

Evaluation of Juvenile and Adolescent Sexual Abuse Victims: A Retrospective Study

Erdem Hösükler^{ID}, Aziz Yılmaz^{ID}, Zehra Zerrin Erkol^{ID}

Department of Forensic Medicine, School of Medicine, Abant İzzet Baysal University, Bolu, Turkey

What is already known on this topic?

- Defendants often are recognized by child sexual abuse victims.
- Generally, the examination of sexually abused children is often either normal or without specific findings.
- The relationship between child sexual abuse (CSA) and post-traumatic stress disorder, depression, and anxiety has been strongly defined.

What this study adds on this topic?

- Adolescents are significantly more likely to be abused by a stranger, than children.
- Victims of sexual abuse text the accused online with sexual content. Adolescents are significantly more likely to meet their abuser on the internet and then indulge sexting, compared to children.
- Adolescents are significantly more likely to experience multiple abuse, than children. Adolescents are significantly more likely to be exposed to abuse for more than 3 months, compared to children.

Corresponding author:

Erdem Hösükler

✉drerdemhmakale@gmail.com

Received: June 15, 2021

Accepted: September 14, 2021

Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.



ABSTRACT

Objective: This study aimed to evaluate the sociodemographic characteristics and the mental, anogenital, and physical examination findings of child and adolescent sexual abuse victims and to discuss them in the light of the literature.

Materials and Methods: This study included a total of 134 children and adolescent cases between the ages of 0 and 18 who were victims of sexual abuse, from among the reports prepared in the Forensic Medicine Clinic of Bolu Abant İzzet Baysal Training and Research Hospital between 2015 and 2019.

Results: This study included 134 cases: 113 (84.3%) were female and 21 (15.7%) were male. The mean age was 13 ± 3.4 years (min: 3, max: 17). The average age of the defendants was 25.6 ± 13 years (min: 12, max: 75), and all the defendants were male. The defendants were strangers in 60 cases (4.8%). Sexual abuse mostly occurred as vaginal penetration in 46 cases (34.3%). Sixty-nine (51.5%) cases were exposed to abuse more than once. Depression due to sexual abuse developed in 14 (10.4%) of the cases.

Conclusion: Considering that many child abuse victims have normal examination findings, it should not be forgotten that the interview and psychiatric examination with the child are as valuable as the genital examination.

Keywords: Depression, post-traumatic stress disorder, sexual abuse of child, sexual offenses

INTRODUCTION

Child sexual abuse (CSA) is one of the most common public health problems around the world today.¹ Factors such as the absence of a parent, or a single parent, parental substance abuse, low socioeconomic level, the presence of learning difficulties or physical disabilities in the child, child labor, and children living on the street significantly increase the risk of child abuse.² However, the most important problem in child abuse is that the existence of abuse cannot be fully revealed. The examination of sexually abused children is often either normal or without specific findings. Frequently, the longer the interval between examination and abuse, the less likely is the possibility of meaningful findings.³ The factor of whether the accused is foreign or familiar also affects the time between the incident and the examination. In cases where the accused is a foreigner, the child who receives the support of his/her family can apply to the official authorities earlier.⁴ Unfortunately, in most cases, child abuse can be hidden by the affected children for a long time due to factors such as shame, fear, and guilt.² Considering that child abuse can be concealed by the victims for a long time and that there may not be any findings in subsequent examinations, physicians should know the characteristics of these children very well to make an earlier diagnosis.²⁻⁴

Cite this article as: Hösükler E, Yılmaz A, Erkol ZZ. Evaluation of juvenile and adolescent sexual abuse victims: A retrospective study. *Turk Arch Pediatr.* 2022;57(1):68-74.

The aim of this study was to evaluate the characteristic features of child and adolescent sexual abuse victims, to provide a better understanding of the problem, and to ensure correct identification.

MATERIALS AND METHODS

Study Design

This retrospective study was conducted in the Forensic Medicine Clinic of Bolu Abant İzzet Baysal Training and Research Hospital. Children and adolescents under the age of 18 who applied to the Forensic Medicine Clinic with the allegation of sexual abuse/assault between 2015 and 2019 were included in the study. Victims of sexual abuse over the age of 18 were excluded from the study. The study was conducted in accordance with the principles of the Declaration of Helsinki. Informed consent was obtained from all patients. Ethics committee approval dated October 19, 2020 and numbered 424 was obtained from Bolu Abant İzzet Baysal University Clinical Research Ethics Committee for the study.

The Diagnostic Procedure

Victims of sexual abuse are sent to the forensic medicine clinic by the judicial authorities. First of all, forensic interviews are conducted with the victims and a detailed story of the incident is recorded. Then, an anogenital examination is performed and biological samples are obtained. The victims are referred to the child and adolescent psychiatry outpatient clinic and undergo a detailed psychiatric examination, including intelligence tests. Finally, a detailed forensic report is prepared.

Data Collection and Implementation

The cases included in the study were evaluated in terms of the following parameters: age, gender, family structure, educational status, gender of defendant, age of defendant, the relationship between the defendant and the victim, internet dating, crime scene, type of sexual abuse, number of instances of sexual abuse, duration of sexual abuse, the time between the event and the examination, whether the act was accompanied by physical violence or threat, mental examination findings, and anogenital examination findings. Study parameters were obtained retrospectively from the case files.

Statistical Analysis

The Statistical Package for the Social Sciences 21.0 (Armonk, NY, USA) statistics program was used for data analysis of the study. Pearson's chi-squared test or Fisher's exact test, where appropriate, was used for the comparison of qualitative data, in addition to descriptive statistical methods. The significance level was accepted as $P < .05$.

RESULTS

Gender and Age

This study included 134 cases: 113 (84.3%) were female and 21 (15.7%) were male. The mean age was 13 ± 3.4 (min: 3, max: 17) years, and the cases were mostly in the 13–15 age group (n: 60, 44.8%) (Table 1). The victims in 43 cases (32.1%) were 12 years and younger (children) and in 91 cases (67.9%) were 13 years and older (adolescents).

Education and Family Structure

Forty-nine (36.6%) cases involved high school students (Table 1). Ninety-two (68.7%) cases were living in a nuclear family (Table 1). Parents in 98 (73.1%) cases were married and living together. The parents in 33 (24.7%) cases were divorced, the father in 2 (1.5%) cases, and the mother in 1 (0.7%) case had died.

Gender and age of the defendants, victim–defendant relationship

The average age of the defendants was 25.6 ± 13 (min: 12, max: 75) years and all the defendants were male. An evaluation of the relationship of the defendants with the victims revealed that the defendants were strangers in 60 cases (44.8%) (Table 1). Adolescents were significantly more likely to be abused by a stranger, than children ($P < .01$) (Table 1).

Internet Dating – Sexting

Twenty-three of the 60 defendants who were strangers (38.3%) met the victims on the internet. In 29 cases (21.6%), sexual messaging with the accused over the internet was detected, and in 25 (18.7%) of them, it was determined that the accused was a foreigner. It was determined that 12 of the cases (8.9%) had a history of sending nude photographs to the accused, and in 10 of them, the accused was a foreigner. Adolescents were significantly more likely to meet their abuser on the internet and then indulge in sexting, compared to children (Table 2).

Crime Scene

The victims were exposed to abuse most frequently at the defendant's home (n: 49, 36.6%) and at the victim's own home (n: 22, 16.4%) (Table 1).

Type of sexual abuse

In this study, the most common form of sexual abuse was vaginal penetration (n: 46, 34.3%) (Table 1).

Sexual Abuse – Number of Incidents and Duration

The victims in 65 (48.5%) cases were exposed to abuse once, and in 69 (51.5%) cases more than once. Adolescents were significantly more likely to be abused more than once compared to children ($P < .001$) (Table 2).

The abuse lasted for 2–30 days in 20 cases (29.0%), 1–3 months in 7 cases (10.1%), and >3 months in 42 cases (60.9%). The duration of abuse was significantly different between children and adolescents ($P > .05$) (Table 2). This difference was because the proportion of adolescents exposed to abuse for >3 months was higher than for children. The likelihood of a single instance of abuse is greater for children than for adolescents ($P < .01$) (Table 2).

Time of Examination After Sexual Abuse

Nine (6.7%) cases were examined on the day of the event, 66 (49.3%) cases within 2–30 days, 7 (5.2%) cases within 1–3 months, and 52 (38.8%) cases later than 3 months.

Threatening–Physical Violence

There was threatening during abuse in 45 cases (33.5%), and the abuse was accompanied by physical violence in 14 cases (10.4%) (Table 1). There was no significant difference between

Table 1. Data Regarding Child Sexual Abuse

	n (%)
Age group	
0-8	15 (11.2)
9-12	28 (20.9)
13-15	59 (44)
16-18	32 (23.9)
Educational level	
Preschool	10 (7.5)
Primary school	17 (12.7)
Primary school drop out	1 (0.7)
Secondary school	41 (30.6)
Secondary school drop out	2 (1.5)
High school	49 (36.6)
High school drop-out	14 (10.4)
Family structure	
Nuclear family	92 (68.7)
Extended family	5 (3.7)
Broken home	35 (26.2)
Protective family	1 (0.7)
Dormitory	1 (0.7)
Victim-defendant relationship	
Foreign	60 (44.8)
Friends	38 (28.4)
Father	7 (5.2)
Cousin	6 (4.5)
Brother	5 (3.7)
Step-father	5 (3.7)
Uncle	4 (3)
Distant relative	4 (3)
Maternal uncle	3 (2.2)
Grandfather	2 (1.5)
Scene of event	
Defendant's home	49 (36.6)
Victim's home	22 (16.4)
Forest	10 (7.5)
Inside vehicle	9 (6.7)

children and adolescents in terms of physical abuse ($P > .05$) (Table 2).

Mental Examination

Mild mental retardation was detected in 14 cases (10.4%). At the mental examination, pre-existing mental illnesses were found in 7 (5.1%) cases and mental illnesses developed as a result of abuse in 24 (17.9%) cases. Depression due to sexual abuse developed in 14 (10.4%) of the cases (Table 1). In cases in which the abuse occurred more than once, the rate of mental disorder was found to be significantly higher ($P < .05$) (Table 3). When the development of CSA-related mental illness was compared with the duration of sexual abuse, a significant difference was observed ($P < .05$) (Table 3). This difference is due to the higher rate of CSA-related mental disorders in victims who have been abused for more than 3 months.

Anogenital Examination

The genital examination was performed in 113 cases (84.3%). There was an intact hymen in 44 cases (38.9%), elastic hymen

	n (%)
Derelict building	6 (4.5)
Other*	38 (28.3)
Form of abuse	
Vaginal penetration	46 (34.3)
Touching- kissing-fondling	30 (22.4)
Rubbing	22 (16.5)
Anal/vaginal penetration	15 (11.2)
Anal penetration	12 (9)
Verbal abuse	5 (3.7)
Anal-vaginal-oral penetration	3 (2.2)
Finger insertion	1 (0.7)
Threatening	
Yes	45 (33.5)
No	89 (66.5)
Physical violence	
Yes	14 (10.4)
No	120 (89.6)
Psychiatric diagnoses	
Before abuse	
ADHD	5 (3.7)
Dyslexia	1 (0.7)
Bipolar disorder	1 (0.7)
Mild mental retardation	14 (10.4)
After abuse	
Depression	14 (10.4)
PTSD	4 (3.0)
Depression and anxiety	2 (1.5)
Depression and PTSD	2 (1.5)
Anxiety	1 (0.7)
Adjustment disorder	1 (0.7)
Pregnancy after the abuse	
Present	4 (3.0)
Absent	130 (97)

*Other: School, mosque, street, workplace, hotel, haymow, hencoop, cafe, student residence, etc.

in 28 cases (24.8%), an old tear in the hymen in 24 cases (21.3%), acute tear in the hymen in 5 cases (4.4%), and notch of hymen in 12 cases (10.6%). It was found that 130 (97%) of the victims who underwent anal examination had normal examination findings: 3 victims (2.2%) had chronic fissures, and 1 victim (0.7%) had acute fissures.

DISCUSSION

In a systematic review in India, the prevalence of CSA was between 4% and 41% in girls and between 4% and 57% in boys.⁵ In a meta-analysis involving 22 countries, the prevalence of CSA was 19.7% in girls and 7.9% in men.⁶ In a study conducted with 4339 senior high school students in Sweden, 65% of the girls and 23% of the boys stated that they had been exposed to sexual abuse. However, only 8.3% of them had a professional, 6.8% had reported it to social services or the police.⁷ As is seen, CSA is a serious public health problem all over the world. Therefore, it is necessary to analyze CSA victims very well both nationally and regionally, and to reveal their risk factors.

Table 2. Comparison of Cases in Terms of Child/Adolescent

	Child, n (%)	Adolescent, n (%)	P
Number of incidences of abuse			
Once	29 (21.6)	36 (26.8)	.003
More than once	14 (10.5)	55 (41.1)	
Defendant			
Stranger	10 (7.5)	50 (37.3)	.001
Acquaintance	33 (24.6)	41 (30.6)	
Physical violence			
Yes	5 (3.7)	9 (6.7)	.759
No	38 (28.4)	82 (61.2)	
Dating on internet			
Yes	1 (0.7)	22 (16.4)	.002
No	42 (31.4)	69 (51.5)	
Sexting			
Yes	2 (1.5)	27 (20.2)	.001
No	41 (30.6)	64 (47.7)	
Nude Photo			
Yes	0 (0)	12 (9)	.009*
No	43 (32.1)	79 (58.9)	
Period of abuse			
One day	29 (21.6)	36 (26.9)	.012
2–30 days	6 (4.5)	14 (10.5)	
1–3 months	2 (1.5)	5 (3.7)	
>3 months	6 (4.5)	36 (26.8)	

Pearson's chi-squared test; *Fisher's exact test.

Gender and Age

The results of studies on the subject reveal that in general, females (56.3–93.8%) are more likely to be victims of CSA than males.^{4,8–13} In Turkey, 56.4–85% of CSA victims are female.^{14–16} This study included 134 cases: 113 (84.3%) were female and 21 (15.7%) were male. In studies conducted in Turkey, the average age of victims of CSA is between 9 and 14 years.^{14,16,17} In this study, the mean age was 13 ± 3.4 (min: 3, max: 75) years, and the cases were mostly in the 13–15 age group (n: 59, 44%), similar to the Küçük study, but in contrast to the Bahali study (Table 1).

Education

In a study involving 426 CSA victims in Hungary, 6.1% of the cases were of preschool children and 57% were students.⁴ In Turkey, while there are studies reporting that the victims of CSA are more at primary school age (64.5–68.3%),^{14,18} there are also studies reporting that the number of victims in the high school age is also high.¹⁵ In this study, 36.6% (n: 49) of the cases were of high school students (Table 1). This situation was thought to be related to the higher risk-taking behaviors of high school-age adolescents in this period, and the more unsupervised time they spend with their peers.

Family Structure

The absence of parents or having a single parent increases the risk for CSA.² In a 7-year study, the majority of CSA victims lived in a nuclear family (14). In this study, 92 cases (68.7%) were of victims living in nuclear family (Table 1). Parents of 98 (73.1%) victims were married and living together, while the

Table 3. Comparison of Cases in Terms of Child Sexual Abuse (CSA)-Related Mental Disorder

	CSA-Related Mental Disorder		
	No, n (%)	Yes, n (%)	P
Number of incidences of abuse			
Once	59 (44)	6 (4.5)	.011
More than once	51 (38)	18 (13.5)	
Defendant			
Stranger	50 (37.3)	10 (7.5)	.735
Acquaintance	60 (44.8)	14 (10.4)	
Physical violence			
Yes	9 (6.7)	5 (3.7)	.066
No	101 (75.4)	19 (14.2)	
Threatening			
Yes	35 (26.1)	10 (7.5)	.355
No	75 (56)	14 (10.4)	
Gender			
Men	17 (12.7)	4 (3)	.882
Women	93 (69.4)	20 (14.9)	
Child/Adolescent			
Child	37 (27.6)	6 (4.5)	.412
Adolescent	73 (54.5)	18 (13.4)	
Penetration			
Yes	65 (48.5)	12 (9)	.414
No	45 (33.5)	12 (9)	
Period of abuse			
One day	59 (44)	6 (4.5)	.016
2–30 days	17 (12.7)	3 (2.2)	
1–3 months	6 (4.5)	1 (0.7)	
>3 months	28 (20.9)	14 (10.4)	

Pearson's chi-squared test.

parents of 33 (24.7%) victims were divorced; the father in two (1.5%) cases, and the mother in 1 (0.7%) case had died.

Gender and Age of the Defendants, Victim-Defendant Relationship

The overwhelming majority of CSA defendants are male.^{12,13,19} Almost all of the CSA defendants are male in Turkey.^{16–18,20} In our study, the average age of the defendants was 25.6 ± 13 (min: 12, max: 75) years and all the defendants were male.

While it is usually acquaintances who sexually abuse girl children,^{11,21} CSA involving male victims is frequently committed by strangers.¹¹

More than half of the CSA defendants (68.4–73%) are supposed acquaintances and are trusted by the victims.^{4,9,12,19} Rizzo et al²² showed that defendants are more likely to be intrafamilial in child victims, and more likely to be strangers in cases involving adolescents. In studies conducted in Turkey, defendants are often recognized by the victim, and only 11.8–33.7% of CSA victims were abused by a stranger.^{14,15,18,20,23} In this study, 53.3% of the defendants were recognized by the victims while 44.7% were strangers. Adolescents were significantly more likely to be abused by a stranger than children ($P < .01$) (Table 2). This may be due to the more protective approach

of families toward children than toward adolescents and the potential of adolescents to meet more strangers over the internet.

Internet Dating–Sexting

Sexting is defined as sexual messaging and sending sexually explicit photographs via the internet and phone.²⁴ Especially adolescents may be exposed to sexual talk and sexual acts with coercion and enticement by foreigners they meet online.²⁵ Moreover, victims tend to hide their online and offline conversations with defendants from parents, siblings, and other adults.²⁶ Sexting is associated with exploitative and abusive sexual behavior including sexual abuse and intimate partner violence in young adolescents.²⁷ In this study, 23 of 60 foreign defendants (38.3%) met the victims on the internet. In 29 cases (21.6%), sexual messaging with the defendant over the internet was detected, and in 25 (18.7%) of them, it was determined that the defendant was a foreigner.

In 12 (8.9%) of the cases, there was a history of nude photos sent to the defendant, and in 10 of them, the defendant was a foreigner. Adolescents are significantly more likely to meet their abuser on the internet and indulge in sexting, compared to children ($P < .01$) (Table 2).

Crime Scene

While there are studies reporting that CSA victims are more abused in the victim's home,^{4,15,20} there are also studies showing that they are more abused outside the home.^{14,18} In this study, the victims were exposed to abuse most frequently in the defendant's home (n : 49, 36.6%) and in the victim's own home (n : 22, 16.4%) (Table 1).

Type of Sexual Abuse

More than half of the CSA victims in Saudi Arabia experience anal or vaginal penetration.⁹ In Hungary, CSA included vaginal penetration (51.4%), touching–kissing–fondling (41.8%), and anal penetration (3.3%), respectively.⁴ In Turkey, CSA cases include vaginal penetration (14.9–34.5%), anal penetration (9.1–33.6%), touching–kissing–fondling (18.1–58.9%), oral penetration (1.2–3.8%) and verbal abuse (2.1–10.9%).^{14,15,20,23,28} In this study, the most common form of sexual abuse was vaginal penetration (n : 46, 34.3%) (Table 1). The higher rate of vaginal penetration is due to the higher number of female victims.

Sexual Abuse—Number of Incidences and Duration

In a study including 311 CSA cases, abuse was repeated in 67% of the cases.¹² In a study including 3430 CSA victims, no significant difference was found between adolescents and children in terms of duration of abuse.⁸ In Turkey, 40.7–85.8% of CSA victims have been exposed to abuse more than once.^{16,23,28} In this study, 65 (48.5%) cases were exposed to abuse once, and 69 (51.5%) were abused more than once. Adolescents were significantly more likely to experience multiple abuse than children ($P < .01$) (Table 2). The abuse lasted for 2–30 days in 20 cases (29.0%), 1–3 months in 7 cases (10.1%), and >3 months in 42 cases (60.9%). The duration of abuse between children and adolescents was significantly different ($P < .05$) (Table 2). This difference was because the proportion of adolescents exposed to abuse for >3 months was higher than that among children. Children are more likely to be abused only once, compared to adolescents ($P < .01$) (Table 2).

Time of Examination After Sexual Abuse

Cases examined within the first 72 hours after abuse are more likely to reveal evidence of sexual abuse.²⁹ The recovery is very fast, especially in children, and the lesions can heal without leaving a trace 72 hours after the event.¹ Only 33.3% of the cases in Brazil were examined within 72 hours after the sexual abuse.¹³ However, 59.9% of the cases in Hungary were examined within 72 hours.⁴ In addition, male victims' examinations were 2.4 times more likely to be delayed by more than 1 week, compared to girls.⁴ In Spain, 74% of CSA adolescent victims were examined in the first 72 hours.³⁰ Adolescent CSA victims are more likely to apply to the hospital within 24 hours of sexual abuse than children.²² In this study, 9 (6.7%) cases were examined on the day of the event, 66 cases (49.3%) within 2–30 days, 7 (5.2%) cases within 1–3 months, and 52 cases (38.8%) later than 3 months.

Threatening—Physical Violence

CSA victims may be exposed to physical abuse along with sexual abuse.²¹ Findings of physical violence can also be detected in between 3.5% and 19.5% of CSA victims.^{4,9,12,31} In Turkey, physical violence findings are more common in children and adolescents who are victims of sexual abuse (28.4–47.2%) compared to the literature.^{14–16} In our study, there was threatening behavior during sexual abuse in 45 cases (33.5%), and sexual abuse was accompanied by physical violence in 14 cases (10.4%). The presence of violence is higher in adolescent CSA victims than in children.^{8,22} However, in a study involving 205 CSA victims, there was no significant difference between the presence of physical violence in adolescents and children.³² In this study, we found no significant difference between children and adolescents in the proportion of physical violence ($P > .05$) (Table 2).

Mental Examination

Mental retardation is an important risk factor for exposure to CSA.³³ Children and adolescents with mental retardation cannot adequately protect themselves against sexual abuse. They may have difficulty identifying the sexual abuse incident and the characteristics of the perpetrator.³⁴ In Turkey, 9–23.9% of CSA victims have mental retardation.^{14,15,18,28,32} In the current study, mild mental retardation was detected in 14 cases (10.4%) (Table 1). The relationship between CSA and post-traumatic stress disorder (PTSD), depression, and anxiety has been strongly defined in the literature.^{35,36} Acute stress disorder (1.8–3%), PTSD (21.3–54.5%), depression (4.7–21.4%), and anxiety (0.3–7.1%) were determined in CSA victims in Turkey.^{14,15,18,28,37} In this study, pre-existing mental illnesses were found in 7 cases (5.1%) and mental illnesses developed as a result of abuse in 24 cases (17.9%). Depression due to sexual abuse developed in 14 (10.4%) of the cases (Table 1). There was no statistically significant difference in the development of mental disorders due to CSA in terms of gender, threat, physical violence, victim–accused relationship, child/adolescent period, and penetration ($P > .05$) (Table 3). However, cases in which the abuse occurred more than once, the rate of mental disorder was found to be significantly higher ($P < .05$) (Table 3). In addition, when the development of CSA-related mental illness was compared with the duration of sexual abuse, a significant difference was observed ($P < .05$) (Table 3). This difference is due to the higher rate of CSA-related mental disorders in victims who have been abused for more than 3 months.

Anogenital Examination

In pediatric cases with alleged sexual abuse, normal examination findings are detected in the vast majority of cases in the anogenital examination.^{4,13,29,38} Victims with genital penetration rather than genital contact are more likely to have positive findings on genital examination.³⁹ However, the rate of positive findings even in victims with a history of genital penetration is lower than expected. In a study of 226 sexually abused victims with a history of vaginal penetration, complete hymenal clefts were detected in 17 victims (7.5%), and incomplete hymenal clefts in 33 victims (14.6%).⁴⁰ In the study of Smith et al.²⁹ only 4.8% of the cases had anogenital examination findings of sexual assault in 3659 pediatric sexual abuse/assault examinations.²⁹ Moreover, deep notches/clefts were detected in 1.3% of the cases. In this study, the genital examination was performed in 113 cases (84.3%): there was an intact hymen in 44 cases (38.9%), elastic hymen in 28 cases (24.8%), old tear in hymen in 24 cases (21.3%), acute tear in hymen in 5 cases (4.4%), and notch of hymen in 12 cases (10.6%).

Anal contamination, anal fissure, anal laceration, and total anal dilatation findings are closely associated with anal penetration.⁴¹ The detection rate of anal laceration, which is a strong indicator of sexual abuse, is only 0.08–4.6% by simple examination.^{29,41} However, researchers claim that these rates can be further improved with assistive techniques such as rectoanal endosonography.⁴² In this study, it was found that 130 (97%) cases who underwent anal examination had normal examination findings: 3 cases (2.2%) had chronic fissures, and 1 case (0.7%) had acute fissures.

This study has strengths as well as weaknesses. First of all, the retrospective design of the study is an important limitation. Another limitation is that it does not include the medium and long-term effects of sexual abuse on the victims. In addition, there are no data in this study about the profession of the victims' parents, their educational background, alcohol and drug addictions, and the victim–parent relationship.

CONCLUSION

Programs should be created to raise awareness among families and their children. Children and adolescents must be taught to avoid allowing their friends home when no one is at home; to avoid visiting a friend at their home if the friend is alone; to avoid going alone with a friend to secluded places such as forested areas; to say no if the friend wants to take nude pictures or videos or in underwear; and to avoid posting nude photos over the internet. In these programs, children and their families should be enlightened to tell their families without fear or hesitation about the acts of abuse they have experienced and the threats they are exposed to. It should be emphasized that children should not be afraid of their families and the families should approach their children with tolerance; they should always take care of them and stand behind them. Anogenital examination of CSA victims should be performed as soon as possible after an incident of abuse, and necessary biological and microbiological samples should be obtained. Professionals conducting the examination should be aware that the absence of any examination findings will not rule out abuse. Considering

that many child abuse victims have normal examination findings, it should not be forgotten that the interview and psychiatric examination with the child are as valuable as the genital examination.

In addition, long-term planned psychiatric support programs should be established against the acute and chronic negative mental effects of abuse on children and adolescents. There are differences between child and adolescent sexual abuse victims. Therefore, these differences need to be better defined with higher case series. Thus, more comprehensive prevention and support programs can be created for children and adolescents.

Ethics Committee Approval: This study was approved by Ethics committee of Abant İzzet Baysal University, (Approval No: 2020/424).

Informed Consent: Verbal and Written informed consent was obtained from the patients who agreed to take part in the study.

Peer Review: Externally peer-reviewed.

Author Contributions: Concept – E.H., Z.Z.E.; Design – E.H., Z.Z.E.; Supervision – Z.Z.E.; Resources – E.H., A.Y.; Materials – E.H., A.Y.; Data Collection and/or Processing – E.H., A.Y.; Analysis and/or Interpretation – E.H.; Literature Search – E.H., A.Y.; Writing Manuscript – E.H., A.Y. Critical Review – Z.Z.E.

Conflict of Interest: The authors have no conflict of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES

- Adams JA, Kaplan RA, Starling SP, et al. Guidelines for medical care of children who may have been sexually abused. *J Pediatr Adolesc Gynecol.* 2007;20(3):163–172. [CrossRef]
- Murray LK, Nguyen A, Cohen JA. Child sexual abuse. *Child Adolesc Psychiatr Clin N Am.* 2014;23(2):321–337. [CrossRef]
- Kotzé JM, Brits H. Child sexual abuse: the significance of the history and testifying on non-confirmatory findings. *Afr J Prim Health Care Fam Med.* 2019;11(1):e1–e7. [CrossRef]
- Enyedy A, Tsikouras P, Csorba R. Medical and legal aspects of child sexual abuse: a population-based study in a Hungarian County. *Int J Environ Res Public Health.* 2018;15(4):701. [CrossRef]
- Choudhry V, Dayal R, Pillai D, Kalokhe AS, Beier K, Patel V. Child sexual abuse in India: a systematic review. *PLoS One.* 2018;13(10):e0205086. [CrossRef]
- Pereda N, Guilera G, Forns M, Gómez-Benito J. The prevalence of child sexual abuse in community and student samples: a meta-analysis. *Clin Psychol Rev.* 2009;29(4):328–338. [CrossRef]
- Priebe G, Svedin CG. Child sexual abuse is largely hidden from the adult society. An epidemiological study of adolescents' disclosures. *Child Abuse Negl.* 2008;32(12):1095–1108. [CrossRef]
- Giroux ME, Chong K, Coburn PI, Connolly DA. Differences in child sexual abuse cases involving child versus adolescent complainants. *Child Abuse Negl.* 2018;79:224–233. [CrossRef]
- AlMadani O, Bamousa M, Alsaif D, Kharoshah MAA, Alsowayigh K. Child physical and sexual abuse in Dammam, Saudi Arabia: a descriptive case-series analysis study. *Egypt J Forensic Sci.* 2012;2(1):33–37. [CrossRef]
- Davies EA, Jones AC. Risk factors in child sexual abuse. *J Forensic Leg Med.* 2013;20(3):146–150. [CrossRef]

11. Modelli MES, Galvão MF, Pratesi R. Child sexual abuse. *Forensic Sci Int*. 2012;217(1-3):1-4. [\[CrossRef\]](#)
12. Essabar L, Khalqallah A, Dakhama BS. Child sexual abuse: report of 311 cases with review of literature. *Pan Afr Med J*. 2015;20:47. [\[CrossRef\]](#)
13. Silva WDS, Ribeiro FM, Guimarães GK, Santos MSD, Almeida VPDS, Barroso-Junior UO. Factors associated with child sexual abuse confirmation at forensic examinations. *Cien Saude Colet*. 2018;23(2):599-606. [\[CrossRef\]](#)
14. Bahali K, Akçan R, Tahiroglu AY, Avci A. Child sexual abuse: seven years in practice. *J Forensic Sci*. 2010;55(3):633-636. [\[CrossRef\]](#)
15. Butun C, Yildirim A, Ozer E, Yilmaz E, Sari SA. A nonrandom sample of 55 sexual abuse cases in Sivas. *Med Sci Monit*. 2017;23:4360-4365. [\[CrossRef\]](#)
16. Küküker H. Analysis of 268 child and adolescent victims of sexual assault and the legal outcome. *Turk J Pediatr*. 2008;50(4):313-316.
17. Demirci S, Dogan KH, Erkol Z, Deniz İ. Evaluation of child cases examined for sexual abuse in Konya. *Turk J Türkiye Klin J Med*. 2008;5:43-49. Available from: <https://www.turkiyeklinikleri.com/article/en-konyada-cinsel-istismar-yonunden-muayenesi-yapilan-cocuk-olgularin-degerlendirilmesi-52545.html>.
18. Demirkaya SK, Kükükköse M. Demographic and clinical characteristics of sexually abused children and adolescents referred to child and adolescent psychiatry for psychiatric assessment. *Bull Leg Med*. 2017;22(1):14-20. Available from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.619.3001&rep=rep1&type=pdf> and PMID is 19014042.
19. Girgira T, Tilahun B, Bacha T. Time to presentation, pattern and immediate health effects of alleged child sexual abuse at two tertiary hospitals in Addis Ababa, Ethiopia. *BMC Public Health*. 2014 ;14:92. [\[CrossRef\]](#)
20. Aydin B, Akbas S, Turla A, Dundar C, Yuce M, Karabekiroglu K. Child sexual abuse in Turkey: an analysis of 1002 cases. *J Forensic Sci*. 2015;60(1):61-65. [\[CrossRef\]](#)
21. Csorba R, Aranyosi J, Borsos A, Balla L, Major T, Póka R. Characteristics of female child sexual abuse in Hungary between 1986 and 2001: a longitudinal, prospective study. *Eur J Obstet Gynecol Reprod Biol*. 2005;120(2):217-221. [\[CrossRef\]](#)
22. Rizzo A, Ricard D, La Harpe R, Fracasso T, Yaron M. Female child and adolescent sexual abuse cases reported at the Geneva University Hospitals Between 2006 and 2014: a retrospective study. *J Pediatr Adolesc Gynecol*. 2020;33(3):260-263. [\[CrossRef\]](#)
23. Copur M, Uneri OS, Aydın E, et al. Characteristic features of sexually abused children and adolescents in İstanbul sample. *Anatol J Psychiatry*. 2012;13:46-50. Available from: https://app.trdizin.gov.tr/dokuman-goruntule?ext=pdf&path=CrnWZGRsXTjRjLjWxD978OSUAL2jXitizhVYmCxNvH7wqn9tO2ihVQqNeW6rnmLzDO5dm-SczMs73nG2HmknAGlACMTbFVL-iLXWUHLafBYhBfK0q2TXZ-vUgTQAEToTL0d9c6zkW19SQusqrYB_DWPpyNsEQ16jXPRGdWx-59LGe1szEvndCQNVz0EFmDL0z2v4g-pJz22pa87gBS7XbancarpF-HDFN31ETasodJag=&contentType=application/pdf.
24. Gassó AM, Klettke B, Agustina JR, Montiel I. Sexting, mental health, and victimization among adolescents: a literature review. *Int J Environ Res Public Health*. 2019;16(13):2364. [\[CrossRef\]](#)
25. Jonsson LS, Fredlund C, Priebe G, Wadsby M, Svedin CG. Online sexual abuse of adolescents by a perpetrator met online: a cross-sectional study. *Child Adolesc Psychiatry Ment Health*. 2019;13:32. [\[CrossRef\]](#)
26. Katz C. Internet-related child sexual abuse: what children tell us in their testimonies? *Child Youth Serv Rev*. 2013;35(9):1536-1542. [\[CrossRef\]](#)
27. Titchen KE, Maslyanskaya S, Silver EJ, Coupey SM. Sexting and young adolescents: associations with sexual abuse and intimate partner violence. *J Pediatr Adolesc Gynecol*. 2019;32(5):481-486. [\[CrossRef\]](#)
28. Yektaş Ç, Tufan AE, Büken B, Çetin NY, Yazıcı M. Evaluation of abuse and abuser's features and risk factors associated with psychopathology in children and adolescents victimized by sexual abuse. *Anatol J Psychiatry*. 2018;19:501-508. [\[CrossRef\]](#)
29. Smith TD, Raman SR, Madigan S, Waldman J, Shouldice M. Anogenital findings in 3569 pediatric examinations for sexual abuse/assault. *J Pediatr Adolesc Gynecol*. 2018;31(2):79-83. [\[CrossRef\]](#)
30. Schilling S, Samuels-Kalow M, Gerber JS, Scribano PV, French B, Wood JN. Testing and treatment after adolescent sexual assault in pediatric emergency departments. *Pediatrics*. 2015;136(6):e1495-e1503. [\[CrossRef\]](#)
31. Abd El Rahman AE, Azab SMS, Ramadan M. Study of cases of child sexual abuse referred for medico-legal examination in Cairo and Giza, Egypt, 2007-2011. *J Child Sex Abus*. 2017;26(3):308-318. [\[CrossRef\]](#)
32. Isır AB, Büyükelik A, Özdiş S, Coşkun AG. Evaluation of all sexual abuse cases and the child abuse and mental retardation in the sexual abuse cases that have been reflected to Gaziantep University Medicine Faculty Forensic Medicine Department. *Bull Leg Med*. 2009;14(1):5-11. [\[CrossRef\]](#)
33. Euser S, Alink LR, Tharner A, van IJzendoorn MH, Bakermans-Kranenburg MJ. The Prevalence of child sexual abuse in out-of-home care: increased risk for children with a mild intellectual disability. *J Appl Res Intellect Disabil*. 2016;29(1):83-92. [\[CrossRef\]](#)
34. Farlina M. Prevention of sexual abuse in children with mental disability: a systematic literature review. *IJDS*. 2019;6(1):73-83. [\[CrossRef\]](#)
35. Amado BG, Arce R, Herraiz A. Psychological injury in victims of child sexual abuse: a meta-analytic review. *Psychosoc Interv*. 2015;24(1):49-62. [\[CrossRef\]](#)
36. Elkliit A. Treatment of Danish survivors of child sexual abuse: a cohort study. *Behav Sci*. 2015;5(4):589-601. [\[CrossRef\]](#)
37. Koçak U, Alpaslan AH. Psychiatric disorders and sociodemographic characteristics of sexually abused children and adolescents. *Bull Leg Med*. 2015;20(1):27-33. [\[CrossRef\]](#)
38. Adams JA, Farst KJ, Kellogg ND. Interpretation of medical findings in suspected child sexual abuse: an update for 2018. *J Pediatr Adolesc Gynecol*. 2018;31(3):225-231. [\[CrossRef\]](#)
39. Gallion HR, Milam LJ, Littrell LL. Genital findings in cases of child sexual abuse: genital vs. vaginal penetration. *J Pediatr Adolesc Gynecol*. 2016;29(6):604-611. [\[CrossRef\]](#)
40. Eg MB, Hansen LA, Sabroe S, Charles AV. Hymenal lesions and legal outcome in sexually abused girls with a history of vaginal penetration. *Forensic Sci Int*. 2015;252:163-167. [\[CrossRef\]](#)
41. Myhre AK, Adams JA, Kaufhold M, Davis JL, Suresh P, Kuelbs CL. Anal findings in children with and without probable anal penetration: a retrospective study of 1115 children referred for suspected sexual abuse. *Child Abuse Negl*. 2013;37(7):465-474. [\[CrossRef\]](#)
42. Rostion CG, Galaz MI, Contador M, Aldunate M, Benavides S, Harz C. Helpfulness of rectoanal endosonography in diagnosis of sexual abuse in a child. *J Pediatr Surg*. 2016;51(7):1151-1161. [\[CrossRef\]](#)