COPING STYLES AND DISORDERED EATING IN SURVIVORS OF CHILDHOOD SEXUAL ABUSE

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Abstract

Childhood sexual abuse (CSA) is a complex form of trauma that can have long-lasting effects on how an individual copes with stress and adversity in their daily life. CSA has been associated with a number of sequelae, one of them being eating disorder (ED). This thesis focuses on the coping styles of CSA survivors and explores the link between CSA and ED, through the lens of coping and trauma-related cognitions. Due to a gender imbalance in the current literature, a systematic review of studies measuring the link between ED and CSA in males was carried out. Half of the studies included in the review found support for the relationship between CSA and harmful eating patterns in males. A case study of a male CSA survivor presenting with difficulties coping with emotions, expressed as self-injury, binge eating and physical and sexual aggression towards others, revealed that a coping-focused intervention successfully reduced harmful behaviours. An empirical study (N=295) investigated coping styles and early maladaptive schema as mediating variables in the link between CSA and ED, using the EAT-26, the Young Schema Questionnaire (YSQ-S3) and the Brief COPE. The sample included participants recruited from social media platforms (n 118), as well as ED (164) and CSA support forums (13). Only early maladaptive schema were found to mediate the relationship between CSA and ED. An interpretation may be that ED itself is a coping mechanism. A psychometric review of the Brief Coping with Problems Experienced (COPE) scale, highlights difficulties in the measurement of coping and explores potential benefits of a conceptualisation focusing on flexibility in coping, rather than style of coping. It also indicates a need for more trauma-sensitive measures when assessing coping strategies in this population. Future research should focus on the specific early maladaptive schemas or schema domains that may influence the relationship between CSA and ED. Future efforts should also aim to better understand the relationships of these variables in male survivors. Clinical implications are discussed, along with limitations of the thesis.

Overview

This thesis explores the coping styles used by survivors of child sexual abuse, and through this lens, the link to disordered eating. Cognitive representations, in the form of early maladaptive schema, are also considered. These concepts are examined within the context of long-term adjustment following child sexual abuse. The implications for interventions with survivors, including within forensic settings, are considered.

Chapter One critically examines empirical studies that have explored the link between child sexual abuse and eating disorder in male survivors. The review included males only, considering that eating disorder in male survivors has received less attention by researchers and clinicians, and the findings to date had yet to be reviewed. The review used a comprehensive search strategy and considered all studies investigating the relationship between the two variables, published between 2001 and 2016. A narrative synthesis is provided, along with the methodological limitations of the studies. The implications of the review informed the inclusion criteria for chapter three, whereby males were included in the study.

Chapter Two is a case study exploring the coping strategies of a male survivor and perpetrator of child sexual abuse. The psychological formulation illustrates how self-harm, binge eating, and physical and sexual aggression towards others could be conceptualised within a coping and self-regulatory framework. An intervention focusing on building coping skills for managing difficult thoughts and feelings, as informed by dialectical-behavioural and narrative approaches, was delivered over 22 sessions. The intervention successfully reduced self-harming behaviour and yielded significant clinical change on several subscales of an

emotion regulation measure. Limitations of the intervention are discussed, with a particular focus on the systemic challenges of delivering a coping-focused intervention in a prison environment.

Chapter Three is an empirical study of the relationship between child sexual abuse and eating disorder, with coping styles and early maladaptive schema as mediating variables. 295 participants (262 females, 28 males and 8 gender non-conforming) were recruited from social media platforms and eating disorder or child sexual abuse survivor support forums. They were asked to complete a battery of questionnaires exploring their coping styles, early maladaptive schema, eating disorder risk and whether they had experienced child sexual abuse. Early maladaptive schema was found to mediate the relationship between child sexual abuse and eating pathology. However, coping style was not found to be a significant mediator. Methodological limitations and implications for future research and clinical practice are discussed.

Chapter Four critically evaluates the Brief COPE scale (Carver, 1997), as used with childhood trauma survivors. The chapter examines the development and generic psychometric properties of the scale, before moving onto the trauma-specific context. Examining the utility and acceptability of the scale as a measure of coping within the childhood trauma context was particularly pertinent given the lack of support for coping as a mediating variable found in Chapter Two. Common challenges to the conceptualisation and measurement of coping are discussed and the need for trauma-specific measures is highlighted.

The thesis is concluded with a discussion summarising the findings presented in individual chapters, and considering their implications for research and practice.

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Introduction

Psychological trauma has been described as an inescapable stressful event that overwhelm an individual's existing coping mechanisms (van der Kolk & Fisler, 1995). Such events threaten an individual's sense of safety and stability in the world, which often makes recovery difficult. Traumatic events may include traffic accidents or natural disasters, but are found to have the gravest of impact when being intentional and interpersonal, due to elements of betrayal, injustice and immorality (Finkelhor, 2008, Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). The childhood trauma term will be used to refer to such interpersonal experiences.

The UN Convention of the Rights of the child defines a child as someone aged under 18 (1989). Childhood trauma is widespread and has significant individual and societal implications. The NSPCC's national survey on child abuse and neglect in the UK (Radford, Corral, Bradley, Fisher, Collishaw Bassett & Howat, 2011) found that one in five children had experienced severe maltreatment. They also found that all types of abuse and neglect were associated with poor mental health. A landmark study of the long-term consequences of childhood trauma was the adverse childhood experiences (ACE) study (Felitti, Anda, Nordenberg, et al. 1998), which linked early traumatic experiences with a number of negative outcomes: substance abuse, mental illness, suicide attempts, poor academic achievement, sexual risk taking, financial stresses, and heart and liver diseases. Findings that have since been extensively replicated and expanded upon (Nemeroff, 2004; Goodwin & Stein, 2004; Varese, Smeets, Drukker, et al., 2012). This includes the link to criminal and violent behaviour. The prevalence of childhood trauma is high within forensic settings (Spitzer,

Chevalier, Gillner, Freyberger & Barnow, 2006; Ardino, 2011; Wolff & Shi, 2012) and a recently published cohort study (Webb, Antonsen, Carr, Appleby, Pedersen & Mok, 2017) links early trauma with both internal and external destructive behaviours, including self-harm and interpersonal violence.

The increasing body of evidence detailing the societal impact of childhood trauma has led childhood abuse and injury to be considered as major contributors to the global burden of disease (Sara & Lappin, 2017). It weighs heavy economically and it has been estimated that childhood sexual abuse alone costs the UK £3.2 billion annually (Saied-Tessier, 2014).

Child sexual abuse (CSA) includes forcing or persuading a child to take part in a sexual activity, including both contact and non-contact interactions (NSPCC, 2015). Within this context, the legal definition of a child may vary depending on the age of sexual consent. In the UK, the age of consent is 16. CSA is prevalent with one in eight adults globally reporting having been victimised (Stoltenborgh, Bakermans-Kranenburg, Alink & van Ijzendoorn, 2015). It often has grave impact upon its victims as an invasive form of trauma associated with a number of poor health and wellbeing outcomes (Bal, Crombez, Bourdeaudhuij & Van Oost, 2009). The later consequences of CSA for physical and psychological wellbeing have been extensively examined and CSA has been classified as a risk factor for a number of psychiatric disorders, such as PTSD, substance abuse, mood, anxiety and eating disorders (Molnar, Buka & Kessler, 2001; Smolak & Murnen, 2002; Brewerton, 2007). Eating disorder (ED) in particular has attracted substantial attention as a sequela of CSA and the temporal relationship between these two phenomena has been examined for decades.

EDs are a group of complex conditions involving food and weight-related thoughts, emotions and behaviours that are harmful to an individual's health (National Eating Disorders Association, 2017). EDs often emerge during adolescent years and typically have a duration of 6 or more years (PricewaterhouseCoopers, 2015). They have prevailing and serious health effects, including life-threatening consequences for sufferers (PricewaterhouseCoopers, 2015). EDs vary in their presentation, with different types characterised by various behavioural components, such as excessive or inadequate food intake, or harmful weight regulation practices (National Eating Disorders Association, 2017).

The idea that CSA could lead to later development of ED falls within the stress-diathesis model (Zuckerman, 1999) and various theories are available to account for why CSA is a risk factor for the later development of an ED. These theories incorporate both restrictive and over-eating behaviours. Whilst some authors theorise that self-starvation is a strategy to re-exert control over one's body following sexual victimisation (Scwartz & Gay, 1993), others believe that early sexual victimisation can lead to a dissociative coping style expressed as binge eating (Perry, Pollard, Blakely, Baker & Vigilante1995). Others suggest that eating disorder symptoms may function as self-punishment following abuse (Favaro, & Santonastaso, 2000), or be an attempt at avoiding sexual maturation, which may have direct linkage to abuse experiences (Romans, Gendall, Martin & Mullen, 2001). Furthermore, emotional eating may be used as a coping strategy to regulate distress or negative affect arising from abuse experiences (Groleau, Steiger, Bruce, Israel, Sycz, Ouellette & Badawi, 2012).

A large body of research has linked CSA with ED. Some studies have found a higher prevalence of harmful eating behaviours amongst CSA survivors, compared to control samples (Romans et al., 2001; Conley & Garza, 2011). Other studies have focused on the high rates of reported CSA in populations presenting with ED (Tice, Hall, Beresford, Quinones & Hall,1989; Lock, Reisel & Steiner, 2001). Longitudinal research has further supported CSA as a risk factor for the development of ED (Sanci, Coffey, Olsson, Reid, Carlin & Patton, 2008).

Understanding the role that CSA plays in the aetiology of ED is important. CSA survivors in eating disorder treatment are more likely to present with comorbid psychiatric symptoms and suicidal and self-injurious behaviour (Tobin & Griffing, 1996). CSA experiences have been associated with poor treatment prognosis in conventional ED treatment programmes (Gleaves & Everenz, 1994; Vrabel, Rø, Martinsen, Hoffart & Rosenvinge, 2010). Conversely, women in group treatment for sexual trauma have been found to have worse outcomes if affected by eating pathology (Harper, Richter & Gorey, 2010). Molinari (2001) reviewed various studies reporting on the link between CSA and ED and suggested that, whilst the pathways to developing ED are complex and multi-factorial, one of the ways in which CSA affects subsequent child development and sets the scene for an ED, is within the remit of coping with trauma-related cognitions and intense emotions.

Coping with CSA

Children are more vulnerable to the aftereffects of traumatic events for various reasons. They are undergoing crucial developmental stages in terms of brain maturation and are less able to appreciate the relationship between cause and effect, which combined with limited access to language, prevents processing and

integration of traumatic events (van der Kolk, 2014). Furthermore, children are reliant on adults and significant others to protect them in the face of threat (Bowlby, 1969). When such protection is absent, the child commonly resorts to the limited strategies they have at hand to protect themselves from what is happening to them (Perry, et al., 1995). A traumatic context may also inhibit the development of more adaptive coping strategies and lead to an over-reliance on primitive coping strategies that can become pervasive and long-standing (Morrow & Smith, 1995; Briere, 2002). If over-generalised, these coping strategies affect several aspects of human functioning, including mood regulation and interpersonal interaction. Maladaptive coping strategies have been associated with a number of adverse outcomes, such as personality disorders (Young, 1994), self-injury (Nixon, Cloutier & Aggarawal, 2002) and substance misuse (Garland, Pettus-Davis & Howard, 2013). This may possibly be extended to eating disorders, as some ED behaviours have been conceptualised as means of coping with trauma (Brewerton, 2004) and low levels of coping resources have been associated with increased ED symptomatology (Tagay, Schlottbohm, Reyes-Rodriguez, Repic & Senf 2014).

This thesis explores the relationship between CSA and ED, within the context of coping. Coping is an important concept in understanding psychological adjustment following trauma. As such, the concept may offer a window of opportunity to improve understanding of the development of dysfunctional and harmful behaviours expressed by CSA survivors. It may help to shed further light upon the relationship between CSA and ED, in addition to providing a measurable intervention target. The thesis aims to take a gender-sensitive approach to the interaction of these variables. It has been suggested that boys

and girls cope differently with traumatic exposure, with girls using more internalising strategies, whilst boys are more likely to cope by externalisation, such as aggression, delinquency and hyperactivity (Briere & Scott, 2006). This may have led to disproportionate distribution of research resources and differing diagnostic labels prescribed to individuals with CSA experiences (Jane, Oltmanns, South & Turkheimer, 2007).

The thesis begins by examining the literature on the relationship between CSA and ED using a systematic review methodology. ED in males is understudied and as studies addressing the relationship between CSA and ED in males had yet to be reviewed, males only were considered. The thesis goes on to consider a coping-focused intervention with a male survivor of childhood sexual abuse, presenting with various self-harming behaviours. The thesis then continues by exploring the relationship between CSA and ED in an empirical study and adds to the existing literature base, by looking at coping styles and early maladaptive schema as potential mediators. The limitations and implications of carrying out this type of intervention in a prison setting are discussed. The thesis finally critically examines the Brief Coping with Problems Experienced (COPE) scale. Its psychometric properties are considered and its utility within the childhood trauma context is explored, adding original value. The thesis concludes with a review of the findings, a summary of its limitations and implications for future research and clinical practice.

CHAPTER 1

Child Sexual Abuse and Eating Disorder in Males:

A Systematic Review

Abstract

Child sexual abuse (CSA) has been identified as a risk factor for eating disorders (ED) through decades of research on the subject. Previous reviews have however focused on female samples and the evidence base on male populations remains unexplored. This review aimed to investigate whether CSA is associated with ED in males, to explore the variables that may underlie such association, and to compare the results to female samples where possible. Searches of seven databases yielded 18 eligible studies and included 29,067 male participants. The results were disparate, with half of the papers (n=9) reporting some form of association between the two variables in their male samples. This number was slightly higher for females. The disparity in findings was partly attributed to methodological differences in how CSA and ED were conceptualised and measured. The findings are also affected by the poor methodological quality of studies and in particular a lack of prospective studies establishing causality. Results suggest that CSA may be a risk factor for ED in males, but further research, utilising validated measures and longitudinal designs, is needed in order to improve understanding of gender effects upon the link between CSA and ED.

Background

Eating disorder (ED) has attracted substantial attention as a sequela of CSA and the literature base on the link between the two variables, has been reviewed several times (Connors & Morson, 1993; Smolak & Murnen, 2002; Narvaz & Oliveira, 2009; Chen, Murad, Paras, et al., 2010; Madowitz, Matheson & Lang, 2015). The most thorough review was conducted by Smolak and Murnen in 2002. They carried out a meta-analysis of 53 studies to explore the nature of the relationship between the two factors, along with the methodological variables that accounted for variations in the relationship. They found a significant correlation between the two, but discovered that this varied greatly depending on which of the factors were treated as the independent variable and which tools were used to measure ED. They concluded that greater specificity was needed about which components of ED are linked to which kinds of abuse experiences. Their paper did not report on gender effects. A review published in 2009 (N=40) by Narvaz and Oliveira, looked more closely at bulimia in particular. The results of this review were mixed, which led researchers to conclude that CSA likely is a risk factor acting through a complex network of other associated variables, although similarly to Smolak and Murnen (2002), they acknowledged that methodological and conceptual difficulties may have influenced the results. This study relied mainly on Spanish language databases, searching only two in English (Google Scholar and Medline). The limited number of databases, along with restricting search terms to bulimia and binge eating, may have resulted in exclusion of important literature, particularly in the field of anorexia and restrictive eating disorders. Furthermore, the review did not report on males. A 2010 review (Chen at al.) evaluating the link between CSA and psychiatric disorders found a significant association between CSA and ED, using a

comprehensive search strategy (N=37). This review also reported that the relationship was strengthened by a history of rape. The review concluded that the relationship between the two factors persisted regardless of gender, but included only one study reporting on males.

The most recent review was published in 2015 by Madowitz, Matheson & Liang (N=32) and considered sexual violence across the lifespan. They found an increased prevalence of CSA in eating disordered women and concluded that sexual trauma and ED tend to co-occur, with some studies supporting the notion that CSA precedes the development of ED. This review considered only three databases, possibly excluding relevant material and although males were included in the review, the effects of gender were not reported.

Despite the effects of conceptual and methodological differences, most reviews have found evidence of an association between CSA and ED. However, most of the reviews report results for females only or make no comparison of the extent to which this association differs between males and females. Hence, the literature on the link between CSA and ED in males has yet to be examined.

The focus on females can likely be attributed to evidence suggesting that both ED and CSA more commonly affects females (Cawson, Wattam, Brooker & Kelly, 2000; Micali, Hagberg, Petersen & Treasure, 2013). The rate of CSA for males has however been estimated at high levels, with some studies suggesting that as much as one in six boys has been sexually abused before the age of 16 (Dube, Anda, Whitfield, Brown, Felitti, Dong & Giles, 2005). There is also evidence to suggest that females are more likely than males to disclose CSA (Jonge & Okur, 2013). In terms of ED, recent studies imply that males may account for as much as 25% of all those suffering from eating related difficulties (McManus, Meltzer,

Traolach, Bebbington & Jenkins, 2007). Eating disorders in males are however more likely to be overlooked and underdiagnosed (Strother, Lemberg, Stanford, & Turberville, 2012). As research on EDs have focused on women, screening and assessment tools may be gender biased. Furthermore, the perception of eating disorders as a 'female problem', creates a stigma which prevents reporting and help-seeking in males (Jones & Morgan, 2010). In light of the above, investigating whether the relationship between CSA and ED is applicable to males and exploring the existence of gender differences in particular features of the association may offer a valuable contribution to the literature base.

The last comprehensive review looking exclusively at CSA was carried out in 2010, including studies conducted in or prior to 2008. The literature base has since continued to grow, with several recent papers published on the topic. Some of the more recent papers have aimed to investigate variables that influence the link between ED and CSA, such as dissociation, depression or emotional regulation (Hopwood, Ansell, Fehon & Grilo, 2011; Moulton, Newman, Power, Swanson & Day, 2015; Racine & Wildes, 2015). An exploration of these variables may also provide valuable knowledge on the subject of gender and the relationship between CSA and ED.

Aims/Objectives

The overall aim of this systematic review is to summarise and evaluate the literature reporting on the relationship between CSA and ED in males.

The objectives are; to establish whether there is an association between CSA and ED in males and the extent to which this relationship is influenced by external variables. Where possible, the findings will be compared and contrasted to female samples.

Methods

Data sources and searches

Methods described by Boland, Cherry and Dickson (2014) were used in the development of the review protocol. Studies were identified by searching major electronic databases from the fields of psychology, medicine, education, nursing and social sciences. These were: Medline, ASSIA, Web of Science, PsycINFO, ERIC and CINAHL. Information on unpublished research was sought by searching ProQuest dissertation abstracts. Hand searches were carried out of the International Journal of Eating Disorders, as well as Child Abuse and Neglect, chosen for their strength in their respective fields. In addition, reference lists of existing reviews were searched and five experts within the field of CSA and ED were contacted via email for information on any studies that may have been missed during searches, or any studies due to be published in the near future.

The search terms used were; "child sexual abuse", "child sexual maltreatment", "child sexual trauma", "child sexual assault", "child sexual victimisation" and "child sexual molestation", in conjunction with eating disorder terms, such as "eating disorder", "eating pathology", "anorexia", "bulimia" "binge eating disorder" and "ednos" (eating disorder not otherwise specified). MeSH terms were used for Medline and PsycINFO. (See appendix A for the full search syntax.)

Table 1.1 Inclusion Criteria

Population	Males (or both males and females where separate analysis is carried out for by gender).
Exposure	Child sexual abuse (prior to age 18)
Comparison	Males with no reported experiences of child sexual abuse
Outcomes	Eating disorder as identified by self-report, diagnostic or screening tool or behavioural aspects of disorder e.g. purging.
Study design	Primary observational or qualitative study

All titles and abstracts were screened by an independent reviewer from the field of psychology. Titles and abstracts were considered based on the inclusion criteria reported in table 1.1. The full-text papers of relevant titles or abstracts were obtained where possible. Full-text articles were screened using a screening tool based on the inclusion/exclusion criteria (appendix B). Where a study appeared eligible on review, but the relevant data were unpublished, it was requested from authors via email. Full-text papers that did not meet the full criteria were excluded (listed in appendix C), with the justifications for their exclusion.

Study Selection

The review considered quantitative and qualitative studies addressing the relationship between CSA and ED in males (table 1.1). Papers that look at the presence of ED in populations with CSA experiences; as well as those that look for the prevalence of CSA in eating disordered populations were included. All observational research designs were considered, but the review only included primary studies. Participants included in the review were males of all ages. Studies combining both male and female samples were included only if results were reported separately for male and female samples.

Due to the expected small number of papers addressing the relationship between CSA and ED in males, broad definitions of the two concepts were used. The ED definition was based on the description by the National Health Service (Eating disorders, 2015). CSA exposure included both contact and non-contact experiences as within the definition by the National Society for the Prevention of Cruelty to Children (NSPCC) (Radford et al., 2011). The definition of a child was adopted from the UN Convention on the Rights of the Child (1989) as less than 18 years. Therefore, children exposed to sexual abuse prior to the age of 18 years were included, regardless of the age of sexual consent which varies between countries and states (12 to 18 years).

Definition of terms:

Child Sexual Abuse	*Being forced or persuaded to take part in any sexual act- including, but not limited to physical contact, before the age of 18.*
Eating Disorder	*Disturbances in eating behaviour and weight regulation that is harmful to an individual's health*

No exclusions were made based on how abuse status was established. Outcomes included all main eating disorders; anorexia, bulimia, binge eating disorder and eating disorders not otherwise specified (EDNOS). Only publications including some measure of the behavioural components of eating disorders were included, as studies have indicated that the motivators for ED behaviour may be different for males compared to females (Murray & Touys, 2013). Hence, studies reporting only Body Mass Index (BMI) or body image were excluded. As the most thoroughly conducted meta-analysis on the subject was published in March 2002 (accepted in April 2001), only studies from 2001-2015 were included. All searches were carried out in October 2015. No language restrictions were set for the initial searches.

Data Extraction

Data were extracted into a piloted data extraction form (appendix D). The reviewer obtained study descriptions, such as year of publication, and the country where the study was conducted. Participant descriptions were obtained, such as the sample size and any particulars about the setting or population they were recruited from. Details about the measurement of the exposure and outcome variables were extracted. Where the study measured the impact of other variables upon the relationship of child sexual abuse and eating disorder, information on these were recorded. The main findings of the study and whether the results supported the existence of a link between child sexual abuse and eating disorder were also included. Where studies had both male and female samples, outcomes for both were recorded.

If the data from a study had been presented in multiple publications, the data were entered into the same extraction form. Summary data, such as odds ratios, confidence intervals and probabilities were obtained from studies reporting significant results.

Quality Assessment

The quality of the included studies was assessed using an adapted version of the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool (Effective Public Health Practice Project, 2009). This tool was chosen as it was developed for public health research, where randomisation studies may not be ethical or possible. It has a strong methodological rating and is used in conjunction with a guide (appendix E), which increases inter-rater reliability (National Collaborating Centre for Methods and Tools, 2008). The tool assesses

the quality of a study by rating the extent of bias on each of six criteria; selection bias, study design, control of confounders, blinding, data collection methods and withdrawals and dropouts. Each criterion is rated as strong, moderate and weak and the study is given a global rating based on the component ratings. A study is considered strong if it has no weak ratings, moderate if it has one weak rating and weak if two or more components were given weak ratings. (See appendix F for study definitions and adaptations made to the tool. Appendix G lists each individual quality assessment).

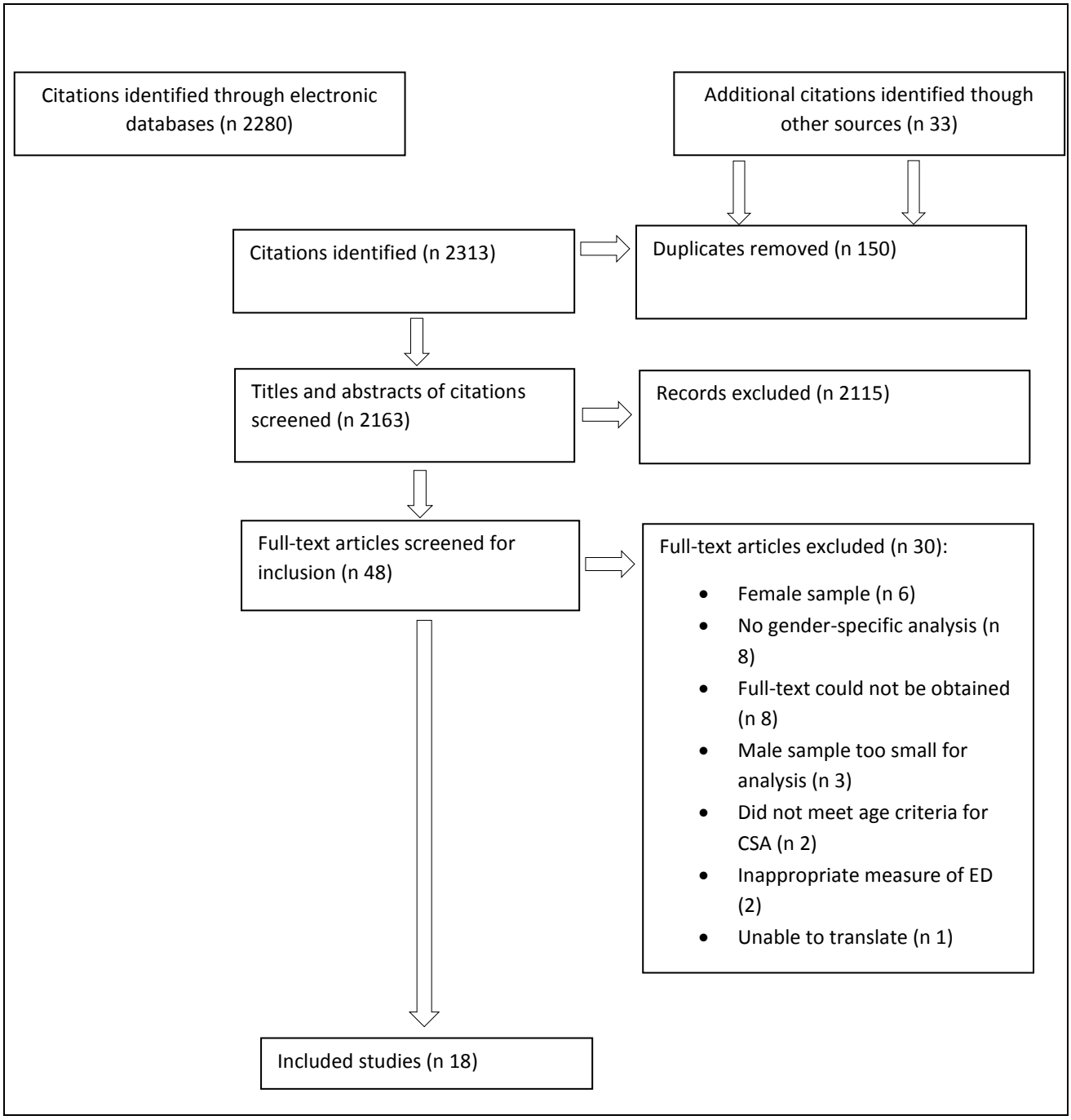
The tool was adapted by adding confounding variables, such as other forms of childhood trauma and family factors, as pertinent to the study topic. A "partial" item was added to section E, in order to account for studies that did not report on or use reliable and valid measurements for all of their exposure or outcome variables. 20% of the studies were assessed by two independent reviewers from the field of forensic psychology. Disagreements about quality were resolved through discussion or through a third reviewer.

Results

Overall, 2313 citations were identified through electronic searches, hand searches and reference lists. Of the five experts that were contacted, one replied and stated that they were unaware of any further studies. Once 150 duplicates were removed, 2163 citations remained (Figure 1.1). The titles and abstracts of these papers were screened for inclusion, which resulted in 48 full-text papers for review. When applying the inclusion criteria to the full-text papers, 30 studies were excluded. Six studies had female only participants, eight studies did not analyse results for males only, three studies had a male sample that was too small for analysis, two studies measured sexual assault across the lifespan, two

studies had an inappropriate measure of ED and one study was in Mandarin. The Chinese paper appeared relevant upon rough translation, but could not be translated thoroughly enough for inclusion. Eight studies could not be obtained. These were all dissertations or theses identified via ProQuest.

Figure 1.1. Flowchart of the study selection process.



Study Characteristics (see Table 1.2)

The systematic review included 18 studies, published between 2001 and 2014. One was a retrospective cohort study and two were case control, whilst 15 were cross-sectional. No qualitative studies were identified. 29,067 males were included in the review. 13 studies were conducted within US populations, three within UK, one in Austria, and one in Australia. Five of the studies surveyed adolescents in school settings, three looked at university students, three measured clinical populations, and two studies focused on minority groups in terms of ethnicity and sexual orientation.

All but one study, which relied on medical records, used self-report measures to assess abuse status. Four of the studies used the Childhood Trauma Questionnaire (CTQ) to assess abuse status. Other measures used to assess abuse status were the Million Adolescent Clinical Inventory (MACI), Sexual Abuse Exposure Questionnaire (SAEQ), Traumatic Life Events Questionnaire (TLEQ) and The Juvenile Wellness and Health Survey (JWHS-76). Seven of the studies where CSA was self-reported did not use any standardised measure to assess abuse status.

A number of different measures were also used to assess ED symptoms. Two studies used the MACI, two studies used DSM and ICD clinical interviews, whilst others studies used specific subscales from structured measures or specific questions related to bingeing and weight control practices. In addition, the methods of analysis often varied, with some studies reporting odds ratios, whilst others reported mean differences. The substantial heterogeneity and differences in study design precluded a meta-analysis of the results.

Table 1.2. Characteristics of included studies (n 18)

Nr	First author, year, country, study design	Sample	CSA Exposure	Outcome Measure	Significant outcomes CSA and ED	Controlled Variables	Additional findings
1	Ackard, 2001 US Cross-sectional	6728 adolescents (3153 males)	Non-standardised self-report items on abuse experiences e.g. abuse location, relationship to the abuser and abuse frequency	Non-standardised self-report items on binging and purging behaviours	✓ Association between CSA and binging and purging behaviour for males OR 1.23, (CI 0.46-3.25). Association was stronger for males sexually abused in the home	Race, physical abuse, BMI, school grade and SES	Stronger association when combined with physical abuse
2	Ackard, 2002 & 2003 US Cross-sectional	81247 adolescents (40301 males)	Self-report items on contact CSA within our outside the family	Self-report items on bingeing and weight control behaviours	✓ Males who experienced single or multiple CSA victimisations were more likely to fast: OR, 2.32 (CI 2.17-2.48), binge eat OR, 5.61(CI 5.47-5.75), use diet pills OR 17.29 (CI 17.10-17.48), vomit OR 24. 16 (CI 23.94-24.37), and use laxatives OR 29.22 (CI 29.01-29.43)	School grade and race	CSA was associated with suicidal thoughts and attempts and lower self-esteem and wellbeing
3	Conley, 2011 US Cross-sectional	147 University students (29 males)	Sexual Abuse Exposure Questionnaire (SAEQ)	Binge Eating Scale (BES)	✓ Males victimised in childhood displayed more binge eating than adults and non-victims: F(2.139)=4.74, p= .01	Age	Males with CSA histories scored higher on promiscuity and had higher BMI
4	Cutajar, 2010 Australia Cohort Retrospective	5436 clinical records (2759 CSA cases) (1157 males)	Records from the Victorian institute of forensic medicine	Records from the Victorian psychiatric case register	✗	-	CSA increased the risk of psychosis, affective, substance use and personality disorders
5	Feldman, 2007 US Cross-sectional	193 bisexual or gay males	Life Events Questionnaire	World Health Organization-Composite International Diagnostic Interview (WMH-CIDI)	✓ Males with CSA history were more likely to have subclinical bulimia OR 3.4 (CI 1.2-9.3), any other current ED OR 2.6 (CI 1.2-5.7), or lifetime subclinical disorder OR 3.8 (CI 1.2-12.8)	Physical abuse	Substance use and depression did not mediate the association between CSA and ED
6	Fonesca, 2002 US Cross-sectional	9042 adolescents (4417 males)	The Voice of Connecticut Youth (YCY) self-report item on CSA	VCY self-report items on weight control behaviours	✓ Males reporting extreme weight control behaviours were more likely to report CSA history, OR 2.80 (CI 2.0-3.9)	Family factors	High parental supervision was another risk factor for males. Maternal presence and connectedness were protective

Nr	First author, year, country, study design	Sample	CSA Exposure	Outcome Measure	Significant outcomes CSA and ED	Controlled Variables	Additional findings
7	Fuemmeler,2009 US Cross-sectional cohort	12772 adolescents (6314 males)	Self-report item on sexual relations with an adult caregiver	Self-report items on weight control and problematic eating behaviours	×	Race, parental education, age and depressive symptoms	Obese males were more likely to report CSA histories
8	Gentile, 2007 US Cross-sectional	884 University students (389 males)	Traumatic Life Events Questionnaire (TLEQ)	Eating Disorder Diagnostic Scale (EDDS)	✓ Males with ED were more likely to have experienced CSA: F(12)=2.35, p= .05	Physical abuse and race	Physical abuse did not predict CSA in males
9	Grilo, 2001 US Case-control	145 adults with binge eating disorder (34 males)	Childhood Trauma Questionnaire (CTQ)	Structure Clinical Interview, Eating Disorders Examination-Questionnaire (EDE-Q)	×	Other forms of childhood abuse	CSA was associated with greater body dissatisfactio n in males
10	Hopwood, 2011 US Cross-sectional	148 adolescent psychiatric inpatients (66 male)	Childhood Trauma Questionnaire (CTQ)	Million Adolescent Clinical Inventory (MACI)	×	Other forms of child abuse and depression	Child abuse in general predicted ED features in males, partially mediated by depression
11	Jonas, 2011 UK Cross-sectional	7403 adults (3627 males)	Self-report items on contact and non-contact CSA	The SCOFF screening tool for anorexia and bulimia	✓ Significant association between CSA and Eating disorder in males for both contact abuse, OR 5.54 (CI 1.8-17.5) and non-consensual sexual intercourse, OR 3.48 (1.8-6.8)	Social class, education level, ethnicity, household income	CSA associated with six types of common mental health disorders, substance abuse and PTSD
12	Lock, 2001 US Cross-sectional	1769 adolescents (802 males)	The Juvenile Wellness & Health Survey (JWHS-76). Self-report items	JWHS-76. Self-report items on eating and weight regulation behaviours	✓ Males in the high risk ED group reported higher levels of rape, OR 7.4 (CI 2.0-27.7) and sexual molestation, OR 4.4 (CI 2.0-10.7)	Age, race, socio-economic status	CSA and physical abuse lead to more general risk taking, physical and mental health problems in males
13	Mangweth-Matzek, 2010 Austria Case-control	75 adult males (32 ED cases)	Non-standardised interview questions relating to contact abuse prior to age 18 by a person at least 5 years older	DSM-IV Clinical Interview	×	-	Social and sexual characteristi cs, childhood social and body-focused behaviours, including physical abuse related to ED

Nr	First author, year, country, study design	Sample	CSA Exposure	Outcome Measure	Significant outcomes CSA and ED	Controlled Variables	Additional findings
14	Martinez-Raga, 2002 UK Cross-sectional	482 adults admitted to alcohol inpatient unit (311 males)	Self-report items on contact and non-contact CSA, level of force, age and relationship to perpetrator	DSM-IV or ICD-10 assessment	✗	Marital status, living arrangement	Male victims of CSA scored higher for substance abuse and were more likely to have PTSD and personality disorders
15	Mitchell, 2005 US Cross-sectional	168 University student males	CTQ	Bulimia Test-Revised (BULIT-R)	✗	Other forms of childhood abuse, depression, alexithymia and anxiety	Physical abuse and physical neglect associated with disordered eating.
16	Plant, 2005 UK Cross-sectional	2027 adults (975 males)	Self-report items on contact and non-contact abuse, within or outside the family	Self-report items on eating and weight-regulation behaviours	✗		Males with CSA scored higher on internet use and sexual activity
17	Schrepf, 2014 US Cross-sectional cohort	7189 adults (3163 males) (subsample from the longitudinal MIDUS study)	CTQ	Self-report items on coping through food	✗	Other forms of childhood abuse, mood, stress and anxiety	Childhood abuse in general led to higher BMI, through food coping and C-reactive protein
18	Zaitsoff, 2010 US Cross-sectional	492 adolescent psychiatric inpatients (206 males)	MACI	MACI	✓ Significant association between CSA and dietary restriction, r=.18, p= .05 and self-induced vomiting, r=.18, p= .05	Negative affect	ED psychopathology related to various externalising problems

Quality of Included Studies (see Table 1.3).

None of the studies received strong quality ratings. The majority of the studies received weak ratings, whilst only four received ratings in the moderate category. Seven of the studies received poor ratings in the selection bias section, either due to using opportunity samples, not reporting on their response rate or having response rates below 60%. Most of the studies were cross-sectional in their design, thereby yielding weak ratings in this area. Seven studies scored

poorly on the confounder item as they controlled for few or no confounding variables or did not report on the variables that were controlled. Six of the studies received weak scores on their data collection methods, due to using non-validated measures of either CSA or ED or not reporting on the psychometric properties of their tools. For the one study where dropouts were relevant, these were not reported.

Table 1.3. Quality Assessment Using adapted version of EPHPP Quality Assessment Tool (n 18).

Reference	**Selection Bias**	**Study Design**	**Confounders**	**Blinding**	**Data Collection Method**	**Withdrawals and Dropouts**	**Overall Rating**
1 Ackard, 2001	2	3	1	1	3	n/a	WEAK
2 Ackard, 2002	1	3	2	1	3	n/a	WEAK
3 Conley, 2011	3	3	2	1	1	n/a	WEAK
4 Cutajar, 2010	2	2	2	1	2	3	MODERATE
5 Feldman, 2007	3	3	3	3	1	n/a	WEAK
6 Fonesca, 2002	1	3	2	2	3	n/a	WEAK
7 Fuemmeler, 2009	1	3	1	2	3	n/a	WEAK
8 Gentile, 2007	3	3	2	2	1	n/a	WEAK
9 Grilo, 2001	2	2	3	2	1	n/a	MODERATE
10 Hopwood, 2011	2	3	3	2	1	n/a	WEAK
11 Jonas, 2011	3	1	2	2	2	n/a	MODERATE
12 Lock, 2001	2	3	2	2	2	n/a	MODERATE
13 Mangweth-Matzek, 2010	3	2	2	3	3	n/a	WEAK
14 Martinez-Raga, 2002	2	3	3	2	2	n/a	WEAK
15 Mitchell, 2005	3	3	3	2	1	n/a	WEAK
16 Plant, 2005	2	3	3	2	3	n/a	WEAK
17 Schrepf, 2014	3	3	1	2	1	n/a	WEAK
18 Zaitsoff, 2010	2	3	3	2	1	n/a	WEAK

CSA and ED in males

Exactly half (n 9) of the 18 studies reported a significant association between one or more forms of CSA and one or more ED features for males. Three of these studies reported that males who had experienced CSA were likely to score higher on standardised measures of ED (Gentile, Raghavan, Rajah, & Gates, 2007; Conley & Garza, 2011; Jonas, Bebbington, McManus, Meltzer, Jenkins, Kuipers, Cooper,King, & Brugha, 2011). One study found that males with CSA experiences were more likely to have subclinical bulimia or any other lifetime subclinical ED (Feldman & Meyer, 2007). Another study split individuals into groups, based on their eating behaviours and found that those in the high-risk ED group reported higher rates of rape and sexual molestation (Lock, Reisel & Steiner, 2001). The other four studies reported associations between CSA and certain features of ED. Two of these four studies found that CSA was related to binge eating (Ackard, Neumark-Sztainer, Hannan, French, & Story, 2001; Ackard & Neumark-Sztainer, 2002,) three supported a link to purging (Ackard et al., 2001; Ackard & Neumark-Sztainer, 2002; Zaitsoff & Grilo, 2010), two supported a link to restrictive eating behaviours (Ackard & Neumark-Sztainer, 2002; Zaitsoff & Grilo, 2010) and one found that CSA was linked to extreme weight control behaviours in males (Fonesca, Ireland & Resnick, 2002). Five of these nine studies used validated measures (Lock, 2001; Feldman & Meyer, 2007; Zaitsoff & Grilo, 2010; Jonas et al., 2011; Conley & Garza, 2011) and four were large population-based studies (Lock, Reisel & Steiner, 2001; Ackard et al., 2001; Ackard & Neumar-Sztainer, 2002; Jonas et al., 2011).

Out of the nine studies that did not support the relationship between CSA and ED, three had more restrictive outcome measures, looking only at binge eating, bulimia or coping through food (Grilo & Mahseb, 2001; Mitchell & Mazzeo, 2005;

Schrepf, Markon & Lutgendorf, 2014). One of the studies also had a narrow conceptualisation of CSA, limiting it to caregiver abuse only (Fuemmeler, Dedert, McClernon & Beckham,2009). The rest of these five remaining studies had broad concepts of CSA, looked at different ED features or used clinical interviews to establish ED. Four of the studies that rejected an association between CSA and ED in males had sample sizes below 200 participants (Grilo & Mahseb, 2001; Mitchell et al., 2005; Mangweth-Matzek, Rupp, Hausmann, Gusmerolti, Kemmler & Biel, 2010; Hopwood et al., 2011) and one of them only had three males in the abused group, making analysis difficult (Mangweth-Matzek et al., 2010).

Within the nine studies that did not report a significant relationship between CSA and ED in males, two studies reported a significant association between childhood physical abuse and ED (Mangweth-Matzek et al., 2010; Mitchell et al., 2005), whilst two reported a significant association with child abuse in general (Schrepf, Markon & Lutgendorf, 2014; Hopwood et al., 2010). However, CSA alone was not a significant predictor. The other five of these studies found that CSA was more likely to predict other psychiatric conditions or externalising behaviours, such as psychosis, affective disorders, substance abuse, personality disorders, PTSD, body dissatisfaction, internet use and sexual activity (Grilo & Masheb, 2001; Martinez-Raga, Marshall, Ball, Best & Strang, 2002; Plant, Plant & Miller; 2005; Cutajar, Mullen, Ogloff, Thomas, Wells & Spataro, 2010).

Gender comparisons (see Table 1.4)

15 of the 18 studies included both male and female samples and three studies were of males only. Eleven of the 15 studies supported the association for females, whilst only eight did for the male samples. Five (of the 15) studies

found no relationship between CSA and ED features in either males or females and 2 of the 3 male only studies found no such relationship.

Seven studies supported a relationship between CSA and ED features in both their male and female samples. In these studies the CSA and ED association appeared to manifest similarly in both male and female samples. One study reported that the association was stronger for boys who were victimised at home (Ackard et al., 2001), whilst another study reported that the male sample in the high risk ED group reported higher levels of rape than the low risk group (Lock, Reisel & Steiner, 2001). These findings were not comparable in the female samples.

Four additional studies supported the association in the female samples only. Two of these suggested that females that had experienced CSA victimisation were more likely to have a history of ED psychopathology and display ED behaviours, such as binge eating and dietary restraint (Fuemmeler et al., 2009; Plant, Plant & Miller, 2005). One of them reported a relationship between CSA and overeating in their female sample (Plant, Plant & Miller, 2005), whilst one reported a significant relationship between CSA and a lifetime ED diagnosis (Martinez-Raga et al., 2002). One study supported the association between CSA and ED in the male sample only (Zaitsoff & Grilo, 2010).

Table 1.4. Gender Comparisons within included Studies (n =18)

	First author, year	Association between CSA and ED behaviours	
		Males	Females
1	Ackard, 2001	✓ Association between CSA and binging and purging behaviour for males. A higher percentage males sexually abused in the home and by a family member engaged in binge and purge behaviours	✓ Association between CSA and binging and purging behaviour for females
2	Ackard, 2002	✓ Males who experienced single or multiple CSA victimisations were more likely to binge eat, use laxatives, fast and vomit	✓ Females who experienced single or multiple CSA victimisations were more likely to binge eat, use laxatives, fast and vomit
3	Conley, 2011	✓ Males victimised in childhood displayed more binge eating than adult and non-victims	✓ Females victimised in childhood displayed more binge eating than adult and non-victims
4	Cutajar, 2010	×	×
5	Feldman, 2007	✓ Males with CSA history were more likely to report ED	NA
6	Fonesca, 2002	✓ Males reporting extreme weight control behaviours were more likely to report CSA history	✓ Females reporting extreme weight control behaviours were more than twice as likely to report CSA history compared to controls
7	Fuemmeler, 2009	×	✓ Females who had experienced CSA were more likely to display problematic eating behaviours and have eating disorder history
8	Gentile, 2007	✓ Association between CSA and ED for males	✓ Association between CSA and ED for females
9	Grilo, 2001	×	×
10	Hopwood, 2011	×	✓ Association between CSA and ED behaviours for females
11	Jonas, 2011	✓ Significant association between CSA and Eating disorder in males	✓ Significant association between CSA and Eating disorder in females
12	Lock, 2001	✓ Males in the high risk ED group reported higher levels of rape and sexual molestation	✓ Females in the high risk ED group reported higher levels of sexual molestation.
13	Mangweth-Matzek, 2010	×	NA
14	Martinez-Raga, 2002	×	✓ Significant relationship between CSA and lifetime ED in females
15	Mitchell, 2005	×	NA
16	Plant, 2005	×	✓ Significant association between CSA and eating too much in females
17	Schrepf, 2014	×	×
18	Zaitsoff, 2010	✓ Significant association between CSA and dietary restriction and self-induced vomiting in males	×

Covariates and additional outcomes

All of the included studies measured covariates and additional outcomes. These were: other mental disorders, other types of childhood abuse, self-esteem, social support, substance abuse, alexithymia, impulsivity, theft, violent behaviour and family factors.

Six of the included studies measured the impact of different types of childhood abuse on ED psychopathology. Two studies found that physical abuse made the correlation between CSA and ED stronger (Ackard et al., 2001; Ackard & Neumark-Sztainer, 2002), whilst results by Gentile et al., (2007) contradicted this finding. Two studies found that whilst CSA was not a significant predictor, childhood abuse in general was associated with ED symptoms (Hopwood et al., 2010; Schrepf, Markon & Lutgendorf, 2014).

Three studies looked at variables that might affect the relationship between CSA and ED. One study looked at substance abuse and depression as mediators, but found no significant results (Feldman & Meyer, 2007). One study found that the relationship between child abuse in general and ED was partially mediated by depression (Hopwood et al., 2010). Another study examined family factors and found that "maternal presence" and "connectedness" moderated the relationship (Fonesca, Ireland & Resnick, 2002).

Twelve studies used additional outcome variables to ED. Five studies found that CSA was related to a number of other mental health disorders, such as affective disorders, substance abuse, personality disorders and PTSD (Cutajar et al., 2010; Martinez-Raga, 2002; Plant, Plant & Miller, 2005; Jonas et al., 2002; Lock, Reisel & Steiner, 2001). Two studies reported that CSA led to higher BMI and obesity rates (Conley & Garza, 2010; Fuemmeler et al., 2009). Five studies

reported that CSA was related to a number of externalising behaviours, such as sexual activity, attempted suicide, general risk taking and internet use (Ackard & Neumark-Sztainer, 2002; Conley & Garza, 2011; Lock, Reisel & Steiner, 2001; Plant, Plant & Miller, 2005; Zaitsoff & Grilo, 2010). Two studies looked at internal states and reported that CSA was related to lower self-esteem and wellbeing and greater body dissatisfaction respectively (Grilo & Masheb 2001; Ackard & Neumark-Sztainer, 2002).

Discussion

The results of the review yielded an inconsistent picture with substantial disparity in outcomes. Half of the papers supported a relationship between harmful eating/weight regulation practices and CSA in males, whilst the other half rejected such a premise. Some studies reported that the link was strengthened in the presence of physical childhood abuse or mediated by depression, whilst other studies found no support for depression as a mediator or that physical abuse contributed to the model. A few of the studies that rejected the relationship in males, supported it in females. This may suggest that CSA plays a bigger role in the relationship to harmful eating for females, but could also indicate a gender bias in the utilised measurement tools.

The findings of the present review aligns to some extent with previous reviews suggesting that CSA is a nonspecific risk factor for ED (Smolak & Murnen, 2002). No studies compared clinical ED samples with other clinical samples, which limits comments about specific relevance to ED, compared to other diagnoses. However, the results do suggest that CSA is likely to predict other kinds of psychiatric disorders and that other types of childhood abuse may play an equal

or greater role in the relationship. There is increasing evidence pointing towards psychological and emotional abuse as more commonly experienced and pertinent predictors of psychopathology, that are believed to underpin other forms of childhood traumatic experiences (Robinson, 2013; Guillaume, Jaussent, Maimoun, Ryst, Seneque, Villain & Courtet, 2016). This would be worthy of further attention in future studies.

Smolak and Murnen (2002) suggested that the more narrowly ED is defined, the smaller its relationship to CSA. This trend could be observed to some extent in the current review. Although two studies utilised full diagnostic criteria and obtained significant results using the WMH-CIDI and the EDDS, most of the studies that reported significant results measured simply bingeing and purging behaviours or used more general screening measures, such as the SCOFF (Morgan, Reid, & Lacey, 1999), rather than full diagnostic criteria or measures assessing a specific eating disorder e.g. BULIT-R for bulimia (Welch et al., 1993). These findings may be particularly pertinent to males as current assessment tools are based mainly upon research on female samples and may not accurately reflect the clinical presentation of ED in males (Jones & Morgan, 2010). It does however limit the conclusions of the review to comment on the link between CSA and harmful eating and weight regulation practices, rather than ED per diagnostic measure.

The findings also fit with previously published reviews in that they were affected by substantial heterogeneity. Smolak and Murnen (2002) attributed this partly to methodological variation and shortcomings. This review was affected by similar complications. In addition to the previously mentioned variation in how ED was defined and measured, the conceptualisation and measures of CSA were equally disparate. Some studies included both contact and non-contact abuse, whilst

others focused only on intrafamilial abuse. Whilst some studies used standardised measures of childhood trauma to capture CSA experiences, others did not. This meant that the concept of what was being measured varied greatly depending on the study.

Overall, the quality of the included studies was poor, with the majority of studies being in the 'weak' range, which limits any conclusions that can be drawn from the review. Most of the studies were cross-sectional in design, preventing interpretations to be made about the sequence of abuse and onset of ED. Retrospective assessment of risk factors is problematic as the information may be biased. Firstly, participants may be deliberately under-reporting their abuse experiences. CSA is a sensitive topic and it has been found that CSA survivors often refrain from disclosing their experiences of victimisation to others (London, Bruck & Ceci, 2005; Jacques-Tiura, Tkatch, Abbey & Wegner, 2010). Repression, subjective forgetting, shame, and confusion about whether a sexual experience constitutes abuse, are frequently cited underpinnings of non-disclosure (Briere & Conte, 1993; Ghetti, Edelstein, Goodman, Cordon, Quas, Alexander, Redlich & Jones, 2006; Spataro, Moss & Wells, 2001). These factors are more likely to affect males, due to societal stereotypes of masculinity, such as self-reliance, independence and sexual prowess (Spataro, Moss & Wells, 2010). Some studies (Ackard et al., 2001, Ackard & Neumark-Sztainer, 2002) reported missing data for questions related to abuse experiences, suggesting that under-reporting may have had an impact upon findings. The methodological differences in CSA conceptualisation across studies further contributed to under-reporting of certain types of CSA experiences.

Another important methodological factor relates to the age cut-off for what is considered to be CSA. Briere (2002) suggests that early severe trauma

interrupts the child's development and may lead to reliance on avoidance techniques to regulate abuse related emotions and cognitions. Hence, children experiencing CSA at a young age, prior to developing adaptive coping strategies, may be more vulnerable to developing ED type symptoms, e.g. binge eating to self-soothe or regulate emotions. One study reported that CSA was predictive of ED, whilst adult sexual assault was not (Conley & Garza, 2011). This suggests that a younger age at the time of victimisation may increase chances of ED development. Some of the included studies, did however have a cut-off at 18 (Ackard et al., 2001; Ackard & Neumark-Sztainer, 2002), where other more adaptive coping strategies may have already been developed.

Strengths of the review include the conducted quality assessment, which was partly undertaken by independent reviewers. Scoping searches were carried out in order to pilot the inclusion criteria and identify relevant search terms. In terms of limitations, the broad conceptualisation of both CSA and ED partly accounts for the level of heterogeneity observed in the findings, but was necessary in order to yield enough studies. Whilst searching for abuse terms in conjunction with child terms may have yielded a greater number of studies, this risk was mitigated by the subsequent components of the search strategy. The screening and inclusion was carried out by a single reviewer, making the review more vulnerable to bias. Furthermore, the review only included papers from Western countries, which limits the generalisability of the findings. Eight studies that appeared relevant on abstract review could not be obtained. These were all unpublished dissertations and theses. Without these studies, it was not possible to assess the extent to which publication bias (Easterbrook, Berlin, Gopalan, & Matthews, 1991) has affected the literature base on the relationship between CSA and ED, and thereby the findings of this review.

The current review points to crucial methodological issues, such as the measurement and conceptualisation of both eating disorder and CSA, including potential effects of gender in the clinical presentation of ED and the interpretation and disclosure of CSA experiences. Future research should consider and address the methodological and conceptual limitations of the current published literature. Even more importantly, longitudinal studies are needed in order to establish causality in the relationship. Furthermore, some authors have suggested based on clinical experience that victims of more severe forms of CSA often present in treatment with severe forms of ED (Wooley, 1994). These groups have also been found to have worse treatment outcomes (Vrabel et al., 2010; Harper et al., 2010). Those presenting with higher clinical severity and who find it difficult to engage in treatment may be less likely to partake in research, which can make large-scale studies of clinical samples difficult. Without studying clinical populations receiving treatment for ED or CSA, the relationship between the two variables may be misrepresented. Future research should aim to capture these groups.

As reported by Smolak and Murnen (2002), there may also be heterogeneity in the actual relationship between ED and CSA. A better understanding of what types of abuse experiences lead to what types of ED features and the underlying pathways that mediate and moderate this relationship in both male and female samples would make valuable contributions to the literature.

This review offers some initial indication that the relationship between CSA and ED may be applicable also to male populations. Seven of the full-text papers screened for inclusion in the review had not carried out gender-specific analysis on their sample. It is unfortunate that relevant data is gathered, but not analysed, thus limiting current information on the link between CSA and ED in

males, as well as gender differences in this relationship. More research incorporating male samples is needed in order to get a clearer image of the extent to which CSA is a risk factor for ED in male populations, as well as the extent to which this differs by gender. One way in which boys and girls may differ following CSA is in the strategies used to cope with the experience (Eaton & Bradley, 2008). Different ways of coping have been associated with different pathological outcomes (Kelly, Tyrka, Price & Carpenter, 2008). These may offer a gendered insight into the developmental pathways that link CSA and subsequent maladjustment.

Conclusions and Recommendations

The scope of this review was to explore the potential relationship between CSA and ED in males, as well as to investigate the extent to which this differs for females. Although the findings yielded an inconsistent picture, CSA does appear to coincide with ED symptomatology in a number of studies with male samples. This suggests that expanding the knowledge base would be a worthwhile undertaking. Future research in this area should be methodologically rigorous and aim to develop and validate ED measures that can capture male presentations of ED. This would also help inform appropriate provision of support services.

Practitioners working with males with ED symptomatology may want to assess for CSA history to help formulate clinical presentation. Conversely, assessing the eating and weight regulation practices of male survivors of CSA may help to improve understanding of the clinical treatment needs of this group. This may hold particular value in forensic environments where CSA rates are high.

CHAPTER TWO

Coping with Distressing Thoughts and Emotions

-A Case Study of a Male Survivor of Childhood Trauma

Abstract

Childhood trauma is known to have a severe impact upon the child's development of effective coping strategies to deal with stress and adversity. A long-term effect of childhood traumatic experiences is an impaired ability to regulate emotions, which survivors may manage through coping strategies that are harmful to both the individual and those around. This includes the use of avoidance-based strategies. These are formed to avoid the direct impact of a stressor, but have adverse psychological effects. The following case study describes a coping-focused intervention with a 20 year old male survivor of childhood physical and sexual abuse, who had difficulties managing distressing thoughts and emotions. These were expressed as self-harm, binge eating and verbal aggression. The case study describes his assessment and treatment progress in a five month intervention, which focused on enhancing adaptive coping strategies within a prison setting. The intervention successfully reduced harmful behaviours and highlights the value of a coping-focused intervention in addressing the management of trauma-related emotions. The client's treatment engagement, along with limitations and implications of the intervention are discussed.

Introduction

Chapter One indicated that there is value in exploring the relationship between CSA and ED in males. Developing an understanding of the pathways that link CSA experiences with harmful eating and weight regulation practices in male survivors will help improve insight into this area. A key to understanding psychological maladjustment following CSA is in the developmental context.

Traumatic events tend to be the most damaging when interpersonal and intentional and when occurring during childhood (Courtois & Ford, 2009). As children are going through crucial developmental stages, they are more vulnerable to the aftereffects of traumatic events (Perry et al., 1995). Furthermore, children rely on their caregivers to provide safety and stability. These early interpersonal experiences lay a foundation for an individual's subsequent interactions with others and the world around them, as well as the child's formation of a self (Bowlby, 1969). When children are repeatedly subjected to traumatic events, such as chronic abuse and neglect, which often happens within the family structure, it has significant impact upon the child's cognitive, social and emotional development, often referred to as 'complex trauma', due to its pervasive and longstanding sequelae (Kiesiel, Fehrenbach, Torgersen, Stolbach, McClelland, Griffin & Burkman, 2014).

A substantial number of individuals who experienced childhood trauma will end up in contact with the criminal justice system and mental health services. One study assessed children from juvenile justice programmes and welfare agencies and found that most came from severely dysfunctional family environments. (Spinazzola, Ford, Zucker, van der Kolk, Silva, Smith & Blaustein, 2005). Many are diagnosed with ADHD, oppositional defiant disorder and conduct disorder, as

the roots of these behaviours are less obvious (van der Kolk, 2014). The long-term consequences of trauma in childhood include mental health problems, substance misuse, physical health problems, poor school performance, delinquency and aggressive behaviour (Felitti, et al., 1998). One frequently reported outcome, which plays a role in several of the aforementioned concerns, is that of emotional dysregulation (Dvir, Ford, Hill & Frazier, 2015). The neural and neuroendocrine systems associated with emotions are shaped by early developmental experiences. Regular exposure to traumatic events in childhood has been linked to subsequent impaired pre-frontal functioning during stress, which in turn undermines mental flexibility and adaptive coping (Bateman & Fonagy, 2004).

Emotion Regulation and Coping in the Context of Childhood Trauma

Individuals cope with stress and adversity in various ways. Some coping strategies are generally considered adaptive and effective in relieving stress, whilst others have been linked with negative health outcomes (Roth & Cohen, 1986). When child development has been affected by severe stress and adversity, this disrupts the development of effective coping techniques, which may last well into adulthood. Traumatised children are often at a disadvantage when it comes to developing more sophisticated coping styles as they are constantly overwhelmed by painful situations, which in turn may make them experts at using powerful, but primitive coping strategies (Briere, 2002). Furthermore, some strategies that are considered adaptive (e.g. support seeking) may not have been available to them. Perry et al., (1995) observed that children's coping responses to interpersonal trauma were of two kinds. The hyper-arousal continuum, where the child responds by vigilance, defiance, aggression and resistance. This continuum can also be conceptualised in terms

of fight or flight reactions. The second kind was termed the dissociative continuum. The lower the age of the child, the higher the likeliness of dissociative coping responses. A young child that is exposed to trauma has few coping strategies at their disposal and may be unable to make sense of what is happening to them. Hence, in order to protect themselves from the pain, they may shut off the experience from their consciousness, which creates a lack of connection in thoughts, memories, feelings and actions. Dissociation can be referred to as "blocking out" or "spacing out" and being out of touch with emotional experiences.

Some of these coping mechanisms are likely effective in the context of abuse and neglect, but if overgeneralised to other stressful situations and utilised later in life, may be ineffective and cause harm to both the individual and those around. Examples include substance misuse and self-harm, which are often referred to by childhood trauma survivors as a coping mechanisms that allow temporary relief from emotional pain, but are ineffective in resolving difficulties, perpetuate psychological distress, and have serious health consequences (Nixon, Cloutier & Aggarawal, 2002, Garland, Pettus-Davis & Howard, 2013). Another example is that of coercive sexual behaviours towards others, utilised by survivors in attempts to regain control and regulate feelings of powerlessness that are typically generated by childhood sexual abuse (Ward, Stephen & Hudson, 1998, Bentovim, 1996).

Morrow and Smith (1995) suggested that adult survivors of childhood trauma use a number of strategies to prevent themselves from being overwhelmed by emotions, such as releasing the feelings (rage, anger, acting out) or distancing themselves from feelings altogether in efforts to avoid or escape them. The scientific literature often distinguishes between approach and avoidance-focused

coping, where approach strategies aim to tackle a stressful situation directly, whilst avoidance-based approaches aims to protect the individual from exposure to the stressor, by denial, minimisation and detachment (Roth & Cohen, 1986). This can be done by disengaging one's thoughts and feelings or denying that the stressor even exists (Littleton, 2007). Research has linked avoidant coping with poor psychological health (Holohan, Moos, Holahan, Brennan & Schutte, 2005). As dissociation and avoidance are closely related, it is not surprising that adult survivors of childhood trauma often utilise more avoidance coping in efforts to prevent becoming overwhelmed by distressing emotions (Walsh, Fortier & DiLillo, 2010). Several studies have suggested that avoidance coping is a mediating factor in linking child abuse with substance misuse and psychological distress in adulthood (Min, Farkas, Minnes & Singer, 2007; Rosenthal, Rasmussen-Hall, Palm, Batten & Follette, 2005).

In light of the above, addressing the ways in which survivors cope with their emotional experiences is a vital step towards psychological adjustment. Skills-based therapies that aim to aid the emotion regulation strategies available to the individual have proved an effective domain in the treatment of survivors of childhood trauma (Linehan, 1993). This case study describes a coping-focused and skills-based intervention with a male survivor or childhood abuse, whom had difficulties tolerating and regulating emotions, manifesting as self-harm, impulsivity, substance misuse, and binge eating.

Case Introduction

At the time of the intervention, the client was a 20 year old male serving a prison sentence for sexual activity with a 13 year old girl. He was referred for psychological therapy due to presenting with self-harming behaviours whilst in

custody. His cognitive abilities had previously been assessed to lie within the 'borderline' range. The client gave his informed consent to take part in this case study (appendix H). Names have been changed to protect anonymity and the client chose the name "Seth" as his pseudonym.

Referral procedure

Seth was described by prison staff as "difficult to manage" on the wing. He regularly self-harmed by punching walls or cutting his arms and frequently subjected prison officers to verbal abuse. The verbal abuse was also directed towards other prisoners, which occasionally resulted in their retaliation. This led Seth to self-isolate in his cell. He placed himself on a "single unlock" regime, which meant he only came out of his cell once other prisoners were locked away. Due to his self-harming behaviours, he was placed on an Assessment, Care in Custody and Teamwork (ACCT) document, which is the prison's process for managing the risk of self-harm. The prison service also made a referral to the inreach mental health team for assessment. Based on the assessment, Seth was assigned to an occupational therapist for a stress management intervention. Following an escalation of his self-harm and aggressive behaviours, he was referred for psychological therapy.

Assessment

Seth's assessment included triangulating information from his care notes and the risk assessment conducted by Probation: The Offender Assessment System (OASys). This dynamic tool evaluates the risk of future offences, as well as offence-related needs. The assessment also included observations made by prison officers and his occupational therapist, history-taking through clinical interviews, and psychometric evaluation using the Difficulties in Emotion

Regulation Scale (DERS) (Gratz & Roemer, 2004). The information is limited by Seth's reluctance and difficulty talking about his early experiences.

Family and Psychosocial History

Seth grew up as an only child. He reported having no recollection of his father from when he was little, but social work reports described his father as a "violent individual" that frequently misused substances. Seth's parents separated when he was a young child and he resided initially with his mother. Seth's mother went on to establish a new relationship and her partner started cohabiting with them. Seth reported being regularly subjected to physical abuse by his step-father, by means of hitting, slapping and lashing him with belts. The abuse escalated as Seth grew older and his behaviour became more oppositional. Seth reported the abuse to teachers at school, which led social services to be called. When they attended the house, Seth's mother denied that the abuse was taking place. This resulted in Seth retracting the allegations, due to fear that the abuse would increase. Seth reported that he was often bullied by other children in school, but described that he had an older friend "Jake". He disclosed that both he and Jake were sexually abused by Jake's father and Jake's father's friend. During one incident, Jake's father attempted to strangle Seth with a belt. Seth never reported the sexual abuse to anyone.

Seth recalled that he started experimenting with drugs during adolescence and that delinquency and substance misuse was common within his peer group. He described that he got "kicked out" by his mother, due to these behaviours. Following this, his lifestyle became more chaotic. He resided occasionally with his father, a girlfriend, and at youth hostels. Seth remained in contact with his mother and reported that at one point in time, she lived with him in his youth

hostel as she was homeless. He described that he had a positive relationship with his maternal grandmother and that she had "always been there for him".

History of Presenting Difficulties

Seth reported that during childhood he would binge on food and sweets when he was "feeling bad". This led him to become overweight and he often suffered bullying from other children about his weight and appearance. During adolescence he started using drugs and alcohol to "block out his thoughts and feelings". He also described enjoying how the drugs made him lose weight and how he was "able to be underweight". He cut himself for the first time at age 16, following the suicide of a friend, when he saw another boy in the hostel where he resided, "deal with it that way". Prior to his conviction, he made a serious attempt on his life by taking an overdose of tablets, which resulted in hospitalisation.

Relationship History

Seth reported that he had his first romantic relationship at age 11. He reported that he and Jake had "kind of had a relationship, although it was wrong". After this he had relationships with female partners (one of whom was the victim of his offences), but identified as bisexual. It is not known whether the other relationships were age-appropriate. For years, he had an on-and-off again relationship with a woman two years older than him; "Kate" and the two of them reconciled their relationship during Seth's time in prison.

Educational and Occupational History

Seth reported frequently truanting in school and was permanently excluded in year 9, due to what he referred to as his "behaviour issues". He also reported to

have been diagnosed with ADHD. Following his exclusion, he gained a qualification from a media and music course and reported that he had enjoyed this as "they treated me like a normal person". He secured part-time employment at a McDonald's restaurant at age 17, but was fired when a number of knives where discovered in his bag. Prior to his conviction, he was assessed by an educational psychologist, whom reported Seth's cognitive ability to be within the borderline range.

Forensic History

Seth was serving a prison sentence for three counts of sexual activity with a 13 year old girl. He was 17 years old at the time of the offence and stated that he had been in a relationship with the victim. He admitted that he had been aware of her age, but maintained that the sexual activity between them had been "consensual". According to the OASys report, Seth had coerced her by means of threats and force. There were also indications of grooming behaviour, such as supplying the victim with alcohol. In addition to the index offence, three similar offences were reported to lie on file. Limited information was available on these offences, but they reportedly occurred as two discreet events. One victim was a boy younger than Seth and one victim was a girl older than Seth. Seth was 13 and 15 at the time of these offences. Seth also had three prior convictions for burglary and theft.

Presenting Difficulties

Upon meeting, Seth described that self-harm was a long-standing coping strategy for dealing with difficult thoughts and emotions and that he could feel a "release" of these when cutting. He also relied on other less adaptive strategies, such as substance misuse and binge eating, which enabled him to "shut his

emotions out". Seth completed the Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004), which is a multi-dimensional assessment of emotion regulation. Its items are simple and clearly written and it has been used with both adolescent and adult populations (Weinberg & Klonsky, 2009). The DERS has yet to be normed and does not provide clinical cut-off scores, but has utility in measuring client change across an intervention. Seth received a total score of 139 on the DERS, prior to the intervention (Table 2.1, page 55). The most elevated scores were for the factors measuring a lack of strategies to manage emotions (38), lack of impulse control (30), lack of emotional awareness (26) and difficulties engaging in goal directed behaviour (25). Seth expressed that emotions like anger, anxiety and frustration would interfere with his daily living, make him feel out of control and that he would not always notice them until he felt overwhelmed by them, at which point he had no strategies for managing them. We agreed to meet for weekly sessions with a focus on "coping with distressing thoughts and emotions".

Formulation

An initial formulation was drafted collaboratively with Seth within the cognitive behavioural framework. As Seth was naïve to psychological therapy and to accommodate his cognitive ability, Kennerley's "blobby" formulation model (2015) was used, as it provides a simple framework. This was complemented by Padesky and Mooney's (1990) cross-sectional model, to draw out a maintenance cycle of Seth's difficulties (Appendix I). The formulation was a reiterative process and was expanded upon as Seth became more open about his experiences and the systemic variables were better understood (see figure 2.1, page 48).

Seth grew up in circumstances where those around him were either abusive towards him or failed to care for him and protect him. His childhood and adolescence was chaotic and he experienced rejection and abandonment within the family structure. His early experiences of interpersonal relationships appeared to have been further compromised by the sexual abuse, where boundaries were blurred from an early age. This was indicated by Seth's description of his friend "Jake", whom Seth often described as his "best friend", "brother" and "ex-partner". They seemed bound together by their abuse experiences, but this relationship also appeared to have elements of grooming and coercion, with Jake being "older". Furthermore, Jake appeared to have modelled some of Seth's harmful coping strategies. Seth quickly learnt that other people could not be trusted and that seeking help from others was not an effective coping strategy, as indicated by his attempt to seek help from teachers at school, which failed to stop the abuse. Seth described that his mother "only saw what she wanted to see". These above early experiences appeared to have resulted in core beliefs about himself as defective and vulnerable and others as dangerous and not to be trusted.

Seth found other ways of relieving his distress and appeared to rely on more dissociative, avoidance focused strategies. Initially, Seth found eating to provide a quick relief of negative emotions. This however came with the negative consequences of overweight and bullying by peers. As he was getting older, he found that drugs, alcohol and cutting himself could provide a short term relief or a "blocking out" of distressing thoughts and feelings he was having. Acting out towards others may have been Seth's attempts to reassert himself and gain a sense of control in response to his feelings of vulnerability and powerlessness.

Although limited information was available on Seth's sexual offences, they may also have played such a self-regulatory function.

A range of emotional states would trigger incidents of self-harm; sadness, frustration, guilt, self-loathing and anger. These were often precipitated by interactions where others expressed disapproval or dismay with Seth. This would include reprimands by prison officers, conflict with his partner, verbal abuse by other prisoners, or internet trolling and harassment (whilst in the community). Seth having difficulty understanding information and having to ask for help or clarification, such as when filling out forms, was another trigger for self-harm. Seth felt that such situations "confirmed that he was stupid". The above situations appeared to activate the core beliefs formed by his early experiences, generating negative and critical thoughts of himself that fuelled distress. Seth's self-harm appeared to have increased whilst in custody. This may be partly attributed to prison being a high-stress environment, but Seth also had less access to mind-altering substances and foods he could binge on. It was observed that self-harm was more likely to occur when Seth had exhausted his canteen spending's and had run out of tobacco and sweets.

Seth's harmful coping strategies were maintained by their ability to relieve unpleasant emotions in the short-term and allowing him to detach and dissociate from the pain he was experiencing. However, they resulted in more self-loathing and more guilt and thereby reinforced his negative core beliefs. Acting out towards other prisoners and them retaliating became a self-fulfilling prophecy, further confirming beliefs about his own vulnerability and others' dangerousness. This was observed in a session, where other prisoners came out for exercise outside. Seth ran unprovoked to the window and shouted abuse at them, which resulted in another prisoner spitting in his face through the window and Seth's

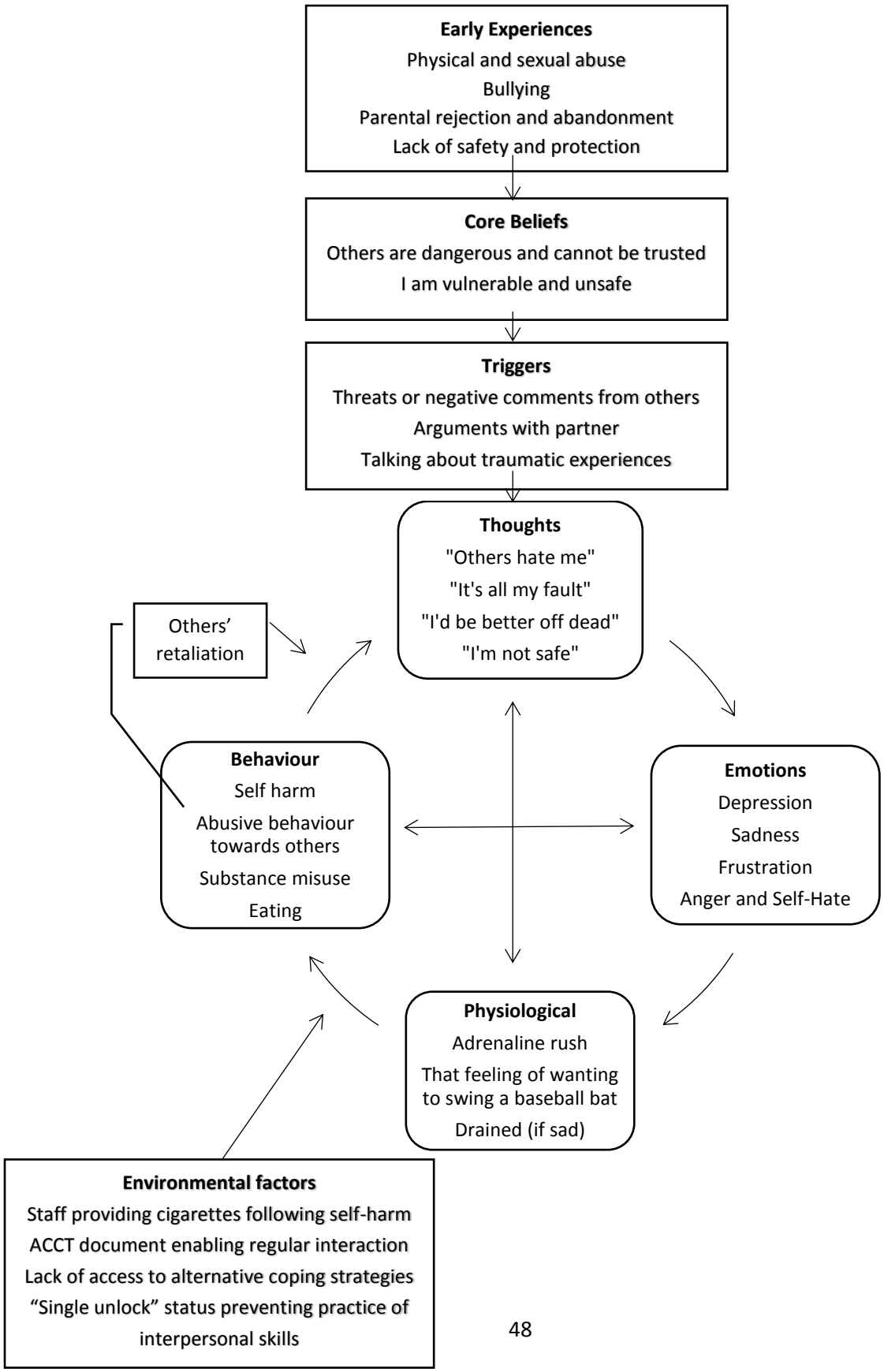
immediate reaction that "everyone hates me and I'm not safe here". Such behaviours appeared to serve as trauma re-enactments (van der Kolk, 1989), mirroring his own defiance towards his step-father and the physical abuse that would follow. His physical isolation in his cell allowed him to feel safe by establishing a physical boundary between himself and others, but prevented him from practicing interpersonal skills with others and maintained his belief that others were dangerous and not to be trusted.

Environmental factors also played a part in maintaining harmful behaviours. The self-harm resulted in the ACCT process. Part of this management plan is for staff to have a number of meaningful interactions every day with the prisoner. These interactions allowed Seth to feel cared for and attended to and therefore provided motivation to keep the document open. It was however more resource-heavy for staff, which led to resentment and negative comments made towards Seth, again triggering self-harm. Additionally, officers would occasionally behave in ways they perceived to be helpful, such as giving him cigarettes after self-harming to "make him feel better", which acted as further reinforcements of the behaviour.

Despite the above systemic difficulties, the environment also acted as a protective factor. Seth expressed that because he didn't have any access to drugs his mind was "clearer than ever". This meant that he was more motivated and committed to meaningfully engage in an intervention and was in a more stable frame of mind to think about his difficulties. His abstinence had also improved his relationship with his grandmother and partner. Although the relationship with his partner could be volatile, it was a significant motivating factor for Seth to work on his difficulties. The intervention with the occupational therapist had nurtured his creative abilities and he regularly used painting and

drawing as a creative outlet and as distraction when his emotions became overwhelming.

Figure 2.1. Formulation



Based on the formulation, we set out to identify less harmful ways of coping with his emotions, which would help Seth "break the cycle" (appendix G). Initially the work focused on managing emotions in the prison setting, whilst the latter part of the intervention focused on extending these strategies to his community context, prior to his release. The intervention focused only on Seth's risk of harm to himself as this was perceived to be the most imminent risk. Targeting his sexually harmful behaviour towards others, prior to having adaptive coping strategies for managing his own emotional experiences, would likely have increased his risk of harm to himself.

Treatment

1:1 intervention with Seth

Seth was seen for 22 weekly sessions during a five month period. The intervention was mainly informed by Dialectical Behaviour Therapy (DBT) (Linehan, 2014). This is considered an effective model for working with childhood trauma survivors who present with behaviours that are impulsive and harmful to cope with intense emotions (Henderson & Bateman, 2006). As in line with DBT principles, the intervention relied on validating Seth's experiences, but also exploring how his current coping mechanisms were obstructing him from achieving his identified goals; finding work and having a healthy relationship with his partner.

The sessions included mindfulness exercises (Kabat-Zinn, 2003), in order to help Seth increase his awareness of emotions and their physiological expressions. Seth worked well with these exercises and was able to link how certain emotions would manifest in his body, e.g. "sadness feels like a black shadow in the chest".

During the intervention he also started practicing meditation with the Buddhist chaplain, which aligned well with his treatment.

Distress tolerance skills (Linehan, 2014) were introduced early and remained a focus throughout the intervention. Distress tolerance skills are aimed at coping and surviving through a crisis, when the situation itself cannot be changed. This is particularly useful within the prison setting, where the environment itself may restrict the number of coping strategies available. If unable to self-harm, Seth would find it unbearable to be alone when he was feeling low and would frequently use his cell bell to call staff over and request for items or to make mundane conversations. This led staff to perceive him as "needy" and "manipulative". We therefore spent time in sessions practicing ways for Seth to tolerate and be with his emotions. This included grounding and relaxation exercises, as well as using his artwork to distract himself.

Identifying what would help Seth "stay well" and discussing emotion regulation techniques (Linehan, 2014) formed another component of the intervention. This included some psych-education on the ways that sleep, eating and mind-altering substances interlinks with emotions (the substance misuse component was covered in more detail by an intervention led by the substance misuse team). Seth was also able to identify that when he was feeling low, he would often engage in behaviours that made him feel worse, such as listening to sad music or drawing his own funeral. Hence, a significant amount of time was spent exploring activities that made him feel good and encouraging him to practice these more regularly and use them to counter distressing emotions.

During the intervention it became clear that Seth's self-esteem was low and he often doubted his own ability to make changes in his life. A narrative approach

was used in working with this difficulty. Narrative approaches to therapy are based on the principle that individuals live their lives based on stories that have been created through their lived experience (White & Epston, 1990) and that difficulties occur when an individual has internalised a story of weakness or inability, which based on the formulation appeared to be the case for Seth. Hence, time was spent in sessions drawing on stories of strength and exploring the things that Seth liked about himself, in order to increase self-esteem and self-efficacy. Seth created a drawing with a list of strengths he had identified and later used this list to counter his negative thoughts about himself during times of distress.

Due to the disclosure of sexual abuse, we explored the potential of reporting the abuse to the police. Seth chose not to move forward with this. Insufficient information was provided in order to proceed with the report without Seth's cooperation. Furthermore, this may have compromised the therapeutic relationship. However, a safeguarding concern regarding the relationship with Jake was handed over to his probation officer.

Systemic Intervention

One of the coping strategies explored in sessions was that of verbally seeking help from others, which was particularly challenging for Seth, given his past experiences. A number of prison officers had come to hold a negative view of Seth, which presented a barrier to help-seeking. Their attitudes appeared to affect their responses towards him and they often used terms such as "manipulative" and "attention seeking" to describe him. The difference between the mental health team and prison officers approach to working with Seth

manifested a typical team split, as described by Hamilton (2010), re-enacting the chaos and instability that characterised Seth's early life.

In order to manage the split between professionals, a reflective session was arranged with some of the wing staff and Seth's occupational therapist. The aim of the session was to increase staff consistency and shape guidelines in working with Seth. The session was trauma-informed (Foa, Ehlers, Clark, Tolin & Orsillo, 2000) and aimed to explore what professionals believed was underlying some of Seth's challenging behaviours, e.g. how Seth viewed himself, others and the world around. During this exercise, they expressed that they felt Seth had low self-esteem and were scared of others. They were also able to identify that they treated him differently from other prisoners, and would pander excessively to his requests, due to their fear of him self-harming. The session resulted in Seth being placed on a "traffic light system". This is a token economy system used in the prison. This specified that verbal abuse towards staff and excessive use of his cell bell would have short term consequences, such as a loss of his TV for the morning or afternoon, but interacting respectfully with them came with rewards, such as having a PlayStation in his room.

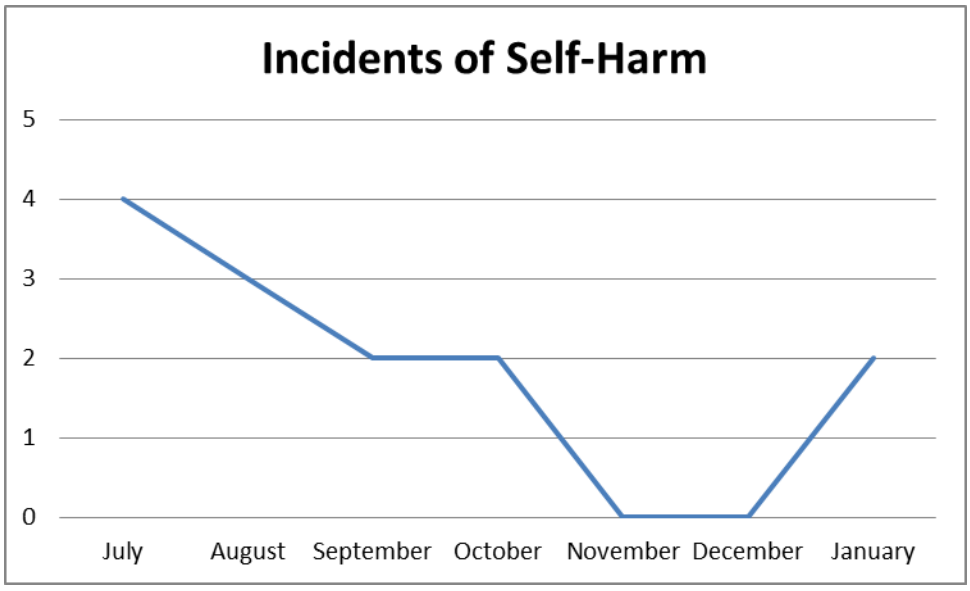
A joint session was also held with Seth and one of the wing officers, which helped Seth to understand the impact of his behaviour upon the staff, e.g. engaging in conversation with staff about the news would not make it clear to them that he was distressed. Furthermore they would not always be able to meet his requests promptly, due to a busy wing regime, at which times Seth was encouraged to utilise his distress tolerance skills. The session also outlined how staff could help him cope with his difficulties, e.g. to refrain from asking Seth about his mood or self-harm within earshot of other prisoners, as this made him feel ashamed and humiliated. A rating system was agreed upon for describing

his mood and also for staff to be transparent about when they would be able to assist. The traffic light system worked well, with Seth earning the PlayStation on all, but one weekend. As a result, the relationship between Seth and the prison officers improved. It also appeared to have an empowering effect, enabling Seth to take more ownership of his interactions.

Treatment Results

Incidents of self-harm decreased during the intervention and eventually stopped, which allowed for closure of the ACCT document. Seth also came off his "single unlock" status and started to come out for association with small groups of other prisoners. Two further incidents of self-harm did however occur prior to his release (see figure 2.2). Seth attributed this to anxiety about going "back out there" and fears that he would not be able to "deal with it".

Figure 2.2. Incidents of Self-Harm



We summarised the intervention by collaboratively completing a safety plan for how he could maintain his positive changes and extend the coping strategies he found useful to the community. The plan included what he could do to cope in a

crisis, as well as how others could best support him (appendix J). Seth agreed for this safety plan to be shared with both his family and his probation officer.

Seth completed the DERS at the end of the intervention and his total score had decreased to 112. His scores had reduced in all the relevant areas (see Table 2.1 below). Jacobson, Follette & Revenstorf's (1984, cited in Evans, 1996) 'criterion A' method for calculating clinically significant change was used for the factors that were highlighted as treatment needs at the outset of the intervention. These were *strategies, impulse, awareness* and *goals.* A sample of hospitalised adolescent males (*n* 90) (Perez, Venta, Garnaat & Sharp, 2012) presenting with self-harm behaviour was used for clinical sample data. Apart from *awareness*, all the measured factors yielded clinically significant change. It is worth noting that the utilised sample had a lower mean age (16), which may affect the validity of these findings.

Seth also completed a post-intervention goal attainment form and scored the intervention as 10/10 helpful in addressing the identified issues. He reported that the most useful part of the intervention was "talking to someone that's listening". As described by Levenson (2014), the relational aspect of therapy can be powerful in promoting change, as well as modelling healthy boundaries and respectful interaction. Hence, the above quote from Seth may indicate that he found the process rather than the content to be the most useful part of the intervention.

Seth did however state that he still found it difficult to manage anger towards others and according to prison officers, although less frequent, incidents of verbal abuse towards them still occurred. This was highlighted as a

recommendation for further intervention in the end of treatment report provided to Seth's probation officer.

Table 2.1. DERS Scores

	Pre-Intervention	Post-Intervention
NONACCEPT Non-acceptance of emotional responses	14	16
GOALS Difficulties engaging in goal directed behaviour	25	14*
IMPULSE Impulse control difficulties	30	26*
AWARENESS Lack of emotional awareness	26	23
STRATEGIES Limited access to emotion regulation strategies	38	24*
CLARITY Lack of emotional clarity	11	9
TOTAL	**139**	**112**

*=clinically significant change.

Seth was given a follow-up call after his release back into the community, where he reported to be doing well and stated he felt he had coped with it "better than expected". As informed by narrative therapy (Fox, 2003), the intervention was summarised in a therapeutic letter. This was sent to Seth (appendix K) following his release.

Barriers and Limitations

Although Seth engaged well and attended all sessions, it became clear from early on in the intervention that bringing his thoughts and feelings to the forefront of his mind by talking about them, easily became overwhelming and could result in self-harm after the sessions. This pertained particularly to

discussions about his traumatic experiences in childhood. I was mindful about the adverse effects of re-processing traumatic memories before Seth had sufficient coping skills to deal with the distress this brought him. Seth on the other hand felt it was important for him to be able to "vent". This was addressed by spending the first part of each session led by Seth, but keeping the focus on "how to cope with his experiences in the here and now". Each session was ended with a distress tolerance or mindfulness exercise, which proved to have a containing effect.

One of the barriers to establishing a therapeutic relationship was the prison environment itself. Low staffing and frequent incidents on the wing meant that the regime would rapidly change and sessions would be cancelled, interrupted or prematurely ended. This challenged the basic therapeutic principles of consistency and reliability, mirroring Seth's own chaotic past. It was often a source of frustration for Seth at the beginning of the intervention and he frequently interpreted the disruptions as "others being against him". Time and transparent communication about what to expect ameliorated these frustrations to some extent. Prison staff seeing the value of the intervention further improved the organisation of sessions, but the chaotic nature of the delivery likely impeded the development of a therapeutic relationship.

I also noticed how it was important for me to adapt my communication to Seth's cognitive abilities. As a non-native English speaker, I may at times express myself with less clarity than a native speaker. As Seth often felt ashamed of not understanding, he would mask this by acquiescence. I made sure to always check his understanding and as the therapeutic relationship developed he became more able to ask for clarification.

Furthermore, Seth's interpersonal effectiveness and how he expressed anger towards others was clearly an outstanding treatment need, based on both his own and prison officers' report. Although this was covered to some extent both in the 1:1 sessions and the joint session with prison staff, it would likely have benefitted from more attention during the intervention.

It is of note that Seth was not referred for harmful eating behaviour. Nor did he view this as a significant problem. Whilst several behaviours could be conceptualised as part of a more expansive constellation of avoidance-based strategies, binge eating and chain-smoking were less immediately damaging. Hence, a harm-minimisation approach was taken. The extent to which the intervention influenced these behaviours is not known. It is possible that Seth would benefit from further support with these areas in the future.

Discussion

This intervention illustrates how focusing on coping skills and resilience building had a direct positive effect on the management of trauma-related thoughts and feelings in a male survivor of childhood trauma. This is in line with Herman's (1992) first stage of trauma-work which emphasizes safety and stabilisation. However, building the skills to cope with trauma-related memories is only the first component. Seth initially maintained that he "couldn't remember any of his childhood", but as the intervention progressed, he shared more and more of his early traumatic experiences. This suggested that he may have initially coped with these experiences through repression or selective forgetting. As the intervention appears to have brought more of these experiences to the forefront of his mind, Seth would likely benefit from further treatment focusing on re-processing and integrating these memories. Seth having identified skills that he

can use when overwhelmed by emotions will be a useful foundation for such work.

The sexual abuse and lack of boundaries within early relationships are likely linked to Seth's own harmful sexual behaviour. During sessions, Seth appeared confused about what was appropriate within a relationship and seemed to struggle with the concept of consent. Sexually abused children are at increased risk of committing sexual offences, due to modelling the behaviour of their abuser or adopting their attitudes, in an endeavour to understand their own experiences (Hanson & Morton-Bourgon, 2004, Boonmann, Grisso, Guy, Colins, Mulder, Vahl & Vermeiren, 2016). Seth occasionally brought up the offence in the sessions. Whilst he was willing to reflect on the reasons that he was convicted, this appeared challenging for him to do and he quickly became emotive. I perceived this to be linked to shame and guilt; emotions which often precipitated incidents of self-harm. Hence, any intervention directly targeting sexual offending should be holistic and trauma-informed. This may be crucial in minimising Seth's risk of harm to himself, as well as enabling him to understand his harmful sexual behaviour within the context of his own traumatic experiences.

This intervention was limited to Seth's ability to cope with his own experiences and the risk of harm he presented to himself. The sexual assault of a 13 year old child and the previous offences of a similar nature suggested that this was becoming a more established pattern of offending. Alcohol and drugs appeared to play a part in Seth's offending, both in terms of overcoming internal inhibitors, as well as victim resistance (Finkelhor, 1984). Although the interventions targeting Seth's substance misuse and coping strategies may be a useful first step in addressing his offence pattern (Vogel, Ruiter, Bouman, &

Vries Robbe, 2009), there appeared to be outstanding treatment needs to address, in order to reduce Seth's risk of re-offending. A structured assessment was needed in order to inform any further treatment, but it was outside the remit of the employing service to provide such assessment. This was recommended in the end of treatment report provided to probation and was also handed over to the MAPPA panel managing Seth's case. Ongoing support with maintaining the changes made, were highlighted as a need to Seth's probation officer.

Although this case study highlights how targeting a client's way of coping can be effective, it also emphasizes how the context and systemic variables play an important role in in establishing new and more adaptive strategies. As coping strategies do not exist in a vacuum, more systemic interventions may be needed in order to establish healthier ways of functioning. This finding aligns with the Attachment, Self-Regulation and Competency (ARC) model for working with complex trauma, which stresses that interventions addressing an individual's context lead to more effective and sustainable change to coping strategies (Kinniburgh, Blaustein & Spinazzola, 2005). Returning to the community context will present a different set of challenges to those in custody. Furthermore, coping strategies that have been built over a long time, will require time to alter.

Systemic variables also have a direct impact upon which behaviours are noticed and perceived as problematic. Self-harm by cutting offers a visible marker of distress. In prison this triggers an automatic process of safeguarding, whilst harmful eating behaviours are more likely to go undetected. This can lead practitioners to focus on isolated parts of a more complex clinical picture.

Conclusions and Recommendations

The current case study illustrates how binge eating and a range of harmful behaviours can be conceptualised within the framework of coping with childhood trauma. The study also highlights the extent to which the expression of these behaviours is context-dependent. The outcomes showed how targeting coping strategies both through individual therapy and systemic intervention yielded clinically significant change.

Self-harm is common in the prison-environment. Practitioners should evaluate the extent to which this behaviour forms part of a larger pattern of maladaptive coping. This may help clients develop a more holistic understanding of their difficulties, as opposed to splitting these off into various clinical problems.

Furthermore, practitioners should carefully evaluate systemic factors when designing interventions for trauma-survivors in the prison environment. Re-processing work should not be considered under repeated exposure to trauma-related triggers.

CHAPTER THREE

The Relationship between Child Sexual Abuse and Eating Disorder

- The effects of early maladaptive schemas and coping.

Abstract

Numerous theories have been proposed to account for a possible relationship between child sexual abuse (CSA) and eating disorder (ED), however, decades of research on the subject have yielded mixed results. Understanding factors that influence or contribute to the relationship between the two variables may shed more light upon its nature. The current study hypothesised that there would be a relationship between CSA and ED and that this relationship would be mediated by maladaptive schemas and coping styles. 295 participants were recruited from social media platforms (n=118), as well as online ED (n=164) and CSA support forums (n=13). They completed questionnaires measuring eating disorder risk using the Eating Attitudes Test (EAT-26), coping styles using the Brief COPE, early maladaptive schema using the Young Schema Questionnaire Short Form (YSQ-S3), as well as whether they had experienced CSA. Results showed that the relationship between CSA and ED was mediated by early maladaptive schema, whilst none of the coping factors mediated the relationship. Findings provide evidence for maladaptive schema as a meaningful cognitive link between CSA and ED and may offer clinical utility in the treatment of CSA survivors presenting with ED symptoms. Findings in relation to the coping variables are discussed.

Introduction

The previous chapters illustrated how a relationship between CSA and ED may be applicable to both males and females, as well as how harmful eating behaviour can be conceptualised as part of a wider framework of strategies used to regulate distressing cognitions and emotions. Several existing theories have been put forward to account for the ways in which CSA experiences lead to later development of ED. Finkelhor and Browne (1986) formulated a model of the impact of CSA, which includes four traumagenic factors: traumatic sexualisation, betrayal, stigmatisation and powerlessness. Subsequent researchers have suggested that self-starvation may function as a method of re-exerting control over the body in response to the powerlessness caused by CSA (Schwartz & Gay, 1993). Others have viewed ED symptoms as a form of self-punishment (Favaro, & Santonastaso, 2000) or a way to avoid sexual maturation, due to direct linkage to abuse experiences (Romans, Gendall, Martin & Mullen, 2001). As illustrated by the case study in Chapter Two, ED behaviours have also been conceptualised as a way of coping with or regulating trauma-related emotional states (Groleau et al., 2012). This is in line with Ehlers and Clark's (2001) cognitive model of traumatic stress. This model suggests that the traumatic event leads to unprocessed memories accompanied by intense emotional states, which are maintained by avoidance or maladaptive coping strategies.

The empirical evidence for a link between CSA and ED has been somewhat mixed. Smolak and Murnen (2002) conducted a meta-analysis of 53 studies investigating the association between the two variables. They found a small positive relationship, although marked by considerable heterogeneity. Methodological factors account for some of this inconsistency as studies vary in

their definition and measurement of ED and CSA, as well as which variable they treat as the independent. Smolak and Murnen's (2002) analysis showed that the relationship was stronger with abuse status as the independent variable and attributed this to the definition of eating disorder used in these studies. They also suggested that the narrower the definition of eating disorder, the weaker the relationship.

Intervening Factors

The variability in the literature may also be attributed to a range of mediating and moderating variables. Understanding these intervening factors may shed more light on the nature of the relationship between CSA and ED. The most apparent source of variation is the impact of the CSA upon the individual. Some studies have tried to conceptualise the impact of CSA, by looking at the objective abuse content and the factors associated with later psychological maladjustment (Finkelhor & Browne, 1985; Russell, 1999; Zink, Klesges, Steven & Decker, 2009). However, the subjective meaning and personal interpretation of the trauma may more sensitively capture its impact upon an individual (Güleç, Kalafat, Boysan & Barut, 2013).

Early Maladaptive Schema (EMS)

Traumatic events often produce changes in an individual's thoughts and beliefs about themselves and the world, which in turn affects the emotional impact of the event. Such negative cognitions have been found to influence later psychological adjustment following trauma (Foa et al., 2000). Particularly when these adverse experiences happen during childhood and crucial developmental

stages, they may result in negative cognitive representations that are instrumental in how the individual sees themselves and the world, further leading to pervasive patterns of emotional distress and dysfunctional behaviour (Beck, Emery, & Greenberg, 1985; Cukor & McGinn, 2005; Young, 1994). These are sometimes referred to as schema-level representations or early maladaptive schema (Young, 1994). A schema has its roots in childhood and will in the absence of corrective experiences increase in stability over time, holding broad patterns of memories, emotions and cognitions that serve to guide an individual's behaviour (Karatzias, Jowett, Begley & Deas, 2016). EMS are usually divided into five domains; disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, and overvigilance and inhibition (Young, Klosko & Weishaar, 2003).

Studies have found that these cognitive interpretations of interpersonal trauma are meaningfully linked to trauma-related psychopathology, such as Posttraumatic Stress Disorder (PTSD) (Harding, Burns & Jackson, 2012; Karatzias et al., 2016). Increasingly, evidence is also suggesting that unconditional negative beliefs about others, the self and the world, play a part in the formation and maintenance of eating disorder symptoms (Leung, Waller & Thomas, 2000; Waller, 2003; Yiend, Parnes, Shepherd, Roche & Cooper, 2014). The schema-focused approach to therapy is yielding promising results in eating disorder treatment (Simpson et al., 2010; Pugh, 2015). Some evidence has suggested that maladaptive schema mediates the relationship between CSA and bulimic symptoms (Jenkins, Meyer & Blissett, 2013; Estévez, Ozerinjauregi, Herrero-Fernández & Jauregui, 2016). The first of these studies only incorporated EMS in the disconnection and rejection domain and the second

focused on bulimia-type symptoms, using a Spanish impulsivity measure. It would be useful to get more of a comprehensive image of the role of EMS in the relationship between CSA and ED, using a measure specific to eating disorders.

Coping Styles

Another factor increasingly receiving attention as an important element in the long-term adjustment following CSA is the cognitive and behavioural coping strategies used by survivors (Walsh, Fortier & DiLillo, 2010). Several different models are used to classify coping. One frequently used model divides into approach (integrating painful material) and avoidance coping (Roth & Cohen, 1986), whilst another model distinguishes between emotion-focused and problem-focused coping, where the former aims to relieve the emotional response and the latter directly targets the problem (Turner, Bryant-Waugh, Peveler & Bucks, 2012). Avoidance and emotion-focused coping styles have consistently been associated with poor psychological outcomes and evidence suggests that CSA survivors tend to employ these types of coping both in the short and long-term (Walsh, Fortier & DiLillo, 2010). According to Briere (2002), early severe abuse interrupts the child's development and reduces the capacity to regulate emotions and deal with the stressor. If exposed to severe trauma, the child will make use of cognitive and emotional avoidance techniques in order to reduce the self-exposure to the traumatic material and maintain an internal balance when overwhelmed by trauma-related emotions. Negative cognitions formed as a result of the abuse may serve to perpetuate these dysfunctional coping mechanisms (Young, 1994, Ehlers & Clark, 2000, Chapter Two).

Avoidant and emotion-focused coping mechanisms have also been associated with disordered eating. A study by Aubalat and Marcos (2012) found that an avoidant coping style predicted ED risk symptoms in adolescents prior to the onset of an eating disorder. Another study by MacNeil, Esposito-Smythers, Mehlenbeck and Weismoore (2012) used a stress/diathesis model to investigate the effects of avoidance coping on eating disorder attitudes and behaviours and found that those experiencing high number of daily stressors and employing an avoidant coping style exhibited more eating disordered symptoms. Further evidence has shown that women with historical or current eating disorder reported higher levels of escape-avoidance strategies (Ghaderi & Scott, 2000). Recent studies have found support for coping style as a mediating variable between social and emotional stressors and emotional eating patterns (Raspopow, Matheson, Abizaid & Anisman, 2013; Litwin, Goldbacher, Cardaciotto & Eubanks Gambrel, 2017).

Aims of the Current Study

In summary, the cognitive interpretations of abuse experiences along with maladaptive coping techniques have been found to have a substantial impact upon later psychological adjustment following CSA. Negative cognitions and maladaptive coping techniques have also been found to predict ED symptomatology. If trauma-related cognitions and coping is found to influence the relationship between CSA and ED, it may have some important clinical implications as both negative cognitions and coping strategies (Chapter 2) can be targeted in psychological therapy (Linehan, 2014, Young, 1994). Knowing more about how CSA impacts upon eating disordered cognitions and behaviours

could therefore assist clinicians working with populations affected by ED and CSA, in terms of tailoring and targeting interventions. It may also prove helpful in both the prevention and assessment of ED.

Hence, the aim of the current study is to investigate whether trauma-related cognitions and maladaptive coping strategies will affect the relationship between CSA and ED. Based on the existing literature, it was hypothesised that (1) there will be a relationship between CSA and ED, (2) and that increased EMS and (3) the use of maladaptive coping strategies will mediate that relationship.

Methods

Ethics

The study was reviewed and approved by the University of Nottingham ethics committee (Appendix L). Importance was placed on stating explicitly the nature of the study and providing adequate support contacts in the debrief section, due to the sensitive topic and potentially vulnerable characteristics of participants. Permission was obtained to use study materials where needed.

Participants

The sample included 295 participants (n=259 female, *n*=28 male and *n*=8 gender nonconforming), recruited through various online platforms. They comprised three different sub-samples; sexual abuse survivors (CSA sample) recruited through survivor online support forums (*n*=13), participants suffering with eating difficulties (ED sample) recruited through online eating disorder support forums (*n*=164), and a general population sample recruited through

social media platforms (*n*=118). The gender distribution across the three samples can be found in table 3.1. Eating-type difficulties usually starts in adolescent years, but due to the sensitive topic of the study, the inclusion criteria was set with a lower age limit of 16. The age range of the total sample was between 16 and 69. The mean age for the total sample was 27.8 (SD=9.3). This was similar for the social media sample, 28. 3 (SD=9.0) and the ED sample, 26.7, (SD=8.3), whilst the CSA sample had a slightly higher mean age with 36.8 (SD=15.2). The mean age was similar for females, 27.8 (SD=9.1), and males, 29.8 (SD=11.0), with mean age for gender nonconforming participants being somewhat lower, 21.4 (SD=4.9). Participants could withdraw from the study at any point up until the submission of their survey. The utilised survey software did not allow for measurement of dropouts. A priori power analysis using the exact function in GPower (Faul, Erdfelder, Buchner & Lang, 2009) indicated that a sample size of 118 participants would be sufficient to detect an effect size of .15 with a power of .90.

Table 3.1. Participant gender distribution across samples

	Social Media Sample	**ED sample**	**CSA Sample**	**Total**
Females	96	153	10	**259**
Males	19	7	2	**28**
Gender-nc	3	4	1	**8**
Total	**118**	**164**	**13**	**295**

Materials

Eating attitudes test (EAT-26)

EAT-26 (appendix M) is the modified version of the original EAT-40 (Garner & Garfinkel, 1979). It is widely used as a screening measure of the symptoms that indicate eating disorders and has been used as a valid and reliable tool for identifying dysfunctional eating patterns in both clinical and non-clinical samples (Garner, Olmsted, Bohr & Garfinkel, 1982). It is not intended for diagnosing eating disorders, but rather to identify "eating disorder risk", where a score of 20 or more warrants professional assessment. EAT-26 comprises three criteria; the total score from the 26 questions, the score from the behavioural questions (binging, purging, exercise, weight loss and dieting in the last 6 months) and the BMI score derived from the respondent's weight and height. A referral to a professional is also recommended if a respondent meets the threshold for one or more criteria. This study focused on the 26 self-report questions and considered a score above 20 as 'high risk of ED'. The items refer to both behaviour and cognitive aspects of respondents eating behaviour, e.g.
"I vomit after I have eaten" and "*I give too much time and thought to food".*

The Brief Coping Orientations to Problems Experienced Scale (Brief COPE)

The Brief COPE (appendix N) by Carver (1997) is one of the most commonly used self-report measures of coping (Kasi, Naqvi & Afghan, 2012). It is an abbreviated version of the original 66-item COPE (Carver, Scheier & Weintraub, 1989). It was created due to the length of the initial version and was developed by selecting the items with the strongest factor loadings in the original scale. The Brief COPE is comprised of 28 items that cover 14 distinct coping strategies; self-distraction, active coping, denial, substance abuse, use of emotional

support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion and self-blame. Respondents were asked to think of what they generally do when faced with stress in their life and score each item on a four point Likert scale, ranging from "I usually don't do this at all" to "I usually do this a lot". The Brief COPE has been validated on several different samples and in different languages. It has been used to measure coping in eating disordered populations (Brytek-Matera & Schiltz, 2013) as well as with victims of child sexual abuse. (Ullman, Peter-Hagene & Releya, 2014).

The Young Schema Questionnaire (YSQ-S3)

The YSQ-S3 (Young, 2003) is a self-report questionnaire (appendix O) consisting of 90 items. It is a short form of the original scale. It measures 18 maladaptive schema about the self, others and the world, which can be split into five domains. These are; emotional deprivation, abandonment, mistrust/abuse, alienation, defectiveness/shame (Domain 1: disconnection and rejection), vulnerability to harm, enmeshment, failure to achieve, dependence/incompetence (Domain 2: impaired autonomy and performance) subjugation, self-sacrifice, admiration (Domain 3: other-directedness), entitlement, insufficient self-control (Domain 4: impaired limits), emotional inhibition, unrelenting standards, pessimism and self-punitiveness (Domain 5: overvigilance and inhibition).

The score for each schema is derived by calculating the mean of the item scores in that domain. The higher the score, the more maladaptive the schema. The

YSQ-3 has been used with both eating disorder and sexual abuse survivor populations (Waller, 2003; Harding, Burns & Jackson, 2012).

Procedure

An online sampling method was chosen in order to reach out to a large number of people with both CSA and ED experiences. Upon entering the online survey, participants were presented with a brief information sheet (appendix P) and thereafter gave their informed consent. They were informed that the study investigated the relationship between CSA and ED and that they would need 30-45 minutes to complete the questionnaires. Participants were asked for demographic information and were subsequently presented with the YSQ-S3, the EAT-26 and the Brief COPE. Participants were asked about their CSA and ED status at the end of the survey, to avoid priming. The question about experiences of child sexual abuse is based on the definition found on NSPCC (NSPCC, 2015);

Prior to the age of 16, were you forced or persuaded to take part in any sexual activity? This may include both contact (e.g. rape, touching) and non-contact (e.g. asking you to look at pornography or taking pictures of you) activities.

Similarly to the Childhood Trauma Questionnaire (Pennebaker & Susman, 2013), participants were also asked to evaluate on a seven point Likert-type scale how traumatic they perceived the CSA and how much they had confided in others. Seven being the highest level of trauma and the maximum amount an individual confided in others. They were also asked to indicate their age when the abuse took place. Both contact and non-contact abuse experiences were included, as

recent literature has shown that both are linked with major mental health problems and reduced psychological wellbeing later in life (Fergusson, McLeod & Horwood, 2013). Following the completion of the survey, participants were presented with a short de-brief form (appendix Q), which included contact details for the researchers, as well as relevant support organisations.

Data Analysis

Screening for data errors resulted in removal of 12 of the 307 participants prior to analysis. The assumption of normality was violated in the male sample. However, due to the small number of participants in this group, outliers were retained. The Kendall's tau method of analysis was used as this has been cited as the most robust measure of non-parametric correlation (Croux & Dehon, 2010). In an effort to reduce the number of coping variables and understand the underlying structure of the Brief COPE, exploratory factor analyses were carried out. These were performed on the ED and social media samples respectively, using principal axis factoring in SPSS version 22. In line with Field (2013), an oblique method of rotation (direct oblimin) was used, due to the overlapping nature of coping strategies. The relationships between variables were explored using bivariate correlations. In order to evaluate the effects of coping and EMS on the relationship between CSA and ED, multiple mediation analyses were carried out using the 'PROCESS' macro (Hayes & Preacher, 2013; downloadable from: http://afhayes.com/spss-sas-and-mplus-macros-and-code.html) in SPSS version 22. This method allows measurement of both direct and indirect effects of an independent variable on a dependent variable through one or several mediators. It is a non-parametric measure that yields bias-corrected bootstrapped confidence intervals based on 5,000 bootstrap samples.

Confidence intervals are interpreted as significant if they do not contain a zero value.

Results

Male and Gender-nonconforming Participants

Males and gender-nonconforming participants, were analysed separately. Descriptive statistics for the samples can be found in Appendix R.

Males (n=28)

46.4% (n=13) of the male participants had experienced CSA, with a mean age of 9.7 (2.7) at the time. The mean score for how traumatic this was perceived was 4.5 (2.3), whilst the mean score for how much this had been confided in others was 3.2 (2.4). The mean score for the EAT-26 was 16.5, with 32.1% of males (n=9) scoring within the high risk category for eating disorder. The mean score for the YSQ-S3 was 13.6 (4.5), with unrelenting standards having the highest mean score, 18.3 (7.2) and dependence scoring lowest with 10.7 (4.5). Self-blame was the coping variable with the highest mean score 5.6 (2.0), whilst denial had the lowest mean of 2.9 (1.4). A Kendall's tau-b correlation showed no significant relationship between CSA and EAT-26 scores, $\tau b = .165$, $p = .309$.

Gender-Nonconforming (n=8)

All but one (87.5%) of the gender-nonconforming participants (n=7) had experienced CSA, with a mean age of 8.4 (3.2). The mean score for how traumatic this had been experienced was 6.3 (1.0) and the degree to whether participants had confided in others had a mean score of 1.7 (1.3). The mean EAT-26 score for this sample was 31.1 (19.7), with 62.5% scoring in the 'high risk of ED' range. Mean YSQ-S3 was 21.17 (SD 4.64). Alienation had the highest mean score with 26.9 (4.4), whilst entitlement was the lowest scoring schema with a mean of 11.6 (4.5). In terms of the coping variables, religion and denial had the lowest means with 3.1 (2.1) and 3.3 (1.5), whilst the highest mean score was for self-blame, 7.6 (1.1). The small number of participants precluded analysis on the relationship between the CSA and ED variables.

Females

Descriptive statistics for CSA and EAT-26 scores, arranged according to sample, are presented in table 3.2. Means and standard deviations for the various EMS and coping strategies are presented in table 3.3 and 3.4.

Table 3.2. CSA and ED characteristics of the females across samples.

	ED Sample, Females n=153			**Social Media Sample, Females n=96**			**CSA Sample, Females n=10**		
	N	%	Mean (SD)	N	%	Mean (SD)	N	%	Mean (SD)
CSA	90	58.8		46	47.9		10	100	
Age			9.2 (4.0)			10.7 (4.1)			6.4 (3.3)
Confide			1.5 (1.0)			2.1 (1.5)			1.7 (1.3)
Trauma			5.5 (1.6)			4.7 (2.6)			5.9 (1.9)
Eat-26			35.9 (17.4)			20.5 (15.7)			19.8 (13.5)
High Risk ED	122	79.9		42	43.8		6	60	

*Age refers to the time of CSA

ED Sample (n=153)

58.8% (n=90) of the ED sample had experienced CSA, with a mean age of 9.2 (4.0) at the time of abuse. The mean for trauma was 5.5 (1.6), whilst confiding in others was 1.5 (1.0). The mean score for the EAT-26 was 35.9, with 79.9% (n=122) of the participants scoring within the high risk range. The mean YSQ-S3 score was 18.5 (4.5), with unrelenting standards scoring highest; 23.8 (5.6), and enmeshment scoring lowest; 11.92 (6.45). The highest scoring coping strategy was self-blame with a mean of 7.0 (1.4), whilst religion had the lowest mean; 3.1 (1.70).

Table 3.3. Means and standard deviations of EMS for female participants

Schema	ED Sample, Females n=153	Social Media Sample, Females n=96	CSA Sample, Females n=10
	Mean (SD)	Mean (SD)	Mean (SD)
Emotional Deprivation	16.0 (7.5)	12.4 (7.5)	20.9 (5.8)
Abandonment	19.7 (7.0)	16.0 (8.0)	18.8 (5.9)
Mistrust	19.8 (6.7)	15.4 (7.4)	20.9 (3.5)
Alienation	21.6 (7.2)	16.4 (7.7)	23.0 (4.1)
Defectiveness	20.6 (7.9)	13.7 (7.4)	21.5 (4.9)
Failure	19.9 (8.1)	14.2 (7.1)	14.8 (8.3)
Dependence	15.6 (6.2)	12.0 (6.3)	12.3 (6.1)
Vulnerability to harm	16.8 (6.3)	14.2 (6.8)	15.7 (5.5)
Enmeshment	11.9 (6.5)	10.7 (5.8)	10.6 (7.9)
Subjugation	18.2 (6.5)	14.1 (6.1)	16.3 (6.5)
Self-Sacrifice	21.2 (5.1)	18.7 (5.8)	21.4 (2.8)
Emotional Instability	19.1 (6.1)	15.0 (6.5)	18.8 (5.0)
Unrelenting standards	23.8 (5.6)	20.3 (5.8)	21.2 (2.0)
Entitlement	13.4 (5.6)	13.6 (5.5)	10.8 (2.9)
Instrumental control	16.2 (6.4)	15.5 (6.1)	14.3 (3.9)
Admiration	16.3 (6.4)	15.3 (5.8)	12.7 (4.2)
Pessimism	20.7 (6.6)	16.5 (7.3)	18.1 (6.3)
Self-punitiveness	21.4 (7.1)	15.6 (6.2)	19.7 (6.3)
YSQ-S3	18.5 (4.5)	15.0 (4.9)	17.3 (3.2)

Social Media Sample (n=96)

Out of the participants recruited through social media, 47.9% (n=46) had experienced CSA, with a mean age of 10.7 (4.1). Trauma had a mean score of 4.7 (2.6), whilst amount of confiding had a lower mean of 2.1 (1.5). The mean for the YSQ-S3 was 15.0 (4.9), with unrelenting standards scoring highest; 20.3 (5.8), and enmeshment scoring the lowest also for this sample; 10.7 (5.8). Self-distraction was the coping strategy with the highest mean (5.0), whilst denial scored lowest (3.1).

Table 3.4. Means and standard deviations of coping strategies for female participants

Coping Strategy	ED Sample, Females n=153	Social Media Sample, Females n=96	CSA Sample, Females n=10
	Mean (SD)	Mean (SD)	Mean (SD)
Self-distraction	6.4 (1.5)	6.0 (1.5)	6.8 (1.4)
Active coping	5.3 (1.7)	5.7 (1.7)	5.1 (1.3)
Denial	3.6 (1.8)	3.1 (1.5)	3.7 (2.0)
Substance use	3.6 (2.0)	3.8 (2.1)	4.1 (2.1)
Emotional support	4.8 (1.9)	5.4 (1.7)	4.5 (2.1)
Instrumental support	4.7 (1.9)	5.3 (1.7)	4.7 (2.0)
Behavioural disengagement	4.5 (2.0)	3.7 (1.8)	3.3 (2.0)
Venting	4.3 (1.7)	5.1 (1.4)	4.1 (1.5)
Positive reframing	4.2 (1.8)	4.9 (1.8)	4.1 (1.4)
Planning	5.3 (1.8)	5.9 (1.7)	5.6 (1.7)
Humour	4.8 (2.1)	4.6 (1.9)	3.7 (2.0)
Acceptance	5.1 (1.6)	5.6 (1.4)	5.5 (1.4)
Religion	3.1 (1.7)	3.4 (2.0)	4.3 (2.8)
Self-Blame	7.0 (1.4)	5.8 (1.7)	6.5 (1.8)

CSA Sample (n=10)

All the participants from the CSA support forum sample had experienced CSA with a mean age of 6.4. The mean trauma score was 5.9 (1.9) and the degree to which this had been confided to others had a mean score of 1.7 (1.3). The mean score for the EAT-26 was 19.8 (13.5) with 60 % (n=6) scoring within the high risk range. The mean for the YSQ-S3 was 17.3 (3.2). Alienation received the highest mean score for this group of participants, with 23.0 (4.1), whilst enmeshment had the lowest mean with 10.6 (7.9). The highest scoring coping variables were self-distraction, 6.8 (1.4) and self-blame, 6.5 (1.8), whilst denial, 3.7 (2.0), humour, 3.7 (2.0), and behavioural disengagement, 3.3 (2.0) had the lowest means.

The small number of participants recruited through the CSA support forum, as well as those identifying as male or gender-nonconforming, precluded further quantitative analysis of these groups of participants. An exploration of the data using a contingency table, demonstrated a significant difference between the proportion of individuals who had experiences of CSA and ED, $\chi 2$ (2) =29.87, $p < .01$, in the ED and the Social Media samples. Hence, the two samples were analysed separately and include only the female participants.

Social Media Sample

Principal axis factoring was performed on the Brief COPE. Bartlett's test was significant at <.01, the KMO statistic was within the moderate range with a value of .73, whilst the anti-image correlations for individual items were all above .5, indicating that the sample size met the minimum requirements to perform a factor analysis (Kaiser, 1970, cited in Field, 2013). A direct oblimin method of rotation was used, due to the overlapping nature of coping strategies. A three-factor model appeared appropriate, based on the size of eigenvalues, percentage of variance explained and the scree plot. Table 3.5 shows the factor loadings after rotation. As expected, several variables had loadings in more than one factor dimension. The pattern matrix shows the unique contribution of each variable to each factor, whilst the structure matrix takes into account variance and correlations between factors.

Table 3.5. Brief COPE factors obtained using a principal axis factoring method with direct oblimin rotation (pattern and structure matrix) for the social media sample (n=96).

Brief COPE Categories	Pattern Matrix			Structure Matrix		
n=96	1	2	3	1	2	3
Self-distraction	.379		.320	.301		
Active coping	.779	-379		.769	-.374	
Denial		.603			.614	
Substance use		.397			.391	
Emotional support			-.779			-.783
Instrumental support			-.874	.428		-.928
Behavioural disengagement		.807			.856	
Venting	.394			.420		
Positive reframing	.554			.620		-.414
Planning	.744	-.407		.734	-.397	
Humour		.410			.414	
Acceptance	.570			.590		
Religion	.449			.490		
Self-Blame						.301
Eigenvalues				3.91	2.14	1.56
% of variance accounted for				28.0	15.3	11.1
Number of Components				8	6	4

**Note. Factor loadings below .3 are suppressed.*

The first factor accounted for 28.0 % of the variance and was called 'adaptive coping', as it contained items that actively seeks to address the emotional or practical implications of a stressful situation. The second factor accounted for 15.3% of the variance and appeared to seek to avoid the implications of a stressful situation and was therefore named 'avoidance'. The third factor accounted for 11.1% of the variance and was characterised by a lack of reaching out for support and a tendency to blame oneself. Hence it was named, 'internalisation'.

Bivariate Correlations

Correlations between scores for CSA, EAT-26, YSQ-S3 and the three various coping domains are presented in table 3.6. CSA was associated with EAT-26,

YSQ-S3 and the avoidance and internalising domains of coping. EAT-26 correlated significantly with YSQ-S3 and all coping domains.

Table 3.6. Bivariate correlations between CSA, EAT-26, YSQ-S3 and coping domains for social media sample (n=96).

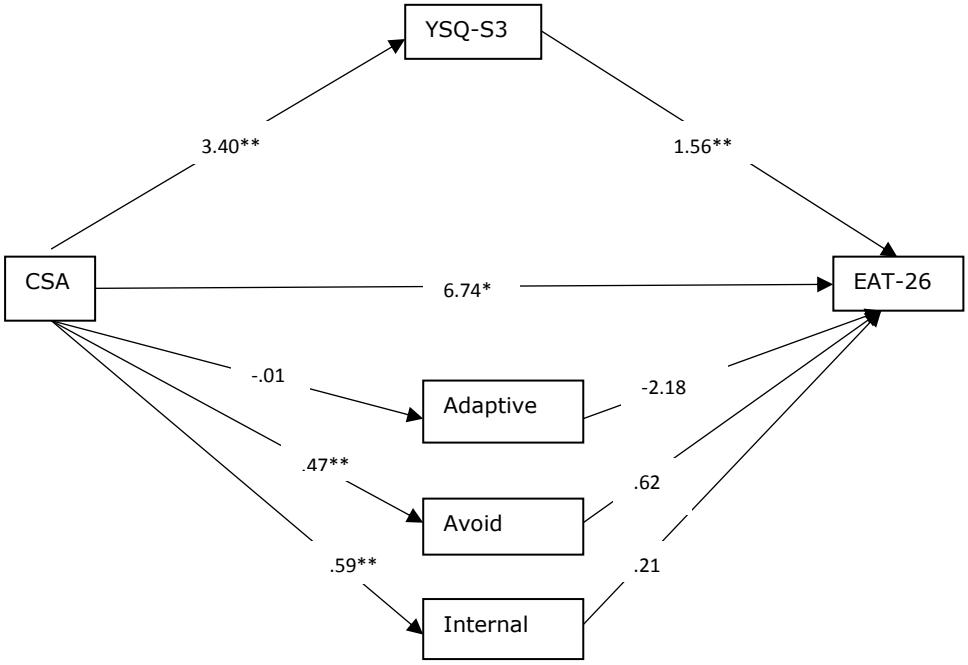
		EAT-26	YSQ-S3	Adaptive	Avoid	Internal
CSA	-	.215*	.351**	-.003	.258*	.311**
EAT-26		-	.546**	-.230*	.377**	.260*
YSQ-S3			-	-.199	.665**	.398**
Adaptive				-	-.089	-.311**
Avoid					-	.189
Internal						-

*p< 0.05, **p< 0.01

Mediation Analysis

A multiple mediation analysis was carried out, using YSQ-S3 and the three identified coping domains as mediators. The unstandardized b coefficients are presented in Figure 3.1. Although CSA predicted both YSQ-S3, avoidant and internalising coping domains, the only significant indirect effect on EAT-26 was through the YSQ-S3 path, *b* = 5.29, 95% CI [1.41, 10.22].

Figure 3.1 PROCESS model 4 mediation model of EMS and coping with unstandardized regression coefficients, for the social media sample (n=96).



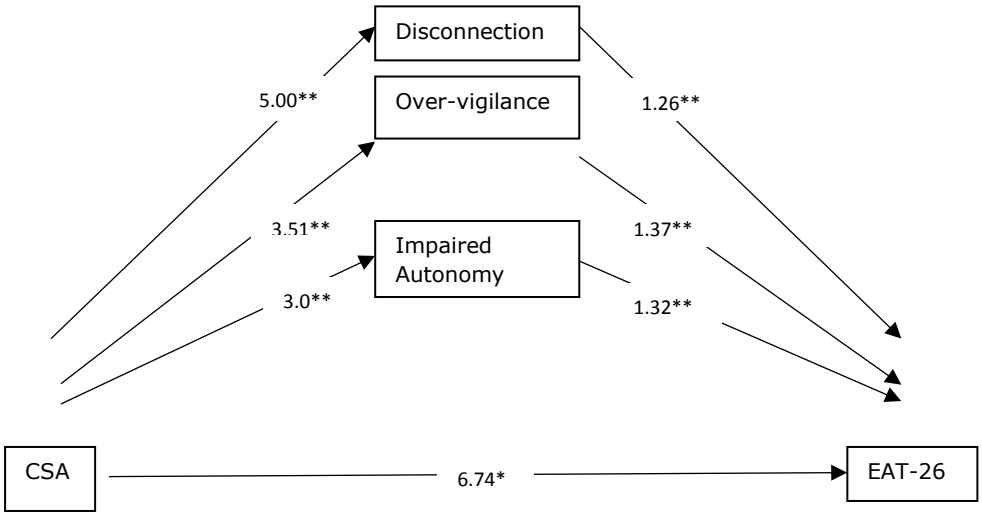
*. p = 0.05, **.p = 0.01.

A post-hoc power analysis was performed using the GPower software (Faul et al., 2009). The sample size of 96, 5 predictor variables and alpha level of p=.05 was used. Post hoc analysis revealed that power exceeded .90 for detection of a small effect size.

Given the significant effects of the YSQ-S3, the effects of individual schema domains were examined. The internal consistency was excellent in the domains of disconnection/rejection, α =.90 and good in the domains of impaired autonomy, α =.84, and overvigilance/inhibition α =.85. It was however questionable in the domain of other-directedness α =.64 and poor in the domain of impaired limits α =.55. Given the small number of items in these scales (three

and two respectively), item deletion would do little to improve internal consistency. These two domains were therefore excluded from the analysis. Mediation analysis showed a significant mediational effect for each of the three schema domains; disconnection/rejection, *b* = 6.32, 95% CI [2.53, 11.60]; overvigilance, *b* = 4.83, 95% CI [1.82, 9.02]; and impaired autonomy, *b* = 3.94, 95% CI [1.00, 8.88].

Figure 3.2 PROCESS model 4 mediation model of the schema domains with unstandardized regression coefficients, for the social media sample (n=96).



**.p = 0.01.

ED Sample

Principal axis factoring using direct oblimin rotation was carried out also for the ED sample. Bartlett's test was significant at <.01, however, the anti-image correlation revealed two individual items below .5 (religion and humour). Hence, these items were removed, in order to generate an acceptable KMO statistic of .72. The analysis again indicated a three-factor model, however with substantial

differences from the social media sample. Table 3.7 shows the factor loadings after rotation. Factor 1 and 2 loaded some of the same variables, as demonstrated by the structure matrix.

Table 3.7. Brief COPE factors obtained using a principal axis factoring method with direct oblimin rotation (pattern and structure matrix), for the ED sample (n=153).

Brief COPE Categories	**Pattern Matrix**			**Structure Matrix**		
n=153	1	2	3	1	2	3
Active coping	.717		.	.769	.378	
Planning	.624			.710	.471	
Positive reframing	.615			.646		
Acceptance	.569			.542		
Self-distraction	.308					
Emotional support		.974			.961	
Instrumental support		.824		.328	.852	
Venting		.405			.413	
Denial			.654			.652
Behavioural Disengagement	-.476		.500	-.510		.541
Self-blame						
Substance use						
Eigenvalues				3.48	1.54	1.50
% of variance accounted for				29.0	12.9	12.6
Number of Components				6	5	2

**Note. Factor loadings below .3 are suppressed.*

The first factor accounted for 29% of the variance. It was composed of 6 items indicating an approach-focused and adaptive style. This was called adaptive coping. The second factor was composed of five items and accounted for 12.9 % of the variance. This again appeared to reflect an approach-focused mode of coping, whilst reaching out more to others for support, therefore labelled 'support seeking'. The third factor accounted for 12.6% of the variance and had two components only; denial and behavioural disengagement, suggesting a more avoidance-focused strategy and was therefore labelled avoidance.

Bivariate Correlations

Correlations between scores for CSA, EAT-26, YSQ-S3 and the three various coping domains are presented in table 3.8. CSA was only associated with YSQ-S3. YSQ-S3 was however associated with EAT-26 and all three coping domains.

Table 3.8. Bivariate correlations between CSA, EAT-26, YSQ-S3 and coping domains, for the ED sample (n=153).

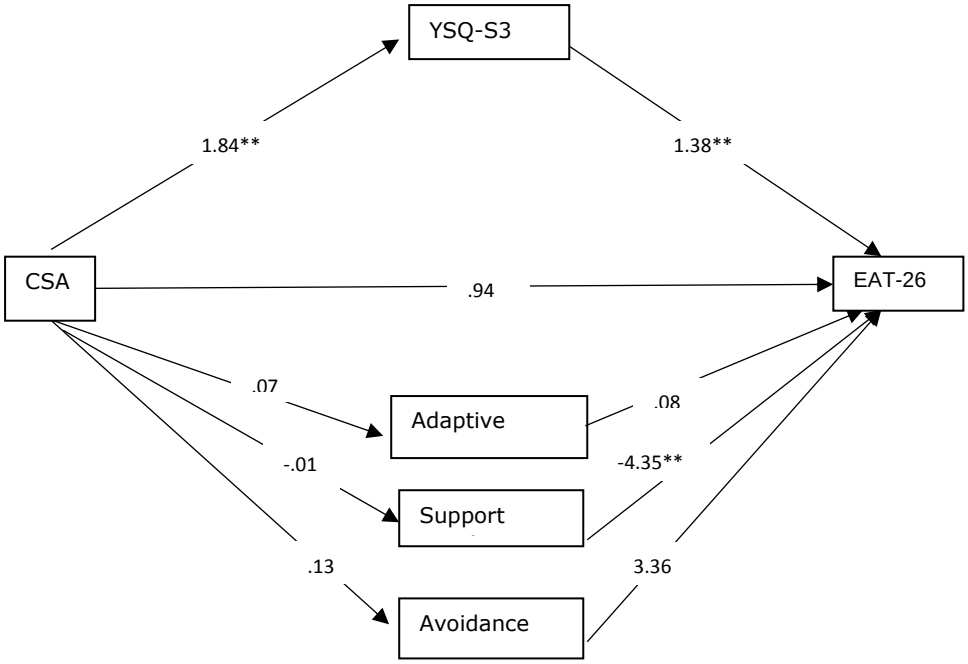
	CSA	**EAT-26**	**YSQ-S3**	**Adaptive**	**Support Seeking**	**Avoidance**
CSA	-	.027	.204*	.040	-.001	.082
Eat_26		-	.475**	-.208**	-.345**	.375**
Mean_YSQ-S3			-	-.288**	-.222**	.537**
Adaptive				-	.339**	-.168*
Support Seek					-	-.165*
Avoidance						-

*. p<0.05, **.p< 0.01.

Mediation analysis

A multiple mediation analysis was carried out, using YSQ-S3 and the three identified coping domains as mediators. The unstandardized b coefficients are presented in Figure 3.2. Also for this sample, the only significant indirect effect was through the YSQ-S3 path, b= 2.53, 95% CI [.71,5.09]. The support-seeking coping domain was negatively associated with EAT-26, b= -4.35, p=.01.

Figure 3.3. PROCESS model 4 mediation model with unstandardized regression coefficients, for the ED Sample (n=153).



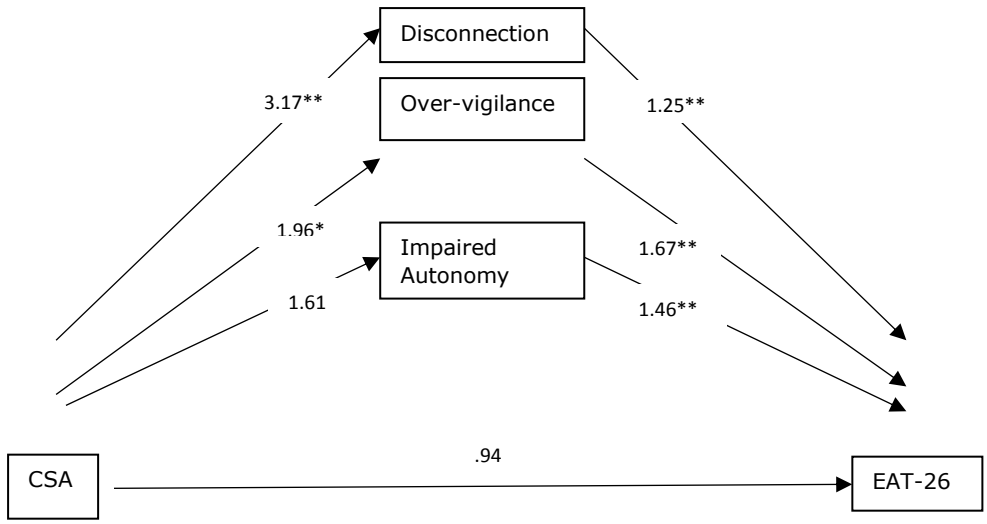
*. p = 0.05, **.p = 0.01.

A post-hoc power analysis was performed using the GPower software (Faul et al, 2009). The sample size of 153, 5 predictor variables and alpha level of p=.05 was used. Post hoc analysis revealed that power exceeded .90 for detection of a small effect size.

Given the significant effects of the YSQ-S3, the effects of individual schema domains were again examined. The internal consistency was good in the domains of disconnection/rejection, α =.87, and overvigilance/inhibition α =.85. It was acceptable in the domain of impaired autonomy α =.77. The domain of impaired limits α =.66 was questionable and the domain of other-directedness α =.51 poor. Hence, these two domains were not included in the mediation analysis. The analysis showed a significant mediational effect for the

disconnection/rejection, *b* = 3.98, 95% CI [1.64, 7.62]; and over-vigilance domains, *b* = 3.26, 95% CI [.64, 6.45].

Figure 3.4 PROCESS model 4 mediation model of the schema domains with unstandardized regression coefficients, for the ED sample (n=153).



*. p = 0.05, **.p = 0.01.

Discussion

Hypothesis 1: The relationship between CSA and ED

The current study hypothesised that there would be a relationship between CSA and ED (1). The hypothesis was not supported for the male sample. This was surprising given the high rates of both CSA and high-risk EAT-26 scores reported by males. This finding may be affected by the small sample size and the

variation observed in the scores. All but one of the gender-nonconforming participants had experienced CSA with 62.5% having high-risk EAT-26 scores. The low number of participants precluded any further analysis, but the reported rates may indicate utility in investigating the relationship between CSA and ED in this population. For females in the social media sample, there was a relationship between CSA and EAT-26 scores. For females in the ED sample however, CSA alone did not significantly predict higher EAT-26 scores.

Research has suggested that a number of adverse childhood experiences are linked lead to the development of eating disorder (Caslini, Bartoli, Crocamo, Dakanalis, Clerici, & Carra, 2016). This may explain the absence of a direct path between CSA and ED in the ED sample, where EAT-26 scores were the highest. Historically, much focus has been placed on CSA and childhood physical abuse, when investigating the link between childhood trauma and ED. More recent studies have however suggested that childhood emotional abuse plays a greater role than other forms of childhood trauma (Moulton et al., 2015; Guillaume et al., 2016). Hence, further studies undertaken in this area should include other forms of childhood maltreatment. There is also a possibility that CSA may be more relevant for certain forms of ED. A recent meta-analysis indicated that CSA may be more relevant for bulimia and binge eating type difficulties (Caslini et al., 2016). The use of a generic measure, such as the EAT-26, may therefore have affected the above findings.

Hypothesis 2: Early Maladaptive Schema (EMS)

The study hypothesised that the relationship between CSA and ED would be mediated by early maladaptive schema (2). The study found that in the social media sample, maladaptive schema, as measured by the YSQ-S3, partially mediated the relationship between CSA and EAT-26 scores. In the ED sample, the relationship was fully mediated by the YSQ-S3. For the social media sample, all of the three tested domains individually mediated the relationship. For the ED sample, both the disconnection/rejection domain and the overvigilance domain had significant individual effects.

These findings build on previous research indicating that EMS provides a window into the cognitions that link early adverse experiences and psychopathology (Bosmans, Braet & Vlierberghe, 2010). They also expand on previous studies that have found support for the disconnection/rejection domain as a significant mediator (Jenkins, Meyer & Blissett, 2013; Estevez et al., 2016). The results reported here suggest a role for several domains of EMS and in addition to the disconnection/rejection domain, highlights the significance of the overvigilance/emotional inhibition domain. In the social media sample, the impaired autonomy domain was also significant and may point to differences in clinical vs non-clinical populations. These findings may also point to variation depending on the clinical presentation of the ED, e.g. restricting vs bingeing/purging types. Future studies exploring differences in cognitive profiles between various ED types may help to shed further light on this. Some efforts are currently ongoing in profiling the contributions of particular schemas in various ED subgroups (Wu, King & Lewis, 2016).

Although this study is cross-sectional and no conclusions between cause and effect can be drawn, one possible interpretation is that the internal representation of CSA experiences through cognitive schema makes an individual more at risk of ED. Another interpretation could be that ED behaviours help to maintain and strengthen held maladaptive schema.

Some studies have reported that an intervention directly targeting negative self-beliefs and schema can lead to a reduction in ED symptoms for individuals in treatment (Yiend et al., 2014, Simpson, Morrow, van Vreeswijk & Reid, 2010). Schema-focused interventions also have utility in alleviating trauma-related presentations (Karatzias, 2016). The current study suggests that schema-focused interventions may have valuable clinical utility also in this specific subsample of those presenting with ED symptoms. Interventions focusing on treating maladaptive schema may prove effective in alleviating both eating and trauma-related symptoms in CSA survivors presenting with ED or at risk of ED. This has important clinical relevance, given the argument that CSA survivors present with specific factors maintaining their symptoms, which standard ED treatments may fail to address (Castellini, Maggi & Ricca, 2014).

Hypothesis 3: Coping Styles

Finally, the study hypothesised that the relationship between CSA and ED would be mediated by coping styles (3). Despite several significant correlations with both CSA and EAT-26 scores, none of the identified coping factors in either of the samples mediated the relationship.

The lack of evidence for coping as a mediator of the relationship between CSA and ED may suggest that although coping strategies have historically (Aubalat & Marcos, 2012; Walsh et al., 2010), and to some extent in this study, been linked to both eating pathology and CSA experiences, they do not play an influential part in the relationship between the two variables. Coping with CSA is an extended process that likely changes across time and involves a variety of strategies at different stages (Walsh et al., 2010). The nature of which would be more adequately addressed through longitudinal studies. Alternatively, coping may play a moderating, rather than mediating role.

Another interpretation relates to the measurement and conceptualisation of coping. This study measured coping as a dispositional style, which has its limitations. Several of the Brief COPE factors loaded the same items. This reflects the dimensional nature of coping, whereby using one strategy does not exclude the use of others, making it more challenging to capture coping as distinct styles. In spite of these difficulties, avoidance and emotion-focused coping strategies have historically been considered maladaptive, whilst problem and approach-focused strategies have been considered adaptive (Schwartzer & Schwartzer, 1996). The difficulty with these distinct taxonomies, is that they do not take contextual factors into account, or whether the strategies are successful, e.g. if the controllability of the stressor is low, then problem and approach-focused strategies are unlikely to yield positive results. There is evidence that the amount of perceived control over a stressor effects the type of coping strategy employed (Gamble, 1992). Hence, trauma-specific triggers may yield very different coping responses to, for example coping with an exam. It is possible that rather than linking ED to a dispositional style, the ED behaviours

themselves represent discrete coping strategies utilised in the face of specific stressors.

In light of the above complexities, it is possible that a trauma-sensitive measure of coping may have captured strategies more effectively in this population. Recent research has also indicated that rather than coping style, "coping flexibility", or an ability to adapt strategies as required, is linked with psychological wellbeing (Cherewick, Doocy, Tol, Burnham & Glas, 2016; Kato, 2016). Alternatively, the schema mode questionnaire (Young et al., 2007) may have offered valuable insight into moment to moment coping responses within the maladaptive schema context. This scale looks at the 'modes' of coping used by an individual. Some evidence has indicated that those with eating disorders rely more frequently on maladaptive modes (Talbot, Smith, Tomkins, Brockman & Simpson, 2015).

Limitations

The study did not distinguish between contact and non-contact abuse or separate on-going from single event abuse. There is evidence to suggest that increased CSA severity may significantly influence the use of maladaptive coping (Fortier, DeLillo, Messman-Moore, Peugh, DeNardi & Gaffey, 2009). It is also possible that the nature of the CSA has an effect on the schema and ED profile of an individual (Zink et al., 2008). The age of the individual at the time of CSA is also likely to play a role in this picture (Briere, 2002).

The study focused on non-specific ED as measured by the EAT-26. Although avoidance-coping has been linked to various forms of eating pathology (Paxton &

Diggens, 1997; Aubalat & Marcos, 2012), there may be variation in coping responses and the schema held within different types of ED symptomatology, e.g. restrictive vs. bingeing and purging subtypes. Given the recent meta-analysis (Caslini et al., 2016) indicating a stronger association for binge-purging symptomatology, in addition to the gender-related concerns of ED measurement raised in Chapter One, there would be utility in measuring such clinical subtleties. Hence, future studies should incorporate increased specificity in the measurement of both CSA and ED.

Furthermore, the study consisted of an opportunity sample of participants with an explicit statement about CSA, which may have led to a biased prevalence of CSA and high risk ED scores in the sample. This may in turn limit the generalisability of the results. The results are also limited by the design of the study, which prevents conclusions about the temporal relationships between variables. Finally, incorporation of other forms of childhood adversity would have allowed examination of CSA impact, whilst controlling for other forms of childhood trauma.

Conclusions and Recommendations

The findings of this study provide evidence that maladaptive schemas play a mediating role in the relationship between CSA and eating pathology. Future efforts should focus on particular schema domains and their associations with differently expressed EDs. Additionally, longitudinal studies, that incorporate other forms of childhood trauma, are needed in order to understand the effect of maladaptive schemas in the development of ED in this population.

The current findings did not support the role of coping styles in mediating the relationship between CSA and ED risk. However, a conceptualisation of coping that incorporates trauma-specific factors and coping flexibility, along with greater measurement specificity of the ED and CSA variables may yield different outcomes.

Practitioners treating survivors of CSA with ED symptomatology may want to consider a schema-informed approach to formulation and intervention. Schema-therapy also holds potential utility as a more comprehensive intervention where typical ED treatment has failed to meet the needs of more complex clinical presentations. A further possibility involves exploring the value of schema-therapy in the prevention of ED for CSA survivors.

*Note. A version of this chapter was presented in a poster at the Division of Forensic Psychology Conference, 2016.

Nidsjö, A., Duff, S., & Browne, K. (2016, June). *Child Sexual Abuse and Eating Disorder: The Role of Maladaptive Schema and Coping.* Poster presented at the Division of Forensic Psychology Annual Conference 2016 | BPS, Brighton.

CHAPTER FOUR

A Critical Evaluation of the Brief COPE within the Childhood Trauma Context

Abstract

Coping refers to a group of internal and external undertakings used to manage stress and adversity. Its dimensionality has been conceptualised in numerous different ways, with most taxonomies considering some strategies more or less adaptive. The Brief COPE is an abbreviated version of the theoretically driven COPE inventory, which measures 14 distinct coping responses. The current critique briefly considers frequently used coping measures and highlights conceptual difficulties when measuring the multi-dimensional and fluctuating nature of coping. It evaluates the psychometric properties of the Brief COPE and examines its utility in measuring coping within the childhood trauma context. The Brief COPE offers an accessible and easy to administer survey of coping with adequate psychometric properties, comparable to other measures of its kind. Few existing studies have however examined its validity within the childhood trauma context. Its utility is further limited by being tailored to adult populations and lacking incorporation of trauma-specific factors.

Introduction

Chapter Two of this thesis illustrated how harmful eating behaviour could be conceptualised as a coping strategy in response to childhood trauma. The notion that ways of coping following trauma play a role in subsequent psychopathology has been supported by several empirical studies (Groleau et al., 2012; Šimić & Barišić, 2010) and was therefore hypothesised as a mediating variable in Chapter Three. However, coping styles as measured by the brief COPE did not yield support for a mediating effect. As a result, the present chapter will evaluate the utility of the Brief COPE with specific reference to the childhood trauma context.

Coping refers to the various processes used to manage the burdens linked to adversity, stressful life events and daily hassles (Snyder, 1999). The concept of coping is not homogenous, but refers to a group of internal and external undertakings. Its dimensionality has been conceptualised in numerous different ways. Holohan and Moos (1987) distinguished between cognitive strategies, where one attempts to change one's own internal states; and behavioural strategies, which refer to overt behaviours employed to reduce the stress. Coping has also been conceptualised in terms of assimilative vs accommodative strategies (Brandtstädter, 1992 cited in Schwarzer & Schwarzer, 1996), where the former aims to alter the environment and the latter aims to alter the self (also referred to as mastery vs meaning). Some of the most well-known approaches differentiate between problem-focused and emotion-focused coping (Lazarus & Folkman, 1984); or approach and avoidance coping (Roth & Cohen, 1986). Problem-focused coping aims to tackle the problem directly, whilst emotion-focused coping refers to managing the emotional experience arising from it. Approach coping is applied when a person deals with the stressful

situation directly, whilst avoidance coping serves to protect the individual from the painful experience. Moos (1995) suggested that these different facets should be combined in order to form a holistic picture of coping.

All the above conceptualisations perceive some strategies to be more adaptive than others. Whilst problem and approach-focused strategies are commonly seen as adaptive ways of managing stress, avoidance and emotion-focused strategies are often perceived to be maladaptive and have been linked to poor health and wellbeing outcomes. The literature suggests that coping responses play a vital part in the psychological adjustment following traumatic experiences (Walsh et al., 2010.) Particularly when the traumatic exposure occurs in childhood, such as with ongoing neglect and abuse, it is likely to have an impact upon the child's development of coping styles, increasing reliance upon maladaptive strategies linked to negative outcomes (Briere, 2002).

The exploration of coping strategies may give us valuable insight into the processes that lead some people to develop physical and mental health problems following childhood traumatic exposure, whilst others display remarkable resilience. Many researchers have indeed treated coping as a mediating or moderating variable in the relationship between childhood trauma and later negative outcomes. Maladaptive strategies have been found to mediate between childhood abuse and later psychological distress, PTSD and sense of self-worth (Walsh et al., 2010). The exploration of coping strategies in childhood trauma survivors also offers clinical value. Coping processes are amenable to change and can be targeted in interventions as demonstrated Dialectical Behaviour Therapy, developed by Linehan (2014). Addressing coping directly, may therefore protect survivors from negative health outcomes associated with certain strategies, e.g. substance misuse or self-harm.

Measuring Coping

Coping strategies have been measured across age, settings, populations and contexts (Kato, 2013). It has frequently been approached as a dispositional attribution, but may also be explored in a situational manner to highlight circumstantial variations. Measures of coping reflect this division. The number of existing coping measures has been estimated to be over 100 (Skinner, 2003), which precludes a review of them all here. A well-established tool is the Ways of Coping Questionnaire (WCQ), which was developed by Lazarus and Folkman (1988) and requires respondents to record coping processes in relation to a specified situation. It splits its 60 items into eight empirically derived scales and evidence of its reliability and validity is widely available (Kato, 2013). Some studies have however argued that when explored using factor analysis, certain factors do not load on their intended structures and seem to vary across samples (Lundquist & Ahlstrom, 2006). This is a common problem with coping measures and likely reflects the fluctuating nature of coping and the issue of situation versus disposition.

Another frequently used measure is the Coping Inventory for Stressful Situations (CISS) (Endler & Parker, 1999). The CISS is a situational measure, which focuses on a specified event and boasts solid psychometric properties. The authors created a 70 item pool, based on previous measures and administered this to a large sample of University undergraduates (n=559). Factor analysis of the 48 relevant items yielded three factors; task-oriented, emotion-oriented and avoidance oriented coping. The CISS has been cross-validated with the WCQ (Endler & Parker, 1994) and replication studies have found validity and reliability ranging from acceptable to good across several samples (Endler, Kantor &

Parker, 1994; Brands, Kohler, Stapert, Wade & van Heugten, 2014,). The CISS also benefits from having both an adult and adolescent version.

Another noteworthy mention is the Coping Strategies Inventory (CSI) (Tobin, 1989), which has been used frequently with childhood trauma victims (Walsh, Fortier & DiLillo, 2010). It is a 72 item measure which measures coping responses to a specific stressor. It splits its items first into eight primary scales, then four secondary scales (emotion-focused and problem focused engagement as well as disengagement) and finally two tertiary scales (engagement vs disengagement). Tobin (1989) reports good internal consistency and adequate validity. However, additional studies are needed in order to further evaluate its psychometric properties.

The above measures tend to rely on two or three factor taxonomies of coping. Carver, Scheier, and Weintraub, (1989) argued that coping strategies are inter-linked and that such divisions were too simplistic. As a result, they developed the Coping with Problems Experienced (COPE) inventory, in order to explore a wide range of coping techniques. It distinguishes itself from most other measures, which are empirically driven, in that it is theoretically informed by the Lazarus model of stress and models of behavioural self-regulation (Lazarus, 1966, Carver & Scheier, 1981, 1983, 1985; Scheier & Carver, 1988, cited in Carver, Scheier & Weintraub, 1989).

The Brief COPE

The length of many coping tools entails a certain level of response burden. In applied research, where several hypotheses are tested at the same time and coping strategies may form part of a bigger picture, a less resource-heavy measure may be warranted.

The Brief COPE (Carver, 1997) is an abbreviated version of the COPE inventory. The tool consists of 28 items measuring 14 distinct coping responses; self-distraction, active coping, denial, substance use, emotional support, instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion and self-blame. Respondents are asked to rate the extent to which they use each strategy on a 4 point Likert scale, ranging from "I don't do this at all" to "I do this a lot". The Brief COPE is intended for adults over the age of 18 and has been translated into a number of languages, such as Spanish, Greek, German, French and Korean. The Brief COPE can be used in a dispositional or (time-limited) situational manner, which along with its brevity and free access, has contributed to its status as one of the most frequently used measures of coping (Kato, 2013).

The Brief COPE was developed within the field of health psychology, but has been used in a variety of settings, such as with psychiatric inpatients (Meyer, 2001), caregivers of individuals with dementia (Cooper, Katona, & Livingston, 2008), medical students (Yusoff, 2010), women with eating disorders (Brytek-Matera & Schiltz, 2013), and childhood sexual abuse survivors (Filipas & Ullman, 2006).

Psychometric Properties

The requirements of a high quality psychological test have been outlined by Kline (2015) as being valid, reliable, able to appropriately discriminate and either have good norms or be customised for the population in question. The test should also have at least interval data. The Brief COPE generates only ordinal data, which allows for efficient collection and categorisation. However, it is unable to measure meaningful differences between values.

Reliability

Several caveats exist when assessing the reliability of coping instruments. As coping is believed to be a process of strategies that may fluctuate across situations and points in time, test-retest reliability is difficult to establish. Furthermore, using some strategies from one category (e.g. active coping) does not necessarily mean that an individual will use all the strategies within it. Nor does it preclude reliance upon other strategies, which inherently becomes a threat to internal consistency.

Hence, similarly to other coping measures, the internal consistency of the Brief COPE has varied by scale across samples. Internal consistency is usually measured using Cronbach's alpha, where a value of above .70 is considered acceptable. During the initial development of the Brief COPE, which was administered to 168 hurricane survivors (Carver, 1997), the internal consistency ranged from .50 for venting to .90 for substance abuse. Similar variations have been found with breast cancer survivors (Yusoff, Low & Yip, 2010), medical students (Yusoff, 2010), traumatic brain injury patients (Snell, Siegert, Hay-Smith & Surgenor, 2011) and psychiatric inpatients (Meyer, 2001). Substance use often ranks highest with alpha coefficients ranging from .87 to 1. Venting, active coping, self-distraction and positive reframing have often been in the lower range between .50 and .68. Snell et al. (2011) however reported that internal consistency could be improved by compiling items into a three factor model with approach, avoidance and help-seeking as over-arching coping styles.

Test-retest reliability has been examined with varying timescales. Cooper, Katona, and Livingston, (2008) found that there was adequate test-retest reliability both a year and two years later in their sample of dementia carers.

Yusoff, Low, and Yip, (2010) used a 7-8 week retest window for a sample of women going through chemotherapy. They found excellent correlations (>.90) for acceptance, denial, venting, behavioural disengagement, and self-blame. The other scales received varying results, which led them to hypothesize that certain coping strategies were more likely to be influenced by the phases of treatment.

Validity

The validity of the Brief COPE has been examined in several populations. Content validity refers to the extent to which test items represent the construct they aim to measure, e.g. coping. In the development of the scale, Carver (1997) reported that (with the exception of three new or modified scales) the factors all loaded similarly to the original version of the COPE. Yusoff (2010) and Snell et al. (2011) conducted confirmatory factor analyses which found support for Carver's (1997) initial factor loadings in samples of medical students and traumatic brain injury patients respectively.

Predictive validity concerns a tests ability to predict another outcome. Several studies have examined the Brief COPE's performance in this area. Cooper, Katona, and Livingston, (2008) reported adequate predictive validity over a two year period for changes in caregiver burden in their dementia carer sample. Meyer, (2001) split the scales into maladaptive and adaptive coping in his sample of psychiatric inpatients. He found that adaptive coping was related to positive social functioning and psychological wellbeing, whilst maladaptive coping was positively related to depression and negatively related to well-being. Bosea, Bjorlinga, Elfstromc, Persson & Saboonchia, (2015) found support for a four factor model consisting of avoidant, emotion-focused, social support and

problem focused coping. Avoidant coping predicted adverse physical and mental health outcomes using the health related quality of life inventory (HRQoL).

Concurrent validity refers to how well a tool corresponds to another established measure in the field. Few studies have examined the concurrent validity of the Brief COPE, but the existing results are promising. Daruy-Filho, Brietzke, Kluwe-Schiavon, da Silva Fabres & Grassi-Oliveira (2013), condensed the Brief COPE items into a three factor model, in order to generate concordant scales with the WCQ. These reflected problem-focused as well as adaptive and maladaptive emotion focused strategies. The problem-focused factor was related to the equivalent in the WCQ at the .05 level (r=.39), the maladaptive emotion-focused was related to the emotion-focused factor in the WCQ at the .01 level (r=.54), whilst the adaptive emotion-focused was related to the 'fantastic or religious thoughts' factor of the WCQ at the .05 level (r=.41). Doron, Trouillet, Gana, Boiché, Neveu & Ninot(2014), examined the hierarchical structure of the Brief COPE in a large French sample (*N*= 2,187) and found a good fit based on Ayers (1996) five-dimensional model of coping, with four of the factor loadings being significant below the .01 level (avoidance, cognitive restructuring, problem solving and support seeking) and one at the .05 level (distraction).

In regards to discriminant validity, which concerns a tool's ability to differentiate between dissimilar constructs, Yusoff, Low, and Yip, (2010) found that some of the scales (active coping, $p<0.01$, planning, $p<0.01$, and acceptance, $p<0.05$) were able to distinguish between women who had a mastectomy and a lumpectomy.

The above suggests that the validity of the Brief COPE is adequate. The somewhat conflicting evidence on its reliability equally affects alternative coping

measures and reflects unresolved issues in the field of coping measurement as a whole. Hence, the psychometric properties of the Brief COPE are comparable to those of other measures. Its brevity makes it easy to incorporate into protocols whilst its theoretically derived scales allow for assessing a broad range of strategies. It also offers a balanced approach to the issue of situation vs disposition. Some other measures, such as the CISS requires professional training in test administration. The Brief COPE in contrast is freely accessible, although this leaves it more vulnerable to misuse.

The Brief COPE with Childhood Trauma Survivors

Granting the evidence of concurrent validity between the WCQ and Brief COPE in childhood trauma survivors (Daruy-Filho et al., 2013), there is a lack of studies examining its validity when measuring coping with childhood trauma. Nonetheless, a number of studies investigating coping in this context have used it in their protocols. Daruy-Filho et al., (2013) examined the relationship between childhood maltreatment and coping in a sample of females with bipolar disorder. Pomroy (2014) used the Brief COPE to explore different strategies of coping following different forms of child abuse and neglect. Some studies have used the Brief COPE to examine coping as a mediating or moderating factor in the relationship between childhood trauma and adverse outcomes, such as psychological distress, anxiety, PTSD, depression, self-injury and attachment (Lyle, 2006; Swannell, Martin, Page et al., 2012; Ullman, Peter-Hagene & Relyea, 2014; Foster, 2014; Su, Lau, Mak, Choi, Feng, Chen & Cheng, 2015). Finally, some researchers have used the Brief COPE to explore the effects of adaptive coping strategies following childhood trauma (Sutherland, 2009; Mohr,

2015). The three factor solution generated in Chapter Three showed some similarities to the results found by Schiavon et al. (2013), where adaptive and more approach-focused strategies loaded one dimension, whilst more avoidance focused strategies formed another factor. There were however differences in the sense that several emotion focused strategies loaded on the same factor as the problem-focused strategies. For the ED sample, where CSA prevalence was highest, one dimension reflected only support-seeking strategies. The ability to reach out to others may be particularly pertinent for CSA survivors, given that CSA often remains undisclosed. However, CSA was not significantly correlated with any of the factor dimensions identified for this sample.

The above finding opens up for questioning whether the Brief COPE can appropriately capture trauma-related coping. It is a theoretically driven measure, which allows for generalisability across samples but may be lacking in validity with distinct populations (Donoghue, 2004). Ben-Porath, Waller, and Butcher (1991, cited in Kato, 2013) reported that an average of 21.5% of strategies listed by the WCQ were not applicable to any given stressor. Similar complications may affect the Brief COPE if used in a situational manner, e.g. coping with an exam is likely to require different strategies than coping with the effects of childhood abuse.

As stated by Walsh, Fortier and DiLillo, (2007), limited efforts have been dedicated to integrate the field of coping with trauma theory. Shame and guilt are widely known effects of traumatisation. The Brief COPE's self-blame category accounts for this to some extent, given that self-blame is a common response to childhood abuse and has been linked to post-trauma maladjustment (van der Kolk, 2014). However, the literature has suggested that self-compassion is a valuable factor in countering feelings of guilt and shame and healing from

childhood trauma (Vettese, 2011). Behavioural strategies such as self-mutilation and self-starvation are other examples frequently reported by childhood trauma survivors as ways of coping (van der Kolk, 2014). Incorporating such trauma-specific factors into coping measures may provide us with valuable information about how survivors adjust following traumatic exposure.

Furthermore, coping with childhood trauma is a developmental process. It is likely to occur in phases and using different coping strategies (Walsh, Fortier & DiLillo, 2009). Certain strategies which are considered more adaptive may not have been available in the context of childhood trauma, e.g. seeking instrumental and emotional support. Strategies such as denial and disengagement, which are usually linked to maladaptive outcomes, may however have been protective for the child at the time. The Brief COPE does not take into account how effective each coping strategy has been for the individual, which may be a vital piece of information. Its ability to be used across situations and over time makes it a valuable measure to assess shifts in coping processes in response to childhood trauma across adulthood. It is however aimed at adults and would not be suitable at measuring coping across the childhood developmental stages.

Another issue is that of gender. The Brief COPE has been used more frequently with females. It has previously been reported that males and females cope differently with emotional stress (Eaton & Bradley, 2008) and are affected by childhood trauma in different ways (Lee, Tsenkova, & Carr, 2014). Doron et al., (2014) conducted gender comparisons in their sample of French college students and found that the hierarchical structure of the Brief COPE did not vary by gender. However, more studies like this are needed to highlight any existence of differences between males and females in the context of childhood trauma.

Conclusions and Recommendations

The field of coping is affected by a number of conceptual issues in relation to its generality and stability and we are in need of more research to understand its multi-dimensionality as a concept. Coping is likely to vary depending on the circumstance and change over time. Hence, we must measure it as a changing process and consider both situational and dispositional variables in order to create a holistic framework of coping.

The Brief COPE offers a brief, accessible and easy to administer survey of coping. Its psychometric properties are comparable to those of other coping measures. It can be used in a dispositional or situational manner, which makes it adequate for use in longitudinal designs. The measure is however designed for adults, which makes it unsuitable for measurement of coping across the developmental context.

The Brief COPE was not developed for measuring trauma-specific coping. As a result it does not incorporate strategies that survivors have been cited to frequently rely on. Researchers and practitioners assessing the coping strategies used by survivors of childhood trauma may want to incorporate trauma-specific factors in their protocols. Future research efforts should focus on developing valid tools for measuring coping in this context.

DISCUSSION

Aims of the thesis

This thesis aimed to explore the relationship between child sexual abuse (CSA) and eating disorder (ED), using a coping framework. Firstly it aimed to investigate the relationship between CSA and ED in males, given the absence of prior reviews of findings with males. The findings of which would help to inform future research, assessment and intervention with male survivors of CSA. The thesis then continued by exploring the efficacy of a coping-focused intervention with a male survivor of CSA whom presented with self-harming and binge eating behaviours, in efforts to regulate emotions. The following chapter examined the link between CSA and ED, using coping as a mediator variable. The study also examined early maladaptive schema (EMS) as a mediator of the relationship, in order to incorporate a cognitive link between CSA and ED. Finally the thesis evaluated a frequently used coping measure; the Brief COPE. This was carried out with a particular focus on the childhood trauma context, in order to gain a better understanding of the utility of the Brief COPE within this remit.

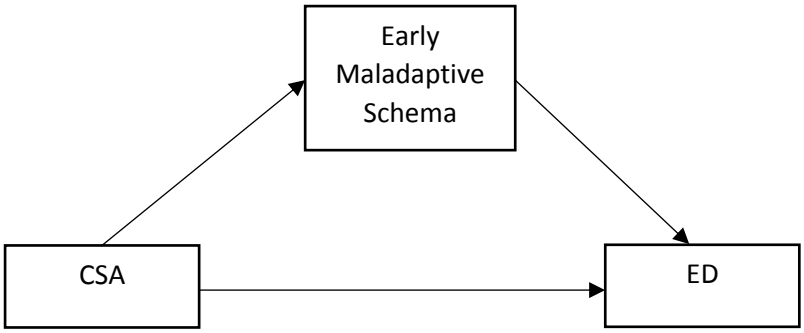
Main Findings

The relationship between CSA and ED in males was examined through a systematic review of the literature. Exactly half of the identified studies supported the relationship between CSA and ED-type behaviours in males, whilst a slightly higher number of papers supported it in females. The findings were characterised by considerable variation, in terms of designs and conceptualisations of the CSA and ED terms. They were also affected by poor

methodological quality, which highlights the need for caution in interpretation. However, given that a number of studies did find a correlation between CSA and ED in male samples, there appears to be value in exploring this further. CSA in males is both under-researched and under-reported (Lowe & Balfour, 2015). This means that the frameworks currently held for understanding coping processes used by survivors have limited utility in capturing male experiences. This may in turn influence how male survivors conceptualise their experiences and how support services respond to those seeking help. With an increase in males reporting CSA in the last decade (Osborne, 2011; Mathews, Bromfield, Walsh, Cheng, Norman, 2017), a gender-informed approach will be required in meeting the needs of male survivors and mitigating pathways that may lead to subsequent psychopathology. The case study detailed in Chapter two, showed how targeting an individual's ways of coping could generate positive change, in terms of reduced self-harming behaviour and client acceptability. The case-study did however also demonstrate the extent to which coping strategies are context-dependent and highlighted how a systemic intervention is imperative in altering how an individual copes with stress. This has particular relevance for forensic institutional settings, where the environment may offer limited access to alternative strategies, but where affecting systemic change may be possible and measureable (Wood, Bailey & Butler, 2017).

The empirical study presented in Chapter three showed some evidence of a relationship between CSA and ED with female samples. This was however non-significant for the male sample. Early maladaptive schema was a significant mediator for both of the female samples (figure 5.5).

Figure 5.5. EMS in the relationship between CSA and ED



Despite some correlations between certain coping styles and CSA and ED, none of the identified coping styles significantly mediated the relationship between CSA and ED. These results suggest that the cognitive interpretation of CSA is more meaningful in linking CSA and ED presentations. One explanation of the findings is that the conceptualisation of coping affected the results. Another interpretation might be that ED behaviours in themselves can be conceptualised as self-regulatory coping strategies for CSA survivors (Groleau et al., 2012, Chapter Two).

The critical evaluation of the Brief COPE underlined how the field of coping assessment is plagued by a number of conceptual difficulties. The Brief COPE is an accessible and easy to administer measure of coping, which features adequate psychometric properties, comparable to alternatives in the field. Its use has however been limited in measuring coping within the childhood trauma context and it does not consider trauma-specific factors, such as self-harm. It may be that measures incorporating such items would more accurately capture coping within this population.

Limitations of the Thesis and Implications for Future research

The findings of both the systematic review and the empirical study suggests that the relationship between CSA and ED may be more questionable for males. Methodologically rigorous research is needed to better understand its relevance as a risk factor to consider in the assessment and treatment of males presenting with harmful eating and weight regulation behaviours.

ED in males is an understudied area. However, masculinity has been perceived by researchers to be increasingly linked with body image (Murray & Touyz, 2013) and the number of males diagnosed with ED is on the rise (Micali et al., 2013). There are also indications that males are more likely to present with particular clinical features, such as orthorexia (fixation with healthy eating) (Sweeting, Walker, MacLean, Patterson, Räisänen & Hunt, 2015) or muscle dysmorphia (fixation with building muscle) (Murray & Touyz, 2013). Most ED assessment tools are validated on female samples, thereby limiting the representation of male experiences. Research efforts should be dedicated to exploring the pathways that lead to ED in males, in order to inform appropriate assessment and treatment (Micali et al., 2013; Shu, Limburg, Harris, McCormack, Hoiles & Watson, H. J. 2015).

The empirical study in this thesis used a generic ED measure, which similarly to other ED measures have been validated primarily with women. This may have affected findings and it is recommended that future studies utilise measures of ED that can more sensitively capture male presentations. This will be relevant to forensic institutional settings. These environments hold populations that report a high prevalence of CSA (Johnson, Ross, Taylor, Williams, Carvajal & Peters, 2006), particularly in certain groups, such as adolescent sexual offenders

(DeLisi, Kosloski, Vaughn, Caudill & Trulson, 2014). Food often holds significant value in these settings; as a commodity, source of conflict, or as a method of exercising control in an environment where autonomy is limited and access to adaptive coping strategies are restricted (Valentine & Longstaff, 1998; Brockman, 1999). Food refusal and hunger-strikes in these settings are common (Stroud, 2010), but under-researched phenomena. A more gendered approach may help in understanding such harmful eating behaviours.

Chapter two demonstrated how a coping-focused intervention can have a positive effect on the management of trauma-related thoughts and feelings, in line with Herman's (1992) first stage of trauma-work which emphasizes safety and stabilisation. It was also effective in reducing self-injurious behaviour. Future efforts aiming to extend this to other harmful coping strategies may be of value. Harmful strategies used to regulate trauma-related cognitions are often challenging for healthcare practitioners to work with and negative attitudes towards this group of clients are prevalent (Karman, Kool, Poslawsky & van Meijel, 2015). Viewing harmful behaviours displayed by CSA survivors within the coping framework may be less stigmatising and when understood within this context, may make for comprehensive intervention, both directly with clients and in affecting systemic change.

Whilst coping is an important concept in the adjustment following CSA, its relevance as a dispositional style (as used in this thesis) that mediates the relationship between CSA and ED, appears questionable. A limitation of the thesis is the use of a generic measure, given that differently expressed ED's may be related to different coping strategies. Furthermore, there are several barriers to effectively measure coping strategies and the debate on how it is best conceptualised continues (Kato, 2013, Kato, 2016). Future research may want to

consider coping in relation to various ED presentations, use a measure of coping flexibility, and incorporate traumagenic factors, in order to better understand the role that coping may play for survivors of CSA with ED.

The findings on EMS suggests that the internal representation of oneself, others and the world around is a more powerful mediator in the relationship between CSA and ED risk. This highlights the importance of considering the thoughts and beliefs that underlie ED behaviour, rather than the food-related thoughts themselves. This is of significance, given how a recent review described the lack of implementation of theoretical models into effective ED treatment (Pennesi & Wade, 2016). The results of this thesis support the notion that schema-focused interventions may have good clinical utility with CSA survivors presenting with ED symptomatology. Future efforts should focus on particular schema domains and their associations with differently expressed EDs, which was beyond the scope of this thesis. This may offer us important insights into the cognitive representations that link CSA and ED. This may also help to establish survivors who are at risk of developing an eating disorder. It is possible that a measure, such as the Schema Mode Inventory (Young, Arntz, Atkinson, Lobbestael, Weishaar, van Vreeswijk & Klokman, 2007), which conceptualises coping behaviours within the EMS framework may provide valuable insight into coping in this context.

Additionally, longitudinal studies, that incorporate other forms of childhood trauma, are needed in order to understand the effect of maladaptive schema in the development of ED in this population. The focus of the current thesis was limited to CSA only. Whilst there is value in examining this discrete form of abuse on its own, incorporating, comparing and contrasting with other forms of adverse childhood experiences would have allowed for a more holistic picture. If

ED's do serve a self-regulatory function in response to childhood stresses, this would not be isolated to this form of trauma alone. This is particularly important considering how recent studies have highlighted other forms such as neglect and emotional abuse as stronger predictors of adult psychopathology (Robinson, 2013; Guillaume et al., 2016, Widom, Czaja, Kozakowski & Chauhan, 2017).

Conclusions

With the information currently held, the relationship between CSA and ED appears more applicable to female populations. However, the current knowledge base is largely limited by the lack of research invested in these areas, as well as the gender bias in reporting, conceptualising, and assessing these difficulties. Research should be dedicated to informing a gendered approach in understanding CSA and ED presentations. Without such research, CSA and ED services will be ill equipped in their efforts to understand and support males.

The cognitive interpretation of CSA offers a clear link between CSA and ED. Further exploration of the effectiveness of schema-informed approaches is therefore recommended, particularly for complex presentations where typical CSA or ED treatments have failed to meet the needs of the client.

Coping appears a relevant concept in individuals' adjustment following CSA and offers a holistic conceptualisation of co-occurring difficulties, e.g. substance misuse, self-injury and harmful eating and weight regulation practices. It also offers a measurable intervention target. It also offers a measurable intervention target. Current literature concerning coping is however affected by conceptual difficulties, which complicate the use of current measurement tools. Future research aimed at measuring coping should incorporate trauma-specific factors.

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Appendices

Search Syntax

ASSIA Search 2001-2015

20/10/15 (70 hits)

((child* sex* abus*) OR (child* sex* victim*) OR (child* sex* molest*) OR (child* sex* maltreat*) OR (child* sex* assault*)) AND ((eating dis*) OR (eating *patholog*) OR anorexi* OR bulimi* OR binge* OR ednos)

Web of science 2001-2015

23/10/15 (543 hits)

1. TOPIC: (child* sex* abus*) OR TOPIC: (child* sex* maltreat*) OR TOPIC: (child* sex* exploit*) OR TOPIC: (child* sex* trauma*) OR TOPIC: (child* sex* molest*) OR TOPIC: (child* sex* assault*)
2. TOPIC: (eating dis*) OR TOPIC: (anorexi*) OR TOPIC: (bulimi*) OR TOPIC: (bing*) OR (ednos) OR (eating *pathology*)
3. #2 AND #1

CINAHL 2001-2015

23/10/15 (188 hits)

1. (MM "Child Abuse, Sexual") OR (MM "Child Abuse Survivors") OR (MM "Sexual Abuse") OR "child sexual abuse OR child sexual exploitation OR child sexual assault OR child sexual trauma OR child sexual molestation"
2. (MM "Eating Disorders") OR "eating disorders" OR (MM "Bulimia Nervosa") OR (MM "Feeding and Eating Disorders of Childhood") OR (MM "Anorexia") OR (MM "Anorexia Nervosa"
3. 1 AND 2

(binge eating under bulimia term and “ednos” not recognised)

ProQuest Dissertations (2001-2015)

23/10/2015 (255 hits)

((child* sex* abus*) OR (child* sex* exploit* OR child* sex* assault) OR (child sex* victim* OR child* sex* trauma*) OR (child* sex* maltreat*)) AND ((eating dis*) OR (anorexia* OR bulimia*) OR (binge* OR ednos*) OR (eating pathology*))

Medline 2001-2015 (exploded search)

23/10/2015 (337)

abus* anorexia nervosa assault* binge eating binge eating disorder body weight bulimia child abuse child* crime victims dietary restraint dis* early experience eating eating behaviour eating disorders exploit* molest* prostitution purging (eating disorders) sex offenses sex* sexual abuse traffic* trauma trauma* victim* victimization weight control

ERIC 2001-2015

23/10/2015 (93 hits)

1. child sexual abuse OR child sexual exploitation OR child sexual assault OR child sexual maltreatment OR child sexual trauma OR child sexual victimization
2. eating disorders OR anorexia OR bulimia OR binge OR ednos OR eating pathology OR eating psychopathology
3. 1 AND 2

PsycInfo (2001-2015)

31/10/15 (794 hits)

1. (child* sex* abus* or child* sex* trauma* or child* sex* molest* or child* sex* victim* or child* sex* maltreat* or child* sex* exploit* or child* sex* assault*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
2. limit 1 to yr="2001 - 2015"
3. (eating dis* or anorexi* or bulimi* or binge* or eating patholog* or ednos).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
4. limit 3 to yr="2001 - 2015"
5. 2 and 4

Child Sexual Abuse and Eating Disorder Screening Tool

Reviewer Name: **Date:**		
Author Name/Study Id: **Year:**		
Title: **Journal:**		
Population	**Include** ❑ Males (or males and females with gender-specific analysis)	**Exclude** ❑ Females only/no gender specific analysis
Exposure	**Must Include** ❑ Child sexual abuse (before 18)	**Exclude** ❑ No sexual victimisation prior to age 18
Comparison	**Must Include** ❑ Males with no documented experiences of child sexual abuse. **May include** ❑ Sexual violence in adulthood ❑ Other types of childhood abuse	**Exclude** ❑ Child sexual abuse
Outcomes	**Include** ❑ Eating disorder symptoms as identified by behavioural components of disorder	**Exclude** ❑ Body Image Measures (only) BMI measures (only)
Study Design	**Include** ❑ Primary observational research (case-control, cohort & cross-sectional studies) and qualitative studies.	**Exclude** ❑ Not an observational/qualitative study.
Overall Decision:	❑ **INCLUDED**	❑ **EXCLUDED**
Notes:		

Excluded full-texts

Nr	Citation	Reason for exclusion
1	Bjelland, L. E. (2013). Early exposure to sexual content and the development of anorexia nervosa. (3637070), The University of the Rockies, Ann Arbor. ProQuest Dissertations & Theses A&I database.	Could not be obtained
2	Borman, S. I. (2004). The relationship between perceived trauma and disordered eating in college men and women. (3161759), Hofstra University, Ann Arbor. ProQuest Dissertations & Theses A&I database.	Could not be obtained
3	Chou, K.-L. (2012). Childhood sexual abuse and psychiatric disorders in middle-aged and older adults: evidence from the 2007 Adult Psychiatric Morbidity Survey. The Journal of clinical psychiatry, 73(11), e1365-1371. doi:10.4088/JCP.12m07946	No divide between males and females
4	Claes, L., & Vandereycken, W. (2007). Is there a link between traumatic experiences and self-injurious behaviors in eating-disordered patients? Eating Disorders, 15(4), 305-315.	Female only
5	Corstorphine, E., Waller, G., Lawson, R., & Ganis, C. (2007). Trauma and multi-impulsivity in the eating disorders. Eating behaviors, 8(1), 23-30. doi:10.1016/j.eatbeh.2004.08.009	Not enough males to report on them separately
6	Crawford, B. J. (2014). Affect dysregulation as a mediator of the relationship between childhood trauma and comorbid substance use disorder and bulimia nervosa. (3681065), The University of North Dakota, Ann Arbor. ProQuest Dissertations & Theses A&I database.	Could not be obtained
7	Domine, F., Berchtold, A., Akre, C., Michaud, P. A., & Suris, J. C. (2009). Disordered Eating Behaviors: What About Boys? Journal of Adolescent Health, 44(2), 111-117. doi:10.1016/j.jadohealth.2008.07.019	Sexual assault up to age 20
8	Dworkin, E., Javdani, S., Verona, E., & Campbell, R. (2014). Child Sexual Abuse and Disordered Eating: The Mediating Role of Impulsive and Compulsive Tendencies. Psychology of Violence, 4(1), 21-36. doi:10.1037/a0031779	No divide between males and females
9	Ericsson, N. S., Keel, P. K., Holland, L., Selby, E. A., Verona, E., Cougle, J. R., & Palmer, E. (2012). Parental disorders, childhood abuse, and binge eating in a large community sample. International Journal of Eating Disorders, 45(3), 316-325 310p. doi:10.1002/eat.20938	No divide between males and females
10	Favaro, A., Tenconi, E., & Santonastaso, P. (2010). The interaction between perinatal factors and childhood abuse in the risk of developing anorexia nervosa. Psychological Medicine, 40(4), 657-665 659p.	Female only

	doi:10.1017/S003291709990973	
11	Franzoni, E., Gualandi, S., Caretti, V., Schimmenti, A., Di Pietro, E., Pellegrini, G., . . . Pellicciari, A. (2013). The relationship between alexithymia, shame, trauma, and body image disorders: Investigation over a large clinical sample. Neuropsychiatric Disease and Treatment Vol 9 Feb 2013, ArtID 185-193, 9.	Female only
12	Froom, K. (2007). A study to examine the effects of early traumatic experiences on emotional development in the eating disorders. (U232844), The University of Manchester (United Kingdom), Ann Arbor. Retrieved from http://ezproxy.nottingham.ac.uk/login??url=http://search.proquest.com/docview/301701237?accountid=8018Retrieved from http://sfx.nottingham.ac.uk/sfx_local/?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+%26+theses&sid=ProQ:ProQuest+Dissertations+%26+Theses%3A+UK+%26+Ireland&atitle=&title=A+study+to+examine+the+effects+of+early+traumatic+experiences+on+emotional+development+in+the+eating+disorders&issn=&date=2007-01-01&volume=&issue=&spage=&au=Froom%2C+K&isbn=&jtitle=&btitle=&rft_id=info:eric/&rft_id=info:doi/ ProQuest Dissertations & Theses: UK & Ireland database.	Female only
13	Gault-Sherman, M., Silver, E., & Sigfusdottir, I. D. (2009). Gender and the associated impairments of childhood sexual abuse: a national study of Icelandic youth. Social science & medicine (1982), 69(10), 1515-1522. doi:10.1016/j.socscimed.2009.08.037	Eating anxiety only
14	Gerber, A. F. (2005). Trauma, culture and disordered eating. (3172771), University of Massachusetts Boston, Ann Arbor. ProQuest Dissertations & Theses A&I database.	Could not be obtained
15	Grilo, C. M., Masheb, R. M., Brody, M., Toth, C., Burke-Martindale, C. H., & Rothschild, B. S. (2005). Childhood maltreatment in extremely obese male and female bariatric surgery candidates. Obesity research, 13(1), 123-130. doi:10.1038/oby.2005.16	No divide between males and females
16	Harrington, J. K. (2014). Childhood maltreatment in severely obese bariatric surgery candidates. Dissertation Abstracts International: Section B: The Sciences and Engineering, 75(5-B(E)), No Pagination Specified.	Could not be obtained
17	Hunter, K. D. (2003). The prevalence of sexual abuse, binge eating disorder, and perception of social support in a morbidly obese population. (3095332), Fuller Theological Seminary, School of Psychology, Ann Arbor. Retrieved from http://ezproxy.nottingham.ac.uk/login??url=http://search.proquest.com/docview/305265818?accountid=8018Retrieved from http://sfx.nottingham.ac.uk/sfx_local/?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+%26+theses&sid=ProQ:ProQuest+Dissertations+%26+Theses+A%26I&atitle=&title=The+prevalence+of+se	Could not be obtained

	xual+abuse%2C+binge+eating+disorder%2C+and+perceptio n+of+social+support+in+a+morbidly+obese+population&iss n=&date=2003-01-01&volume=&issue=&spage=&au=Hunter%2C+Krys+Doreen &isbn=&jtitle=&btitle=&rft_id=info:eric/&rft_id=info:doi/ ProQuest Dissertations & Theses A&I database.	
18	Hunziker, E. (2015). Child maltreatment and eating disorders: An investigation of shame-proneness, guilt-proneness, and self-objectification as mediating variables. Dissertation Abstracts International: Section B: The Sciences and Engineering, 76(2-B(E)), No Pagination Specified.	Could not be obtained
19	Klopfer, K. M. (2011). The association of childhood trauma, eating disorder symptoms and general psychopathology in individuals with eating disorders. (MR76175), University of Toronto (Canada), Ann Arbor. ProQuest Dissertations & Theses A&I database.	Not enough males to report on them separately
20	Kugu, N., Akyuz, G., Dogan, O., Ersan, E., & Izgic, F. (2006). The prevalence of eating disorders among university students and the relationship with some individual characteristics. Australian and New Zealand Journal of Psychiatry, 40(2), 129-135. doi:http://dx.doi.org/10.1111/j.1440-1614.2006.01759.x	Not enough males to report on them separately
21	Leal, F. J. V., Macias, J. A. G., Garcia-Herraiz, M. A., Vinuesa, B. L., Bautista, M. M., & Peralvarez, M. B. (2005). History of sexual abuse in patients with bulimia nervosa: its influence on clinical status. Actas Espanolas De Psiquiatria, 33(3), 135-140.	Female only
22	Mitchell, K. S., Mazzeo, S. E., Schlesinger, M. R., Brewerton, T. D., & Smith, B. N. (2012). Comorbidity of partial and subthreshold ptsd among men and women with eating disorders in the national comorbidity survey-replication study. International Journal of Eating Disorders, 45(3), 307-315. doi:10.1002/eat.20965	Lifetime sexual abuse
23	Molinari, E., Selvini, M., & Lenzini, F. (2003). Sexual abuse and eating disorders: clinical cases. Eating and weight disorders : EWD, 8(4), 253-262.	Female only
24	Ng, I. S. F., Cheung, K. C. K., & Chou, K.-L. (2013). Correlates of Eating Disorder in Middle-Aged and Older Adults: Evidence From 2007 British National Psychiatric Morbidity Survey. Journal of Aging & Health, 25(7), 1106-1120. doi:10.1177/0898264313494798	No divide between males and females
25	O'Leary, P. J. (2009). Men who were sexually abused in childhood: Coping strategies and comparisons in psychological functioning. Child Abuse & Neglect, 33(7), 471-479. doi:http://dx.doi.org/10.1016/j.chiabu.2009.02.004	No ED measure
26	Salwen, J. K., Hymowitz, G. F., Bannon, S. M., & O'Leary, K. D. (2015). Weight-related abuse: Perceived emotional impact and the effect on disordered eating. Child Abuse & Neglect,	No divide between males and females

	45, 163-171. doi:http://dx.doi.org/10.1016/j.chiabu.2014.12.005	
27	Sarin, S., & Nolen-Hoeksema, S. (2010). The dangers of dwelling: An examination of the relationship between rumination and consumptive coping in survivors of childhood sexual abuse. Cognition & Emotion, 24(1), 71-85. doi:10.1080/02699930802563668	No divide between males and females
28	Tahilani, K. K. (2015). Impact of self-efficacy and emotion dysregulation as mediators between trauma history and disordered eating. Dissertation Abstracts International: Section B: The Sciences and Engineering, 75(11-B(E)), No Pagination Specified.	Could not be obtained
29	Visser, H. A., van Minnen, A., van Megen, H., Eikelenboom, M., Hoogendoorn, A. W., Kaarsemaker, M., . . . van Oppen, P. (2014). The relationship between adverse childhood experiences and symptom severity, chronicity, and comorbidity in patients with obsessive-compulsive disorder. The Journal of clinical psychiatry, 75(10), 1034-1039. doi:10.4088/JCP.13m08825	No divide between males and females
30	Ye, Q., Tao, F.-b., Fang, D.-s., Huang, K., & Sun, Y. (2006). Impact of childhood abuses on the psychology and behaviors regarding harmful dietary pattern in adolescents. Zhonghua liu xing bing xue za zhi = Zhonghua liuxingbingxue zazhi, 27(4), 319-323.	Chinese (unable to translate)

Data Extraction Form

Reviewer:	Date:
Author:	Year:
Source:	Record number:

Design:	
Year conducted:	
Country/Location:	
Setting:	
Nr of participants:	Male: Female:
Participant specifics:	
CSA/exposure measure:	
CSA age cut-off:	
ED/outcome measure:	
Findings on ED and CSA:	
Summary Statistics:	
Confounders controlled:	
Covariates:	
Mediating/moderating variables:	
Additional outcomes:	
Secondary findings:	
Reviewer notes:	

EPHPP Dictionary

The purpose of this dictionary is to describe items in the tool thereby assisting raters to score study quality. Due to under-reporting or lack of clarity in the primary study, raters will need to make judgements about the extent that bias may be present. When making judgements about each component, raters should form their opinion based upon information contained in the study rather than making inferences about what the authors intended.

A) SELECTION BIAS

(Q1) Participants are more likely to be representative of the target population if they are randomly selected from a comprehensive list of individuals in the target population (score very likely). They may not be representative if they are referred from a source (e.g. clinic) in a systematic manner (score somewhat likely) or self-referred (score not likely).

(Q2) Refers to the % of subjects in the control and intervention groups that agreed to participate in the study before they were assigned to intervention or control groups.

B) STUDY DESIGN

In this section, raters assess the likelihood of bias due to the allocation process in an experimental study. For observational studies, raters assess the extent that assessments of exposure and outcome are likely to be independent. Generally, the type of design is a good indicator of the extent of bias. In stronger designs, an equivalent control group is present and the allocation process is such that the investigators are unable to predict the sequence.

Randomized Controlled Trial (RCT)

An experimental design where investigators randomly allocate eligible people to an intervention or control group. A rater should describe a study as an RCT if the randomization sequence allows each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. If the investigators do not describe the allocation process and only use the words ‘random’ or ‘randomly’, the study is described as a controlled clinical trial.

See below for more details.

Was the study described as randomized?

Score YES, if the authors used words such as random allocation, randomly assigned, and random assignment.

Score NO, if no mention of randomization is made.

Was the method of randomization described?

Score YES, if the authors describe any method used to generate a random allocation sequence.

Score NO, if the authors do not describe the allocation method or describe methods of allocation such as alternation, case record numbers, dates of birth, day of the week, and any allocation procedure that is entirely transparent before assignment, such as an open list of random numbers of assignments.
If NO is scored, then the study is a controlled clinical trial.

Was the method appropriate?

Score YES, if the randomization sequence allowed each study participant to have the same chance of receiving each intervention and the investigators could not predict which intervention was next. Examples of appropriate approaches include assignment of subjects by a central office unaware of subject characteristics, or sequentially numbered, sealed, opaque envelopes.

Score NO, if the randomization sequence is open to the individuals responsible for recruiting and allocating participants or providing the intervention, since those individuals can influence the allocation process, either knowingly or unknowingly.

If NO is scored, then the study is a controlled clinical trial.

Controlled Clinical Trial (CCT)
An experimental study design where the method of allocating study subjects to intervention or control groups is open to individuals responsible for recruiting subjects or providing the intervention. The method of allocation is transparent before assignment, e.g. an open list of random numbers or allocation by date of birth, etc.

Cohort analytic (two group pre and post) An observational study design where groups are assembled according to whether or not exposure to the intervention has occurred. Exposure to the intervention is not under the control of the investigators. Study groups might be non-equivalent or not comparable on some feature that affects outcome.

Case control study
A retrospective study design where the investigators gather ‘cases’ of people who already have the outcome of interest and ‘controls’ who do not. Both groups are then questioned or their records examined about whether they received the intervention exposure of interest.

Cohort (one group pre + post (before and after)
The same group is pretested, given an intervention, and tested immediately after the intervention. The intervention group, by means of the pretest, act as their own control group.

Interrupted time series
A time series consists of multiple observations over time. Observations can be on the same units (e.g. individuals over time) or on different but similar units (e.g. student achievement scores for particular grade and school). Interrupted time series analysis requires knowing the specific point in the series when an intervention occurred.

C) CONFOUNDERS

By definition, a confounder is a variable that is associated with the intervention or exposure and causally related to the outcome of interest. Even in a robust study design, groups may not be balanced with respect to important variables prior to the intervention. The authors should indicate if confounders were controlled in the design (by stratification or matching) or in the analysis. If the allocation to intervention and control groups is randomized, the authors must report that the groups were balanced at baseline with respect to confounders (either in the text or a table).

D) BLINDING

(Q1) Assessors should be described as blinded to which participants were in the control and intervention groups. The purpose of blinding the outcome assessors (who might also be the care providers) is to protect against detection bias.
(Q2) Study participants should not be aware of (i.e. blinded to) the research question. The purpose of blinding the participants is to protect against reporting bias.

E) DATA COLLECTION METHODS

Tools for primary outcome measures must be described as reliable and valid. If 'face' validity or 'content' validity has been demonstrated, this is acceptable. Some sources from which data may be collected are described below:

Self reported data includes data that is collected from participants in the study (e.g. completing a questionnaire, survey, answering questions during an interview, etc.).

Assessment/Screening includes objective data that is retrieved by the researchers. (e.g. observations by investigators).

Medical Records/Vital Statistics refers to the types of formal records used for the extraction of the data.

Reliability and validity can be reported in the study or in a separate study. For example, some standard assessment tools have known reliability and validity.

F) WITHDRAWALS AND DROP-OUTS

Score **YES** if the authors describe BOTH the numbers and reasons for withdrawals and drop-outs.

Score **NO** if either the numbers or reasons for withdrawals and drop-outs are not reported.

The percentage of participants completing the study refers to the % of subjects remaining in the study at the final data collection period in all groups (i.e. control and intervention groups).

G) INTERVENTION INTEGRITY

The number of participants receiving the intended intervention should be noted (consider both frequency and intensity). For example, the authors may have reported that at least 80 percent of the participants received the complete intervention. The authors should describe a method of measuring if the intervention was provided to all participants the same way. As well, the authors should indicate if subjects received an unintended intervention that may have influenced the outcomes. For example, co-intervention occurs when the study group receives an additional intervention (other than that intended). In this case, it is possible that the effect of the intervention may be over-estimated. Contamination refers to situations where the control group accidentally receives the study intervention. This could result in an under-estimation of the impact of the intervention.

H) ANALYSIS APPROPRIATE TO QUESTION

Was the quantitative analysis appropriate to the research question being asked?
An intention-to-treat analysis is one in which all the participants in a trial are analyzed according to the intervention to which they were allocated, whether they received it or not. Intention-to-treat analyses are favoured in assessments of effectiveness as they mirror the noncompliance and treatment changes that are likely to occur when the intervention is used in practice, and because of the risk of attrition bias when participants are excluded from the analysis.

Component Ratings of Study:

For each of the six components A – F, use the following descriptions as a roadmap.

A) SELECTION BIAS

Strong: The selected individuals are very likely to be representative of the target population (Q1 is 1) **and** there is greater than 80% participation (Q2 is 1).

Moderate: The selected individuals are at least somewhat likely to be representative of the target population (Q1 is 1 or 2); **and** there is 60 - 79% participation (Q2 is 2). 'Moderate' may also be assigned if Q1 is 1 or 2 and Q2 is 5 (can't tell).

Weak: The selected individuals are not likely to be representative of the target population (Q1 is 3); **or** there is less than 60% participation (Q2 is 3) **or** selection is not described (Q1 is 4); and the level of participation is not described (Q2 is 5).

B) DESIGN

Strong: will be assigned to those articles that described RCTs and CCTs.

Moderate: will be assigned to those that described a cohort analytic study, a case control study, a cohort design, or an interrupted time series.

Weak: will be assigned to those that used any other method or did not state the method used.

C) CONFOUNDERS

Strong: will be assigned to those articles that controlled for at least 80% of relevant confounders (Q1 is 2); **or** (Q2 is 1).

Moderate: will be given to those studies that controlled for 60 – 79% of relevant confounders (Q1 is 1) **and** (Q2 is 2).

Weak: will be assigned when less than 60% of relevant confounders were controlled (Q1 is 1) **and** (Q2 is 3) **or** control of confounders was not described (Q1 is 3) **and** (Q2 is 4).

D) BLINDING

Strong: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **and t**he study participants are not aware of the research question (Q2 is 2).

Moderate: The outcome assessor is not aware of the intervention status of participants (Q1 is 2); **or** the study participants are not aware of the research question (Q2 is 2); **or b**linding is not described (Q1 is 3 and Q2 is 3).

Weak: The outcome assessor is aware of the intervention status of participants (Q1 is 1); **and** the study participants are aware of the research question (Q2 is 1).

E) DATA COLLECTION METHODS

Strong: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have been shown to be reliable (Q2 is 1).

Moderate: The data collection tools have been shown to be valid (Q1 is 1); **and** the data collection tools have not been shown to be reliable (Q2 is 2) **or** reliability is not described (Q2 is 3).

Weak: The data collection tools have not been shown to be valid (Q1 is 2) **or** both reliability and validity are not described (Q1 is 3 and Q2 is 3).

F) WITHDRAWALS AND DROP-OUTS - a rating of:

Strong: will be assigned when the follow-up rate is 80% or greater (Q2 is 1).

Moderate: will be assigned when the follow-up rate is 60 – 79% (Q2 is 2) **OR** Q2 is 5 (N/A).

Weak: will be assigned when a follow-up rate is less than 60% (Q2 is 3) or if the withdrawals and drop-outs were not described (Q2 is 4).

Adaptations to the EPHPP

Study design

Due to the nature of the studies considered in the review, prospective cohort studies were awarded a strong rating. Case-control studies were awarded a moderate rating (as per the EPHPP guidance), whilst cross-sectional studies were awarded weak ratings. Where studies used samples from cohort studies, but reported on data generated on a single point in time, this was awarded a weak rating.

- *Cohort study –Studies following CSA survivors over time. Prospective cohort refers to studies looking forward (examining outcome/ED status after a set time). Retrospective cohort refers to those looking at historic records of CSA and it's linkage to ED in a certain cohort.*
- *Case-Control Study -Comparing rates of CSA in ED patients' compared to controls/psychiatric patients without ED.*
- *Cross-Sectional Study -Analysing a set of data collected from a population at a specific point in time (Cross-sectional cohort refers to studies where a subsample from a cohort study was used, but only data from one specific point in time was used).*

Blinding

Blinding was considered in terms of the extent to which participants were aware of the purpose of the study, which may have primed responses. Blinding of outcome assessors was only considered relevant where researchers established ED outcome through interview.

Intervention Integrity

This component was removed from the tool, as no interventions were considered.

Confounders

This component was reworded to account for questionnaire assessment as opposed to interventions. The list of confounders were expanded to include other forms of childhood trauma, whilst those perceived to be irrelevant were removed (e.g marital status). Strong ratings were awarded to studies that controlled for more than 3 of the identified confounders.

Data collection tools

Partial ratings were awarded in either the reliability or validity section, to account for both CSA and ED measurement.

Drop-outs and withdrawals

Drop-outs were only measured for cohort studies.

EPHPP Quality Assessment Tool (Modified) **(Ackard, 2001)**

COMPONENT RATINGS

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?
1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?
1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls
1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B) STUDY DESIGN
Indicate the study design
1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C) CONFOUNDERS
(Q1) Were there important differences between groups prior to the assessment?
1 Yes
2 No
3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial
3 No

4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G) Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No Yes

If yes, indicate the reason for the discrepancy

1 Oversight
2 Differences in interpretation of criteria
3 Differences in interpretation of study

Final decision of both reviewers (circle one):

1 STRONG
2 MODERATE
3 WEAK

EPHPP Quality Assessment Tool (Modified) **(Ackard, 2002)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:
1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?
1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?
1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?
1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?
1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?
1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Conley, 2011)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:
1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?
1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?
1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?
1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?
1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?
1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Cutajar, 2010)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
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(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3) (control's matched by age and gender)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
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(Q2) Were the study participants aware of the research question?

1 Yes
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(Q1) Were data collection tools shown to be valid?

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3 No
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F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Feldman, 2007)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
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Indicate the study design

1 Prospective Cohort
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3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

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C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
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4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
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E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
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(Q2) Were data collection tools shown to be reliable?

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RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

H) Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No Yes

If yes, indicate the reason for the discrepancy

1 Oversight
2 Differences in interpretation of criteria
3 Differences in interpretation of study

Final decision of both reviewers (circle one):

1 STRONG
2 MODERATE
3 WEAK

EPHPP Quality Assessment Tool (Modified) **(Fonesca, 2002)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:
1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?
1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?
1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?
1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?
1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?
1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Fuemmeler, 2009)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify Cross-sectional cohort (CSA status established retrospectively and reports only on third wave data out of three waves)
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes

2 No
3 Can't tell

The following are examples of confounders:
1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?
1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?
1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?
1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?
1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?
1 Yes

2 Partial
3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Gentile, 2007)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Grilo, 2001)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none (Control group was female only, but did not control for gender)
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No Yes

If yes, indicate the reason for the discrepancy

1 Oversight
2 Differences in interpretation of criteria
3 Differences in interpretation of study

Final decision of both reviewers (circle one):

1 STRONG
2 MODERATE
3 WEAK

EPHPP Quality Assessment Tool (Modified) **(Hopwood, 2011)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional (case series)
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Jonas,2011)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Lock, 2001)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No Yes

If yes, indicate the reason for the discrepancy

1 Oversight
2 Differences in interpretation of criteria
3 Differences in interpretation of study

Final decision of both reviewers (circle one):

1 STRONG
2 MODERATE
3 WEAK

EPHPP Quality Assessment Tool (Modified) **(Mangweth-Matzek,2010)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
7 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
2 No

3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 +3
2 Some (2-3)
3 1 or none
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D. BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the exposure status of participants?

1 Yes
2 No
3 Can't tell
4 Not applicable (e.g. self-administered questionnaires)

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E. DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 Partial
3 No
4 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 Partial

3 No
4 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F. WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

NA

G. Analyses

(Q1) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

GLOBAL RATING FOR THIS PAPER (circle one):

1 STRONG (no WEAK ratings)

2 MODERATE (one WEAK rating)

3 WEAK (two or more WEAK ratings)

EPHPP Quality Assessment Tool (Modified) **(Martinez-Raga, 2002)**

COMPONENT RATINGS

A. SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
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(Q2) What percentage of selected individuals agreed to participate?

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2 60 – 79% agreement
3 less than 60% agreement
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(Q3) Selection of controls

1 same population as exposed group
2 drawn from different source
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See dictionary	1	2	3

B. STUDY DESIGN

Indicate the study design

1 Prospective Cohort
2 Retrospective cohort (measuring outcome retrospectively)
3 Case-control (measuring exposure retrospectively with control group)
5 Cross-sectional
6 Other specify _____
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C. CONFOUNDERS

(Q1) Were there important differences between groups prior to the assessment?

1 Yes
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The following are examples of confounders:

1 Race
2 Sex
3 Family factors
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Other childhood trauma

(Q2) If yes, indicate the number of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

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3 No
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GLOBAL RATING FOR THIS PAPER (circle one):

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2 MODERATE (one WEAK rating)

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EPHPP Quality Assessment Tool (Modified) **(Mitchell, 2005)**

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6 Other specify Cross-sectional cohort (CSA status established retrospectively and reports only on fourth wave of longitudinal study)
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3 WEAK (two or more WEAK ratings)

The University of Nottingham
UNITED KINGDOM • CHINA • MALAYSIA

CONSENT FORM

Case Study

Name of participant:

1. I know that Aili is training to be a Forensic Psychologist and that all the work she does is supervised. ☐

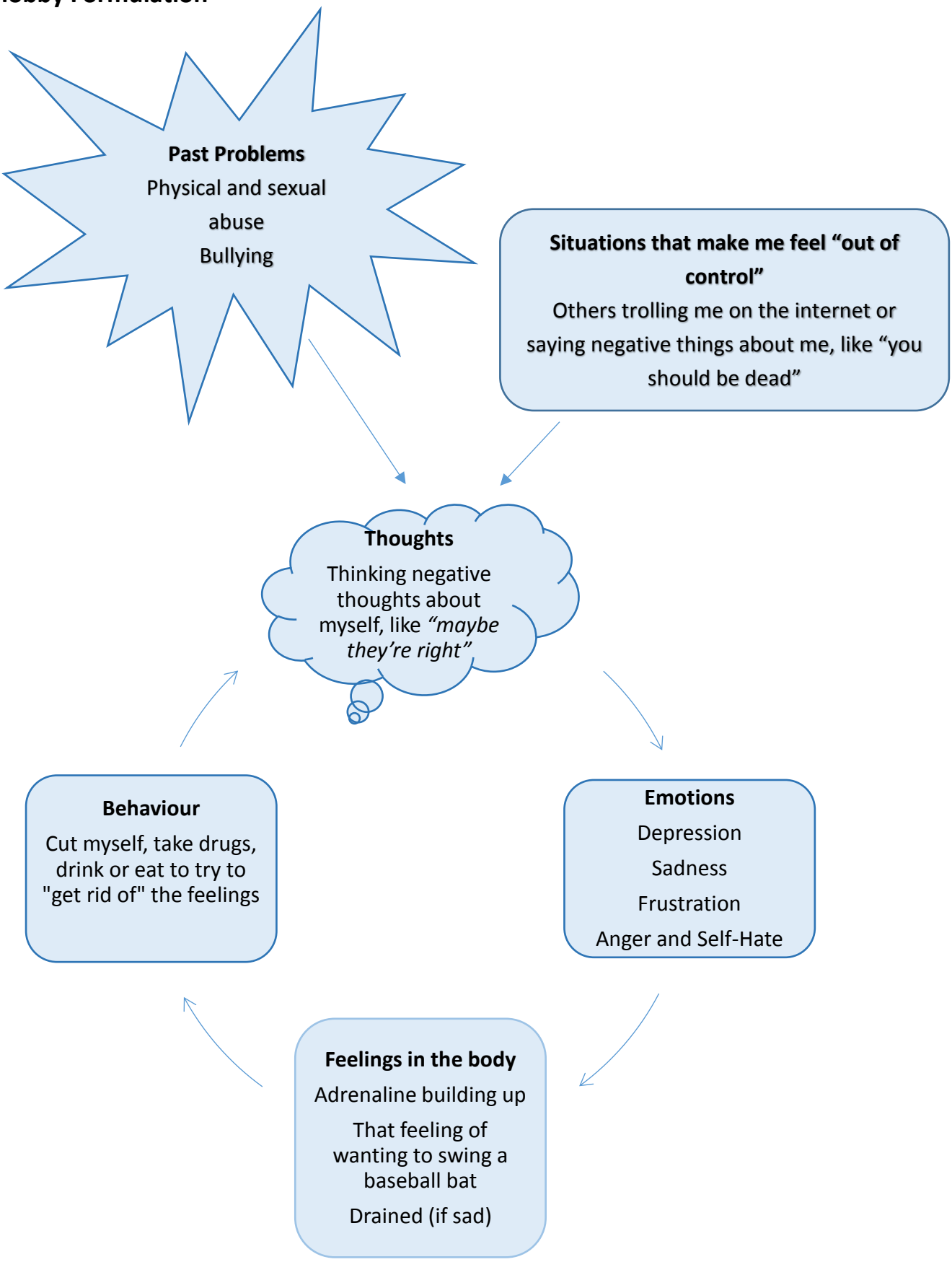
2. I am aware that the work I have done with Aili will be written up and presented at her University as a Case Study. ☐

3. I know that it is entirely my choice to be involved in the case study. I understand that if I choose not to, this will not affect my treatment. ☐

4. I know that the work I have done with Aili will be written up in reports and that some of the information she writes up may be looked at by assessors and supervisors at her University. I understand that the information will be completely confidential and that I will not be identifiable from any reports. ☐

_____	_____	_____
Name of participant	Date	Signature
_____	_____	_____
Name or therapist	Date	Signature

Blobby Formulation



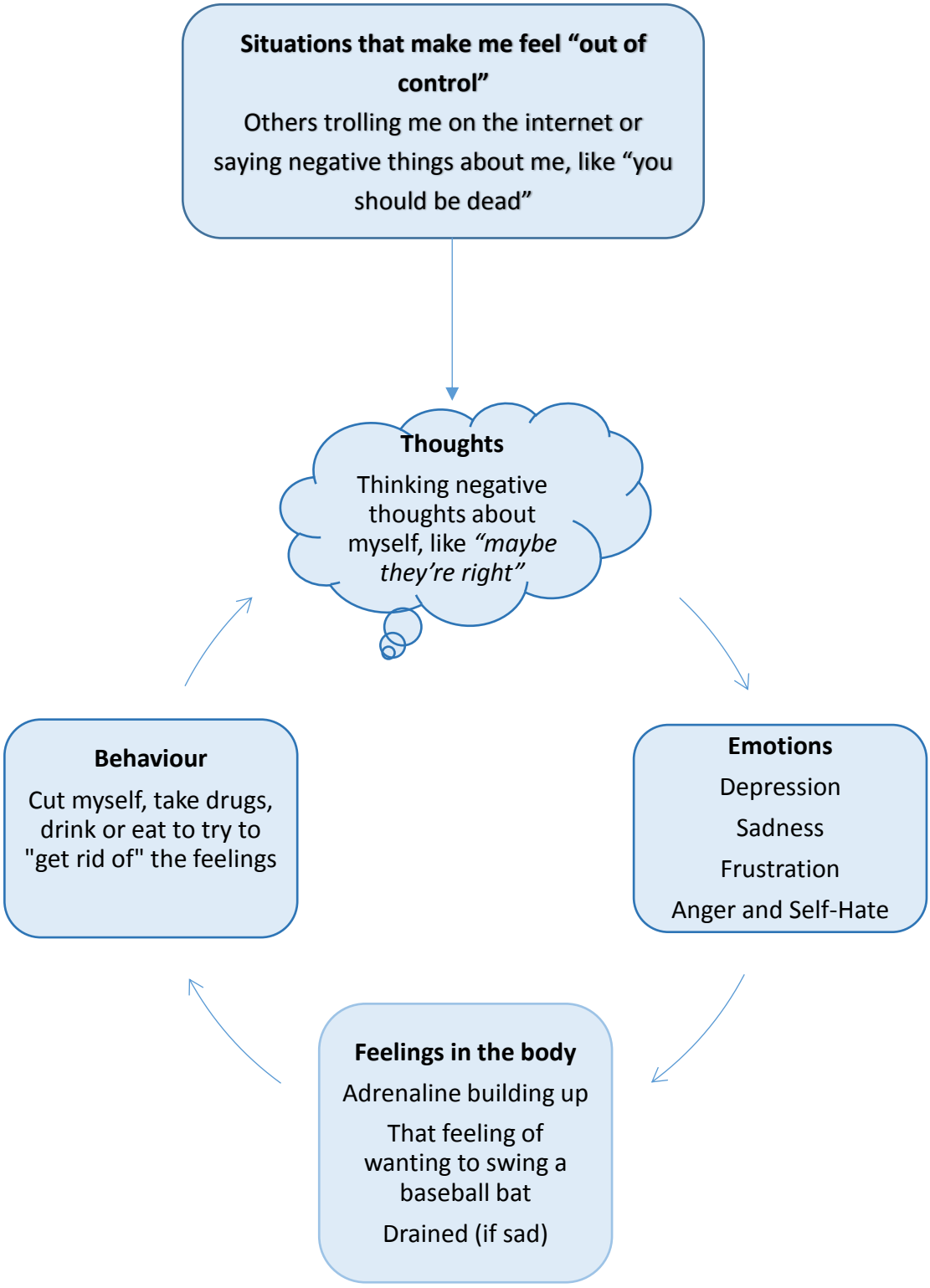
Seth –Safety Plan

What I can do to stay safe and well in the community:

- Having stable accommodation
- Having contact with Kate, Nan and Mum.
- Finding work (hopefully within media).
- Exercising, by running or boxing or joining a gym
- Staying off drugs
- My breathing/meditation exercises

Things that make me feel good

- Being with friends and family
- Planning and going on vacations or trips (like camping)
- Shopping
- Decorating at home
- Playing music
- Restoring furniture
- Watching TV or listening to the radio
- Thinking about a good future
- Being at events that celebrate others (like birthdays)
- Woodwork
- Watching or playing with animals
- Cooking
- Taking a nap
- Grooming myself or wearing nice clothes, aftershave or makeup
- Designing things
- Getting a massage
- Taking pictures
- Going to the cinema, zoo or amusement park
- Fishing and hunting
- Others noticing me/keeping me in mind
- Completing a task that's been difficult


Situations that make me feel "out of control"
Others trolling me on the internet or saying negative things about me, like "you should be dead"
Thoughts
Thinking negative thoughts about myself, like *"maybe they're right"*
Emotions
Depression
Sadness
Frustration
Anger and Self-Hate
Feelings in the body
Adrenaline building up
That feeling of wanting to swing a baseball bat
Drained (if sad)
Behaviour
Cut myself, take drugs, drink or eat to try to "get rid of" the feelings

Things I can do to break the cycle:

- Doing my breathing/meditation exercises
- Go for a run with music on my headphones
- Listen to music that makes me feel good (rather than more sad), like James Arthur, drum'n base or dubstep
- Cook something (like mum's Dr pepper chicken)
- Go to my nan's house (unless I'm angry)
- Watch the clouds if my nan is not home
- Smoke a cigarette
- Have a bath
- Look at my list and remember the good things about me
- Think about happy memories that make me feel good (like going to the park with Kate)
- Watch Seth Rogen movies (Knocked up, Bad neighbours, Ted) or funny series like Family Guy or American Dad.
- Tell myself to "snap out of it" or "you've got a lot to live for".

How others can help me break the cycle:

- To be aware that when I am feeling low, I become very quiet and stop taking care of myself
- Ask me what's wrong when I'm being quiet
- Tell me that they care about me
- Talk to me about general things to distract me from how I feel

What I do NOT want OTHERS to do:

- Don't want mates to hug me
- Don't look through my phone or personal things to ring my family

If I feel suicidal and out of control, I will:

- Call my family (Mum, Nan, Kate)
- Go to the A&E department or call 999, if I can't get there safely

Why we started meeting

You were initially referred to the CMHT, as those working with you were concerned about how you were coping in prison. When we met you told me that you struggled with low mood and found it difficult to manage your emotions, which would lead you to hurt yourself or get into conflict with others. We agreed to meet for weekly sessions to think together about how to manage distressing thoughts and feelings. Between August 2016 and January 2017, we met for 22 sessions. As you have now left Feltham, I wanted to write you a letter to summarise our work together.

Past problems

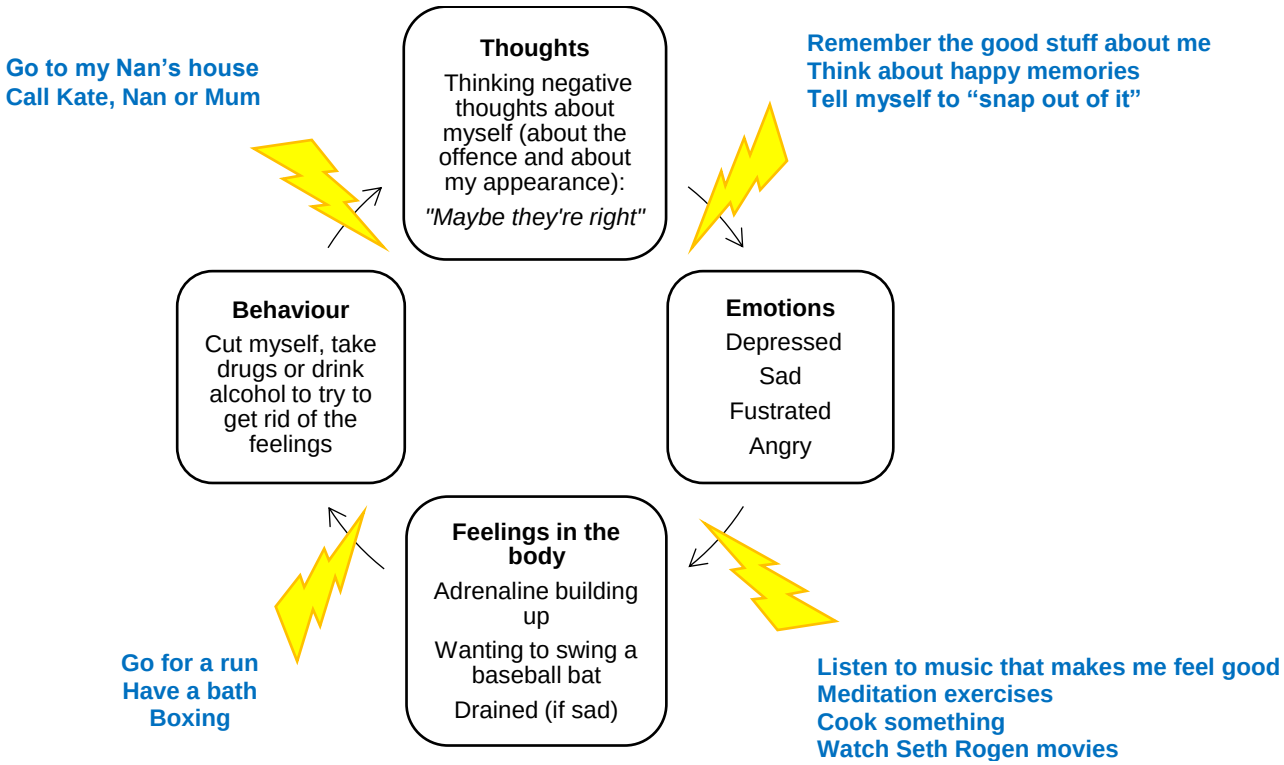
We talked a bit about how things were for you when you were little. Although it could be difficult for you to think about, you remembered more and more things. We talked about how you were bullied and how your step-father would be physically abusive towards you. We also talked about your relationship to Jake and the "stuff that Jake's father and his friend did" to you. You explained to me how you had reported your step-fathers violence at school, but that although social services came to your house, nothing changed. Experiences like this had made you feel like there was 'no point' in asking for help from other people.

We also talked about how you used to manage your emotions whilst out in the community. You told me about how when you were little, you would binge on foods when you were feeling bad and later started to use drugs and cut yourself in order to cope with difficult emotions.

Managing distressing thoughts and emotions

You helped me understand that sadness, frustration and anger were emotions that were really hard to deal with. We talked quite a bit about how you sometimes felt hate towards yourself or blamed yourself for things from the past. Situations where others said negative things about you would make you think negative thoughts about yourself. These thoughts would fuel the difficult emotions. Although taking drugs or hurting yourself could take away the emotions for a little while, they would come back again later on. These coping mechanisms had also become obstacles to some of your life-goals, such as finding a good job and having good relationships with your family.

In our meetings, we spent a lot of time thinking about other coping mechanisms you could practice. We tried out some meditation and relaxation techniques. I know that you also found spirituality to help you during times of stress and pursued meditation with the Buddhist chaplain. We talked a fair amount about how you could often be angry with or critical of yourself. Sometimes all those thoughts could make you forget the good things about you. We spent some time talking about these and I learned so much more about you, such as the kindness others value, your passion for film, and the determination you have when you set your mind to something. You were able to come up with a long list which could work as a useful reminder when the negative thoughts try to take over. We drew up a safety plan of all the things that would help you to 'break the cycle' of distressing emotions and self-harm and using drugs. I hope you will be able to continue to practice these things to cope when life becomes stressful.



We also spent some time thinking of your interactions with others people. Whilst you were here in Feltham, we often talked about how it was important for you to tell people clearly about how you were feeling, as otherwise it could be difficult for them to understand you. We also talked about how you find it reassuring to talk to others and like when they notice you and talk to you in a sensitive way. Perhaps these things would be important for your relationships with others on the outside too?

Thinking about the future

I am really impressed with how you were committed to our sessions and met with me weekly to tell me about yourself and what was going on in your life. You were able to share things that had been very difficult for you. Although you said it felt good to 'vent', you let me know that it could sometimes feel overwhelming to talk about these things too. Did it become easier with time? I remember you also said that anger is still a problem for you. I wonder if it could be helpful to continue to talk to someone about these things in the community? This may be something for you to think about.

It was a pleasure getting to know you and I wish you all the best in all your future endeavours,

Aili

The University of Nottingham

Faculty of Medicine and Health Sciences

Research Ethics Committee
School of Medicine Education Centre
B Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham
NG7 2UH

Direct line/e-mail
+44 (0) 115 8232561
Louise.Sabir@nottingham.ac.uk

20th January 2015

Aili Nidsjö
Doctorate Trainee Forensic Psychologist
c/o Dr Simon Duff
Director, Top-Up Doctorate in Forensic Psychology
Centre for Forensic and Family Psychology
Psychiatry and Applied Psychology
Room B15 YANG Fujia
Jubilee Campus
Wollaton Road
Nottingham
NG8 1BB

Dear Aili

Ethics Reference No: FMHS K10112015 SoM PAP DFP– **please always quote**
Study Title: The Relationship between child sexual abuse and eating disorder – The effects of maladaptive schemas and coping.
Chief Investigator/Supervisor: Dr Simon Duff, Director, Top-Up Doctorate in Forensic Psychology, Professor Kevin Browne, Director, Centre for Forensic and Family Psychology, Psychiatry and Applied Psychology, School of Medicine.
Lead Investigator/Student: Aili Nidsjö, Doctorate Trainee Forensic Psychologist, School of Medicine.
Duration of Study: 01/02/2015-01/05/2015 3 mths
No of Subjects: 187 ((16+ yrs)

Thank you for your response to the comments made by the Committee and the following revised documents were received:

- Response to comments 05/12/2015
- Project Proposal version 2.0, 04.12.2015
- Participant Information Page- eating disorder group version 2.0, 04.12.2015
- Participant Information Page – child sexual abuse group version 2.0, 04.12.2015

These have been reviewed and are satisfactory and the study is approved.

Approval is given on the understanding that the Conditions of Approval set out below are followed.

1. You must follow the protocol agreed and inform the Committee of any changes using a notification of amendment form (please request a form).

2. You must notify the Chair of any serious or unexpected event.

3. This study is approved for the period of active recruitment requested. The Committee also provides a further 5 year approval for any necessary work to be

Eating Attitudes Test (EAT-26)©

Instructions: This is a screening measure to help you determine whether you might have an eating disorder that needs professional attention. This screening measure is not designed to make a diagnosis of an eating disorder or take the place of a professional consultation. Please fill out the below form as accurately, honestly and completely as possible. There are no right or wrong answers. All of your responses are confidential.

Part A: Complete the following questions:

1) Birth Date	Month:		Day:	Year:	2) Gender:	Male	Female
3) Height	Feet :	Inches:					
4) Current Weight (lbs.):		5) Highest Weight (excluding pregnancy):					
6) Lowest Adult Weight:		7: Ideal Weight:					

Part B: Check a response for each of the following statements:		Always	Usually	Often	Some times	Rarely	Never
1.	Am terrified about being overweight.						
2.	Avoid eating when I am hungry.						
3.	Find myself preoccupied with food.						
4.	Have gone on eating binges where I feel that I may not be able to stop.						
5.	Cut my food into small pieces.						
6.	Aware of the calorie content of foods that I eat.						
7.	Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)						
8.	Feel that others would prefer if I ate more.						
9.	Vomit after I have eaten.						
10.	Feel extremely guilty after eating.						
11.	Am preoccupied with a desire to be thinner.						
12.	Think about burning up calories when I exercise.						
13.	Other people think that I am too thin.						
14.	Am preoccupied with the thought of having fat on my body.						
15.	Take longer than others to eat my meals.						
16.	Avoid foods with sugar in them.						
17.	Eat diet foods.						
18.	Feel that food controls my life.						
19.	Display self-control around food.						
20.	Feel that others pressure me to eat.						
21.	Give too much time and thought to food.						
22.	Feel uncomfortable after eating sweets.						
23.	Engage in dieting behavior.						
24.	Like my stomach to be empty.						
25.	Have the impulse to vomit after meals.						
26.	Enjoy trying new rich foods.						

Part C: Behavioral Questions: In the past 6 months have you:		Never	Once a month or less	2-3 times a month	Once a week	2-6 times a week	Once a day or more
A	Gone on eating binges where you feel that you may not be able to stop? *						
B	Ever made yourself sick (vomited) to control your weight or shape?						
C	Ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?						
D	Exercised more than 60 minutes a day to lose or to control your weight?						
E	Lost 20 pounds or more in the past 6 months	Yes		No			

* Defined as eating much more than most people would under the same circumstances and feeling that eating is out of control

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Brief COPE

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Each item says something about a particular way of coping. We want to know to what extent you do what the item says. Don't answer on the basis of whether it seems to be working or not—just whether or not you're doing it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

1 = I usually don't do this at all
2 = I usually do this a little bit
3 = I usually do this a medium amount
4 = I usually do this a lot

1. I turn to work or other activities to take my mind off things.
2. I concentrate my efforts on doing something about it.
3. I say to myself "this isn't real."
4. I use alcohol or drugs to make myself feel better.
5. I try to get emotional support from others.
6. I just give up trying to deal with it.
7. I take action to try to make the situation better.
8. I refuse to believe that it has happened.
9. I say things to let my unpleasant feelings escape.
10. I get help and advice from other people.
11. I drink alcohol or take drugs, in order to think about it less.
12. I try to see it in a different light, to make it seem more positive.
13. I criticise myself
14. I try to come up with a strategy about what to do
15. I get comfort and understanding from someone.
16. I give up the attempt to cope.
17. I look for something good in what is happening.
18. I make jokes about it.
19. I do something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.
20. I accept the reality of the fact that it happened.
21. I express my negative feelings
22. I try to find comfort in my religion or spiritual beliefs.
23. I try to get help and advice from other people about what to do.
24. I learn to live with it.
25. I think hard about what steps to take.
26. I blame myself for things that happened.
27. I pray or meditate.
28. I make fun of the situation.

YSQ-S3

Instructions

Listed below are statements that people might use to describe themselves. Please read each statement, then rate it based on how accurately it fits you over the past year. When you are not sure, base your answer on what you emotionally feel, not on what you think to be true.

A few of the items ask about your relationships with parents or romantic partners. If any of these people have died, please answer these items based on your relationships when they were alive. If you do not currently have a partner but have had partners in the past, please answer based on your most recent significant romantic partner.

1 Completely untrue of me	4 Moderately true of me
2 Mostly untrue of me	5 Mostly true of me
3 Slightly more true than untrue	6 Describes me perfectly

Select the rating from 1 to 6 that best describes you.

1. I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.
2. I find myself clinging to people I am close to because I am afraid that they will leave me.
3. I feel that people will take advantage of me.
4. I don't fit in.
5. No man or woman could love me once he/she saw my defects or flaws.
6. Almost nothing I do at work/school is as good as other people can do.
7. I do not feel capable of getting by on my own in everyday life.
8. I can't seem to escape the feeling that something bad is about to happen.
9. I have not been able to separate myself from my parent(s) the way other people my age seem to.
10. I think that if I do what I want, I'm only asking for trouble.
11. I'm the one who usually ends up taking care of the people I am close to.
12. I am too self-conscious to show positive feelings to others (e.g. affection, showing I care).
13. I must be the best at most of what I do; I can't accept second best.
14. I have a lot of trouble accepting "no" for an answer when I want something from other people.
15. I can't seem to discipline myself to complete most boring or routine tasks.
16. Having money and knowing important people make me feel worthwhile.
17. Even when things seem to be going well, I feel that it is only temporary.
18. If I make a mistake I deserve to be punished.
19. I don't have people to give me warmth, holding and affection.
20. I need other people so much that I worry about losing them.
21. I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.
22. I'm fundamentally different from other people.
23. No one I desire would want to stay close to me if he or she knew the real me.

24. I'm incompetent when it comes to achievement.
25. I think of myself as a dependent person when it comes to everyday functioning.
26. I feel that a disaster (natural, criminal, financial or medical) could strike at any moment.
27. My parent(s) and I tend to be over-involved in each other's lives and problems.
28. I feel as if I have no choice to but to give in to other people's wishes, or else they will retaliate, get angry or reject me in some way.
29. I am a good person because I think of others more than myself.
30. I find it embarrassing to express my feelings to others.
31. I try to do my best; I can't settle for "good enough".
32. I'm special and shouldn't have to accept many of the restrictions or limitations placed on other people.
33. If I can't reach a goal, I become easily frustrated and give up.
34. Accomplishments are most valuable to me if other people notice them.
35. If something good happens, I worry that something bad is likely to follow.
36. If I don't try my hardest I should expect to lose out.
37. I haven't felt that I am special to someone.
38. I worry that people I am close to will leave me or abandon me.
39. It is only a matter of time before someone betrays me.
40. I don't belong; I'm a loner.
41. I'm unworthy of the love, attention and respect of others.
42. Most other people are more capable than I am in areas of work and achievement.
43. I lack common sense.
44. I worry about being physically attacked by people.
45. It is very difficult for my parent(s) and me to keep intimate details from each other without feeling betrayed or guilty.
46. In relationships, I usually let the other person have the upper hand.
47. I'm so busy doing things for the people that I care about that I that I have little time for myself.
48. I find it hard to be free-spirited and spontaneous around other people.
49. I must meet all my responsibilities.
50. I hate to be constrained or kept from doing what I want.
51. I have a very difficult time sacrificing immediate gratification or pleasure to achieve a long-term goal.
52. Unless I get a lot of attention from others, I feel less important.
53. You can't be too careful; something will almost always go wrong.
54. If I don't do the job right, I should suffer the consequences.
55. I have not had someone who really listens to me, understands me or is tuned into my true needs and feelings.
56. When someone I care for is pulling away or withdrawing from me, I feel desperate.
57. I am quite suspicious of other people's motives.
58. I feel alienated or cut off from other people.
59. I feel that I'm not lovable.
60. I'm not as talented as most people are at their work.
61. My judgement cannot be counted on in everyday situations.
62. I worry that I'll lose all my money and become destitute or very poor.

63. I often feel as if my parent(s) are living through me – that I don't have a life of my own.
64. I've always let others make choices for me, so I don't really know what I want for myself.
65. I've always been the one who listens to everyone else's problems.
66. I control myself so much that many people think I am unemotional or unfeeling.
67. I feel that there is constant pressure for me to achieve and get things done.
68. I feel that I shouldn't have to follow the normal rules and conventions that other people do.
69. I can't force myself to do things I don't enjoy, even when I know it's for my own good.
70. If I make remarks at a meeting, or am introduced in a social situation, it's important to me to get recognition and admiration.
71. No matter how hard I work, I worry that I could be wiped out financially and lose almost everything.
72. It doesn't matter how I make a mistake. When I do something wrong I should pay the consequences.
73. I haven't had a strong or wise person to give me sound advice or direction when I'm not sure what to do.
74. Sometimes I am so worried about people leaving me that I drive them away.
75. I'm usually on the lookout for people's ulterior or hidden motives.
76. I always feel on the outside of groups.
77. I am too unacceptable in very basic ways to reveal myself to other people or to let them get to know me well.
78. I'm not as intelligent as most people when it comes to work/school.
79. I don't feel confident in my ability to solve everyday problems that come up.
80. I worry that I am developing a serious illness although nothing serious has been diagnosed by a doctor.
81. I often feel I do not have a separate identity from my parent(s) or partner.
82. I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
83. Other people see me as doing too much for others and not enough for myself.
84. People see me as uptight emotionally.
85. I can't let myself off the hook easily or make excuses for my mistakes.
86. I feel that what I have to offer is of greater value than the contributions of others.
87. I have rarely been able to stick to my resolutions.
88. Lots of praise and compliments make me feel like a worthwhile person.
89. I worry that a wrong decision could lead to disaster.
90. I'm a bad person who deserves to be punished.

Information Page
Eating disorder and Early Adverse Sexual Experiences: The Role of Core Schemas and Coping.

University of Nottingham, School of Medicine & Health Sciences

Division of Psychiatry and Applied Psychology – Autumn 2015

Introduction and Aims

You are being invited to participate in a research study investigating eating disorder and early adverse sexual experience by looking at the role of maladaptive schemas and coping. You do not need to have had adverse sexual experiences or eating-related difficulties in order to take part.

Research has found that there is a link between early adverse sexual experiences and the later development of eating disorders. However, little is known about the factors that contribute to this link. Maladaptive schemas are negative fundamental beliefs about the self, others and the world. This study will look at maladaptive schemas and coping strategies that may be used by both those who have had sexually harmful experiences in childhood and those who have eating disorder-type difficulties. This research may help us to improve treatment and support services.

Who is doing the study and who has approved it?

The study is being carried out by Aili Nidsjo, Prof Kevin Browne and Dr Simon Duff from the University of Nottingham. It has been approved by Faculty of Medicine and Life Sciences Research Committee (FMHS UREC). FMHS Research Ethics Reference number: FMHS K10112015

Why have I been invited to take part?

You have been invited to take part as you are over the age of 16. We would like to hear from both men and women.

What will be asked of me?

You will be asked to complete a set of online questionnaires. It is estimated that this should take you approximately 30-45 minutes. We will not ask for any identifying information from you.

What are the risks and benefits to taking part?

The survey includes questions about your eating behaviours and how you cope with stress in your life. It also includes questions about your beliefs about yourself, others and the world, along with a question about any adverse sexual experiences you may have had. Answering some of these questions may be upsetting to you. If you have concerns about the distress this may cause you, please do not proceed. If you choose to take part and begin to feel distressed, please feel free to withdraw from the study. If you need any additional support, you may contact:

- The Survivors Trust (0808 801 0818) http://thesurvivorstrust.org,
- Rape Crisis (0808 802 9999) http://rapecrisis.org.uk/
- Samaritans (08457 90 90 90) http://www.samaritans.org/
- beat (0345 634 1414) www.b-eat.co.uk
- Your General Practitioner (GP).

We cannot guarantee any direct benefits from participation in the study. However, by taking part you will help to improve the understanding of thoughts and behaviours that link adverse childhood sexual experiences and eating disorder, which may lead to improvements in treatment and support services.

Do I have to take part?

It is entirely your choice if you want to participate in the study. Your data will only be uploaded once you have completed the questions and clicked the 'submit' button. However, once you have submitted the survey, it will not be possible to withdraw your data, due to the anonymous nature of the survey.

How will you keep my data confidential?

The survey is completely anonymous and no identifiable information will be collected. However, as with any online related activity, a breach is always possible. We will do everything possible to ensure that this does not happen. Risks will be minimised by ensuring confidentiality through the use of anonymised data and encrypted and password protected survey software. Once uploaded, the data will be stored on an encrypted, password protected memory stick, kept in a secure University location, until it is destroyed (7 years after the publication of results). The data will be accessed by the research team only.

What if there is a problem?

If you have a concern about the study you should speak to the researchers who will do their best to answer your questions. If you remain unsatisfied and would like to complain formally, you can do so by contacting; Louise Sabir, FMHS (UREC) Administrator, c/o The School of Medicine Education Centre Office, B Floor, The Medical School, QMC Campus, Nottingham University Hospitals, Nottingham, NG7 2UH, email: lousie.sabir@nottingham.ac.uk

What will happen to the results of the study?

The results of the research study will be reviewed by external examiners and may be published in a journal or presented at professional conferences. Please email the researchers if you would like a summary of the results.

For any queries, please contact:

Prof Kevin Browne lwzkdb@nottingham.ac.uk
Dr Simon Duff mczsd@nottingham.ac.uk
Aili Nidsjo msxasn@nottingham.ac.uk

Thanks for reading this information sheet. Click on the PDF link if you would like a copy of it.

https://static.onlinesurveys.ac.uk/media/account/171/survey/197168/question/information_sheet_generic_20_0.pdf

Consent Form

Please read the below statements carefully. By clicking the “I consent” button, you agree to participate in the study.

- I confirm that I have read and understood the information on the *Information Page*.
- I confirm that I am 16 years or older.
- I understand that my participation in this study is voluntary and that I can withdraw at any time.
- I understand that my data can be withdrawn by exiting the survey, but cannot be retrieved once submitted, due to the anonymous nature of the survey.
- I understand that the survey is completely anonymous and that my identity or personal details cannot be identified by the researchers.
- I understand that the anonymous data I provide in the survey may be used for research and teaching purposes.
- I understand that some of the questions may have a distressing impact and am aware that I can contact Beat (0345 634 1414), Samaritans (08457 90 90 90), Rape Crisis (0808 802 9999),The Survivors Trust (0808 801 0818), or my GP if I need support.

Thanks for participating in the study!

This study was an investigation into factors that may influence the relationship between early experiences of sexual abuse and the development of eating disorders. We explored this by looking at the effects of core schema and coping strategies. We believe that certain coping strategies that focus on emotions or avoidance rather than actively tackling the problem is likely to make the link stronger. We also believe that more negative beliefs about the self, others and the world around will make the link stronger. If this is found to be true it may give us a better understanding of why people who have had early harmful sexual experiences go on to develop eating disorders. This knowledge may be valuable in the prevention of eating disorder as well as developing more effective treatment and sexual abuse support services.

If participating in this study has made you distressed, please contact:

- The Survivors Trust (0808 801 0818) http://thesurvivorstrust.org,
- Rape Crisis (0808 802 9999) http://rapecrisis.org.uk/
- Samaritans (08457 90 90 90) http://www.samaritans.org/
- Beat (0345 634 1414) www.b-eat.co.uk
- Your General Practitioner (GP).

If you have any questions about the study or would like a summary of the results, please contact:

- Prof Kevin Browne lwzkdb@nottingham.ac.uk
- Dr Simon Duff mczsd@nottingham.ac.uk
- Aili Nidsjo msxasn@nottingham.ac.uk

Thanks again for your participation!

Table 1. CSA and ED characteristics for the male and gender-nonconforming participants

	Males n=28			**Gender-nonconforming n=8**		
	N	%	Mean (SD)	N	%	Mean (SD)
CSA	13	46.4		7	87.5	
Age			9.7 (2.7)			8.4 (3.2)
Confide			3.2 (2.4)			1.7 (1.3)
Trauma			4.5 (2.3)			6.3 (1.0)
Eat-26			16.5 (19.3)			31.1 (19.7)
High Risk ED	9	32.1		5	62.5	

*Age refers to the time of CSA

Table 2. Means and Standard deviations of EMS for male and gender-nonconforming participants

Schema	**Males n=28**	**Gender-nonconforming n=8**
	Mean (SD)	**Mean (SD)**
Emotional Deprivation	14.7 (6.3)	17.4 (8.4)
Abandonment	13.1 (7.1)	25.3 (7.2)
Mistrust	14.5 (7.7)	21.8 (8.9)
Alienation	15.9 (7.4)	26.9 (4.4)
Defectiveness	12.8 (7.7)	22.4 (9.9)
Failure	11.8 (5.8)	23.9 (6.8)
Dependence	10.7 (4.5)	17.6 (8.1)
Vulnerability to harm	11.9 (5.8)	21.5 (7.33)
Enmeshment	8.9 (4.6)	14.1 (8.1)
Subjugation	12.3 (4.8)	20.0 (8.0)
Self-Sacrifice	15.8 (5.8)	25.0 (3.9)
Emotional Instability	15.9 (5.9)	21.0 (6.5)
Unrelenting standards	18.3 (7.2)	25.1 (3.3)
Entitlement	12.4 (4.9)	11.6 (4.5)
Instrumental control	14.4 (6.1)	19.1 (5.6)
Admiration	12.0 (5.7)	19.0 (8.0)
Pessimism	14.0 (6.4)	24.3 (8.2)
Self-punitiveness	14.9 (6.4)	25.1 (7.1)
YSQ-S3	13.6 (4.5)	21.2 (4.6)

Table 3. Means and Standard deviations of coping strategies for male and gender-nonconforming participants

Coping Strategy	Males n=28	Gender-nonconforming n=8
	Mean (SD)	**Mean (SD)**
Self-distraction	5.1 (1.5)	6.6 (2.0)
Active coping	5.3 (1.7)	5.1 (2.1)
Denial	2.9 (1.4)	3.3 (1.5)
Substance use	3.6 (2.1)	5.5 (2.9)
Emotional support	4.1 (1.7)	5.1 (1.7)
Instrumental support	4.5 (1.8)	4.8 (1.8)
Behavioural disengagement	3.6 (1.8)	4.8 (2.1)
Venting	3.9 (1.4)	5.4 (2.0)
Positive reframing	4.1 (2.0)	4.0 (1.9)
Planning	5.3 (1.8)	5.8 (2.1)
Humour	4.9 (1.9)	6.0 (2.1)
Acceptance	5.6 (1.8)	5.5 (1.4)
Religion	2.5 (2.0)	3.1 (2.1)
Self-Blame	5.6 (2.0)	7.6 (1.1)