

Prevalence and Association of Childhood Traumas, Dissociative Experiences and Post Traumatic Stress Disorder

Travma Sonrası Stres Bozukluğu Prevalansı, Çocukluk Çağı Travmaları ve Dissosiyatif Belirtilerle İlişkisi

İrem Ekmekçi Ertek¹, Mustafa Necmi İlhan², Asiye Uğraş Dikmen², Melih Gözükara³

¹Department of Psychiatry, Faculty of Medicine, Gazi University, Ankara, Turkey

²Department of Public Health, Faculty of Medicine, Gazi University, Ankara, Turkey

³Amasya Central Community Health Center, Amasya, Turkey

ABSTRACT

Objective: This study aimed to investigate the prevalence of Post-traumatic stress disorder (PTSD), childhood traumas and dissociative experiences among primary health care applicants.

Methods: In this cross-sectional study, Post-traumatic stress disorder checklist-5 (PCL-5), Childhood Trauma Questionnaire (CTQ), and Dissociative Experiences Scale (DES) were applied to 303 participants with face-to-face interviews who applied to primary health care institutions from different socioeconomic regions for any reason.

Results: The prevalences of PTSD, dissociative experiences, and childhood traumas were found as 11.1%, 6%, and 74.2%, respectively. The most common type of childhood trauma was physical neglect. Dissociation was positively correlated with PTSD and childhood traumas, and PTSD was positively correlated with childhood traumas. Participants with emotional, physical, and sexual abuse were more likely to have PTSD and dissociation.

Conclusion: Childhood trauma, dissociation and PTSD are three concepts that frequently coexist and interact with each other. Besides its frequency, negative effect of PTSD on functionality points to the importance of preventive mental health services. Primary health care centers have critical importance in recognizing these comorbidities as being the first-line destination for a large proportion of these patients.

Keywords: prevalence; PTSD; childhood trauma; dissociation; primary health care

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ÖZET

Amaç: Bu çalışmada birinci basamak sağlık kuruluşuna başvuranlarda travma sonrası stres bozukluğunun (TSSB) prevalansı ve çocukluk çağı travmaları ve dissosiyatif belirtilerle ilişkisinin araştırılması amaçlanmıştır.

Yöntem: Kesitsel tipteki çalışmada farklı sosyoekonomik bölgelerdeki birinci basamak sağlık kuruluşlarına herhangi bir nedenle başvuran 303 katılımcı ile yüz yüze görüşülerek DSM-5 için Travma Sonrası Stres Bozukluğu Kontrol Listesi, Çocukluk Çağı Ruhsal Travma Ölçeği ve Dissosiyatif Yaşantılar Ölçeği uygulanmıştır.

Bulgular: TSSB, dissosiyatif yaşantı ve çocukluk çağı travmalarının prevalansları sırasıyla %11,1, %6 ve %74,2 olarak bulundu. En sık görülen çocukluk çağı travması fiziksel ihmaldi. Dissosiasyon ile TSSB ve çocukluk çağı travmaları arasında pozitif korelasyon bulunurken; benzer şekilde TSSB ile çocukluk çağı travmaları arasında da pozitif korelasyon bulundu. Duygusal, fiziksel ve cinsel istismar öyküsü bulunanlarda TSSB ve dissosiyatif yaşantı sıklığı daha fazla bulundu.

Sonuç: Çocukluk çağı travması, dissosiasyon ve TSSB, birliktelikleri ve etkileşimleri sık görülen üç kavramdır. TSSB'nin sık görülmesinin yanında işlevselliğe olan olumsuz etkisi koruyucu ruh sağlığı hizmetlerinin önemine dikkat çekmektedir. Hastaların büyük bir kısmının ilk başvuru yeri olması açısından birinci basamak sağlık kuruluşları bu komorbiditelerin tanınmasında kritik öneme sahiptir.

Anahtar Sözcükler: prevalans; TSSB; çocukluk çağı travması; dissosiasyon; birinci basamak sağlık kuruluşu

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ORCID IDs: İ.E.E.000-0002-7529-7123, M.N.İ.0000-0003-1367-6328, A.U.D.0000-0002-3204-7562, M.G.0000-0002-6147-4053

Yazışma Adresi / Address for Correspondence: İrem Ekmekçi Ertek, MD Department of Psychiatry, Faculty of Medicine, Gazi University, Ankara, Turkey, E-mail: iremekmekci@gazi.edu.tr

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INTRODUCTION

PTSD is a chronic mental disease characterized by symptoms of intrusion (e.g., flashbacks, nightmares); avoidance (e.g., trauma-related thoughts, feelings or places); cognition or mood (e.g., persistent negative trauma-related emotions, dissociative amnesia) and arousal (e.g., irritability, sleep problems) that occur aftermath a trauma. Traumatic events include exposing to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence via direct exposure, witnessing the trauma, learning that a relative or close friend was exposed to trauma, or indirect exposure in the course of professional duties (1). Despite the fact that almost half of the population experience at least one traumatic event; not all of them develop PTSD; as a meta-analysis reported a 7.9% lifetime prevalence of PTSD (2). This complexity has been the subject of many studies examining the risk factors for PTSD, a disease that can be classified as a public health issue due to its effects on the individual, social, and community level (3). Both physical and psychiatric conditions frequently accompany PTSD and this association may not only contribute to the disabling effects of PTSD but also confuse the process of the diagnosis. The lifetime prevalence of any psychiatric disorder comorbid with PTSD is approximately 80%; most notably substance use disorders, depression, and anxiety disorders (4). Besides; general physical symptoms, medical and pain-related conditions are also common in patients with PTSD (5). All these eventually result with increased rates of morbidity, mortality (6), and healthcare utilization (7).

The prevalence of PTSD can vary among populations. The severity of trauma experiences of societies, social support systems, social and cultural differences may act on PTSD development (8). According to the World Health Organization (WHO) World Mental Health Surveys, the lifetime prevalence of PTSD ranges from 0.3% in China to 6.1% in New Zealand (9). It may also differ between specific populations; for example, in the Gulf War Veteran population the prevalence of PTSD was reported as 10.1% and in Operation Iraqi Freedom service members as 13.8% (9). Individual risk factors include personal and family histories of psychological problems, prior trauma, peritraumatic emotional response, and dissociation (2).

Dissociation is a disruption of and/or discontinuity in the integration of one's psychological functioning. In this case, association and coordination can be interrupted in consciousness memory, identity, perception, or behavior (10). Dissociative processes can act as a defense mechanism to reduce stress levels in response to traumatic events. Thereby; intolerable thoughts, feelings, and memories are separated from consciousness to cope with the effects of the trauma (11).

Both the severity and the timing of the trauma have been shown to affect symptoms of dissociation and PTSD (12). Childhood trauma that has been encountered in a sensitive developmental period, is a strong risk factor for PTSD and dissociation as well as many other psychopathologies (13). Dissociation, which primarily functions as a coping mechanism, becomes increasingly widespread in people with multiple traumas, making it difficult to perceive trauma-related signs and lay the groundwork for new traumas (14). Therefore; dissociation is not only a phenomenon comorbid with PTSD but also mediates the association between trauma and PTSD (15).

This complex and bidirectional relationship between trauma and dissociation is related to some psychological and physiological responses (16) and also with poor treatment outcomes in trauma-focused therapies (17). Considering their frequency and accompanying physical and psychiatric comorbidities, it can be concluded that patients with traumatic and dissociative symptoms may be likely to present in primary care settings mostly for medical rather than psychiatric complaints. However; the unwillingness of patients to talk about their traumas and not considering them related to the current problem lead to under detection of PTSD in primary care services (18).

There has been a great deal of research on PTSD in specific populations and psychiatric settings, yet population-based studies are still insufficient. In Turkey, the literature on PTSD mostly focused on earthquakes or terrorism attacks that are common in the country (19,20). However; epidemiological studies are limited. In this study, it was aimed to investigate the prevalence of PTSD, childhood traumas, and dissociative experiences and the relationship between them in primary care settings.

METHODS

This cross-sectional study was conducted with the participants with the age of 18 and older who applied to primary health care institutions for any reason. These 12 primary healthcare centers were chosen from different socioeconomic regions of Ankara, Turkey. As an average of 1200 patients apply to those primary health care institutions per week; it was aimed to reach a minimum of 292 participants with 50% of the unknown frequency, 2% deviation, and 95% confidence interval and in total it was reached to 303 participants. A face-to-face questionnaire was administered using the simple random sampling method to individuals who agreed to participate in the study and gave written consent. Ethical approval of this study was granted by the Ethical Committee of Gazi University with the number of 01 and date 07.01.2020. A sociodemographic data form was used to examine the demographic characteristics of the patients.

Post-traumatic stress disorder checklist-5 (PCL-5) was used to evaluate PTSD. It is a self-report scale consisted of 20-items with a 5-point Likert. The Turkish version of the scale was made by Boysan et al. with an internal consistency ranging from 0.94–0.97 for the overall scale. A cut-off score of 48 was proposed with high sensitivity for community samples (21).

Childhood trauma was assessed by a Turkish version of the Childhood Trauma Questionnaire (CTQ). It is a 28-item self-report questionnaire originally developed by Bernstein and colleagues. The Turkish validity and reliability of the scale was conducted by Şar et al. and consists of 28 questions with five subscales which are emotional and physical neglect and emotional, physical, and sexual abuse. In the adaptation study, the internal coefficient of consistency was 0.93 and test-retest reliability was 0.90. Cut-off scores were indicated as >5 for sexual and physical abuse, >7 for emotional abuse and physical neglect, >12 for emotional neglect, and >35 for total score (22). For dissociative symptoms, the Dissociative Experiences Scale (DES) was used. The DES is a 28-item self-report instrument developed by Bernstein. The Turkish version of the scale has good reliability and validity and the scale scores over 30 cut-off point, indicate a possible dissociation (23).

The research data were evaluated by SPSS 23.0 statistical package program. The suitability of the variables to the normal distribution was examined using visual (histogram and probability graphics) and analytical methods (Kolmogorov-Smirnov test). It was found that the data fit the non-parametric distribution. Descriptive variables are presented as percentages. Pearson Chi-Square Test, Yates corrected Chi-Square test and Fisher's Exact Test were used in the evaluation of categorical variables, and Spearman Correlation Test was used for continuous numerical variables. Results were accepted at a 95% confidence interval, with statistical significance as $p < 0.05$.

RESULTS

Table 1 shows some sociodemographic variables of the participants. The majority of the participants were between 26 and 35 years old, graduated from university, had a monthly family income of 2021-4040 Turkish Liras. 29.8% of the participants had a chronic physical disease and 6% of them were diagnosed with a psychiatric disorder.

Table1. Sociodemographic Characteristics of the Participants

	N	(%)*
Age Group (n=291)		
18-25	65	22.3
26-35	80	27.5
36-45	55	18.9
46-64	73	25.1
65 and older	18	6.2
Education (n=299)		
Illiterate	4	1.3
Primary school	76	25.4
High school	90	30.1
University	129	43.1
Monthly Income (n=269)		
0-2020 TL	26	9.7
2021-4040 TL	97	36.1
4041-6060 TL	74	27.5
6061 TL and above	72	26.8
Native Language (n=297)		
Turkish	292	98.3
Kurdish	5	1.7
Birthplace (n=303)		
Ankara	128	42.2
Other	175	57.8
Living Place (n=303)		
Ankara	288	95.0
Other	15	5.0
Migration (n=303)		
No	275	90.8
Yes	28	9.2
Working Status (n=284)		
Working	141	49.6
Unemployed	36	12.7
Housewife	50	17.6
Retired	36	12.7
Student	21	7.4
Chronic Physical Disease (n=299)		
No	210	70.2
Yes	89	29.8
Psychiatric Disorder (n=300)		
No	282	94.0
Yes	18	6.0
Family History of Psychiatric Disorder (n=299)		
No	263	88.0
Yes	36	12.0

* Column percentage

The sociodemographic form also consisted of other questions related with trauma and according to this, 51.5% of the sample stated that they experienced at least one traumatic event in their life. 27.5% of them had direct exposure to trauma, whereas 44.2% of them witnessed or indirectly learned a family member or a close friend's trauma and 5.1% had repeated exposure to trauma in the course of professional duties.

Traumatic events were mostly consisted of death or threatened death (57.3%), actual or threatened serious injury (44.3%), and actual or threatened sexual violence (6.9%). Most of the participants (90.3%) stated that they did not get help from any support organization after trauma. Only 18 participants (11.3%) reported seeking help for mental and emotional problems and 16 (64%) of the participants who received treatment stated that they got better after the treatment. 92.3% of the participants were not on active treatment period for trauma.

Table 2. Prevalences of PTSD, Dissociative Experiences and Childhood Traumas

	N	(%)*
PTSD	30	11.1
Dissociative Experiences	17	6
Childhood Traumas	201	74.2
Emotional neglect	79	26.9
Physical neglect	105	36.3
Emotional abuse	78	26.9
Physical abuse	43	14.6
Sexual abuse	32	10.9

* Column percentage

According to the scale scores; prevalences of PTSD, dissociative experiences, and childhood traumas were 11.1%, 6%, and 74.2%, respectively. The most common type of childhood trauma was physical neglect (36.3%) (Table 2).

Table 3. Relationship of Scale Scores with Sociodemographic Variables

	PTSD		Dissociation		Childhood Trauma	
	N	(%)*	N	(%)*	N	(%)*
Age (n=261)						
≤25	10	16.7	5	8.2	33	55.9
>25	19	9.5	10	4.7	160	79.6
	p=0.185**		p=0.337**		p<0.001****	
Gender (n=269)						
Female	11	7.5	8	5.1	105	70.9
Male	19	15.6	9	7.3	164	78.3
	p=0.036***		p=0.615***		p=0.169****	
Marital Status (n=267)						
Single	15	16.0	6	6.4	54	60
Married	14	9.5	11	6.9	121	80.1
Divorced/Widow	1	3.8	0	0	23	92
	p=0.138***		p=0.375****		p<0.001****	
Education (n=268)						
Primary school	3	4.0	3	4.0	66	88.0
High school and above	27	14.0	14	6.8	133	69.3
	p=0.035**		p=0.573****		p=0.002****	
Working status (n=254)						
Working	20	15.6	10	7.6	93	72.7
Unemployed	5	13.9	2	5.7	24	72.7
Housewife/Retired/Student	3	3.3	1	1	73	78.5
	p=0.014***		p=0.066****		p=0.588****	
Monthly income (n=244)						
0-2020	2	8.3	2	8.0	21	84.0
2021-4040	9	9.7	5	5.4	72	79.1
4041-6060	8	11.9	7	10.1	46	71.9
6061 and above	8	13.3	3	4.5	43	69.4
	p=0.866***		p=0.554****		p=0.347****	
Native language(n=267)						
Turkish	28	10.6	17	6.2	193	73.9
Kurdish	2	50	0	0	4	80
	p=0.064****		p****		p=1.000**	
Birthplace (n=271)						
Ankara	13	10.7	4	3.2	85	70.2
Other	17	11.4	13	8.1	116	77.3
	p=0.844***		p=0.136***		p=0.185****	
Migration (n=66)						
No	6	13.6	4	9.3	27	62.8
Yes	4	18.2	3	10.7	20	87.0
	p=0.720****		p=1.000**		p=0.048**	

*: raw percentage **: Fisher's Exact Test ***: Yates Corrective Chi-Square Test ****: Pearson Chi-Square Test *****: the "p" value could not be calculated since one of the cells is zero

In Table 3, the relationship of scale scores with demographic variables is shown. Participants older than 25 years old were significantly more likely to have childhood traumas than the ones younger than 25 but the same significance was not found in PTSD and dissociation. The frequency of PTSD was significantly higher in male participants whereas dissociation and childhood traumas did not differ between genders.

There was a significant difference in childhood traumas according to marital status and posthoc pairwise comparisons revealed that the difference was between the single-married groups ($p < 0.001$) and the single-divorced / widowed groups ($p = 0.003$). Primary school graduates were more likely to have childhood traumas but less likely to have PTSD. Working status had only a significant relationship with PTSD and according to posthoc comparisons, the statistical difference is due to the housewives/students / retired group. Participants with a history of migration were more likely to have childhood traumas. Monthly income, native language, or birthplace had no statistically significant relationship with any of the scales.

Table 4. Correlations between PTSD, dissociation, and childhood traumas

		Dissociation	PTSD	Childhood traumas
Dissociation	Spearman R*		0.521	0.165
	p**	1	<0.001	0.008
	N		258	261
PTSD	Spearman R*	0.521		0.146
	p**	<0.001	1	0.020
	N	258		252
Childhood traumas	Spearman R*	0.165	0.146	
	p**	0.008	0.020	1
	N	261	252	

*: Correlation Coefficient **: $p < 0,05$

Statistically significantly, there was a moderate positive correlation of the dissociation with PTSD ($p < 0.001$) and a weak positive correlation with the childhood traumas ($p = 0.008$). There was a statistically weakly positive correlation between PTSD and childhood traumas ($p = 0.020$).

When examining the effect of the type of childhood trauma on PTSD and dissociation; it was found that participants with emotional, physical, and sexual abuse were more likely to have PTSD and dissociation but there was not a statistically significance regarding emotional and physical neglect.

DISCUSSION

In this cross-sectional study with a representative sample of primary care services in Ankara; the prevalence of possible PTSD was estimated as 11.1%. Greene et al. have systematically reviewed the literature on PTSD in primary care settings and reported a range of 2.0%-39.1% with the most studies were on the 2% to 15% interval (24). It was also noted in this review that the other studies reporting higher rates generally consisted of high-risk populations. For example; McDevitt-Murphy et al. found a 39.1% prevalence in the Veterans Affairs primary care clinic (25), and Carey et al. found a 19.9% prevalence in an urban primary care setting in South Africa (26). The prevalence of PTSD varies depending on the scale used in the study and the characteristics of the sample. In a nationally representative sample of primary care attenders in Israel, the prevalence of PTSD was reported as 7.5% among men and 10.5% among women (27).

In Turkey, trauma-related research has generally focused on survivors of traumas such as an earthquake (19) or terrorism (20) or has been conducted in clinical settings with specific populations (28). However; population-based epidemiological studies are insufficient. This study, conducted with different primary care clinics of various socioeconomic regions, in accordance with the literature, gives an overview of the possible prevalence of PTSD.

In our study, 74.2% of the participants had experienced childhood trauma, with the most frequent type was physical neglect (36.3%). The second most common types were emotional neglect (26.9%) and emotional abuse (26.9%). In a recent study using the same scale, the prevalence of childhood trauma was found as 69% in healthy volunteers and emotional neglect was reported as the most frequent type (60.3%) (14). In psychiatric inpatients with different diagnoses, adverse childhood experiences were present in 89.8% of the sample (29). Kong et al reported a 73.0% prevalence of emotional neglect and a 66.1% prevalence of physical neglect in a specialized trauma clinic in Korea (30). Traumas that encountered childhood period cause neurobiological effects that may disrupt child development in various areas such as physical, social, behavioral, or emotional domains. These effects may eventually appear with adult psychiatric disorders. Among all the psychiatric diagnoses, PTSD, in particular, is associated with childhood traumas, and physical neglect which was found as the most frequent type of childhood trauma in our study is especially related with PTSD (31). The other well-documented condition related with childhood trauma is dissociation.

As there are studies showing that childhood traumas are frequent in the history of patients with dissociation (32); in the opposite direction, there are also studies showing that children who experience trauma, may develop dissociative symptoms in the future (33). Dissociative symptoms are seen in 3-6% of the general population (30). In concordance with that; the prevalence of dissociative experiences was found as 6% in our study. Exposure to trauma in early life may lead to a tendency to dissociate as a response to stress factors. As dissociation is not always a good method to deal with stress; it may predispose to the development of new traumas (14). Therefore; it can be concluded that dissociation, apart from coexistence, may have a mediating role between childhood trauma and PTSD, as described as "re-victimization". (34). The relationship between these three concepts was also seen in the correlation analysis of our study that all had a positive and significant relationship with each other. This correlation, apart from potentiating each other, was also shown to be associated with eating disorders, self-harm, or suicidal thought (35,36). Additionally; it also has been shown to negatively impact treatment outcomes of trauma-focused psychotherapy (17).

When examining the type of trauma; emotional, physical, and sexual abuse had the strongest potential for developing PTSD and dissociation in our study. Similarly; a recent study found that childhood emotional and physical abuse were both associated with greater adult trauma (14) and another study reported a significant relationship between dissociation and emotional and physical neglect (29). These results underline the importance of evaluation and follow-up of individuals with a childhood history of emotional, physical, and sexual traumas.

In our study, PTSD was more likely seen in participants of the male gender, with higher education level and those working ones. PTSD is generally known to be more prevalent in those who are women, young adults, single, divorced or widowed, socially withdrawn, or of low socioeconomic level. But there are more decisive risk factors such as severity or duration of trauma and it is said that no one is independent of developing PTSD with no exception (37). Because of the contradictory results regarding the relationship of PTSD with demographic variables; it is advised not to make definite suppositions on the development of PTSD based on sociodemographic characteristics (24).

The results of this study should be interpreted with some limitations. First; because it was aimed to investigate PTSD, dissociation, and childhood traumas in a cross-sectional nature; screening tools were used as an instrument.

Although the PTSD Checklist is a widely used screening tool in epidemiological studies, it should be kept in mind that the prevalence estimated in this study may not reflect the definite diagnoses since the clinical interviews could not be performed. Additionally, trauma-related variables that were based on participants' declaration, may not reflect actual data because of memory bias and stigmatization. The collection of the research data was carried out with patients who applied to primary care services instead of home visits also restricts their generalization to the society. Nevertheless; collecting data from different socioeconomic regions of Ankara with a relatively large sample constitutes the strengths of this study.

CONCLUSION

In this cross-sectional study, PTSD was found nearly one out of ten people who applied to primary care services. Although the recommendation for screening PTSD in primary care is still contradictory; people with childhood traumas and dissociation may be thought to be at risk for PTSD and raising awareness would be the first step in this issue. It is considered important to keep this association in mind in the follow-up and management of these patients in primary care services.

Conflict of interest

No conflict of interest was declared by the authors.

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