DOI: 10.5455/NYS.20180114113242

Moderating Effect of Resilience between Childhood Trauma and Depression, Rumination in Turkish University Students

Hacer Zeynep Çetinkaya[1], **Gül Alpar**[2], **Osman Tolga Arıcak**[3]

[1]MSc, Hasan Kalyoncu University, Faculty of Economics, Administration and Social Sciences, Gaziantep, Turkey

[2]PhD, Dr., Istanbul Police Directorate, Child Police Social Service, Istanbul, Turkey

[3]Professor, Hasan Kalyoncu University, Faculty of Economics, Administration and Social Sciences, Gaziantep, Turkey

Corresponding Author:

Phone: +90 5337796105

Fax: +90 2163326566

E-mail: hzeynepcetinkaya@gmail.com

Date of receipt: 14 January 2018

Date of acceptance: 03 July 2018

ABSTRACT

Objective: The present study was conducted to see to what extend resilience plays a moderator role between depression, rumination and childhood trauma among university students in Turkey.

Methods: In the current study, 368 private university students were participated and four different questionnaires were used in order to obtain the data from participants. The questionnaires are Childhood Trauma Questionnaire, CES Depression Scale, Ruminative Response Scale and Brief Resilience Scale.

Results: The results revealed that there is no significant moderating effect of resilience between childhood trauma and depression on the other hand, there is a significant moderating effect of resilience on the relationship between childhood trauma and rumination. The effect of childhood trauma on rumination changes due to resilience level and it is found that resilience moderates the relationship between childhood trauma and rumination only for the low levels of childhood trauma.

Conclusion: Traumatic experiences do not necessarily result in psychological dysfunction in adulthood. Although individuals have traumatic experiences during their childhood, they are able to deal with long-term effects of traumas through certain psychological abilities, such as resilience. The present study makes an important contribution to the literature while indicating the effect of resilience on the relationship between depression, rumination and childhood trauma in Turkish university students.

Key words: childhood trauma, resilience, depression, rumination

ÖZET

Türk Üniversite Öğrencilerinin Çocukluk Dönemi Travması ve Depresyon, Ruminasyon Arasındaki Direncin Ortaya Çıkışı

Amaç: Bu çalışma Türkiye'deki üniversite öğrencilerinin dayanıklılıklarının, çocukluk çağı travmaları ile depresyon ve ruminasyon arasındaki ilişki üzerinde düzenleyici etkisinin hangi boyutlarda olduğunun belirlenmesi amacıyla yürütülmüştür.

Yöntem: Çalışmanın özel bir üniversitede öğrenimlerine devam eden 368 katılımcısına Çocukluk Çağı Travmaları Ölçeği, CES Depresyon Ölçeği, Ruminatif Tepki Ölçeği ve Kısa Dayanıklılık Ölçeği uygulanmıştır.

Bulgular: Bulgular, çocukluk çağı travmaları ile depresyon arasındaki ilişkide dayanıklılığın düzenleyici etkisinin anlamlı olmadığını ancak çocukluk çağı travmaları ile ruminasyon arasındaki ilişkide dayanıklılığın düzenleyici etkisinin anlamlı olduğunu göstermektedir. Çocukluk çağı travmalarının ruminasyon üzerindeki etkisi dayanıklılık düzeyine göre değişmektedir. Dayanıklılık, çocukluk çağı travmaları ile ruminasyon arasındaki ilişkiyi, çocukluk çağı travmasının düşük düzeylerinde düzenlerken, çocukluk çağı travmalarının yüksek düzeylerinde düzenlememektedir.

Sonuç: Çocukluk çağı travmatik yaşantıları her zaman yetişkinlik döneminde psikolojik işlevlerde bozulma ile sonuçlanmaz. Bireyler, çocukluk sürecinde travmatik yaşantılara maruz kalmış olsa da, dayanıklılık gibi kimi psikolojik becerilerle travmanın uzun dönem etkileri ile başa çıkabilmektedir. Bu çalışma, Türkiye'deki üniversite öğrencilerinin çocukluk çağı travmaları ile depresyon ve ruminasyon arasındaki ilişkide dayanıklılığın düzenleyici etkisini göstermesi bakımından önemli bir katkı sağlamıştır.

Anahtar sözcükler: çocukluk çağı travmaları, dayanıklılık, depresyon, ruminasyon.

 DOI: 10.5455/NYS.20180114113242

INTRODUCTION

Through the late 20 years, childhood trauma has studied by academicians and psychologists since it is linked to several psychological problems such as PTSD,[1-3] personality disorders,[4,5] depression[6,7] and anxiety.[8] Although the mechanisms behind this link are implicit, it is possible that early exposure to trauma may cause maladaptive traits that increases the vulnerability to psychopathology.[9,10] Roy indicated that there are significant relationships between neuroticism and emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect.[10] Children who were exposed to multiple traumas, such as neglect and abuse, are more likely to have mental health difficulties in adult life.[11] Furthermore, it is found that individuals who have adverse childhood experiences are more likely to have stress responses with resulting impairment in multiple brain structures and functions.[12] For these reasons, to what extend a child is exposed to maltreatment is crucial.

The article aims to concentrate on depression as one of the long-term negative effects of childhood traumas since the literature indicates that there is a strong relation between having a childhood trauma and emergence of depression during adulthood. To give an example, Wiersma et al. displayed that having multiple childhood traumas can be considered as an independent determinant of chronicity of depression. For that reason, it is important to detect the presence of childhood traumas during the treatment of depressed patients.[13] Another research shows that childhood trauma is a potential risk factor for developing depression in adulthood as a result of additional stress.[14] Furthermore, Banyard, Williams and Siegele worked on mothers and showed the relationship between mothers' traumatic history and increased maternal depression.[15] Hence, these mentioned evidences might be evaluated that there is a strong link between being exposed to a childhood trauma and emergence of depression in adulthood.

Following to this case, in the field of clinical psychology, the term of rumination is considered as an elucidated condition, particularly in how depressive feelings develop and persist.[16] Rumination is actively researched for depression and anger by Nolen-Hoeksema, who deals with the role of rumination in the context of depression.[17] The researcher indicated that the relationship between depressive feelings and ruminative tendency is remarkable. Rumination is a response system of thinking about the emotions and problems without actively solving the problem and it is defined as "a mode of responding to distress that involves repetitively and passively focusing on symptoms of distress and on the possible causes and consequences of these symptoms."[18] Additionally, Martin and Tesser mentioned rumination as unintended, difficult to eliminate and more likely to be long lasting.[19] For these reasons, rumination might have a huge impact on a person's mental life. Thus, it could be inferred that rumination might be seen as a sustaining factor for depression in individuals. Despite its relation with depression, its mediating effect between childhood trauma and depression is also studied in the literature. Kim et al. found that rumination mediates the influence of childhood trauma on the development of depression and anxiety.[20] Furthermore, in a female sample, Spaosjevic and Alloy found rumination to be a fully mediator of number of depressive episodes and sexual maltreatment.[21] These evidences support significant relations of rumination with childhood trauma and depression.

Clinical psychology is more on to human beings' suffering and the processes behind it, but understanding the positive psychology functioning is also crucial for understanding psychological distress.[22] Depending on the research, which is conducted on male veterans whom had been in combat, although long-term negative effects of the trauma are observed, perceiving positive benefits from the adverse experience reduces the negative effects of the trauma.[23] Furthermore, there are some research about psychological growth which indicate that experiencing a trauma does not necessarily cause long-term negative psychological effects all the time. For instance, Shigemoto and Poyrazli indicate that post traumatic growth is significantly correlated with number of traumas experienced and one's optimism level.[24] The fact that traumatic experiences do not necessarily result in psychological dysfunction in adulthood, the researchers and clinical psychologists investigate protective factors to shed a light on this case.

The study gravitated its attention to the effectiveness of resilience as a protective factor since it is found to be related to depression and other several psychological disorders.[25] Resilience is defined as the ability to step back and recover from stress and to function well after various stressful circumstances.[26] Furthermore, resilience is stated to be a protective factor for depression and childhood trauma.[27] In their study on Chinese children, Ding et al. found that resilience played a moderating role between depressive symptoms and childhood trauma.[28] Shulz et al. resulted that resilience played an important role as a protector against the long-term effects of childhood trauma.[7] Wingo et al. also found that higher resilience causes higher social functioning and that is protective for PTSD and depression among veterans in the USA.[29] Additionally, Ben-David and Jonson-Reid displayed that people who have childhood maltreatment experiences continue to function well in life through resilience.[30] After obtaining the data from the literature, it could be inferred that even though individuals have traumatic experiences during their childhood, they are still able to deal with long-term effects of their traumas through certain psychological abilities, such as resilience.

The present study is delivered to see to what extent resilience plays a moderator role between rumination, depression and childhood trauma among individuals. If resilience helps to ruminate less and leads a pathway other than rumination and depression, then resilience skills in individuals might be used in clinical field to treat people who have childhood traumas. Additionally, the literature about the moderating effect of resilience between childhood trauma and depression, rumination was mostly obtained from countries other than Turkey. In Turkey, psychological resilience is mainly researched among university students[31,32] and health workers.[33] Doğulu et al. researched community resilience in Van earthquake,[34] and Öksüz and Güven examined the relationship of psychological resilience and subjective well-being on teacher candidates.[35] Kesebir et al. investigated the relationship of affective temperament and resilience in depression.[36] Childhood trauma was already researched in the context of depression and sleep quality,[37] general cognitive ability,[38] affective temperament in depression[39] and the role of alexithymia on somatization in major depressive disorder.[40] Until today, almost no study has been found that investigates the moderating effect of resilience between rumination, resilience and childhood trauma in a Turkish sample. Therefore, this study is going to be the first one within this topic in Turkey.

The research questions below were examined in this study;

1. Are there significant correlations between childhood trauma, resilience, depression and rumination?
2. Is there a significant moderating effect of resilience on the relationship between childhood trauma and depression?
3. Is there a significant moderating effect of resilience on the relationship between childhood trauma and rumination?
4. Is there a significant difference between males and females in terms of childhood trauma, resilience and rumination scores?

 DOI: 10.5455/NYS.20180114113242

METHODS

The present study has been conducted in a correlational design.

Sample

The participants were 368 students (107 males, 261 females) from a private university in Turkey. The mean age of the participants is 21.69. ± 3.73. The participants were selected using convenient sampling technique.

Measures

In this investigation, four different questionnaires were used in order to obtain the data from participants, which are Childhood Trauma Questionnaire, CES Depression Scale, Ruminative Response Scale and Brief Resilience Scale.

Childhood Trauma Questionnaire – Short Form: This scale consists of 28 items assessing abuse and neglect in the childhood era.[41] The scale has five factors: physical abuse, sexual abuse, emotional abuse, emotional neglect and physical neglect. There are three items measuring denial. The Turkish validation study was conducted by Şar et al. and Cronbach's alpha coefficient was found as .93. They recommended cut-off points for the scale. Five points and below are considered as there are no sexual and physical abuse; seven points and below are considered as there are no physical neglect and emotional abuse; 12 points and below are considered as there are no emotional neglect; 35 points and below are considered as there are no childhood trauma.[42]

CES Depression Scale: The scale was developed by Radloff as a self-report depression scale.[43] The scale consists of 20 items. The scale has four factors: negative affect, positive affect, somatic symptoms and interpersonal problems. The Turkish version was translated and validated by Tatar and Saltukoğlu with a Cronbach's alpha coefficient of .89.[44] In both original form and Turkish form, the cut-off score for depression was calculated as 16. The higher scores indicate higher levels of depression.

Brief Resilience Scale: The scale was used for measuring the resilience of adults and developed by Smith et al.[26] The Turkish version was made by Doğan with a Cronbach's alpha coefficient as .83. The higher scores indicate higher levels of resilience.[45]

Ruminative Response Scale – Short Form: Ruminative Response Scale – Short Form was formed by Treynor et al. and consists of 10 items.[46] Scale has two factors as the original form: Reflection and Brooding.[47] The Turkish version of the scale was made by Erdur-Baker and Bugay.[48] They calculated Cronbach's alpha as .72. The higher scores mean higher levels of rumination.

Data analysis

The data was analyzed with SPSS 21.0. Normality test was run for the continuous variables and this reveled that Childhood Trauma Scale scores of participants did not have normal distribution whereas CES: Depression Scale, Brief Resilience Scale and Ruminative Response Scale scores of participants had normal distribution. Therefore, Spearman's correlation and also Pearson correlation were used to calculate correlation between continuous variables. Baron and Kenny's[49] steps were followed to examine moderating effect of resilience on the relationship between childhood trauma and depression, and on the relationship between childhood trauma and rumination. Therefore, a regression analysis was conducted by using childhood trauma as an independent variable, resilience as a moderator variable and interaction variable which was an interaction of childhood trauma and resilience. Interaction variable was calculated by centering procedure which was a multiplication of centered independent variable and centered moderator variable. Centering of independent variable and moderator variable was subtraction of each mean score: childhood trauma score – mean childhood trauma score and resilience score – mean resilience score for each participants. This calculation revealed new variables which were centered independent and moderator variables. Interaction variable was calculated by multiplying centered independent and moderator variables. After the regression analysis, a simple slope test was conducted for the high levels of interaction variable and the low levels of interaction variable. After the moderation calculations, Mann Whitney U test and independent samples t test was used to compare the mean scores of variables for gender.

RESULTS

As seen in Table 1, Spearman Correlations reveal that there is a small significant and negative correlation between the denial of childhood trauma and depression [$r_{(368)}=-0.168$; $p<0.01$]. There is a moderate significant and positive correlation between emotional abuse and depression [$r_{(368)}=0.314$; $p<0.01$]. There are small significant and positive correlations between physical abuse, physical neglect, emotional neglect, sexual abuse and depression [$r_{(368)}=0.118$; $p<0.01$; $r_{(368)}=0.124$; $p<0.05$; $r_{(368)}=0.226$; $p<0.01$; $r_{(368)}=0.219$; $p<0.01$, respectively]. There is a moderate significant and positive correlation between total childhood trauma and depression [$r_{(368)}=0.315$; $p<0.01$].

Table 1. Spearman Correlation between variables

	Depression	Resilience	Rumination
Denial	**r.-0.168****	r.0.093	r.-0.074
	p.0.001	p.0.075	p.0.158
Emotional Abuse	**r.0.314****	r.0.008	**r.0.265****
	p.0.000	p.0.885	p.0.000
Physical Abuse	**r.0.118***	r.-0.049	r.0.055
	p.0.024	p.0.353	p.0.290
Physical Neglect	**r.0.124***	r.-0.023	r.0.061
	p.0.017	p.0.657	p.0.240
Emotional Neglect	**r.0.226****	r.-0.048	**r.0.103***
	p.0.000	p.0.358	p.0.049
Sexual Abuse	**r.0.219****	r.-0.066	**r.0.123***
	p.0.000	p.0.209	p.0.018
Total Score	**r.0.315****	r.-0.032	**r.0.191****
	p.0.000	p.0.541	p.0.000

*p<0.05
**p<0.01

Spearman's Correlation reveals that there is no significant correlation between the childhood trauma and resilience.

Data displays that there are small significant and positive correlations between emotional abuse, emotional neglect, sexual abuse, total childhood trauma and rumination [$r_{(368)}$=0.265; p<0.01; $r_{(368)}$=0.103; p<0.05; $r_{(368)}$=0.123; p<0.05; $r_{(368)}$=0.191; p<0.01, respectively].

Table 2. Pearson Correlations between Depression, Resilience and Rumination.

	1	2
Rumination		
Resilience	**r.-0.112*** p.0.032	
Depression	**r.0.589**** p.0.000	**r.-0.149**** p.0.004

*p<0.05
**p<0.01

As seen in Table 2, Pearson Correlation analysis reveals that there is a small significant and negative correlation between rumination and resilience [$r_{(368)}$=-0.112; p<0.05], resilience and depression [$r_{(368)}$=-0.149; p<0.01]. There is also a moderate significant and positive correlation between rumination and depression [$r_{(368)}$=0.589; p<0.01].

Table 3. Moderator effect of resilience on the relationship between childhood trauma and depression

Model and Variables		B	SE	B	t	p
1	Constant	42.444	0.555		76.533	0.000
	Childhood Trauma	0.346	0.062	0.277	5.571	0.000
	Resilience	-0.399	0.142	-0.140	-2.820	0.005
2	Constant	42.453	0.555		76.439	0.000
	Childhood Trauma	0.347	0.062	0.278	5.580	0.000
	Resilience	-0.398	0.142	-0.140	-2.808	0.005
	Childhood Trauma x Resilience	0.008	0.015	0.026	0.527	0.598

Table 3 shows the hierarchical regression analysis findings regarding the effect of independent variable childhood trauma, moderator variable resilience and interaction of both variables on the dependent depression.

Hierarchical regression analysis reveals that the first model acquired [F(2-365)=20.025, p<0.001] and the second model acquired are significant [F(3-364)=13.416, p<0.001]. First model indicates that 9.9% of the variance in depression is explained by childhood trauma and resilience (moderator) variable [R=0.314; R^2=0.099]. Second model indicates that 10% of the variance in depression is explained by childhood trauma, resilience (moderator) and interaction of childhood trauma and resilience [R=0.316; R^2=0.100], but it also indicates that the interaction does not have a significant contribution to the change of the variance [ΔR^2 =0.001; ΔF (1-364) =0.278; p=0.598]. Since the interaction is not significant, resilience does not moderate the relationship between childhood trauma and depression.

Graphic 1 shows the interaction of childhood trauma and resilience (moderator) for their high and low levels [cM-1SD (cX-1SD) = 41.184; cM-1SD (cX+1SD) = 46.842; cM+1SD (cX-1SD) = 37.502; cM+1SD (cX+1SD) = 44.284].

Graphic 1. Interaction of Childhood Trauma and Resilience for Depression

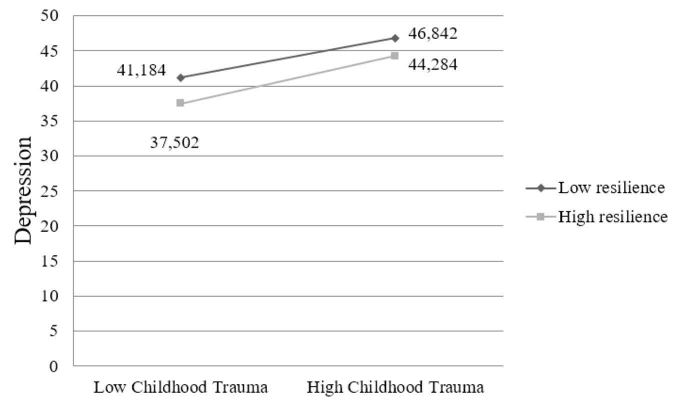
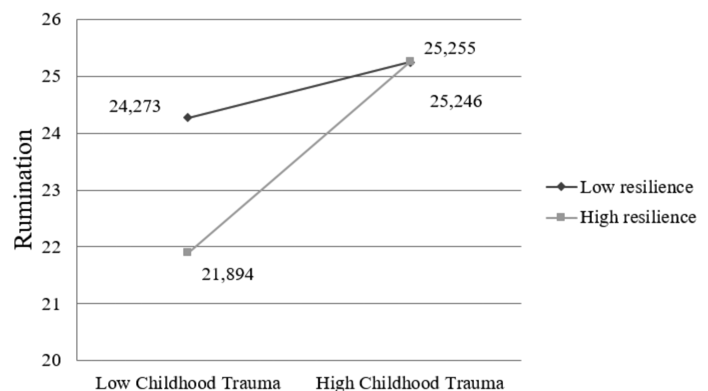


Table 4 shows the hierarchical regression analysis findings regarding the effect of childhood trauma, resilience (moderator) and interaction of both variables on rumination.

Hierarchical regression analysis reveals that the first model acquired [F(2-365)=8.971; p<0.001] and the second model acquired are significant [F(3-364)=7.666; p<0.001]. First model indicates that 5% of the variance in rumination is explained by childhood trauma and resilience (moderator) [R=0.216; R^2=0.047]. Second model indicates that 6% of the variance in rumination is explained by childhood trauma, resilience (moderator) and the interaction of childhood trauma and resilience (moderator) [R=0.244; R^2=0.059] and it also indicates that the interaction has a significant contribution to the change of the variance [ΔR^2 =0.013; ΔF (1-364) =4.865; p=0.028]. Since the interaction is significant, resilience moderates the relationship between childhood trauma and rumination.

Graphic 2 shows the interaction of independent variable childhood trauma and moderator variable resilience for their high and low levels [cM-1SD (cX-1SD) = 24.273; cM-1SD (cX+1SD) = 25.246; cM+1SD (cX-1SD) = 21.894; cM+1SD (cX+1SD) = 25.255].

Graphic 2. Interaction of Childhood Trauma and Resilience for Rumination



A simple slope test is run for the significance of regression lines and it reveals that resilience moderates the relationship between childhood trauma and rumination for the low levels of childhood trauma [F (3-364)=7.666; B=0.188; SE=0.045; B=0.294; t=4.158; p=0.000] not for the high levels of childhood trauma [F (3-364)=7.666; B=0.055; SE=0.044; B=0.085; t=1.247; p=0.213].

Table 4. Moderator effect of resilience on the relationship between childhood trauma and rumination

Model and Variables		B	SE	B	t	p
1	Constant	24.147	0.293		82.448	0.000
	Childhood Trauma	0.119	0.033	0.186	3.630	0.000
	Resilience	-0.154	0.075	-0.106	-2.065	0.040
2	Constant	24.167	0.291		82.912	0.000
	Childhood Trauma	0.121	0.033	0.189	3.721	0.000
	Resilience	-0.151	0.074	-0.104	-2.036	0.042
	Interaction of Childhood Trauma and Resilience	0.017	0.008	0.112	2.206	0.028

A simple slope test is run for the significance of regression lines and it reveals that resilience moderates the relationship between childhood trauma and rumination for the low levels of childhood trauma [F (3-364)=7.666; B=0.188; SE=0.045; B=0.294; t=4.158; p=0.000] not for the high levels of childhood trauma [F (3-364)=7.666; B=0.055; SE=0.044; B=0.085; t=1.247; p=0.213].

Table 5. Mean ranks of Childhood Trauma and its subscales according to gender and the results of Mann Whitney U test

Childhood Trauma	Gender	N	M_R	n^2	U	z	p
Denial	Male	107	191.50		13214.00	-0.849	0.396
	Female	261	181.63				
Emotional Abuse	Male	107	185.81		13823.00	-0.158	0.874
	Female	261	183.96				
Physical Abuse	Male	107	202.43	0.028	12044.50	-3.198	**0.001**
	Female	261	177.15				
Physical Neglect	Male	107	202.75	0.014	12011.00	-2.296	**0.022**
	Female	261	177.02				
Emotional Neglect	Male	107	195.39		12798.50	-1.266	0.205
	Female	261	180.04				
Sexual Abuse	Male	107	183.00		13571.00	-0.654	0.513
	Female	261	191.50				
Total Score	Male	107	181.63		12271.00	-1.831	0.067
	Female	261	185.81				

As seen in Table 5, Childhood Trauma and its subscale levels of participants according to gender are compared using nonparametric independent samples Mann Whitney U test. Analysis reveals that the mean rank of physical abuse score of male participants (M_R=202.43) is significantly higher than female participants (M_R =177.15) [U=12044.50; z=-3.198; p<0.05; n^2=0.028]. The mean rank of physical neglect score of male participants (M_R=202.75) is significantly higher than female participants (M_R=177.15;) [U=12011.00; z=-2.296; p<0.05; n^2=0.014]. However, the mean ranks of denial, emotional abuse, emotional neglect, sexual abuse and total score of childhood trauma are not significantly different according to gender.

As seen in Table 6, resilience, rumination, and depression levels of participants according to gender are compared using independent samples t test. Although the mean scores of resilience and depression are not significantly different according to gender, the mean of rumination scores of female participants (M=24.82; SD=5.850) is significantly higher than male participants (M=22.50; SD=5.120) [t=3.591; p<0.05; d=0.38].

DISCUSSION

In accordance with the literature, the results revealed a positive relationship between childhood trauma (emotional abuse, physical abuse, physical neglect, emotional neglect and sexual abuse) and total scores of depression while there is a negative relationship between denial of childhood trauma and total scores of depression. The finding might be supported by Heim et al. They demonstrated that people who are exposed to childhood trauma are more likely to develop depression in adulthood.[14] Additionally, Weiss et al. resulted that depression levels were found to be more common in participants who reported childhood abuse history than in those who denied childhood abuse.[50] Some of the researchers named the denial of childhood trauma as minimization.[42] Based on the results, it is possible to say that denial or minimization of childhood trauma might be protective for the long term adverse impacts of a childhood trauma. Minimizing or denying the traumatic experience may cause normalization of the trauma and for that reason, people may have less long-term depressive symptoms of childhood traumas.

Contrary to the most of the research in the literature, the results show no significant relationship between childhood trauma (emotional abuse, physical abuse, physical neglect, emotional neglect, sexual abuse and denial) and resilience. In compliance with our results, Schultz et al. found out that the significant negative correlation between resilience and depression does not differ between the groups of participants who were exposed to childhood maltreatment and who were not exposed to childhood maltreatment.[7] Therefore, it may support the non-significant relation between childhood trauma and resilience.

As it is expected, there is a significant positive relationship between childhood trauma (emotional abuse, emotional neglect and sexual abuse) and rumination. However, there is no significant correlation between denial of childhood trauma, physical abuse, physical neglect and rumination in the study. Kim et al. displayed the relation between childhood trauma and rumination.[20] O'Mahen et al. found out that emotional abuse and emotional neglect are strongly related to rumination.[51] Conway et al. resulted that participants reported sexual abuse were more likely to report rumination,[52] whereas O'Mahen et al reported that physical neglect is not significantly correlated with rumination.

Table 6. Mean Scores of Depression, Resilience and Rumination according to gender and the results of Independent Samples t Test

	Gender	N	M	SD	d	t	p
Resilience	Male	107	17.06	3.983		0.975	0.330
	Female	261	16.62	3.901			
Rumination	Male	107	22.50	5.120	0.38	3.591	**0.000**
	Female	261	24.82	5.850			
Depression	Male	107	42.08	9.265		0.437	0.663
	Female	261	42.59	11.885			

The findings display a significant negative relationship between total score of depression and resilience. To be able to explain the negative relationship between depression and resilience, Wingo et al.

 DOI: 10.5455/NYS.20180114113242

stated that higher resilience causes higher social functioning and that is protective for depression.[29]

Depending on the results, there is a significant positive relationship between total score of depression and rumination. On the other hand, there is a significant negative relationship between rumination and resilience. To support these from the literature, Nolen-Hoeksema indicated that the relationship between depressive feelings and ruminative tendency is remarkable[47] while Min et al. study revealed that there is a significant negative correlation between rumination and resilience.[53]

The study expected to find a moderating effect of resilience between childhood trauma and depression, however the results revealed that there is no significant moderating effect of resilience between childhood trauma and depression. To give an example from the literature, Schultz et al. support the non-significant moderating effect of resilience between childhood trauma and depression[7] while showing that the significant negative correlation between resilience and depression does not differ between the groups of participants who were exposed to childhood maltreatment and who were not exposed to childhood maltreatment.

The findings show that there is a significant moderating effect of resilience on the relationship between childhood trauma and rumination. The effect of childhood trauma on rumination changes due to resilience level and it is found that resilience moderates the relationship between childhood trauma and rumination for the low levels of childhood trauma, not for the high levels of childhood trauma. In other words, for the high levels of childhood trauma, resilience does not have a moderator effect between childhood trauma and rumination. As Tedeschi and Calhoun indicate, rumination is a way to reconstruct the meaning of life after traumatic event,[54] our findings might show that for a high level of traumatic event whether someone is resilient or not, rumination still occurs to give meaning for what happened. Besides, Brooks et al. found that focusing the traumatic event, rumination, control of today and future and post-traumatic growth are related to each other.[55] It seems that for the low levels of childhood trauma, resilience leads to ruminate less and so trauma victims do not need to focus on the meaning of what happened.

The study also revealed the gender differences in terms of childhood trauma, depression, resilience and rumination scores. The male participants' physical abuse and physical neglect scores are significantly higher than females. And there are no gender differences between the total scores of childhood trauma, the scores of sexual abuse, emotional abuse, emotional neglect and denial. Mert et al. found similar results such as, the male participants' physical neglect scores are significantly higher than female participants and the means of emotional abuse are similar in both gender.[38] Furthermore, no significant difference between males and females in terms of total depression scores and its subscales is found in our study. Marchand et al. found that females' depression levels are significantly higher than males'.[56] However, Poole et al. put forth that there are no gender differences in terms of depression.[27] In our study, resilience scores do not differ according to gender. Sezgin supported our results while founding no significant difference between males and females in terms of resilience.[57] Lastly, female participants are more likely to ruminate than male participants which are also argued by Nolen-Hoeksema.[17]

Suggestions and Limitations

The major limitation of the study is not to work with participants who are clinically diagnosed as they have childhood traumas. Since it is hard to achieve enough people clinically evaluated as they have childhood traumas, the present study has been conducted in a correlational design with a continuous variable (childhood trauma). The cut off point for childhood trauma questionnaire is recommended as 35 by Şar et al. which means that a participant with a score under 35 has no childhood trauma and a participant with a score above 35 has childhood trauma. In our study, the mean score of total childhood trauma is 33.61 which is below the cut-off score recommended in the literature. Furthermore, the participants were selected from a private university, for that reason, the sample consists of mostly young adults from middle to high socio-economic status. These are the limitations that may affect the representativeness of our sample. Despite these limitations, the present study made an important contribution to indicate the effect of resilience on the relationship between childhood trauma and depression, rumination in Turkish university students. For further studies, it is recommended to study with a clinical group who are clinically diagnosed or entered to forensic system for being exposed to sexual or physical abuse since there is no regulation in forensic system for physical neglect, emotional abuse and neglect. Additionally, in the study, to eliminate participants' boredom and fatigue, the researcher tried to keep the item numbers minimum. For that reason, Brief Resilience Scale was selected with six items. More comprehensive resilience scale such as "Psychological Hardiness Scale"[58] might be conducted in future studies.

REFERENCES

1. Hetzel MD, McCanne TR. The roles of peritraumatic dissociation, child physical abuse, and child sexual abuse in the development of posttraumatic stress disorder and adult victimization. Child Abuse Negl 2005; 29(8): 915–930.

2. Rowan AB, Foy DW, Rodriguez N, Ryan S. Posttraumatic stress disorder in a clinical sample of adults sexually abused as children. Child Abuse Negl 1994; 18(1): 51–61.

3. Scahaaf KK, McCanne TR. Relationship of childhood sexual, physical, and combined sexual and physical abuse to adult victimization and posttraumatic stress disorder. Child Abuse Negl 1998; 22(11): 1119-1133.

4. Miller PM, Lisak D. Associations between childhood abuse and personality disorder symptoms in college males. J Interpers Violence 1999; 14(6): 642–656.

5. Rogosch FA, Cicchetti D. Child maltreatment, attention networks, and potential precursors to borderline personality disorder. Dev Psychol 2005; 17(4): 1071–1089.

6. Nanni V, Uher R, Danese A. Childhood maltreatment predicts unfavorable course of illness and treatment outcome in depression: A meta-analysis. Am J Psychiatry 2012; 169(2): 141–151.

7. Schultz A, Becker M, Van der Auwera S, Barnow S, Appel K, Mahler J et al. The impact of childhood trauma on depression: Does resilience matter? Population-based results from the study of health in Pomerania. J Psychosom Res 2014; 77: 97-103.

8. Lindert J, von Ehrenstein OS, Grashow R, Gal G, Braehler E, Weisskopf MG. Sexual and physical abuse in childhood is associated with depression and anxiety over the life course: Systematic review and meta-analysis. Int J Public Health Res 2014; 59(2): 359–372.

9. Rachman S. Emotional processing. Behav Res Ther 1980; 18(1): 51–60.

10. Roy A. Childhood trauma and neuroticism as an adult: Possible implication for the development of the common psychiatric disorders and suicidal behaviour. Psychol Med 2002; 32(8): 1471–1474.

11. McCormack L, Thomson S. Complex trauma in childhood, a psychiatric diagnosis in adulthood: Making meaning of a double-edged phenomenon. Psychol Trauma 2017; 9(2): 156-165.

12. Anda RF, Felitti VJ, Bremmer JD, Walker JD, Whitfield C, Perry BD et. al. The enduring effects of abuse and related adverse experiences in childhood: a convergence of evidence from neurobiology and epidemiology. Eur Arch Psychiatry Clin Neurosci 2006; 256: 174-186.

13. Wiersma JE, Hovens JGFM, van Oppen P, Giltay E, van Schaik DJF, Beekman AT et al. The importance of childhood trauma and childhood life events for chronicty of depression in adults. J Clin Psychiatry 2009; 70(7): 983-989.

14. Heim C, Newport DJ, Mletzk T., Miller AH, Nemeroff CB. The link between childhood trauma and depression: insights from HPA axis studies in humans. Psychoneuroendocrinology 2008; 33(6): 693-710.

15. Banyard VL, Williams LM, Siegel JA. The impact of complex trauma and depression on parenting: and exploration of mediating risk and protective factors. Child Maltreat 2003; 8(4): 334-349.

16. Smith JM, Alloy LB. A roadmap to rumination: A review of the definition, assessment, and conceptualization of this multifaceted construct. Clin Psychol Rev 2009; 29(2): 116-128.

17. Nolen-Hoeksema S. Responses to depression and their effects on the duration of depressive episodes. J Abnorm Psychol 1991; 100: 569–582.

18. Nolen-Hoeksema S, Wisco BE, Lyubomirsky S. Rethinking rumination. Perspect Psychol Sci 2008; 3(5): 400–424.

19. Martin LL, Tesser A. Ruminative Thoughts. Advances in Social Cognition Volume IX (Ed: Wyer R. S. Jr.). Lawrence Erbaum Associates, Mahwah, New Jersey 1996; 1-48.

20. Kim JS, Jin MJ, Jung W, Hahn SW, Lee SH. Rumination as a mediator between childhood trauma and adulthood depression / anxiety in non-clinical participants. Front Psychol 2017; 8(1597): 1-11.

21. Spasojević J, Alloy LB. Who becomes a depressive ruminator? Developmental antecedents of ruminative response style. J Cogn Psychother 2002; 16(4): 405–419.

22. Joseph S, Wood A. Assessment of positive functioning in clinical psychology: Theoretical and practical issues. Clin Psychol Rev 2010; 30: 830-838.

23. Aldwing CM, Levenson MR, Spiro A. III. Vulnerability and resilience to combat exposure: can stress have lifelong effects? Psychol Aging 1994; 9(1): 34-44.

24. Shigemoto Y, Poyrazli S. Factors related to posttraumatic growth in U.S. and Japanese college students. Psychol Trauma 2013; 5(2): 128-134.

25. Karremans JC, Van Lange PAM, Ouwerkerk JW, Kluwer ES. When forgiving enhances psychological well being: The role of interpersonal commitment. J Pers Soc Psychol 2003; 84: 1011–1026.

26. Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The Brief Resilience Scale: Assesssing the ability to bounce back. Int J Behav Med 2008; 15: 194-200.

27. Poole JC, Dobson KS, Pusch D. Childhood adversity and adult depression: The protective role of psychological resilience. Child Abuse Negl 2017; 64: 89-100.

28. Ding H, Han J, Zhang M, Wang K, Gong J, Yang S. Moderating and mediating effects of resilience between childhood trauma and depressive symptoms in Chinese children. J Affect Disord 2017; 211: 130-135.

29. Wingo AP, Briscione M, Norrholm SD, Jovanovic T, McCullough SA, Skelton K et al. Psychological resilience is associated with more intact social functioning in veterans with post-traumatic stress disorder and depression. Psychiatry Res 2017; 249: 206-211.

30. Ben-David V, Jonson-Reid M. Resilinece among adult survivors of childhood neglect: A missing piece is resilience literature. Child Youth Serv Rev 2017; 78: 93-103.

31. Kapkıran Ş, Acun-Kapkıran N. Optimisim and psychological resilience in relation to depressive symptoms in university students: Examining the mediating role of self-esteem. Educa Sci Theory Pract 2016; 16: 2087-2110.

32. Malkoç A, Yalçın İ. Relationship among resilience, social support, coping and psychological well being among university students. Turkish Psychol Counsel Guidance J 2015; 5(43): 35-43.

33. Karacağoğlu K, Köktaş G. The mediating role of optimism on the relationship between psychological resilience and psychological well-being: A research on hospital employees. J Hum Work 2016; 6: 119-127.

34. Doğulu C, Karanci AN, İkizer G. How do survivors perceive community resilience? The case of the 2011 earthquakes in Van, Turkey. IJDRR. 2016; 16: 108-114.

35. Öksüz Y, Güven E. The relationship between psychological resilience and procrastination levels of teacher candidates, Procedia Soc Behav Sci 2014; 116(2): 3189-3193.

36. Kesebir S, Gündoğar D, Küçüksubaşı Y, Tatlıdil-Yaylacı E. The relation between affective temperament and resilience in depression: A controlled study. J Affect Disord 2013; 148: 352-356.

37. Kılıçaslan EE, Esen AT, Kasal MI, Özelci A, Boysan M, Güleç M. Childhood trauma, depression and sleep quality and their association with psychotic symptoms and suicidality in schizophrenia. Psychiatry Res 2017; 258: 557-564.

38. Mert DG, Kelleci M, Yıldız E, Mızrak A, Kuğu N. Childhood trauma and general cognitive ability: Roles of minimization/denial and gender. Psychiatry Res 2016; 243: 147-151.

39. Gündoğar D, Kesebir S, Demirkan AK, Tatlıdil-Yaylacı E. Is the relationship between affective temperament and resilience different in depression cases with and without childhood trauma? Compr Psychiatry 2014; 55: 870-875.

40. Yazıcı-Güleç M, Altıntaş M, İnanç L, Bezgin ÇH, Kaymak-Koca E, Güleç H. Effects of childhood trauma on somatization in major depressive disorder: The role of alexithymia. J Affect Disord 2013; 146: 137-141.

41. Bernstein DP, Stein JA, Newcomb MD, Walker E, Pogge D, Ahluvalia T et al. Development and validation of a brief screening version of the Childhood Trauma Questionnaire. Child Abuse Negl 2003; 27: 169–190.

42. Şar V, Öztürk E, İkikardeş E. Validity and Reliability of the Turkish Version of Childhood Trauma Questionnarie. Türkiye Klinikleri J Med Sci 2012; 32(4): 1054-1063.

43. Radloff LS. The CES-Depression scale: A self-report depression scale for research in the general population. Appl Psychol Meas 1977; 1: 385-401.

44. Tatar A, Saltukoğlu G. CES-Depresyon Ölçeği'nin doğrulayıcı faktör analizi ve madde cevap kuramı kullanımı ile Türkçeye uyarlanması ve psikometrik özelliklerinin incelenmesi. Psych Clin Psychopharm 2010; 20: 213-222.

45. Doğan T. Adaptation of the Brief Resilience Scale into Turkish: A validity and reliability study. JHW 2015; 3(1): 93-102.

46. Treynor W, Gonzalez R, Nolen-Hoeksema S. Rumination reconsidered: A psychometric analysis. Cogn Ther Res 2003; 27(3): 247–259.

47. Nolen-Hoeksema, S, Morrow J. A prospective study of depression and post-traumatic stress symptoms following a natural disaster: The 1989 Loma Prieta Earthquake. J Pers Soc Psychol 1991; 61(3): 115-121.

48. Erdur-Baker Ö, Bugay A. The short version of ruminative response scale: reliability, validity and its relation to psychological symptoms. Proc Soc Behav Sci 2010; 5: 2178-2181.

49. Baron, RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: Conceptual, Strategic, and Statistical Considerations. J Pers Soc Psychol 1986; 51(6): 1173-1182.

50. Weiss EL, James MD, Longhurst MD, Mazure CM. Childhood sexual abuse as a risk factor for depression in women: Psychosocial and neurobiological correlates. Am J Psychiatry 1999; 156(6): 816-828.

51. O'Mahen HA, Karl A, Moberly N, Fedock G. The association between childhood maltreatment and emotion regulation: Two different mechanisms contributing to depression? J Affect Disord 2015; 174: 287-295.

52. Conway M, Mendelson M, Giannopoulos C, Csank PAR, Holm SL. Childhood and adult sexual abuse, rumination on sadness, and dysphoria. Child Abuse Negl 2004; 28: 393-410.

53. Min JA, Yu JJ, Lee CU, Chae JH. Cognitive emotion regulation strategies contributing to resilience in patients with depression and / or anxiety disorders. Compr Psychiatry 2013; 54: 1190-1197.

54. Tedeschi RG, Calhoun LG. Posttraumatic growth: Conceptual foundations and empirical evidence. Psychol Inq 2004; 15: 1-18.

55. Brooks M, Graham-Kevan N, Lowe M, Robinson S. Rumination, event centrality, and perceived control as predictors of post-traumatic growth and distress: The cognitive growth and stres model. Br J Clin Psychol 2017; 56: 286-302.

56. Marchand A, Bilodeau J, Demers A, Beauregard N, Durand P, Hainess VY. Gendered depression: Vulnerability or exposure to work and family stressors? Soc Sci Med 2016; 166: 160-168.

57. Sezgin F. Investigating the psychological hardiness levels of primary school teachers. KED 2012; 20(2): 489-502.

58. Işık Ş. Developing The Psychological Hardiness Scale: The validity and reliability study. JHW 2016; 4(2): 165-182.