



The Mediating Role of Childhood Traumas in the Relationship between Somatic Symptoms, Self-Perception, and Splitting in University Students

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Abstract

This study aimed to examine the mediating role of childhood traumas in the relationship between somatic symptoms, self-perception and division in university students. Within the scope of the study, a total of 220 university students, 154 (70.0%) female and 66 (30.0%) male, participated in the study with the convenient sampling method, which is one of the non-random sampling methods. Since the study was conducted in predictive correlational design, Pearson Correlation Coefficient was used to determine the relationship between variables in the study. Then, Regression-based mediation analysis was performed for mediation through the Jamovi Package Program. In statistical analysis, the level of significance was taken as .05. Childhood trauma scores, which are mediator variables, have a positive relationship with somatic symptoms and division scores within the scope of the study, and a negative and low level significant relationship with self-perception scores. When childhood trauma level was included in the model as a mediator variable to this significant relationship, it was determined that the relationship between students' division levels and somatic symptom levels was statistically significant, but the effect decreased. According to this result, it was determined that the level of childhood trauma had a partial mediating role in the relationship between the

social comparison level of university students and somatic symptoms. The model shows that childhood traumas negatively affect the division, somatic symptoms and self-perception of university students.

Keywords: Childhood Trauma, Somatization, Split, Self-Perception, University Students

Üniversite Öğrencilerinde Somatik Belirtiler, Kendilik Algısı ve Bölme Arasındaki İlişkide Çocukluk Çağı Travmaları: Bir Aracılık Modeli

Öz

Bu çalışmada, üniversite öğrencilerinde somatik belirtiler, kendilik algısı ve bölme arasındaki ilişkide çocukluk çağı travmalarının aracılık rolünü incelemeyi amaçlanmıştır. Araştırma kapsamında seçkisiz olmayan örnekleme yöntemlerinden uygun örnekleme yöntemi ile 154'ü (%70.0) kadın, 66'sı (%30.0) erkek olmak üzere toplam 220 üniversite öğrencisi katılmıştır. Çalışma yordayıcı korelasyonel desende yapıldığından, çalışmada değişkenler arasındaki ilişkiyi belirlemek için öncelikle Pearson Korelasyon Katsayısı kullanılmıştır. Ardından Jamovi Paket Programı aracılığıyla aracılık için Regresyon tabanlı aracılık analizi yapılmıştır. İstatistiksel analizde anlamlılık düzeyi .05 olarak alınmıştır. Aracı değişken olan çocukluk çağı travması puanlarının ise araştırma kapsamındaki somatik belirtiler ve bölme puanları ile pozitif yönde, kendilik algısı puanları ile negatif yönde ve düşük düzeyde anlamlı bir ilişkiye sahip olduğu görülmektedir. Anlamlı olan bu ilişkiye çocukluk çağı travma düzeyi aracı değişken olarak modele dahil edildiğinde, öğrencilerin bölme düzeyleri ile somatik belirti düzeyleri arasındaki ilişkinin istatistiksel olarak yine anlamlı olduğu fakat etkisinin azaldığı belirlenmiştir. Bu sonuca göre üniversite öğrencilerinin sosyal karşılaştırma düzeyi ile somatik belirtiler arasındaki ilişkide çocukluk çağı travma düzeyi kısmi aracılık rolüne sahip olduğu belirlenmiştir. Model, çocukluk çağı travmalarının üniversite öğrencilerinin bölme, somatik belirtilerini ve kendilik algısını olumsuz etkilediği görülmektedir.

Anahtar Kelimeler: Çocukluk Çağı Travması, Somatizasyon, Bölme, Kendilik Algısı, Üniversite Öğrencileri

Introduction

In a previous study that was conducted by the World Mental Health Initiative (WMH) with approximately 52 thousand people in 21 countries, including Belgium, Japan, the USA, South Africa, and China, it was reported that approximately 40% of the population had childhood traumas. It was reported that 29.8% of adult cases with a diagnosis of mental disorder experienced childhood traumas (Kessler et al., 2010, p.378). In a study conducted in Turkey, the prevalence of childhood traumas was found to be 74.2% (Ertek et al., 2022). It was also found that 75.6% of chronic depression patients between the ages of 20 and 60 in Germany experienced childhood trauma and 37% experienced more than one type of childhood trauma (Negele et al., 2015). The effects of these childhood traumas continue throughout life and it is emphasized that they usually cause negative health problems in the long term (Magruder et al., 2017; Schnyder, 2013).

Childhood traumas include exposures to chronic environmental stressors in childhood, such as low socioeconomic status, bullying, emotional and physical neglect and abuse, domestic violence, and losses (e.g., parental mental illness, parental divorce, or parental death). Children exposed to violent behaviors and traumas in early childhood cause mental disorders at an early age (Teicher, 2016, p.652), behaviors that damage physical health (Bellis et al., 2014, p.8), increase sensitivity to psychosocial stress, and this causes personality traits and personality traits in adulthood to increase and affects social functions (Shapero et al., 2014, p.210).

It is already known that traumatic experiences have a strong impact on various aspects of individual lives. Considering the long-term consequences of traumas such as childhood traumas, range from various psychiatric disorders to somatic disorders such as cardiovascular problems (Sack et al., 2010). It was reported in previous studies that childhood trauma is significantly higher in patients with mental disorders and this is an important factor in the formation of psychopathology in the later period (Duhig et al., 2015; Xie et al., 2018). It was also stated that 30% to 60% of patients especially in primary healthcare institutions complain of symptoms without a medical basis (Kirmayer & Robbins, 1991, p.650). The development and persistence of these unexplained symptoms are often referred to as somatization. Symptoms tend to be interpreted by those who have these symptoms as indicating serious medical problems. Several studies show that early negative life experiences contribute to the development of somatizations in adulthood (Stuart & Noyes, 1999, p.35). Childhood trauma stories were associated with somatization in adults (Barsky et al., 1994; Spertus et al., 2003).

It is known that splitting is an immature defense mechanism. It was stated that immature defenses, especially narcissistic and borderline defenses, can hinder the development of an active therapeutic alliance (Kramer et al., 2009, p.681). Previous studies show that individuals with mental disorders often use immature defense mechanisms (Granieri et al., 2017; Shabanpour et al., 2012). In a previous study, it was reported that women who reported childhood traumas (i.e., sexual abuse) had significantly higher somatic symptoms, and dissociative (splitting) symptoms than women who did not report sexual abuse or were not traumatized (Sack et al., 2010, p.318). Based on this point of view, it was determined that both somatization and dissociation are associated with childhood traumas (Chu & Dill, 1990; Kisiel & Lyons, 2001) and it can be said that childhood traumas are a trigger for splitting.

One of the effects that may occur as a result of childhood traumas in an individual in adulthood is the negative development of self-perception (Black et al., 1994, p.89). Self-perception is about how individuals perceive their bodies. The term self-perception, first coined by Schilder (1923), reflects mental representations of experiences and attitudes towards both the appearance and vital functions of the body. It is emphasized that all factors that affect the self-emerge in an intersubjective process reflect the individual's developmental story (Cash & Pruzinsky, 2002; Thompson, 1990). When compared to younger children, it is developmentally normative that self-perceptions become more negative as children become older. However, it was also stated that childhood trauma disrupts this normative development and this disrupted process settles in a trajectory that affects mental and emotional health throughout life (Cicchetti & Banny, 2014, p.732). These findings are especially valid for women with childhood traumas (DiLillo et al., 2007). Although individuals who develop a positive or negative self-perception in early childhood depending on the judgments of others and experience satisfying and pleasant experiences develop a positive self-perception, those with traumatic and unhappy life experiences perceive themselves negatively (Rogers, 1975, p.152). For this reason, it was stated that the violation of the self-boundaries of individuals causes both perception disorders towards their bodies (self-perception, body image) and the emergence of a self with reduced activation (Weiner & Thompson, 1997).

In summary, previous studies show that university students who are exposed to childhood trauma experience various psychological abnormalities in the short and long term. In this respect, individuals' negative self-perception, dissociation, and psychosomatic symptoms are considered to be associated with traumatic events in childhood. For this reason, the present study constitutes an important area for ongoing studies on university students experiencing

childhood traumas. So far, there has been no mediator evaluation that simultaneously evaluates the effects of each of the mediators in a multivariate model. In conclusion, the purpose of the study was to examine the mediating role of childhood traumas in the relationship between somatic symptoms, self-perception, and splitting in university students. It was hypothesized that the level of childhood trauma mediated the relationship between the splitting level of university students and somatic symptoms.

Method

Sample

Since the purpose of the current study was to examine the mediating role of childhood traumas in the relationship between somatic symptoms, self-perception, and splitting in university students, it was conducted with the predictive correlational research method, one of the quantitative research approaches. Within the scope of the study, a total of 220 university students (154 (70.0%) female and 66 (30.0%) male) participated in the study voluntarily. The convenient sampling method, which is one of the non-random sampling methods, was used in the study. The study was found appropriate in terms of research ethics in line with the ethical permission of Bingöl University Scientific Research and Publication Ethics Committee numbered 33117789/044/64915.

Data Collection Tools

Childhood Trauma Scale (CTQ)

The scale, which was developed by Bernstein et al. in 1994 and adapted to our culture by Şar et al. (2012), is a 5-point Likert-type scale consisting of 28 items. Childhood trauma, which has five subscales (sexual, physical, emotional abuse, and physical and emotional neglect), also includes a 3-item minimization subscale measuring trauma denial. The total score of the scale varies between 25-125 and the total scores of the subscales vary between 5-25. The Cronbach Alpha Internal Consistency Coefficient was found to be .93 in the cultural adaptation of the scale (Şar et al., 2012).

Social Comparison Scale (SCI)

The cultural adaptation of the scale that was developed by Aslı Gilbert and Trent was made by Şahin and Şahin in 1992 by adding new items. The scale, which consists of 18 items, was prepared using a single dimension and 6-point scale. The highest score to be obtained from

the scale items, which are scored between 1-6, shows the positive self-schema of the individual. According to the results of the internal consistency test, the Cronbach Alpha Coefficient of the scale was 0.87 (Şahin & Şahin, 1992). This scale was used to measure self-perception in the study.

Splitting Scale

This self-report scale consists of 14 items and was developed to examine the compartmental defense mechanism generally seen in borderline and narcissistic personality disorders. High scores in this 7-point Likert-type scale (the lowest score is 14 and the highest score is 98) indicate that the splitting defense mechanism is used at a high level. The internal consistency value of the scale was found to be 0.70 in the validity and reliability study conducted by Gerson (1984). The test-retest reliability coefficient, which was applied with an interval of three weeks, was calculated as 0.85. The test-retest reliability coefficient of the scale adapted to our culture by Alkan (2010) was found to be .85 and the internal consistency (α) value was 70. In the exploratory factor analysis performed later, it was seen that the factor distribution of the scale was different from the original study and consisted of multiple overlapping items. In this context, the validity and reliability study of the scale was conducted again and 3 items of the scale were excluded from the analysis. The results of the reliability analysis showed that the internal consistency (α) value of the 11-item scale was .63. Also, the test-retest reliability coefficient of the scale was calculated as .73 (Aytaç & Köse Karaca, 2017, p.11).

Symptom Checklist

The Psychological Symptom Checklist (SCL-90-R: Symptom Checklist 90 Revised), which was developed by Derogatis (1977) was designed to determine the psychopathological area of the individual's psychological symptoms and the level of the symptom related to this psychopathology. The scale items (a total of 90 items) are scored between 0-4. The validity and reliability studies in Turkey were conducted by Tufan (1987) on high school students and the test-retest result was found to be .83. However, the internal validity levels of the scale were found to be between .75 and .89 in the validity and reliability studies conducted by Dağ (1991). In the present study, the somatization sub-dimension of the scale was used to measure somatization.

Statistical Analysis

Since the study was conducted in a predictor correlational design, the Pearson Correlation Coefficient was used to determine the relationship between the variables in the study first.

Then, Regression-based mediation analysis for mediation was performed through the Jamovi Package Program. The level of significance was taken as .05 in statistical analysis.

Results

In line with the purpose of the study, descriptive statistics of the measurements obtained from the measurement tools used in the study were calculated and given in Table 1.

Table 1. The descriptive statistics on the measurement tools

Scales	Min-Max	\bar{X}	SD	Skewness	Kurtosis
Somatization (SCL)	0.00-39.00	15.58	8.40	.48	-.34
Social Comparison (SC)	36.00-108.00	77.85	16.79	-.44	-.40
Splitting Scale (SS)	35.00-88.00	59.59	11.48	.23	-.54
CCTO	9.00-52.00	24.08	8.75	.86	.45

It is seen in Table 1 that the skewness and kurtosis values of the four scales were in the range of ± 1 and their distributions had a normal distribution. After the descriptive statistics of the measurement tools were given, the correlations between the variables were examined and the obtained results are given in Table 2.

Table 2. Binary correlations between variables

Variables	SCL	SK	BO
SCL	--		
SK	-.174*	--	
BO	.260*	-.063	--
CCTO	.294*	-.229*	.315*

*p < .05

When Table 2 is examined, it is seen that although the predicted (dependent) variable (division scores) had a positive and low-level significant relationship with SCL and CCTO scores, it did not have a significant relationship with SC scores. CCTO scores, which are mediator variables, had a positive relationship with SCL and BO scores within the scope of the study, and an inverse and low-level relationship with SK scores.

After the bilateral relations between the variables were examined, the mediation model established in line with the purpose of the study was tested and the findings related to this model are given in Table 3.

Table 3. Indirect, direct, and total effects for the model mediated by the level of childhood trauma in university students' relationships between somatic symptoms, self-perception, and division.

Type	Effect	B	SH	β	Z
Direct	SCL \Rightarrow CCTO \Rightarrow BO	0.11	0.04	0.07	2.99**
Components	SCL \Rightarrow CCTO	0.31	0.07	0.27	4.56**
	CCTO \Rightarrow BO	0.34	0.09	0.26	3.97**
Direct	SCL \Rightarrow BO	0.25	0.09	0.18	2.79**
Total	SCL \Rightarrow BO	0.36	0.09	0.26	3.99**

* $p < .05$, ** $p < .01$, SE = Standard Error.

When Table 3 is examined, it is seen that the somatic symptoms (SCL) of university students were statistically significant ($\beta = 0.26$; $Z = 3.89$; $p < .05$). It was determined that a one standard deviation increase in the somatic symptom levels of university students caused an increase of 0.26 standard deviations on the splitting levels. When childhood trauma levels were included in the model as a mediator variable to this significant relationship, it was seen that the relationship between students' splitting levels and somatic symptom levels was still statistically significant, but its effect decreased ($\beta = 0.19$; $Z = 2.79$; $p < .05$). Also, the indirect effect between splitting level and somatic symptoms appears to be significant ($\beta = 0.07$; $Z = 2.99$; $p < .05$). According to this result, it was found that the level of childhood traumas had a partial mediating role in the relationship between the splitting levels of university students and somatic symptoms. The graphical representation of the tested model is given in Figure 1.

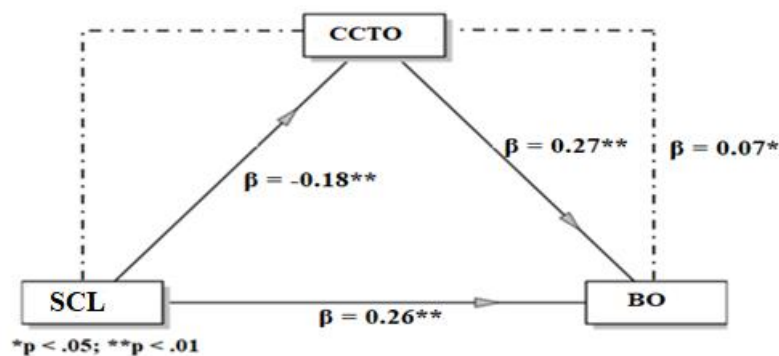


Figure 1. The mediating role of childhood trauma levels in the relationship between somatic symptoms and splitting levels of university students.

Discussion

In the present study, the purpose was to examine the mediating role of childhood traumas in the relationship between somatic symptoms, self-perception, and splitting in university students. It was found that childhood trauma scores had a positive relationship with somatization scores and splitting scores, and an inverse and low-level significant relationship with social comparison (self-perception) scores. This finding showed that as childhood trauma scores of university students increased, splitting and somatization scores also increased, but social comparison scores decreased. Several previous studies found that individuals who experienced childhood traumas showed symptoms of somatization. In a previous study conducted by Spertus et al. (2003), it was reported that individuals who experienced childhood traumas such as sexual abuse, physical abuse, and emotional abuse showed significant somatic symptoms. On the other hand, the relationship between childhood traumas and somatization were studied with a similar model and it was reported that there is a relationship between childhood trauma and somatization (Davis et al., 2005; Sansone et al., 2001; Van Oudenhove et al., 2008). Consistent with previous studies, the present study shows that childhood trauma is associated with somatic symptoms. It can be argued that childhood traumas are both a trigger for somatization and an effect on the pain that reflects on the individual's body. Exposure to chronically stressful and traumatic situations in childhood was shown to cause significant impairments in both coping strategies and stress-related responses during adulthood (Crosta et al., 2018). For this reason, it is considered that experts and responsible institutions regarding childhood traumas should conduct preventive and protective studies more strictly, and also, remedial studies must be conducted for children exposed to traumatic experiences.

Childhood traumas (including sexual, physical, and emotional abuse, and neglect) were associated with a wide variety of adult symptoms for which there is no medical explanation, including chronic pain (Barsky et al., 1994; Sansone et al., 2001). For example, studies such as headaches and musculoskeletal symptoms (Bendixen et al., 1994), gynecological complaints (Cunningham et al., 1988), and gastrointestinal symptoms (Bass et al., 1999) show that childhood traumas have significant impacts on the body. It is considered that children exposed to childhood abuse and neglect are vulnerable to concerns about bodily functions and integrity in the later stages of their lives, because they cannot physically resist it or because the caregivers ignore these children's basic physical and emotional needs (Dong, C., Xu, R., and Xu, L. 2021). On the other hand, it was also reported that there is a relationship between

emotional, physical, and sexual abuse and somatization in childhood traumas (Güleç et al., 2013, p.141), and it was observed in mental disorders characterized by somatization, namely somatoform disorders. In particular, childhood traumas were associated with hypochondriasis and conversion disorders (including pseudo-seizures) (Roelofs et al., 2002; Spitzer et al., 1999). However, although the relationship between early negative life experiences and adult somatization is well established, the underlying mechanisms are not well understood yet (Waldinger et al., 2006, p.135).

Another finding obtained as a result of the study was that there was a positive and significant relationship between childhood trauma and the splitting defense mechanism. This finding shows that as childhood trauma scores of university students increased, their splitting scores also increased. A strong correlation was found between childhood trauma and immature defense styles of adults who had negative childhood experiences in a previous study on outpatient psychosomatic patients (Nikel & Egle, 2001). Psychoanalytic theories argued that any psychopathological entity is characterized by the use of vague maladaptive defense mechanisms at its base. For this reason, it was stated that immature defenses are associated with poor psychological adjustment and the presence of psychopathological symptoms (Cramer & Block, 1998; Watson, 2002). The use of immature defense mechanisms in adulthood may be indicative of psychological difficulties at an age when these defenses are developmentally dominant (e.g., splitting in early childhood). To protect from excessive anxiety and to digest the traumatic experience, young children use defense mechanisms strongly depending on the severity of the event. As a result of the excessive use of the defense mechanism, the defenses continue to function after that age and remain a prominent feature of the individual's personality (Cramer & Block, 1998, p.159). Previous studies reported that patients with mental disorders often use immature defense mechanisms (Granieri et al., 2017; Shabanpour et al., 2012). Immature defenses emphasize that they protect individuals from awareness of anxiety-provoking experiences or conflicts by limiting awareness of thoughts and feelings, as well as the capacity for more adaptive ways of addressing stress (Perry et al., 2015). For this reason, it was stated that especially narcissistic and borderline defenses hinder the development of an active therapeutic alliance (Kramer et al., 2009). However, no study was found that directly examined whether there is a relationship between childhood trauma and the splitting defense mechanism. It is considered that the present study will contribute to the literature with this aspect.

The other finding of the study showed that there is an inverse and low-level relationship between childhood traumas and social comparison (self-perception). This also shows that the higher the childhood trauma score, the lower the individual's self-perception score, and thus the negative impact of childhood trauma on self-perception. One of the effects of childhood traumas that may occur during adolescence and adulthood is the development of negative self-perception (Black et al., 1994). Self-perception is the sum of individuals' beliefs about themselves (Taylor et al., 2006). Studies report that self-concept does not develop passively, but instead, it is shaped as a result of important interactions between the individual and another (Cantor & Kihlstrom, 1987). Individuals may develop a positive or negative self-image depending on the judgments of another, especially in early childhood. Although individuals who have pleasant and satisfying experiences develop a positive self-perception, those who experience traumatic and unhappy life experiences express negative self-perceptions (Loos & Alexander, 1997; Lopez & Heffer, 1998; Raschke & Raschke, 1979; Rogers, 1951). In another study that predicted self-perception with childhood traumas, it was found that individuals who were exposed to violence, who did not receive enough attention from their parents or who lacked attention, did not have a positive perception of themselves and their characteristics (Wang et al., 2021).

The results show that childhood trauma is a risk factor in university students' self-perception and showing somatic symptoms, as well as that the level of childhood trauma has a mediating role in the relationship between university students' self-perception (social comparison) levels and somatic symptoms. Although there is no study directly similar to the present study, as stated above, it is seen that the studies conducted to support the findings of the present study. In this respect, it is considered that the results obtained from the study will contribute to the literature.

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