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He Repercussions of Childhood Trauma on Posttraumatic Stress: the Mediating Effects of Dissociation and Emotion Dysregulation

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THE REPERCUSSIONS OF CHILDHOOD TRAUMA ON POSTTRAUMATIC
STRESS: THE MEDIATING EFFECTS OF DISSOCIATION AND EMOTION
DYSREGULATION

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ABSTRACT

The present study explored the mediating effects of dissociation and emotion dysregulation on the relationship between different types of childhood trauma and symptoms of posttraumatic stress. Participants were 181 undergraduate students at Cleveland State University, who completed measures of childhood trauma (emotional abuse, physical abuse, sexual abuse, and general trauma), posttraumatic stress symptoms, dissociation, and emotion dysregulation. Multiple mediation analyses were conducted to examine the model proposed in this study. The results of this study revealed that all trauma types significantly predicted adulthood posttraumatic stress. The relationship between emotional abuse and posttraumatic stress was mediated through both dissociation and emotion dysregulation. Specific indirect effects emerged through dissociation on physical abuse and emotional abuse, and through emotion dysregulation on general trauma, and posttraumatic stress. These findings support prior research that associates posttraumatic stress symptoms to traumatic childhood experiences. Furthermore, the results indicate differential psychopathological outcomes related to type of traumatic experience in early life.

Keywords: childhood trauma, posttraumatic stress, dissociation, emotion dysregulation

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CHAPTER I

INTRODUCTION

There has been mounting recognition of the negative effects of childhood traumatic experiences on the behavioral and emotional development of survivors. Epidemiological studies estimate that in the United States 25% of people experience at least one traumatic event before the age of 16, which increases to 60% by the age of 18 (Copeland-Linder, 2008; McLaughlin, Koenen, & Hill, 2013). It is estimated that one quarter to one third of psychological disorders occurring after childhood are related to early trauma (Green et al., 2010).

The extant literature reflects empirical efforts to identify negative outcomes and intervening effects on psychological dysfunction for individuals with a history of childhood trauma; and that differential outcomes may be associated with different types of traumatic experiences (Egeland, 2009). Researchers have focused their attention on these factors as mediators on the relationship between childhood trauma and negative

psychological outcomes, including posttraumatic stress (Choi et al., 2014; Moulton et al., 2015). For example, Macfie, Cicchetti, and Toth (2001) found that individuals exposed to trauma during childhood presented with more dissociative symptoms, while van der Kolk et al. (2005) reported that individuals exposed to trauma in childhood exhibit greater emotion regulation difficulties. Other studies have found that exposure to traumatic events during childhood has been linked to adult psychological troubles, such as posttraumatic stress symptoms (Briere & Runtz, 1990; Gross & Keller, 1992).

Researchers recognize trauma as a psychosocial stressor and have acknowledged wide-ranging responses to trauma exposure, leading to the need for clarification of factors that may mollify such stress responses (Yama et. al, 2013). Understanding the differential conduits of mediating factors on the relationship between childhood trauma and negative psychological outcomes would allow for a more robust understanding of these associations and a more research-based development of treatment foci (Burns, Jackson, & Harding, 2010).

The primary aims of the present study are two-fold. First, this study seeks to expand upon previous research by examining the mediating roles of emotion regulation difficulties and dissociative tendencies on the relationship between childhood traumatic experiences and posttraumatic stress disorder symptomatology in adulthood. Second, this study seeks to explore the possibility of differential outcomes (e.g. dissociation, emotion dysregulation, and PTSD symptomatology) of exposure to trauma based upon type of traumatic experience and posttraumatic stress symptomatology. This study seeks to add to the literature by assessing exposure to various types of childhood abuse (e.g., physical, emotional, and sexual) and general trauma exposure (e.g., death of a loved one, natural

disaster, etc.) during childhood, and the roles emotion dysregulation and dissociation play on the expression of adulthood symptoms of posttraumatic stress.

CHAPTER II

LITERATURE REVIEW

2.1 Posttraumatic Stress

Posttraumatic stress symptom expression following childhood trauma is estimated to range between 25% and 62% (Albach & Everaerd, 1992; Chu & Dill, 1990). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5, American Psychiatric Association, 2013) describes posttraumatic stress disorder as a trauma and stress-related disorder that is a developmental reaction to trauma exposure, characterized by afflicting hallucinations, dreams, memories and/or dissociative recollections regarding the traumatic event. A traumatic event is described as experiencing a life-threatening event, exposure to death, or violence, and includes direct experience, personal witnessing, knowledge of a loved one experiencing the event, or repeated exposure to details regarding the traumatic event (American Psychiatric Association, 2013). Exposure to trauma can cause immediate and enduring effects that involve negatively impactful interpersonal or environmental events, with these exposures leading to adverse effects on

the individual's overall functioning (Tishelman & Geffner, 2011). Research suggests that reactions to traumatic events are variably and inconsistently expressed and/or experienced, implicating unique individual perceptions, coping strategies, and circumstantial aspects as important factors to the differential expression and development of posttraumatic stress disorder (Belsky, 1993).

Childhood trauma has been empirically recognized as a risk factor for the development of posttraumatic stress symptomatology though not all individuals with trauma exposure experience posttraumatic stress. Variability in the development of posttraumatic stress indicates the need to identify mediating variables that exert indirect effects on its expression and better understand the occurrence of differing outcomes based on type of early trauma experience. Ozer et al. (2003) propose that individual psychological processes transpiring simultaneously and as a direct reaction to experiencing trauma, influence the individual's mental health condition following the traumatic event. Experiencing traumatic events during childhood have been connected to emotion regulation difficulties (van der Kolk, Perry & Herman, 1991). Moreover, individuals who respond to the traumatic experience with intensely negative sentiments or dysregulated emotional responses, in conjunction with dissociation are more at-risk to develop posttraumatic stress symptoms (Ozer et al, 2003). As such, the experience of childhood trauma may leave these individuals more predisposed to develop posttraumatic stress disorder due to the inability to positively react, psychologically manage, and regulate emotional responses to these experiences.

2.2 Dissociation

Dissociation is believed to be a key factor affecting posttraumatic stress symptom presentation in individuals with a history of childhood trauma (Stovall-McClough & Cloitre, 2006). It is estimated that 85-100% of individuals with a history of traumatic childhood events experience dissociative symptoms (Vermetten, Dorahy, & Spiegel, 2007). Dissociation involves the substantial alteration to typical cognizance and perception, resulting from an individual's diminished or modified access to emotions, memories, and cognitions (Briere, Weathers & Runtz, 2014). Dissociative symptoms have been theorized as involuntary responses associated with unconscious reflective reactions to traumatic events, and are thought to be self-protective defensive actions (Putnam, 1993).

High levels of dissociation have been linked to experiencing early trauma (Dalenberg & Palesh, 2004; Banyard, Williams & Siegel, 2001). Dissociation has been shown to mediate the direct relationship between childhood trauma and posttraumatic stress, and that childhood trauma was very strongly associated with dissociative symptoms in adulthood (Gutierrez, Wang, Cosden, & Bernal, 2001). Harvey and Bryant (2002) found that posttraumatic stress symptoms were persistently associated with dissociative symptoms, identifying dissociation as a sort of emotion regulation mechanism employed well-after the occurrence of trauma. These findings suggest dissociative symptoms associated with early trauma may persist into adulthood. Furthermore, these findings suggest that this type of persistent dissociation may exert the same type of effect as emotion regulation strategies on the relationship between childhood trauma and posttraumatic stress symptomatology.

2.3 Emotion Dysregulation

Childhood is regarded as a significant developmental period of the lifespan, especially regarding emotion regulation skill advancement and maturation (Eisenberg, Spinrad, & Eggund, 2010). Emotion regulation strategies are the processes by which individuals moderate, both unconsciously and consciously, their emotions to successfully meet the exigencies of the environment (Rottenberg & Gross, 2003). Developmental theorists posit that the psychologically damaging effects of childhood trauma contributes to the disturbance of emotion regulation strategy development and consolidation (Cloitre, Miranda, Stoval-McClough, & Han, 2005).

A deficiency in emotion regulation strategies is mutually a resulting negative occurrence of childhood trauma, and a central method linking childhood trauma with variety of negative psychological sequelae (Choi et al., 2014). For example, individuals exposed to early trauma display perceived emotion regulation difficulties, which are predictive of mental health symptoms related to post-traumatic stress disorder and dissociation, implicating emotion regulation difficulties as a direct negative occurrence of child abuse (Sundermann & DePrince, 2015). Moreover, childhood trauma significantly forecasts emotion dysregulation, whereby these difficulties mediate the relationship between childhood trauma and interactive functioning and interpersonal adjustment-related difficulties (Briere & Rickards, 2007). Impairment in emotion regulation has also been shown to mediate the relationship between early trauma and psychological issues, including post-traumatic stress. (Choi & Oh, 2014; Schwartz & Proctor, 2000; Shields & Cicchetti, 2001).

2.4 Current Study

The association between childhood trauma and adulthood psychopathology is recognized throughout the empirical literature. Despite this, comprehension of how emotion dysregulation and dissociative tendencies affects this relationship is needed. The purpose of the present study was to examine the relationship between childhood trauma and adulthood posttraumatic stress symptomatology. Specifically, the operative relationships between childhood trauma, dissociation, emotion dysregulation, and posttraumatic stress symptoms. Understanding these relationships could aid in the determination of the courses of treatment for adults affected by childhood trauma as well as aid in the development of therapeutic techniques for children affected by trauma. Furthermore, this study seeks to examine differential outcomes in dissociation, emotion dysregulation and posttraumatic stress symptomatology in the context of various types of childhood trauma.

CHAPTER III

METHODS

3.1 Participants

The sample consisted of 181 undergraduate students attending Cleveland State University, with 74% female. The subjects were all adults (≥ 18 years; 97.5% aged 18-29), primarily Caucasian (72.4%), and primarily heterosexual (85.1%). The remainder of the racial composition was as follows: African American (14.4%), Asian (1.7%), Hispanic (2.8%), Middle Eastern (3.3%), multi-racial (5.0%), and Pacific Islander (0.6%).

3.2 Measures

3.2.1 Demographic Information

Participants completed a short questionnaire that assessed basic demographic information such as age, gender, ethnicity, employment status, level of highest completed education, marital status, student status, and household income.

3.2.2 Childhood Trauma

The *Early Trauma Inventory – Self-Report* (ETI-SR) is a retrospective, 62-item measure of traumatic experiences during childhood (before the age of 18) (Bremner, Vermetten & Mazure, 2000). It is comprised of four subscales, measuring general trauma, and physical, emotional, and sexual abuse. When the respondent indicates a positive response to a prompt, it is followed with items concerning age of onset, perpetrator, and frequency of the trauma (Bremner et. al, 2000). Concluding each subscale is a series of items regarding the current effect on the respondent in the areas of social, emotional, and work functioning, regarding the trauma(s) indicated (Bremner et. al, 2000). This measure is considered valid and reliable ($\alpha > .74$ for all subscales) (Bremner et. al, 2000).

3.2.3 Dissociation

The *Dissociative Experiences Scale - II* (DES-II) is a 28-item measure of the occurrence of dissociative tendencies in daily life (Bernstein & Putnam, 1993). It measures the three main factors of dissociation, amnesia, immersion, and depersonalization/Derealization (Bernstein & Putnam, 1993). Items are rated by their frequency on a Likert-type scale, ranging from 0% (never) to 100% (always), by tens (Bernstein & Putnam, 1993). This measure is considered to be valid and reliable ($\alpha > .95$) (Bernstein & Putnam, 1993).

3.2.4 Emotion Dysregulation

The *Difficulties in Emotion Regulation Scale* (DERS) is a 36-item measure of deficits in emotion regulation strategies (Gratz & Roemer, 2004). It is comprised of six scales measuring lack of emotional clarity, limited access to emotion regulation strategies, lack of emotional awareness, impulse control difficulties, difficulties engaging

in goal-direction, and nonacceptance of emotional responses (Gratz & Roemer, 2004). A rating scale, ranging from 1 (almost never – 0-10%) to 5 (almost always – 91-100%), is used to assess how often each prompt is applicable to the respondent. Higher scores indicate greater emotion dysregulation for the subscales and the total score. The DERS is a valid and reliable measure ($\alpha > .80$ for all 6 subscales) (Gratz & Roemer, 2004).

3.2.5 Posttraumatic Stress

The *PTSD Diagnostic Scale for DSM-5* (PDS-5) is 24-item self-report scale used to measure posttraumatic stress symptom severity (Foa et. al, 1997). Respondents rate each item on a 5-point scale, ranging from “not at all” (0) to “6 or more times a week/severe” (4), regarding the frequency of each posttraumatic stress symptom occurring (Foa et. al, 1997). The PDS-5 is a valid and reliable measure ($\alpha > .92$) (Foa et. al, 1997).

3.3 Procedure

The Cleveland State University Institutional Review Board (IRB) granted ethical approval to this study. Participants were referred to this study via oral presentation, or browsing the studies accepting participants on Sona Systems, a website utilized by Cleveland State University for research recruitment. Once signing up for survey participation, participants were redirected to and completed all measures online via Survey Monkey, a secure online server. Participants were automatically assigned an ID number and were not required to provide any personally identifying information, ensuring confidentiality. The measures were presented to participants in a randomized completion order.

3.4 Data Analysis

All data analyses were completed using IBM SPSS statistics software (IBM, Inc., 2013). Descriptive statistics including means and standard deviations (see Table 1) and correlational analyses (see Table 2) were performed on all scales.

Missing data analysis revealed that 45.25% of responses ($N = 400$) to the predictor and outcome variables were missing. Analysis of missing data patterns via expectation-maximization (EM) analysis revealed that the data were missing completely at random $\chi^2(130, 357) = 119.84, p = .73$. To reduce the effects of the missing data, cases missing predictor or outcome variable totals were removed from the sample, reducing it to $N = 181$.

CHAPTER IV

RESULTS

4.1 Correlational Analyses

Associations between the predictor and outcome variables were calculated via Pearson correlation coefficients. The correlational analysis results between childhood trauma type, dissociation, emotion dysregulation, and posttraumatic stress are presented in Table 2. Dissociation, emotion dysregulation and posttraumatic stress were all significantly associated ($ps < .01$). Emotional, physical, and sexual abuse, and general trauma were all significantly correlated with dissociation and posttraumatic stress symptoms ($ps < .01$). Only emotional abuse was significantly associated with emotion dysregulation ($r = .23, p < .01$). Finally, all trauma types were significantly correlated with each other ($ps < .01$) and all outcome variables were significantly associated with one another ($ps < .01$).

4.2 Mediation Analyses

Analyses were performed to detect the multiple mediation effects of dissociation and emotion dysregulation upon the relationship between the predictor variables of childhood trauma type, and the outcome variable of posttraumatic stress symptoms. Mediation analyses were conducted via Process (Hayes, A., 2012), where each mediating variable (dissociation, emotion dysregulation) was regressed onto the predictor variable (childhood trauma). Bootstrapping techniques as outlined by Preacher and Hayes (2008), were used to test for mediation effects among the variables. The effect of covariates, such as gender, age, and co-occurring types of trauma, were controlled for when examining the relationship between the predictor (childhood trauma type) and mediator variables (dissociation and emotion dysregulation), as well as the predictor (childhood trauma type) and outcome (posttraumatic stress symptomatology) variables.

Coefficients for the mediation model are presented in Table 4 and Fig 2. All trauma variables significantly predicted dissociation (emotional abuse ($b = .26, p < .01$), physical abuse ($b = .20, p < .05$), sexual abuse ($b = .21, p < .01$), general trauma ($b = .09, p < .01$), and posttraumatic stress (emotional abuse ($b = 2.14, p < .01$), physical abuse ($b = 1.47, p < .01$), sexual abuse ($b = 1.71, p < .01$), general trauma ($b = .47, p < .01$)). Only emotional abuse significantly predicted emotion dysregulation ($b = 3.05, p < .01$). Both mediating variables, dissociation ($b = 2.46, p < .01$). and emotion dysregulation ($b = .30, p < .01$), predicted posttraumatic stress.

Direct effects of all abuse variables on posttraumatic stress were significant at the .01 level (emotional abuse ($b = 2.14$), physical abuse ($b = 1.47$), sexual abuse ($b = 1.71$), general trauma ($b = .47$), indicating that exposure to childhood trauma increases the risk

for posttraumatic stress in adulthood. Total model effects for all trauma types were also significant at the .01 level (emotional abuse ($b = 3.24$), physical abuse ($b = 2.05$), sexual abuse ($b = 2.18$), general trauma ($b = .70$). These findings suggest that survivors of childhood trauma are more likely experience dissociation and emotion regulation difficulties which increases symptoms of posttraumatic stress.

Significant indirect effects emerged through examination of the confidence intervals (see Table 4). Dissociation emerged as a mediator on the relationship between emotional abuse ($b = .22$, 95% CI [.01, .57]) and physical abuse ($b = .18$, 95% CI [.01, .52]) and posttraumatic stress. Additionally, emotion dysregulation emerged as a mediator on the relationship between emotional abuse ($b = .87$, 95% CI [.36, 1.59]) and posttraumatic stress.

CHAPTER V

DISCUSSION

The purpose of the present study was to explore the role of dissociation and emotion dysregulation on the relationship between varying types of childhood trauma and posttraumatic stress. These results provide evidence for the enduring effects of early trauma, as all types of childhood trauma were significantly associated with negative outcomes, including dissociative tendencies, emotion dysregulation, and posttraumatic stress symptoms in adulthood. Furthermore, the present study provides additional support for an indirect relationship between childhood trauma and posttraumatic stress in the context of differing types of childhood traumatic experiences (emotional abuse, physical abuse, sexual abuse, and general trauma). An important strength of the present study is the broad examination of traumatic childhood experiences.

Dissociation was significantly associated with all trauma types, whereby all trauma types emerged as significant predictors of dissociative tendencies. Emotion dysregulation was only significantly associated with emotional abuse, and only emotional

abuse was a significant predictor of emotion dysregulation. Posttraumatic stress was significantly associated with all trauma types and both mediators (dissociation, emotion dysregulation), whereby these variables emerged as significant predictors of posttraumatic stress. Specific indirect effects were observed through dissociation on the relationship between emotional abuse and physical abuse, and posttraumatic stress. Additionally, an indirect effect was observed through emotion dysregulation on the relationship between emotional abuse and posttraumatic stress.

The present study supports prior research in finding a significant relationship between exposure to childhood trauma and dissociation (van IJzendoorn & Schnugel, 1996), and dissociation and posttraumatic stress (Briere et al., 2005). The empirical literature has indicated dissociation as a mediator on the relationship between childhood trauma and anxiety (Gutierrez et al., 2001). The present study provides further evidence for prior research, as dissociation emerged as a mediator on the relationship between emotional and physical abuse and posttraumatic stress. This may indicate that the consideration of other variables when examining specific outcomes based on abuse type is important to understanding the enduring effects of early life trauma when examining posttraumatic stress. Research suggests that the occurrence of dissociation may be like that of posttraumatic stress, in that symptomatology may be impacted by other factors, such as emotion dysregulation, stress response strategies, complex trauma exposure, social support, and socioeconomic status (Briere, 2004). As such, it is important for future research to seek to determine and understand other factors and subsequent interactions that influence the development of dissociation and resultant posttraumatic stress in the context of childhood trauma.

Consistent with prior research, the present study found significant associations between emotion dysregulation, all trauma types, and posttraumatic stress (Ehring & Quack, 2010; Tull, Barrett, McMillan & Roemer, 2007). This study extends upon previous research by indicating specific types of early trauma that have enduring effects on emotion regulation processes (Lilly, London & Bridgett, 2014). Childhood emotional abuse was significantly predictive of emotion regulation difficulties, whereby emotion dysregulation mediated the relationship between early emotional abuse and adulthood posttraumatic stress, providing further evidence to the existing literature (Burns et al., 2010). These findings are important as treatment approaches, such as Skills Training in Affective and Interpersonal Regulation (Cloitre, Cohen, & Koenen, 2006) and Dialectical Behavioral Therapy (Linehan, 1993), focus on behaviorally based interventions for individuals with a history of trauma. These findings underline the importance of identifying and attending to emotion regulation difficulties for these individuals, as the development of emotion regulation skills may reduce the occurrence of posttraumatic stress.

The results of this study implicate dissociative tendencies and emotion dysregulation as factors affecting posttraumatic stress as an outcome of childhood trauma exposure. Providing further evidence to the existing literature, in that the effects of early trauma endure into adulthood and may negatively manifest as posttraumatic stress, as a function of emotion dysregulation and dissociation (Powers et al., 2015). This suggests that emotion regulation difficulties and dissociation may operate as risk factors in the development of posttraumatic stress, especially in context of childhood traumatic experiences.

It is important to note several limitations of the present study. Childhood trauma data was obtained wholly through retrospective self-report measures. Given the sensitive nature of the topics being assessed, this type of measure may be subjected to participant exaggeration, discomfort or embarrassment to disclose personal information, social desirability bias, and recollection errors. The results of this study may not be largely generalizable, as the participant pool was solely comprised of undergraduate students attending Cleveland State University. This study relied on voluntary participation where participants were awarded either extra credit or research participation credits, which may have methodically biased the sample.

Despite these limitations, the results of this study suggest emotion dysregulation as an important factor in understanding the relationship between childhood trauma and posttraumatic stress symptoms. Additionally, the relationship between type of traumatic experience and dissociation may have implications for clinical practice. The inclusion of emotion regulation skills and mindfulness practices education and implementation may aid in decreasing dissociative tendencies and emotion dysregulation processes may enhance psychological functioning and treatment effectiveness for individuals with a history of childhood trauma (van Dijke, Ford, Frank, & van der Hart, 2015; Powers, et. al, 2015). This data supports the necessity for further research to examine the enduring psychological effects of various types of childhood trauma, and disentangle differential outcomes to understand dissociation, emotion dysregulation, and posttraumatic stress in the context of type of childhood traumatic exposure.

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APPENDIX

APPENDIX

TABLES

Table 1
Means and standard deviations for different measures

| Measure | Mean | Standard Deviation |
|-----------------------|-------|--------------------|
| Dissociation | 2.54 | 1.92 |
| Emotion Dysregulation | 84.13 | 25.46 |
| Posttraumatic Stress | 30.84 | 14.31 |
| Emotional Abuse | 2.48 | 1.93 |
| Physical Abuse | 2.76 | 2.12 |
| Sexual Abuse | 1.60 | 2.42 |
| General Trauma | 4.82 | 6.77 |

Note. Dissociation was measured using the Dissociative Experiences Scale (DES-II); emotion dysregulation was measured using the Difficulties in Emotion Regulation Scale (DERS); posttraumatic stress was measured using the Posttraumatic Diagnostic Scale for DSM 5 (PDS-5); trauma was measured using the Early Trauma Inventory – Self-Report (ETI-SR)

Table 2
Correlational analyses between childhood trauma type and emotion dysregulation, dissociation, and symptoms of posttraumatic stress

| | Dissociation | Emotion Dysregulation | Posttraumatic Stress | Emotional Abuse | Physical Abuse | Sexual Abuse | General Trauma |
|--------------------------|--------------|--------------------------|----------------------|-----------------|----------------|--------------|----------------|
| Dissociation | - | | | | | | |
| Emotion Dysregulation | .34** | - | | | | | |
| Posttraumatic Stress | .33** | .54** | - | | | | |
| Emotional Abuse | .26** | .23** | .41** | - | | | |
| Physical Abuse | .22** | .07 | .27** | .67** | - | | |
| Sexual Abuse | .27** | .08 | .35** | .39** | .46** | - | |
| General Trauma | .30** | .12 | .31** | .41** | .43** | .30** | - |

Note. Dissociation was measured using the Dissociative Experiences Scale (DES-II); emotion dysregulation was measured using the Difficulties in Emotion Regulation Scale (DERS); posttraumatic stress was measured using the Posttraumatic Diagnostic Scale for DSM 5 (PDS-5); trauma was measured using the Early Trauma Inventory – Self-Report (ETI-SR)
** = $p < .01$, * = $p < .05$

Table 3
Results of mediation analyses

| Predictor | Coefficient | SE | t | p |
|--|-------------|------|------|-------|
| Model 1: Dissociation as outcome variable | | | | |
| Emotional Abuse | .26 | .07 | 3.63 | < .01 |
| Physical Abuse | .20 | .07 | 2.95 | < .01 |
| Sexual Abuse | .21 | .06 | 3.77 | < .01 |
| General Trauma | .09 | .02 | 4.24 | < .01 |
| Model 2: Emotion dysregulation as outcome variable | | | | |
| Emotional Abuse | 3.05 | .96 | 3.19 | < .01 |
| Physical Abuse | .86 | .90 | .96 | .34 |
| Sexual Abuse | .85 | .78 | 1.09 | .28 |
| General Trauma | .43 | .28 | 1.54 | .12 |
| Model 3: Posttraumatic stress as outcome variable | | | | |
| Dissociation | 2.46 | 5.15 | 4.70 | < .01 |
| Emotion Dysregulation | .30 | .04 | 8.43 | < .01 |
| Emotional Abuse | 2.14 | .47 | 4.54 | < .01 |
| Physical Abuse | 1.47 | .43 | 3.42 | < .01 |
| Sexual Abuse | 1.71 | .37 | 4.65 | < .01 |
| General Trauma | .47 | .15 | 3.43 | < .01 |

Note. Dissociation was measured using the Dissociative Experiences Scale (DES-II); emotion dysregulation was measured using the Difficulties in Emotion Regulation Scale (DERS); posttraumatic stress was measured using the Posttraumatic Diagnostic Scale for DSM 5 (PDS-5); trauma was measured using the Early Trauma Inventory – Self-Report (ETI-SR)

Table 4
 Bootstrapped indirect effects of childhood trauma on posttraumatic stress through the mediators

| Mediator | Trauma Type | Coefficient | SE | Bootstrap 95% CI | |
|-----------------------|-----------------|-------------|-----|------------------|-------|
| | | | | Upper | Lower |
| Dissociation | Emotional Abuse | .22 | .14 | .01 | .57 |
| | Physical Abuse | .18 | .12 | .01 | .52 |
| | Sexual Abuse | .14 | .12 | -.02 | .46 |
| | General Trauma | .07 | .05 | -.01 | .20 |
| Emotion Dysregulation | Emotional Abuse | .72 | .30 | .24 | 1.44 |
| | Physical Abuse | .23 | .24 | -.19 | .76 |
| | Sexual Abuse | .23 | .24 | -.12 | .76 |
| | General Trauma | .11 | .08 | -.02 | .30 |

Note. Dissociation was measured using the Dissociative Experiences Scale (DES-II); emotion dysregulation was measured using the Difficulties in Emotion Regulation Scale (DERS); posttraumatic stress was measured using the Posttraumatic Diagnostic Scale for DSM 5 (PDS-5); trauma was measured using the Early Trauma Inventory – Self-Report (ETI-SR)

Figures

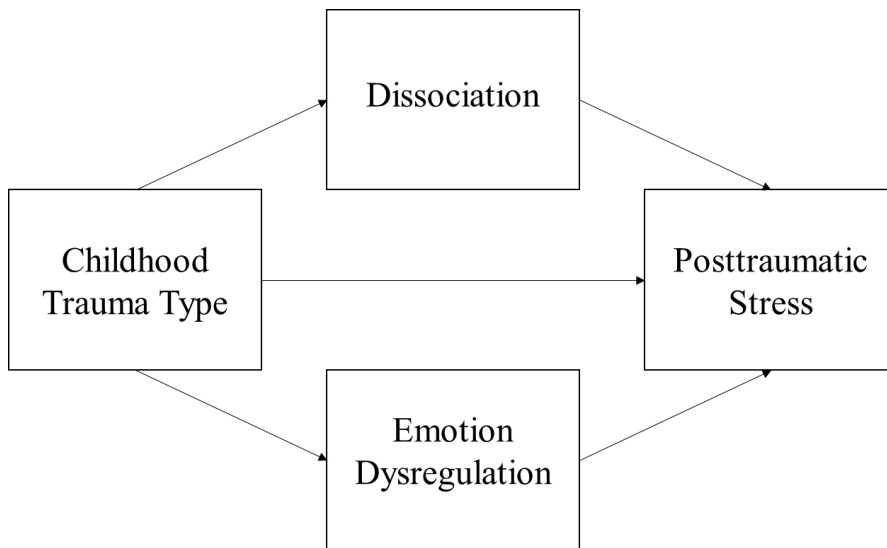


Fig 1. The multiple mediation model

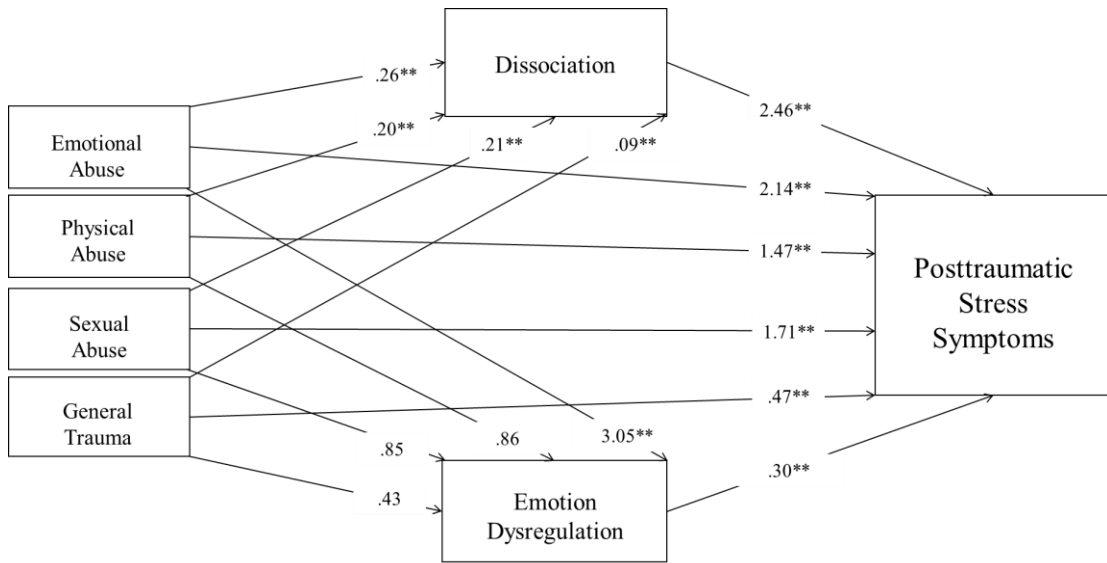


Fig 2. The multiple mediation model presenting coefficients. Note. ** $p < .01$, * $p < .05$