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# The Mediator Role of Depression, Stress and Anxiety in the Relationship between Childhood Trauma Experiences and Psychological Vulnerability

Selcan YILDIZ<sup>1</sup>, Müge YUKAY YÜKSEL<sup>2</sup>

<sup>1</sup>Ministry of Family and Social Services, İstanbul, Türkiye  0000-0003-1130-6593

<sup>2</sup>Faculty of Education, Marmara University, İstanbul, Türkiye  0000-0002-7425-2716

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## ABSTRACT

The aim of this study was to examine the mediating role of stress, anxiety and depression in the relationship between psychological vulnerability and childhood trauma experiences among university students. For this purpose, structural equation model was used in the study. A total of 465 students, including 329 (70.01%) females and 139 (29.9%) males, were selected using the random disproportionate cluster sampling method. In the study, data were collected using Psychological Vulnerability Scale, Childhood Trauma Scale, Depression-Anxiety-Stress Scale Short Form (DASS-21) with personal information form. Analyses were carried out using AMOS 20.0 and SPSS 20 programmes. The data obtained as a result of the study were tested with the structural equation model. Examining the model established between psychological vulnerability, childhood trauma experiences, stress, depression and anxiety scores, it was found that anxiety, stress and depression have a mediating role in the relationship between childhood trauma experiences and psychological vulnerability.

Keywords:

Psychological vulnerability, childhood trauma, anxiety, depression, stress, structural equation model

## 1. Introduction

Individuals are born into a world that can be called a pool of relationships consisting of relationships established with other people. The obligatory attachment to the care provided to the newborns by someone else for their needs to survive also forms the basis of the selves and characteristics that individuals will have in the future and the learning that will be effective in the construction of their futures. The period covering the first years of life contains important clues and data in terms of making sense of human and human nature. The attachment established between the baby and the caregiver and its forms affect the psychological perceptions and infrastructure of the person in adult life (Bowlby, 2012). Negative life events in childhood create conditions that the child will find difficult to cope with developmentally. The child has not yet established an adult cognitive infrastructure, and his or her perceptual processes are not yet complete. These conditions are observed to affect the individual relationally and psychopathologically in later stages of life (Bahar, Savaş, & Bahar, 2009; Silver & Updegraff, 2013). Therefore, traumas experienced in childhood draw great interest in the literature. Trauma is defined as all of the situations that occur at micro and macro levels due to natural phenomena, human contribution, or direct deliberate human actions and that damage the achievements specific to developmental areas, make the individual unable to cope, and have effects that disrupt the integrity of the person (Korn, 2009; Ruppert, 2014; Terr, 1991). Childhood traumas, which are evaluated in the context of the trauma phenomenon with its multi-layered and interactive structure, include neglect and abuse behaviors applied by adults towards children (DSM-5, 2013). According to Runyan et al.

<sup>1</sup> Corresponding author's address: Marmara University, Atatürk Faculty of Education, İstanbul /Türkiye

e-mail: [pd.selcanyildiz@gmail.com](mailto:pd.selcanyildiz@gmail.com)

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(2002), the main sources of trauma are child neglect and abuse, and these negative experiences create traumatic effects on the developmental areas of the child. Childhood trauma causes cognitive, emotional, and physical problems, impaired perception of reality, difficulties in coping, and psychopathological disorders in individuals, while childhood experiences of neglect and abuse are detrimental to individual well-being, leading to addiction, depression, and events requiring psychiatric diagnosis in adulthood (Banducci et al., 2014; Maschi & Bradley, 2008; Şar, Akyüz, Kundakçı, Kızıltan, & Doğan., 2004). In this context, childhood trauma experiences and the concepts of stress, anxiety, and depression are discussed.

Although the concept of depression is widely used in the literature, it has long been defined as a distinctly depressed mood that causes a loss of pleasurable feelings such as joy, desire, and pleasure by focusing on negativity in a cognitive sense and negative experiences in an emotional and behavioral sense. In today's modern world, it is defined as a highly prevalent disorder with a distinct depressive structure in areas of development (Gilbert, 2016). This concept includes affective and cognitive patterns formed by the feeling of being unable to control the uncertain and unpredictable future and the feeling of intense distress and fear (Barlow & Campbell, 2000; Köknel, 1989). Another concept, anxiety, is as common as depression and has become a part of life. This concept includes affective and cognitive patterns formed by the feeling of being unable to control the uncertain and unpredictable future and the feeling of intense distress and fear (Barlow & Campbell, 2000; Köknel, 1989). In addition to the fact that this concept exists as a natural result of the flow of life, it is also known that it has effects in psychopathological dimensions (Kessler et al., 2005). While stress, which is another concept discussed in this study, also exists as a natural outcome of the flow of life, it can affect the well-being of individuals from a psychopathological perspective. According to Fontana and Abouserie (1993), stress is an emotional, cognitive, and physical response or reaction that people develop against situations that create internal and/or external tension, pressure, and conflict

Depression, anxiety, and stress affect a person's well-being, relational functionality, self-attributions, physical completeness, cognitive beliefs, and emotional well-being (Küey, 1998). Depression, anxiety, and stress experiences, as well as childhood trauma experiences, are frequently discussed together in the literature. It is seen that in the clinical context, the concepts of childhood traumas and depression are also considered together with variables such as mood and regulation (Kara, 2018), insight (Heim et al., 2008), pharmacological effects (Nemeroff et al., 2003), neuropsychological studies (Vythilingam et al., 2002), schizophrenia and dissociative structure (Ertürk, 2014), and suicide (Sarchiapone, Carli, Cuomo, & Roy, 2007). On the other hand, the concepts of childhood trauma and anxiety are generally discussed in the literature with variables such as physiological effects, attachment, anger (Kara, 2018), mood, emotion regulation (Çöllü, 2017), emotional and neurobiological effects (Heim & Nemeroff, 2001; Nemeroff, 2004), memory (Wessel, Meeren, Peeters, Arntz, & Merckelbach, 2001), psychosis (Van Nierop et al., 2015), and trichotillomania (Lochner et al., 2002). From the perspective of the stress concept, childhood trauma experiences are generally discussed in studies related to dissociative and psychotic disorders (Aas et al., 2014; Ertürk, 2014) and post-traumatic stress disorder (O'Donovan et al., 2011; Perry, 1994). In this study, it is aimed at examining the relationship between childhood trauma experience, stress, anxiety, and depression concepts, whose relationships with each other have been the subject of various studies. Although childhood trauma experience, anxiety, depression, and stress are significant risk factors for each other's development, they cannot be generalized in a causal context due to the subjectivity and uniqueness of each individual's internal dynamics. The fact that while some individuals do not show any psychopathological problems in experienced life events that may lead to severe trauma, depression, anxiety, and stress, some individuals show clinical results in similar life events can be explained by subjective differences (Poole, Dobson, & Pusch, 2017). In this context, psychological vulnerability, which is an important concept in the literature related to the effects of experiential events, is discussed.

The concept of vulnerability can be defined as the "proneness to be harmed" and "vulnerability" of humans as relational beings (Turner & Noh, 1983). It has also been defined comprehensively by Lee and Scanlon (2007) as "sensitivity" and "tenderness" to possible dangers and negative experiences involving different dimensions (physical, social, psychological, etc.). Due to this high sensitivity and tenderness that they have towards negative life events and phenomena, individuals become prone to being harmed and become an open target for damages. Psychological vulnerability has been considered a concept that occurs based on the feeling of being in a relationship that exists in individuals as a natural tendency, as well as the fear of rejection and the belief of inadequacy in a relationship (Brown et al., 2016). It has been defined as individuals' establishing their

perceptions of themselves based on the outside world, other people, and the approval and discretion of others at the relational level, determining their self-worth and respect according to external criteria, and exhibiting dependent characteristics against approval sources (Sinclair & Wallston, 1999). In the literature, psychological vulnerability is frequently used closely with the concept of “proneness” since it leads to disorders on the psychopathological level. Considering that vulnerability is observed as a temperament feature in people with high vulnerability, it is seen that it creates a basis for psychopathological disorders, problems, and especially depression (Beck et al., 1987). Psychological vulnerability, which is a state of being prone to injury and harm (Ingram & Price, 2010) towards trauma experiences, psychopathological problems, and the possible effects of these experiences, leads to these and other psychopathological problems with a double-ended interaction (Gilbert et al., 1996). It is seen that in the literature, vulnerability and trauma experiences are discussed, especially within the framework of post-traumatic stress disorder, migration, and refugee phenomena (Manne et al., 2000; Neuner et al., 2004), as well as with a focus on brain research and schemas (Boudoukha et al., 2016; Gilbertson et al., 2002). In terms of being prepared and ready against stress and future life events, the brain studies of Swartz, Knodt, Radtke, and Hariri (2015) are quite interesting. In this study, how the participants of the research coped differently with similar stressful life events for four years was discussed, taking into account their subjective psychological vulnerabilities. Moreover, psychological vulnerability has been discussed together with the concepts of stress and social support (Thoits, 1982), emotion regulation (Kashdan et al., 2006), suicide (Conner, Duberstein, Conwell, Seidlitz, & Caine, 2001), addiction (McCormick et al., 2012), use of humor and cognitive flexibility (Sarıçalı, 2018), resilience, well-being, happiness (Satici, 2016; Satici & Uysal, 2017), and depression (Antypa et al., 2017)

Polat (2017) stated that neglect and abuse of children are very common in both our country and the world. In an epidemiological study conducted by Sofuoğlu et al. (2014), it was found that the frequency of childhood trauma experiences varied between 42% and 70% in a sample of 7540 children from Turkey. In its report related to depression and mental illnesses, the World Health Organization (2006) states that depression and anxiety disorders increase rapidly every year, and many mental disorders, especially suicide, are observed in the world population with the course of these disorders. It is thought that the concept of psychological vulnerability, which is associated with proneness in the field of psychopathology, is firmly related to the concepts of psychological trauma, stress, depression, and anxiety, which are important psychopathological experiences, and the concept of vulnerability may offer a different perspective on these cases. It is seen that the variables of this study are other than psychological vulnerability, and the studies conducted with these variables are generally based on symptoms. The concept of psychological vulnerability, which is discussed in the context of possible psychopathological and relational disorders, will contribute to the literature in the planning of preventive interventions. Contrary to the general concepts of positive psychology (well-being, self-compassion, resilience, etc.), the concept of psychological vulnerability is directly related to the negative internal dynamics of individuals, and at the same time, it opens space for mental disorders related to the clinical psychology framework. It is considered important that vulnerability studies can offer a different perspective on the concepts of anxiety, depression, and stress in childhood trauma experiences and open a new field of application in preventive psychological counseling interventions.

In an experimental study entitled "Sexual Trauma and Personality: Sexual Trauma and Personality," Wonderlich et al. (2001) focused on women who had experienced sexual trauma in childhood and adulthood. They found that the personality disorder scores of those who had experienced sexual trauma in childhood were higher than the scores of those who had not experienced trauma and had been exposed to trauma in adulthood. From this point of view, it is believed that this study conducted with university students to examine childhood trauma experiences within the framework of depression, anxiety, stress, and psychological vulnerability will be useful in terms of ensuring and protecting the mental well-being of young adult students, and it is important to examine the issue in terms of the Turkish sample. It is believed that this study will contribute to the literature on psychological vulnerabilities that arise during childhood traumas experienced before the transition to adult life. For the aforementioned reasons, the purpose of this study was to examine the mediating role of stress, depression, and anxiety between psychological vulnerability and childhood trauma experiences of university students using a structural equation model.

## 2. Methodology

### 2.1. Research Model

In this article, the mediating role of stress, depression, and anxiety between psychological vulnerability and the childhood trauma experiences of university students was examined with a structural equation model. Structural Equation Modeling (SEM), on the other hand, is a statistical model that includes testing the validity of the statistical model established between the variables within the scope of the conducted research and involving multidimensional and variable statistical analyses of the indirect, direct, and observed or latent relations between the variables at a complex level (Schumacker & Lomax, 2004).

### 2.2. Research Sample

The study group consisted of students who were actively continuing their education at the undergraduate level at Marmara University in the autumn academic semesters of 2022 and 2023. Necessary permissions were obtained from the participants through a consent form. The sample for the study was determined by random disproportionate cluster sampling. While determining the sample size of the research, the 95% confidence interval and  $\pm 5\%$  sampling error were taken into account for the population that did not exhibit a homogeneous structure, and the sample size required for the research was calculated as  $n = 380$  (Gürbüz & Şahin, 2016). Considering that there may be possible data losses within the scope of the research, we collected data from 496 people. Ultimately, of the examinations performed during the analysis, data belonging to 31 participants determined to be incomplete and incorrect were excluded from the study, and the final sample size was 465.

### 2.3. Data Collection Tools and Procedure

*Childhood Trauma Scale:* This scale was developed by Bernstein et al. (1994) to evaluate pre-adulthood trauma experiences and the questionnaire. Şar et al. (2012) adapted this scale to its Turkish forms. The scale consists of a total of 28 items in five subscales determining experiences under two kinds of neglect (emotional and physical) and three kinds of abuse (sexual, physical, and emotional). In terms of the internal consistency of the subscales of the original questionnaire, the Cronbach Alpha coefficient was calculated as .92 for sexual abuse, .88 for physical abuse, .81 for emotional abuse, .87 for emotional neglect, and .62 for physical neglect, and .88 for the whole scale. In the study of the scale, the Cronbach Alpha coefficient of the subscales was calculated as .90 for emotional abuse, .90 for physical abuse and .73 for sexual abuse, .85 for emotional neglect, .77 for physical neglect, and .93 for the whole scale. It has been observed that the results of both analyses are consistent with each other.

*Psychological Vulnerability Scale:* Sinclair and Wallston developed the psychological vulnerability scale in 1999. The scale was adapted into Turkish by Akın and Eker (2011) to measure the psychological vulnerability levels of adults. The scale consists of six 5-point Likert-type self-assessment items. This scale has no reverse items. High scores indicate high psychological vulnerability. As a result of the internal consistency analyses of the scale, the Cronbach Alpha coefficient was found to be .72 for the original scale, while it was found to be .71 for the adapted scale. It is evident that both values are consistent with each other.

*Depression Anxiety Stress Scale Short Form:* The long form of the Depression-Anxiety-Stress Scale (DASS) was developed by Lovibond and Lovibond in 1995. On the other hand, the Depression-Anxiety-Stress Scale Short Form (DASS 21) is comprised of three subscales (stress, depression, and anxiety) and a total of 21 4-point Likert-type items. Yılmaz et al. (2017) adapted the scale into Turkish. In terms of internal consistency of the original scale, the Cronbach Alpha coefficient was determined to .67 for the depression subscale, .86 for the anxiety, .67 for stress, and .87 for the whole scale. In the Turkish adaptation study of the scale, as a result of the internal consistency analysis, the Cronbach Alpha coefficient was found to be .85 for the "depression", .80 for the "anxiety" and .77 for the "stress".

### 2.4. Data Analysis

The data set of the study was analyzed using AMOS 20.0 and SPSS 23 programs. Before starting the analysis, the kurtosis and skewness of the data distribution were tested. It was observed that these values were distributed between +2 and -2. As a result of this, it was determined that the data does not show a non-normal distribution, and the process was continued with parametric analysis. (George & Mallery, 2010). The

relationships between the Psychological Vulnerability Scale, Childhood Trauma Scale, Depression-Anxiety-Stress Scales, and their subscales were examined by Pearson Correlation Coefficient analysis. Structural equation modeling was used to examine the mediating role of depression, anxiety, and stress between psychological vulnerability and childhood trauma, which is the main purpose of this study.

**Table 1.** Kurtosis, Skewness and Deviation Values

	Kurtosis	Skewness	St.Deviation
DAS	1.64	.93	14.21
PK	-.34	.20	4.44
CCRT	1.70	1.49	14.59

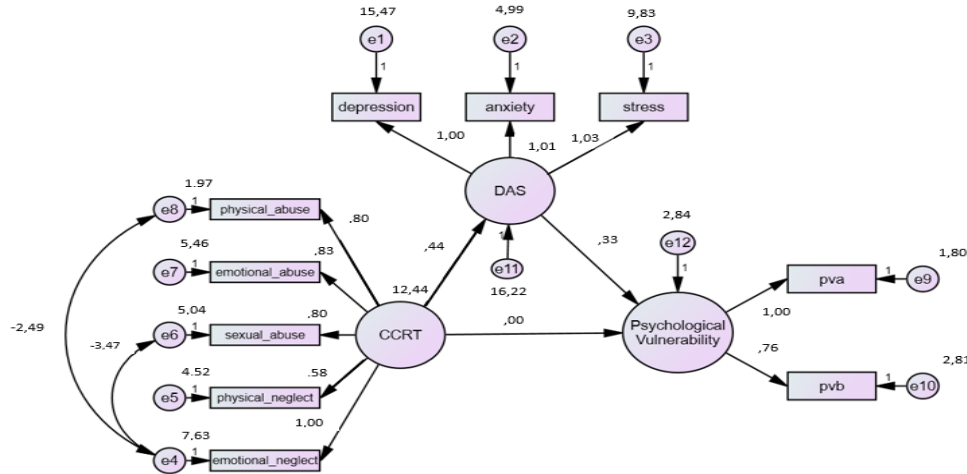
## 2.5. Ethical

The study entitled "The Mediator Role of Depression, Stress, and Anxiety in the Relationship between Childhood Trauma Experiences and Psychological Vulnerability" was reviewed by the Research and Publication Ethics Committee of Marmara University Educational Sciences Institute. It was decided that the study in question was ethically appropriate by the committee's decision dated March 29, 2022, and numbered 254174.

## 3. Findings

### Findings Related to the Model Regarding the Mediating Role of Anxiety, Depression, and Stress between Psychological Vulnerability and Childhood Trauma Experiences

When the mediating role of stress, depression, and anxiety between psychological vulnerability and childhood trauma experiences is examined, the independent variable of the study is childhood trauma, the dependent variable is psychological vulnerability, and the mediator variables are depression, anxiety, and stress. The findings regarding the path analysis of the model established in the context of the structural equation model are presented in Figure 1.



**Figure 1:** Structural Equation Model Formed to Examine the Mediator Role of Anxiety, Depression, and Stress in the Relationship between Psychological Vulnerability and Childhood Trauma Experiences

As shown in Figure 1, it was determined that the significant relationship ( $\beta=.21$ ;  $Sd=.04$ ;  $t=4.797$ ;  $p<.001$ ) between childhood trauma experiences and psychological vulnerability became statistically insignificant ( $\beta=.00$ ;  $Sd=.030$ ;  $t=-.103$ ;  $p>.05$ ) when anxiety, depression, and stress variables were included in the analysis as mediator variables. That is, in accordance with the structural equation model criteria of Baron and Kenny (1986), the obtained results of the analysis showed that the significant relationship between the independent and dependent variables disappeared with the inclusion of mediator variables in the analysis. From this point of view, it is seen that the variables of stress, depression and anxiety have a full mediator role between psychological vulnerability and childhood trauma experiences. The findings that emerged after the analyses

made and the modifications performed to ensure that the values of the goodness of fit were among the good and acceptable values are presented in Table 1.

**Table 2.** Model Fit Values Regarding the Mediator Role of Anxiety, Depression, and Stress between Psychological Vulnerability and Childhood Trauma Experiences

Model Fit Criteria	Good Fit	Acceptable Fit	Research Data
1 CMIN/SD	$0 \leq \chi^2/sd \leq 2$	$2 \leq \chi^2/sd \leq 3$	2.486
2 NFI	$0.95 \leq NFI \leq 1.00$	$0.90 \leq NFI \leq 0.95$	.968
3 IFI	$0.95 \leq IFI \leq 1.00$	$0.90 \leq IFI \leq 0.95$	.981
4 CFI	$0.97 \leq CFI \leq 1.00$	$0.95 \leq CFI \leq 0.97$	.980
5 RMSEA	$0 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.08$	.057
6 GFI	$0.95 \leq GFI \leq 1.00$	$0.90 \leq GFI \leq 0.95$	.970

When the fit indices ( $\chi^2/df=2.486$ ;  $RMSEA=.057$ ;  $CFI=.980$ ;  $GFI=.970$ ;  $IFI=.981$ ;  $NFI=.968$ ) of the created structural equation model (Table 1) were examined, it was seen that all fit values were at a high level, good, and in the acceptable range. Based on these indices and the findings, it can be said that the model created to test the mediator role of anxiety, stress, and depression between psychological vulnerability and childhood trauma experiences is confirmed.

#### 4. Discussion and Conclusion

In this study, while examining the mediator role and the features that the established model should have, the way to be followed was determined by taking the study of Baron and Kenny (1986) on the structural equation model as reference. Path analysis was conducted to examine the mediating role of anxiety, depression, and stress in the relationship between psychological vulnerability and childhood trauma experiences. To test the results obtained within the scope of the established model, the full mediator model was examined based on the accepted fit indices (Bayram, 2016). The data of the structural equation model of the study was determined to be in the range of accepted fit indices, and the established model was confirmed.

As a result of the analyses, first, it was found that childhood trauma experiences were considerable effective on psychological vulnerability and depression, anxiety, and stress. Secondly, it was determined that anxiety, depression, and stress also had a statistically significant effect on psychological vulnerability. It was observed that the significant relationship between psychological vulnerability and childhood trauma experiences became statistically insignificant and disappeared when stress, depression, and anxiety variables were included in the analysis. Accordingly, it was concluded that anxiety, depression, and stress played a full mediator role in the relationship between childhood traumas and psychological vulnerability. These results show that the whole relationship between psychological vulnerability and childhood trauma experiences can be explained by depression, stress, and anxiety. Although there is no other study examining all the variables of this study together, there are similar studies focusing on some of these variables in the literature. In the study conducted by Sinclair and Wallston (2010), it was revealed that stress, depression, and anxiety variables significantly predicted the psychological vulnerability variable. Psychological vulnerability was found to predict 56% of the variance in depression. In the literature, there are also studies examining childhood trauma experiences and variables of stress, anxiety, and depression. In a study conducted with university students, Wright et al. (2009) examined the mediating role of maladaptive schemas in the relationship between childhood emotional abuse and neglect experiences and psychological symptoms in adult life. As a result of the research, they found that emotional abuse and emotional neglect cause depression, anxiety, and other psychological problems in adult life. In their experimental study on childhood trauma experiences and depression, Toth et al. (1992) found that the depression vulnerability of children who had a childhood trauma experience and who had a history of neglect and abuse was higher than that of those who did not have any childhood trauma experience. It is evident that the findings obtained from this current study are in parallel with the literature. In their study, Hanson et al. (2015) stated that psychological disorders, which increased with the stressful experiences of daily life, increased the incidence of depression and anxiety due to early childhood traumas. In the Adverse Childhood Experiences (ACE) research (Felitti et al., 2019), which is one of the important studies in the field of trauma, comprehensive screening studies were carried out with a large sample group, including people with general medical-related disorders. Studies have shown that negative

childhood experiences of people who have been exposed to or witnessed traumas involving neglect and abuse during childhood and who have experienced trauma content such as violence, addiction, psychiatric disorders, and depression are associated with physical chronic disorders, disability experiences, chronic depression findings, crime content experiences (Dube et al., 2001), addiction, and deterioration of general well-being (Dube et al., 2003). Regarding these results, it can be said that the findings of the current study are in parallel with the literature.

In this research study, it was aimed to examine the mediating role of psychological symptoms in the relationship between psychological vulnerability and childhood trauma experiences and in college students. For this purpose, a structural equation model was used in the study. The external reality limitation of this study is thought to be population selection. As a result, it was revealed in the study that anxiety, depression, and stress play a full mediator role between psychological vulnerability and childhood trauma experiences, and it is being considered that this finding is important and explanatory data on the relationship between individuals' childhood experiences and their well-being in adult life. It is seen that the perception that the world is an insecure place, which is caused by childhood traumas, abuse, and neglect experiences that harm the integrity of individuals, and the perception that social positions pose a threat to the individual lead to psychological vulnerability even if the experiences in the ongoing course of adult life do not have a threatening content. It seems that psychological vulnerability, which shows itself in individuals as proneness to being harmed, causes clinical experiences that make psychotherapy essential in interpersonal relationships, in the relationship that the individuals have established with themselves, and in their perception of the world. It can be seen that current experiences of depression, anxiety, and stress experienced here and now can damage individuals' well-being by affecting the psychological vulnerability associated with childhood experiences. In addition, past vulnerabilities that have not been worked on also have effects today. In this context, it is considered that by developing a new approach to the concepts of anxiety, stress, childhood trauma experiences, and depression, which are generally discussed in the clinical framework in the literature, in terms of psychological vulnerability, this study can open a field of intervention in terms of today and now. It is believed that individual counseling focusing on psychological vulnerability with students on issues such as childhood trauma, depression, anxiety, and stress can have an important impact on the mental health and well-being of individuals

### Recommendations

The psychological trauma experiences covered in this study are limited to experiences of neglect and abuse. In addition, other types of childhood trauma (having a diagnosed parent, having a dependent parent, peer bullying, etc.) were not included in the study. Therefore, different types of childhood trauma may be the subject of other studies with other variables that may be related. In line with the results of this study, it is recommended that individual and group psychological counseling sessions that strengthen the self against psychological vulnerability be used in the treatment of current trauma experiences, depression, anxiety, or stress experiences.

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