Group** **Control Group** 7.3 7.1 *Post-treatment:* **Closed Group** **Control Group** 5.3 7.3	Sig. decrease between pre and post- treatment total TSCC scores for treatment group ($p < .001$). Sig. decrease between pre and post- treatment anxiety scores for the treatment group ($p < .001$). Sig. decrease between pre and post- treatment depression scores for treatment group ($p < .001$). Sig. decrease between pre and post- treatment dissociation scores for treatment group ($p < .01$). Sig. decrease between pre and post- treatment posttraumatic stress scores for treatment group ($p < .001$). Sig. decrease between pre and post- treatment anger scores for treatment group ($p < .01$). No sig. difference between pre and post-treatment sexual preoccupation scores for either groups (*p* unknown).

Sample analysed: Whole sample (n = 40).

Study	Outcomes	Significance
Tourigny et al., (2005)	<u>(YSRP) Internalising behaviour mean score</u> *Pre-treatment* **Closed Group** **Control Group** 29.4 18.3 *Post-treatment* **Closed Group** **Control Group** 27.4 31.6	Sig. decrease in internalising behaviour scores for treatment group (p <.001).
	<u>(YSRP) Social withdrawal mean score</u> *Pre-treatment* **Closed Group** **Control Group** 7.4 6.5 *Post-treatment* **Closed Group** **Control Group** 4.8 8.6	Sig. decrease in social withdrawal behaviour scores for treatment group (p <.001).
	<u>(YSRP) Externalising behaviour mean score</u> *Pre-treatment* **Closed Group** **Control Group** 17.8 14.4 *Post-treatment* **Closed Group** **Control Group** 15.0 15.8	Sig. decrease in externalising behaviour scores for treatment group (p < .05).
	<u>(YSRP) Delinquent behaviour mean score</u> *Pre-treatment* **Closed Group** **Control Group** 5.7 5.2 *Post-treatment* **Closed Group** **Control Group** 4.7 5.3	No sig. difference between delinquent behaviour scores for either groups (p unknown).
	<u>(YSRP) Aggressive behaviour mean score</u> *Pre-treatment* **Closed Group** **Control Group** 12.2 9.2 *Post-treatment* **Closed Group** **Control Group** 10.3 10.4	No sig. difference between aggressive behaviour scores for either groups (p unknown).
	<u>Self-Injurious behaviour mean score</u> *Pre-treatment* **Closed Group** **Control Group** 5.1 4.3 *Post-treatment* **Closed Group** **Control Group** 2.2 3.2	No sig. difference between self-injurious behaviour scores for either groups (p unknown).

Sample analysed: Whole sample (n = 53)

Tourigny & Hebert (2007)	<u>(TSCC) Total mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 69.8 71.5 64.5 *Post-treatment* **Open group** **Closed Group** **Control Group** 43.6 45.8 67.6 <u>(TSCC) Anxiety mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 13.6 12.9 11.4 *Post-treatment* **Open group** **Closed Group** **Control Group** 8.3 8.0 13.1 <u>(TSCC) Depression mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 13.5 14.0 14.1 *Post-treatment* **Open group** **Closed Group** **Control Group** 8.1 8.8 13.1 <u>(TSCC) Dissociation mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 12.3 12.0 10.1 *Post-treatment* **Open group** **Closed Group** **Control Group** 6.6 8.1 10.3 <u>(TSCC) Posttraumatic Stress mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 15.8 16.9 15.0 *Post-treatment* **Open group** **Closed Group** **Control Group** 11.7 10.4 17.3 <u>(TSCC) Anger mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 9.3 11.6 9.8 *Post-treatment* **Open group** **Closed Group** **Control Group** 7.2 7.0 9.8 <u>(TSCC) Sexual Preoccupations mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 9.2 7.7 7.1 *Post-treatment* **Open group** **Closed Group** **Control Group** 4.4 5.8 7.6	No sig. difference between open and closed groups for all variables. Sig. decrease in total TSCC scores for Open group (p = .000). Sig. decrease in anxiety scores for Open group (p = .000). Sig. decrease in depression scores for Open group (p = .000). Sig. decrease in dissociation scores for Open group (p = .006). Sig. decrease in post-traumatic stress scores for Open group (p = .000). No sig. difference in anger scores between the Open and control groups (p = .062). Sig. decrease in sexual preoccupation scores for Open group (p = .003).

Sample analysed: Whole sample (n = 53)

Study	Outcomes	Significance
Tourigny & Hebert (2007)	<u>(YSRP) Internalising behaviour mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 24.7 29.6 27.4 *Post-treatment* **Open group** **Closed Group** **Control Group** 21.2 18.0 32.0 <u>YSRP Social withdrawal mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 5.9 7.2 6.5 *Post-treatment* **Open group** **Closed Group** **Control Group** 5.0 4.7 8.7 <u>YSRP Externalising behaviour mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 15.4 18.6 14.4 *Post-treatment* **Open group** **Closed Group** **Control Group** 13.1 14.4 17.4 <u>YSRP Delinquent behaviour mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 4.5 5.9 5.2 *Post-treatment* **Open group** **Closed Group** **Control Group** 4.0 4.6 5.5 <u>YSRP Aggressive behaviour mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 10.9 12.7 9.2 *Post-treatment* **Open group** **Closed Group** **Control Group** 9.0 9.9 11.7 <u>Self-Injurious behaviour mean score</u> *Pre-treatment* **Open group** **Closed Group** **Control Group** 5.0 5.8 5.7 *Post-treatment* **Open group** **Closed Group** **Control Group** 2.2 2.9 4.7	No sig. difference between open and closed groups for all variables. Sig. decrease in internalising behaviour scores for Open group (p = .000). Sig. decrease in social withdrawal scores for Open group (p = .000). No sig. difference for externalising behaviour scores between Open and Control group. No sig. difference for delinquent behaviour scores between Open and Control group. No sig. difference for aggressive behaviour scores between Open and Control group. Sig. decrease in self-injurious behaviour scores for Open group (p = .004).

Sample analysed: Follow-up sample (n = 27)

Study	Outcomes	Significance
Tourigny (2008)- follow-up study	<u>(TSCC) Total mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 67.8 65.3 *Post-treatment:* **Treat. Group** **Control Group** 39.1 66.0 <u>(TSCC) Anxiety mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 12.9 11.8 *Post-treatment:* **Treat. Group** **Control Group** 8.2 12.7 <u>(TSCC) Depression mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 13.2 14.9 *Post-treatment:* **Treat. Group** **Control Group** 7.2 13.0 <u>(TSCC) Dissociation mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 11.6 10.3 *Post-treatment* **Treat. Group** **Control Group** 5.7 9.0 <u>(TSCC) Posttraumatic Stress mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 16.1 15.0 *Post-treatment:* **Treat. Group** **Control Group** 9.6 17.4 <u>(TSCC) Anger mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 9.6 9.8 *Post-treatment:* **Treat. Group** **Control Group** 6.0 10.0 <u>(TSCC) Sexual Preoccupation mean score</u> *Pre-treatment:* **Treat. Group** **Control Group** 7.6 6.6 *Post-treatment:* **Treat. Group** **Control Group** 4.2 7.8	Sig. decrease between pre and post- treatment total TSCC scores for treatment group ($p < .001$) on all TSCC subscales.

Sample analysed: Follow-up sample (n = 28)

Study	Outcomes	Significance
Tourigny (2008)-follow-up study	(YSRP) Internalising behaviour mean score *Pre-treatment* **Treat. Group Control Group** 27.7 29.5 *Post-treatment* **Treat. Group Control Group** 31.5 17.5	Sig. decrease in internalising behaviour scores for control group (p <.001).
	(YSRP) Social withdrawal mean score *Pre-treatment* **Treat. Group Control Group** 6.8 7.3 *Post-treatment* **Treat. Group Control Group** 8.6 4.7	Sig. decrease in social withdrawal behaviour scores for control group (p <.001).
	(YSRP) Externalising behaviour mean score *Pre-treatment* **Treat. Group Control Group** 14.2 16.5 *Post-treatment* **Treat. Group Control Group** 17.4 11.6	Sig. decrease in externalising behaviour scores for treatment group (p = .001).
	(YSRP) Delinquent behaviour mean score *Pre-treatment* **Treat. Group Control Group** 5.1 5.3 *Post-treatment* **Treat. Group Control Group** 5.8 3.7	Sig. decrease in delinquent behaviour scores between pre- and post-treatment between delinquent for control groups (p =.010).
	(YSRP) Aggressive behaviour mean score *Pre-treatment* **Treat. Group Control Group** 9.1 11.2 *Post-treatment* **Treat. Group Control Group** 11.6 7.9	Sig. difference in aggressive behaviour scores between pre and post-treatment for control group (p =.003).
	Self-Injurious behaviour mean score *Pre-treatment* **Treat. Group Control Group** 4.7 6.1 *Post-treatment* **Treat. Group Control Group** 4.5 4.8	Sig. decrease in self-injurious behaviour scores between pre-and post-treatment for control group (p<.001).

Sample analysed: Whole sample (n = 30)

Study	Outcomes	Significance
Verleur et al. (1986)	<u>Coopersmith Self Esteem Inventory (CSI) mean score</u> *Pre-treatment* **Group therapy** 13.25 **Control Group** 13.36 *Post-treatment* **Group therapy** 18.75 **Control Group** 15.29	Sig. increase in self-esteem scores for both groups between pre and post-treatment (p = .001).

Appendix 2.3

Results of Imagery Rehearsal Therapy.

Sample analysed: Whole sample (n =16)

Study	Outcomes	Significance
Krakow et al., (2001)	Nightmare Frequency Questionnaire (NFQ) mean of nightmares per month *Pre-treatment* **Treatment Group** **Control Group** 22.4 19.8 *Post-treatment* **Treatment Group** **Control Group** 6.6 23.1 Nightmare Distress Questionnaire (NDQ) mean number of nightmares per month *Pre-treatment* **Treatment Group** **Control Group** 26.4 30.8 *Post-treatment* **Treatment Group** **Control Group** 19.2 28.7 PTSD Symptom Scale- self report (PSS-SR) mean score *Pre-treatment* **Treatment Group** **Control Group** 16.6 23.5 **Treatment Group** **Control Group** 14.3 20.2	Sig. decrease in nightmare frequency for treatment group (p = .012). Sig. decrease in nightmare distress scores for treatment group (p = .02). No sig. difference between treatment and control groups for PSS-R scores (p = .525).

Appendix 2.4

Results for Prolonged Exposure Therapy. Sample analysed: Whole sample (n = 61).

Study	Outcomes	Significance
Foa, et al., (2013)	<u>CPSS-I mean score</u> *Pre-treatment* **Prolonged exposure** **Supportive counselling** 27.3 29.4 *Post-treatment* **Prolonged exposure** **Supportive counselling** 6.7 16.1 *Follow-up* **Prolonged exposure** **Supportive counselling** 7.3 15.1	Sig. greater decrease in CPSS-I scores for prolonged Exposure (p = <.001). Sig. decrease between pre- and post- treatment for both groups (p <.001).
	<u>Lost diagnosis of PTSD (K-SADS) (%)</u> *Pre-treatment* **Prolonged exposure** **Supportive counselling** 0.0 0.0 *Post-treatment* **Prolonged exposure** **Supportive counselling** 78.4 44.8 *Follow-up* **Prolonged exposure** **Supportive counselling** 89.0 54.7	Sig. greater increase in % of lost diagnosis of PTSD for prolonged Exposure (p = <.01). Sig. decrease between pre- and post-treatment for both groups (p <.001).
	<u>Self-reported mean PTSD score (CPSS-SR)</u> *Pre-treatment* **Prolonged exposure** **Supportive counselling** 28.6 31.4 *Post-treatment* **Prolonged exposure** **Supportive counselling** 9.9 16.1 *Follow-up* **Prolonged exposure** **Supportive counselling** 7.1 17.0	Sig. greater decrease in CPSS-SR scores for prolonged Exposure (p = <.02). Sig. decrease between pre- and post- treatment for both groups (p <.001).
	<u>Depression mean score (CDI)</u> *Pre-treatment* **Prolonged exposure** **Supportive counselling** 17.3 19.3 *Post-treatment* **Prolonged exposure** **Supportive counselling** 6.1 10.9 *Follow-up* **Prolonged exposure** **Supportive counselling** 5.9 12.6F	Sig. greater decrease in depression scores for prolonged Exposure (p = <.008). Sig. decrease between pre- and post-treatment for both groups (p <.001).

Note: Child PTSD Symptom Scale Interview (CPSS-I), Child PTSD Symptom Scale Self Report (CPSS-SR), Children's Depression Inventory (CDI)

Appendix 2.5

Results of Emotional Freedom Techniques Therapy (EFT).

Church et al., (2012)	Whole sample (n = 16)	<u>Impact of Events Scale (IES) total mean score</u> *Pre-treatment* **EFT single session** **Control Group** 36.38 32.00 *Post-treatment* **EFT single session** **Control Group** 3.38 31.38 <u>IES Memories scale mean score</u> *Pre-treatment* **EFT single session** **Control Group** 11.50 10.75 *Post-treatment* **EFT single session** **Control Group** 0.50 11.13 <u>IES Avoidance Scale mean score</u> *Pre-treatment* **EFT single session** **Control Group** 25.00 21.25 *Post-treatment* **EFT single session** **Control Group** 2.88 20.25	Sig. decrease in total scores between pre and post-treatment times for EFT (p <.001). Sig. decrease in memories scores between pre and post-treatment times for EFT (p <.001). Sig. decrease in avoidance scores between pre and post-treatment times for EFT (p <.001).

Appendix 2.6

Quality assessment of treatment outcome measures

Treatment outcome measures	Validated/ normed on adolescents	Good reliability	Validity measure in the tool
Coopersmith Self Esteem Inventory (CSI) (Coopersmith, 1981)	✓	✓	✓
The Children's Depression Rating Scale- Revised (Poznanski, & Mokros, 1996)	✓	✓	X
Kiddie-Sads- Present and Lifetime version (K-SADS-LS) (Kaufman et al., 1997)	✓	✓	X
Child PTSD Symptom Scale- interview (CPSS-I) (Foa et al., 2001)	✓	✓	X
Child PTSD Symptom Scale- self-report (CPSS-SR) (Foa et al., 2001)	✓	✓	?
Children's Depression Inventory (CDI) (Kovacs, 1985)	✓	✓	X
Beck Depression Inventory-II (Beck et al., 1996)	✓	✓	X
UCLA PTSD Index for DSM-IV Adolescent and Caregiver versions (Steinberg et al., 2004)	✓	✓	X
Behavioural Assessment System for Children (BASC-2) Parent and Youth versions (Reynolds & Kamphaus, 1992)	✓	✓	✓
Offer Self-Image Questionnaire- Revised (OSIQ-R) (Offer et al., 1992)	✓	✓	X
Suicidal Ideation Questionnaire (SIQ-JR) (Reynolds, 1988)	✓	✓	X
Scale of Suicidal Ideation- Past week (SSI-PW) (Beck et al., 1979)	✓	✓	X
Diagnostic Interview Schedule for Children – (DISC-IV) (Shaffer et al., 1997)	✓	✓	X
Nightmare Frequency Questionnaire (Krakow et al., (2002)	X	✓	X
Nightmare Distress Questionnaire (Belicki, 1992)	X	✓	X
PTSD symptom Scale- self rated (Foa, et al., 1993)	X	✓	?
Trauma Symptom Checklist for Children (TSCC) French version (Briere, 1996)	✓	✓	✓
Self-Injurious Behaviours Questionnaire (Sadowski, 1995) Unpublished manuscript	?	?	?
The Youth Self-Report and Profile (YSRP; Achenbach, 1991)	✓	✓	X
Impact of Events Scale (IES) (Spanish version) (Baguena et al., 1998)	X	✓	X
Piers Harris Children's Self Concept Scale (Piers, 1969)	✓	✓	X
The Institute for Personality and Ability Testing (IPAT) Anxiety Scale (Krug, Scheier, & Cattell, 1976)	✓	✓	X
(IPAT) Depression Scale (Krug & Laughlin, 1976)	✓	✓	X

Appendix 2.7

Inclusion Checklist

Inclusion Criteria	Tick if present
• Male and female adolescents (aged between 13 and 19 years).	
• Adolescents with a history of childhood maltreatment (sexual, physical, emotional abuse, neglect and exposure to domestic violence).	
• Psychological treatments which target the psychological harm of childhood maltreatment.	
• Psychological treatments that target the young person (which can also include their family).	
• Adolescents who have not received psychological treatment (waiting list) or have received less/minimal treatment. • Adolescents who have received an alternative form of treatment (other than psychological treatment) such as art or music therapy.	
• Self-report measures of trauma symptoms.	
• Symptoms of Post-Traumatic Stress Disorder and other disorders such as depression and anxiety.	
• Psychometric measures of trauma symptoms.	
• Behavioural rating scales (internalising/externalising behaviours).	
• Randomised Control Studies	
• Case control studies	
• Cohort studies	

Appendix 2.8

Quality assessment form: Case Control Studies

Y = Yes, N = No, P = partially met, U = Unclear	Y	N	P	U	Comments
Sampling and selection bias					
1. Were the samples recruited appropriately (e.g. are the cases defined precisely?					
2. Was everyone included who should have been?					
3. Was anyone excluded from the study?					
4. If so was the reason for this appropriate?					
5. Was there a power calculation to show if enough cases were selected?					
6. Were the controls selected in a suitable way? (From the same population as the cases?)					
7. Were the controls representative of the defined population?					
8. Was there a sufficient number of controls selected (power calculation)?					
9. Are the cases and controls comparable with respect to potential confounding variables?					
10. Are they matched, population based or randomly selected?					
Risk of selection bias?				*Low Unclear High*	
Measurement bias for exposure (childhood maltreatment)					
1. If self-report is used, is it corroborated?					
2. Are measures administered by trained individuals, external to the study?					
3. Are measures administered by the same person or individuals trained to assess in the same way and in the same setting?					
4. Was exposure for cases and controls measured in the same way?					
5. Do the tools appropriately define and measure the exposure?					
6. Is there a validity measure within the tool?					
7. Has the measure been validated/normed?					
8. Does the measure have good reliability?					
Risk of measurement bias for exposure?				*Low Unclear High*	
Measurement bias for outcome (effectiveness of psychological treatment)					
1. If self-report is used, is it corroborated?					
2. Are measures administered by trained individuals, external to the study?					
3. Are measures administered by the same person or individuals trained to assess in the same way and in the same setting?					
4. Was outcome for cases and controls measured in the same way?					

5. Do the tools appropriately define and measure the outcome?					
6. Is there a validity measure within the tool?					
7. Has the tool been validated/normed?					
8. Does the measure have good reliability?					
9. Have the authors identified all important confounding factors? Such as other ongoing types of therapy at the time, sources of ongoing trauma?					
10. Are the methods to control for confounding variables effective and appropriate?					
11. Was the follow-up for long enough?					
12. Were the assessors blind to the different groups?					
Risk of measurement bias for outcome?				*Low*	*Unclear* *High*
Attrition bias					
1. Is attrition accounted for and if so, is the stage of the study this occurred at recorded?					
2. Is the attrition rate acceptable at follow-up?					
3. Are the characteristics of the population that dropped out documented?					
4. How was the effect of subjects refusing to participate evaluated?					
Risk of attrition bias?				*Low*	*Unclear* *High*
Other issues					
1. Was the statistical analysis appropriate?					
2. Were assumptions of the data tested?					
3. How precise are the results? (Consider, size of the P-value, size of the confidence intervals)					
4. Have the authors considered all the important variables?					
5. Do the results seem too extreme or good to be believable?					

Overall quality
Number of participants
Risk of bias in different domains

Quality Assessment form: Randomised Control Studies

Y = Yes, N = No, P = Partially met U = Unclear	Y	N	P	U	Comments
SAMPLING AND SELECTION BIAS					
1. Were the samples recruited appropriately (e.g. are the cases defined precisely?					
2. Was everyone included who should have been?					
3. Was anyone excluded from the study?					
4. If so was the reason for this documented and appropriate?					
5. Was there a power calculation to show if enough cases were selected?					
6. Were the controls selected in a suitable way? (From the same population as the cases?)					
7. Were the controls representative of the defined population?					
8. Was there a sufficient number of controls selected (power calculation)?					
9. Are the cases and controls comparable with respect to potential confounding variables?					
10. Was the allocation concealed?					
MEASUREMENT BIAS FOR EXPOSURE (childhood maltreatment)					
1. If self-report is used, is it corroborated?					
2. Are measures administered by trained individuals, external to the study?					
3. Are measures administered by the same person or individuals trained to assess in the same way and in the same setting?					
4. Was exposure for cases and controls measured in the same way?					
5. Do the tools appropriately define and measure the exposure?					
6. Is there a validity measure within the tool?					
7. Has the measure been validated/normed?					
8. Does the measure have good reliability?					
Risk of measurement bias for exposure? Low Unclear High					
MEASUREMENT BIAS FOR OUTCOME (effectiveness of psychological treatment)					
1. If self-report is used, is it corroborated?					
2. Are measures administered by trained individuals, external to the study?					
3. Are measures administered by the same person or individuals trained to assess in the same way and in the same setting?					
4. Were outcomes for cases and controls measured in the same way?					
5. Do the tools appropriately define and measure the outcomes?					
6. Is there a validity measure within the tool?					

7. Has the measure been validated/normed on this population?					
8. Does the measure have good reliability?					
9. Have the authors identified all important confounding factors?					
10. Are the methods to control for confounding variables effective and appropriate?					
11. Were the assessors blind to the different groups?					
12. Was the follow-up for long enough?					
Risk of measurement bias for outcome? *Low* *Unclear* *High*					
ATTRITION BIAS					
1. Is attrition accounted for and if so, is the stage of the study this occurred at recorded?					
2. Is the attrition rate acceptable for follow-up?					
3. Are the characteristics of the population that dropped out documented?					
4. How was the effect of subjects refusing to participate evaluated?					
Risk of attrition bias? *Low* *Unclear* *High*					
ANY OTHER ISSUES					
1. Was the statistical analysis appropriate?					
2. Were assumptions of the data tested?					
3. How precise are the results? (Range of confidence intervals?)					
4. Have the authors considered all the important variables?					
5. Do the results seem too extreme or good to be believable?					

Overall quality
Number of participants
Risk of bias in different domains

Quality Assessment form: Cohort Studies

Y = Yes, N = No, P = Partially met, U = Unclear	Y	N	P	U	Comments
SAMPLING AND SELECTION BIAS					
1. Were the samples recruited appropriately (e.g. are the cases defined precisely?					
2. Was everyone included who should have been?					
3. Was anyone excluded from the study?					
4. If so was the reason for this appropriate?					
5. Was there a power calculation to show if enough cases were selected?					
6. Were the controls selected in a suitable way? (From the same population as the cases?)					
7. Were the controls representative of the defined population?					
8. Was there a sufficient number of controls selected (power calculation)?					
9. Are the cases and controls comparable with respect to potential confounding variables?					
10. Are they matched, population based or randomly selected?					
Risk of selection bias?			*Low*	*Unclear*	*High*
MEASUREMENT BIAS FOR EXPOSURE (Childhood maltreatment)					
1. If self-report is used, is it corroborated?					
2. Are measures administered by trained individuals, external to the study?					
3. Are measures administered by the same person or individuals trained to assess in the same way and in the same setting?					
4. Was exposure for cases and controls measured in the same way?					
5. Do the tools appropriately define and measure the exposure?					
6. Is there a validity measure within the tool?					
7. Has the measure been validated/normed?					
8. Does the measure have good reliability?					
Risk of measurement bias for exposure?			*Low*	*Unclear*	*High*
MEASUREMENT BIAS FOR OUTCOME (effectiveness of psychological treatment)					
1. If self-report is used, is it corroborated?					
2. Are measures administered by trained individuals, external to the study?					
3. Are measures administered by the same person or individuals trained to assess in the same way and in the same setting?					
4. Were outcomes for cases and controls measured in the same way? 5. Do the tools appropriately define and measure the outcomes?					
6. Is there a validity measure within the tool?					

7. Has the measure been validated/normed on this population?					
8. Does the measure have good reliability?					
9. Have the authors identified all important confounding factors?					
10. Are the methods to control for confounding variables effective and appropriate?					
11. Were the assessors blind to the different groups?					
12. Was the follow up for long enough?					
Risk of measurement bias for outcome?			*Low*	*Unclear*	*High*
ATTRITION BIAS					
1. Is attrition accounted for and if so, is the stage of the study this occurred at recorded?					
2. Is the attrition rate acceptable for follow-up?					
3. Are the characteristics of the population that dropped out documented?					
4. How was the effect of subjects refusing to participate evaluated?					
Risk of attrition bias?			*Low*	*Unclear*	*High*
ANY OTHER ISSUES					
1. Was the statistical analysis appropriate?					
2. Were assumptions of the data tested?					
3. How precise are the results? (Range of confidence intervals?)					
4. Have the authors considered all the important variables?					
5. Do the results seem too extreme or good to be believable?					

Overall quality
Number of participants
Risk of bias in different domains

Appendix 2.9

Data Extraction Form

General information	
Date	
Study number	
Author(s)	
Title	
Type of publication	
Country of origin	
Funding source	
Study characteristics	
Aims/Objectives	
Design	
Inclusion/exclusion criteria	
Recruitment	
Participant characteristics	
Number in sample	
Age	
Gender	
Ethnicity	
Diagnosis	
Co-morbidities	
Child maltreatment measure	
Type of maltreatment	
Measure of maltreatment	
Administrator of measure	
Intervention outcome & results	
Type of intervention	
Duration of intervention	
Outcome measure	
Administrator of measure	
Unit of measure	
Statistical methods	
Results of analysis	
Significant findings	
Non-significant findings	
P Values	
Type of control group	

Additional outcomes	

Appendix 3.0

Summary of sexual and non-sexual offences (2005-2010):

Please see cluster diagram of offences in Appendix 3.1.

-Formal reprimand for property damage (Convicted November 2005).

-Formal warning for using racially threatening abusive or insulting words or behaviour to cause fear or provocation of violence (Convicted April 2006).

-Conviction for shoplifting and a Referral Order for three months was made (Convicted August 2006)

-Attempted theft of a cycle. Sentenced with a six months Conditional Discharge which was breached given the offences described below (Convicted May 2006).

-Criminal damage- Client W is said to have damaged the primary school mini bus by throwing a tin of paint over it. He also painted over the CCTV camera (Convicted May 2008).

-Sexual assault on a female- Client W approached a 49 year old woman unknown to him and slapped her on the bottom. When she confronted him it is reported that he said to her “fancy a shag?” It is reported that during his interview for this charge Client W said he did not know why he had done this, but that he was sexually excited by this and that he found it “funny” (Convicted May 2008).

-Criminal damage- Client W destroyed some pot plants at the same primary school. HE also climbed onto the garage roof and damaged the floodlight. During the interview for this charge Client W said he found some scissors and attempted to cut through the wires of the floodlight. (Convicted May 2008).

-Sexual assault of a female child under 13 years. Client W approached a 12 year old girl and slapped her on her bottom twice. He produced a packet of condoms and asked her “fancy a shag?” During the interview for this charge he told the interviewer that he was sexually excited by the act but that he did not want to have sex and he did it as a joke (Convicted May 2008).

-Use of threatening abusive insulting words/behaviour or disorderly behaviour to cause harassment/distress. Client W approached a 40 year old woman and commented “hey sexy woman”. He then stated “can I screw you or stab you?” His victim left the vicinity (Convicted July 2008).

-Assault on a female- this offence is said to have occurred only thirty minutes later than the one described above. Client W approached a 44 year old woman who was walking her dogs. Client W proceeded to slap the woman on her buttocks. His victim confronted him and threatened to call the police. Client W stated “I wouldn’t do that if I were you as I’ve got a knife”. The victim noted that Client W has taken an object out of his pocket though she could not identify it was a knife. Client W later said he had taken out his wristwatch. Client W left the area when the woman threatened to set her dogs on him. During his police interview Client W said he was sexually excited by his actions. He also made a reference to “worrying himself” and not being in control of his behaviour. (Convicted July 2008)

-Client W pleaded guilty to all the charges described above. He was convicted of all the charges detailed above and he was made subject to a two year supervision order on 20/08/08. He was also issued with a Sex Offence Notice for two years and six months however the requirement was removed on 27/08/08.

-Assault on a female. Client W is said to have approached a nine year old girl when she was alone. He asked her where she lived and asked her if he could show her where he lived. After walking for a while Client W told the girl that they had to stop. He then told her to “snog” him and proceeded to kiss her on the lips and cheeks. The victim said that she pushed him away and said that she should go home. Client W is then reported to have said “wait, stop, let’s sit on the wall for a bit”. The girl cycled away, feeling frightened. She subsequently informed her mother who contacted the police. Client W pleaded not guilty to this charge (October 2008).

Client W was convicted of this offence and was made subject to a 24 months Supervision Order in January 2009. The Order listed the following extra requirements:

>That he is to submit a risk assessment by 15.03.09 and a cognitive assessment by 31.03.09.

>Not to leave placement except when accompanied by a carer, at any time or as directed by CYPS for the duration of the order.

>Go to school every day.

>Comply with the supervisors instructions for the duration of the order.

>Reside where directed by supervising officer.

-Client W was convicted of theft for stealing a mobile phone. He was made subject to a Reparation Order on 05.01.10 which stipulated that he must make reparation for twelve hours within three months of the Order. He successfully completed the Order. (Convicted October 2009).

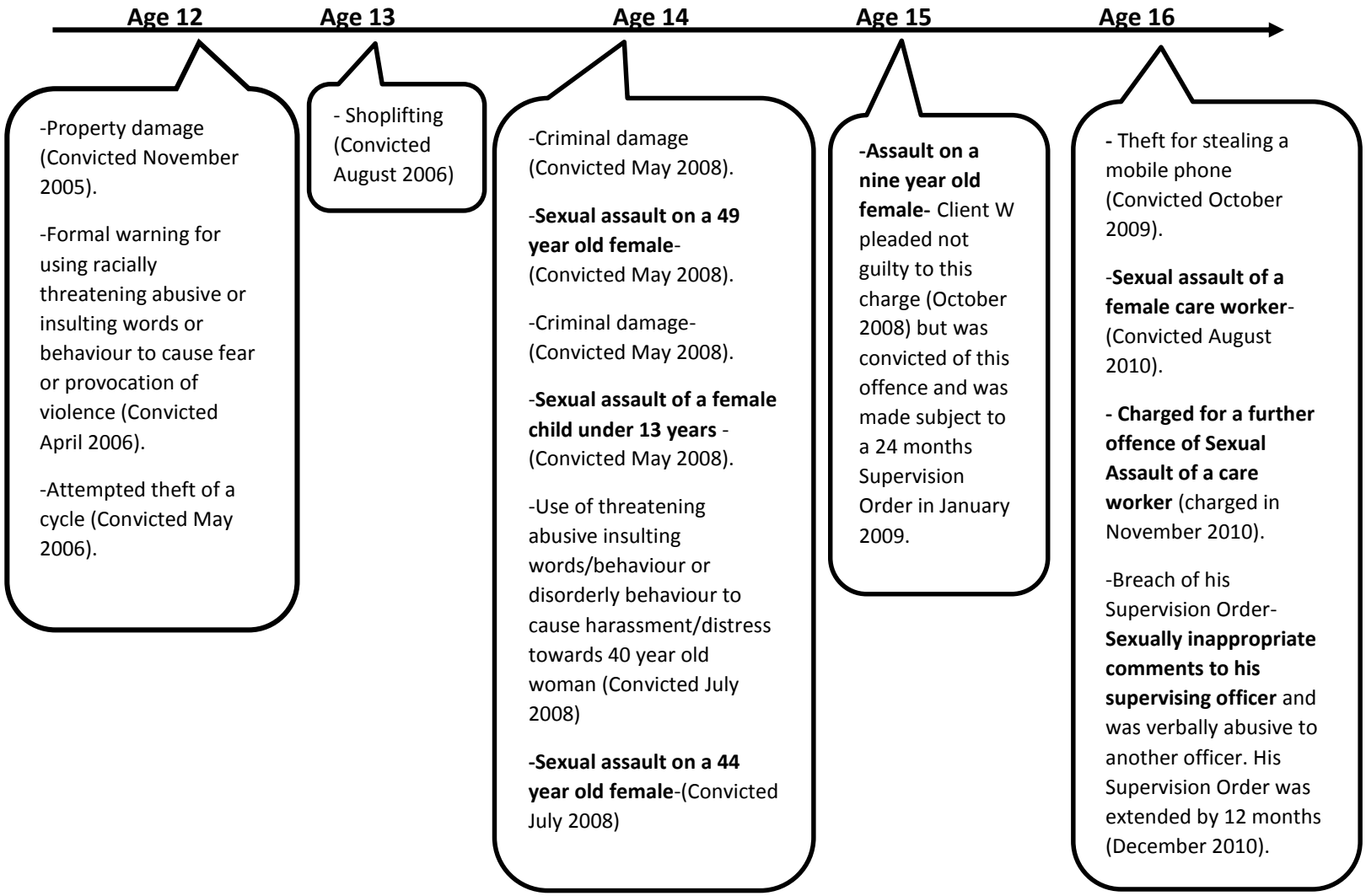
-Assault on a female. Client W was convicted of intentionally touching a woman (one of his care workers). He was made subject to a Youth Rehabilitation Order with the requirement to attend an Attendance Centre for a period of 12 months (Convicted August 2010).

-W was charged for a further offence of Sexual Assault. The incident involved Client W touching a female care worker on the buttocks (charged in November 2010).

-W was in breach of his Supervision Order. He had made sexually inappropriate comments to his supervising officer and was verbally abusive to another officer. His Supervision Order was extended by 12 months (December 2010).

Appendix 3.1

Summary of sexual and non-sexual offences (2005-2010) Cluster Diagram.



Appendix 3.2

Assessments for psychological formulation and treatment planning:

Risk for Sexual Violence Protocol (RSVP)

The RSVP (Hart, Kropp, Laws, Klaver, Logan, & Watt (2003) is a set of professional guidelines for the assessment of risk of sexual violence. It identifies static and dynamic risk factors based on literature review and consultation with clinicians and academics. The RSVP provides explicit guidelines for risk formulation, based on risk scenarios, and risk management strategies. The RSVP is mainly designed to be used with males over the age of eighteen with a known or suspected history of sexual violence. It can be used with older male adolescents and with women, though the research in respect of these populations is more limited. The RSVP assumes that risk must be defined in the context in which it occurs and regards the primary risk decision as preventative, considering steps which are required to minimise any risks posed by the individual being assessed.

The Trauma Symptom Checklist for Children (Briere, 1996)

The TSCC (Briere, 1996) is a 54 item self-report which evaluates posttraumatic distress and related symptomatology. The items of the TSCC are explicitly written at a level thought to be understood by children eight years of age or older. The 54 items yield two validity scales (Underresponse and Hyperresponse) and six clinical scales (Anxiety, Depression, Anger, Posttraumatic Stress, Dissociation, and Sexual Concerns). The TSCC is intended for use in the evaluation of children who have experienced traumatic events, including child abuse (sexual, physical, and psychological) and neglect, victimisation by peers, major losses, witnessing trauma to others, major accidents, and natural disasters. The scale measures not only posttraumatic stress, but also other symptom clusters found in some traumatised adolescents.

An analysis of reliability for the TSCC scales in the normative sample (3,008 children combined from three nonclinical samples; Evans, Briere, Boggiano, & Barrett, 1994;

Friedrich, 1995; Singer, Anglin, Song, & Lunghofer, 1995) showed high internal consistency for five of the six clinical scales (α range from .82 to .89) and the remaining clinical scale (Sexual Concerns) was moderately reliable (α = .77). The reliability of the clinical subscales for internal consistency was also generally high in several other samples (three samples from a Child Abuse Centre, Elliott & Briere, 1994; Lanktree & Briere, 1995b; Nelson-Gardell, 1995). A later study by Sadowski and Friedrich (2000) demonstrated that the individual TSCC scales and subscales had moderate to high internal consistency in a clinical sample of psychiatrically hospitalised adolescents (Dissociation Fantasy: α= .71, Overt Dissociation: α= .88, Sexual Distress: α=.73, Sexual Preoccupation α=.78). Many other studies have found good Convergent and Discriminant validity for the measure.

Beck Youth Inventories- 2nd Edition (BYI-II)

The BYI-II (Beck, Beck, Jolly, & Steer, 2005) comprises five self-report scales to assess the young person's experience of depression, anxiety, anger, disruptive behaviour and self-concept. The inventories are intended for use with children and adolescents between the ages of 7 and 18 and are written at a reading age suitable for those aged 7 years so the items are easy to understand. 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.

This measure was developed using a sample of 1100 children from four demographic regions and 30 sites in the US. In addition to the sex- and age-based norming groups, results from a sample of 107 children receiving outpatient mental health services were used to develop a clinical comparison group. These children were collected from one site in New Jersey. Bose-Deakins, & Floyd (2004) found that the internal consistency coefficients for all inventories exceeded the minimum criterion of .80 using Cronbach's coefficient alpha method for each norm group. In terms of validity, the authors report that the BYI has good content validity and correlations between inventory scores across the four norm groups indicated consistent, strong, and statistically significant relations. Bose-Deakins & Floyd also found sound convergent validity evidence for the inventories.

Interpersonal Personality Disorder Examination (IPDE) - Abbreviated (DSM-IV version)

The IPDE (Loranger, Sartorius, & Janca, 1996) was developed to assess personality disorders as they are defined by the Diagnostic and Statistical Manual of Mental Disorders and the International Classification of Diseases. Results from the IPDE interview allow the examiner to assign a definite, probable or negative diagnosis for each personality disorder. The IPDE Interview questions are arranged in a format that provides the optimal balance between a spontaneous, natural clinical interview and the requirements of standardisation and objectivity. Self-report questionnaires provide a quick structured assessment of many traits but are limited by an individual's insight and what they are willing to reveal or share. In forensic settings it is recommended that personality assessments do not rely on self-report assessments alone (Hart, 2001), it is therefore suggested that informant information be gathered to offset the limitation of self-reports measured.

The IPDE clinical interview was not completed in full due to two areas being of specific interest (Narcissistic Personality Disorder and Schizotypal Personality Disorder). The manual advises that the interview may be abbreviated to assess specific personality disorders provided all questions pertaining to the specific disorder are asked. The interview was conducted by a psychologist that does not work with and has not previously met Client W. Informant information was provided by the Assistant Psychologist that works with Client W. Self-report information was gathered over a series of clinical interviews. Information was collected following the clinical interview with Client W to prevent interviewer bias during the IPDE interview. Where informant information was used to evaluate a criterion, it is felt to be more reliable than self-report information and was subject to the same scoring criteria as self-report information.

Psychometrics used for pre and post-intervention assessment (illustrated in Chapter 3, Table 3.1):

Novoco Anger Scale and Provocation Inventory (NAS-PI)

The NAS-PI helps clinicians and researchers evaluate the role of anger in various psychological and physical conditions. It can be used in clinical, community and prison settings. The NAS-PI is composed of two parts; the Novaco Anger Scale (60 items), which tells you how an individual experiences anger and the Provocation Inventory (25 items), which identifies the kind of situations that induce anger in particular individuals. It was standardised on an age stratified sample using 1,546 persons, ages 9-84 years. Separate norms are provided for preadolescents/adolescents (ages 9-18) and adults (ages 19 and older). Novaco, & Taylor, (2004) investigated the reliability and validity of the NAS-PI using a sample of 129 male inpatients with developmental disabilities (mostly forensic). The authors found high internal consistency: NAS Total=.92 (n = 110), and PI = .92 (n = 114) and high inter-measure consistency. There were also some concurrent validity with staff ratings.

Social Problem Solving Inventory (SPSI) (D'Zurilla, & Nezu, 1990)

The SPSI assesses individual's strengths and weaknesses in their problem-solving abilities so that deficits can be addressed and progress monitored. The SPSI consists of 2 major scales and 7 subscales. The 2 major scales are the Problem Orientation Scale (POS) which has three subscales: the Cognition subscale, the Emotion subscale, and the Behaviour subscale and the Problem-Solving Skills Scale (PSSS) which is divided into 4 subscales: the Problem Definition and Formulation subscale, the Generation of Alternative Solutions subscale, the Decision Making subscale, and the Solution Implementation and Verification subscale. The original SPSI was standardised on a population of undergraduate college students and middle aged community residents. The psychometric properties of the original and revised inventories were investigated by Sadowski, Moore, & Kelley, (1994) for normal adolescents and psychiatrically hospitalized adolescents (n=63). Internal consistency and reliability estimates were adequate.

Questionnaire on Attitudes Consistent with Sexual Offending (QACSO) (Lindsay, Whitefield, Carson, Broxholme, & Steptoe, 2004; Lindsay, Whitefield & Carson, 2007)

This questionnaire was designed specifically for use with sex offenders with Intellectual Disability (ID). The QACSO assesses an individual's attitudes and beliefs related to sexual behaviour and offending. The items are divided into seven scales: rape and attitudes towards women, voyeurism, exhibitionism, dating abuse, homosexual assault, offences against children, and stalking and sexual harassment. Each scale contains questions related to intent, responsibility and victim awareness. The seven scale version was tested on four groups – sexual offenders with ID, non-sex offenders with ID, non-offenders with ID, and non-offender non-ID controls (Lindsay et al., 2007). It was found that the test had good internal consistency (α = 0.79 to 0.86) for all scales except the homosexual assault scale. As with the earlier version, the test was able to differentiate between sexual offenders with ID and other groups (Lindsay et al., 2007).

Beck Youth Inventories- 2nd Edition (BYI-II)

(Please see description outlined above).

How I Think Questionnaire (HIT) (Barriga, Gibbs, Potter, & Liau, 2001)

This questionnaire was developed to measure self-serving cognitive distortions (thinking errors). The Behavioural referent subscales include: Opposition-Defiance, Physical Aggression, Lying, and Stealing. The Cognitive distortion subscales include: Self-Centred, Blaming Others, Minimizing/Mislabelling, and Assuming the Worst. This measure was developed on a sample of 147 male adolescents' ages 14 to 20 from Ohio. Participants were divided into three criterion groups: incarcerated at a juvenile corrections facility (n=55), in grades 10-12 at an urban working class public high school (n=50), and in grades 10-12 at a suburban upper middle class public high school (n=42). The authors reported a test-retest reliability of 0.91, and internal consistency reliabilities (alphas) of 0.64-0.96. Further studies have reported alphas of 0.66-0.96. The authors have also reported evidence of extensive convergent validity. Further studies have also reported evidence of discriminative validity and moderate divergent validity.