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ARAŞTIRMA Açık Erişim

Investigation of the Relationship Among Childhood Traumas and Self-Harming Behaviours, Depression, Psychoform and Somatoform Dissociation in Female University Students

Kadın Üniversite Öğrencilerinde Çocukluk Çağı Travmaları ile Kendine Zarar Verme Davranışları, Depresyon, Psikoform ve Somatoform Dissosiyasyon Arasındaki İlişkilerin İncelenmesi

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ABSTRACT

The aim of this study is to determine the predictive role of childhood traumas on self-harming behaviours, depression, psychoform, and somatoform dissociation in female university students. This study was conducted with 314 female university students. It was evaluated that the differentiation of psychoform dissociation as an independent variable, varied based on negative or positive taxonomy in terms of dependent variables as well as the predictive effect of childhood traumas. It was found that childhood trauma predicted psychoform dissociation experienced in adulthood, and emotional abuse predicted amnestic dissociation, absorption and psychoform dissociation. The findings of the study differed from other studies, especially with clinical samples, and childhood traumas were positively correlated with psychoform dissociation and negatively associated with somatoform dissociation. The findings also emphasise the importance of certain correlations between childhood trauma and self-harming behaviours in a non-clinical sample group, such as female university students, as well as clinical samples.

Article Information

Keywords
Childhood Trauma
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ÖZET

Bu çalışmanın amacı kadın üniversite öğrencilerinde çocukluk çağı travmalarının; kendine zarar verme davranışları, depresyon, psikoform ve somatoform dissosiyasyon üzerindeki yordayıcılık rolünün incelenmesidir. Bu çalışmanın katılımcılarını 314 kadın üniversite öğrencisi oluşturmaktadır. Bağımsız değişken olarak psikoform dissosiyasyonun takson negatif ve pozitif olma durumuna göre bağımlı değişkenler açısından farklılık gösterme durumu ve çocukluk çağı travmalarının yordayıcılık etkisi değerlendirilmiştir. Çocukluk çağı travmalarının yetişkinlik döneminde yaşanan psikoform dissosiyasyonu, duygusal istismarın ise amnestik dissosiyasyon, absorbsiyon ve psikoform dissosiyasyonu yordadığı bulgulanmıştır. Çalışma sonucunda, söz konusu bulguların özellikle klinik örneklemli diğer araştırmalara göre farklılık gösterdiği ve çocukluk çağı travmalarının psikoform dissosiyasyon ile pozitif yönde, somatoform dissosiyasyon ile ise negatif yönde ilişki gösterdiği saptanmıştır. Bulgular, ayrıca klinik örneklemlerin yanı sıra kadın üniversite öğrencileri gibi klinik olmayan bir örneklem grubunda da çocukluk çağı travmaları ile kendine zarar verme davranışları arasında belirli düzeydeki korelasyonların önemini vurgulamaktadır.

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INTRODUCTION

The concept of childhood traumas involves any form of neglect, abusive behaviour and similar destructive experiences that are inflicted on an individual during his/her childhood by the primary caregivers, especially the parents, or other individuals in his/her environment (Kepenekçi, 2001). In the relevant literature, these experiences are discussed at the level of abuse such as physical abuse, emotional abuse and/or sexual abuse or at the level of neglect such as physical neglect and emotional neglect (Aysev & Taner, 2007; Kara, Biçer & Gökalp, 2004). After the initial studies on the physical and psychological conditions of children working in hazardous works (factories, mines, etc.), in the 19th and 20th centuries, studies focused on the negative effects of childhood abuse and neglect on the physical and psychological health of children and the concept of childhood traumas started to be used in the relevant literature (Marylène, Lisa, & Lisa, 2006; Türksoy, 2003). Studies in the field also started to discuss the effects of childhood trauma on the individual and they aimed to point out to the effects of childhood traumas on adulthood, sharing the results of psychological consequences in older ages.

Based on the studies in the field, it is known that the traumas experienced in childhood result in an increased inclination toward various psychological disorders in older ages (Vallati et al., 2020). Especially psychological inefficacy, lack of development of self and weak coping skills play a role in the ongoing effects of childhood traumatic experiences. Studies also highlight those traumatic experiences (such as abuse and neglect, etc.) experienced in childhood are risk factors for the development of primary dysfunctional schemas (Carr & Francis, 2010; McCarthy & Lumley, 2012; Young, Klosko, & Weishaar, 2003; Vallati et al., 2020). Said dysfunctional schemas adversely affect the information processing during emotional reactions to the actual life events, entailing significant cognitive problems (such as thought patterns underlying depression) and psychopathologies (Dozois, Martin, & Bieling, 2009). Öztürk (2018) states that dissociative identity disorder is an effort of self-identification that the individual develops unknowingly as a defence mechanism against chronic childhood traumas. Moreover, the psychohistory discipline, which clearly explains the link between dissociation and individual and social traumas, including the traumatic experiences and negative child rearing styles applied by mothers to their own children, emphasises that it is particularly important to evaluate childhood traumas within the scope of psychologically unhealthy child rearing styles (Öztürk, 2016; 2020a; 2020b).

It is known that the childhood traumas influence an individual in older ages in the form of psychological problems such as decreased self-esteem and socialization, impairment in interpersonal functioning, withdrawal, and self-harm (Gören & Tıraşçı, 2007; Kahveci, 2016) and observation of behavioural aspects such as decrease in executive functions and increase in impulsivity (Shin et al., 1999; Türksoy, 2003). Along with these effects, the research support that the childhood traumas cause several psychopathologies such as personality disorder, dissociative disorders (Bennet, 2016; Fung et al. 2019), substance addiction, somatoform disorder, anxiety disorder and depression (Bifulco, Brown, & Adler, 1991; Erdoğan, Delibaş, & Baskin, 2020; Humphreys et al., 2020; Lindert et al., 2014; Olafson, 2014; Özen, Antar, & Özkan, 2007; Stein et al.. 1996; Haj-Yahia & Tamish, 2001; Vallati et al., 2020). In particular, there are various studies highlighting that childhood traumas are key factors in the formation of personality and core beliefs, and are associated with mood disorders. These studies report that psychiatric disorders such as depression (Bifulco et al., 1991) and anxiety disorder (panic disorder and diffuse anxiety) are frequently encountered in adults exposed to sexual abuse in childhood (Stein et al., 1996). Similarly, traumas experienced in childhood increase the risk of self-harming behaviours (Bennet,

2016; Hoyos et al., 2019), eating disorders (Tunç, 2019), internalized and externalized behaviour problems (Hébert, Langevin, & Oussaïd, 2018) in older ages. It is not possible, or even almost impossible, to react appropriately to both childhood traumas and traumatic events experienced after childhood. This situation, which is called the trauma paradox, creates a feeling of shame in the individual. In the face of the traumatic event, no reaction will be sufficient for the traumatized and dissociated individuals, even if the individuals run away, bow down, freeze, fight or assume that this negative life experience does not exist. The feelings of helplessness and guilt that emerge as a result of the trauma paradox tend to first turn into shame and then into anger. On the traumatic ground, anger is directed towards one's self through self-harming behaviours (Fischer et al., 1996; Öztürk, 2004; 2020a). Some of the psychiatric disorders that are believed to be associated with childhood abuse and neglect are reported as post-traumatic stress disorder (PTSD), cognitive disorders, impairment of self-perception, impairment of interpersonal relationships and psychological health problems (Lindert et al., 2014; Özen et al., 2007). Fonagy and Allison (2012) report that individuals hinder their emotional awareness and display avoidance behaviours because of their traumatic experiences in childhood to safeguard themselves from negative environmental conditions and destructive thoughts. It is highlighted that when individuals lose or hinder their emotion-regulation skills, they reveal their emotions with somatic symptoms rather than verbally. Ogrodniczuk, Joyse and Abbass (2014) also concluded that alexithymia has a mediating role in the relationship between the childhood maltreatment and somatic symptoms.

The term "psychological dissociation", which was founded by Pierre Janet, is used for the psychological components of dissociation, and the term "somatoform dissociation" is used for symptoms that phenomenologically involve the body. Both dissociation terms indicate the lack of integration regarding the individual's responses and functions (Öztürk, 2020b; Van der Hart & Horst, 1989). Dissociative disorders; are complex and usually co-diagnosed psychiatric disorders, caused by chronic childhood traumas that begin at an early age. Violence-oriented negative child rearing styles are as effective as childhood traumas in the etiopathogenesis of dissociative disorders. Dissociative disorders occur especially after cumulative traumatic experiences encountered in early childhood. (Öztürk, 2020b; 2021). Abuse and neglect in childhood were indicated as significant predictors of dissociation (Terock et al., 2016; Watson et al., 2006). Meta-analysis studies found that childhood abuse/neglect was important in the etiology of dissociation (Merckelbach & Muris, 2001; Vonderlin et al., 2018). Additionally, studies involving female adults indicate that women report psychological problems related to childhood trauma at higher rates (Abrams, Milisavljević, & Šoškić, 2019; Chen & Gueta, 2016; Giarratano, Ford, & Nochajski, 2020). Fischer et al. (2014) underlined that the prevalence of somatic syndromes in women increases due to the adverse effects of childhood trauma on stress and psychological resilience. The negative experiences of childhood are reported to have a positive relationship with the tendencies of anxious attachment (Waldinger et al., 2006) and the adverse effects of childhood traumas on interpersonal relationships are discussed.

Reviewing the results of childhood traumas in adolescence and adulthood, Gallo et al. (2017) noted that the prevalence of major depression symptoms was three times higher in women compared to men. Similarly, they concluded that individuals exposed to emotional abuse and multiple maltreatment in childhood had a higher risk of experiencing psychological problems in the future compared to men (Gallo et al., 2017). Cutler and Nolen-Hoeksema (1991) took a different approach to depression observed in women. Researchers expressed that women tend to feel ashamed of themselves and take a more introvert attitude because of their experiences under adverse living conditions such as abuse and domestic violence

and that the risk of low self-confidence and depression increased, accordingly (Cutler & Nolen-Hoeksema, 1991). It is reported that women with a history of childhood trauma suffer from eating disorders at a higher rate than women without such a history and that they also take considerably more psychiatric medications and psychiatric support (Messina & Grella, 2006). This study has a unique value as it is one of the first studies investigating childhood traumas and self-harming behaviours, depression, somatoform and psychoform dissociation together in female university students. The aim of this study is to determine the predictive role of childhood traumas on self-harming behaviours, depression, psychoform, and somatoform dissociation in female university students.

METHOD

Participants and Sample

The population consists of 143,759 female students who were registered in any undergraduate programme in the academic year 2018-2019 and studied in various departments of Faculty of Education at Trakya University. The sample consists of 314 undergraduate female students, were selected through simple random sampling. In the first phase of the study, researchers applied to the Trakya University Ethics Committee of the Social and Humanities Research and started the data collection process for the research after the ethics decision numbered 2019.01.03 and dated 23/01/2019 was obtained. In the scope of the study, 314 undergraduate female students attending the Faculty of Education were informed about voluntary participation and their informed consents were obtained. Psychiatric diagnosis and/or using medication were not sought in participant selection. The data collection lasted approximately six months. The scales were applied to the participants in return for five extra credits.

314 undergraduate female students were participated in the research. Since the applications were carried out in the classroom, criteria such as psychiatric diagnosis and/or using medication were not sought in participant selection. The mean age of the participants was 19.82 years. Female students who participated in the research were in first (80.9%, n=254), second (14.6%, n=46), third (2.5%, n=8) and fourth (1.9%, n= 6) years. When the distribution of their departments was considered, they were studying in the fields of pre-school (30.3%, n=95), psychological counselling and guidance (28.3%, n=89), class-teaching (19.7%, n=62), English (15%, n=47), arts (2.5%, n=8), and special education (4.1%, n=13). Participants stated their income levels as lower-income (8.9%, n=28), middle-income (88.9%, n=279) and high-income level (2.2%, n= 7). 8.6% (27) of the participants reported that they had chronic diseases while 91.4% (287) reported that they did not have any chronic diseases. 25 participants (8.0%) evaluated their relationship with their mother as "slightly close"; 194 participants (61.8%) evaluated as "very close"; 4 participants (1.3%) evaluated as "not close at all" and 91 participants (29.0%) evaluated as "close". 61 participants (19.4%) evaluated their relationship with their father as "slightly close"; 117 (37.3%) as "very close"; 22 (7%) "not close at all" and 114 (36.3%) as "close".

Table 1. Descriptive data on variables

Variables	N	X	SS
Emotional abuse	314	10.18	2.12
Physical abuse	314	5.46	1.68
Emotional neglect	314	6.08	1.95
Physical neglect	314	11.51	2.76
Sexual abuse	314	6.04	2.82
Minimization	314	1.41	1.26
CTQ	314	39.28	8.04

BDE	314	13.13	8.60
Amnesia	314	3.90	4.50
Absorption	314	9.98	6.37
Depersonalisation	314	3.42	4.18
DES	314	21.42	16.29
Self-Harm	314	7.60	11.92
Somatoform	314	28.81	9.32

As it can be seen in Table 1, the mean of childhood trauma scores of the entire group was 39.28 (SD=8.04). The mean scores of emotional abuse (10.18, SD=2.12), physical abuse (5.46, SD=1.68), emotional neglect (6.08, SD=1.95), physical neglect (11.51, SD=2.76), sexual abuse (6.04, SD= 2.82), and minimization (1.41, SD=1.26). In addition, the mean scores of BDI, psychoform dissociation, amnesia, absorption, depersonalisation, somatoform dissociation and self-harming behaviour as 13.13 (SD= 8.60), 21.42 (SD=16.29), 3.90 (SD=4.50), 9.98 (SD=6.37), 3.42 (SD=418), 28.81 (SD=9.32) and 7.61 (SD=11.9).

Ethical Statement

The authors declare that they continue to work in accordance with scientific study ethics and the Helenski declaration in this study. Accordingly, the research was reviewed by the Trakya University Ethics Committee of the Social and Humanities Research and was given permission (Date: 23/01/2019, Number: 2019.01.03). In addition, the participants participated in the study on a voluntary basis.

Data Collection Tools

Demographic Information Form. The demographic information form prepared by the researchers included questions asked to determine the characteristics of the participants such as age, department, perceived income level, perceived relationship with mother and perceived relationship with father, history of psychiatric medication use, etc.

Self-Harm Behaviour Inventory (ISAS). It is a self-report inventory developed by Klonsky and Glenn (2009), of which validity and reliability studies were performed. The inventory was developed for a comprehensive assessment of self-harming behaviours without the "intent to commit suicide" and the first part of the inventory investigates 12 different self-harming behaviours (self-cutting, self-biting, carving letters/shapes onto skin, self-burning, pinching, hair-pulling, self-scratching, head-banging/self-hitting or similar, preventing wound healing, skin-rubbing to a hard place, sticking needles into skin, drinking/swallowing hazardous/harmful substances) and associated conditions (frequency of self-harming, age, feeling pain and the desire to stop, etc.). The second part deals with the functions of any such behaviours. In the completed validity-reliability study, the internal consistency of the twelve behaviours was reported to be at a very good level (α = 0.84). Bildik et al. (2013) conducted the Turkish validity and reliability study of the inventory and reported it as a valid and reliable tool for evaluating self-harming behaviours. In this study, Cronbach's alpha value was calculated as .95.

Childhood Trauma Questionnaire (CTQ). This assessment tool developed by Bernstein et al. (1994) consists of 28 questions, three of which are items that measure the minimization of trauma. Patients assign a score of 1 to 5 for each item. Using this questionnaire, five sub-scores about childhood sexual, physical, emotional abuse and emotional and physical neglect are obtained, and their combination/sum gives the total score (Bernstein, Fink, & Handelsman, 1994). The questionnaire, which originally consisted of 53 items, was shortened, and translated into Turkish (Şar, Öztürk, & İkikardeş, 2012). The

first translation of the questionnaire, which was re-translated into English by an expert in both languages, was used in a pilot study and the comprehensibility of the items was evaluated and thus, the questionnaire was put into its final form. Consistency was ensured between both versions. The Cronbach's alpha value, which indicates the internal consistency of the questionnaire, was 0.93 for the group of all subjects (N = 123). Guttmann's split-half coefficient was calculated as 0.97 (Şar et al., 2012), and the internal consistency coefficient of the scale in this questionnaire was .80.

Beck Depression Inventory (BDI). This inventory consists of 21 items that measure emotional, somatic, cognitive, and motivational symptoms occurring in depression. Scores are assigned between 0 and 3. The original tool, which was developed in 1961, was revised in 1978. The correlations between the two forms are high (.87-94). In addition, it is frequently used as an external criterion in the validity studies of various measurement tools developed to measure other depression-related structures and variables. Item 2 of the Beck Depression Inventory on pessimism and Item 9 on suicidal thoughts are discussed alone in the analyses of studies on pessimism and suicide. Hisli (1989) adapted said inventory into Turkish. In this study, Cronbach's alpha value was calculated as .86.

Somatoform Dissociation Questionnaire (SDQ). Somatoform dissociation was evaluated by using SDQ. It consists of 20 items measuring analgesia, anesthesia, motor disorders, changing taste/smell preferences, pain, and loss of consciousness (Nijenhuis et al., 1996). This questionnaire developed by Nijenhuis et al. (1998) is used for screening physical dissociation symptoms. Şar et al. (2001) conducted the Turkish validity and reliability study. Cronbach's alpha value was calculated as .88.

Dissociative Experiences Scale (DES). Psychoform dissociation including the variables about amnesia, loss of control, identity confusion, and fragmentation were evaluated by applying DES to the participants. It is a self-report scale developed by Bernstein and Putnam (1986) and consists of 28 items. For each item of the scale, subjects assign a score of 0-100, and the result is calculated by taking the average of the total scores. Scores above 30 indicate a possible dissociative disorder. Yargıç, Tutkun and Şar (1995) conducted the Turkish validity and reliability study. In this study, Cronbach's alpha value was .94.

Procedure

Data collection was based on questionnaires. The authors introduced the study to the participants, and were available for clarifying questions while the participants filled out the questionnaire. Participation in the study was voluntary. The questionnaires were applied in the classroom and every application took approximately 35 minutes for the participants.

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Data Analysis

This study was designed based on the relational scanning model. It examined the relationship between childhood traumas and self-harming behaviours, depression, psychoform dissociation and somatoform dissociation evaluated whether variables, except psychoform dissociation, varied based on negative or positive taxonomy in terms of psychoform dissociation as well as the predictive effect of childhood traumas, which is a dependent variable, on other variables. Independent Samples t-Test was used for

statistical significance among the variables in the study and Pearson's Correlation Coefficient was used to determine the correlation. For Simple Linear Regression analysis, CTQ total score was used as dependent variable and the mean overall DES score and the total BDE and SDQ-20 scores were used as independent variables. Kolmogorov-Smirnov test (K-S) was used to test the normality of data distribution. The distribution was found to be normal (p>.05).

RESULTS

Table 2. Correlations (Pearson) between scale scores CTQ, BDE, DES, Self-Harm and SDQ-20

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Emotional abuse	1	,499**	,440**	,529**	,348**	-,431**	,779**	,009	,311**	,282**	,229**	,341**	-,035	-,151**
Physical abuse	,499**	1	,477**	,290**	,434**	-,259**	,708**	,039	,200**	,214**	,113*	,236**	-,013	-,064
Physical neglect	,440**	,477**	1	,431**	,239**	-,300**	,690**	,006	,170**	,190**	,113*	,165**	-,066	-,067
Emotional neglect	,529**	,290**	,431**	1	,204**	-,696**	,720**	,058	,183**	,145*	,118*	,228**	-,082	-,092
Sexual abuse	,348**	,434**	,239**	,204**	1	-,266**	,661**	,020	,112*	,074	,093	,178**	,016	-,121*
Minimization	-,431**	-,259**	-,300**	-,696**	-,266**	1	-,573**	-,021	-,175**	-,093	-,125*	-,227**	,127*	,094
CTQ Total	,779**	,708**	,690**	,720**	,661**	-,573**	1	,039	,267**	,241**	,185**	,320**	-,050	-,144*
Depression	,009	,039	,006	,058	,020	-,021	,039	1	-,014	-,040	-,003	-,002	,238**	,406**
DES	,311**	,200**	,170**	,183**	,112*	-,175**	,267**	-,014	1	,869**	,916**	,874**	-,085	-,071
Amnestic	,282**	,214**	,190**	,145*	,074	-,093	,241**	-,040	,869**	1	,674**	,721**	-,103	-,076
Absorption	,229**	,113*	,113*	,118*	,093	-,125*	,185**	-,003	,916**	,674**	1	,716**	-,053	-,037
Depersonalisation	,341**	,236**	,165**	,228**	,178**	-,227**	,320**	-,002	,874**	,721**	,716**	1	-,066	-,082
Self-harm	-,035	-,013	-,066	-,082	,016	,127*	-,050	,238**	-,085	-,103	-,053	-,066	1	,183**
Somatoform	-,151**	-,064	-,067	-,092	-,121*	,094	-,144*	,406**	-,071	-,076	-,037	-,082	,183**	1

****. Correlation is significant at the 0.01 level (2-tailed).**

***. Correlation is significant at the 0.05 level (2-tailed).**

As it can be seen in Table 2, emotional abuse and physical abuse (r=,499, p<.001) have a positive significant correlation with physical neglect (r=,440, p<.001), emotional neglect (r=,529, p<.001), sexual abuse (r=,348, p<.001), total childhood traumas (r=,779,p <.001), psychoform dissociation (r=,311, p<.001), amnestic sub-dimension (r=,282, p<.001), absorption (r=,229, p<.001) and depersonalisation (r=,341, p<.001). They have a negative significant correlation with minimization (r=-,431, p<.001) and somatoform dissociation (r=-,151, p<.001). Physical abuse has a positive correlation with physical neglect (r=,477, p<.001), emotional neglects (r=,290, p<.001), sexual abuse (r=.434, p<.001), total childhood trauma (r=,708, p<.001), psychoform dissociation (r=.200, p<.001), amnestic sub-dimension (r=.214, p<.001), absorption (r=,113, p<.05) and depersonalisation (r=,236, p<.001). Physical neglect and emotional neglect (r=,431, p<.001) have a positive correlation with sexual abuse (r=,239, p<.001), total childhood traumas (r=.690, p<.001), psychoform dissociation (r=.170, p<.001), amnestic sub-dimension (r=,190, p<.001), absorption (r=,113, p<.05) and depersonalisation (=,165, p<.001). They have a negative correlation with minimization (r=-300, p<.001). Emotional neglect has a positive correlation with sexual abuse (r=,204, p<.001), total childhood traumas (r=,720, p<.001), psychoform dissociation (r=,183, p<.001), amnestic sub-dimension (r=,145, p<.05), absorption (r=,118, p<.05) and depersonalisation (r=,228, p<.001). It has a negative correlation with minimization (r=-,696, p<.001). Minimization has a positive correlation with absorption (r=-,125*, r<.05) and self-harm (r=,127, p<.05). It has a negative correlation with total childhood traumas (r=-,573, p<.001), psychoform dissociation (r=-,175, p<.001) and depersonalisation (r=-,227, r<.001). Childhood traumas have a positive correlation with psychoform dissociation (r=,267, p<.001), amnestic sub-dimension (r=,241, p<.001), absorption (r=,185, p<.001) and depersonalisation (r=,320, p<.001).

Regression assumptions were tested before proceeding to the regression analysis. The skewness and kurtosis coefficients of the variables are between -2 and +2, and these values indicate that the data show a normal distribution. In order to examine autocorrelation, which is the second assumption, the autocorrelation between the errors with the Durbin-Watson test was examined to show that the errors are independent from each other. The Durbin-Watson test result being around 2 shows that the errors are independent of each other. Tolerance and VIF values were calculated to test the linearity of the relationship between the independent variables and the dependent variable, which is another assumption. It has been determined that this assumption is also met when the tolerance value is above 0.1 and the VIF values are below 10. Finally, the scatter plot was examined and it was seen that the concurrency assumption was met.

Table 3. Simple linear regression analysis for investigating the power of childhood traumas in predicting dissociation, its sub-dimensions and depression

Predicted Variable	Predictor Variable	B	St. Error	β	R	R^2	t
Dissociation	Constant	,183	4,430				,041
	CTQ Total	,541	,110	,267	,267	,071	4,896**
Dissociation	Constant	-,216	7,140				-,030
	Emotional abuse	2,047	,553	,266			3,703**
	Physical abuse	,543	,674	,056			,806
	Physical neglect	,193	,553	,023			,348
	Emotional neglect	-,128	,491	-,022			-,262
	Sexual abuse	-,127	,355	-,022			-,357
	Minimization	-,777	,993	-,060	,319	,102	-,782
Amnestic	Constant	-3,364	1,982				-1,697
	Emotional abuse	,516	,153	,243			3,364**
	Physical abuse	,262	,187	,098			1,400
	Physical neglect	,142	,154	,062			,928
	Emotional neglect	,004	,136	,003			,031
	Sexual abuse	-,091	,099	-,057			-,928
	Minimization	,151	,276	,042	,306	,093	,546
Absorption	Constant	4,453	2,865				1,554
	Emotional abuse	,672	,222	,223			3,029**
	Physical abuse	-,054	,270	-,014			-,198
	Physical neglect	,071	,222	,022			,318
	Emotional neglect	-,105	,197	-,045			-,531
	Sexual abuse	,024	,142	,011			,170
	Minimization	-,276	,399	-,054	,233	,054	-,692
Depersonalisation	Constant	-2,642	1,802				-1,466
	Emotional abuse	,508	,139	,257			3,640**
	Physical abuse	,195	,170	,079			1,148
	Physical neglect	-,055	,140	-,026			-,391
	Emotional neglect	,021	,124	,014			,168
	Sexual abuse	,052	,090	,035			,576
	Minimization	-,280	,251	-,084	,361	,131	-1,115

As it can be seen in Table 3, childhood traumas account for 0.7% of psychoform dissociation (R^2 =.07, F(1,312)=23,966, p<.001). Emotional abuse, together with other sub-dimensions account for 10% of psychoform dissociation (amnestic) (R^2 =.10, F(6,307)=5,812, p<.001). Emotional abuse, together with other sub-dimensions, account for 0.9% of psychoform dissociation (absorption) (R^2 =.09, F(6,307)=5,276, p<.001). Emotional abuse, together with other sub-dimensions, account for 0.5% of psychoform dissociation (depersonalisation) (R^2 =.05, F(6,307)=2,947, p<.001).

Table 4. Differentiation in DES cut-off score based on Scores below and above 30

Scale	Subset		Superset		Female t Test	
	N= 243	(%77.4)	N=71	(%22.6)	Sd= 312	
	Mean	SS	Mean	SS	t	p
Emotional abuse	9,88	1,83	11,22	2,66	-4,872	.000
Physical abuse	5,27	1,38	6,10	2,35	-3,698	.000
Physical neglect	5,96	1,76	6,48	2,46	-1,969	.050
Emotional neglect	11,25	2,62	12,39	3,07	-3,097	.002
Sexual abuse	5,90	2,61	6,52	3,43	-1,631	.104
Minimization	1,52	1,28	1,04	1,11	2,836	.005
CTQ Total	38,27	7,02	42,72	10,17	-4,201	.000
Depression	13,26	8,64	12,70	8,52	,478	.663
Self-harm	8,27	12,33	5,34	10,15	1,831	.068
Somatoform	29,26	9,31	27,27	9,27	1,588	.113

As it can be seen in Table 4, considering the differentiation of psychoform dissociation based on the cut-off score of 30, significant differences were detected in favour of superset of emotional abuse (X = 11.22; SD = 2.66, p<.001), physical abuse (X= 6.10; SD = 2.35, p<.001), emotional neglect (X= 12.39; SD = 3.07, p<.001), minimization (X= 1.04; SD = 1.11, p<001) and CTQ total (X= 42.72; SD = 10.17, p<.001). In addition to these, the types of self-harming behaviours expressed by the participants were biting and scratching at skin (n=48), cutting skin (n=32), sticking needle (n=32), preventing the healing of the wound (e.g. severing their shells) (n=29), hair pulling (n=14), head banging and punching self (n=9), burning of skin (n=8), taking poisonous substances (n=1).

DISCUSSION, CONCLUSION & SUGGESTIONS

In this study, data analysis showed that experiences of childhood traumas had a significant correlation with dissociative experiences (psychoform dissociation) and somatoform dissociation in female university students. It also showed that female university students with dissociative experiences at pathological level that can be diagnosed with dissociative disorder report emotional abuse, physical abuse, emotional neglect and childhood traumas at higher rates than female university students with non-pathological dissociative experiences.

A considerable number of studies pointing out that traumatic experiences in childhood are associated with psychological problems that may also be observed in adulthood are available. These studies also report that biological sex may have a mediating role and reveal that women with childhood traumas have a higher risk of suffering from depression and self-harming behaviours compared to men (Abrams et al., 2019; Chen & Gueta, 2016; Cutler & Nolen-Hoeksema, 1991; Gallo et al., 2017; Giarratano et al., 2020; Messina & Grella, 2006; Vallati et al., 2020). Despite the emphasis on this biological sex difference, there are also researchers who argue that depression is related to gender-role socialization, with little or no biological influence (McBride & Bagby, 2006, Piccinelli & Wilkinson, 2000). Also, there are some studies showing that there is no relationship between gender-role and depression (Arcand et al., 2020; Bromberger & Matthews, 1996). Therefore, besides the gender roles that women adopt, the negative life events they are exposed to due to this gender-role seem important. For example, Hünler (2000) reported that female university students who perceive more discrimination show more depressive symptoms, Schmitt et.al. (2002) found that perceived discrimination also negatively affects well-being. In addition, according to Hünler (2000), the adoption of gender roles by women and the expectation of behaviours that are not suitable for this role can lead to depression (Hünler, 2000). The fact that the participants of this research are university students, therefore, does not conform to traditional gender roles. Accordingly,

the purpose of the study was to evaluate the effect of childhood traumas experienced by undergraduate female students on self-harming behaviours, depression levels, psychoform dissociation and somatoform dissociation. In line with the primary purpose, the correlation between the childhood traumas and self-harming behaviours, depression, psychoform dissociation, somatoform dissociation was examined; whether childhood traumas vary based on the DES scale cut-off score, and the predictive effect of childhood traumas on dependent variables.

Various studies in the literature explicitly indicate the correlation between childhood traumas, psychoform dissociation and somatoform dissociation and it can be stated, with certainty, that childhood traumas are one of the most basic etiological elements of somatoform dissociation and psychoform dissociation (Bohn et al., 2013; Nijenhuis, 2001; Öztürk & Şar, 2008; Waller et al., 2001). This study also found that childhood traumas had a significant correlation with psychoform dissociation and somatoform dissociation (Table 2). In this study, the predictive role of childhood traumas on psychoform dissociation, somatoform dissociation, self-harming behaviours and depression in female university students was investigated and it was found that childhood traumas predicted psychoform dissociation and somatoform dissociation. In addition, as an original finding in this study, a significant negative correlation was found between somatoform dissociation and psychoform dissociation. Dissociative experiences that are characterized by chronic childhood traumas that emerge at an early age can be evaluated under two categories: "somatoform dissociation" that is phenomenologically related to the body and "psychoform dissociation" involving the mind. During or after traumatic experiences, these trauma victims give somatization reactions that occur in the body or psychoform dissociation reactions that occur psychologically (Farina et al., 2011; Nijenhuis, 2001, 2009; Nijenhuis et al., 2003). In our study that supports these data, a negative and significant correlation was found between SDQ-20 that is used to measure somatoform dissociation and DES that is used as a measurement tool that evaluates psychoform dissociation (Table 2). In another study conducted with university students, a negative relationship was found between physical abuse and somatoform dissociation and this data is in line with the findings of our study (Sadeghi et al., 2017). The reason why it shows a negative relationship between childhood traumas and somatoform dissociation and a positive relationship with psychoform dissociation may be the difference between dissociative reactions of individuals to negative life experiences. Traumatized individuals try to cope with these negative life events by showing either mind level (psychoform dissociation) or somatic symptoms (somatoform dissociation) (Farina et al., 2011; Nijenhuis, 2009). In a study, which supports this view, conducted with a sample of university students, it has been clearly demonstrated that both forms of dissociative experiences (psychoform dissociation and somatoform dissociation) that can develop during or immediately after chronic childhood traumas that begin at an early age may not occur at the same time. In the same study, it was emphasized that individuals are less likely to endure negative life events by showing both psychoform and somatoform dissociative reactions (Farina et al., 2011). In this context, one of the psychoform or somatoform dissociations is usually at the forefront in cases of dissociative disorder (Öztürk, 2020b). A considerable number of studies in the literature focusing on the correlation between childhood traumas and those dissociative experiences and self-harming behaviours highlight those dissociative experiences play an intermediary role between self-harming behaviours and childhood traumas (Chaplo et al., 2015; Ford & Gómez, 2015; Franzke, Wabnitz & Catani, 2015). Among psychological trauma and self-harming behaviours, "dissociative experiences" are the main determinants in determining the frequency, severity and duration of traumatic experiences. Self-harming behaviours, which are closely related to dissociation, are mostly carried out to control the

negative effects of traumatic experiences on emotions, thoughts and behaviours (Öztürk, 2020b; Polskaya & Melnikova, 2020). There are many clinical studies reporting that childhood traumatic experiences and dissociative experiences are more common in psychiatric patients with self-harming behaviours compared to other patient groups (Noll et al., 2003; Öztürk, 2020b; Van der Kolk & Van der Hart, 1995; Webermann et al., 2016). In our study, a significant correlation was found between self-harming behaviours and somatoform dissociation but any significant correlation with psychoform dissociation was not found. This result is vital in showing that self-harming behaviours may escalate with increasing somatoform dissociative experiences and in evaluating somatoform dissociation, as well as psychoform dissociation, as a factor in the emergence of self-harming behaviours (Table 2). In addition to this, according to another study showing a certain similarity with this study, Öztürk and Şar (2008) found that dissociative disorder cases with suicidal thoughts were diagnosed with somatization disorder more than dissociative disorder cases without suicidal thoughts. It is thought that it is a sign of the positive correlation between suicidal thoughts and somatization, which are closely related with self-harming behaviours.

Female university students with dissociative experiences at pathological level (those with a total DES score of 30 and above) that can be diagnosed with dissociative disorder report emotional abuse, physical abuse, emotional neglect and childhood traumas (CTQ total scores) at higher rates than female university students with non-pathological dissociative experiences (Table 4). Many studies that support these findings are available and it can be stated that emotional abuse and emotional neglect occur at statistically higher rates in individuals with dissociative experiences (Belli et al., 2017; Şar, Türk, & Öztürk, 2019; Vogel et al., 2009; Watson et al., 2006). In this study, participants with pathological dissociative experiences represent 22.6% of the entire sample, which is vital for revealing the severity of dissociative reactions in the non-clinical population. Studies conducted with non-clinical samples report that pathological dissociative experiences occur at 5.9-29.0% over a wide extension and our finding is consistent with the research in the literature (Chiu et al., 2016; Fung, Ho, & Ross, 2018; Serrano-Sevillano et al., 2017; Şar, Türk, & Öztürk, 2019).

As a result of their meta-analysis, Vonderlin et al. (2018) found that individuals with a history of child abuse got higher dissociation scores than individuals without such a history. Anxiety and depression seem more likely to occur in individuals with a history of child abuse (Olafson, 2014). Based on another meta-analysis study, it is reported that adults who were exposed to sexual and physical abuse in their childhood report high levels of depression, anxiety and distress (Lindert et al., 2014). Yet another meta-analysis study found that the probability of depression increased when they calculated the long-term outcomes of childhood trauma (Humphreys et al., 2020). Erdoğan et al. (2020) suggested that childhood traumas may be taken into evaluation in individuals with depression and concomitant attention-deficit/hyperactivity disorder. Childhood traumas may be the underlying cause in patients with affective, anxiety, and somatoform disorders (Carlier et al., 2016). Somatoform disorders are an interesting way to determine adolescents suffering from abuse (Marquis et al., 2016).

When the correlations between the variables were examined, a predictive correlation was not found between childhood trauma and self-harming behaviours. Although childhood trauma is a predictor of self-harming behaviours, research results indicate that dissociation is more effective (Zoroglu et al., 2003). Another study demonstrates that dissociation serves as a mediator between childhood traumas and self-harming behaviours (Hoyos et al., 2019). Childhood traumas have also been shown to have an

intermediary effect for internalized and externalized behaviour problems such as self-harming behaviours (Hébert et al., 2018). Based on the analysis of the collected data, the findings obtained for the correlation between psychoform dissociation, somatoform dissociation, depression and childhood trauma were found to be consistent with the literature. Dissociation is assigned higher scores in individuals who report child abuse (Bennet, 2016; Fung et al., 2019). Dissociation also increases the risk of revictimization in individuals with childhood abuse (Zamir et al., 2018). The main difference of this study according to other studies is that childhood traumas have a positive relationship with psychoform dissociation and a negative relationship with somatoform dissociation. Previous studies have found a largely positive relationship between childhood traumas and somatoform dissociation (Maaranen et al., 2004; Palmisano et al., 2018; Waller et al., 2001). Contrary to the previous studies, in this study, it is found that the negative relationship between childhood traumas and somatoform dissociation as it was carried out with participants from non-clinical (normal) population. Kate, Hopwood & Jamieson (2019) determined that approximately 10% of 25,871 university students had pathological dissociation according to the data average of 66 studies' meta-analysis on dissociative experiences and dissociative disorders in the university population. Referring to the studies in Turkey conducted with university students, DES average score is varied between 12,12 and 24,30, this rate, even though it is below 30 points which point to dissociative experiences in pathological levels, is indicative that dissociative experiences are used in subclinical levels in the process of coping with traumatic experiences of everyday life (Dalbudak et al., 2014; Öztürk, 2020b; Öztürk & Şar, 2008; Şar et al., 2019). The fact that 77.4% (243 people) of the participants in this study were below the DES total score average of 30 is the main indication that the majority of the sample belongs to a non-clinical population in terms of dissociative disorders.

On the other hand, as Brand (2012) highlighted the consequences of randomized clinical trials' meta-analysis, researchers who focused on complex trauma patients generally overlook polysymptomatic patients. Bradley et al. (2005) concluded 62% of the participants in their study excluded participants with current alcohol or alcohol use, whereas 46% excluded participants with suicidal ideation. In line with this conclusion, Brand (2012) drew attention to the possibility of excluding dissociative disorders patients from studies focusing on treatment approaches for survivors of childhood abuse. Depending on that, it can be said that gathering data from non-clinical dissociative disorders participants empower the insufficient points of relevant studies.

Certain limitations of the present study need to be mentioned. First, since the research universe is made up of 143,759 female students enrolled in any undergraduate program in education faculties in Turkey in the 2018-2019 academic year, participants (314 female students) do not fully represent the research universe. Furthermore, we have not assessed the participants' prior experience in using medication or somatoform and psychoform dissociation. Nonetheless, our findings suggest that clinicians should be sensitive to the possibility that early childhood trauma experiences in female university students may be an issue that needs to be addressed in the treatment and management of self-harm, psychoform dissociation and somatoform dissociation. As a result of the study, it is thought that future studies may study with participants from clinical samples, and investigate other variables such as attachment, child rearing styles and defense mechanisms to further understand the relationship between childhood trauma and adulthood psychiatric symptoms in female university students.

Practical Implication

As stated earlier, in this study, it was found that childhood traumas predicted psychoform dissociation in adulthood, and emotional abuse predicted amnestic dissociation, absorption and psychoform dissociation. In addition, as an important practical contribution to the literature, a negative and significant relationship was found between psychoform dissociation and somatoform dissociation in this study. Dissociative disorders are one of the leading psychiatric disorders that develop after childhood traumas, and these disorders negatively affect the social adaptation of individuals, their perception of the environment, consciousness and attention, leading to interruptions in their psychological integrity. For this reason, it is extremely important that cases of dissociative disorder, which is a trauma-related psychiatric disease that is characterized by suicide attempts, self-harming behaviours, especially in adolescents and adults, are recognized by both clinicians and teachers, and directed to the relevant treatment centers.

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Ethical Statement

The authors declare that they continue to work in accordance with scientific study ethics and the Helenski declaration in this study. Accordingly, the research was reviewed by the Trakya University Ethics Committee of the Social and Humanities Research and was given permission (Date: 23/01/2019, Number: 2019.01.03). In addition, the participants participated in the study on a voluntary basis.

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