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The Psychiatric Consequences of Child and Adolescent Sexual Abuse

Çocuk ve Ergenlerde Cinsel İstismarın Psikiyatrik Sonuçları

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ABSTRACT

Introduction: The purpose of this study was to investigate the psychiatric consequences of sexual abuse and its associated factors in children and adolescents referred to our child and adolescent psychiatry clinic from official medico–legal units.

Methods: All victims of sexual abuse (n=590) aged 1–18 (mean: 13.56±3.38) referred from forensic units to Ondokuz Mayis University Child and Adolescent Psychiatry Clinic over a period of 2 years [boys: 83 (14.1%); girls: 507 (85.9%)] were included. Child and adolescent psychiatry and forensic medicine specialists evaluated all the cases. The Wechsler Intelligence Scale for Children-Revised Form (WISC-R) and the Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime Version-Turkish Version (K-SADS-PL-T) were applied.

Results: Abuse-related psychiatric diagnoses (of which 45.9% were major depressive disorder and 31.7% were post-traumatic stress disorder cases) were made in 75.2% of the cases. In 80.3% of the cases, the perpetrators were known to their victims [incest, n=91 (15.1%)], and intercourse took place in 48.8%. Although gender and age were not significantly associated with the appearance of any psychiatric disorders, severity of abuse (e.g., intercourse; p=.006), additional physical assault (p<.001), and incest (p<.001) had a significant correlation with psychiatric disorders. To explore the predictive value of multiple factors in the appearance of any sexual assault-related psychiatric disorder, a logistic regression model was used to determine the best linear combination of age, gender, abuse severity, incest, involvement of any other victim, additional physical assault, and length of time from first abuse to first psychiatric evaluation. This combination of variables (occurrence of incest, additional physical assault, and a long duration from first abuse to first psychiatric evaluation) significantly predicted the appearance of a psychiatric disorder of any kind (χ^2=55.42; df=7; n=522; p<.001).

Conclusion: Our findings reveal that the occurrence of incest, additional physical assault, and a long duration from first abuse to first psychiatric evaluation predict higher rates of sexual abuse-related psychiatric disorders.

Keywords: Child sexual abuse, children and adolescence, psychiatric outcomes, trauma

ÖZET

Amaç: Bu çalışmanın amacı, adli birimlerden hastanemiz çocuk ve ergen psikiyatrisi polikliniğine sevk edilen cinsel istismar mağduru çocuk ve ergenlerde istismarın psikiyatrik sonuçlarını ve bunlara etki eden faktörleri araştırmaktır.

Yöntem: İki yıllık bir sürede adli birimlerce Ondokuz Mayıs Üniversitesi Çocuk ve Ergen Psikiyatrisi Kliniği'ne yönlendirilen cinsel istismara maruz kalmış 1-18 yaş arası (ortalama 13,56±3,38) tüm olgular [n=590, erkek: 83 (%14,1); kız: 507 (%85,9)] çalışmaya dahil edildi.Tüm olgular adli tıp ve çocuk ve ergen psikiyatrisi uzmanları tarafından değerlendirildi. Olgulara, Wechsler Çocuklar İçin Zeka Ölçeği Yeniden Gözden Geçirilmiş Formu (WÇZÖ-R) ve Okul Çağı Çocukları İçin Duygulanım Bozuklukları ve Şizofreni Görüşme Çizelgesi-Şimdi ve Yaşam Boyu Şekli-Türkçe (K-SADS-PL-T) uygulandı.

Bulgular: Olguların %75,2'sinde istismar ile ilişkili psikiyatrik bozukluk (%45,9 olguda major depresif bozukluk ve %31,7 olguda travma sonrası stres bozukluğu) tespit edildi. Olguların %80,3'ü failleri tanıyordu [ensest, n=91 (%15,1)] ve %48,8'inde cinsel ilişki gerçekleşmişti. Herhangi bir psikiyatrik bozuklukla cinsiyet ve yaş grupları arasında belirgin bir ilişki saptanmazken istismarın şiddeti (örneğin tamamlanmış cinsel ilişki) (p=0,006), ek fiziksel saldırı (p<0,001) ve ensest (p<0,001) ile belirgin bir korelasyon saptandı. Cinsel saldırı ile ilişkili psikiyatrik bozukluk gelişmesine etki eden faktörlerin belirleyicilik değerini araştırmak için yaş, cinsiyet, istismar şiddeti, ensest, diğer mağdurların olması, ek fiziksel saldırı ve ilk istismar ile ilk psikiyatrik değerlendirme arasındaki süre lojistik regresyon modeli ile araştırıldı. Bu değişkenlerin kombinasyonunun (ensest varlığı, ek fiziksel saldırı ve ilk istismar ve ilk psikiyatrik değerlendirme arasındaki süre) herhangi bir psikiyatrik bozukluk ortaya çıkmasının anlamlı bir şekilde önceden haber vericisi olduğu bulunmuştur (χ^2=55,42, df=7, n=522, p<0,001).

Sonuç: Bulgularımız, ensest mevcudiyetinde, ek fiziksel saldırı olmasında ve ilk istismar ile ilk psikiyatrik değerlendirme arasındaki sürenin uzun olmasında cinsel istismar ile ilgili psikiyatrik bozukluk gelişme olasılığının daha yüksek oranda olduğunu ortaya koymaktadır.

Anahtar kelimeler: Çocuk cinsel istismarı, çocuk ve ergen, psikiyatrik sonuçlar, travma

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INTRODUCTION

Sexual abuse is defined as any sexual conduct or contact with or upon a child by an adult or significantly older child for the purposes of sexual gratification or financial benefit of the perpetrator, including contacts for sexual purposes, statutory rape, molestation, prostitution, exposure, pornography, incest, and other sexually exploitative activities (1). The prevalence rates of sexual abuse in the general population range from 4.0% to 21.4% among adults and from 3.0% to 33.2% among children (2). Previous studies report that from 10% to 40% of children are subjected to some form of sexual abuse (3). While there is a lack of reliable statistical data regarding the prevalence of sexual abuse of children in Turkey, the estimated rate of child and adolescent sexual abuse is 9% to 18% (4).

As the vast majority of sexual abuse remains unreported, it is difficult to collect reliable data on sex crimes against children (5,6,7,8). It is estimated that only 15% of child and adolescent sexual abuse cases in Turkey are reported (9). Feelings of guilt and shame (10,11,12,13), developmental and cognitive difficulties (11,12), factors related to post-traumatic stress disorder (PTSD) (14), the nature of the abuse, the relationship with the abuser (15,16,17), and confidence in the care provider, and threats against the child (18) have all been suggested as factors discouraging disclosure.

The majority of perpetrators of sexual abuse against both boys and girls are males (19,20,21). Girls are more likely to report sexual abuse than boys (19,20). There is a general consensus that childhood sexual abuse is more prevalent among and has a greater impact on girls (21,22).

Childhood sexual abuse has long-term effects on mental wellbeing depending upon the severity and persistence of the abuse (3,21). Sexual abuse is recognized as a risk factor for many psychiatric disorders in childhood, adolescence, and even late adulthood (3,23). The most common psychological problems associated with childhood sexual abuse are depression, anxiety, and anger (24,25). Other reviews have reported an association of sexual abuse with PTSD (14,26,27,28), depression (27,28,29), suicide attempts (27,29,30), low self-esteem (28,31,32), fear and nightmares (28,30,31), somatic complaints (27,32), withdrawal (31,32), attention and concentration problems (29), and eating disorders (33).

A strong association of intrafamilial sexual abuse with suicidal behavior has been reported (34,35). Sexually abused children have been reported to have fewer close friends, more conflict with parents, more sexual partners, an earlier onset of sexual activity, and more frequent unprotected sex than non-sexually abused children (36).

The severity and type of sexual abuse, the gender and age of the child and the offender, the relationship between the child and the offender, any accompanying physical abuse, and the frequency, number, and length of the abusive acts all seem to affect the child's outcomes (37,38,39,40,41,42). A previous study found that the victim's relationship with the abuser, the persistence and recurrence of the abuse, genital penetration, and the use of force or intimidation are associated with more adverse outcomes (43).

The purpose of this study was to investigate the psychiatric consequences of sexual abuse and its associated factors in children and adolescents referred to our child and adolescent psychiatry clinic from official medico–legal units in 2010 and 2011. We also aimed to explore the predictive value of multiple factors in the appearance of any psychiatric disorder related to sexual assault.

METHODS

Participants

All children and adolescents [n=590 (girls, n=507; boys, n=83)] with strong evidence of sexual abuse referred from medico–legal units for psychiatric assessment at our child and adolescent psychiatry outpatient clinic over 2 years (2010-2011) were included in this study. Under Turkish law, psychiatric assessments and diagnostic evaluations (including intelligence assessments) are mandatory in all cases when sexual abuse is reported to an official department. Child and adolescent psychiatry and forensic medicine specialists evaluated all the cases. Following comprehensive psychiatric assessment and diagnostic evaluations, which utilized the Wechsler Intelligence Scale for Children-Revised Form (WISC-R) and the Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime Version-Turkish Version (K-SADS-PL-T), the final forensic reports were drafted and signed by a committee of forensic medicine and child and adolescent psychiatry specialists. These reports included psychiatric diagnoses based on DSM-IV-TR and intelligence reports.

Previously, Turkish law and penal codes classified sexual abuse in five categories with varying degrees of severity (37). Although the Turkish Penal Code no longer uses this classification, it can still be helpful for research purposes. The classification includes the categories of "sexual contact without touching," "sexual contact," "indecent assault," "vaginal/anal penetration," and "subject to prostitution."

Measurements

Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Lifetime Version-Turkish Version: The K-SADS-PL-T is a widely used semi-structured interview scale that permits evaluation in 20 separate diagnostic fields. It effectively diagnoses all major childhood psychiatric disorders. Kaufman et al. (44) described the KSADS-PL as a valid and reliable diagnostic tool. Gökler et al. (45) translated it into Turkish in 2004. This scale was applied to all patients and their parents by physicians trained to use structured interview techniques in K-SADS-PL. In this study, we used the K-SADS-PL-T along with broad psychiatric clinical evaluations to investigate psychiatric disorders and comorbidities.

Wechsler Intelligence Scale for Children-Revised Form: The WISC was developed by Wechsler in 1949 to ascertain children's intelligence level. A revised form (WISC-R) was produced in 1974. The WISC-R consists of the following two subdivisions: verbal and performance. Savaşır and Şahin (46) standardized the WISC-R for Turkish children while working with a sample of 1,639 children aged 6–16 years. Reliability was determined to be .97 for the verbal section, .93 for the performance section, and .97 overall. The correlation between sub-tests varied from .51 to .86.

Statistical Analysis

Variable distributions were examined for normality, and nonparametric statistics were used in cases in which scores were not normally distributed. Statistical differences between groups were assessed using the chi-square test for categorical variables and the t-test or Mann–Whitney U-test for continuous variables. To explore the predictive value of multiple factors in the appearance of any sexual assault-related psychiatric disorder, a logistic regression model was applied to determine the best linear combination of age, gender, severity of abuse, occurrence of incest, involvement of any other victim, additional physical assault, and length of time from first abuse to first psychiatric evaluation. All values are expressed as percentages or means±standard deviation. Statistical Package for the Social Sciences 15.0 (SPSS, Inc.; Chicago, IL, USA) was used to perform all statistical calculations.

RESULTS

Over a period of 2 years, 590 [boys: 83 (14.1%); girls: 507 (85.9%)] sexually abused victims aged 1–18 (mean: 13.56±3.38) years were referred from medico–legal units and recruited into the study. The youngest victim was aged 1 year (n=1), and 19 victims (3.2%) were aged <6 years. The sample was grouped according to age as follows: preschool (0–6 years), school age (7–11 years), and adolescents (12–17 years). A majority of the victims (76.4%) were adolescents, followed by school-age victims (17.8%) and preschoolers (8.8%). The age distribution of the victims is shown in Figure 1.

The sexual abuse classification in our study sample is shown in Figure 2. Sexual intercourse (vaginal/anal penetration and/or subjected to prostitution) occurred in 48.9% of the cases.

All the perpetrators were males, and in 80.3% of the cases, they were related to the victims [incest, n=91 (15.1%)]. The distribution of perpetrators is shown in Figure 3.

A great majority of the victims (73.2%; n=432) fell within the normal range of intelligence, while 12.3% (n=73) had a borderline value. Mild mental retardation was diagnosed in 12.3% (n=73) of the victims and moderate retardation was diagnosed in 1.8% (n=11).

In psychiatric evaluations, 75.2% of the victims were diagnosed with a psychiatric disorder. The most common psychiatric disorders associated with sexual abuse were as follows: depressive disorder (45.9%), PTSD (31.7%), acute stress disorder (11.5%), anxiety disorder (1.1%), and conversion disorder (1.1%), in descending order. A total of 143 patients (24.2%) were not diagnosed with any psychiatric disorder, despite having mild emotional and behavioral symptoms (e.g., anxiety, feelings of guilt, and sleep problems).

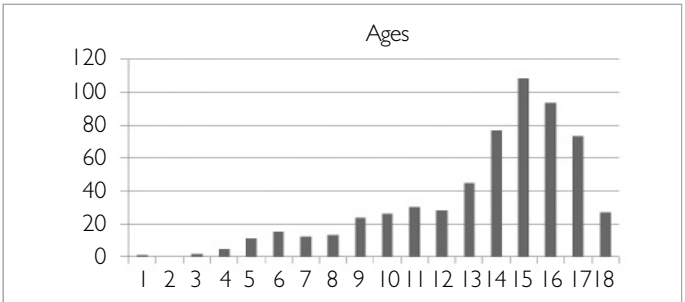

Figure 1. Age distribution of the victims

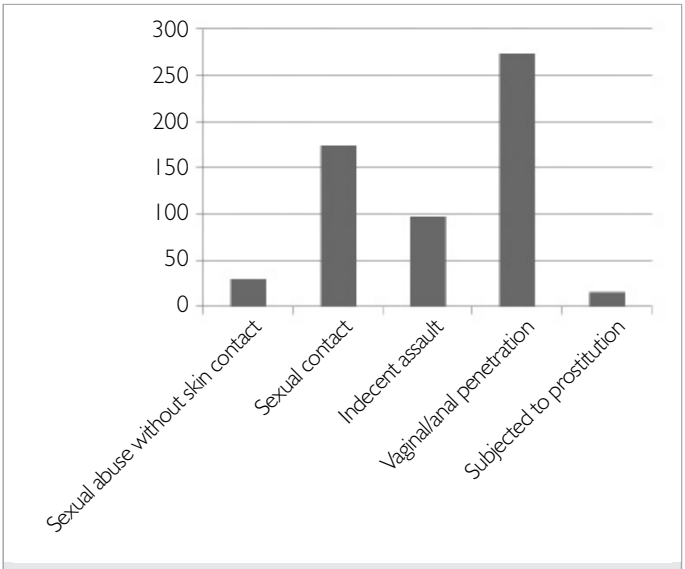

Figure 2. Classification of the sexual abuse

Although gender and age were not significantly associated with the appearance of any psychiatric disorder, the severity of abuse (e.g., intercourse; p=.006), additional physical assault (p<.001), and incest (p<.001) were. Group differences in the appearance of any psychiatric disorder associated with sexual abuse are shown in Table 1.

To explore the predictive value of multiple factors in the appearance of any psychiatric disorder related to sexual assault, a logistic regression model was used to determine the best linear combination of age, gender, abuse severity, occurrence of incest, involvement of any other victim, additional physical assault, and length of time from first abuse to first psychiatric evaluation. This combination of variables (occurrence of incest, additional physical assault, and a long duration from first abuse to first psychiatric evaluation) significantly predicted the appearance of a psychiatric disorder of any kind (χ^2=55.42; df=7; n=522; p<.001). As shown in Table 2, the occurrence of incest increases the risk of the appearance of psychiatric disorder upto 2.36-fold; accompanying physical abuse, 12.5-fold, and duration between first abuse and psychiatric assessment for each day, 1-fold.

DISCUSSION

This is a leading study exploring the factors predicting the appearance of psychiatric disorders associated with child and adolescent sexual abuse. To the best of our knowledge, it involves a larger sample than all previous studies conducted on this subject in Turkey. The regression analysis revealed that the occurrence of incest, additional physical assault, and a long duration from first abuse to first psychiatric evaluation significantly predicted the appearance of a psychiatric disorder of any kind.

In agreement with previous studies, a great majority of child and adolescent sexually abused victims were girls, although a comparatively large number of boys also experienced sexual abuse (19,20,47,48). The fact that all the perpetrators were males may contribute to the finding that most victims are girls. On the other hand, the different nature and characteristics of child sexual abuse experienced by boys and girls could also contribute to the lower prevalence rates in male children and adolescents (49).

The mean age of the victims was 13.6. The majority (76.4%) were adolescents, followed by school-age victims (17.8%) and preschool-age victims (8.8%). This result shows that the risk of child sexual abuse increases with age. Similarly, other studies have shown that adolescents are particularly vulnerable to sexual assault by peers (50). However, after the age of 15 years, the incidence of sexual abuse decreases. Several factors can explain this trend. First, children may learn to protect themselves against such

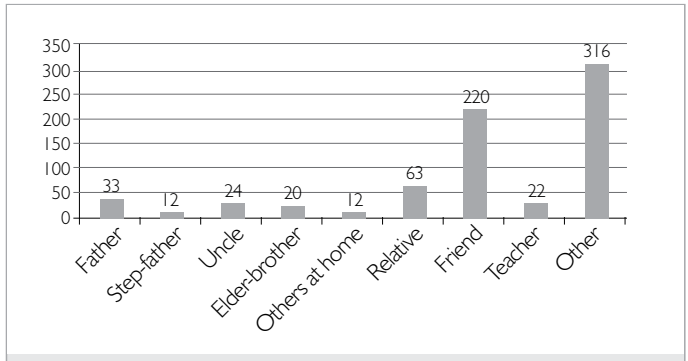

Figure 3. Distribution of the perpetrators

Table 1. Group differences in terms of appearance of any psychiatric disorder associated with the sexual abuse

		Appearance of psychiatric disorder	No appearance of psychiatric disorder	
		n (%)	n (%)	p[a]
Gender	Female	368 (74.6)	125 (25.4)	NS
	Male	65 (78.3)	18 (21.7)	
Age group	Children (n)	122 (74.4)	42 (25.6)	NS
	Adolescent (n)	311 (75.5)	101 (24.5)	
Abuse type	Sexual abuse without skin contact	16 (55.2)	13 (44.8)	**.006**
	Sexual contact	125 (72.7)	47 (27.3)	
	Indecent assault	80 (85.1)	14 (14.9)	
	Vaginal/anal penetration	198 (74.4)	68 (25.6)	
	Subjected to prostitution	14 (93.3)	1 (6.7)	
Perpetrator	A familiar person	347 (73.4)	114 (24.7)	NS
	Not a familiar person	86 (74.8)	29 (25.2)	
Incest	Present	79 (89.8)	9 (10.2)	**<.001**
	Absent	354 (72.5)	134 (827.5)	
Physical assault	Present	78 (97.5)	2 (2.5)	**<.001**
	Absent	355 (71.6)	141 (28.4)	
Another victim	Present	84 (77.1)	25 (22.9)	NS
	Absent	349 (74.7)	118 (25.3)	

Missing cases were excluded. NS: not significant. [a]: Chi-square tests.
Bold text indicates statistical significance.

assaults by the mid-adolescence age. Second, disclosure of sexual abuse may decrease as adolescents learn that disclosure incurs a social burden.

Vaginal/anal penetration was reported in upto .8%–31.9% of sexual abuse cases (51,52). Sexual intercourse took place in almost half (48.9%) of the cases in our sample (vaginal/anal penetration and/or subjected to prostitution). This rate appears to be higher than that in the previous studies. On the other hand, two previous studies conducted in Turkey reported that vaginal penetration of girls and anal penetration of boys were the most common types of sexual abuse among medico–legal referrals (20,53). These results suggest that more severe sexual abuse is reported to Turkish forensic units; however, less severe but more common types of sexual abuse could go unreported.

In agreement with the literature, we established that the perpetrators were generally known to their victims. Bahali et al. (42) reported that the majority (66.3%) of the victims had been abused by an acquaintance, and 33.7% had been abused by a stranger. Another study by several institutions in Turkey reported that adolescents are more likely to be abused than children by someone known to them (54). Finkelhor (50) reported that upto 33%–50% of the individuals who attacked girls were family members as compared with only upto 10%–20% of those who attacked boys. In general, abuse will be more harmful if the abuser is someone whom the child knows and trusts and if the abuse violates that trust (55).

In our study, 15.1% (n=91) of the cases involved incest. One recently published paper from Turkey reported incest rates of 14.4% among all the cases of childhood and adolescent sexual abuse (56). In 4.9% of the cases, the perpetrator was the victim's father. Another paper from Turkey found that the father was the attacker in 8.3% of the sexual abuse cases (57). The real rates may be much higher because incest is presumed to be the form of sexual abuse that is the most difficult to report.

Table 2. Regression analysis of the predictive value of several factors in the appearance of any psychiatric disorder related to sexual assault

Variables	B	SE	Odd's ratio	95% C.I.	p
Gender	−.42	.35	.65	.32–1.30	.2
Abuse severity	.11	.11	1.11	.91–1.37	.3
occurrence of incest	−.85	.42	2.36	1.04–5.33	**.04***
Presence of physical assault	2.52	.73	12.5	2.99–52.20	**.001****
Presence of another victim	.16	.30	1.17	.65–2.11	.6
Age	.03	.03	1.02	.96–1.10	.5
Duration since the first abuse	.001	.000	1.00	1.00–1.00	**.02***
Constant	2.42	1.12			**.03***

χ^2=55.42, d*f*=7, n=522, p<.001. *p<.05; **p<.01

Sexual abuse can cause and/or exacerbate various psychiatric symptoms, including fear, anxiety, thumb sucking, nail biting, and attention and behavioral problems. These symptoms may be severe and enduring and signify a psychiatric disorder (3,9,23,37). In our sample, 75.2% of the victims developed at least one psychiatric disorder associated with sexual abuse. However, a quarter of the patients did not develop any psychiatric disorders. Caffaro-Rouget et al. (58) and Mannarino et al. (59), respectively, reported that upto 49% and 31% of the sexually abused children were asymptomatic. A recent study conducted in Turkey found that only 12.1% of childhood sexual abuse victims did not display psychiatric symptoms (60). Some researchers suggest that sexually abused children who are initially asymptomatic may develop severe psychiatric disorders years after the trauma (61).

Stressful life experiences naturally increase the risk of psychiatric disorders such as anxiety disorders and major depression (62). Preclinical studies have shown that excessive or prolonged exposure to glucocorticoids and stress results in neurostructural alterations in limbic brain areas that may be involved in the pathogenesis of PTSD and other stress-related disorders (63,64). Numerous studies have linked major depression and dysthymia with sexual abuse (32). A history of sexual abuse has been implicated in the early onset of depressive disorders and altered response to standard medical treatments for depression. The form of sexual abuse (e.g., touching and penetration) and the victim's relationship to the offender (e.g., closest relative and stranger) appear to influence the development and severity of depression (65).

We identified major depressive disorder as the leading disorder associated with sexual trauma. In contrast, the majority of previous studies have found that PTSD is more common than depression (42,66,67).

The results of our regression analysis suggest that the occurrence of incest, additional physical assault, and delayed disclosure of trauma are predictive of a worse outcome. When the perpetrator of sexual abuse is a family member, the duration between first assault and first psychiatric assessment is likely to be longer, and we can conclude that sexual crimes in a familial context are more likely to be kept hidden and more traumatic for the victims. Our empirical results indicate that psychological dysfunction is more significant if the victim has a close emotional connection with the offender, if the abuse occurs over a prolonged period, if penetration is involved, and if force and coercion are used (58,68,69,70,71,72,73,74, 75,76).

Goodman-Brown et al. (77) reported that older children who were abused by a household member felt ashamed over it and worried about the adverse consequences of disclosure had the longest delay in reporting the abuse. Based on these findings, this study's proposed model of delayed revelation suggests that age, the perpetrator's relationship to the victim, feelings of guilt, and fear of potential outcomes are important variables in delayed revelation. These results show that child sexual abuse committed by family members and others known to the victim is less likely to be reported. At the same time, the disclosure of childhood sexual abuse brings a family into contact with medico–legal systems, which may cause secondary traumatization. This contact can further aggravate dysfunction in troubled families and even create new problems in families that otherwise had been functioning satisfactorily (78).

Study Limitations

We retrospectively used hospital files and forensic records. Although information was collected systematically, as described in the methods section, patients' developmental history and a number of psychosocial stress factors were not subjected to systematic review. Because all were patients referred from medico–legal units, the findings cannot be generalized to the whole population and other countries.

In conclusion, this is a leading study in exploring the factors predicting the appearance of psychiatric disorders associated with child and adolescent sexual abuse. To the best of our knowledge, this study involves the largest sample as compared with all other studies conducted on this subject in Turkey. Most of the sexually abused children had psychiatric disorders, most commonly depression and PTSD. Our findings reveal that the occurrence of incest, additional physical assault, and a long duration from first abuse to first psychiatric evaluation predict higher rates of sexual abuse-related psychiatric disorders. Child sexual abuse can result in severe sequelae, particularly if unrecognized and untreated. The results of this study can help develop preventive measures for victims of sexual abuse, aid in earlier recovery, and reduce the feelings of guilt associated with the trauma.

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