# Mediating Role of Maladaptive Schemas between Childhood Emotional Maltreatment and Psychological Distress among College Students

Shirin Farazmand<sup>1</sup>, Parveneh Mohammdkhani<sup>1\*</sup>, Abbas Pourshahbaz<sup>1</sup>, Behrooz Dolatshahi<sup>2,1</sup>

1. Department of Clinical Psychology, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

2. Substance Abuse and Dependence Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

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# ABSTRACT

**Objective:** This study aimed to investigate the mediating role of maladaptive schemas between childhood emotional maltreatment and psychological distress among college students.

**Methods:** This was a descriptive-correlative and after the fact study. A total of 315 students were selected with multistage cluster sampling from students of Tehran universities. The participants completed the lifetime of experiences questionnaire (LEQ), Young s schema questionnaire short form with 90-item (YSQ-SF-3), and the trauma symptom checklist-40 (TSC-40). Data were analyzed by path analysis using SPSS 16.

**Results:** The results indicated that perception of childhood emotional maltreatment was associated with later psychological distress and mediated through schema of defectiveness/ shame, vulnerability to harm, self-sacrifice, and entitlement

**Conclusion:** In this study, our findings suggested that childhood emotional maltreatment is contributed to later psychological distress by developing cognitive vulnerability of children through maladaptive schemas. These schemas are rigid and extreme cognitive structures that negatively filter and bias cognitive and emotional information

# **1. Introduction**

motional maltreatment is defined as a severe and repeated pattern conveying this message to the children that they are worthless, damaged, unwanted, unloved, or endangered. Furthermore, if they want to be valuable, they should meet the needs of another

person (Kairys & Johnson, 2002). Although emotional maltreatment is the most prevalent form of childhood maltreatment, it is usually the least form that is reported, identified, and studied (Barnet, Miller-Perrin, 2005). Childhood emotional maltreatment has lagged behind other types of maltreatments in research findings, journals, and clinical practices (Behl, Conyngham, & May, 2003; Lowell, A., Renk, K., & Adgate, A. H., 2014). Although limited research has investigated the consequences of emotional maltreatment, the experience of childhood emotional maltreatment is associated with permanent and long-term psychological sequelae such as feeling of shame, humility, anger, worthlessness, and emotional inhibition (Barnet et al., 2005).

Research revealed that experience of childhood emotional maltreatment is contributed to the impaired function in adulthood (Young et al., 2003). If these experiences such as constant criticism, contempt, disapproval, rejection, put downs, and being ignored get internalized as a global and negative beliefs about oneself, their negative impact will be enduring in adulthood (Wright et al., 2009).

\* Corresponding Author: Parvaneh Mohammadkhani, PhD Address: Department of Clinical Psychology, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. Tel: +98 (21) 22180045 E-mail: parmohamir@yahoo.com Clinical observations revealed that individuals with traumatic events like emotional maltreatment in their childhood have more problems in relevant psychological tasks such as distress symptoms, interpersonal problems, and problems in experience of intimacy and forming mature relationship with authority figures in adulthood (Brodhagen et al., 2008; Stange et al., 2013; Ozer et al., 2003; Mills et al., 2015). The consequences of emotional maltreatment often depend on the type of maltreatment as well as the number and severity of the exposures (Schoedl et al., 2010; Wolfe & McIsaac, 2011; Goodman et al., 2014). Experience of emotional maltreatment when become a traumatic event that impairs the individuals\_sense of integration such as their mental schemas (Hwangbo, 2004).

Literature review reveals that experiences of childhood emotional maltreatment are associated with the development of maladaptive schemas (Young, Klosko, & Weishaar, 2003). Cognitive theories suggest that the impact of childhood emotional maltreatment on later psychopathology may be mediated through cognitive vulnerabilities consisting of attributional styles and maladaptive schemas (Gibb, Abramson, & Alloy, 2004; Hankin, 2005). Youngs model attempted to explain the relationship between childhood maltreatment and symptoms of psychopathology through cognitive mechanisms in schema theory (Dozois & Beck, 2008; Young, Klosko, & Weishaar, 2003). Several cross-sectional studies supported the link between parents\_maltreatment and maladaptive schemas (Calvet & Orue, 2013; Carr & Francis, 2010; McCarthy & Lumley, 2012; Muris, 2006; Thimm, 2010, Wright et al, 2009).

All of these studies suggested that childhood emotional maltreatment is associated with maladaptive schemas in disconnection/ rejection and impaired autonomy domains (Calvet, 2013). Schemas are broad and pervasive patterns consisting of memories, emotions, cognitions, and bodily sensations about oneself and ones relationship with others. They were developing during childhood, elaborating throughout ones lifetime, and dysfunctional to a significant degree. In general, they may be made up of emotional memories of past hurt, tragedy, fear, abuse, neglect, unmet safety needs, abandonment, or lack of normal human affection. Young et al. (2003) identified 18 different maladaptive schemas, each of them has its own proposed origin and long-term impact (Young et al., 2003).

Many studies have also confirmed that maladaptive schemas mediate the association of parenting styles and the symptoms of depression and anxiety in adulthood (Harris & Curtin, 2002; McGinn, Cukor, & Sanderson, 2005; Wright, Crawford, & Del Castillo, 2009). Multiple studies showed that heightened maladaptive schemas are associated with the general symptoms of depression and anxiety, as well as diagnosable depressive and anxiety disorders (Hawke & Provencher, 2011). Moreover, one preliminary study suggested that there are associations between maladaptive schemas and global function level (Hawke & Provencher, 2010).

Although several investigations have studied the sequelae of sexual and physical maltreatment in college students, fewer studies have investigated the consequences of emotional maltreatment among them (Banyard & Cantor, 2004; Bryant & range, 1997; Clemmons, Dilillo, Martinez, DeGue & Jeffcott, 2003; Loos & Alexander, 1997). However, a previous study suggested that psychological maltreatment is more closely tied up with negative outcomes compared to physical maltreatment (Crittenden, Claussen, & Sugarman, 1994). Moreover, previous fin ings indicated that reporting of childhood emotional maltreatment by college students is an important contributor to the dramatic increase in the referral of clients to counseling universities center (American College Health Association, 2006). These experiences may influence their competency in doing relevant this aged psychological task such as experience of increasing intimacy and shaping more mature relationship with authority figures, and such problems can influence their future personal and occupational life strongly (Banyard & Cantor, 2004).

Research on childhood emotional maltreatment has increased significantly since its identification as a separate form of maltreatment (Brassard, Germaine, & Hart, 1987; Simmel & shpiegel, 2013; Tommyr et al., 2011). However as prior investigations have focused on the negative effects of emotional maltreatment and investigating of mediating cognitive mechanism was limited too, more questions have left unanswered about development and process of childhood emotional maltreatment. With regard to the literature, the objective of the present study was to address this limitation by investigating this process from the perspective of schema theory and examining the mediating role of maladaptive schemas between childhood emotional maltreatment and psychological distress in college students.

# 2. Methods

This was a descriptive-correlative and after the fact study. The study population was all students at universities of Tehran. The sample size according to the multiple regression model is 15 participants for each independent variables (Hooman, 2005). In this study we had 19 independent variables and with considering 10% loss of sample therefore our sample size consisted of 315 participants (185 female, 130 men) who were selected by cluster multistage sampling method. First, 4 universities were randomly selected among all universities of Tehran. Then, 4 classes were randomly selected from each variables university. After obtaining permission from these universities, sampling was made. Inclusion criteria were as follows: aged between 18 and 30 and having no obvious mental disorder according to the participants\_self-report. All participants were informed about the purposes of the study and received the rules and instructions of fillin out the questionnaire. Participants agreed to take part in a study on investigating the long-term effects of childhood emotional maltreatment, while they were free to answer any question they want. Then they started to fill the questionnaires. Prior to conducting analyses, 26 questionnaires were removed because of incomplete filling. Finally, data of 289 participants were used in analysis (169 females, 120 males).

The lifetime experience questionnaire (LEQ) (Gibb et al., 2001) was used to measure histories of emotional maltreatment before the age of 15. The LEQ is an 82-item self-report questionnaire, divided into various subscales of maltreatment, including physical, emotional, and sexual parts. In this study, the physical and sexual subscales were omitted. The emotional maltreatment subscales contained 38 items that measure emotional neglect and abuse. Each item presented a specific maltreatment event (e.g. Did anyone say to you that you were selfish, hateful, no-good, mean, or other negative qualities?), and respondents indicated whether they had experienced the specific maltreatment. They also indicated its perpetrator and frequency before the age of 15. Emotional maltreatment subscale included derogation, humiliation, rejection, extortion, and teasing (Gibb, Benas, Crossett, & Uhrlass, 2007).

The emotional abuse subscale has correlated highly with emotional maltreatment reported by students in a structured interview (r=0.78), demonstrating good internal consistency (Cronbach  $\alpha$ =0.85), and predicting symptoms

| Variable                  | Mean  | SD    |
|---------------------------|-------|-------|
| Emotional maltreatment    | 26.82 | 17.26 |
| Abandonment               | 13.22 | 5.64  |
| Mistrust/abuse            | 12.11 | 5.34  |
| Emotional deprivation     | 12.29 | 5.92  |
| Defectiveness/shame       | 10.63 | 4.79  |
| Social isolation          | 9.06  | 4.41  |
| Dependence/incompetence   | 8.76  | 3.81  |
| Vulnerability to harm     | 10.11 | 4.81  |
| Enmeshment                | 11.32 | 4.51  |
| Failure                   | 8.85  | 3.99  |
| Entitlement               | 16.37 | 5.06  |
| Insufficient self-control | 14.15 | 5.95  |
| Negativity/pessimism      | 12.26 | 4.99  |
| Punitiveness              | 11.03 | 4.44  |
| Subjugation               | 10.22 | 4.40  |
| Self-sacrifice            | 14.91 | 4.47  |
| Approval seeking          | 15.95 | 5.72  |
| Emotional inhibition      | 12.48 | 5.23  |
| Unrelenting standards     | 16.69 | 5.06  |
| Psychological distress    | 26.40 | 17.27 |

Table 1. The means and standard deviation of variables.

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of depression (Gibb et al., 2001). Reliability in the current sample was also strong ( $\alpha$ =0.92). In the current study, participants were responded in a 5-point Likert-type scale to the questions. Scores for emotional maltreatment were calculated by summing the items endorsed on the emotional abuse and neglect subscales. Higher scores indicated a greater severity of emotional maltreatment.

Young schema questionnaire (YSQ-SF-3) was used to assess the endorsement of negative cognitive schemas. The YSQ-SF-3 is a self-report 90-item inventory measuring 18 emotional maladaptive schemas. Using a 6-point scale, respondents indicated the level of self-description of each item, ranging from 1 (completely untrue of me) to 6 (describes me perfectly). Scores on each schema were calculated by summing the items on each scale, thus higher means on a subscale indicated greater endorsement of the schema (Jones, Harris, & Leung, 2005). The YSQ-SF-3 subscale include abandonment, mistrust/abuse, emotional deprivation, defectiveness/shame, social isolation, dependence/incompetence, vulnerability to harm, enmeshment, failure, entitlement, insufficient self-control, negativity/ pessimism, punitiveness, subjugation, self-sacrifice, approval seeking, emotional inhibition, unrelenting standards. In samples of undergraduates and adults, the YSQ demonstrated adequate internal consistency (Cronbach  $\alpha$ =0.55–0.88; Annuth, 2011). The current sample also demonstrated adequate internal consistency (Cronbach α=0.55-0.80).

Trauma symptom checklist-40 (TSC-40) is a 40-item self-report questionnaire designed to assess trauma symptoms. Items are measured on a 4-point Likert-type scale in 6 dimensions: anxiety, depression, dissociation, sexual problems, post sexual abuse trauma, and sleep disturbances (Elliot & Briere, 1992). The participants were asked to respond how often they experienced symptoms in the last

two months from 0 (never) to 3 (often). Internal consistency was satisfactory (Cronbach  $\alpha$ =0.92) (Brier, 1996).

Statistical analysis was performed using the SPSS 16. In order to analysis the data, we used descriptive (mean and standard deviation) and inferential statistics (path analysis via multiple regression). A path analysis was performed in order to determine the mediation role of maladaptive schemas in childhood emotional maltreatment and later psychological distress among college students (P<0.05).

# **3. Results**

Table 1 shows the mean and standard deviation of emotional maltreatment, maladaptive schemas and psychological distress scores. At the first step we test multiple regression statistical assumption by checking for multivariate outliers with mahalanobis distance. Based on the results, no cases eliminated from the analysis. After that, we assessed collinearity statistics and our result showed that the tolerance of all predictors are far in excess of 0.01 suggesting that multicollinearity is not a problem. All pairwise correlations among the schemas were less than 0.50 indicating their independence. Path analysis was used via multiple regression analysis with standard method (Enter) to determine the proportion of emotional maltreatment and maladaptive schemas in explaining the variance of severity of psychological distress. Results are summarized in Tables 2 to 5.

When all maladaptive schemas were entered, adjusted  $R^2$  was 0.51, which means that 0.51% variance of psychological distress could be explained by defectiveness/ shame, vulnerability to harm, self-sacrifice, and entitlement schemas. At the next step, emotional maltreatment and maladaptive schemas is added to the regression simultaneously and adjusted  $R^2$  rose to 0.54, which means that emotional maltreatment and maladaptive schemas can ex-

Table 2. Model summary of predicting psychological distress according to maladaptive schemas.

| Model               | R                    | R <sup>2</sup>     | Adjusted R <sup>2</sup> | SE                | F     | P value |
|---------------------|----------------------|--------------------|-------------------------|-------------------|-------|---------|
| 1                   | 0.73                 | 0.54               | 0.51                    | 12.06             | 17.83 | 0.00    |
| Table 3. Coefficier | nts of predicting ps | sychological distr | ress according to m     | naladaptive schem | as.   |         |
|                     | В                    | SE                 | E E                     | Beta              | т     | P value |

|                       | В    | SE   | Beta | т    | P value |
|-----------------------|------|------|------|------|---------|
| Defectiveness/shame   | 0.56 | 0.24 | 0.15 | 0.23 | 0.02    |
| Vulnerability to harm | 0.75 | 0.22 | 0.21 | 42.3 | 0.00    |
| Self sacrificing      | 0.41 | 0.20 | 0.10 | 2.02 | 0.04    |
| Entitlement           | 0.48 | 0.22 | 0.14 | 2.19 | 0.02    |
|                       |      |      |      |      |         |

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plain 54% of the variance of later psychological distress. The path analyses in this study supported the hypothesis that maladaptive schemas have a mediating role in childhood emotional maltreatment and later psychological distress among college students.

Path analysis is a method used to determine whether a multivariate set of nonexperimental data fits well with a particular (a prior) causal model. A path analysis can be conducted as a hierarchical (sequential) multiple regression analysis. For each endogenous variable, we conducted a multiple regression analysis by Enter method to predicting that dependent variable from all other variables hypothesized to just indirectly affect dependent variable (through one or more mediating variables). The beta weights from these multiple regressions were the path coefficients shown in the typical figures used to display the results of path analysis (Pedhazur, 1982).

Our diagram indicated that psychological distress is directly affected by childhood emotional maltreatment and indirectly through mediating defectiveness/shame, vulnerability to harm, self-sacrifice and entitlement schemas. We use two multiple regression by standard method (Enter) and obtained adjusted R<sup>2</sup>=0.54, and the beta weights as follows: defectiveness/shame=0.23, vulnerability to harm=0.26, self-sacrifice=0. 1, entitlement=0.10, and emotional maltreatment=0.29.

#### 4. Discussion

The present study aimed to investigate the mediating role of maladaptive schemas in the relationship between emotional maltreatment and later psychological distress among college students. Results showed that some of maladaptive schemas, including defectiveness/shame, vulnerability to harm, self-sacrifice, and entitlement may have roles in predicting of later psychological distress in the individuals who have reported experience of childhood emotional maltreatment.

These findings are consistent with previous studies that showed that the feelings of defectiveness and shame are strongly associated with anxiety and depression (Haferkamp et al., 2015; Ferguson, Dacey, 1997). Wright and colleagues also showed that the perception of emotional maltreatment was associated with reporting some maladaptive schemas, including vulnerability to harm, shame, and self-sacrifice schemas (Wright, Crawford, & Del Castillo, 2009). Prior research identified shame as an important emotion because it is the most disturbing affect to the self, and is central for the sense of identity. Shame itself can lead to self-doubt and impairs both senses of security and confidence. Moreover it plays a key role in many psychological disorders, including depression, paranoia, addiction, and borderline conditions as well. Sexual disorders and many eating disorders are associated with the feeling of shame (Kaufman, Gershen, 1996; Goodman et al., 2014).

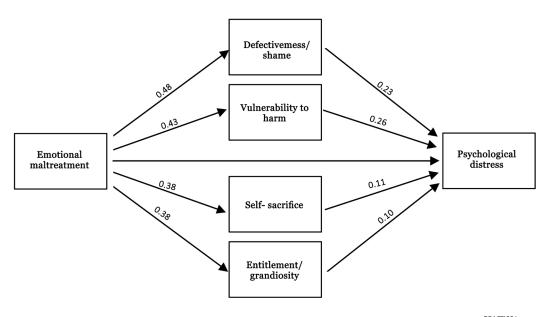
The results of this study provided some evidence to explain the link between shame as an overwhelming feeling that is associated with childhood emotional maltreatment and later dissociative tendencies that is one of the subscales of psychological distress in adulthood.

According to trauma hypothesis of dissociation, multiple studies have shown significant and strong link between dissociation and retrospective reports of childhood maltreatment (Swannell et al., 2012; Carlson, Dalenberg, & Dade-Montez, 2012; Moulton et al., 2015) in psychiatric patients (Gast, Rodewald, Nickel, & Emric, 2001; Boyad

| Table 4. Model summary | v of predicting psycholo | ogical distress according | g to emotional maltreatment and | d maladaptive schemas. |
|------------------------|--------------------------|---------------------------|---------------------------------|------------------------|
|                        |                          |                           |                                 |                        |

| Model  | R      | R <sup>2</sup> | Adjusted R <sup>2</sup> | SE    | F     | P-value |
|--|--------|----------------|-------------------------|-------|-------|---------|
| 3  | 0.74   | 0.55           | 0.54                    | 11.63 | 69.03 | 0.00    |
| <b>Table 5.</b> Coefficients of predicting psychological distress according to emotional maltreatment and maladaptive schemas. |        |                |                         |       |       |         |
|  | В      | SE             | Ве                      | ta    | т     | P-value |
| Defectiveness/shame  | 0.85   | 0.18           | 0.2                     | 23    | 4.72  | 0.00    |
| Vulnerability to harm  | 0.93   | 0.16           | 0.2                     | 26    | 5.53  | 0.00    |
| Self-sacrificing   | 0.43   | 0.17           | 0.3                     | 11    | 2.49  | 0.01    |
| Entitlement  | 0.36   | 0.15           | 0.3                     | 10    | 2.30  | 0.02    |
| Emotional maltreatment   | t 0.29 | 0.04           | 0.2                     | 29    | 5.96  | 0.00    |

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Figure 1. Path analysis model for explaining psychological distress based on childhood emotional experience and maladaptive schemas.

& McFeeters, 2015) as well as in nonclinical population (Schafer et al., 2014).

Shame is a strong negative evaluation of the self. Individuals with the schema of defectiveness /shame expect that if they expose themselves to the view of others, they will certainly be rejected. So, they usually desire to hide and disappear (Feiring, 2005). According to this desire, they may try to remove the experience of childhood maltreatment from their memory which results in dissociation. However, dissociation often prevents cognitive and emotional processing of traumatic experience from recovering and may impair the persons\_ability to coping effectively (Briere & Scott, 2006; Feiring & Taska, 2005; Talbot et al., 2004). Also, these findings have emphasized the necessity of identifying the feeling of shame in the treatment.

The core feature of the vulnerability to harm schema is fear and helplessness. The individuals with this schema believe that catastrophic events may occur any time and they are unable to prevent them (Young et al., 2033). So, these expectations can lead to the feelings of anxiety and helplessness about the future (Gibb, 2002; Hankin, 2005). This outcome is in line with previous studies (Wrigh et al., 2009) that showed vulnerability to harm mediates the relationship between emotional neglect, dissociation, and internalized symptoms. Emotional neglect, especially in the form of parents\_unavailability during distress times (Egland & Susman-Stillman, 1996, van Harmelen et al., 2010) may lead to the development of weak self-emotion regulation. While dissociation is a way that children can separate themselves from the feelings of fear and helplessness, this avoidance strategy may hinder development of more effective coping strategies (Talbot et al., 2004).

Self-sacrifice was an important conditional schema in this study. People with this schema use excessive efforts on meeting needs and demanding of others, at the expense of sacrificing their own needs. The main reasons of developing this strategy is avoiding guilt from feeling selfish, being loved, and keeping their connection with others (Young et al., 2003). However, secondary gain that this schema might have for individual is conformity, increasing kindness, and diminishing blaming of parents who emotionally maltreated their child. However, in adulthood this strategy will be harmful by development of one directed relationship that does not have any advantage for them (Bellow, Boris, Larrieu, Lewis, & Elliot, 2005; Crawford & Wright, 2007). Similar to these findings Wright and colleagues (2009) proposed that the schema of defectiveness/shame is associated with symptom of depression and anxiety.

Entitlement schema indicates the belief that one is superior to others, and thus entitled to special right (Wright et al., 2003). In the present study, our findings showed this schema as a mediator of psychological distress in adulthood. There are two types of entitlement: pure entitlement and narcissistic. Those, who are described as narcissistic in the literature develop entitlement schema in order to overcompensate for underlying feeling of defectiveness and emotional deprivation (Young et al., 2003). It seems that the schema of entitlement in the students who have experienced childhood emotional maltreatment was developed to overcompensate defectiveness and shame feelings. The present study provides further evidence for important role of schemas as a cognitive vulnerability in predicting psychological distress in adulthood.

On the other hand, the other findings of this study showed that experience of childhood emotional maltreatment predicted internalized symptoms (depression and anxiety) in adulthood. This finding is supported by previous studies (Kessler., et al, 1998; Mineka, Watson and clark, 1998; Sachs-Ericsson ., et al, 2006). That shows the importance of fear and helplessness as long term consequence of emotional maltreatment (Gibb, 2003; Hankin, 2005).

It is important to mention several limitations of the study. First of all, no interview was conducted to obtain more detailed information. Second, participants\_information was collected by self-report method. Future research is recommended to study all subscales of the life time experience questionnaire to find the effects of other forms of maltreatment.

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