**ORIGINAL ARTICLE**

**Miraç Barış Usta**[1]
**Seher Akbaş**[2]
**Berna Aydın**[3]

[1] Samsun Research and Training Hospital, Child Psychiatry Specialist, Samsun, Turkey
[2] Istinye University, Department of Child Psychiatry, Istanbul, Turkey
[3] Ondokuz Mayıs University, Department of Forensic Medicine, Samsun, Turkey

***Corresponding Author:***
*Miraç Barış Usta*
*Samsun Research and Training Hospital, Child Psychiatry Specialist, Samsun, Turkey*
*Tel:+90 532 2646409*
*E-mail: dr.miracbarisusta2@gmail.com*

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konuralptipdergi@duzce.edu.tr
konuralptipdergisi@gmail.com
www.konuralptipdergi.duzce.edu.tr

# Behavioural Problems Associated with Child Sexual Abuse in Adolescents: A Retrospective Study

**ABSTRACT**

**Objective:** Child Sexual Abuse (CSA) is a public health problem with negative effects on the mental health and development of children and adolescents. The aim of this study was to identify the psychiatric outcomes of child sexual abuse and the trauma-related behavioural and emotional problems in adolescents.

**Methods:** Retrospective archive study included patient who were referred to child psychiatry clinic dates between 1 December 2010 and 31 December 2013. 136 CSA victims and non-CSA clincal referred group had reached. Diagnostic evaluation of the CSA victims was applied with the criteria of the DSM-IV-TR by child and adolescent psychiatrists and behavioral and emotional problems were were assessed by self-reports.

**Results:** CSA victims are 86.0% were female and %30.1 expereinced multiple sexual abuse events. %72.1 of CSA victims has psychiatric diagnosis on Axis 1. Compared to age-matched controls Internalizing problems ($p<0.001$), Anxiety/depression ($p<0.001$), Withdrawn ($p<0.001$), and Rule breaking behaviour ($p=0.002$) scores are higher in the CSA group.

**Conclusions:** Specific problems following a traumatic event may be important in respect of treatment and a formulation to understand the psychopathology. There is a need for longitudinal childhood studies to investigate the mediators of the psychopathology and to understand the emotional and behavioural problems of CSA victims.

**Keywords:** Sexual Abuse, Ptsd, Adolescent, Behavioural Problems

# Adölesanlarda Cinsel İstismar İle İlişkili Davranışsal Problemler: Retrospektif Bir Çalışma

**ÖZET**

**Amaç:** Çocuk cinsel istismarı, çocukların ve ergenlerin zihinsel sağlığı ve gelişimini olumsuz yönde etkileyen halk sağlığı problemidir. Bu çalışmanın amacı, ergenlik çağındaki çocuklarda cinsel istismarın psikiyatrik sonuçlarını ve travmaya bağlı davranışsal ve duygusal sorunları tanımlamaktır.

**Gereç ve Yöntem:** 1 Aralık 2010 ile 31 Aralık 2013 tarihleri arasında değerlendirilen 409 mağdur retrospektif arşiv çalışmasına katıldı. DSM-IV-TR kriterlerine göre çocuk ve ergen psikiyatrları tarafından konulan ve davranışsal ve duygusal sorunlar özbildirim ölçekleri ile değerlendirilmiş toplam 136 mağdur çalışmaya katıldı.

**Bulgular:** Mağdurlarının % 86.0'ı kızdı ve % 30.1'i birden fazla cinsel istismara maruz kalmıştır. Mağdurlarının %72.1'sinde Eksen 1'de psikiyatrik tanı mevcut bulunmuştur. Kontrollerle karşılaştırıldığında, içe dönük sorunlar ($p<0.001$), anksiyete/depresyon ($p<0.001$), çökkünlük ($p<0.001$) ve kural bozma davranışı ($p=0.002$) puanlarının mağdur grubunda daha yüksek olduğu gözlenmiştir.

**Sonuç:** Cinsel istismar sonrası ortaya çıkabilecek spesifik davranış problemlerini tanımak ve formüle etmek, daha sonraki travmaları önlemek ve psikiyatrik tedavi açısından önem taşımaktadır. Cinsel istismar mağdurlarının duygusal ve davranışsal sorunlarını anlamak için uzunlamasına çalışmalarına ihtiyaç duyulmaktadır.

**Anahtar Kelimeler:** Cinsel İstismar, Ptsd, Adolesan, Davranışsal Sorunlar

## INTRODUCTION

Child sexual abuse (CSA) is a public health problem with negative effects on the mental health and development of children and adolescents (1). Many studies have reported that in adolescent CSA victims, psychiatric disorders may be seen such as suicidal thoughts, behavioural problems, substance addiction, personality disorders, major depressive disorder (MDD) and post-traumatic stress disorder (PTSD) (2). CSA-related PTSD also affects peer relationships and the effects in adolescents have been reported to be severe and generally long-lasting. Compared to a control group, adolescent CSA victims have been shown to start risk-taking behaviour and engaging in risky sexual behaviour at an earlier age and consequently are at high risk of the adverse effects of these practices (3).

In addition to PTSD, recent studies have reported an increased risk of internalised and externalised behaviours in children who have suffered CSA (4). More intense behavioural problems are known to be exhibited in adolescence in who suffered CSA at a younger age (5) and it has been reported that in a significant proportion of cases, the sexual abuse started in the pre-adolescent period (6). When compared with other forms of abuse, victims of CSA have been reported to show more intense internalised behavioural problems (7). Moreover, boys show mental symptoms soon after CSA and these decrease in the long-term, but in girls the symptoms continue clinically in the short and long term and girl victims of CSA have been reported to show more intense internalised symptoms than boys (9).

Retrospective self-reporting is the most widely used method for the evaluation of sexual abuse of children (7) and retrospective studies have reported that lack of confidence, social isolation and resistance to therapy are associated with CSA (10). The identification of symptoms in patients experiencing CSA-related PTSD is clinically difficult but important for treatment (11), because the majority of CSA-related symptoms are chronic and are known to severely negatively affect the emotional and social development of adolescents (12). In addition there is strong evidence that adolescents who have suffered CSA and CSA-related PTSD are at increased risk of potential lifelong difficulties and psychiatric disorders (13).

The aim of this study was to identify the psychiatric outcomes of CSA and the trauma-related behavioural and emotional problems in adolescents. By comparison with a control group, formed of healthy children age and gender-matched to the CSA victims, it was aimed to examine differences between the groups in terms of behavioural and emotional problems.

## MATERIAL AND METHODS

**Participants:** The study planned as a retrospective archive study dates included between 1 December 2010 and 31 December 2013. CSA victims group was formed of adolescents who were referred to the Forensic Medicine and Pediatric Mental Health Department by the courts for examination of the mental outcomes of abuse. A total of 409 CSA victims, aged 12 -18 years, from various regions in Turkey. Under Turkish law, psychiatric assessments and diagnostic evaluations are mandatory in all cases when sexual abuse is reported to an official department. Also according to criminal law the presence of any such disorder increases the extent of the punishment given to the offender by the court. 136 victim had filled self-reports and formed as CSA group. Non-CSA group was formed retrospectively from referred clinical sample who were filled self-reports and without DSM-IV diagnosis.

**Psychiatric assessment:** Psychiatric interviews were conducted with the CSA victims by a Child and Adolescent Psychiatrist. Information related to the sexual abuse was acquired in these interviews. Diagnostic evaluation of the CSA victims was applied with the criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR).

**Sociodemographic forms:** The forms prepared for this study were completed by the CSA victims and the control group. The age, gender, educational level, medical and psychiatric histories were recorded.

**Youth Self Report (YSR):** The YSR, which is an Achenbach System of Empirically Based Assessment evaluation tool, is a questionnaire prepared as a self-report (14). With a total of 112 items, the emotional, behavioural and social problems of the 11-18 years age group are calculated in the form. The YSR has 8 sub-scales of Anxious/Depressed, Withdrawn, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule Breaking Behavior, and Aggressive Behavior. While the Anxious/Depressed, Withdrawn, and Somatic Complaints comprise Internalizing problems, Rule Breaking Behavior and Aggressive Behavior constitute Externalizing problems. The Total Problems show the total of all the scores.

In the scores of total behavior problems, the broadband factors are stated as standardized T scores with mean of 50 (SD=10). The higher the score, the greater the pathology. For the Turkish version of the YSR, the test–retest reliability was calculated as 0.82 for Total Problems and internal consistency was found to be 0.89 (15).

**Data Analysis:** The data of the study and control groups were evaluated using SPSS vn 15.0 statistics software. Conformity of the variables to normality was assessed with the Kolmogorov-Smirnov test. The Mann Whitney U-test was applied to variables which did not conform to normal distribution. For correlation analysis, the

Spearman correlation test was applied. A value of $p<0.05$ was accepted as statistically significant.

## RESULTS

**The sociodemographic findings:** The study group of CSA victims comprised 86.0% females and 14.0% males with a mean age of 14.7 ±1.6 years. The level of education of the CSA victim group was primary school in 73 cases (56%), high school in 60 (44.1%) and university in 3 (2.2%). The time from the traumatic experience to psychiatric evaluation was mean 13.6 ± 13.3 months. In 41 cases, there had been multiple incidents of abuse (Table 1).

**Table 1.** Demographics and baseline characteristics of the CSA victims and Non-CSA group

| | CSA Victims (n: 136) (mean ± SD) | Non-CSA group (n: 136) (mean ± SD) | p |
|---|---|---|---|
| **Age (years)** | 14.7 ± 1.6 | 14.4 ± 1.9 | >0.05 |
| **Education** | | | >0.05 |
| Elementary School | 73 (53.6%) | 76 (55.8%) | |
| High School | 60 (44.1%) | 57 (41.9%) | |
| University | 3 (2.2%) | 3 (2.2%) | |
| **Time from the traumatic event to the psychiatric assessment (months)** | 13.6 ± 13.3 | - | |
| **Multiple sexual abuse events** | 41 (30.1%) | - | |

**Note:** Means *(SD)* presented in columns. Significance values are based on Chi-Square Tests.

**Sexual abuse related data:** Psychiatric disorders were determined in 72.1% of the CSA group. The most frequently observed diagnosis was PTSD with comorbid MDD (n=57, 41.9%). All the perpetrators of the abuse were reported to be male. In 91.2% of cases, the perpetrator was previously known to the victim, and 21 (15.4%) cases of incest were reported. The most commonly reported form of abuse was sexual touching (38.2%) and penile penetration was reported in 30.1% of cases (Table 2).

**Table 2.** Sexual abuse related data of CSA victims

| | Frequency (n) | % |
|---|---|---|
| **Relationship to perpetrator** | 55 | 40.4 |
| Acquaintance | 32 | 23.5 |
| Friend | 21 | 15.4 |
| Family member | 16 | 11.7 |
| Boyfriend- Partner | 12 | 8.8 |
| Stranger | | |
| **Type of Sexual Abuse** | | |
| Sexual touching,kissing | 52 | 38.2 |
| Penile penetration | 41 | 30.1 |
| Oral-genital abuse | 28 | 20.5 |
| Digital penetration | 15 | 11.0 |
| **DSM-IV diagnosis** | | |
| PTSD and MDD | 57 | 41.9 |
| No diagnosis on Axis I | 38 | 27.9 |
| MDD | 20 | 14.7 |
| PTSD | 19 | 13.9 |
| Adjustment Disorder | 2 | 1.4 |

**YSR subscores of the groups:** The YSR scores are shown in Table 3. When compared with the control group, higher scores were reported for the CSA victims in the subscores of internalizing problems (U=7120, Z=-3.281, p=0.001), anxiety/ depression scores (U=6523, Z=-4.192, p=0.001), withdrawn scores (U=7146, Z=-3.254, p=0.001), total problems (U=6147, Z=-4,782, p=0.001) and aggressive behavior (U=7264, Z=-3.066, p=0.02). A positive correlation was observed between the age of CSA victims and internalizing problems (Spearman r=0.480, p=0.01). When the CSA victims were grouped according to gender, no significant difference was determined in the YSR total score and subscores.

## DISCUSSION

CSA is a serious problem which affects all children, regardless of age, gender or socio-economic level (16). Epidemiological studies have shown that CSA is a threat to 5%-20% of all children and girls are at a 3-fold higher risk than boys (17). Consistent with these findings in literature, the vast majority of the victims in the current study were female (n=117, 86.0%).

Studies have reported that victims are exposed to different forms and severity of sexual trauma. In a study of 1002 cases in Turkey, the rate of penetration in children aged 4-17 years was reported as 41% (18). In the current study, the most reported form of abuse was sexual touching and kissing (38.2%) and 30.1% of the children suffered penetration.

It has been reported in literature that the vast majority of abuse perpetrators are male. Furthermore, the perpetrator has been reported to be an acquaintance or a family member at a high rate (16%-27%) (19-21). Consistent with literature, in the current study, all the perpetrators were male; the perpetrator was known to the victim in 92.5% of cases and was a family member in 20% of cases.

CSA has been associated with many psychiatric diseases, the majority of which start in childhood and continue into adulthood (22).

**Table 3.** Comprasion of mean YSR subscores of the groups.

| YSR Subscores | CSA group (n:136) (mean T score ±SD) | Non-CSA group (n:136) (mean T score ±SD) | Z | p |
|---|---|---|---|---|
| **Internalizing problems** | 62.5±13.6 | 56.2±14.7 | 3.281 | **0.001** |
| **Anxiety/depression** | 60.9±12.4 | 54.5±10.9 | 4.192 | **0.001** |
| **Somatic complaints** | 61.2±16.0 | 61.5±15.0 | 0.467 | 0.641 |
| **Withdrawn** | 61.6±12.7 | 56.9±12.4 | 3.255 | **0.001** |
| **Externalizing problems** | 60,4±13,7 | 60,1±11,3 | 0.464 | 0.642 |
| **Aggressive behavior** | 57.5±13.8 | 51.8±7.6 | 3.066 | **0.002** |
| **Rule breaking behavior** | 63.4±15.8 | 62.5±15.0 | 0.088 | 0.930 |
| **Attention problems** | 65.7±16.0 | 66.2±13.7 | 0.140 | 0.889 |
| **Thought problems Social problems** | 63.9±16.0 | 63.1±19.1 | 0.998 | 0.318 |
| **Social problems** | 60.6±13.6 | 59.7±12.4 | 0.926 | 0.355 |
| **Total score** | 56.0±9.9 | 50.5±7.0 | 4,782 | **0.001** |

**Note:** Means *(SD)*presented in columns. Significance values are based on Mann-Whitney-U tests. Statistically significant values in bold.

In studies which have investigated the long-term effects of CSA, PTSD at rates of 33%-86% and MDD at rates of 13%-88% have been reported as the most common psychiatric diseases (12) and the first psychiatric interview of 40% of child CSA victims does not report psychiatric symptoms to be diagnosed (23). Furthermore, long-term studies have reported that 10%-20% of children who have been asymptomatic for a period of 12-18 months have experienced mental and behavioural problems and could later develop psychiatric disorders (12). In the current study, a psychiatric diagnosis was made for 72% of the CSA victims. The most common DSM-IV diagnosis was PTSD and comorbid MDD (41.9%). In the majority of adolescents with PTSD, comorbid MDD has been reported, and both diseases have been associated with sexual abuse-related trauma in particular (13, 24).

Many studies in literature have reported higher rates of internalizing and externalizing problems in children who are trauma victims compared to control groups (25, 26). In the current study, the total internalizing problems were determined to be significantly higher in the CSA victims than in the control group and there was no significant difference in respect of externalizing problems. The vast majority of the CSA victims in the current study were girls and in literature it has been reported that girls experience more psychological symptoms than boys and internalizing problems are seen more often in female child victims (9). However, a meta-analysis reported that psychiatric symptoms were seen at a higher rate in boys who were sexual abuse victims than in girls (27). In contrast to these findings in literature, no difference was determined between the male and female children in the current study in respect of psychiatric diagnosis and externalizing - internalizing problems. However, it is difficult to generalise these results as the number of adolescent male CSA victims was low in this study (n=19) and therefore, there is a need for more information of CSA-related behavioural problems in male adolescents.

Although no statistically significant difference was determined between the CSA victim group and the control group in terms of total externalizing aggressive behaviours, the aggressive behavours scores of the CSA victims were statistically significantly higher than those of the control group. In recent studies, PTSD symptoms have been reported to constitute a risk for aggressive behaviours and this could be related to emotion dysregulation (28). It has also been reported that adolescents with a history of neglect and abuse in childhood are at an increased risk of demonstrating sexually aggressive behaviours against their peers (29). The aggressive behaviours of adolescent CSA victims destroy relationships with family, close friends and peers and make it difficult for them to form relationships with healthy people (30).

In the current study, the time from CSA to the psychiatric evaluation was mean 13.6 months. In a study by Combs-Lane et al of women who had been raped when aged below 18 years, it was reported that 28% had never explained the trauma to anybody, and 47% had found the courage to explain it to somebody at a time of at least 5 years later (31). Crisma et al reported that more than two-thirds of adolescents who had suffered abuse had not told their families about the event for reasons such as insecurity, general fear, guilt, and thoughts that they would not be believed or the outcomes of exposing this situation (32).

Epidemiological studies have shown that the negative effects of CSA increase with increasing age and as CSA victims grow older, they experience more social and psychological problems

(7). In the current study, a positive correlation was observed between internalizing problems and age. There is known to be increasing prevalence of internalizing problems such as anxiety with age throughout the period of adolescence (33). Although there are negative outcomes of CSA at every age, it can be concluded that adolescent CSA victims experience more intense internalizing symptoms in mid and late adolescence.

The results of this study showed that the majority of adolescent CSA victims were abused by a person known to them, they had a high rate of psychiatric diagnoses compared to the control group and internalising symptoms were seen at a significantly higher rate. CSA victims must be closely monitored in respect of internalising problems and great attention must be paid to this subject to be able to provide the necessary psychiatric support.

**Limitations:** The major limitation of this study was that it was cross-sectional and there is a need for follow-up studies to be able to understand the emotional and behavioural problems of adolescent CSA victims. Other situations (social support after the trauma, academic performance, economic status etc) which could be related to the emotional and behavioural problems of adolescents may have been ignored.

**Conclusion**

This study was conducted to investigate psychiatric and behavioural problems related to sexual abuse in childhood. Although CSA is a public health problem, the prevalence is increasing in Turkey, as it is throughout the world. Specific problems following a traumatic event may be important in respect of treatment and a formulation to understand the psychopathology. There is a need for longitudinal childhood studies to investigate the mediators of the psychopathology and to understand the emotional and behavioural problems of CSA victims.

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