

**AN EXAMINATION OF THE RELATIONSHIPS AMONG
CHILDHOOD TRAUMA, EMOTIONAL INVALIDATION, AND
ADULT DISSOCIATION**

A Senior Scholars Thesis

by

CHRISTY ALEENE TALBERT

Submitted to the Office of Undergraduate Research
Texas A&M University
in partial fulfillment of the requirements for the designation as

UNDERGRADUATE RESEARCH SCHOLAR

April 2008

Major: Psychology

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Approved by:

Research Advisor:

Associate Dean for Undergraduate Research:

Leslie Morey

Robert C. Webb

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ABSTRACT

An Examination of the Relationships Among Childhood Trauma, Emotional
Invalidation, and Adult Dissociation (April 2008)

Christy Aleene Talbert
Department of Psychology
Texas A&M University

Research Advisor: Dr. Leslie Morey
Department of Psychology

This study examined the association between childhood trauma and adult dissociative tendencies through analyses of the mediating and moderating effects of emotional invalidation. Participants ($N = 185$, ages 17-24, 62.2% female) completed various self-report measures assessing experiences of childhood abuse and neglect, childhood emotional invalidation, and current experiences of dissociation. Results indicated that emotional invalidation mediated the relationship between childhood trauma and adult experiences of dissociation and depersonalization. The moderating effect of emotional invalidation was supported only in the cases of emotional abuse and adult depersonalization and emotional neglect and adult depersonalization.

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CHAPTER I

INTRODUCTION: AN EXAMINATION OF THE RELATIONSHIPS AMONG CHILDHOOD TRAUMA, EMOTIONAL INVALIDATION, AND ADULT DISSOCIATION

Dissociation is a separation of thoughts, emotions, and identity that are usually integrated (Spiegel & Cardeña, 1991). Dissociative symptoms include periods of amnesia, feelings of depersonalization and derealization, and identity confusion (Johnson, Cohen, Kasen, & Brook, 2006). As a defense mechanism, dissociation is used to distance oneself from overwhelming emotions (Irwin, 1995). If used in moments of extreme stress, such as physical abuse, dissociation can play an adaptive role by allowing an individual to mentally survive a traumatic event (Counts, 1990). However, the repeated use of dissociation as a coping mechanism can become problematic and potentially evolve into a dissociative disorder (Irwin, 1995).

The research literature suggests that adult dissociation is related to stress experienced earlier in life (Bernstein & Putnam, 1986; Brunner, Parzer, Schuld, & Resch, 2000). Even in subjects without a diagnosed dissociative disorder, dissociative symptoms are indicative of traumatic childhoods (Simeon et al., 2001). Sanders, McRoberts, and Tollefson (1989) found a significant association between stress early in life and later

This thesis follows the style of *Journal of Trauma & Dissociation*.

dissociation in a sample of college students. However, a few studies have found results contrary to the traumatogenic model of dissociation. For instance, Simeon et al. (1997) found no significant association between total scores on the Dissociative Experiences Scale, a measure of dissociation, and total scores on the Childhood Antecedents Questionnaire, a measure of childhood traumatic experiences. Similarly, Irwin (1998) reported no significant association between dissociation and trauma, as measured by the Dissociative Experiences Scale and Childhood Trauma Questionnaire. Compared to research on risk factors for PTSD, little is known about risk factors for dissociation (Simeon, Guralnik, Knutelska, & Schmeidler, 2002).

In addition to the lack of clarity concerning the role of childhood stress in the development of adult dissociation, past research has almost exclusively focused on abuse as an index of trauma, particularly physical and sexual abuse (Irwin, 1996). Other factors, such as childhood emotional environment, have largely been ignored (Irwin, 1994; Modestin, Lötscher, & Erni, 2002). One study accounting for the context of abuse found no differences between non-abused and abused participants on measures of general psychological impairment when controlling for perceived family environment (Nash, Hulse, Sexton, Harralson, & Lambert, 1993). Simeon et al. (1997) noted that more subtle forms of childhood stress may contribute to certain forms of adult dissociation. Less severe but chronic emotional stress may hold equal or even greater importance in studying the etiology of dissociative phenomena (Brunner et al., 2000).

Parental responses to children's emotions greatly influence how children handle their feelings, especially in the presence of stressors (Krause, Mendelson, & Lynch, 2003; Gentzler, Contreras-Gray, Kerns, & Weimer, 2005). Indeed, Herman, Perry, and van der Kolk (1989) argued that the validation of trauma is necessary to restore an integrated self-identity. Others have also argued that emotional invalidation results in the inhibition of emotional experience and expression (e.g., Linehan, 1993). One study found a negative association between paternal care and level of dissociation (Kooiman et al., 2004). Another study demonstrated that childhood emotional support mediates the relationship between childhood stress and adult dissociative coping styles (Irwin, 1996); however, limitations of this study, such as the use of measures with unknown psychometric properties, restrict the generalizability of its findings.

While interest in dissociation has increased over the past ten years, one form of dissociation, depersonalization, remains severely under-investigated (Simeon et al., 1997). Depersonalization refers to a sense of disconnect from oneself, or an individual's experience of unreality from him or herself (Simeon, Stein, & Hollander, 1995). Common symptoms of depersonalization include emotional numbing, altered body experience, visual derealization, and alterations in the personal experience of memory (Sierra & Berrios, 2001). Although largely ignored in psychological research, depersonalization ranks third after anxiety and depression as the most common psychiatric symptom (Simeon, Guralnik, Schmeidler, Sirof, & Knutelska, 2001) and is less rare than previously assumed (Baker et al., 2003).

Very few studies have examined the relationship between childhood trauma and adult depersonalization. Thus, the present study seeks to explore the role of emotional invalidation in the childhood trauma-adult dissociation and childhood trauma-adult depersonalization link using mediation and moderation analyses. As shown in Figure 1, we hypothesize emotional invalidation to mediate the relationship between childhood trauma and adult dissociation, contrasted to past research suggesting a direct effect of trauma on dissociation. X represents the independent variable (childhood trauma), Y represents the dependent variable (adult dissociation), and M represents the mediating variable (emotional invalidation). Paths a , b , and c represent the correlations between each variable. As shown in Figure 2, we also hypothesize emotional invalidation (M) to moderate the trauma-dissociation (X - Y) link, where high levels of invalidation predict a significant association between trauma and dissociation, and low levels of invalidation predict no association between trauma and dissociation.

FIGURE 1. Mediation Hypothesis.

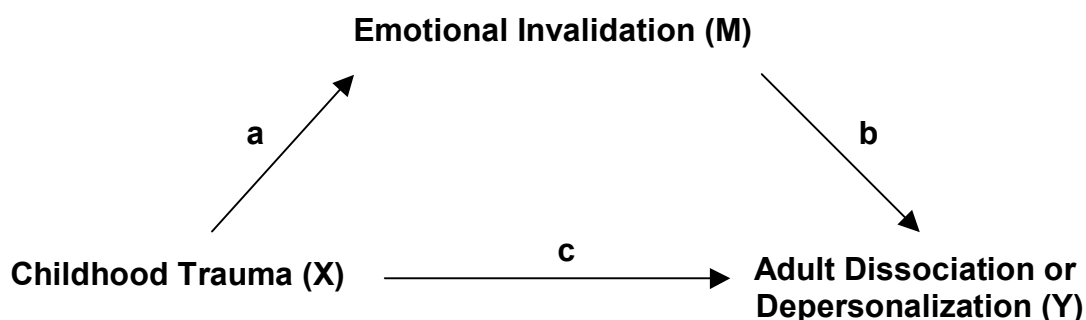
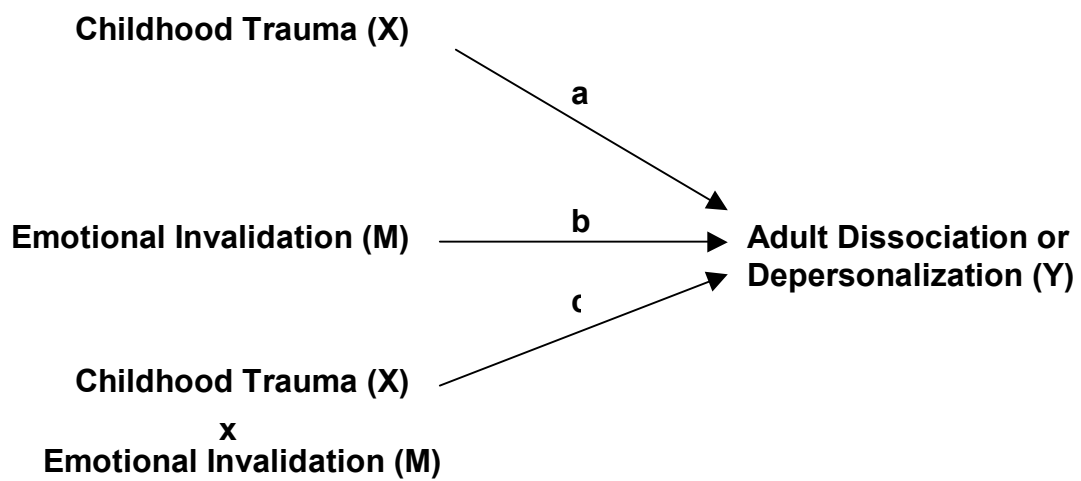


FIGURE 2. Moderation Hypothesis.



CHAPTER II

METHODS

Participants

Participants were undergraduates (N=185) from introductory psychology courses at Texas A&M University, who received course credit as compensation for their participation. The total sample included 70 male (37.8%) and 115 female (62.2%) students ranging in age from 17 to 24 years (mean = 18.51, SD = 1.03). 76.8% of the participants self-identified as Caucasian, 10.8% as Hispanic, 5.9% as African American, 4.9% as Asian, and 1.6% as Other.

Measures

Demographic Information Sheet

Participants provided information about age, gender, and racial/ethnic background.

Dissociative Experiences Scale (DES)

The Dissociative Experiences Scale (DES) is a 28-item self-report measure widely used to assess dissociation. The DES has previously demonstrated good test-retest reliability, internal consistency, and construct validity in clinical and nonclinical populations (Bernstein & Putnam, 1986; Holtgraves & Stockdale, 1997; Gleaves, Williams, Harrison, & Cororve, 2000).

Cambridge Depersonalization Scale (CDS)

The Cambridge Depersonalization Scale (CDS) is a 29-item self-report measure used to assess depersonalization. Participants are asked to indicate the frequency and duration of various experiences of depersonalization over the past six months. The CDS has been shown to have good reliability and high internal consistency (split-half reliability and Cronbach alpha were 0.92 and 0.89, respectively) (Sierra & Berrios, 2000).

Childhood Trauma Questionnaire (CTQ)

The Childhood Trauma Questionnaire (CTQ) is a 28-item self-report measure used to assess a wide range of traumatic experiences in childhood. The CTQ contains five subscales: physical, sexual, and emotional abuse, and physical and emotional neglect. The factors have been shown to have high internal consistency and face validity (Bernstein et al., 1994). The entire scale has previously demonstrated high internal consistency ($\alpha = 0.95$) (Bernstein et al., 1994).

Socialization of Emotion Scale (SES)

The Socialization of Emotion Scale (SES) (adapted from the Coping with Children's Negative Emotions Scale, CCNES, Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002, by Krause et al., 2003), is a 12-item self-report measure assessing participants' retrospective recall of their caretakers' behaviors and attitudes (Krause et al., 2003). The original scale is used to assess how caretakers respond to their children's negative emotions, and has been shown to have good internal consistency, test-retest reliability,

and concurrent validity (Fabes et al., 2002). The SES uses three of the subscales from the CCNES to assess childhood emotional invalidation: parental distress response, parental punitive response, and parental minimization response (Krause et al., 2003). Participants complete the measure separately for each primary caregiver. The subscales have been shown to have good internal consistency (alphas ranging from 0.78-0.85) and test-retest reliability (Fabes et al., 2002).

Procedure

Participants provided written informed consent before completing a series of questionnaires assessing each of the four constructs in question. Dissociation was measured with the DES. Depersonalization was measured with the CDS. Childhood trauma was measured with the CTQ. Childhood emotional invalidation was measured with the SES. A research assistant administered the measures in three group sessions. Students took a maximum of one hour to complete the questionnaire packet.

Statistical Analysis

Descriptive statistics and reliability analyses were performed, followed by linear regression analyses with the main variables of dissociation, depersonalization, childhood trauma, and maternal and paternal emotional invalidation. All reliability and regression analyses were carried out using the SPSS for Windows (version 11.5) statistical program. We then used the Sobel (1982) test of indirect effects to determine the significance of mediation and Preacher's (2002) calculation to test the difference

between two independent correlation coefficients, high and low emotional invalidation groups, to determine the significance of moderation.

CHAPTER III

RESULTS

Descriptive Statistics

Table 1 depicts the means, standard deviations, ranges, and coefficient alphas for the sample. Table 2 depicts the correlations among the main variables. As suggested by Baron and Kenny (1986), initial correlations between the independent variable and mediating variable (path *a* in Figure 1), the mediating variable and independent variable (path *b* in Figure 1), and the independent variable and dependent variable while controlling for the mediating variable (path *c* in Figure 1), must show significance before testing for mediation. The sexual abuse and physical abuse subscales of the CTQ failed to meet the third criterion by not correlating significantly with the dependent variable ($r = 0.04$ and 0.05 , respectively), and were discarded from further analysis.

TABLE 1. Descriptives: Means, standard deviations, ranges, and coefficient alphas

Variable	Mean	SD	Range	Coeff. Alpha
Age	18.51	1.03	17-24	-----
DES	17.26	12.38	1.29-60.29	0.93
CDS	34.51	26.04	0-118	0.95
CTQ				
Emotional Abuse	7.42	3.74	5-25	0.87
Physical Abuse	6.75	2.32	5-21	0.57
Sexual Abuse	5.46	1.89	5-20	0.83
Emotional Neglect	7.54	3.53	5-25	0.88
Physical Neglect	5.69	1.76	5-17	0.72
SES				
Mother	3.01	0.89	1.50-6.44	0.89
Father	3.21	0.96	1.50-6.19	0.87

Note: DES = Adult Dissociation, CDS = Adult Depersonalization, CTQ = Childhood Trauma, SES = Emotional Invalidation

TABLE 2. Descriptives: Correlations among all variables

	DES	CDS	EA	EN	PN	SESm	SESf
DES		.621**	.203**	.196**	.108	.188*	.272**
CDS			.268**	.303**	.191*	.198*	.235**
EA				.703**	.492**	.378**	.505**
EN					.633**	.396**	.343**
PN						.325**	.146
SESm							.711**

Note: DES = Adult Dissociation, CDS = Adult Depersonalization, EA = Emotional Abuse, EN = Emotional Neglect, PN = Physical Neglect, SESm = Maternal Emotional Invalidation, SESf = Paternal Emotional Invalidation

* $p < .05$, ** $p < .01$

Mediation Hypothesis

We hypothesized that emotional invalidation would mediate the relationship between childhood trauma and adult dissociative tendencies. Regression analyses were used to verify the significance of paths *a*, *b*, and *c* in the mediation model. Sobel's (1982) test of indirect effects was then performed for each possible mediation to determine the significance of the reduction in path *c*. Table 3 summarizes the mediation results, which support our hypothesis. The strength of the association between emotional abuse and adult dissociation was reduced after controlling for emotional invalidation. Similarly, the strength of the association between emotional neglect and adult dissociation was also reduced after controlling for emotional invalidation. When examining depersonalization specifically, the same reduction occurred. Specifically, the strength of the association between emotional abuse and adult depersonalization, and between emotional neglect and adult depersonalization, was reduced after controlling for emotional invalidation. In

addition, the strength of the association between physical neglect and depersonalization was also reduced when controlling for emotional invalidation.

TABLE 3. Mediation Summary

X	M	Y	a	b	c	Sobel	p
EA	SESm	DES	.38**	.19*	.20**	2.22	.027
EA	SESf	DES	.51**	.27**	.20**	3.17	.002
EN	SESm	DES	.40**	.19*	.20**	2.22	.027
EN	SESf	DES	.34**	.27**	.20**	2.78	.005
EA	SESm	CDS	.38**	.19*	.27**	2.30	.022
EA	SESf	CDS	.51**	.24**	.27**	2.75	.006
EN	SESm	CDS	.40**	.19*	.30**	2.30	.022
EN	SESf	CDS	.34**	.24**	.30**	2.48	.013
PN	SESm	CDS	.33**	.19*	.19*	2.20	.027

Note: EA = Emotional Abuse, EN = Emotional Neglect, PN = Physical Neglect, SESm = Maternal Emotional Invalidation, SESf = Paternal Emotional Invalidation, DES = Adult Dissociation, CDS = Adult Depersonalization

* $p < .05$, ** $p < .01$

Moderation Hypothesis

To further assess the effects of emotional invalidation in the link between childhood trauma and adult dissociation, we tested a moderation hypothesis. We predicted high levels of emotional invalidation would strengthen the relationship between trauma and dissociation and low levels of invalidation would weaken the relationship between trauma and dissociation. After standardizing the variables, an interaction term was calculated by multiplying the independent variable (trauma) by the moderating variable (emotional invalidation). Separate regression equations were then used for high and low levels of invalidation. A median split was employed to classify individuals as high versus low on the SES. Using Preacher's (2002) method, we calculated Z-scores to test

the difference between two independent correlation coefficients to see if the difference between the high and low invalidating groups was significant (Table 4). Contrary to our hypothesis, only three moderation models were statistically significant. Maternal and paternal emotional invalidation moderated emotional neglect and depersonalization ($p < .05$), whereas only paternal emotional invalidation moderated emotional abuse and depersonalization ($p < .01$).

TABLE 4. Moderation Summary

	IV	DV	High (r)	Low (r)	z-score
SESm	EA	DES	.11	.21	-0.437
	EN	DES	.31	.19	0.541
	EA	CDS	.40	.16	1.022
	EN	CDS	.62	.19	2.130*
	PN	CDS	.41	.09	1.394
SESd	EA	DES	.37	.18	0.923
	EN	DES	.16	.21	-0.232
	EA	CDS	.67	.13	3.021**
	EN	CDS	.62	.19	2.332*
	PN	CDS	.34	.15	0.901

Note: EA = Emotional Abuse, EN = Emotional Neglect, PN = Physical Neglect, SESm = Maternal Emotional Invalidation, SESd = Paternal Emotional Invalidation, DES = Adult Dissociation, CDS = Adult Depersonalization

* $p < .05$, ** $p < .01$

CHAPTER IV

DISCUSSION AND CONCLUSION

The purpose of the present study was to investigate the role of emotional invalidation in the relationship between trauma and dissociation. Results of this study support the hypothesis that emotional invalidation mediates the relationship between certain experiences of childhood trauma and adult dissociative tendencies. Emotional abuse and neglect were both mediated by emotional invalidation in relation to adult dissociation and adult depersonalization. In addition, emotional invalidation mediated the relationship between physical neglect and depersonalization. These findings accord with Irwin's (1996) results suggesting emotional support plays a mediating role in the link between childhood trauma and adult dissociation.

Interestingly, however, results failed to support the role of physical and sexual abuse in the mediation model. The non-significant relationship between dissociative tendencies and physical and sexual abuse, generally considered more severe types of trauma, supports Simeon et al.'s (1997) suggestion that the etiology of depersonalization involves less severe and more subtle forms of childhood trauma. It should be noted, however, that the frequency of reported physical and sexual abuse was lower than reported emotional abuse and neglect, which may influence the present study's failure to find physical and sexual abuse as significant mediators.

Results also partially support the second hypothesis that emotional invalidation moderates the relationship between childhood trauma and adult dissociation.

Interestingly, the moderation model only worked with depersonalization as the independent variable and not with general dissociation. Both maternal and paternal invalidation moderated the effect of emotional neglect on depersonalization, where high levels of invalidation strengthened the relationship between emotional neglect and depersonalization and low levels of invalidation weakened the relationship between emotional neglect and depersonalization. Only paternal emotional invalidation moderated the effect of emotional abuse on depersonalization, where high levels of invalidation strengthened the association between emotional abuse and depersonalization and low levels of invalidation weakened the association between emotional abuse and depersonalization. This finding corresponds to Modestin et al.'s (2002) finding that paternal care contributed more to the variance of dissociation than maternal care. Although the present study did not examine the perpetrator of reported traumatic events, or the interaction between gender of participant and gender of caregiver, doing so may help explain the differing roles of paternal versus maternal emotional invalidation.

Limitations of this study include the use of a convenience sample of undergraduate students. Replication with a more diverse sample would strengthen the generalizability of the present findings, particularly with a sample reporting a higher frequency of physical and sexual abuse. Additionally, the use of self-report measures to assess childhood trauma and emotional invalidation raise issues of recall and reporting bias. A

prospective study is warranted to examine the developmental sequence of trauma, emotional invalidation, and dissociation.

Despite these limitations, the present findings support the conceptualization of dissociation as a response to traumatic stress experienced in an environment lacking the emotional resources necessary to restore an injured self-identity (Corrigan, 2002). This study also emphasizes the importance of examining various kinds of trauma as separate entities, each contributing differently to the etiology of dissociation and depersonalization (Simeon et al., 2001). Future research is needed to further our understanding of how an emotionally invalidating environment hinders the resolution of childhood trauma and contributes to the later development of dissociative tendencies.

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CONTACT INFORMATION

Name: Christy Aleene Talbert

Professional Address: c/o Dr. Leslie Morey
Department of Psychology
Texas A&M University
College Station, TX 77843

Email Address: christy1207@tamu.edu

Education: B.S. Psychology, Texas A&M University, December 2008
Summa Cum Laude
Undergraduate Research Scholar
Phi Beta Kappa