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RESEARCH

Childhood Trauma and Dissociative Symptoms in Patients Treated in the Forensic Psychiatry Service

Adli Psikiyatri Servisinde Tedavi Gören Hastalarda Çocukluk Çağı Travması ve Dissosiyatif Belirtiler

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Abstract

The aim of this study was to investigate the prevalence of dissociative symptoms and the relationship between childhood traumas and clinical variables in individuals who have committed crimes and are followed up in the forensic psychiatry service. 55 patients followed in Elazig City Hospital High Security Forensic Psychiatry (YGAP) service were included in the study. A semi-structured sociodemographic data form, Childhood Trauma Scale (CTQ-28) and Dissociative Experiences Scale (DES) were administered to all participants. The DES total score was 26.7±11.9 in delinquent patients with a diagnosis of mood disorder. A positive and significant correlation was found between DES amnesia, depersonalization/derealization subscores and CTQ-28 physical abuse, physical neglect, sexual abuse and minimalization subscores. According to the research findings, the frequency of having dissociative experiences is low in delinquent mood disorder patients, while it is high in other patient groups. It also suggests that it should be routinely investigated in terms of dissociative symptoms and childhood neglect-abuse in psychiatric patients who have committed crimes.

Keywords: Forensic psychiatry, childhood trauma, dissociative symptoms

Öz

Bu çalışmada, suç işlemiş olup adli psikiyatri servisinde takip edilen kişilerdeki dissosiyatif belirti yaygınlığı ve çocukluk çağı travmalarının klinik değişkenler ile ilişkisinin araştırılması amaçlanmıştır. Çalışmaya Elazığ Şehir Hastanesi Yüksek Güvenlikli Adli Psikiyatri (YGAP) servisinde takip edilen 55 hasta dahil edildi. Tüm katılımcılara yarı yapılandırılmış sosyodemografik veri formu, Çocukluk Çağı Travma Ölçeği (CTQ-28) ve Dissosiyatif Yaşantılar Ölçeği (DES) uygulandı. Bu çalışmada duygudurum bozukluğu tanılı suç işlemiş hastalarda DES toplam puanını 26,7±11,9 saptandı. DES amnezi, depersonalizasyon/derealizasyon alt puanları ile CTQ-28 fizikselistismar, fiziksel ihmal, cinselistismar ve minimalizasyon alt puanları arasında pozitif yönde anlamlı bir korelasyon tespit edildi. Araştırma bulgularına göre suç işleyen duygudurum bozukluğu tanılı hastalarda dissosiyatif yaşantılara sahip olma sıklığı düşük, diğer psikiyatrik hasta gruplarında ise yüksektir. Ayrıca bulgular suç işlemiş psikiyatri hastalarında dissosiyatif belirtiler ve çocukluk çağı ihmal-istismar açısından da rutin olarak araştırılması gerektiğini düşündürmektedir.

Anahtar sözcükler: Adli psikiyatri, çocukluk çağı travması, dissosiyatif belirtiler

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ONE must have full mental health to be penalized due to their offends against the law (Silva 2009). Previous studies consistently highlighted that 10% of offenders had mania, depression, delusions, or one of the other psychotic symptoms while committing a crime (Eastman et al. 2012). It is also known that individuals with a mental disorder show more frequent violent behaviors than the general population (İnan et al. 2018). For instance, those with bipolar disorder and schizophrenia are more prone to violence (Volavka 2013). Therefore, psychiatric patients showing violent behaviors are followed up in specialized forensic psychiatry units to receive proper treatment and rehabilitation and not to harm themselves and others (Martin 2001).

Dissociative experiences can be described in a broad spectrum of situations ranging from distraction, daydreaming, and forgetfulness that many can experience in daily life to dissociative identity disorder (Kılıç 2019). Dissociation may not only be in the form of a personality trait but also appear as a defense mechanism against trauma or as a symptom in some mental disorders. Individuals with dissociative experiences often have a history of childhood trauma (Şarlak and Öztürk 2018). In clinic examinations, such individuals may show the inability to remember things in a way that cannot be explained with a normal forgetfulness and a feeling of alienation from the social milieu and own self (Şar 2018).

Some studies suggest that psychotic symptoms may be dissociative symptoms associated with past traumatic experiences (Moskowitz et al. 2009). Previously, childhood traumas were shown to be linked with dissociative symptoms in individuals with schizophrenia (Şener et al. 2020). Moreover, the research revealed that being exposed to physical neglect in the past may be an indicator of following adult dissociation in patients with psychosis (Vogel et al. 2009). The studies also suggested that offenders without psychiatric disorders have dissociative experiences, which are associated with emotional abuse and childhood traumas (Deniz 2017).

On the other hand, the research interest seems to miss the relationship between childhood traumas and dissociative symptoms in those admitted to forensic psychiatry services. Therefore, the present study aimed to uncover the frequency of childhood traumas and dissociative symptoms in offender psychiatric patients. Accordingly, we can understand the reasons for patients' turning into crime, and the crime rates can be reduced by adopting preventive measures.

Method

Sample

The Fırat University, Non-Interventional Research Ethics Committee granted the ethical approval to our study (No: E-97132852-050.01.04-40902, dated 03.05.2021), and we carried out all research procedures following the Declaration of Helsinki. For this cross-sectional study, we reached out to 80 individuals admitted to Elazığ Fethi Sekin Hospital, High-security Forensic Psychiatry Service between 05.15.2021 and 06.30.2021. Nevertheless, we excluded those unable to respond to questions, with a neurological disorder history, with hearing and speech disabilities, and with alcohol and substance use history in the last six months. Then, we had to exclude ten of the participants who did not want to continue in the study and fifteen who left missing items on the scales. Consequently, our sample group consisted of 55 male patients since

women's forensic service was not operated at the study time. An experienced psychiatrist conducted the structured interviews (at least 30 minutes per each) following DSM-5 criteria in the psychiatry outpatient clinic.

Procedure

After obtaining written consent from the participants and/or their guardians, the psychiatrist also asked participants to fill out a questionnaire booklet covering a sociodemographic information form, the Dissociative Experiences Scale (DES), and the Childhood Trauma Questionnaire (CTQ-28). At the beginning of the study, the sample size was planned by performing power analysis with G*Power program 3.1 for linear multiple regression R2 increase. The software recommended 86 participants (.80 power, .15 effect size at standard .05 alpha error probability). Considering the possibility of data loss, the data collection process was stopped when the number of participants reached 117. Although 117 people participated in the study, the data of 37 participants who did not fully respond to all scales were excluded. Thus, the number of people who completed all the scales was 80. Since reaching cancer patients during the pandemic was difficult due to factors related to accessibility and motivation, no further attempts were made to reach additional participants. Thus, these 80 participants formed the final sample of the study.

Measures

Sociodemographic and clinical data form

We prepared this semi-structured form to include sociodemographic and clinical data of the participants such as age, marital status, educational attainment, socioeconomic status, diagnosis, family history, psychiatric treatment history, smoking and alcohol/substance use history, self-mutilation and suicide attempt, criminal background, and reason for admitted to the forensic service.

Childhood Trauma Questionnaire (CTQ-28)

It is a self-report measure retrospectively inquiring about the experiences of abuse and neglect in childhood and adolescence. Şar et al. adapted the scale in Turkish in 1996 (Bernstein et al. 1994, Şar et al. 2012). The scale consists of five subscales: emotional abuse, physical abuse, sexual abuse, physical neglect, and emotional neglect. The scores range between 5-25 for subscales, while the total score varies between 25-125; however, scores from positive statements are reversed before calculating subscale scores. High scores indicate frequent childhood traumas. In our study, we used the 28-item version of the scale and found its Cronbach's alpha value to be 0.91.

Dissociative Experiences Scale (DES)

It is a measure developed to screen dissociative experiences (Bernstein and Putnam, 1986). Respondents assign a percentage value between 0% and 100% to each item, and the overall score is the mean value of the assigned scores. The studies in our country suggest that psychiatric patients with a total score of 30 and above are likely to have a dissociative disorder; therefore, we took the cut-off point of the scale as 30 in our study. The DES consists of three subscales: absorption, amnesia, and depersonaliza-

tion/derealization. Şar et al. performed validity and reliability studies of its Turkish version (Şar et al. 1997). We calculated its Cronbach's alpha value to be 0.93.

Statistical analysis

We run the analyses on the SPSS 22.0 package program (Statistical Package for Social Sciences; SPSS Inc., Chicago, IL). In the study, we presented categorical descriptive data as numbers and percentages, and while continuous data were shown as mean±standard deviation (mean±SD) and median, and interquartile range (25-75 percentiles). We compared categorical variables between the groups using a Chi-square test (Pearson Chi-square). We checked whether the continuous variables showed a normal distribution using a Kolmogorov-Smirnov test. Accordingly, for paired comparisons, we used a Student's T-test and Mann-Whitney U-test on normally and non-normally distributed data, respectively. For multiple group comparisons, we used a one-way ANOVA and Kruskal-Wallis test in normally and non-normally distributed data. Then, we explored the relationships between the variables using Pearson and Spearman correlation tests. In all statistical analyses, we accepted the $p<0.05$ level to be statistically significant.

Results

We carried out the study with a total of 55 patients admitted to Elazığ Fethi Sekin City Hospital, High-security Forensic Psychiatry Service. Table 1 presents the sociodemographic characteristics of the participants. By their diagnoses, 17 participants (30.9%) suffered mood disorders, 34 (61.8%) had psychotic disorders, and 4 (7.3%) were struggling with other conditions (multiple psychiatric diagnoses) (Table 1).

The results revealed that the participants with secondary education had significantly higher mean DES (p=0.036) and CTQ-28 (p=0.018) scores than the group with high school and above education. We also found that there was a significant difference between the mean CTQ-28 scores of the groups by socioeconomic status (p=0.005); those with high socioeconomic status got significantly lower scores on the CTQ-28 than the other two groups. Besides, the mean CTQ-28 scores of those who had received psychiatric treatment were significantly lower than those who had not (p=0.028). The mean DES (p=0.005) and CTQ-28 (p=0.035) scores of those with self-mutilation were found to be significantly higher than those without. We determined that the smokers had significantly higher mean DES scores than the non-smokers (p=0.006), while the alcohol/substance users had significantly higher CTQ-28 scores than the others (p=0.027). There were significant differences between diagnoses by DES scores (p=0.016); those with a mood disorder had significantly lower mean DES scores than the group diagnosed for other disorders (Table 2 and Table 3).

There were positive and significant correlations between absorption scores and all other scores, except for emotional abuse. We found positive and significant correlations between amnesia scores and all other scores. Again, we determined positive and significant correlations between depersonalization/derealization scores and all other scores, except for physical abuse. We found positive and significant relationships between the DES total score and all other scores. There were positive and significant associations between emotional neglect scores and all other scores, except for sexual abuse; it was also the case for physical neglect.

Table 1. Sociodemographic characteristics of the patients

Variable		n (%)
Marital status	Single	39 (70.09)
	Married	16 (29.1)
Educational attainment	Secondary school and below	39 (70.9)
	High school and above	16 (29.1)
Place of residence	Village	11 (20.0)
	District	20 (36.4)
	City	24 (43.6)
Socioeconomic status	Low	24 (43.6)
	Moderate	25 (45.5)
	High	6 (10.9)
Employment status	Employed	28 (50.9)
	Unemployed	27 (49.1)
Disorder duration	Less than 5 years	17 (30.9)
	5-10 years	12 (21.8)
	More than 10 years	26 (47.3)
Psychiatric treatment history	Yes	50 (90.9)
	No	5 (9.1)
Self-mutilation	Yes	12 (21.8)
	No	43 (78.2)
Suicide attempt	Yes	13 (23.6)
	No	42 (76.4)
Smoking	Yes	36 (65.5)
	No	19 (34.5)
Alcohol/substance use history	Yes	13 (23.6)
	No	42 (76.4)
Psychiatric diagnosis	Mood disorders	17 (30.9)
	Psychotic disorders	34 (61.8)
	Other	4 (7.3)

M±SD: Mean±Standard Deviation

Table 1. Comparison of the Patients' DES scores by their sociodemographic characteristics

Variable		DES total	
		mean±SD	p
Marital status	Single	33.0±11.5	0.119*
	Married	27.4±12.4	
Educational attainment	Secondary school and below	33.5±12.4	**0.036***
	High school and above	26.1±9.0	
Place of residence	Village	31.8±11.5	0.510**
	District	28.9±6.7	
	City	33.1±15.3	
Socioeconomic status	Low	33.1±10.7	0.317**
	Moderate	31.2±13.3	
	High	24.8±10.0	
Employment status	Employed	31.3±12.1	0.986*
	Unemployed	31.4±12.0	
Disorder duration	Less than 5 years	29.9±7.5	0.647**
	5-10 years	29.9±14.3	
	More than 10 years	32.9±13.3	
Psychiatric treatment history	Yes	30.6±11.8	0.143*
	No	38.8±12.5	
Self-mutilation	Yes	39.7±12.1	**0.005***
	No	29.0±11.0	
Suicide attempt	Yes	35.9±15.7	0.116*

	No	29.9±10.4	
Smoking	Yes	34.0±13.2	**0.006***
	No	26.2±7.0	
Alcohol/substance use history	Yes	35.9±15.6	0.120*
	No	29.9±10.4	
Psychiatric diagnosis	Mood disorders	26.7±11.9[a]	**0.016****
	Psychotic disorders	32.3±10.6[a,b]	
	Other	44.4±14.6[b]	

*T-test for independent samples ** One-way ANOVA.; a,bSource of difference; DES: Dissociative Experiences Scale; Mean±SD: Mean±Standard Deviation

Table 3. Comparison of the patients' CTQ-28 scores by their sociodemographic characteristics

Variable		**CTQ-28 total**	
		Median (IQR)	
Marital status	Single	65.0 (58.0-77.0)	0.159*
	Married	63.0 (55.0-65.0)	
Educational attainment	Secondary school and below	65.0 (60.0-77.0)	0.018*
	High school and above	60.5 (53.0-65.0)	
Place of residence	Village	64.0 (62.0-77.0)	0.812**
	District	65.0 (56.5-67.0)	
	City	63.0 (53.5-75.0)	
Socioeconomic status	Low	66.5 (63.0-76.5)[a]	0.005**
	Moderate	64.0 (55.0-71.0)[a]	
	High	53.5 (51.0-58.0)[b]	
Employment status	Employed	64.0 (56.5-73.5)	0.768*
	Unemployed	65.0 (55.0-74.0)	
Disorder duration	Less than 5 years	62.0 (55.0-67.0)	0.703**
	5-10 years	67.0 (53.0-74.5)	
	More than 10 years	64.5 (60.0-74.0)	
Psychiatric treatment history	Yes	64.0 (55.0-68.0)	0.028*
	No	77.0 (74.0-81.0)	
Self-mutilation	Yes	77.0 (63.5-81.5)	0.035*
	No	64.0 (55.0-67.0)	
Suicide attempt	Yes	65.0 (53.0-78.0)	0.797*
	No	64.0 (58.0-68.0)	
Smoking	Yes	65.0 (59.0-75.5)	0.425*
	No	63.0 (55.0-67.0)	
Alcohol/substance use history	Yes	74.0 (62.0-82.0)	0.027*
	No	64.0 (55.0-67.0)	
Psychiatric diagnosis	Mood disorders	62.0 (55.0-67.0)	0.455**
	Psychotic disorders	65.0 (60.0-74.0)	
	Other	70.0 (57.0-78.5)	

*Mann-Whitney U test, **Kruskal-Wallis test. IQR: Interquartile Range a,bSource of difference; CTQ-28: Childhood Trauma Questionnaire

Emotional abuse was significantly correlated with sexual abuse, minimalization, and the CTQ-28 total score. There were positive and significant correlations between physical abuse scores and minimalization scores and the CTQ-28 total score. Finally, we determined a positive and significant correlation between minimalization scores and the CTQ-28 total score (Table 4).

Table 2. Correlations between the patients' scores

	Absorption	1	2	3	4	5	6	7	8	9
1. Amnesia	.650**									
2. Depersonalization/derealization	.690**	.663**								
3. DES total	.861**	.836**	.790**							
4. Emotional neglect	.498**	.484**	.380**	.578**						
5. Physical neglect	.331*	.359*	.408**	.399**	.647**					
6. Emotional abuse	.233	.297*	.364**	.336*	.704**	.725**				
7. Physical abuse	.325*	.277*	.184	.301*	.568**	.406**	.203			
8. Sexual abuse	.290*	.443**	.268*	.394**	.251	.015	.286*	-.108		
9. Minimalization	.380**	.354**	.409**	.478**	.669**	.722**	.651**	.396**	.099	
10. CTQ-28 total	.449**	.447**	.417**	.530**	.889**	.864**	.818**	.570**	.220	.826**

*p<0.05, **p<0.01. The numbers in the first column refer to the numbers in the first row.; CTQ-28: Childhood Trauma Questionnaire; DES: Dissociative Experiences Scale

Discussion

In this study, it is noteworthy that we found the mean DES score to be 26.7±11.9 (DES negative) in those with a diagnosis of mood disorder and 32.3±10.6 (DES positive) in those with a psychotic disorder, which implies that offenders with a mood disorder do not experience dissociative symptoms while others do. Another significant finding is that childhood traumas are likely to increase the frequency of dissociative symptoms in offender psychiatric patients in their adulthood. It is well-known that a history of childhood trauma is associated with dissociative symptoms (Yargiç et al. 1994). In a study, the researchers found childhood sexual abuse, physical abuse, and neglect trauma experiences to be significantly more prevalent in male patients with an antisocial personality disorder than in their healthy counterparts. They also reported significantly more dissociative experiences in this patient group (Semiz et al. 2007). In this study, we found positive and significant correlations between absorption and all other scores, except for CTQ-28 emotional abuse, which suggests that the dissociative symptoms in our patient group may be related to their past traumas.

In a study, offenders without a psychiatric disorder were found to have more frequent dissociative experiences (Deniz 2017). It is also known that psychiatric disorders accompanied by dissociative symptoms are common among prison populations (Zavattini et al. 2015). We found that patients with a mood disorder had the mean DES score of <30; that is, they experienced no dissociative symptoms when compared to other groups. Besides, there is substantial evidence that dissociative symptoms are prevalent among bipolar disorder patients with a history of substance use or neglect/abuse (Aas et al. 2016). However, a meta-analysis concluded that bipolar disorder patients have lower mean DES scores than other psychiatric patients, similar to our study (Lyssenko et al. 2018). Thus, it can be asserted that offenders with a mood disorder experience less frequent dissociation symptoms.

Previous studies proved that maltreated children have frequent dissociative symptoms and low academic achievement (Perzow et al. 2013). In addition, those exposed to violence in childhood have insufficient academic performance (Covey et al. 2013). In this study, we found that patients with low educational attainments had an increased history of childhood trauma and dissociative experiences in adulthood. This situation may suggest that past traumatic experiences may disrupt education, which, in turn, may lead to dissociative experiences and a tendency to crime in the future.

The mean DES and CTQ-28 scores of the patients with self-mutilation were significantly higher than those without self-mutilation. Trauma victims may try to tranquilize themselves by harming themselves when they think of the bad events they experienced in the past. It was reported that 60% of those with self-harm have a history of sexual and/or physical abuse (Brodsky et al. 1995; Aksoy and Ögel 2003). Accordingly, our findings overlap what was found in the literature before.

The mean age of our sample was 37.3±9.7 years. In a study with forensic psychiatry patients, the mean age was 38.17±9.00 years, which is similar to our study (Ural et al. 2013). Besides, more than half of the offender patients had psychosis, consistent with other studies (Lymburner and Roesch 1999, Öncü et al. 2002). Low socioeconomic status increases childhood neglect/abuse (Assari 2020). We can assert that individuals have to work at an early age in families with low socioeconomic status to contribute financially to the family, which may cause engaging in criminal behaviors for various reasons. Accordingly, we also discovered that 89.1% of the patients had low socioeconomic status, and these patients had experienced childhood traumas more (Dönmezler 2000). Economic difficulties may make it easier to commit crimes. Regarding educational background, we found that 70.9% of the patient group had secondary school and below education. In the literature, it is suggested that offenders often have low educational attainments (Kızmaz 2004).

The majority of our patients (65.5%) were smokers, and the mean DES scores of the smokers were significantly higher than those of the non-smokers. Gürkan et al. (2019) reported that offender schizophrenia patients smoked more than other schizophrenia patients. We think that the patients may have smoked to reduce their dissociation symptoms. Besides, the patients with alcohol/substance use history had higher mean CTQ-28 scores than the other patients. It is known that people with alcohol and substance use disorders are likely to be exposed to childhood traumas (Evren and Ögel 2003). Therefore, offender psychiatry patients may use alcohol or substance to relieve their mental pain caused by their past traumas.

There were positive and significant correlations between absorption scores and all other scores, except for emotional abuse. In other words, the more increased physical and sexual abuse and emotional and physical neglect the patients had, the more they experienced a loss of conscious awareness and a decrease in their awareness of themselves and their environments. Neglected and/or abused individuals may recall their memories vividly even years later (Topçu 2009). Previous studies also demonstrated the relationship between absorption and trying to ignore pain (Seligman and Kirmayer 2008); absorption may be utilized in such patients for this purpose. Furthermore, there were positive and significant correlations between amnesia scores and other scores. Similarly, as the patients experienced increased physical, emotional, and sexual abuse and emotional and physical neglect, they had elevated forgetfulness. Dissociative amnesia is frequently seen in those chronically abused in childhood, and these individuals experience more severe amnesia (Freyd 1996). In addition, as the depersonalization/derealization scores of the patients increased, their other scores significantly increased, except for physical abuse scores. Studies emphasized that childhood traumas are robustly associated with depersonalization (Draijer and Langeland 1999). Finally, there were positive and significant correlations between the DES total score and the CTQ-28 total and subscale scores. It is known that available coping skills do not work in case of exposure to childhood traumas, dissociative

experiences emerge as a kind of coping mechanism, and there is a strong link between dissociative experiences and traumas (Wolf and Nochajski 2013).

This study bears some limitations. Firstly, it was a cross-sectional study and recruited a relatively small number of patients. Secondly, the relevant literature hosts not similar studies with which we can compare our findings in terms of cause-effect relationships. Then, we could administer the scales after the crime dates, while the offender patients were under treatment. Finally, the patients may not have given candid responses when asked about their childhood and sexual abuse traumas due to the fear of being shamed, blamed, or excluded. These limitations can be overcome with prospective studies with a larger number of patients and including pre- and post-crime evaluations.

Conclusion

Our findings showed that the patients who committed crimes and were hospitalized in the psychiatry service might have been exposed to traumas in the past, and such negative experiences may continue in their adulthood and cause both dissociative symptoms and committing a crime. Early detection of such situations and providing the necessary treatments may reduce crime rates and improve the quality of life of psychiatric patients and the whole society. For this reason, psychiatric patients need to receive effective trauma and dissociation-oriented treatments, as well as medical treatments. We also believe that psychosocial support during and after hospitalization in forensic services may help reduce future crime rates.

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