

Childhood Traumas, Ego Defense Mechanisms, and Happiness Level in Medical Students

Ömer ACAT¹  Kemal Macit HİSAR² 

¹Selçuk University, Faculty of Medicine, Department of Public Health, Konya, Turkey,

omer.acat@gmail.com

²Selçuk University, Faculty of Medicine, Department of Public Health, Konya, Turkey, kmhisar@gmail.com

(Corresponding Author)

Article Info

Article History

Received: 25.06.2022

Accepted: 25.08.2022

Published: 25.04.2023

Keywords:

The Childhood Traumas,
Ego Defense Mechanisms,
Happiness,
Medical School.

ABSTRACT

Purpose: This study aims to examine the relationship between childhood trauma, defense mechanisms, and happiness levels in medical students.

Method: This descriptive study was conducted on the medical students of a state university during 1 February to 15 March 2020. The questionnaire used to collect data consisted of socio-demographic form, Childhood Trauma Questionnaire (CTQ), Defense Style Questionnaire (DSQ-40), and Oxford Happiness Questionnaire Short Form.

Results: Analysis of data showed a significant poor and positive relationship between participants' immature defense scores and total childhood mental trauma scores ($r=0.280$; $p<0.001$). While the sub-dimensions of childhood traumas explain 17.0% of the change in the happiness level score, this explanation rate increases to 32.9% when ego defense styles are added to the model.

Conclusion and Suggestions: There was a weak correlation between defense styles and all sub-dimensions of childhood traumas. So, it is necessary to take measures to prevent negative experiences in childhood. Children need to be educated so that they can report abuse. We recommend the education of families on parenting and child rearing as well as the early identification and rehabilitation of child abuse by health systems.

Tıp Fakültesi Öğrencilerinde Çocukluk Çağı Travmaları, Ego Savunma Mekanizmaları ve Mutluluk Düzeyleri

Makale Bilgileri

Makale Geçmişi

Geliş: 25.06.2022

Kabul: 25.08.2022

Yayın: 25.04.2022

Anahtar Kelimeler:

Çocukluk Travmaları,
Ego Savunma Mekanizmaları,
Mutluluk,
Tıp Fakültesi.

ÖZ

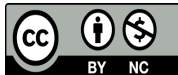
Amaç: Bu çalışmanın amacı tıp fakültesi öğrencilerinde çocukluk çağı travmaları, savunma mekanizmaları ve mutluluk düzeyleri arasındaki ilişkiyi incelemektir.

Yöntem: Tanımlayıcı tipte olan bu araştırma, bir devlet üniversitesinin tıp fakültesi öğrencileri ile 1 Şubat-15 Mart 2020 tarihleri arasında yapılmıştır. Araştırma verilerini toplamak amacıyla hazırlanan anket, sosyodemografik form, Çocukluk Çağı Travma Anketi (CTQ), Savunma Tarzı Anketi (DSQ-40) ve Oxford Mutluluk Anketi Kısa Formundan oluşmaktadır.

Bulgular: Katılımcıların olgunlaşmamış savunma puanları ile toplam çocukluk çağı ruhsal travma puanları arasında zayıf, pozitif, anlamlı bir ilişki ($r=0.280$; $p<0.001$) tespit edilmiştir. Mutluluk düzeyi puanındaki değişimin %17.0'sini çocukluk çağı travmalarının alt boyutları açıklarken, modele ego savunma stilleri eklendiğinde bu açıklama oranı %32.9'a yükselmektedir.

Sonuç ve Öneriler: Savunma stilleri ile çocukluk çağı travmalarının tüm alt boyutları arasında zayıf bir ilişki bulunmuştur. Bu nedenle çocuklukta yaşanan olumsuz deneyimlerin önüne geçilmesi için önlemler alınması gerekmektedir. Çocukların istismarı bildirebilmeleri için eğitilmesi gerekir. Ailelere ebeveynlik ve çocuk yetiştirme konusunda eğitim verilmesini ve istismara uğrayan çocukların sağlık sistemleri tarafından erken teşhis ve rehabilitasyonunu öneriyoruz.

Citation: Acat, Ö. & Hisar, K.M. (2023). Childhood traumas, ego defense mechanisms, and happiness level in medical students. *Genel Sağlık Bilimleri Dergisi*, 5(1), 34-46.



"This article is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/) (CC BY-NC 4.0)"

INTRODUCTION

According to the World Health Organization, child maltreatment includes various forms of neglect and abuse that can harm the health and psychological state of the child. Childhood trauma is a common problem throughout history that negatively affects public health. Although it takes place under various names in the literature, it covers all kinds of maltreatment of the child. Childhood trauma is a term that includes childhood sexual, physical, and emotional abuse and neglect. Childhood sexual abuse is often defined as unwanted, inappropriate sexual activity with the perpetrator. Physical abuse is defined as any deliberate act that has or has the potential for injury or trauma by an older person. Emotional abuse, also called psychological abuse, is defined as behavior that causes psychological trauma or stress. Verbal assault may contain threatening, insulting, terrifying or humiliating remarks. Finally, neglect is defined as a lack of meeting the child's basic physical needs (food, shelter, safety) or psychological needs (Bahk, Jang, Choi, & Lee, 2017). A meta-analysis estimated that more than three-quarters of children (affecting approximately 1.5 billion children) have experienced physical, sexual, and emotional abuse (Hillis, Mercy, Amobi, & Kress, 2016).

The severity and frequency of these traumatic experiences in childhood may cause the emergence of various psychiatric symptoms such as anxiety, depression and psychosis (Grassi Olivera, Kristensen, Brietzke, & Coelho, 2015; Nettis & Mondelli, 2018). In a study, a relationship was found between parental attachment styles, defense styles, and psychiatric symptoms due to childhood traumas (Waikamp, Serralta, Ramos-Lima, Zatti, & Freitas, 2021).

Defense mechanisms are defined as unconscious methods applied by the ego to mask anxiety and distress (Araujo, Ryst, & Steiner, 1999). The definition of the concept of defense mechanisms was first made by Sigmund Freud (1894) in the study entitled "Neuropsychosis of Defenses". At the bottom of this classification are narcissism and pathological defenses used in the first periods of life (up to the age of five). In the second step, immature defenses (displacement, logic etc.), in the third step, neurotic defenses (suppression, reaction formation, displacement, etc.), in the fourth step, the most desired mature defense mechanisms (humor, exaltation, thinking of others, etc.) are included (Vaillant, 1979). These defense mechanisms; classified as immature, neurotic, and mature (Andrews, Singh, & Bond, 1993). Studies have found relationships between childhood trauma and psychiatric symptoms. A positive relationship was found between childhood trauma and psychotic symptoms in adulthood in patients with borderline personality disorder (Nettis & Mondelli, 2018). From the same perspective, Marshall et al. investigated these relationships and found that maternal "emotional control" was significantly associated with depressive symptoms in adults (Catalan et al., 2017).

Happiness is defined as a combination of joy satisfaction or well-being and life satisfaction (Sapmaz & Doğan, 2012). In addition, there is evidence that the distinctive features of happiness such as "life satisfaction and positive emotions" are related to physical health, relationships, and successful results at work (Lyubomirsky, King, & Diener, 2005). Happiness is increasingly desired by people around the world (Diener, Oishi, & Lucas, 2015).

METHOD

Research Design

This descriptive study was conducted on the medical students of a state university during 1 February to 15 March 2020.

Participants

The universe of this study, which was conducted to examine and evaluate the relationship between childhood traumas and ego defense mechanisms and the happiness levels of individuals, consists of 1364 people studying at Selcuk University Faculty of Medicine in the 2019-2020 academic year. The sample was not selected and it was aimed to reach at least 80% of 1364 students. In the study, 1162 people were reached and 45 questionnaires were excluded due to their extreme values and the results of 1117 people were evaluated.

Research Instruments and Processes

The questionnaire used to collect data consisted of socio-demographic form, Childhood Trauma Questionnaire (CTQ), The defense style questionnaire (DSQ-40), and Oxford Happiness Questionnaire Short Form. In the first paragraph of the research questionnaire, we informed them that identity information will not be requested, the answers will be kept confidential, and the data will be used for scientific purposes. It has been reported that participation is voluntary. No questionnaire was given to those who did not want to participate in the study. Questionnaires were filled in the classroom and under the supervision of the researcher.

Socio-demographic Form: It consists of 7 questions to evaluate the gender, age, grade, their caregivers during 0-6 age, with whom they live, their monthly income, and whether they have psychological disorders. The group with monthly income less than 500 TL was classified as low income, the group between 500 TL and 1500 TL was classified as middle income, and the group above 1500 TL was classified as high income.

Childhood Trauma Questionnaire (CTQ): The Childhood Trauma Questionnaire (CTQ) was developed by D. P. Bernstein in 1994 as 70 items. After that it was reorganized in 1994, 1997, 1998, and finally in 2003 as a short form of 28 items (25 items form with 5 factors and 3 items for minimization). The validity and reliability study of the Turkish version was done by Şar et al. The internal consistency coefficient of the scale in terms of reliability was determined as 0.93. It is a 28-item self-report scale aimed at retrospectively screening childhood physical, sexual abuse, and physical and emotional neglect. The scale is 5-point Likert type. The cut-off score for the Turkish version of the scale was not calculated. However, the researchers made some predictions based on the study findings. The findings of this study suggest that giving a yes answer to any of the questions, even at the lowest level, for sexual and physical abuse, that is, exceeding 5 points on the subscale should be considered as positive reporting. It is understood that this limit is evaluated as 7 points for physical neglect and emotional abuse, while it can be at the level of 12 points for emotional neglect. It is seen that this limit for the total score may be around 35 (Sar et al., 2012).

The Defense Style Questionnaire (DSQ-40): The defense style questionnaire (DSQ-40) was firstly developed to evaluate defense styles in 88 items and 4 factors. Later Andrews et al. (1993) developed the final

version of this scale with 40 questions. Defenses in DSQ-40 were grouped under 3 factors as immature, neurotic, and mature defense styles and 20 defense styles were discussed (Andrews et al., 1993). Yılmaz et al. assessed the reliability and validity of DSQ-40 in Turkey in 2007. Psychometric properties were found to be valid and reliable. Cronbach alpha coefficients were 0.83 in immature defense mechanisms, 0.61 in neurotic defense mechanisms, and 0.70 in mature defense mechanisms. The reliability of sub-defenses is limited, and instead of evaluating the scale as sub-defenses one by one, it is recommended to evaluate the scale on the basis of 3 main defense styles with acceptable reliability. Total score or arithmetic mean can be used to calculate each sub defense and 3 defense styles (Yılmaz et al., 2007).

Oxford Happiness Questionnaire Short Form: The Oxford Happiness Scale Short Form was originally developed by Argyle and Hills (2002) from the Oxford Happiness Questionnaire, which is a 4-point Likert-type (0-3) scale with 29 items. Turkish adaptation of the scale was made by Doğan and

Çötek (2011) and it is used to determine the level of happiness of the people (Doğan & Çötek, 2011). The scale consists of 8 items and the forth item was removed in the Turkish adaptation due to the low correlation value in the item analysis. Scale total item was determined as 7. In terms of reliability, the internal consistency coefficient of the scale was 0.74 and the test-retest reliability coefficient was 0.85. Items 1 and 7 are reverse coded in the scale. The higher the score obtained from the scale, the higher the level of happiness (Doğan & Çötek, 2011).

Data Analysis

The data were analyzed using the SPSS 25.0 package program. The data obtained from the socio-demographic form, the Childhood Mental Trauma Scale, the Oxford Happiness Scale Short Form, and the Defense Styles Test-40 (DSQ-40) constitute the variables of this study. Variables are summarized as frequency “n”, percent “%”, arithmetic mean “ \bar{x} ”, standard deviation “Sd”, median (min-max). Categorical data were compared with the Chi-Square test. Bonferroni correction was used to examine the difference between groups in categorical multiple groups. The conformity of the variables to the normal distribution was tested with the Kolmogorow-Smirnow test. Variables that did not show normal distribution were tested for their conformity to the normal distribution by data transformation. In the analysis of normally distributed variables, Student T Test was used in independent paired groups, One Way Anova analysis was used in more than two independent groups, Mann-Whitney U was used in the analysis of two independent groups that did not show normal distribution, and Kruskal Wallis test was used in the analysis of more than two independent groups that did not show normal distribution. Post Hoc Bonferroni correction was used for pairwise comparisons in multiple groups. Pearson Correlation test was used to determine the relationship between variables when normality conditions were met and Spearman Correlation test was used when normality conditions were not met. Simple Linear Regression Analysis, Multiple Linear Regression Analysis and Hierarchical Regression Analysis with the enter method were performed to evaluate the size of the relationship between the variables. In the study, the statistical significance level was accepted as $p < 0.05$ in the significance tests. Since the number of participants was high, cases with $p < 0.001$ in correlation analyzes and regression analyzes were accepted.

Ethic

Ethical approval was obtained from the Ethics Committee of Selçuk University Faculty of Medicine. The research was conducted between 1 February 2020 and 15 March 2020, with the permission of the Dean of the Faculty of Medicine of Selçuk University.

RESULTS

As seen in Table 1, 1117 people participated in the study. 54.2% (n=605) of the participants in the study were women and 45.8% (n=512) were men. The mean age of the participants was 21.13±2.36.

Table 1. Mean and Frequency Distribution of the Participants' Socio-Demographic Characteristics

Yaş	\bar{x} (year) ± Sd (year)	21.13 ±2.36	
		n	%
Gender	Women	605	54.2
	Men	512	45.8
Education class	1st Class	245	21.9
	2nd Class	211	18.9
	3rd Class	177	15.8
	4th Class	168	15.0
	5th Class	157	14.1
	6th Class	159	14.2
0-6 age caregiver	Mother	132	11.8
	Mother and Father	953	85.3
Where they living now	Others	32	2.9
	Parents house	362	32.4
	In the dormitory	440	39.4
Monthly income level	Others	315	28.2
	Low	134	12.0
	Middle	811	72.6
Psychiatric disease	High	172	15.4
	No	1057	94.6
	Yes	60	5.4
	Total	1117	100

The aim of the study is to determine the relationship between childhood traumas, ego defense mechanisms and happiness in medical school students. For this purpose, the arithmetic mean, standard deviation, median, minimum and maximum values of the scores they got from the childhood mental trauma scale, the defense styles test and the Oxford happiness scale short form are given below (Table 2).

Table 2. Distribution of the Scores That the Participants Got from the Scales

	\bar{x}	Sd	Median	Min	Max
Emotional Abuse Score	6.66	255	6	5	23
Emotional Neglect Score	8.38	3.55	8	5	25
Physical Abuse Score	5.55	1.87	5	5	23
Physical Neglect Score	6.37	2.15	5	5	21
Sexual Abuse Score	5.40	1.71	5	5	23
CTQ Total Score	32.35	9.07	30	25	93
Immature Defense Styles Score	101.48	24.19	101	29	193
Neurotic Defense Styles Score	39.52	9.45	40	13	67
Mature Defense Styles Score	44.35	10.12	44	8	72
Happiness Score	23.90	4.94	24	7	35

When we compared the childhood psychological trauma levels of the participants according to their education classes, a significant difference was found between the groups ($\chi^2=12.789$; $p=0.025$). The source of this difference was due to the fact that the childhood psychological trauma levels of those who were educated in the 2nd grade were significantly lower than the levels of those who were educated in the 6th grade ($p=0.036$). When we compared the neurotic defense styles of the participants according to their education classes, a significant difference was found between the groups ($\chi^2=21.91$; $p<0.001$). It was determined that the neurotic defense styles levels of the 1st grade students were significantly higher than the 5th grade students ($p<0.001$). When we compared the levels of mature defense styles according to the educational status of the participants, a significant difference was found between the groups. ($\chi^2=26.28$; $p<0.001$). It was determined that the level of mature defense styles of the 1st grade students was significantly higher than the 4th grade level ($p=0.08$). It was determined that the level of mature defense styles of the 1st grade students was significantly higher than the 5th grade level ($p=0.005$). It was determined that the level of mature defense styles of the 2nd grade students was significantly higher than the 4th grade level ($p=0.005$). It was determined that the level of mature defense styles of the 2nd grade students was significantly higher than the 5th grade level ($p=0.004$) (Table 3).

When we compared the childhood psychological trauma scores of the participants between the ages of 0-6 according to the family member who gave care, a significant difference was found between the groups ($\chi^2=23.75$; $p<0.001$). Childhood mental trauma levels of children cared for by "mother" were found to be significantly higher than those cared for by "mother and father" ($p<0.001$). Childhood mental trauma levels of children who were cared for by "other" were found to be significantly higher than those who were cared for by "mother and father" ($p=0.010$). When we compared the immature defense styles scores of the participants in the 0-6 age range according to the family members responsible for their

care, a significant difference was found between the groups ($\chi^2=5.261$; $p=0.005$). The immature defense styles scores of children who were cared for by "mother" were found to be significantly higher than the scores of those who were cared for by "mother and father" ($p=0.014$). When we compared the happiness scores of the participants in the 0-6 age range according to the family members responsible for their care, a significant difference was found between the groups ($\chi^2=9.99$; $p=0,007$). Happiness scores of children who were cared for by "mother and father" were found to be significantly higher than those who were cared for by "other" ($p=0.017$) (Table 3).

When we compared the childhood psychological trauma scores of the participants according to who they lived with, a significant difference was found between the groups ($\chi^2=7.05$; $p=0.029$). Childhood mental trauma levels of the "other" group were found to be significantly higher than the level of the "dorm" group ($p=0.037$) (Table 3).

When we compared the childhood psychological trauma scores of the participants according to their monthly income, a significant difference was found between the groups ($\chi^2=15.852$; $p<0.001$). When we investigated the source of the difference, it was found that the childhood mental trauma scores of the group with "low" monthly income were significantly higher than the scores of the group with "medium" monthly income ($p<0.001$). Childhood mental trauma scores of the group with "low" monthly income were found to be

significantly higher than the group with "high" monthly income ($p=0.003$). When we compared the immature defense styles scores of the participants according to their monthly financial income, a significant difference was found between the groups ($F=9,841$; $p<0.001$). When we investigated the source of the difference, it was found that the score of the group with "low" monthly income was significantly "higher" than the score of the group with a monthly income ($p<0.001$). The level of the group with "high" monthly income was found to be significantly higher than the score of the group with "medium" monthly income ($p=0.005$). When we compared the happiness scores of the participants according to their monthly financial income, a significant difference was found between the groups ($\chi^2=6.031$; $p=0.049$). When we investigated the source of the difference, no difference was found between groups in pairwise comparisons (Table 3).

When we compared the childhood psychological trauma scores of the participants according to their status or not, a significant difference was found between the groups ($U=22729.0$; $z=-3.71$; $p<0,001$). Childhood mental trauma scores of those with psychiatric illness were significantly higher than those without psychiatric illness. When we compared the mature defense styles scores of the participants according to their psychiatric illness status, a significant difference was found between the groups ($U=24593.0$; $z=-2.93$; $p=0.003$). The mature defense styles scores of those without a psychiatric illness were significantly higher than those with a psychiatric illness. When we compared the happiness scores of the participants according to their psychiatric illness, a significant difference was found between the groups ($U=20975.0$; $z=-4.43$; $p<0,001$). Happiness scores of those without a psychiatric illness were significantly higher than those with a psychiatric illness (Table 3).

It has been determined that the participants who have experienced childhood psychological trauma use immature defense styles more than those who do not ($p<0.001$). (Table 4). It was determined that the participants who were exposed to childhood psychological trauma used neurotic defense styles less ($U=94408$; $z=-2.379$; $p=0.017$) and they used mature defense styles less ($U=86208$; $z=-4.234$; $p<0,001$) than the participants who did not experience psychological trauma in childhood.

The relationship between the increase in the education class of the participants and the level of defense and happiness was examined. There was a poor negative and significant relationship between educational status and neurotic defense scores ($r=-0.119$; $p<0.001$), and a poor negative and significant relationship between education status and neurotic defense scores ($r=-0.126$; $p<0.001$).

Table 3. Comparison of the Scores Obtained from the Scales According to the Education Class of the Participants, Family Members Providing Care, Where They Living Now, Monthly Financial Income Level and Psychiatric Illness Status

	CTQ Median (Min-Max)	IDS x̄ (Sd)	NDS Median (Min-Max)	MDS Median (Min-Max)	Happiness Median (Min-Max)
Education class					
1st Class	30 (25-64)	105.03 (24.03)	41 (14-66)	46 (18-69)	24 (9-35)
2nd Class	29 (25-78)	101.50 (24.40)	40 (13-64)	46 (16-72)	24 (7-34)
3rd Class	30 (25-89)	100.82 (23.06)	40 (17-64)	44 (20-72)	24 (7-35)
4th Class	30 (25-80)	101.74 (23.46)	40 (14-61)	42 (10-72)	23 (10-35)
5th Class	30 (25-68)	97.38 (24.49)	36 (14-67)	42 (8-69)	24 (12-35)
6th Class	31 (25-93)	100.49 (25.36)	39 (17-65)	44 (22-72)	24 (7-35)
p	0.025*	0.069	<0.001*	<0.001*	0.358
0-6 age caregiver					
Mother	32 (25-93)	106.84 (27.70)	39 (16-60)	44 (8-64)	23 (7-35)
Mother and Father	30 (25-83)	100.51 (23.69)	40 (13-67)	44 (10-72)	24 (9-35)
Others	33 (24-71)	108.18 (19.34)	39 (18-55)	41.50 (19-61)	22 (11-32)
p	<0.001*	0.005***	0.221	0.464	0.007*
Where they living now					
Parents house	30 (25-80)	100.58 (23.89)	39 (13-67)	45 (12-72)	24 (10-35)
In the dormitory	30 (25-93)	101.78 (23.54)	40 (14-66)	44 (10-72)	24 (7-35)
Others	31 (25-83)	102.10 (2.41)	39 (14-65)	44 (8-71)	24 (9-35)
p	0.029*	0,681	0,091	0,551	0,843
Monthly income level					
Low	32 (25-93)	107.59 (25.70)	39 (16-67)	43 (16-72)	23 (7-35)
Middle	30 (25-83)	99.54 (24.07)	40 (13-66)	45 (8-72)	24 (7-35)
High	29.50 (25-80)	105.85 (22.20)	41 (14-65)	45 (16-72)	24 (9-35)
p	<0.001*	<0.001***	0.560	0.345	0.049*
Psychiatric disease					
No	30 (25-89)	101.15 (24.00)	40 (13-67)	44 (8-72)	24 (7-35)
Yes	33.50 (25-93)	107.23 (26.73)	41 (14-61)	43 (10-61)	21 (7-35)
p	<0.001**	0.058	0.936	0.003**	<0.001**

When we examine the relationship between immature defense styles and childhood mental traumas subscales; there was a poor, positive, significant relationship between participants' immature defense scores and emotional abuse scores ($r=0.283$; $p<0.001$); a poor, positive, significant relationship between participants' immature defense scores and emotional neglect scores ($r=0.194$; $p<0.001$); a poor, positive, significant relationship between participants' immature defense scores and physical abuse scores ($r=0.184$; $p<0.001$); a poor, positive, significant, relationship between participants' immature defense scores and physical neglect scores ($r=0.197$; $p<0.001$); a poor, positive, significant relationship between participants' immature defense scores and sexual abuse scores ($r=0.210$; $p<0.001$); and a poor, positive, significant relationship between participants' immature defense scores and total childhood mental trauma scores ($r=0.280$; $p<0.001$).

When we examine the relationship between neurotic defense styles and childhood mental traumas subscales; it was determined that there was a poor, negative, significant relationship between the neurotic defense scores of the participants and their emotional neglect scores ($r= -0.130$; $p<0.001$).

When we examine the relationship between mature defense styles and childhood mental traumas subscales; it was determined that there was a poor, negative, significant relationship between the mature defense scores of the participants and their emotional neglect scores ($r= -0.194$; $p<0.001$); a poor, negative, significant relationship between the mature defense scores and the physical neglect scores ($r= -0,079$; $p<0,001$); a poor, negative, significant relationship between the participants' mature defense scores and the total score of childhood mental traumas ($r= -0.135$; $p<0,001$).

When we examine the relationship between happiness level and childhood trauma subscales and defense styles ; it was determined that there was a poor, negative, significant relationship between happiness level and emotional abuse scores ($r = -0.278$; $p < 0.001$); moderate, negative, significant relationship between happiness level and emotional neglect scores ($r = -0.418$; $p < 0.001$); poor, negative, significant relationship between happiness level and physical abuse scores ($r = -0.140$; $p < 0.001$); poor, negative, significant relationship between happiness level and physical neglect scores ($r = -0.205$; $p < 0.001$); poor, negative, significant relationship between happiness level and sexual abuse scores ($r = -0.129$; $p < 0.001$); moderate, negative, significant relationship between happiness level and total childhood psychological traumas score ($r = -0.380$; $p < 0,001$); poor, negative, significant relationship between happiness level and immature defense styles score ($r = -0.291$; $p < 0.001$); poor, positive, significant relationship between happiness level and neurotic defense styles score ($r = 0,125$; $p < 0,001$); moderate, positive, significant relationship between happiness level and mature defense styles score ($r = 0.335$; $p < 0.001$).

It was found that there was no autocorrelation (Durbin-Watson=2,023), no multicollinearity problem, and that the standardized residual residuals of the variables conformed to the normal distribution in the multiple linear regression model established between the immature defense styles and the subscales of childhood mental traumas that have a linear relationship. According to the model, the variables of emotional abuse, emotional neglect, physical abuse, physical neglect and sexual abuse from childhood traumas explain 10,0% of the change in immature defense styles scores ($F = 25.703$; Adj. $R^2 = 0.100$; $p < 0.001$). When the significance level of the β coefficient was examined, it was determined that emotional abuse had a positive independent contribution to the model ($t = 6.40$. $p < 0.001$).

It was found that there was no autocorrelation (Durbin-Watson=1.957), no multicollinearity problem, and that the standardized residual residuals of the variables conformed to the normal distribution in the multiple linear regression model established between the neurotic defense styles and the subscales of childhood mental traumas that have a linear relationship. According to the model, emotional neglect from childhood traumas explains 1.9% of the change in neurotic defense styles scores ($F = 21.498$; $R^2 = 0.019$; $p < 0.001$). When the significance level of the β coefficient was examined, it was determined that emotional neglect contributed negatively to the model ($t = -4.64$, $p < 0.001$).

It was determined that there was no autocorrelation (Durbin-Watson=1,852), no multicollinearity problem, and that the standardized residual residuals of the variables conformed to the normal distribution in the multiple linear regression model established between the subscales of childhood mental traumas, which have a linear relationship with the mature defense styles. According to the model, emotional neglect and physical neglect from childhood traumas explained 3.8% of the change in mature defense styles scores ($F = 23.22$; Adj. $R^2 = 0.038$; $p < 0.001$). When the significance level of the β coefficient was examined, it was determined that emotional neglect had a negative independent contribution to the model ($t = -6.10$; $p < 0.001$).

It was found that there was no autocorrelation (Durbin-Watson=1.862), no multicollinearity problem, and that the standardized residual residuals of the variables conformed to the normal distribution in the hierarchical regression model established between the childhood mental traumas subscales and the defense

styles subscales, which have a linear relationship with the level of happiness. The first step of the model consisted of the sub-dimensions of childhood traumas emotional abuse, emotional neglect, physical abuse, physical neglect, sexual abuse and explained 17.0% of the change in the happiness level score ($F=46.810$; Adj. $R^2=0.170$; $p<0.001$). When the significance level of the β coefficient was examined, it was determined that emotional neglect had a negative independent contribution to the model ($t=-11.27$; $p<0.001$).

When the immature defense styles, neurotic defense styles and mature defense styles, which are the sub-dimensions of defense styles, were added to the second step of the model in addition to the childhood traumas sub-dimensions, it was seen that it contributed 16% to explain the change in the happiness level score. Childhood traumas sub-dimensions and defense styles sub-dimensions together explained 32.9% of this change in happiness score ($F=88.571$; Adj. $R^2=0.329$; $p<0.001$). When the significance level of the β coefficient was examined in the second model, it was determined that emotional neglect contributed negatively to the model ($t=-9.01$; $p<0.001$), immature defense styles contributed negatively to the model ($t=-11.61$; $p<0.001$), neurotic defense styles contributed positively to the model ($t=3.37$; $p<0.001$), and mature defense styles contributed positively to the model ($t=12.24$; $p<0.001$).

Table 4. *The Relationship Between the Participants' Childhood Psychological Trauma and Their Immature Defense Styles.*

	CTQ	n	\bar{x}	Sd	t	95% CI		p
						Lower Limit	Upper Limit	
Immature DS	No	878	98.44	23.35	-8.282	-17.554	-10.830	<0.001*
	Yes	239	112.64	23.95				

*Student T Test

DISCUSSION

This study aimed to examine the relationship between childhood traumatic experiences, ego defense mechanisms, and happiness scores of medical school students. For this purpose, the findings obtained in the study and the results of previous similar studies in the literature were compared.

When we examine the relationship between immature defense styles and childhood mental traumas subscales, it was determined that immature defense scores, emotional abuse scores, emotional neglect scores, physical abuse scores, physical neglect scores, sexual abuse scores, and childhood mental trauma total scores were positive. When the literature was examined, similar results were obtained in studies conducted with different age groups (Aykut & Gölge, 2019). In our study, the variables of emotional abuse, emotional neglect, physical abuse, physical neglect, and sexual abuse from childhood traumas explain 10% of the change in immature defense styles scores. Similarly, in the study by Yöyen (2017), it was found that emotional abuse and emotional neglect positively predicted the immature defense mechanism and the model was explanatory by 4.1% (Güneri Yöyen, 2017)

When we examine the relationship between neurotic defense styles and childhood mental traumas subscales, it was determined that the participants' neurotic defense scores were negative between their emotional neglect scores. When the literature is examined, studies conducted with similar age groups have mostly obtained similar results (Aykut & Gölge, 2019; Mondelli & Dazzan, 2019a, 2019b) and there are also studies that found different results. In a study by (Güneri Yöyen, 2017), the explanatory power of emotional neglect for neurotic defense styles was found to be 1.9%. In the study of Yöyen (2017), it was found that physical neglect positively

predicted the neurotic defense mechanism and the model was 1.1% (Güneri Yöyen, 2017)

When we examine the relationship between mature defense styles and childhood mental traumas subscales, it was determined that there was a negative relationship between the participants' mature defense scores and their emotional neglect scores. Also, there was a negative relationship between their mature defense scores and their physical neglect scores. Moreover, there was a negative relationship between the participants' mature defense scores and their total childhood psychological trauma scores. When the literature was examined, similar results were obtained in studies conducted with different age groups (Güneri Yöyen, 2017). In this study, emotional neglect and physical neglect from childhood

traumas explained 3.8% of the change in mature defense styles scores. In another study, emotional neglect negatively predicted the mature defense mechanism, physical abuse predicted it positively, and the model was explanatory by 2.7% (Güneri Yöyen, 2017).

When we examine the factors affecting the level of happiness, it has been found that emotional abuse, emotional neglect, physical abuse, physical neglect, sexual abuse, and the total score of childhood mental traumas, immature defense styles had a negative effect. However, neurotic defense and mature defense styles had a positive effect (Waikamp et al., 2021). While the sub-dimensions of childhood psychological traumas explained 17.4% of the change in the happiness level score, the explanatory effect increased to 33.4% when the defense styles were added to the model. When the effect of the variables on the level of happiness is examined, it has been found that emotional neglect and immature defense style has a negative side, but neurotic defense and mature defense styles have a positive independent contribution (Zhou, 2016).

In the study of Ogle et al. (2013) with elderly individuals and Zhou (2016) with university students, a negative relationship was found between childhood traumas and happiness (Ogle et al., 2013; Zhou, 2016). However, in the study of Kaygusuz (2018) with university students, no significant relationship was found between childhood traumas and sub-dimensions and happiness (Kaygusuz, 2018). In the study conducted by Ezer (2017) with high school students, it was found that the level of happiness was negatively correlated with immature defense styles and neurotic defense styles, but a positive relationship was found with mature defense styles. (Ezer, 2017).

In some studies with adult individuals, it was found that those who reported childhood trauma had higher daily stress rates (Infurna et al., 2015; Marshall et al., 2018). Individuals automatically use defense mechanisms to cope with this stress caused by childhood trauma. It is an expected result that individuals with a trauma history will use immature defenses based in early childhood more than healthy individuals (Marshall et al., 2018). There are studies reporting that the use of immature defense mechanisms is increased and the use of mature defense mechanisms is less in individuals who have experienced childhood trauma (Evren et al., 2012; Romans et al., 1999).

CONCLUSION AND SUGGESTIONS

According to the findings obtained in this study, childhood traumas were common. Men had a higher incidence of childhood traumas than women. As the education class increased, childhood traumas increased. Childhood traumas of middle-income groups were higher than other groups. Childhood traumas were lower in participants raised by their parents together. Childhood traumas were higher in those with psychiatric illness.

While men use immature ego defenses more than women, no gender difference was found in the use of neurotic and mature ego defenses. It was found that as the education class increased, immature defenses were used less, neurotic defenses were used less, and mature defenses were used less. While middle-income people use immature defenses less, no difference was found in the use of neurotic and mature ego defense mechanisms in terms of income level. While immature defenses of children aged 0-6 who are only cared for by their mothers are high, there was no difference in the use of neurotic and mature ego defense mechanisms for caregivers aged 0-6. While those without a psychiatric illness used more mature defenses, no difference was found in the presence of psychiatric illness in the use of immature and neurotic ego defense mechanisms.

When we examined the happiness levels of the participants, there was no difference between the genders, in terms of educational status, monthly income status, and caregivers between the ages of 0-6. The level of happiness was found to be higher in individuals who do not have a psychiatric illness. While

childhood traumas and sub-dimensions and immature defense styles predicted happiness level negatively, neurotic defense styles and mature defense styles predicted happiness level positively.

There was a weak correlation between defense styles and all sub-dimensions of childhood traumas. Therefore, it is necessary to take measures to prevent negative experiences in childhood. Children need to be educated so that they can report abuse. We recommend the education of families on parenting and child rearing, and the early identification and rehabilitation of abused children by health systems. The level of happiness of individuals is affected by many factors, both individual and external. Since this study was conducted in only one medical school, its results cannot be generalized to other medical schools. It is recommended to compare the data by selecting samples from other medical faculties and including other faculties in the research. In order to represent the society, it is recommended that the research be conducted in sample groups consisting of individuals of different age groups and characteristics.

LIMITATIONS

The limitation of this study is that it was conducted in only one faculty.

Financial Support

No financial support.

Conflict of Interest

No conflict of interest.

Author Contributions

Design: Ö.A., Data collection or processing: Ö.A., K.M.H., Analysis or interpretation: Ö.A., K.M.H., Literature search: Ö.A., K.M.H., Writing: Ö.A., K.M.H.

REFERENCES

- Andrews, G., Singh, M., & Bond, M. (1993). The defense style questionnaire. *Journal of Nervous and Mental Disease, 181*(4), 246-256. <https://doi.org/10.1097/00005053-199304000-00006>
- Doğan, T., & Çötek, N. A. (2011). Adaptation of the Short Form of the Oxford Happiness Questionnaire into Turkish: A validity and reliability study. *Turkish Psychological Counseling and Guidance Journal, 4*(36), 165-170. <https://dergipark.org.tr/en/pub/tpdrd/issue/21456/229762>
- Evren, C., Ozcetinkaya, S., Ulku, M., Cagil, D., Gokalp, P., Cetin, T., & Yigiter, S. (2012). Relationship of defense styles with history of childhood trauma and personality in heroin dependent inpatients. *Psychiatry Research, 200*(2-3), 728-733. <https://doi.org/10.1016/j.psychres.2012.07.026>
- Ezer, H. İ. (2017). *Ergenlik döneminde yaygın kullanılan savunma mekanizmaları ile psikolojik sağlık ve mutluluk düzeyi arasındaki ilişki: Hatay il merkezi örneği* Sosyal Bilimler Enstitüsü, Hatay.
- Güneri Yöyen, E. (2017). Çocukluk çağı ruhsal travmaları ile ego savunma mekanizmaları arasındaki ilişki. 3. Sektör Sosyal Ekonomi Dergisi, 53(1), 34-45. http://tisej.com/makale_ozet.php?MSID=Fflih3tdtrgTKFk0Ud1GHiiY_BC108LtFiffuE3UPCU%
- Infurna, F. J., Rivers, C. T., Reich, J., & Zautra, A. J. (2015). Childhood trauma and personal mastery: Their influence on emotional reactivity to everyday events in a community sample of middle-aged adults. *PloS one, 10*(4), e0121840. <https://doi.org/https://doi.org/10.1371/journal.pone.0121840>
- Kaygusuz, E. (2018). Çocukluk çağı travmasının bireylerin psikolojik dayanıklılık ve mutluluk düzeyleri açısından incelenmesi. *Üsküdar Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul*.
- Marshall, M., Shannon, C., Meenagh, C., Mc Corry, N., & Mulholland, C. (2018). The association between childhood trauma, parental bonding and depressive symptoms and interpersonal functioning in depression and bipolar disorder. *Irish Journal of Psychological Medicine, 35*(1), 23-32. <https://doi.org/https://doi.org/10.1017/ipm.2016.43>
- Mondelli, V., & Dazzan, P. (2019). Childhood trauma and psychosis: Moving the field forward. *Schizophrenia Research, 205*(21), 34-45. <https://doi.org/https://doi.org/10.1016/j.schres.2019.02.001>
- Ogle, C. M., Rubin, D. C., & Siegler, I. C. (2013). The impact of the developmental timing of trauma exposure on PTSD symptoms and psychosocial functioning among older adults. *Developmental Psychology, 49*(11), 2191. <https://doi.org/https://doi.org/10.1037/a0031985>
- Romans, S. E., Martin, J. L., Morris, E., & Herbison, G. P. (1999). Psychological defense styles in women who report childhood sexual abuse: A controlled community study. *American Journal of Psychiatry, 156*(7), 1080-1085. <https://psycnet.apa.org/record/1999-03084-016>
- Sar, V., Öztürk, E., & İkikardes, E. (2012). Çocukluk Çağı Ruhsal Travma Ölçeği'nin Türkçe uyarlamasının geçerlilik ve güvenilirliği. *Türkiye Klinikleri Tıp Bilimleri Dergisi, 32*(4), 1054. <http://urlbu.com/0ad65>
- Waikamp, V., Serralta, F. B., Ramos-Lima, L. F., Zatti, C., & Freitas, L. H. M. (2021). Relationship between childhood trauma, parental bonding, and defensive styles and psychiatric symptoms in adult life. *Trends in Psychiatry and Psychotherapy, 43*, 225-234. <https://doi.org/https://doi.org/10.47626/2237-6089-2020-0086>
- Yılmaz, N., Gençöz, T., & Ak, M. (2007). Savunma Biçimleri Testi'nin psikometrik özellikleri: Güvenilirlik ve geçerlik çalışması. *Türk Psikiyatri Dergisi, 18*(3), 244-253. <https://search.trdizin.gov.tr/yayin/detay/72507/>
- Zhou, Y.H. (2016). Childhood trauma and subjective well-being in postgraduates: The mediating of coping style. *Chinese Journal of Clinical Psychology, 24*(3), 509-513. <https://psycnet.apa.org/record/2016-43701-029>