# Title

Nature of Child Sexual Abuse and Psychopathology in Adult Survivors: Results from a

Clinical Sample in Scotland

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### **Accessible Summary**

•Child sexual abuse (CSA) is highly prevalent. Survivors of childhood sexual abuse are likely to develop a range of mental health problems in adult life which vary widely in severity, duration, and form. While some survivors suffer a wide range of severe psychological problems others experience few, if any at all.

•There is no clear explanation for such differences in frequency and intensity of problems across survivors. The nature of abuse is considered to have a primary role in the development of mental health problems in adult life, although results of existing studies remain inconclusive.

•To our knowledge, this is the first study which investigates the relationship between a wide range of sexual abuse characteristics and the severity of psychopathological disorders in a large sample of adult CSA survivors who attended a specialist Psychotherapy Service for CSA survivors.

•Many experienced severe sexual assault(s) in their early years and presented with severe pathology which could suggest a strong causal link. However, no significant association between the sexual abuse characteristics and severity of psychopathology was detected. This may suggest that for severely disordered, treatment-seeking CSA survivors other factors might have contributed to the development of the post-abuse psychopathology. The present study adds to the growing body of evidence suggesting that CSA effects may be dependent on factors which may not necessarily be related to the nature of the sexual abuse such as poor family relationships or detrimental coping strategies. The current study will contribute to

clinicians' knowledge and understanding of the determinants of psychopathology among severely disordered, help-seeking CSA survivors.

#### **Abstract**

The relationship between history of childhood sexual abuse and psychopathology in adult life is well-established. However, understanding of the mechanisms by which abuse exerts its effects is limited. To our knowledge, this is the first study which investigates the relationship between a wide range of sexual abuse characteristics (i.e., age at onset, frequency of assaults and number and gender of perpetrators, their relationship to the victim) and the severity of psychopathological disorders in a large sample of adult CSA survivors who attended a specialist Psychotherapy Service for CSA survivors. Many CSA survivors experienced severe sexual assault(s) in their early years and presented with severe pathology which could suggest a strong causal link. However, none of the examined trauma characteristics significantly predicted severity of psychopathology. This may suggest that for severely disordered, treatment-seeking CSA survivors post-abuse psychopathology could be caused by other factors. The study adds to the growing body of evidence suggesting that CSA effects may be dependent on factors which are not necessarily related to the nature of sexual abuse. The study findings will help improve clinicians' insight into the determinants of psychopathology.

## Introduction

Child sexual abuse (CSA) is highly prevalent. The recent UK study by Radford et al. (2011) demonstrates that one in four (24.1%) of young adults aged 18-24 surveyed had experienced sexual abuse during childhood and almost one in 10 (9.4%) 11-17 year olds had experienced sexual abuse in the past year. A history of child sexual abuse (CSA) has been associated with a high risk for depression, anxiety disorders, eating disorders, substance misuse, suicidal behaviour, personality disorders and dissociation (Anderson et al. 2000, Bulik et al. 2001, Caspi et al. 2008, Gold et al. 2004, Lee, et al. 2008, Molnar, et al. 2001, Thakkar, et al. 2000). These results were corroborated in community-based samples (Molnar et al. 2001), student populations (Thakkar et al. 2000) and clinical samples (Anderson *et al*. 2000). Nevertheless, although the relationship between history of child sexual abuse and psychopathology is well-established, our understanding of the mechanisms by which abuse exerts its effects is still limited. Researchers hypothesised that the nature of sexual abuse may play a primary role in the severity of psychopathology in adult life (e.g. Ruggiero et al. 2000). For instance, longer duration of abuse was associated with higher levels of PTSD-related symptomatology (Ruggiero et al. 2000; Rodriguez et al. 1996) and psychological distress (Steel et al. 2004). It has also been reported that an earlier age of onset of abuse was positively correlated with higher levels of depression (Lee et al. 2008, Johnson et al. 2001) and dissociation (Gold et al. 2004, Johnson et al. 2001). A recent study reported that the relative risk of having severe depressive symptoms was higher for those abused before the age of 12 than those abused after the age of 12 (Schoedl et al. 2010). Furthermore, a greater risk for psychopathology including depression and generalised anxiety was found to be associated with attempted or completed intercourse and the use of force or threats (Bulik et al. 2001). Similarly, in a study by Lee et al. (2008), penetrative sexual abuse was associated

with more severe depression. In another study, those who reported sexual abuse involving penetration and/or force also reported increased adult sexual risk behaviour (e.g. increased number of lifetime sexual partners) (Senn *et al.* 2007). It has also been suggested that coercive sexual acts were associated with increased levels of dissociation (Gold *et al.* 2004). In terms of types of psychological distress, Caspi *et al.* (2008) found a positive association between child sexual abuse and obsessive compulsive disorder as well as personality disorder. With regard to perpetrator characteristics, survivors whose perpetrators were not carers were found to experience higher levels of posttraumatic symptomatology (PTS) in adulthood than those abused by carers (Lucenko *et al.* 2000). There has also been evidence to suggest that concurrent multiple perpetrators were associated with increased levels of dissociation (Gold *et al.* 2004) and psychological distress (Steel *et al.* 2004).

Nevertheless, it is important to highlight that previous research has also provided a lack of significant associations between the nature of child sexual abuse and subsequent psychopathology. For example, in the study by Ruggiero *et al.* (2000) frequency of abuse was not correlated with the intensity of depression. Similarly in the study by Anderson *et al.* (2000) no significant associations between age at onset of abuse, victim-perpetrator relationship and severity of depression and eating disturbance was detected. Furthermore, in the study by Lee *et al.* (2008) severity of psychopathology was not significantly associated with perpetrator type (familial vs. non-familial).

Thus, existing evidence on the association between nature of abuse and subsequent psychopathology is rather contradictory and inconclusive. Differences across studies could account for these results including the diverse methods of measuring CSA, sampling (Anderson *et al.* 2000) or inclusion of participants with a restricted range of abuse severity (Ruggiero *et al.* 2000). Different findings across the studies, however, may also indicate that some factors might have moderated the relationship between sexual abuse and psychopathology as demonstrated in the study by Alink *et al.* (2009).

There remains the need to determine whether and to what extent nature of sexual abuse contributes to the severity of psychopathology in later life. Although many studies addressed the association between nature of abuse and type and severity of psychopathology, only few have assessed a broad array of abuse characteristics and psychological disorders in a single study (Bulik, *et al.*, 2001; Steel *et al.*, 2004). None of these studies employed a large sample of adult CSA survivors seeking help in the Specialist Services for CSA survivors. CSA survivors come to a Specialist Service because they want to address their traumatic event in the childhood unlike the CSA survivors from the general psychiatric units who are there to receive treatment for specific disorders e.g. bulimia (e.g. Steel *et al* 2004).

Furthermore, trauma survivors who make the decision to seek help can no longer manage to cope with their problems on their own (Stige & Rosenvinge, 2013), thus, it is hypothesised that in this particular population of CSA survivors there would be a strong link between the nature sexual abuse and severe psychopathology in adulthood.

The present study aims to address these gaps by examining the relationship between a wide range of abuse characteristics and psychopathological disorders among a sample of CSA survivors who attended a specialist Psychotherapy Service for adults who have experienced childhood sexual abuse.

### Child Sexual Abuse: The Role of Mental Health Nurses

Survivors of child sexual abuse need to be effectively recognized, assessed, and supported by mental health professionals. Unfortunately the recent evidence suggests that many mental health nurses are poorly prepared to work with survivors of child sexual abuse (Hepworth & McGowan, 2012). Firstly, mental health nurses do not routinely enquire about childhood

sexual abuse during assessment in acute mental health settings despite recognising the importance of such enquiry (Donohue, 2010). The reason for not doing so is a lack of specific training to deal with this client group (Hepworth & McGowan, 2012). Furthermore, even when they ask about the history of childhood sexual abuse they feel uncomfortable, embarrassed and lack confidence in doing so (Day *et al.* 2002). This, in turn, may inhibit the recognition and treatment of survivors of child sexual abuse. For example, in the study by Warne and Mc Andrew, (2005) patients rarely disclosed their experiences of child sexual abuse, and mental health professionals' approach further prevented this disclosure.

## Methodology

#### Procedure and participants

A total of 303 patients were referred to a specialist Psychotherapy Service in Scotland between 2006 - 2009 by general practitioners, psychologists, psychiatric nurses and occupational therapists. Once the patients reached the top of the waiting list they were invited to complete a self-report questionnaire SCL-90 and return it in a self-addressed envelope prior to their first appointment. A total of 149 out of 303 patients posted the questionnaire back with their confirmation that they would attend the arranged therapy session. Participants comprised 77.9% (n = 116) females and 22.1% (n=33) males, who reported unwanted sexual experiences before the age of 16. Age range of participants was 16 to 55 years and most (62.2%) were between the ages of 26 and 45. Most participants identified themselves as white British (96%).

## Data Collection

The present study was approved by the Ethics and Governance Committee at Edinburgh Napier University. Data were collected by an experienced psychotherapist as part of a clinical audit that took place in a specialist Psychotherapy Service. Demographic and trauma characteristics included age at assessment, gender, nationality and abuse-specific variables such as age at onset of abuse, frequency of the abuse, gender of the perpetrator, number of perpetrators and victim-perpetrator relationship.

In addition, the Symptom Checklist 90 (SCL-90) (Derogatis, 2000) was used for the assessment of presence and severity of psychopathology. The questionnaire includes 90 items each of which is self-rated on a five-point Likert-type scale of distress ranging from 0 (none) to 4 (extreme). The SCL-90 consists of 9 primary symptom dimensions including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. Each of the nine symptom dimensions comprises 6 - 13 items. The scores on each dimension represent the mean of the scores of all items of that dimension. SCL-90 also describes three Global Indices of Distress. These include the Global Severity Index (GSI), Positive Symptom Distress Index (PSDI) and Positive Symptoms Total (PST). There is strong support for the reliability and validity of the instrument as a measure of general symptom severity and changes in symptom severity but less support for its proposed dimensionality (Derogatis, 2000).

#### Data analysis

Descriptive statistics were used to report on the demographic and clinical characteristics of the participants and the nature of their sexual abuse (Tables 1-2). Multiple regression analyses were conducted to examine the relationship between abuse characteristics such as number of perpetrators, frequency of abuse, type of abuse (intra-familial vs. extra-familial), age at onset of abuse and the current psychopathology on each of the SCL-90 sub-scores. A p value of 0.05 or below was accepted as statistically significant.

Missing data were handled using listwise deletion. Non-responses to the questions on sexual abuse resulted in fairly large numbers of missing values (Table 1) which raises the possibility that those who declined may have subjected to more severe forms of sexual abuse and thus, suffered poorer psychological health later in life. T-tests for independent samples were conducted to examine if participants who had missing values on abuse characteristics reported more severe psychopathology than those who provided such information. A p value of 0.05 and under was accepted as statistically significant. No significant differences in severity of psychopathology were found between these groups of participants.

## Results

#### Nature of Abuse

Data on the nature of child sexual abuse are presented in

Table 1.

#### Table 1 about here

Most child sexual assaults took place at an early age (range of 5-10 years for 32.2% of the participants). A proportion (14.1%) reported first being abused between 11-16 years of age, 6% reported first being sexually abused under the age of 4. Most participants (37.6%) experienced multiple episodes of abuse and only 6.7% reported one single episode. An overwhelming majority of participants were abused solely by male perpetrators (75.8%). A few participants (3.4%) experienced abuse from both females and males (on separate occasions) and 1 (0.8%) patient reported abuse by a female. The majority was abused by one perpetrator (60.4%) whereas a proportion of 16.8% reported that they were abused by more than one perpetrator. Intra-familial (55%) abuse occurred more frequently than extra-familial

abuse (12%). Few participants experienced both intra-familial and extra-familial abuse (4%). In relation to intra-familial abuse, "fathers" was the most frequent perpetrators (21.5%). Steprelatives and other relatives (14.8%) have also been reported quite frequently by patients in our sample. With regard to extra-familial abuse, many participants reported being abused by a neighbour (11.4%). Abuse by a stranger (2.0%), professional (2.0%) and carer (1.3%) was reported more rarely.

#### Clinical characteristics

SCL-90 mean scores are presented in Table 2.

## Table 2 about here

The highest score was observed in the depression subscale (mean = 2.8, Sd = 0.8). High mean scores were also observed in the interpersonal sensitivity (mean = 2.4, Sd = 0.9), anxiety (mean = 2.2, Sd = 0.9) and obsessive compulsive (mean = 2.3, Sd = 0.8) subscales. Participants scored the lowest in the psychoticism subscale. On a 0 to 4 scale, the mean Global Severity Index (GS) score was 2.1 (Sd = 0.7) whereas the mean Positive Symptom Distress Index (PSDI) was 2.6 (Sd = 0.6). Positive Symptom Total (PST) score was 70.4 (Sd = 15.3).

### The relationship between nature of abuse and psychological effects

## Multivariate analyses

Results from multiple linear regression analysis are shown in Table 3.

## Table 3 about here

Multiple regressions did not reveal any significant predictors of severity of psychopathology for any of the SCL-90 subscales.

## Discussion

The present study aimed to assess the extent to which the nature of child sexual abuse relates to the levels of psychopathology in adult survivors of CSA. In line with results from previous research (Luterek et al. 2004, Ruggiero et al. 2000, Spataro et al. 2004, Zlotnick et al. 2001) it was found in the present study that CSA survivors have elevated levels of psychopathology, particularly depression. However, these were not related to the nature of sexual abuse namely, frequency of abuse, age of onset of abuse, victim-perpetrator relationship, gender and number of perpetrators. These results were corroborated in previous studies employing a populationbased sample (Bulik et al. 2001), children (Ruggiero et al. 2000) and a modest (n=45) sample of hospitalized women with bulimia (Anderson et al. 2000). Ruggiero et al. (2000), for example, demonstrated a lack of association between frequency of abuse and general anxiety and depression. Furthermore, Anderson et al. (2000) found no significant differences in severity of depression among women reporting intra-familial and extra-familial abuse, single and multiple incidents, early abuse and abuse occurring after the age of 14. Finally, a study by Bulik et al. (2001) identified no significant association between age of abuse and number of perpetrators and increased risk of later psychopathology including major depression, generalised anxiety disorder and panic disorder.

Nevertheless, our study, unlike previous research employed a clinical sample of treatmentseeking adult survivors of CSA who attended a Specialist Service for survivors of child sexual abuse. Care staff in specialist services are more experienced in meeting the needs of survivors although the majority of the referrals in specialist services are complex and severe (Astbury, 2006). Trauma survivors who make the decision to seek help can no longer manage

their problems on their own; the experience of losing control over their symptoms and the negative impact that these have on their significant others often leads them to seek help (Stige & Rosenvinge, 2013). Indeed, CSA survivors in our study reported elevated levels of a few psychopathological disorders. For instance, they scored much higher on each of the SCL-90 subscales than CSA survivors recruited mainly from psychiatric outpatient and inpatient clinics in the study by Steel *et al.* (2004). Overall, they reported twice as much psychiatric distress as indicated by G.S.I scores (G.S.I. =1.04 vs. G.S.I. =2.01). CSA survivors in our study also experienced severe trauma as indicated by high prevalence of intra-familial abuse, being abused on several occasions, at a very young age. For instance, our sample mainly consists of those who were sexually abused below the age of 10 unlike the previous studies' samples that included CSA survivors who predominantly experienced sexual abuse above the age of 10 (e.g. Anderson *et al.* 2000).

As such, it might be expected that nature of sexual abuse would have an impact on psychopathology in this particular group. Failure to detect any significant trauma characteristics as predictors of severity of psychopathology may indicate that post-abuse psychopathology was the by-product of other factors. These might include resilience factors such as biological, psychological, and social factors which act to ameliorate or enhance the effects of trauma (Luthar & Cicchetti, 2000). For instance, family environment can play an important contribution to the development of post-abuse psychopathology. Aspects of family environment such as the level of parental support, the presence of parental conflict, parental substance abuse and mother's psychological health have all been found to be linked to adjustment following childhood sexual abuse (Adams & Bukowski, 2007). Furthermore, other forms of abuse might have played a significant role. A significant proportion of children sexually abused also experience physical abuse or emotional deprivation (e.g. Ruggiero et al.

2000; Fergusson et al. 2008). Given the high prevalence of intra-familial abuse including abuse by father and siblings in the present study it is likely that participants regularly experienced emotional and physical abuse which might have contributed to the development of psychopathology. With regards to psychological factors, factors such as coping or attributional style can also buffer or intensify the relationship between CSA and post abuse mental health effects (Feiring et al. 2002). For instance, CSA survivors use fewer adaptive strategies for coping with emotional arousal and more maladaptive strategies (e.g. Shipman et al. 2005) which can predispose to psychopathology. Regarding, biological factors there is evidence suggesting that sexual abuse contributes to stress-induced changes in a child's neurobiological systems which may contribute to heightened risk for psychopathology over the longer term (McCrory et al. 2011). Finally, it is important to note that Posttraumatic Stress Disorder (PTSD) symptoms which are very common in CSA survivors and include reexperiencing of the traumatic event, avoidant behaviour and hyper-arousal can also be a powerful mediator between histories of sexual assault and post-trauma mental health (Briere and Elliot, 2003). PTSD symptoms tend to be co-morbid with a number of mental health conditions. Co-morbidity in PTSD could result from the fact that experience of trauma creates a number of cognitive distortions, which are common and could predispose to a number of mental health conditions (Smucker et al., 1995). Therefore, it is difficult to determine whether the disorders reported in this clinical sample such as depression or anxiety constituted separate affective disorders or are more easily accounted for as a response to post-traumatic symptomatology.

## Limitations and directions for future research

Our study suffers a number of methodological limitations and omissions which may have affected the findings and should be addressed in future research. One of the main weaknesses

is the use of an unstandardized measure of trauma characteristics. As a consequence, a number of abuse-specific variables such as duration of abuse, use of force/coercion, type of abuse in terms of contact vs. non-contact abuse were not assessed. In addition, the present study did not examine PTSD symptoms which are common in CSA survivors and might have explained the current psychopathology of the survivors. Furthermore, our study did not examine psychological or social variables which are potential contributors to the development of psychopathology. Investigating these factors may not only help to better understand the aetiology of psychopathology but also to prevent its development among CSA survivors. Given that a significant proportion of CSA survivors experience multiple types of abuse such as physical abuse or emotional deprivation (e.g. Anderson et al. 2000, Fergusson et al. 2008, Ruggiero et al. 2000) researching one type of abuse in a single population at the expense of other types prohibits the investigation of the interactive and cumulative effect of different types of abuse on mental health and well-being (Bromfield et al. 2007). Future studies should take this into account when examining the potential relationship between nature of abuse and psychopathology. It is also important to mention that since this study used a self-reported retrospective measure of CSA, it is possible that inaccuracies of retrospective recall could lead to underestimation of the examined relationships (Polusny & Follette, 1995). Finally, the findings may not be generalized to all CSA survivors considering that the present study utilised a clinical sample of treatment-seeking CSA survivors suffering from severe psychopathology.

### Implications for mental health nurses

The study findings are applicable to clinical work with child sexual abuse (CSA) survivors. Childhood sexual abuse survivors do have some expectations for an appropriate response from health professionals. Most of the survivors appear to be more frustrated and upset about not having abuse issues recognized or dealt with than with having the issues raised (McGregor, et al., 2006; Koehn, 2007). Nevertheless, the reviewed recent evidence including the evidence from the UK demonstrated that nurses are still not prepared to work with survivors of child sexual abuse; they have limited knowledge of CSA and a lack of skills and confidence in dealing with the survivors of CSA (Donohue, 2010; Hepworth & McGowan, 2012). This calls for further training for nurses working with survivors of child sexual abuse. It is envisaged that the present study findings can be used to guide nursing practice. First of all, our findings can improve nurses' insight into the determinants of psychopathology among CSA survivors; in particular that for CSA survivors suffering from severe psychopathology, psychopathology can be caused by many factors beyond nature of abuse. Furthermore, the current study informs the assessment of CSA survivors; it highlights that mental health nurses should not only enquire about nature of abuse but also about other factors such as coping strategies or aspects of family environment. This is crucial since these factors may be important in contributing to the development of post abuse psychopathology than specific characteristics of a CSA experience. A more inclusive assessment of survivors' needs may contribute to improving the quality of services for CSA survivors, for instance, it may encourage the design of interventions aiming at strengthening resilience among this group of patients.

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Variable	Units/level	Frequenc		
Age at onset of abuse	under 4	9 (6.0%)		
8	5-10	48 (32.2%)		
	11-16	21 (14.1%)		
	not disclosed	71 (47.7%)		
Frequency of abuse	single episode	10 (6.7%)		
	multiple episode	56 (37.6%)		
	not disclosed	83 (55.7%)		
Gender of perpetrator	male	113 (75.8%)		
	female	1 (0.8%)		
	female and male	5 (3.4%)		
	not disclosed	30 (20.0%)		
Number of perpetrators	one	90 (60.4%)		
	more than one	25 (16.8%)		
	not disclosed	34 (22.8%)		
Victim-perpetrator	intra-familial	82 (55.0%)		
relationship	extra-familial	18 (12.0%)		
-	both	6 (4.0%)		
	not disclosed	43(29.0%)		
Perpetrator				
	father	32 (21.5%)		
	mother	4(2.7%)		
	sibling	16 ( 10.7%		
	grandparent	5 (3.3%)		
	step-relative	22 (14.8%)		
	other relative	22 (14.8%)		
	carer	2(1.3%)		
	professional	3 ( 2.0%)		
	neighbour	17 ( 11.4%)		
	stranger	3 (2.0%)		
	not disclosed	39 (26.17%		

 Table 1. Trauma characteristics of study group (n=149)

Variable	Mean (Sd)	Sample Range	Scale Range	
Somatisation	1.7 (0.9)	0.0 - 3.7	0-4	
Obsessive Compulsive	2.3 (0.8)	0.1 - 4.0	0-4	
Interpersonal Sensitivity	2.4 (0.9)	0.0 - 3.8	0-4	
Depression	2.8 (0.8)	0.1 - 4.0	0-4	
Anxiety	2.2 (0.9)	0.0 - 4.0	0-4	
Hostility	1.8 (1.1)	0.0 - 4.0	0-4	
Phobic Anxiety	1.8 (1.2)	0.0 - 4.0	0-4	
Paranoid Ideation	2.0 (0.9)	0.0 - 4.0	0-4	
Psychoticism	1.5 (0.8)	0.0 - 3.8	0-4	
Global Indices of Distres	S			
GSI	2.1 (0.7)	0.1 - 3.7	0-4	
PSDI	2.6 (0.6)	1.00 - 3.8	0-4	
PST	70.4 (15.3)	6.0 - 90.0	0-90	

Table 2. Mean (Sd) of general psychopathology (SCL-90)

Table 3. Multiple linear regression analyses. Trauma characteristics as predictors of psychopathology severity as measured by the SCL-90 subscales.

	SCL SUBSCALES								
Regression	somatisation	obsessive compulsive	interpersonal sensitivity	depression	anxiety	hostility	phobic anxiety	paranoid ideation	psychoticism
Model significance									
р	.43	.65	.30	.48	.15	.23	.90	.30	.77
df F	4 .98	4 .63	4 1.26	4 .88	4 1.79	4 1 .44	4 .55	4 1.25	4 .45
PREDICTOR									
<b>Age at onset</b> <b>Of abuse</b> 0-10 11-16									
Beta t-test	.15 1.08	.12 1.50	.16 1.18	.11 .81	.14 .99	.01 .05	.10 .71	.15 1.06	.17 1.18
p-value	.28	.14	.43	.42	.32	.96	.48	.29	.24
Frequency of abuse									
Single episode Multiple episod	le								

# Adult Survivors of Child Sexual Abuse

Beta t-test p-value	.05 .33 .74	.05 .36 .72	.06 .41 .68	01 08 .94	.17 1.20 .24	.17 1.23 .23	.15 1.02 .31	.10 .70 .49	.07 .47 .64
Number of . Perpetrators									
One More than one									
Beta t-test p-value	.21 1.47 .21	03 22 .82	.25 1.80 .08	.24 1.66 .10	.24 1.73 .09	.20 1.46 .15	. 08 .55 .58	.25 1.78 .08	01 09 .93
Type of . Abuse									
Intra-familial Extra-familial									
Beta t-test p-value	.13 .89 .37	02 16 .87	.10 .73 .47	02 15 .88	.22 1.59 .12	12 86 .40	.11 .74 .46	.03 .22 .82	.06 .43 .67