Case-Control Retrospective Study of Child Sexual Abuse History among Psychiatric Consultations in a General Hospital Emergency Room

Sol Jaworowski MBBS FRANZCP[1], Jean-Louis Golmard MD PhD[2], Morag Engelberg MD[3], Sarah Prijs[4], Lital Twizer[5], Cornelius Gropp MD[1] and Joseph Mergui MD[1]

[1]Department of Consultation and Liaison Psychiatry, and [2]Department of Internal Medicine, Shaare Zedek Medical Center, Jerusalem, Israel
[3]Department of Biostatistics, Pitié-Salpêtrière (Assistance Publique-Hôpitaux de Paris), Université UPMC, Paris, France
[4]Department of Psychology, BPP University, London, United Kingdom
[5]Department of Psychology, Hunter College, New York, NY, USA

ABSTRACT: **Background:** A history of childhood sexual abuse (CSA) has been linked to a variety of physical and psychiatric illnesses, including ischemic heart disease and post-traumatic stress disorder (PTSD).

Objectives: To determine the prevalence of past CSA and re-traumatization among hospital psychiatric consultations and to determine whether a CSA group in a hospital setting shared characteristics with community samples described in the literature.

Methods: We divided 228 consecutive psychiatric consultations into two groups. One group comprised patients with a past history of CSA while the other group had no such history. Both groups were further divided into a subgroup that presented with features of re-traumatization.

Results: In the cohort, 38% described a history of CSA. Twenty patients were identified as presenting with features of re-traumatization. There were significant differences between the two groups. The patients with a history of CSA were more likely to have arrived at the emergency department (ED) during the preceding 12 months with a diagnosis of PTSD, personality disorder, and substance use disorder. There was a greater proportion of patients in the CSA group who had grown up in an ultra-Orthodox Jewish household and who currently identified as being secular.

Conclusions: The characteristics of the patients with past CSA in this study are similar to community-based samples, except for a significant gender difference. To the best of our knowledge, this study is the first to investigate CSA history during hospital ED psychiatric consultations. A history of CSA should be considered during psychiatric consultations in a general hospital ED admission.

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Child sexual abuse (CSA) has been defined as either contact and non-contact sexual experiences between a person younger than 18 years of age and an adult or other person at least 5 years older, or sexual experiences resulting from coercion regardless of the age of the other person [1].

The prevalence of CSA was found to range from 15 to 25% for females and 0–16% for males [2]. That study comprised a random sample of 7353 English-speaking individuals who were interviewed using a computer-assisted self-completion interview with the interviewer blinded to the responses. CSA, together with physical abuse and childhood neglect, have been identified as significant childhood adversities related to subsequent poorer health [3,4]. There is evidence linking early life stress to reduced telomere length in a study of physically and psychiatrically healthy adults with or without a reported history of childhood maltreatment. These early experiences often coexist and may affect adult health in two ways: either by cumulative damage over time or by the biological embedding of adversities during sensitive developmental periods [4].

Mediating factors between CSA and physical illness include neuroendocrine dysfunction, metabolic syndrome, and chronic inflammation [5]. CSA has been related to increased use of medical services as a result of increased physical complaints and physical illnesses [6]. However, CSA has also been related to underutilization of preventive healthcare, particularly for assessment of cervical, breast, and colon cancer [7]. Women visiting the website of the National Association for People Abused in Childhood were invited to complete a survey of their views regarding cervical cancer screening. The closed-question survey was completed by 135 women. The findings suggested that the underutilization of healthcare services may constitute avoidance behavior linked to fear of triggering traumatic memories of the original trauma [7].

CSA has been related to subsequent development of psychiatric disorders such as post-traumatic stress disorder (PTSD), personality disorder, depression, alcohol use disorder, and sub-

stance use disorder [8-10]. The World Mental Health Surveys [8] comprised 26 population surveys in the World Health Organization, which examined 71,083 respondents aged 18 or older in relation to PTSD.

The lifetime prevalence of psychopathology and substance abuse related to early exposure to traumatic events [11] was studied using structured telephone interviews with 5995 Australian twins, comparing the twin who reported CSA to the one with no CSA history.

Re-traumatization is described as any situation, interaction, or environmental factor that may evoke feelings and reactions associated with the original traumatic experience. Re-traumatization may compound the impact of the original trauma [12].

As many as 45% of CSA survivors report experiencing abuse memories during gynecological examinations [13]. The American College of Obstetricians and Gynecologists and the American Medical Association have recognized the role that triggering phenomena may play in CSA survivors' avoidance or non-adherence to medical treatment. It has been recommended that obstetricians and gynecologists become acquainted with long-term physical and emotional sequelae of these triggers to increase awareness of this condition during the routine medical history interview. Furthermore, the obstetrician/gynecologist should encourage the patient with suspected CSA to suggest ways in which she might feel more in control during the gynecological examination [14].

The development of traumatic memories at the time of stress exposure is thought to cause major vulnerability through environmental triggering by increasing neurobiological dysregulation. An increasing body of evidence demonstrates how PTSD is associated with significant physical morbidity in the form of chronic musculoskeletal pain, hypertension, hyperlipidemia, obesity, and cardiovascular disease [15].

Increasingly, both neurobiological and clinical research has shown that PTSD has two subtypes: re-experiencing/hyperaroused and dissociative. These different subtypes of trauma response may be viewed as different extremes of emotional dysregulation. The first involves under-modulation and the second over-modulation to trauma-related emotional and somatosensory information. Each response type appears to have distinct central nervous system correlates, and each response type has been correlated with specific neural activity in brain regions responsible for arousal modulation and emotional regulation including the medial prefrontal cortex and the anterior cingulate cortex [16]. These subtypes of PTSD have been incorporated into the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) definition for this disorder [17].

The need for mental health professionals to ask patients about CSA during routine mental health assessments in acute settings has been described. These studies have also included the difficulties of implementing such an approach [18].

The aims of the present study were to determine the prevalence of past CSA and re-traumatization in a cohort of 228 patients referred for psychiatric consultation in a general hospital emergency department (ED) and to examine whether they shared similar characteristics of people with a past history of CSA described in the literature who had been diagnosed in community samples.

To the best of our knowledge, this is the first such controlled cohort study to investigate the CSA history of individuals referred for psychiatric consultation in the general hospital ED. The general hospital presentation of people with past CSA may provide an opportunity to promote healthier ways to cope with trauma in order to prevent or reduce trauma-related physical and psychological disorder.

PATIENTS AND METHODS

STUDY DESIGN

In this case-control retrospective study, we reviewed the hospital records of patients who were referred for psychiatric consultation at the Shaare Zedek Medical Center emergency department. This center is a 1000-bed hospital affiliated with the Hebrew University Medical School.

The study was conducted by an experienced child and adult psychiatrist (S.J.) who reviewed consecutive psychiatric consultations performed between 2014 and 2016. In every consultation, the psychiatrist used a semi-structured interview process to identify whether the patient had experienced sexual abuse in the past. Children and adolescents were examined in the presence of a parent and were also seen alone. They were given the choice of deciding whether they wanted their parent to be present in the examination room when they were asked about past trauma.

The patients were asked whether they had ever experienced an emotional, physical, or sexual trauma in the past. The terms were explained in an age-appropriate way using explicit examples, as necessary. Patients who responded in the affirmative to having experienced a sexual trauma were asked whether they could give details of the trauma including their age at the time of the CSA, duration, disclosure to parents, and whether a formal complaint had been made to the police. They were also asked whether they currently suffered from intrusive memories of the trauma and how the trauma impacts on their current daily life.

For each patient, a clinical determination was made whether their account of a past sexual trauma was included in the definition of CSA as described above. Each case was discussed with two experienced psychiatrists at a weekly team meeting to arrive at a DSM-5 psychiatric diagnosis. The psychiatrists also determined whether the clinical presentation to the ED was compatible with a re-traumatization phenomenon in accordance with our definition of re-traumatization.

The study was approved by the ethics committee of Shaare Zedek Medical Center.

PARTICIPANTS

The study population was a cohort of 228 consecutive patients who were seen between 2014 and 2016 for psychiatric consultation on the same day they were referred by the assessing ED physician at Shaare Zedek Medical Center.

VARIABLES

Demographic information including age, gender, marital status, religion, and medical history was obtained from every patient. Details of the patient's current presentation and past presentations to the hospital over the preceding 12 months were obtained from the patient's hospital file.

STANDARD METHODS

To measure the sample size, a comparison was made between 87 patients (study group) who disclosed having a history of sexual abuse and 141 patients (control group) who denied having experienced sexual abuse in the past. All the patients had been referred to the ED for psychiatric consultations.

STATISTICAL ANALYSIS

Descriptive statistics were performed using percentages for qualitative variables and mean ± standard deviation for quantitative variables. Comparisons between the CSA group and the non-CSA group were evaluated by chi-square tests for qualitative variables and Student's *t*-tests for quantitative variables. All tests were two-tailed. A Bonferroni correction was performed on the basis of eight comparison variables, and a Bonferroni-corrected *P* value < 0.00625 (0.05/8) was considered as significant. Statistical analyses were performed using SAS 9.4 software (SAS Institute Inc., Cary, NC, USA).

RESULTS

In the total cohort, 38.2% described a history of CSA: 24/87 (27.6%) of the minors (< 18 years of age) and 63/141 adults (44.7%) (> 18 years of age). The mean age, in years, of the cohort was 25.4 ± 10.8 (study group) and 24.7 ± 15.3 (control group). The mean age of the CSA was 12.9 ± 4.3 [Tables 1–3].

Significantly fewer Muslim patients were part of the study group. There was a statistically larger number of patients in the study group who grew up in an ultra-Orthodox Jewish home but no longer considered themselves ultra-Orthodox ($P < 0.0009$), and a significant increase in the number of presentations to ED over the preceding 12 months ($P < 0.0001$).

Personality disorder ($P < 0.0001$), PTSD ($P < 0.0001$), and substance-use disorder ($P < 0.005$) were more frequently found in the study group than in the control group. Of the 20 patients

Table 1. Comparison of demographic and clinical variables between the study and control group

	Study group, N (%)	Control group, N (%)	*P* value
Number	87 (38.1)	141 (61.9)	
Gender			0.008*
Female	71 (81.6)	92 (65.3)	
Male	16 (18.4)	49 (34.8)	
Age at presentation to ED	25.4 ± 10.8		
Minors (‹ 18 years at presentation)	24 (26.9)	24.7 ± 15.3	
Adults (› 18 years a presentation)	63 (45.3)	65 (73)	
Overall	87/228 (38.2)	76 (54.7)	
Mean age, years, at CSA	12.9 ± 4.3	141/228 (61.8)	
Marital status			
Single	55 (63.2)	106 (75.2)	0.06*
Married	19 (21.8)	24 (17)	0.37*
Divorced	11 (12.6)	7 (5)	0.04*
Separated	0	2 (1.4)	
Widowed	2 (2.3)	2 (1.4)	
Religion			0.01*
Jewish	82 (94.3)	115 (81.6)	
Muslim	4 (4.6)	25 (17.7)	0.004
Christian	1 (1.2)	1 (0.7)	
Religious observance			0.01*
Secular	50 (57.5)	46 (32.6)	0.003
Ultra-Orthodox	18 (20.7)	32 (22.7)	
Orthodox	9 (10.3)	20 (14.2)	
Traditional	10 (11.5)	36 (25.5)	0.01*
Secular, but observant in the past	6 (6.9)	7 (5)	
From ultra-Orthodox home but no longer ultra-Orthodox	9 (10.3)	1 (0.7)	0.0009
No. of presentations to ED over the previous 12 months	3.5 ± 4.9	1.8 ± 2.9	‹ 0.0001
Length of admissions, days	2.86 ± 13.52	1.42 ± 1.09	0.32*
Reason for presentation to ED			
Substance use	22 (25.3)	28 (19.9)	
Anxiety	18 (20.7)	27 (19.1)	
Suicidal ideation	15 (17.2)	13 (9.2)	
Somatic complaint without pathological findings	14 (16.1)	33 (23.4)	0.07*
Self-harm	9 (10.3)	19 (13.5)	
Hypomania	1 (1.1)	0	
Psychosis	0	8 (5.7)	0.03*
Swallowing foreign body	1 (1.1)	2 (1.4)	
Violent toward others	2 (2.3)	4 (2.8)	
Diagnosis			
Personality disorder	51 (58.6)	27 (19.2)	‹ 0.0001
Post-traumatic stress disorder	51 (58.6)	4 (2.8)	‹ 0.0001
Alcohol use disorder	13 (14.9)	9 (6.4)	0.03*
Substance use disorder	14 (16.1)	7 (5)	0.005
Cigarette smoking	20 (23)	16 (11.4)	0.02*
History of self-harm	51 (58.6)	63 (44.7)	0.04*
Depression	26 (29.9)	25 (17.7)	0.03*
Adjustment disorder	60 (69)	27 (31)	
Anxiety disorder	4 (4.6)	14 (9.9)	0.15*
Dissociative disorder	5 (5.8)	1 (0.7)	0.03*
Acute stress disorder	1(1.2)	6 (4.3)	0.2*
Psychosis	2 (2.3)	15 (10.6)	
Eating disorder	10 (11.5)	6 (4.3)	0.04*
Bipolar disorder	5 (5.8)	2 (1.4)	0.11*
Attention deficit hyperactivity disorder	4 (4.6)	14 (9.9)	0.21*
Guardianship order	2 (2.3)	2 (1.4)	0.6*
History of repeated CSA	29 (12.7)		
Family history of mental illness	3 (3.5)	5 (3.6)	1*

*Not significant

CSA = child sexual abuse, ED = emergency department

Table 2. Personality disorder diagnoses in the study group

Personality disorder	Total, N=57	
Borderline	34	59.6%
Avoidant	7	12.3%
Dependent	7	12.3%
Histrionic	4	7%
Narcissistic	4	7%
Paranoid	1	1.8%

who were diagnosed with re-traumatization, one committed suicide shortly after her ED presentation.

DISCUSSION

The relationship of CSA, secular religious status, and increased healthcare visits, which was found in this study, has been supported by others in relation to community-based samples [15,19]. However, in contrast to community studies [2] in which CSA was more common in females than in males, in our study there was only a trend toward female gender being more common in the study group. The lack of difference between males and females in our study, as well as the relationship between CSA history and having grown up in an ultra-Orthodox home but no longer considering themselves ultra-Orthodox may be related to the bias of the population of Jerusalem and the religious image of the medical center where the study was conducted.

The significant relationship between CSA history and personality disorder, in particular borderline personality disorder, PTSD, and substance abuse, is described in the literature [8-10,20].

The significant relationship that we observed in CSA history and having grown up in an ultra-Orthodox home but no longer considering themselves ultra-Orthodox may relate to the religious alienation phenomenon [21] that has been described in relation to CSA in the setting of a Christian educational framework.

We were unable to determine whether the alienation from the ultra-Orthodox lifestyle occurred as a result of involvement of family members as perpetrators of the CSA, or occurred secondary to perceived lack of support by the family and community. The role of the family in moderating the psychological impact of CSA was described by Silberg [22]. In that research, the author studied whether the relationships within the family changed as a result of the sexual trauma and if the interpersonal

Table 3. Analysis of 20 patients who presented to the emergency department with features of re-traumatization

Gender*	Age, years**	Marital status***	Recent trauma	Past trauma	Study group§	Ramifications of re-traumatization	Religious background
Female	48	Married	Disclosure of past sexual abuse of son	Sexual assault	Yes	Overdose followed by suicide by hanging in psychiatric hospital	Jewish
Female	31	Married	Miscarriage	Attempted rape, abduction	Yes	Headaches	Muslim
Female	18	Single	Argument with father over religion	Rape, age 16	Yes	Overdose	Jewish
Male	28	Divorced	Attempted lynch	Sexual abuse at age 4–17 years	Yes	Anxiety attack	Jewish
Female	47	Divorced	Argument with National Insurance/suicide of perpetrator of abuse	Sexual abuse at age 5–7 years	Yes	Overdose	Jewish
Female	27	Married	Therapy-related anxiety	Sexual assault, age 19	Yes	Anxiety attack/depression	Jewish
Male/ soldier	18	Single	Military imprisonment with alleged sexual assault	Sexual assault, age 13	Yes	Anxiety	Jewish, ultra-Orthodox
Female	29	Divorced	Sexual assault	Sexual and physical assault	Yes	Anxiety	Jewish
Male	21	Single	Arrest of perpetrator	Sexual abuse	Yes	Overdose/depression	Jewish
Female	32	Married	Informed that she will be delivered by cesarean section	Past birth trauma with cesarean section	No	Anxiety	Muslim
Male/ soldier	22	Single	Allegedly punished to remain on base for weekend after complaints of abdominal pain	Perforated appendicitis while on the base 6 weeks earlier	No	Anxiety	Jewish
Female	21	Single	Delay in starting psychiatric day program	Physical and sexual abuse	Yes	Overdose/psychiatric hospitalization	Jewish
Female	55	Divorced	Completion of army memorial where she works	Death of brother 40 years earlier, during military service	No	Anxiety/depression	Jewish
Female	25	Single	Court case of perpetrator/father	Physical abuse by father	No	Cannabis abuse	Jewish
Female	19	Single	Therapy-related anxiety	Sexual abuse	Yes	Recurrent pseudo-seizures	Jewish
Female	14	Single	Social media shaming at school	Ongoing traumatic divorce of parents	No	Overdose	Jewish
Female	16	Single	Therapy-related anxiety	Sexual abuse	Yes	Overdose	Jewish
Female	36	Single	Therapy-related anxiety	Sexual abuse	Yes	Syncopal episodes	Jewish
Female	37	Separated	Conflict with resident of womens' center	Physical violence from spouse	No	Suicidal ideation	Jewish
Female	21	Single	Therapy-related anxiety	Sexual abuse in the family	Yes	Overdose	Jewish

*80% of the cohort were female

**Mean age 28.3 years

***Single 55%, married 20%, divorced 20%, separated 5%

§Study group was 70% of the entire cohort, control group was 30%; soldier status 10%

relationships in the families of the victims were poor from the outset.

We found that eliciting and responding to patient histories of abuse and trauma represent a challenge for medical education [23]. Due to the vulnerability of individuals with a past history of CSA to develop physical and psychological disorders [3,4,8-10], we also suggest that the ongoing healthcare needs of CSA survivors may be facilitated through a general hospital multi-disciplinary clinic that includes internists, psychiatrists, psychologists, nurses, social workers, and dieticians. This team could provide containment of the anxiety regarding issues of trust and disempowerment that frequently impact the patient–doctor relationship in this population [24].

Healthcare systems should provide a range of services including crisis intervention, preventive healthcare, and collaboration with community agencies including the family physician, marital and parenting support services, and employment services [25]. Such an approach could reduce over-utilization of healthcare services driven by fear of falling through the gaps in services while at the same time ensuring that preventive healthcare, such as cervical smears, breast self-examination, and occult blood examinations, are performed as necessary.

Interventions for past CSA should include the nature of early life trauma and its effects on psychobehavioral factors. When healthcare providers counsel victims of childhood abuse, they should consider the long-term psychological and physical well-being necessary to counter adverse responses to abuse – such as disordered eating, lack of exercise, sleeping problems, and depressive symptoms – and promote healthier ways to cope with trauma. Such psychological interventions would have the potential to prevent or reduce physical health problems in later life [4].

LIMITATIONS

The cohort population was relatively small and based on only one ED.

CONCLUSIONS

The characteristics of the patients with past CSA in this study are similar to community-based samples, except for the lack of a significant gender difference. The relationship between religious alienation in a secular group of Jewish individuals with past CSA who had grown up in an ultra-Orthodox household has not previously been reported in the literature. Future research should examine the prevalence of CSA in people who present to the general hospital ED, identify pro-active interventions to reduce ongoing illness, and clarify the relationship between CSA and religious alienation.

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Correspondence

Dr. S. Jaworowski

Dept. of Consultation and Liaison Psychiatry, Shaare Zedek Medical Center, Jerusalem 9103102, Israel, **Fax:** (972-2) 655-5058, **e-mail:** solj@szmc.org.il

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