The Predictive Role of Early Trauma Dimensions on Self-Esteem in 11 - 13- Year-Old Students: Controlling the Role of Maladaptive Schema

Seyede Fatemeh Sajjadi,[1,*] Yadolla Zargar,[2] Leila Zare,[3] and Fakhri Tajikzadeh[2]

[1]Young Researchers and Elite Club, Shiraz Branch, Islamic Azad University, Shiraz, IR Iran
[2]Department of Psychology, Shahid Chamran University of Ahvaz, Ahvaz, IR Iran
[3]Islamic Azad University, Marvdasht Branch, Marvdasht, IR Iran

[*]Corresponding author: Seyede Fatemeh Sajjadi, Young Researchers and Elite Club, Shiraz Branch, Islamic Azad University, Shiraz, IR Iran. Tel: +98-9173046244, Fax: +98-7136301969, E-mail: f-sajadi@mscstu.scu.ac.ir

Abstract

Background: Self-esteem is a stable sense of personal worthiness. There is insufficient evidence from the available research to fully determine the relationship between self-esteem and early trauma.

Objectives: This is a correlational study aims to investigate the relationship between early traumas as a predictor of negative self-esteem by controlling the effect of maladaptive schemas in 11-13 year-old-student sample.

Methods: 292 people (201 females, 91 males) with mean age of 12.33 were selected via multistage random sampling. Participants completed questionnaire on children's depression inventory (CDI), childhood trauma questionnaire (CTQ), schema inventory for children (SIC) and provided demographic information. Analyzing data was done using correlation and stepwise regression methods.

Results: The results showed that emotional neglect and physical abuse are the best predictors of negative self-esteem. Additionally, the results revealed no evidence of maladaptive schemas mediating the relationship between early trauma and negative self-esteem.

Conclusions: In general, the findings showed that emotional neglect and physical abuse are the best predictors of negative self-esteem in children and explain a considerable variance of survival index. Our findings also demonstrate that maladaptive schemas do not have any significant effect on the relationship between trauma and negative self-esteem.

Keywords: Negative Self-Esteem, Early Trauma, Maladaptive Schema

1. Background

General health perspectives describe self-esteem as a vital component in individual's social and mental health since it has a crucial effect on their personal goals, aspirations and interpersonal relationships (1, 2). Self-esteem is defined as affective and evaluative components of self-concept; it indicates that how individuals feel about themselves. More specifically, self-esteem is characterized as dimensional structures and it refers to ones sense of worth and can be enhanced by accurate and well-advised interventions. If individuals perceive themselves as competent and qualified enough in domains where they aspire to excel, they will have high self-esteem. Conversely, if individuals fall short of their ideals by being unsuccessful in domains where they aspire to be competent, low self-esteem will result (3). High self-esteem strongly predicts prospect of success in people's life domains including work, relationships and mental well-being, and it also shows robust correlation with positive psychological outcomes, such as psychological adjustment, positive emotion and prosocial behavior. Moreover, in comparison with those with high self-esteem, individuals with low self-esteem experience very negative emotions (4).

There is a developing body of research, however, which suggests that childhood adverse experiences (physical abuse, sexual abuse, emotional abuse) is a robust predictor of low self-esteem (5). Yumbul et al. (6) has defined trauma as a threatening experience which alters adaptive processes into maladaptive processes. According to these authors, trauma is a condition in which situational/permanent unpredictable and irritating factors interrupt psychological experience and intervene in the coping capability of individuals for a period of time. Previous studies estimated that two-third of children experience early traumatic events before age 16 (7). Further, a substantial body of literature has suggested that those who experienced traumatic events, in comparison with those control groups without experiencing such an adverse background, are more likely to exhibit low self-esteem (8-10), higher stressful states and use more avoidant coping mechanism

(8, 9).

Another psychological variable that is affected by childhood adverse experiences and can be a predictor of low self-esteem is early maladaptive schemas. Schemas develop in early childhood and people are affected by them during their lifetime (11). Schemas have defined as one's core beliefs about self, others and the environment; typically derive from their childhood unsatisfied demands especially emotional needs (12). More broadly, schemas can be described as a prototypical abstraction of a complicated concept derived from individuals past experiences and affect the way individuals organize their incoming information. Further, dysfunctional schemas, known as early maladaptive schemas, originate from childhood frustration of psychological core demands through chronic dysfunctional patterns of interaction with important others, traumatization and inappropriate boundaries; or the mismatch between parental rearing style and child innate temperament (13). It is hypothesized that maladaptive schemas have strong roots in the interaction of genetic predisposition and early environmental factors and lead to behavioral and emotional dysfunction. Young (1990) asserted that maladaptive schemas can be categorized into five class: 1) disconnection and rejection; 2) impaired limits; 3) impaired autonomy and performance; 4) overvigilance and inhibition and 5) other-directedness (14). A substantial body of literature has suggested that the definition of schema contains the imprinting of experiences while the definition of self-esteem emphasizes the evaluation of self (15).

With research to date indicate that self-esteem is frequently targeted in psychological issues due to its importance in conceptualizing sense of one's worth as a person and one's successes; and given that less is done on investigating the predictive role of psychological factors rooted in childhood in developing low self-esteem.

2. Objectives

The present study aimed to explore the relationship between early traumatic experiences (emotional neglect, emotional abuse, physical abuse and physical neglect) and negative self-esteem with controlling the role of maladaptive schemas in 11 - 13-year-old students.

3. Methods

This is a cross-sectional study, investigating the relationship between physical abuse, emotional abuse, physical neglect and emotional neglect with negative self-esteem by controlling the role of maladaptive schemas in 11

-13-year-old-students. The data obtained through questionnaires were analyzed with correlation and stepwise regression analysis using SPSS-18. Analyzing data was done using correlation and stepwise regression method. All participants completed questionnaire on children's depression inventory (CDI), childhood trauma questionnaire (CTQ) and schema inventory for children (SIC). The participants were fully informed about the aims of the study, the questionnaire were filled out without reporting the name of the participants and the right of participants regarding the confidentiality was ensured.

3.1. Participants

Students from four regions in Shiraz, studying in 6st and 7rd grades of elementary school in educational year 2014 - 2015 (Iranian year of 1393 - 1394) were solicited to participate in the questionnaire surveys. The sample included 292 students (68.8% female, 31.2% male) chosen with multistage random sampling. First, two girl's schools and two boy's schools were chosen randomly, then two classes of each were selected by random and finally half of the students of each class were randomly chosen to answer the questionnaire. The age range of the participants was 11 to 13 years, with an average of 12.33 and standard deviation 0.83. 36% of subjects were in 6st grade and 64% in 7st grade elementary school. The average CGPA (Cumulative Grade Point Average) of students in sample was 18.31, SD = 1.03.

3.2. Instruments

Childhood trauma questionnaire (CTQ; Bernstein et al. 1994) is one of the most widely used instrument that measures the severity of different types of childhood trauma, designing for both clinical and nonclinical populations. CTQ is 34-item retrospective self-report questionnaire to evaluate five depression dimensions including (a) physical abuse; (b) emotional abuse; (c) sexual abuse; (d) physical neglect; and (e) emotional neglect (16). The items are scored on 5-point Likert scale ranging from 1 (never) to 5 (very often) (17). Previous researches reported strong psychometric properties with Cronbach's α of 0.79 to 0.94 (18). In the current sample Cronbach's α was 0.80.

Children's depression inventory (CDI; Kovacs 1980/1981) is considered one of the few existing diagnostic measures in studies of depressed versus non depressed 8 - 13-year-old-children. The CDI is a 27-item self-report questionnaire that asks subjects to endorse one of the three descriptions that best applies to him/her during the last 2 weeks. CDI is scored on a 0 - 2 scale, with 0 representing the absence of depressive symptoms and 2 representing the severe form. This scale evaluates 6 subscales including negative mood, interpersonal problems, ineffectiveness,

anhedonia and negative self-esteem (19). The cut-off point for CDI was reported as 15 for mild, 20 for moderate and 25 for severe depression (20). The CDI has shown adequate reliability and validity in previous studies; previous studies reported high internal consistency with a Cronbach's α of 0.82 (21) and 0.86 (22). In the current study, negative self-esteem was the only sub-scale studied and Cronbach's α for this subscale was 0.70 and for whole scale was 0.94.

Schema Inventory for Children (SIC; Rijkeboer and de-Boo, 2010) is a 40-item self-report inventory designed for assessing maladaptive schema in children aged 8 - 13 years old. The items are scored on 5-point Likert scale ranged from "not true" (1) to "yes definitely" (5). SIC was designed in order to represent the 11 schema construct of young schema questionnaire: loneliness, vulnerability, submission, mistrust/abuse, defectiveness/shame, unrelenting standards, self-sacrifice, enmeshment/undeveloped self, entitlement/grandiosity, insufficient self-control, and failure to achieve. Prior researches in Iran examining this instruments with a large community sample of male students in guidance school showed high consistency ($\alpha >$ 0.73) (23). In the current study, Cronbach's α was 0.82.

4. Results

Descriptive statistics and zero-order correlational matrix for research variables are reported in Table 1.

Table 1. Means and Standard Deviation for Research Variables (n = 292)[a]

Variables	Full Sample
Negative self-esteem	8.51 ± 2.99
Emotional abuse	9.06 ± 4.07
Physical abuse	7.39 ± 3.10
Emotional neglect	21.34 ± 7.90
Physical neglect	14.00 ± 3.16
Maladaptive schemas	1.08 ± 22.48

Abbreviations: CGPA, cumulative grade point average; SD, standard deviation; yr, years.
[a]Values are expressed as mean ± SD.

As shown in Table 1, the Mean (SD) scores obtained by the sample (n = 292) on variables of negative self-esteem was 8.51 (2.99) and maladaptive schemas 1.08 (22.48), and trauma subscales including emotional abuse 9.06 (4.07), physical abuse 7.39 (3.10), emotional neglect 21.34 (7.90) and physical neglect 14.00 (3.16).

To investigate the relationship between negative self-esteem and early traumas dimensions, a matrix for Pearson correlation coefficient was calculated. Bivariate correlation between study variables (Table 2) showed that not only all of the variables have a significant correlation with

each other, but also significant alpha coefficients range from 0.11 to 0.52. Focusing on the main study variables, as seen in Table 2, significant negative relationships were found between negative self-esteem and emotional abuse (r = -0.13; P < 0.05), physical abuse (r = -0.18; P < 0.01), and emotional neglect (r = -0.23; P < 0.01), but there was no significant correlation between negative self-esteem with maladaptive schema and physical neglect.

Before performing multiple regression analysis to investigate the relation of trauma dimensions with negative self-esteem, regression assumptions including Kolmogorov–Smirnov test, linearity, linearity deviation and outlier removal were investigated. One of the basic assumptions of multiple regression analysis is independence of predictive variables or to put it in another word, the lack of correlation between the independent variables error, in next step we investigate this case by Durbin-Watson test. In sum, it can be said that if the value of test statistic was between 1.5 and 2.5, the independence of the observations could be accepted and the analysis could be performed (24).

Since the results of Durbin-Watson test were equal to 1.7, the predictor variables are independent. In this regression, predictive role of two variables on negative self-esteem has been investigated (Table 3).

As seen in Table 3, emotional neglect and physical abuse are the best predictors of negative self-esteem but emotional abuse and physical neglect were excluded from analysis and were removed from the regression equation. R and R2 are respectively 0.4 and 0.16, thus 16% of negative self-esteem variance were explained by emotional neglect and physical abuse. F related to multiple correlations is equal to 15.07 (P < 0.001).

As can be seen in Table 4, the correlation between trauma total score and negative self-esteem was obtained 0.29, but the correlation of these two variables with controlling maladaptive schemas was 0.30. Given that these two correlations are close, we conclude that maladaptive schemas have no significant effect on the relationship between trauma and negative self-esteem.

5. Discussion

The current study purported to examine the predictive role of early traumatic experiences and maladaptive schemas in predicting negative self-esteem in 11 - 13-year-old students. In the present study, it was observed that emotional neglect and physical abuse are the best predictors of negative self-esteem. So that 16% of negative self-esteem variance were explained by emotional neglect and physical abuse (F = 15.07; P < 0.001). Our study findings are similar to those of Muller and Lemieux (25); Bartlett and

Table 2. Zero-Order Correlation Between Research Variables (n = 292)

Variables	1	2	3	4	5	Mean ± SD
Negative self-esteem	-					8.51 ± 2.99
Emotional abuse	-0.13[a]	-				9.06 ± 4.07
Physical abuse	-0.18[b]	0.52[b]	-			7.39 ± 3.10
Emotional neglect	-0.23[b]	0.42[b]	0.31b	-		21.34 ± 7.90
Physical neglect	-0.04	0.25[b]	0.37[b]	0.11[a]	-	14.00 ± 3.16
Maladaptive schemas	-0.004	0.37[b]	0.17[b]	0.004	0.06	1.08 ± 22.48

[a] P < 0.05.
[b] P < 0.01.

Table 3. Stepwise Regression Analysis

Criterion Variable	Predictive Variable	β	t	R	R^2	F	P Value
Negative self-esteem	Emotional neglect	-0.227	-3.82	0.274	0.075	22.99	< 0.001
	Physical abuse	-0.154	-2.58	0.4	0.16	15.07	<0.001

Table 4. Partial Correlation Coefficient of Trauma Total Score and Negative Self-Esteem with and Without Controlling Schema

Variables	Pearson Correlation with Negative Self-Esteem		Partial Correlation by Controlling Schema	
	Correlation	Significance	Correlation	Significance
Trauma total score	0.29	0.00	0.30	0.00

DeSteno (26); Briere and Runtz (27); Brown and Finkelhor (28); Peters (29); Brayden et al. (30), considering the relationship between early trauma and low self-esteem. These findings support the assumption that negative attitude about self is a significant risk factor associated with the psychopathology of those with early traumatic experience. Negative attitude about self is the strongest predictors of psychopathology, suggesting that there is a negative association between early traumatic experiences and developing self-esteem (25). A central consideration in a dynamic relationship between early trauma and low self-esteem is that those people with the history of childhood traumas report more negative emotions associated with life dissatisfaction and dissatisfaction with interpersonal relations, because they have difficulty in establishing and maintaining healthy relations. Additionally, due to their inability to trust others, they are unsatisfied with their peer and intimate relations and this will increase the incidence of depression symptoms and low self-esteem (31). More broadly, because at the time of establishing relationships and connecting with others, self-esteem and one's ability to trust others play a key role; and since traumatic survivors have serious negative emotional relation to social experiences, it is so difficult for these people to establish and maintain their interpersonal relations (26).

Margaritoiu and Eftimie (32) draw attention to the the-

ory of Kary Killen's theory (1998) which has posited that depending on the forms of abuse individuals suffer from, its negative consequences will be affected various aspects of personality, such as emotional, physical and somatic reactions, self-perception, relationships, social integration and performance. The intensity and duration of abuse are also other important factors that demonstrate the negative effects on children (e.g., anxiety, depression and aggression). According to these authors, 81% of abused children aged between 13 and 18 years old showed low self-esteem, 85% of them had a negative self-perception, 78% of investigated children had a negative image of their scholar self, 59% of them had a low emotional level, 48% of them were insecurely in their relationship with others, 86% of them had a black vision about their future, 85% of them were dominated by negative thoughts and 37% of them need group support. These findings suggest that children will develop many affective dysfunctions in the absence of family warmth, and this will affect their capacity for emotional maturity growth and emotional control (32).

Moreover, we have found that maladaptive schemas have no significant effect on the relationship between trauma and negative self-esteem. Consistently with existing literature, we hypothesized that early traumas will lead to developing maladaptive schemas (33-36), and consequently affect self-esteem. More specifically, we assumed

that early traumatic experiences may affect one's self-esteem by the mediating role of maladaptive schemas and decided to control the role of it in order to study the exclusive effects of trauma dimensions, and our nuanced findings suggest that maladaptive schemas show no significant effect on the relationship between trauma and negative self-esteem.

Our study is subject to several limitations that need to be considered when interpreting these results. First, our sample, despite its large size, is restricted to nonclinical 11 - 13-year-old students that limits its generalization to other age ranges. There is a growing demand for similar researches on larger samples and other age groups due to greater awareness of the quality of the relationships and consequently more reliable and generalized information could be achieved. A second limitation is related to the self-report instruments. It is suggested to use structural and semi-structural interviews in future studies. Thus, all interpretations need to be made in the context of these limitations. In sum, our study provides support that exposure to early traumatic experiences can predict negative self-esteem; repetition of these findings in more clinical and controlled setting is needed. Our findings demonstrate the need of implementing a systematic program for individuals and group therapies for abused children in order to increase self-esteem and social integration.

Acknowledgments

Footnote

Authors Contribution: Yadolla Zargar was responsible for Study supervision. Seyede Fateme Sajadi was responsible for study design and drafting of the manuscript. Leila Zare was responsible for Acquisition of data. Fakhri Tajikzadeh was responsible for interpretation of data and Statistical analysis.

References

1. Mann M, Hosman CM, Schaalma HP, de Vries NK. Self-esteem in a broad-spectrum approach for mental health promotion. *Health Educ Res.* 2004;**19**(4):357–72. doi: 10.1093/her/cyg041. [PubMed: 15199011].
2. Kuehner C, Buerger C. Determinants of subjective quality of life in depressed patients: the role of self-esteem, response styles, and social support. *J Affect Disord.* 2005;**86**(2-3):205–13. doi: 10.1016/j.jad.2005.01.014. [PubMed: 15935240].
3. Harter S. Causes and consequences of low self-esteem in children and adolescents. Springer; 1993.
4. Bajaj B, Robins RW, Pande N. Mediating role of self-esteem on the relationship between mindfulness, anxiety, and depression. *Pers Individ Differ.* 2016;**96**:127–31.
5. Cardi M, Milich R, Harris MJ, Kearns E. Self-esteem moderates the response to forgiveness instructions among women with a history of victimization. *J Res Pers.* 2007;**41**(4):804–19.
6. Yumbul C, Cavusoglu S, Geyimci B. The effect of childhood trauma on adult attachment styles, infidelity tendency, romantic jealousy and self-esteem. *Proc Soc Behav Sci.* 2010;**5**:1741–5.
7. Joseph AB. Childhood Trauma, Self-Esteem, and Helping Behaviors: Does History of Trauma Predict Helping? 2014. Available from: http://digitalcommons.georgiasouthern.edu/etd/1130.
8. Valerio P, Lepper G. Sorrow, shame, and self-esteem: Perception of self and others in groups for women survivors of child sexual abuse. *Psychoanal Psychother.* 2009;**23**(2):136–53.
9. Finkelhor D. The prevention of childhood sexual abuse. *Future Child.* 2009;**19**(2):169–94. [PubMed: 19719027].
10. Fortier MA, DiLillo D, Messman-Moore TL, Peugh J, DeNardi KA, Gaffey KJ. Severity of child sexual abuse and revictimization: The mediating role of coping and trauma symptoms. *Psychol Women Q.* 2009;**33**(3):308–20.
11. Almasi A, Safdari S, Azadi E. The Relationship between Early Maladaptive Schemas and Self-Efficacy with Social Adjustment of Students. *Switzerland Res Park J.* 2014;**103**(2).
12. Zhang D, He H. Personality traits and life satisfaction: A Chinese case study. *Soc Behav Pers Int J.* 2010;**38**(8):1119–22.
13. Thimm JC. Mediation of early maladaptive schemas between perceptions of parental rearing style and personality disorder symptoms. *J Behav Ther Exp Psychiatry.* 2010;**41**(1):52–9. doi: 10.1016/j.jbtep.2009.10.001. [PubMed: 19896642].
14. Lawrence KA, Allen JS, Chanen AM. A study of maladaptive schemas and borderline personality disorder in young people. *Cogn Ther Res.* 2011;**35**(1):30–9.
15. Kesting ML, Lincoln TM. The relevance of self-esteem and self-schemas to persecutory delusions: a systematic review. *Compr Psychiatry.* 2013;**54**(7):766–89. doi: 10.1016/j.comppsych.2013.03.002. [PubMed: 23684547].
16. Thombs BD, Lewis C, Bernstein DP, Medrano MA, Hatch JP. An evaluation of the measurement equivalence of the Childhood Trauma Questionnaire–Short Form across gender and race in a sample of drug-abusing adults. *J Psychosom Res.* 2007;**63**(4):391–8. doi: 10.1016/j.jpsychores.2007.04.010. [PubMed: 17905047].
17. Villano CL, Cleland C, Rosenblum A, Fong C, Nuttbrock L, Marthol M, et al. Psychometric utility of the childhood trauma questionnaire with female street-based sex workers. *J Trauma Dissociation.* 2004;**5**(3):33–41. doi: 10.1300/J229v05n04_03. [PubMed: 16957783].
18. Roy A. Combination of family history of suicidal behavior and childhood trauma may represent correlate of increased suicide risk. *J Affect Disord.* 2011;**130**(1-2):205–8. doi: 10.1016/j.jad.2010.09.022. [PubMed: 20943272].
19. Saylor CF, Finch AJ, Spirito A, Bennett B. The children's depression inventory: a systematic evaluation of psychometric properties. *J Consult Clin Psychol.* 1984;**52**(6):955–67. [PubMed: 6520288].
20. Bang YR, Park JH, Kim SH. Cut-Off Scores of the Children's Depression Inventory for Screening and Rating Severity in Korean Adolescents. *Psychiatry Investig.* 2015;**12**(1):23–8. doi: 10.4306/pi.2015.12.1.23. [PubMed: 25670942].
21. Samm A, Varnik A, Tooding LM, Sisask M, Kolves K, von Knorring AL. Children's Depression Inventory in Estonia. Single items and factor structure by age and gender. *Eur Child Adolesc Psychiatry.* 2008;**17**(3):162–70. doi: 10.1007/s00787-007-0650-z. [PubMed: 17876502].
22. Sorensen MJ, Frydenberg M, Thastum M, Thomsen PH. The Children's Depression Inventory and classification of major depressive disorder: validity and reliability of the Danish version. *Eur Child Adolesc Psychiatry.* 2005;**14**(6):328–34. doi: 10.1007/s00787-005-0479-2. [PubMed: 16220217].

23. Montazeri MS, Farsani ZK, Mehrabi H, Shakiba A. Relationship between Early Maladaptive Schemas and Depression in Guidance School Students in Falavarjan. *J Mazandaran Univ Med Sci.* 2013;**23**(98).

24. Beshlideh K. Research methods and statistical analysis of research examples using SPSS and AMOS. Iran: Publication of Ahvaz; 2012.

25. Muller RT, Lemieux KE. Social support, attachment, and psychopathology in high risk formerly maltreated adults. *Child Abuse Negl.* 2000;**24**(7):883–900. [PubMed: 10905414].

26. Bartlett MY, DeSteno D. Gratitude and prosocial behavior: helping when it costs you. *Psychol Sci.* 2006;**17**(4):319–25. doi: 10.1111/j.1467-9280.2006.01705.x. [PubMed: 16623689].

27. Briere J, Runtz M. The Trauma Symptom Checklist (TSC-33) early data on a new scale. *J Interpers Violence.* 1989;**4**(2):151–63.

28. Browne A, Finkelhor D. Impact of child sexual abuse: a review of the research. *Psychol Bull.* 1986;**99**(1):66–77. [PubMed: 3704036].

29. Peters SD. Child sexual abuse and later psychological problems. Annual Meeting of the American Psychological Association. Los Angeles. Sage Publications; .

30. Brayden RM, Deitrich-MacLean G, Dietrich MS, Sherrod KB, Altemeier WT. Evidence for specific effects of childhood sexual abuse on mental well-being and physical self-esteem. *Child Abuse Negl.* 1995;**19**(10):1255–62. [PubMed: 8556439].

31. Goff BS, Crow JR, Reisbig AM, Hamilton S. The impact of individual trauma symptoms of deployed soldiers on relationship satisfaction. *J Fam Psychol.* 2007;**21**(3):344–53. doi: 10.1037/0893-3200.21.3.344. [PubMed: 17874919].

32. Margaritoiu A, Eftimie S. Abused Children's Self Esteem. *Proc Soc Behav Sci.* 2012;**46**:4580–4.

33. Wethington HR, Hahn RA, Fuqua-Whitley DS, Sipe TA, Crosby AE, Johnson RL, et al. The effectiveness of interventions to reduce psychological harm from traumatic events among children and adolescents: a systematic review. *Am J Prev Med.* 2008;**35**(3):287–313. doi: 10.1016/j.amepre.2008.06.024. [PubMed: 18692745].

34. Winston AP. Recent developments in borderline personality disorder. *Advances in Psychiatric Treatment.* 2000;**6**(3):211–7.

35. Young JE, Klosko JS, Weishaar ME. Schema therapy: A practitioner's guide. Guilford Press; 2003.

36. Arntz A, Van Genderen H. Schema therapy for borderline personality disorder. John Wiley & Sons; 2011.