

Interpersonal Rejection Sensitivity in Childhood Sexual Abuse Survivors

Mediator of Depressive Symptoms and Anger Suppression

JANE A. LUTEREK
GERLINDE C. HARB
RICHARD G. HEIMBERG
BRIAN P. MARX
Temple University

This study investigated whether interpersonal rejection sensitivity serves a mediating role between childhood sexual abuse (CSA) and three long-term psychological correlates of CSA in adult female survivors: depressive symptoms, anger suppression, and attenuated emotional expression. Interpersonal rejection sensitivity has been shown to be a risk factor for the development of depression and is elevated in CSA survivors. Similarly, attenuated emotional expression, particularly anger, has been related to adjustment difficulties in CSA survivors. Participants in this study were 355 female undergraduates, 34 of whom reported a history of CSA. Results demonstrated that interpersonal rejection sensitivity mediates the relationship between CSA and later depressive symptoms. Interpersonal rejection sensitivity partially mediated the relationship between CSA and anger suppression; however, it did not mediate the relationship between CSA and attenuated emotional expression. These results are examined within the context of the current literature on adult CSA survivors and their implications are discussed.

Keywords: *childhood sexual abuse; depression; interpersonal rejection; emotional expression*

Childhood sexual abuse (CSA) has far-reaching effects on survivors, which include a broad range of intrapersonal and interpersonal difficulties in adulthood (Polusny & Follette, 1995). Depression is the symptom most commonly reported by adult survivors of CSA (Beitchman et al., 1992; Browne & Finkelhor, 1986; Polusny & Follette, 1995). Indeed, numerous studies find a relationship between CSA and depression or depressive symptoms (Braver,

Bumberry, Green, & Rawson, 1992; Briere & Runtz, 1988; Hunter, 1991; Jackson, Calhoun, Amick, Maddever, & Habif, 1990; Roland, Zelhart, & Dubes, 1989; Yama, Tovey, & Fogas, 1993). A majority of investigations also report a higher prevalence of major depressive disorder among sexually abused than nonabused participants (Polusny & Follette, 1995). CSA survivors also report chronic and recurrent depression during adulthood (Andrews, 1995) and longer depressive episodes in comparison to nonabused participants (Zlotnick, Mattia, & Zimmerman, 2001). Thus, the accumulated evidence points to depression and depressive symptoms as significant long-term correlates of CSA.

Although the relationship between CSA and depression is well documented, the nature of this relationship remains unclear. Researchers have commonly conceptualized CSA as a major risk factor for the development of depression and other difficulties in adulthood (Briere, 1992; Browne & Finkelhor, 1986; Polusny & Follette, 1995). If one accepts that the relationship is indirect, it becomes important to identify the factors that may contribute to CSA survivors' depressive symptomatology. However, the predominant use of linear correlational designs, which only allow for the examination of bivariate relations, has impeded our ability to determine which factors may contribute to this relationship. Isolation of mediational factors may suggest foci for treatment interventions that may reduce the suffering of CSA survivors and prevent occurrences of future depressive episodes.

So what are potential mediating factors? Researchers have recently examined whether interpersonal relationships and interpersonal problems play an important mediational role in the relationship between CSA and later depression (Roche, Runtz, & Hunter, 1999; Whiffen, Thompson, & Aube, 2000). Positive intimate relationships have been found to decrease depressive symptoms among CSA survivors (Feinauer, Callahan, & Hilton, 1996). As CSA occurs in an interpersonal context, it may disrupt the normal developmental processes of learning to trust and form stable and secure relationships with others (Briere, 1992). Indeed, numerous empirical studies have found that CSA survivors demonstrate difficulties in interpersonal functioning in adulthood (see DiLillo, 2001; Rumstein-McKean & Hunsley, 2001, for reviews). One potential variable that may mediate the relationship between CSA experiences and depression in adulthood is the personality trait of interpersonal rejection sensitivity. Boyce and Parker (1989) have defined high interpersonal rejection sensitivity as an "undue and excessive awareness of, and sensitivity to, the behavior and feelings of others" (p. 342). Interpersonal rejection sensitivity may also include reactivity to social feedback, concern about the behavior and statements of others, and fear of perceived or actual criticism by others (Boyce & Parker, 1989). In addition, individuals who are sen-

sitive to interpersonal rejection may experience a sense of inadequacy and feelings of inferiority, resulting in frequent misinterpretations of others' interpersonal behaviors, discomfort in the presence of others, and modification of interpersonal behavior (e.g., avoidance or nonassertive behavior) with the goal of minimizing the risk of rejection.

An investigation of the potential mediating role of interpersonal rejection sensitivity in the relationship between CSA and depression is informed by past research examining this dimension in relation to both CSA and depression. Preliminary research among CSA survivors has used the interpersonal sensitivity subscale of the Symptom Checklist-90-R (SCL-90-R) (Derogatis, 1977). This measure of interpersonal sensitivity assesses feelings of personal inadequacy and inferiority, along with self-deprecation, feelings of uneasiness, and marked discomfort during interpersonal interactions (Derogatis, 1975). CSA survivors have reported significantly higher levels of SCL-90-R interpersonal sensitivity than non-CSA participants in several studies (Bryer, Nelson, Miller, & Krol, 1987; Figueroa, Silk, Huth, & Lohr, 1997; Surrey, Swett, Michaels, & Levin, 1990; Swett, Surrey, & Cohen, 1990). Thus, there is preliminary evidence of an association between interpersonal rejection sensitivity and CSA. However, the SCL-90-R assesses interpersonal sensitivity as a state construct, rather than a personality trait, and is influenced by changes in self-esteem that accompany psychological distress (Boyce & Parker, 1989). An association between the personality trait of interpersonal rejection sensitivity and depression is well documented (Boyce, Hickie, Parker, & Mitchell, 1993; Boyce et al., 1990). Trait interpersonal rejection sensitivity appears to act as a vulnerability factor for depression, predicting initial depressive episodes, the recurrence of depression, and poor outcome 1 year after a depressive episode (Boyce et al., 1992; Boyce, Parker, Barnett, Cooney, & Smith, 1991).

Boyce and Mason (1996) have proposed two general factors that highlight the potentially important role that interpersonal rejection sensitivity plays in depression. First, faulty early attachments may lead to dependency often seen in depression-prone individuals, and children may become sensitized to interpersonal interactions, fearing potential disruptions in their important relationships. Second, the cognitive distortions commonly seen in depressed individuals often focus on themes of interpersonal relationships and suggest that depressed individuals experience this sensitivity to interpersonal rejection. Empirical research tends to support these notions also with regard to individuals with a history of CSA. Children who experience sexual abuse are likely to have difficulties forming secure attachments (Friedrich, 1990, 1996), and a history of CSA is associated with a variety of dysfunctional beliefs concerning issues of interpersonal relationships such as safety, trust,

and intimacy (e.g., “the world is a dangerous place,” “I avoid others because they might hurt me”; Wenninger & Ehlers, 1998, p. 287).

Given these difficulties, it is not surprising that adult CSA survivors also frequently report social isolation (Harter, Alexander, & Neimeyer, 1988), poor social adjustment (Follette, Alexander, & Follette, 1991; Harter et al., 1988; Jackson et al., 1990), and considerable distress and dissatisfaction in their relationships (e.g., Briere, 1988; DiLillo & Long, 1999; Feinauer et al., 1996; Herman, 1992; Hunter, 1991). CSA survivors report difficulties in forming trusting, intimate relationships (Gorcey, Santiago, & McCall-Perez, 1986; Mullen, Martin, Anderson, Romans, & Herbison, 1994), being distant and controlling in relationships (Whiffen et al., 2000), and avoiding the development of close adult relationships due to fears of rejection (Alexander, 1993). Avoidance of interpersonal contact is consistent with manifestations of interpersonal rejection sensitivity. Furthermore, it is likely that CSA survivors develop strategies to prevent potential disruption and rejection in their present relationships. For instance, CSA survivors may be less open to others with regard to their own emotional experiences. Scott and Day (1996) investigated the expression of angry feelings among childhood incest survivors and found them to suppress angry feelings. Effectively expressing feelings of anger results in asserting interpersonal independence and defining interpersonal boundaries (Kennedy-Moore & Watson, 1999). CSA survivors may thwart the expression of anger as a result of fears of interpersonal rejection. Furthermore, this pattern of emotional responding may be consistent with other emotional events as well. The expression of positive emotions is likely to lead to enhanced relationships and the development of intimacy, whereas the expression of negative emotions, such as sadness and fear, is likely to elicit compassion in others (Kennedy-Moore & Watson, 1999). However, the expression of these emotions also leaves one vulnerable if they are not reciprocated or responded to with empathy. As a result, CSA survivors may be overly fearful of rejection, curbing the expression of emotions to prevent relationship disruption; however, emotional suppression may have a paradoxical effect of reducing one's ability to attain interpersonal goals.

The purpose of this study was twofold. First, we investigated whether interpersonal rejection sensitivity served as a mediator between CSA and later depression. Second, we were interested in examining whether the pattern of suppressing emotions in CSA survivors was specific to angry feelings (Scott & Day, 1996) or a general means of dealing with emotions and whether it can be accounted for by interpersonal rejection sensitivity. Thus, we assessed whether interpersonal rejection sensitivity served a mediating role between CSA and the suppression of angry feelings and between CSA and more general attenuation of emotional expression. It was predicted that

interpersonal rejection sensitivity would mediate the relationship between CSA and these three long-term psychological correlates: depression, suppression of angry feelings, and attenuated emotional expression.

METHOD

Participants and Procedure

Three hundred fifty-five female undergraduate students from the Temple University Department of Psychology introductory psychology research pool participated in this study and received 2 hours of credit toward satisfaction of course requirements. For the purpose of this study, CSA was defined as sexual contact that ranged from fondling to intercourse occurring before the age of 14 that either (a) occurred without consent or was unwanted, (b) was perpetrated by a family member, or (c) was perpetrated by a person more than 5 years older than the victim. This definition of CSA, which falls at the conservative end of the continuum of definitions used by researchers in this area (Peters, Wyatt, & Finkelhor, 1986), was chosen to facilitate the detection of group differences that may be easily obscured by more liberal definitions of CSA.

Thirty-four participants (9.58%) were identified as having a history of CSA. They reported a mean age of 19.50 ($SD = 3.81$; range = 18-34) and the following ethnic backgrounds: 12 (35.3%) Caucasian, 11 (32.4%) African American, 10 (29.4%) Other (3 [8.8%] Asian, 3 [8.8%] mixed ethnicity, 2 [5.9%] Hispanic, 2 [5.9%] Other), and 1 (2.9%) did not report. In terms of marital status, most participants who reported a history of CSA (33; 97.1%) were single, whereas 1 (2.9%) reported being divorced. Three hundred twenty-one participants indicated no history of CSA and were included in the control group. Participants in the non-CSA group reported a mean age of 18.75 ($SD = 2.44$; range = 18-45) and the following ethnic backgrounds: 108 (33.6%) Caucasian, 82 (25.5%) African American, 116 (36.1%) Other (22 [6.9%] Asian, 16 [5%] mixed ethnicity, 9 [2.8%] Hispanic, 69 [21.5%] Other), and 15 (4.7%) did not report. Most control participants (97.2%) reported being single, whereas 8 (2.5%) reported a different marital status (5 [1.6%] living with their partner, 1 [.3%] married, 1 [.3%] divorced, 1 [.3%] separated), and 1 (.3%) did not report.

After providing informed consent, participants completed self-report measures of demographic characteristics, interpersonal rejection sensitivity, depressive symptomatology, anger, emotional expression, and childhood sexual abuse experiences, among other measures.

Measures

Life Experiences Questionnaire (LEQ) (Long, 1999). The LEQ, a 62-item self-report questionnaire, measures various demographic characteristics, CSA experiences, and history of exposure to other potentially traumatic events (e.g., physical abuse). It is a revised version of the Past Experiences Questionnaire, a self-report measure with demonstrated reliability (Messner et al., 1988). The LEQ was used to assess CSA history and to classify participants into CSA and non-CSA groups.

The LEQ has shown adequate test-retest reliability over a 2-week period with a sample of 145 women (Long, 1999). High rates of agreement on items related to the nature of the sexual abuse (e.g., vaginal or anal intercourse, oral-genital contact, genital vs. nongenital fondling) support the reliability of the scale. High rates of agreement have also been demonstrated for items such as age of onset of abuse, the age of the perpetrator, and the age difference between victim and perpetrator.

Participants answered eight yes/no questions from the LEQ that screen for sexual abuse during childhood. These items ask about a variety of CSA experiences ranging from being exposed to someone's genitals to having intercourse. Two modifications were made to the LEQ to conform to the definition of CSA used in this study. First, the introduction to the screening questions was changed from "During childhood and adolescence" to "During childhood." Second, the instructions were adjusted to state "before your 14th birthday" rather than "before your 17th birthday." Participants who endorsed any of these screening questions were asked to complete the remainder of the LEQ. Finally, the last 20 questions of the LEQ were omitted because they were not pertinent to establishing CSA history. These omitted questions ask for further descriptive information about participants' sexual abuse experience(s), reactions to the sexual abuse experience at the time it occurred, and current perceptions of the sexual abuse experience.

Interpersonal Sensitivity Measure (IPSM) (Boyce & Parker, 1989). The IPSM is a 36-item self-report instrument that assesses the trait of interpersonal rejection sensitivity, that is, hypersensitivity to interpersonal rejection. It includes the following five subscales: interpersonal awareness, need for approval, separation anxiety, timidity, and fragile inner-self. Initial studies of the IPSM yielded good psychometric evidence, including high internal consistency, retest reliabilities, and convergent and divergent validity (Boyce & Parker, 1989). For the purpose of this study, the total score was used as an index of the trait of interpersonal rejection sensitivity.

Beck Depression Inventory (BDI) (Beck, Rush, Shaw, & Emery, 1979). The BDI is a 21-item self-report measure that assesses the affective, cognitive, behavioral, somatic, and motivational components of depression. Beck, Steer, and Garbin (1988) conducted a meta-analytic study and reported the mean coefficient alpha across 25 years of studies to be .86 for psychiatric populations and .81 for nonpsychiatric populations. Stability estimates for the BDI ranged from .78 for a 2-week period to .62 for a 4-month period (Beck et al., 1988).

Emotional Expressivity Scale (EES) (Kring, Smith, & Neale, 1994). The EES is a 17-item self-report measure of the extent to which people outwardly display their emotions. The EES assesses the general disposition toward expressing different emotions through various channels (e.g., facial, verbal). It is a highly reliable measure, with good evidence for convergent and discriminant validity (Kring et al., 1994). The EES has demonstrated correspondence with observer-rated emotional expression and with laboratory-measured expressiveness in both college and community samples (Kring et al., 1994).

State-Trait Anger Expression Inventory (STAXI) (Spielberger, 1988). The STAXI is a 44-item self-report inventory designed to measure both the experience and expression of anger. The STAXI has demonstrated adequate convergent and discriminant validity as well as test-retest reliability (Jacobs, Latham, & Brown, 1988; Spielberger, 1988). For the purposes of this study, only the Anger-In subscale was of interest. Anger-In measures the tendency to suppress anger or direct it inward (e.g., "I'm irritated a great deal more than people are aware of," and "I boil inside, but I don't show it"). High scores on this index indicate the frequent experience of elevated or intense levels of anger and the tendency to suppress these feelings rather than express them either verbally or physically (Spielberger, 1988; Spielberger & Sydeman, 1994).

RESULTS

Preliminary Analyses

The CSA and non-CSA groups were equivalent with regard to demographic characteristics. No differences were found in age, $t(353) = -1.13, ns$; marital status, $\chi^2(1, N = 354) = .02, ns$; or ethnic background, $\chi^2(2, N = 339) =$

.94, *ns*. Individuals in the CSA group reported the following forms of sexual abuse experiences in childhood: 41.18% reported kissing, 82.35% reported nongenital fondling, 58.82% reported genital fondling, 29.41% reported oral-genital contact, 14.71% reported vaginal intercourse, 5.88% reported anal intercourse, and 5.88% reported penetration of their vagina or anus by objects. (Note: Victims could endorse the occurrence of more than one activity.) The average age of the victim when the abuse began was 8.15 years ($SD = 3.08$). Thirteen participants (38.24%) reported sexual abuse by more than one person during childhood. In terms of their relationship to the offender, 35.29% reported intrafamilial abuse only, 17.65% reported both intrafamilial abuse and extrafamilial abuse, and 47.06% reported extrafamilial abuse only. With regard to the duration of CSA, 49.06% reported only a single incident, 37.74% reported the occurrence of abuse for up to 1 year, and 13.21% reported that they were abused for longer than 1 year.

Mediational Analyses

According to the recommendations of Baron and Kenny (1986), establishing interpersonal rejection sensitivity as a mediator between CSA and the outcomes of interest requires a series of regression analyses. Full mediation is established if CSA is significantly related to interpersonal rejection sensitivity (the potential mediator) in the first equation and to the dependent variable (i.e., depression, emotional expression, anger suppression) in the second equation and if interpersonal rejection sensitivity, but not CSA, is related to the dependent variable in the third equation. Partial mediation is established if the magnitude of the relationship between CSA and the dependent variable is reduced but not removed in the third equation. Table 1 shows the zero-order correlations among CSA, interpersonal rejection sensitivity, and the dependent variables.

Interpersonal Rejection Sensitivity as a Mediator of Depression

The regression of interpersonal rejection sensitivity onto CSA was significant, $t(353) = 2.17, p < .05$, such that CSA survivors exhibited higher levels of interpersonal rejection sensitivity (see Table 2). The regression of depressive symptomatology onto CSA was also significant, $t(353) = 2.24, p < .05^1$; CSA survivors reported higher levels of depressive symptomatology (see Table 2). In the third equation, depressive symptomatology was simultaneously regressed onto CSA and interpersonal rejection sensitivity. With this procedure, the unique contributions of CSA and interpersonal rejection sen-

TABLE 1: Zero-Order Correlations Between Childhood Sexual Abuse, the Potential Mediator (Interpersonal Rejection Sensitivity), and the Dependent Variables

	CSA	IPSM	BDI	EES
Childhood sexual abuse (CSA)	1.0			
Interpersonal rejection sensitivity (IPSM)	.12*	1.0		
Depressive symptoms (BDI)	.12*	.34**	1.0	
Emotional expression (EES)	-.15**	-.18	-.24**	1.0
Anger suppression (STAXI Anger-In)	.17**	.50**	.37**	-.41**

NOTE: CSA = Childhood Sexual Abuse; IPSM = Interpersonal Sensitivity Measure; BDI = Beck Depression Inventory; EES = Emotional Expressivity Scale; STAXI = State-Trait Anger Expression Inventory.

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

sitivity to the prediction of depressive symptomatology can be evaluated. The results of this regression analysis revealed that interpersonal rejection sensitivity predicted depressive symptomatology, independent of CSA, $t(353) = 6.55$, $p < .001$. However, CSA did not predict depressive symptomatology independent of interpersonal rejection sensitivity, $t(353) = 1.60$, *ns* (see Table 3). Based on the recommendations of Baron and Kenny (1986) and Holmbeck (1997), Sobel's (1982) test was employed to determine the statistical significance of the mediating role of interpersonal rejection sensitivity. This test revealed that the partial correlation was significantly smaller than the zero-order correlation ($z = 2.06$, $p < .05$). These results support a model in which interpersonal rejection sensitivity mediates the relationship between CSA and depressive symptoms.

Interpersonal Rejection Sensitivity as a Mediator of Anger Suppression and Emotional Expression

We further investigated whether interpersonal rejection sensitivity mediates the relationship between a history of CSA and the suppression of angry feelings. Interpersonal rejection sensitivity was related to CSA (see above). Anger suppression was also related to CSA, $t(353) = 3.20$, $p < .005$, with CSA survivors reporting higher levels of anger suppression (see Table 2). Next, we simultaneously regressed anger suppression onto CSA and interpersonal rejection sensitivity. This analysis revealed that although suppressing angry feelings was related to interpersonal rejection sensitivity, $t(353) = 10.46$, $p < .001$, $\beta = .48$, it was still significantly related to CSA, $t(353) = 2.44$, $p < .05$, $\beta = .11$. However, interpersonal rejection sensitivity appeared to serve as a partial mediator between CSA and anger suppression, as the rela-

TABLE 2: Summary of Regression Analyses With Childhood Sexual Abuse as the Predictor Variable and Interpersonal Rejection Sensitivity, Depressive Symptoms, Emotional Expression, or Anger Suppression as the Criterion Measure

<i>Outcome Variable</i>	R^2	B	SE B	β
Interpersonal rejection sensitivity (IPSM)	.01	6.13	2.83	.12*
Depressive symptoms (BDI)	.01	3.00	1.34	.12*
Emotional expression (EES)	.02	-7.44	2.56	-.15**
Anger suppression (STAXI Anger-In)	.03	2.44	.76	.17**

NOTE: IPSM = Interpersonal Sensitivity Measure; BDI = Beck Depression Inventory; EES = Emotional Expressivity Scale; STAXI = State-Trait Anger Expression Inventory.

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

TABLE 3: Summary of the Regression Analysis With Depressive Symptoms (Beck Depression Inventory) as the Criterion Variable and Interpersonal Rejection Sensitivity and Childhood Sexual Abuse as the Predictor Variables

<i>Predictor Variable</i>	R^2	B	SE B	β
Interpersonal rejection sensitivity (IPSM)	.12	.16	.02	.33*
Childhood sexual abuse		2.04	1.28	.08

NOTE: IPSM = Interpersonal Sensitivity Measure.

* $p < .001$.

tionship between these variables was reduced (see Table 4). Sobel's (1982) test confirmed that the partial correlation was significantly smaller than the zero-order correlation ($z = 2.12, p < .05$).

In terms of the more general disposition to outwardly express emotions, interpersonal rejection sensitivity was related to CSA (see above). The regression of emotional expression onto CSA was also significant, $t(353) = -2.91, p < .005$, such that CSA survivors reported outwardly expressing less emotion (see Table 2). In the final regression, emotional expression was simultaneously regressed onto CSA and interpersonal rejection sensitivity. This analysis revealed that although emotional expression was related to interpersonal rejection sensitivity, $t(353) = -3.11, p < .005$, it was still related to CSA, $t(353) = -2.57, p < .05$ (see Table 5). However, little reduction in the magnitude of β was obtained, and the partial correlation was not significantly different from the zero-order correlation ($z = -1.77, ns$). Therefore, interpersonal rejection sensitivity did not serve a mediating role between a history of CSA and the general disposition to outwardly express emotions.

TABLE 4: Summary of the Regression Analysis With Anger Suppression (STAXI Anger-In) as the Criterion Variable and Interpersonal Rejection Sensitivity and Childhood Sexual Abuse as the Predictor Variables

<i>Predictor Variable</i>	R^2	B	SE B	β
Interpersonal rejection sensitivity (IPSM)	.26	.13	.01	.48**
Childhood sexual abuse		1.64	.67	.11*

NOTE: IPSM = Interpersonal Sensitivity Measure.

* $p < .05$. ** $p < .001$.**TABLE 5: Summary of the Regression Analysis With Emotional Expressivity (Emotional Expressivity Scale) as the Criterion Variable and Interpersonal Rejection Sensitivity and Childhood Sexual Abuse as the Predictor Variables**

<i>Predictor Variable</i>	R^2	B	SE B	β
Interpersonal rejection sensitivity (IPSM)	.05	-.15	.05	-.16**
Childhood sexual abuse		-6.54	2.54	-.13*

NOTE: IPSM = Interpersonal Sensitivity Measure.

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

DISCUSSION

This study found that the previously reported relationship between CSA experiences and adult depression was mediated by the trait of interpersonal rejection sensitivity. This mediational model demonstrates that sexual abuse during childhood appears to exert its influence on the development of depressive symptoms through the presence of increased vigilance to interpersonal rejection. In addition, attenuated emotional expression and suppression of angry feelings in adulthood were related to a history of CSA. Interpersonal rejection sensitivity was a partial mediator between CSA and anger suppression; however, it did not mediate the relationship between CSA and attenuated emotional expression.

Given that CSA, like other traumatic experiences, may interfere with normal developmental trajectories in children, disrupting the formation of self-concept and distorting basic beliefs about trust and safety in the context of an important relationship (particularly with intrafamilial abuse; Cole & Putnam, 1992; Trickett & Putnam, 1993), it is not surprising that CSA survivors exhibit difficulties in interpersonal functioning, such as a heightened sense of interpersonal rejection sensitivity. Although previous research has suggested

that CSA survivors experience interpersonal rejection sensitivity (Bryer et al., 1987; Figueroa et al., 1997; Surrey et al., 1990; Swett et al., 1990), this is the first demonstration that interpersonal rejection sensitivity is a common personality trait among adult survivors of CSA. Sensitivity to interpersonal rejection may develop as a result of childhood traumatic experiences and affect later psychological functioning. Despite the relatively small relationship between CSA and depressive symptoms, which is consistent with previous studies using college samples (Rind, Tromovitch, & Bauserman, 1998), the results of our mediational analyses suggest that interpersonal rejection sensitivity may be one mechanism through which CSA affects depressive symptoms in adulthood.

The heightened sensitivity to the vicissitudes of interpersonal relationships and fears of interpersonal rejection may result in the development of unhealthy coping patterns such as emotional suppression, denial (Leitenberg, Greenwald, & Cado, 1992), and other emotionally avoidant strategies (Polusny & Follette, 1995). Indeed, this investigation found that interpersonal rejection sensitivity was related to the suppression of angry feelings and attenuated emotional expressiveness, and it partially mediated the relationship between CSA and anger suppression. CSA survivors may suppress anger partly as a result of feeling vulnerable to interpersonal rejection. For CSA survivors who are rejection sensitive, expressing angry feelings may be particularly difficult because anger drives people away from rather than toward the person expressing it. Although reduced emotional expression was not mediated by interpersonal rejection sensitivity in this study, it is still pertinent in understanding the overall picture of CSA survivors' interpersonal functioning and their long-term intrapersonal and interpersonal adjustment. Deficits in the communication of emotions coupled with a heightened sense of interpersonal rejection sensitivity may result in the feelings of isolation (Harter et al., 1988), distress and dissatisfaction in relationships (e.g., Briere, 1988; DiLillo & Long, 1999; Feinauer et al., 1996; Herman, 1992; Hunter, 1991), and difficulties forming and sustaining intimate relationships (Alexander, 1993; Courtois, 1988; Gorcey et al., 1986; Herman, 1981; Jehu, 1989; Maltz & Holman, 1987; Mullen et al., 1994) reported by CSA survivors.

This study may be limited, as it used a university sample that included a small number of CSA survivors. However, investigating an undergraduate population allowed us to obtain a relatively large sample, which is necessary for this type of research. If we are to assume that university students are higher functioning than clinical samples, our results may be conservative. Nevertheless, it is possible that the mediational model suggested in this study

does not translate to more severe populations. It is also noteworthy that this sample was made up of women, and it is unclear whether these results would translate to male CSA survivors. In addition, other forms of childhood abuse, such as emotional and physical abuse, were not examined in this study and may account for a portion of the variance in the relationships reported here. Future studies that assess different forms of childhood abuse are needed to delineate which forms of childhood abuse play a role in the development of psychopathology and interpersonal difficulties in adulthood. Furthermore, emotional expression was assessed using self-report measures, which rely on participants' ability to recall their previous emotional reactions. Previous research has assessed expressive behavior through observational techniques (e.g., Ekman & Friesen, 1978; Kring & Sloan, 1992), which may provide a more reliable and valid measure of emotional expressivity. Similarly, the general disposition to outwardly express emotions was examined by a single questionnaire, which does not isolate different emotional experiences. For instance, it may be that CSA survivors suppress other specific emotional experiences (e.g., sadness, fear, positive feelings toward others) in addition to anger, and this suppression may be due to fears of interpersonal rejection. Further research examining the expression of specific emotions and their relationship to interpersonal rejection sensitivity in CSA survivors would allow for a clearer understanding of how interpersonal rejection sensitivity affects interpersonal relationships in this population.

The results of this study have important implications for therapy with women who have experienced CSA. If interpersonal rejection sensitivity plays a central role in depressive symptoms among CSA survivors, therapies that target interpersonal rejection sensitivity may reduce depression or prevent future depressive episodes. Furthermore, therapies that target CSA survivors' suppression of angry feelings are likely to enhance their interpersonal functioning. Exposure to approach-related behaviors (e.g., assertiveness) and to expressing different emotions (e.g., anger, sadness, happiness) within an interpersonal context may assist CSA survivors in confronting their fears of interpersonal rejection. Interventions that focus on emotion regulation strategies (e.g., Linehan, 1993a, 1993b), in which CSA survivors' emotional experience is validated, may also lead to more adaptive interpersonal functioning. As this investigation found that interpersonal rejection sensitivity mediated the relationship between CSA and depressive symptoms, other investigations that assess various intrapersonal symptoms commonly associated with a history of CSA and how they affect CSA survivors' interpersonal functioning may be fruitful.

NOTE

1. Although this relationship is relatively small, it is consistent with previous investigations assessing the relationship between CSA and depressive symptoms in college samples (Rind, Tromovitch, & Bauserman, 1998).

REFERENCES

- Alexander, P. C. (1993). The differential effects of abuse characteristics and attachment in the prediction of long-term effects of sexual abuse. *Journal of Interpersonal Violence, 8*, 346-362.
- Andrews, B. (1995). Bodily shame as a mediator between abusive experiences and depression. *Journal of Abnormal Psychology, 104*, 277-285.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 6*, 1173-1182.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8*, 77-100.
- Beitchman, J. E., Zucker, K. J., Hood, J. E., DaCosta, G. A., Akman, D., & Cassavia, E. (1992). A review of the long-term effects of child sexual abuse. *Child Abuse and Neglect, 16*, 101-118.
- Boyce, P., Hickie, I., Parker, G., & Mitchell, P. (1993). Specificity of interpersonal sensitivity to non-melancholic depression. *Journal of Affective Disorders, 27*, 101-105.
- Boyce, P., Hickie, I., Parker, G., Mitchell, P., Wilhelm, K., & Brodaty, H. (1992). Interpersonal sensitivity and the one-year outcome of a depressive episode. *Australian and New Zealand Journal of Psychiatry, 26*, 156-161.
- Boyce, P., & Mason, C. (1996). An overview of depression-prone personality traits and the role of interpersonal sensitivity. *Australian and New Zealand Journal of Psychiatry, 30*, 90-103.
- Boyce, P., & Parker, G. (1989). Development of a scale to measure interpersonal sensitivity. *Australian and New Zealand Journal of Psychiatry, 23*, 341-351.
- Boyce, P., Parker, G., Barnett, B., Cooney, M., & Smith, F. (1991). Personality as a vulnerability factor to depression. *British Journal of Psychiatry, 159*, 106-114.
- Boyce, P., Parker, G., Hickie, I., Wilhelm, K., Brodaty, H., & Mitchell, P. (1990). Personality differences between patients with remitted melancholic and nonmelancholic depression. *American Journal of Psychiatry, 147*, 1476-1483.
- Braver, M., Bumbery, J., Green, K., & Rawson, R. (1992). Child abuse and current psychological functioning in a university counseling center population. *Journal of Traumatic Stress, 5*, 477-484.
- Briere, J. N. (1988). The long-term clinical correlates of childhood sexual victimization. *Annals of the New York Academy of Sciences, 528*, 327-334.
- Briere, J. N. (1992). *Child abuse trauma: Theory and treatment of the lasting effects*. Newbury Park, CA: Sage.
- Briere, J., & Runtz, M. (1988). Symptomatology associated with childhood sexual victimization in a nonclinical adult sample. *Child Abuse and Neglect, 12*, 51-59.

- Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin, 99*, 66-77.
- Bryer, J. B., Nelson, B. A., Miller, J. B., & Krol, P. A. (1987). Childhood sexual and physical abuse as factors in adult psychiatric illness. *American Journal of Psychiatry, 144*, 1426-1430.
- Cole, P. M., & Putnam, F. W. (1992). Effect of incest on self and social functioning: A developmental psychopathological model. *Journal of Consulting and Clinical Psychology, 60*, 174-183.
- Courtois, C. C. (1988). *Healing the incest wound: Adult survivors in therapy*. New York: W. W. Norton.
- Derogatis, L. R. (1975). *Brief symptom inventory*. Baltimore, MD: Clinical Psychometric Research.
- Derogatis, L. R. (1977). The SCL-90-R manual I: Scoring, administration, and procedures for the SCL-90. Baltimore, MD: Clinical Psychometric Research.
- DiLillo, D. (2001). Interpersonal functioning among women reporting a history of childhood sexual abuse: Empirical findings and methodological issues. *Clinical Psychology Review, 21*, 553-576.
- DiLillo, D., & Long, P. J. (1999). Perceptions of couple functioning among female survivors of child sexual abuse. *Journal of Child Sexual Abuse, 7*, 59-76.
- Ekman, P., & Friesen, W. V. (1978). *The Facial Action Coding System (FACS): A technique for the measurement of facial actions*. Palo Alto, CA: Consulting Psychologists Press.
- Feinauer, L. L., Callahan, E. H., & Hilton, H. G. (1996). Positive intimate relationships decrease depression in sexually abused women. *American Journal of Family Therapy, 24*, 99-106.
- Figueroa, E. F., Silk, K. R., Huth, A., & Lohr, N. E. (1997). History of childhood sexual abuse and general psychopathology. *Comprehensive Psychiatry, 38*, 23-30.
- Follette, V. M., Alexander, P. C., & Follette, W. C. (1991). Individual predictors of outcome in group treatment for incest survivors. *Journal of Consulting and Clinical Psychology, 59*, 150-155.
- Friedrich, W. N. (1990). *Psychotherapy of sexually abused children and their families*. New York: W. W. Norton.
- Friedrich, W. N. (1996). An integrated model of psychotherapy for abused children. In J. Briere, L. Berliner, J. A. Bulkley, C. Jenny, & T. Reid (Eds.), *The APSAC handbook on child maltreatment* (pp. 104-118). Thousand Oaks, CA: Sage.
- Gorcey, M., Santiago, J. M., & McCall-Perez, F. (1986). Psychological consequences for women sexually abused in childhood. *Social Psychiatry, 21*, 129-133.
- Harter, S., Alexander, P. C., & Neimeyer, R. A. (1988). Long-term effects of incestuous child abuse in college women: Social adjustment, social cognition, and family characteristics. *Journal of Consulting and Clinical Psychology, 56*, 5-8.
- Herman, J. L. (1981). *Father-daughter incest*. Cambridge, MA: Harvard University Press.
- Herman, J. L. (1992). *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror*. New York: HarperCollins.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.
- Hunter, J. A. (1991). A comparison of the psychosocial maladjustment of adult males and females sexually molested as children. *Journal of Interpersonal Violence, 6*, 205-217.
- Jackson, J. L., Calhoun, D. S., Amick, A. A., Maddever, H. M., & Habif, V. L. (1990). Young adult women who report childhood intrafamilial sexual abuse: Subsequent adjustment. *Archives of Sexual Behavior, 19*, 211-221.

- Jacobs, G. A., Latham, L. E., & Brown, M. S. (1988). Test-retest reliability of the State-Trait Personality Inventory and the Anger Expression Scale. *Anxiety Research, 1*, 263-265.
- Jehu, D. (1989). *Beyond sexual trauma: Therapy with women who were childhood victims*. Chichester, UK: Wiley.
- Kennedy-Moore, E., & Watson, J. C. (1999). *Expressing emotion: Myths, realities, and therapeutic strategies*. New York: Guilford Press.
- Kring, A. M., & Sloan, D. (1992). *The Facial Expression Coding System (FACES): A user's guide*. Unpublished manuscript.
- Kring, A. M., Smith, D. A., & Neale, J. M. (1994). Individual differences in dispositional expressiveness: Development and validation of the Emotional Expressivity Scale. *Journal of Personality and Social Psychology, 66*, 934-949.
- Leitenberg, H., Greenwald, E., & Cado, S. (1992). A retrospective study of long-term methods of coping with having been sexually abused during childhood. *Child Abuse and Neglect, 16*, 399-407.
- Linehan, M. M. (1993a). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford.
- Linehan, M. M. (1993b). *Skills training manual for cognitive behavioral treatment of borderline personality disorder*. New York: Guilford.
- Long, P. J. (1999). *Assessing a history of childhood sexual abuse in adults: The Life Experiences Questionnaire*. Unpublished manuscript, Oklahoma State University.
- Maltz, W., & Holman, B. (1987). *Incest and sexuality: A guide to understanding and healing*. Lexington, MA: Lexington Books.
- Messner, S., Shipp, D., Jackson, J., Edison, J., Townsley, R., Burke, M., Chandler, K., & Long, P. (1988, March). *Reliability of adults' reports of childhood sexual abuse*. Paper presented at the annual meeting of the Southeastern Psychological Association, New Orleans, LA.
- Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1994). The effect of child sexual abuse on social, interpersonal, and sexual function in adult life. *British Journal of Psychiatry, 165*, 35-47.
- Peters, S. D., Wyatt, G. E., & Finkelhor, D. (1986). Prevalence. In D. Finkelhor, S. Araji, L. Baron, A. Browne, S. D. Peters, & G. E. Wyatt (Eds.), *A sourcebook on child sexual abuse* (pp. 15-59). Newbury Park, CA: Sage.
- Polusny, M. A., & Follette, V. M. (1995). Long-term correlates of child sexual abuse: Theory and review of the empirical literature. *Applied and Preventative Psychology, 4*, 143-166.
- Rind, B., Tromovitch, P., & Bauserman, R. (1998). A meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychological Bulletin, 124*, 22-53.
- Roche, D. N., Runtz, M. G., & Hunter, M. A. (1999). Adult attachment: A mediator between child sexual abuse and later psychological adjustment. *Journal of Interpersonal Violence, 14*, 184-207.
- Roland, B., Zelhart, P., & Dubes, R. (1989). MMPI correlates of college women who reported experiencing child/adult sexual contact with father, stepfather, or with other persons. *Psychological Reports, 64*, 1159-1162.
- Rumstein-McKean, O., & Hunsley, J. (2001). Interpersonal and family functioning of female survivors of childhood sexual abuse. *Clinical Psychology Review, 21*, 471-490.
- Scott, R. I., & Day, H. D. (1996). Associations of abuse-related symptoms and style of anger expression for female survivors of childhood incest. *Journal of Interpersonal Violence, 11*, 208-220.

- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 290-312). Washington, DC: American Sociological Association.
- Spielberger, C. D. (1988). *Manual for the State-Trait Anger Expression Inventory (STAXI)*. Odessa, FL: Psychological Assessment Resources.
- Spielberger, C. D., & Sydeman, S. J. (1994). State-Trait Anxiety Inventory and the State-Trait Anger Expression Inventory. In M. E. Maruish (Ed.), *The use of psychological tests for treatment planning and outcome assessment* (pp. 292-321). Hillsdale, NJ: Lawrence Erlbaum.
- Surrey, J., Swett, C., Michaels, A., & Levin, S. (1990). Reported history of physical and sexual abuse and severity of symptomatology in women psychiatric outpatients. *American Journal of Orthopsychiatry*, *60*, 412-417.
- Swett, C., Surrey, J., & Cohen, C. (1990). Sexual and physical abuse histories and psychiatric symptoms among male psychiatric outpatients. *American Journal of Psychiatry*, *147*, 632-636.
- Trickett, P. K., & Putnam, F. W. (1993). Impact of child sexual abuse on females: Toward a developmental psychobiological integration. *Psychological Science*, *4*, 81-87.
- Wenninger, K., & Ehlers, A. (1998). Dysfunctional cognitions and adult psychological functioning in child sexual abuse survivors. *Journal of Traumatic Stress*, *11*, 281-300.
- Whiffen, V. E., Thompson, J. M., & Aube, J. A. (2000). Mediators of the link between childhood sexual abuse and adult depressive symptoms. *Journal of Interpersonal Violence*, *15*, 1100-1120.
- Yama, M. F., Tovey, S. L., & Fogas, B. S. (1993). Childhood family environment and sexual abuse as predictors of anxiety and depression in adult women. *American Journal of Orthopsychiatry*, *63*, 136-141.
- Zlotnick, C., Mattia, J., & Zimmerman, M. (2001). Clinical features of survivors of sexual abuse with major depression. *Child Abuse and Neglect*, *25*, 357-367.

Jane A. Luterek, M.A., is a doctoral student in clinical psychology at Temple University as well as a clinician at the Adult Anxiety Clinic of Temple University. Her interests include the psychopathology and treatment of anxiety disorders, particularly examining emotional functioning in anxiety disorder populations.

Gerlinde C. Harb, M.S., is a doctoral student in clinical psychology at Temple University as well as a clinician at the Adult Anxiety Clinic of Temple University. Her interests include the treatment and psychopathology of anxiety disorders, in particular post-traumatic reactions and the role of interpersonal rejection sensitivity in the anxiety disorders.

Richard G. Heimberg is a professor and the director of clinical training at Temple University as well as the director of the Adult Anxiety Clinic of Temple University. He is a past president of the Association for Advancement of Behavior Therapy. His interests include the psychopathology and treatment of the anxiety disorders, especially social anxiety disorder and generalized anxiety disorder. He is the author of the new book Cognitive Behavioral Group Therapy for Social Phobia: Basic Mechanisms and Clinical Strategies and coeditor of the forthcoming book Generalized Anxiety Disorder: Advances in Research and Practice.

Brian P. Marx received his Ph.D. from the University of Mississippi in 1996. He is currently an assistant professor of clinical psychology at Temple University. He investigates various aspects of sexual victimization. He has conducted recent work in predictors and outcomes of sexual assault, sexual revictimization, and predictors of adjustment following childhood sexual abuse.