CLINICAL RESEARCH

Resiliency Factors in the Relation Between Childhood Sexual Abuse and Adulthood Sexual Assault in College-Age Women

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Journal of Child Sexual Abuse, Vol. 16(1) 2007 Available online at http://jcsa.haworthpress.com © 2007 by The Haworth Press, Inc. All rights reserved. doi:10.1300/J070v16n01_01 **ABSTRACT.** Research has suggested that childhood sexual abuse (CSA) may be a risk factor for adulthood sexual assault. This study examined associations between CSA experiences, cognitive resiliency variables, and revictimization. Participants were 73 college-age females who completed self-report questionnaires assessing CSA, adult assault, self-efficacy, locus of control (LOC), and coping styles. Sexual assault was categorized as forced or coerced assault based on the tactics used by the perpetrator. Results indicated that CSA alone was the strongest independent predictor of forced adult assault; however, LOC and positive coping were associated with resiliency to coercive sexual assault. The current findings have clinical implications in that LOC and coping styles are characteristics that can be enhanced through therapy. doi:10.1300/ J070v16n01_01 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@ haworthpress.com> Website: http://www.HaworthPress.com © 2007 by The Haworth Press, Inc. All rights reserved.]

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According to a report by the U.S. Department of Justice, 198,850 sexual assaults were reported to authorities in the United States in 2003 (Catalano, 2004). Sexual assault has been associated with a host of adverse outcomes, including depression, posttraumatic stress disorder (PTSD), substance abuse, low self-esteem, and interpersonal problems; hence, examining risk factors for sexual assault is of great importance. Research has consistently demonstrated that childhood sexual abuse (CSA) is a factor associated with greater risk for adult sexual assault (Arata, 1999; Cloitre et al., 1996; Messman & Long, 1996; Messman-Moore & Long, 2000, 2002; Noll et al., 2003; Roodman & Clum, 2001). In fact, a review of the research literature indicates that CSA survivors are two to three times more likely to be sexually assaulted in adolescence and adulthood than the general population (e.g., Arata, 2002; Cloitre et al., 1996; Wyatt, Guthrie, & Notgrass, 1992).

A number of theories exist to explain why women with histories of CSA may be more vulnerable to assault as an adult. One of the more comprehensive models suggests that a variety of ecological factors affect risk for sexual assault, including intrapersonal factors, such as characteristics of the sexual abuse and ensuing psychological distress; interpersonal factors, such as the perpetrator's perception of the victim's

vulnerability; situational or environmental factors, such as unsafe living conditions; and broad contextual factors, such as cultural perceptions of blame (Grauerholz, 2000; reviewed by Messman-Moore & Long, 2003). Messman-Moore and Long emphasize the importance of future research focused on expanding our knowledge of situational and contextual dynamics. The scope of the present study, however, is limited to the examination of intrapersonal and interpersonal factors; the remainder of the review will thus focus explicitly on such aspects. Within the realm of these lower-level factors, CSA has been associated with a range of outcomes, including relationship insecurity (Cole & Putnam, 1992), low self-esteem (Bagley & Ramsay, 1985), self-blaming attributions (Arata, 2000; Mannarino & Cohen, 1996), low self-efficacy (Valentine & Feinauer, 1993), sexualized behavior (Widom & Kuhns, 1996), and less positive coping, including less reliance on social support as a means of coping (Gibson & Leitenberg, 2001). These factors may contribute to increased risk for revictimization by reducing the victim's ability to cope with and escape from dangerous situations, or by fostering situations in which victimization is more likely to occur (e.g., sexualized behavior may make the victim appear more willing to engage in sexual activities).

Though a significant proportion of women with histories of CSA report adult sexual assault, it is important to note that many women with CSA histories are not revictimized in adulthood. Just as cognitive factors and specific coping styles may enhance vulnerability to revictimization, positive coping skills may protect CSA survivors from revictimization. A number of studies have suggested that positive coping styles predict better emotional adjustment and decreased risk for revictimization for women with histories of CSA (e.g., Gibson & Leitenberg, 2001; Mannarino & Cohen, 1996). In particular, the use of social support and coping methods that do not involve self-blame have been associated with decreased risk for psychological sequelae and revictimization (Arata, 2000; Feinauer & Stuart, 1996). Himelein and McElrath (1996) found that when coping with CSA, women who employed cognitive coping strategies such as disclosing and discussing CSA, minimization, positive reframing, and refusing to dwell on the abuse experience were better emotionally adjusted than women who did not utilize these strategies. In contrast, avoidant coping styles and coping styles that involve self-blame tend to produce greater levels of psychological distress (Kuyken & Brewin, 1999; Spaccarelli, 1994) and increase vulnerability to revictimization (Arata, 2000). For example, recent research suggests that deficits in risk appraisal and situational coping may weaken the victim's

ability to respond appropriately and assertively during the assault experience (Nurius et al., 2004).

Locus of control (LOC) has also been identified as a potential moderator between CSA and revictimization. For example, studies have noted that children who have experienced abuse are more likely to have an external LOC than their non-abused peers (Simmons & Weinman, 1991), and that repeated sexual victimization as a child may lead to lowered perceptions of control as an adult (Bolstad & Zinbarg, 1997). Research also suggests that developing an internal LOC after the experience of CSA may lead to better psychological adjustment and decreased risk of revictimization than developing an external LOC (Frazier, Steward, & Mortensen, 2004; Lam & Grossman, 1997; Valentine & Feinauer, 1993). These findings may indicate that women who perceive themselves as exerting control over most aspects of their lives may feel that they can do more to prevent the experience of revictimization. However, it should be noted that women with strong internal LOC may be more likely to blame themselves when victimized, and as described earlier, coping strategies that employ self-blame tend to be more maladaptive than those that do not (Feinauer & Stuart, 1996). In addition, some studies have found no difference in LOC when comparing abused and non-abused adolescents and adults (Moran & Eckenrode, 1992; Porter & Long, 1999; Silliman, 1993). Reasons for contradictory finding may hinge on differences in abuse characteristics. For example, perhaps only women with chronic abuse experiences tend to develop lowered perceptions of control (Moran & Eckenrode, 1992), whereas individuals who experience only occasional events that do not appear to be contingent upon their own behavior may be unlikely to internalize lowered perceptions of control.

A related factor associated with decreased risk for adult sexual assault is a high sense of self-efficacy (Marx et al., 2001; Valentine & Feinauer, 1993). Bandura (1994) describes self-efficacy as "the belief in one's capabilities to organize and execute the sources of action required to manage prospective situations" (p. 71). Some of the theories that link CSA and revictimization have postulated that women with histories of childhood maltreatment may feel powerless in the actual abuse experience and may internalize and generalize these perceptions across situations (Gold, Sinclair, & Balge, 1999). Women who do not experience feelings of ineffectiveness may feel better able to cope with unexpected events, thereby increasing the likelihood that they will respond to stressful situations in a more adaptive manner (i.e., employing escape/prevention behaviors).

Only recently has research begun to examine characteristics of sexual assault based on tactics used by the perpetrator (Abbey et al., 2004; Cleveland, Koss, & Lyons, 1999; Livingston et al., 2004; Testa & Dermen, 1999; Tyler, Hoyt, & Whitbeck, 1998). Though legal definitions of rape are often restricted to unwanted sexual experiences obtained by physical force or threat of physical force, research indicates that rates of verbally coercive sexual assault and coercive assault involving the use of drugs or alcohol are at least as high as those of forced sexual assault (e.g., Banyard et al., 2005; Koss, Gidycz, & Wisniewski, 1987; Mohler-Kuo et al., 2004; see Spitzberg, 1999 for a review). Though examinations of the characteristics and effects of coercive sexual assault are limited, some studies suggest that coercive assault is more likely to be committed by acquaintances and to take place in the context of romantic relationships and dating scenarios (Cleveland, Koss, & Lyons, 1999). A special report on the violent victimization of college students revealed that 78.5% of sexual assaults reported by college students in the National Crime Victimization Survey were committed by acquaintances of the victim (Baum & Klaus, 2005); therefore, examining factors associated with coercive assault could contribute substantially to our current understanding of sexual assault.

Verbally coercive sexual experiences are defined as those obtained via begging, pressuring, manipulating, or threatening negative consequences (Basile, 1999). Coercive sexual assault has been associated with low assertiveness, low self-esteem, and greater self-blame in response to unwanted sexual experiences (Testa & Dermen, 1999; Tyler, Hoyt, & Whitbeck, 1998). Some studies have examined verbal coercion within the context of using alcohol or drugs to obtain intercourse (e.g., Testa & Dermen, 1999), whereas others have examined verbal coercion and the use of drugs or alcohol as separate tactics (Tyler, Hoyt, & Whitbeck, 1998). For the purposes of the present study, verbal coercion and the use of drugs/alcohol are subsumed under the category "coerced sexual assault."

The current study was designed to investigate associations between CSA, self-efficacy, LOC, coping styles, and revictimization experiences. It was hypothesized that women who have experienced CSA and have developed an internal LOC, more positive coping skills, and a sense of efficacy would be more likely to avoid or escape from situations in which they may be at risk for revictimization. Based on prior research, this study also explored the differential impact of cognitive and coping variables on forced and coerced revictimization experiences.

The following specific hypotheses were evaluated: (1) There will be a significant positive association between a history of CSA and adulthood sexual assault; (2) there will be a significant negative association between cognitive/coping variables such as internal LOC, positive coping styles, and high self-efficacy and adult assault; (3) cognitive and coping variables will be differentially related to adult assault based on tactics used by the perpetrator.

METHOD

Participants

As the National Crime Victimization Survey indicates that more than half of all reported sexual assault victims are females between the ages of 12 and 24 years (Bureau of Justice Statistics, 2001), the current study recruited a sample similar in age and gender. The sample under study consisted of 73 predominantly undergraduate females, ages 18-27. Mean age was 20.42 (SD = 1.82). The sample was predominantly Caucasian (65.8%), with 17.8% of respondents being Asian, 4.1% Hispanic/Latino, 2.7% African American, and 8.2% of mixed ethnicity. The ethnic composition of the sample closely resembles the ethnic diversity of the recruiting university. Most participants reported their relationship status as single (57.7%), although a large percentage also reported being partnered (40.8%). Participants were recruited via a job Web site at a large university in the Northeast and through flyers posted on the university's campus. Flyers recruited women between the ages of 18 and 30 to complete a battery of questionnaires. Participants received \$10 for their participation in the study.

Procedures

Participants contacted the researcher by phone, the study was explained, and an appointment time was granted to interested participants. After consent was obtained, participants completed the battery of self-report questionnaires privately in a classroom in the Psychology Department.

Measures

CSA. The Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) is designed to assess five types of negative childhood experiences:

Emotional neglect, emotional abuse, physical neglect, physical abuse, and sexual abuse. The CTQ is a retrospective self-report measure that consists of 28 items rated on a 1-5 scale ranging from *Never True* to *Very Often True*. Test-retest reliability coefficients for the CTQ range from .79 to .86 over an average of four months, and internal consistency reliability coefficients range from a median of .66 to a median of .92 across samples (Scher et al., 2001). Summary scores were computed for the five types of childhood experiences listed above; a sixth subscale was computed to assess minimization/denial. Cutoff scores recommended by Bernstein and Fink (1998) were used to classify participants into victim and non-victim categories for each type of abuse.

Adult sexual experiences. Adult sexual experiences were measured with three yes-no questions designed to assess consensual sexual behaviors, non-consensual sexual behaviors obtained by some degree of coercion, and non-consensual sexual behaviors obtained by some degree of force after the age of 16. We thought it necessary to include coercive experiences in our assessment of adult assault because the population under study tends to report adult assault experiences that include some degree of coercion (e.g., date rape and alcohol or drug intoxication, etc.) at much higher rates than the general population (Mohler-Kuo et al., 2004). For the purposes of several analyses, the coerced and forced responses were summed into a category characterized as having experienced *any* type of non-consensual sexual assault.

Coping styles. Coping was assessed via the Ways of Coping (Revised) developed by Folkman and Lazarus (1985). The measure asks participants to recall a recent stressful situation, and then to rate how much they used particular coping strategies in that situation. The questionnaire is composed of 66 items that are answered on a 4-point Likert scale ranging from 0 (Not Used) to 3 (Used a Great Deal). The measure is designed so that responses can be divided into eight subscales including problem-focused coping, wishful thinking, detachment, seeking social support, emphasizing the positive, self-blame, tension reduction, and self-isolation. Two summary scores incorporating positive coping styles (problem-focused, seeking social support, focus on the positive) and negative coping styles (wishful thinking, detachment, self-blame, tension reduction, kept to self) were also calculated. Internal consistency ranges from .61 to .79 depending on the subscale examined.

LOC. The IPC (Internality, Powerful Others, Chance) scale developed by Levenson (1981) was used to assess LOC. The measure consists of 24 items that can be answered using a Likert scale ranging from -3 (*Strongly Disagree*) to +3 (*Strongly Agree*). The IPC scale comprises

three subscales: Internality, Powerful Others, and Chance. Internality measures the degree to which people believe they have control over their own lives, Powerful Others assesses the extent to which people believe that others control events in their lives, and Chance relates to the degree to which people believe that chance affects the events in their lives. Participant responses were summed into these three subcategories. In previous samples, the IPC has internal consistency of .64 for I, .77 for P, and .78 for C, and test-retest reliability of roughly .70 for both 1-week and 7-week intervals (Levenson, 1981). The P and C subscales of the IPC correlate between .41 and .60, however, the I subscale correlates with the P and C subscales between – .25 and .19 (Levenson, 1981).

Self-efficacy. Self-efficacy was assessed using the Generalized Self-Efficacy Scale (GSS; Schwarzer & Jerusalem, 1993). The GSS is a 10-item measure that asks participants to respond on a 4-point Likert scale ranging from 1 (Not at All True) to 4 (Exactly True). A total score for the measure is computed by summing the responses. Previous studies have found a mean of 29.46 and a standard deviation of 5.33 (Scholz et al., 2002). In the same samples, the GSS has yielded an internal consistency ranging from .75 to .91, with a test-retest reliability of .67 over 6 months.

Analyses

The current study was designed to investigate the relationships between self-reported CSA, cognitive resilience factors, and adult assault experiences. Based on previous research, three potential cognitive variables were considered: Internal LOC, use of positive coping strategies, and generalized self-efficacy. For the purposes of the current study, CSA and adult assault were measured as dichotomous variables. Adult assault was further subclassified as non-consensual experience obtained by either (1) force or (2) coercion.

We hypothesized that cognitive resilience factors would independently predict the experience of adult assault, beyond the experience of CSA. To test this hypothesis, three analyses were conducted. First, chi-square analyses were used to establish the relation between CSA and adult sexual assault. In instances where the expected cell count of one or more cells was lower than necessary, Fisher's exact test was reported instead of the chi-square value. Second, multivariate analysis of variance (MANOVA) was used to evaluate the relation between the cognitive factors and adult assault, followed by individual univariate

analyses of variance (ANOVAs) when significant. Finally, a series of logistic regressions were conducted with adult sexual assault as the dependent variable; CSA and all coping variables were available for entry into the model. Cognitive factors were considered to contribute to vulnerability to adult sexual assault when providing significant variance to the predictive model.

RESULTS

Prevalence of Abuse/Assault

In the current sample, 22% of individuals reported CSA, and reports of childhood maltreatment ranged from 8% for physical abuse to 32% for emotional neglect (see Table 1). In line with other research studies examining undergraduate populations, approximately 25% of the full sample reported at least one non-consensual adult sexual experience. When examined based on tactics used by the perpetrator, 7% of the total sample reported experiencing forced sexual assault alone, 12% reported coerced sexual assault alone, and 6% reported both. Of the women specifically reporting CSA, 75% reported a non-consensual sexual experience in adulthood.

Relation Between CSA and Adult Sexual Assault

A series of categorical analyses indicated that women with CSA histories were more likely to report at least one adult non-consensual sexual experience compared with women without CSA histories (75% vs. 11%, Fisher's exact test < .001). When adult non-consensual sexual

TABLE 1. Propo	ortion of Sample	Reporting	Childhood	Maltreatment*

Type of Maltreatment	N (%)
Sexual abuse	16 (22)
Physical abuse	6 (8)
Physical neglect	11 (15)
Emotional abuse	20 (27)
Emotional neglect	23 (32)

^{*}Maltreatment classification is based on CTQ cutoff scores (Bernstein & Fink, 1998). Numbers and percentages are non-exclusive (total N = 73).

experiences were separated by tactics employed by the perpetrator, women with CSA histories reported higher levels of both forced (38% vs. 6%, Fisher's statistic = .003) and coerced (56% vs. 7%, Fisher's statistic < .001) adult sexual assault than their non-abused counterparts.

Cognitive/Coping Variables and Adult Assault Experiences

The second hypothesis postulated that self-efficacy, use of positive coping skills, and LOC would differ in women with and without adult sexual assault experiences. Multivariate analyses supported this hypothesis, F(1,72) = 3.47, p < .05. Follow-up univariate analyses indicated that women reporting any non-consensual sexual experience in adulthood reported lower self-efficacy, F(1,72) = 5.6, p < .05, and internal LOC, F(1,72) = 5.68, p < .05, with a non-significant result for less positive coping than women without adult assault histories (see Table 2).

Results varied when examined based on tactics employed by the perpetrator. For women who reported forced non-consensual sexual assault in adulthood, multivariate analyses indicated non-significant results for coping style, F(1,72) = 2.36, p = .079. Univariate analyses indicated that women assaulted via force reported lower internal LOC, F(1,72) = 6.8, p < .05, with a trend for lower self-efficacy (see Table 3). For women reporting coerced assault experiences, multivariate analyses were highly supportive of differences in coping styles, F(1,72) = 6.16, p < .05. Univariate analyses indicated that, compared with women not reporting coerced sexual experiences, these women report lower internal LOC, F(1,72) = 8.98, p < .01; lower levels of positive coping, F(1,72) = 7.9, p < .01; and lower self-efficacy, F(1,72) = 9.35, p < .01; see Table 4).

TABLE 2. ANOVAs for Cognitive/Coping Variables by Adult Assault

Cognitive/Coping Variable	Any Adult Assault	Mean	SD	F	р
Self-efficacy	Yes	20.50	4.76	5.26	.025
	No	24.45	4.83		
Internal LOC	Yes	34.44	5.47	5.03	.028
	No	38.15	7.70		
Positive coping	Yes	8.63	13.06	1.06	.307
	No	13.25	17.12		

Note. All ANOVAs calculated on (1,71) degrees of freedom.

TABLE 3. ANOVAs for Cognitive/Coping Variables by Forced Assault

Variable	Forced Assault	Mean	SD	F	р
Self-efficacy	Yes	29.89	19.05	3.16	.080
	No	32.95	13.50		
Internal LOC	Yes	32.33	9.87	6.83	.011
	No	37.92	5.32		
Positive coping	Yes	24.89	3.51	0.10	.750
	No	23.28	3.11		

Note. All ANOVAs calculated on (1,71) degrees of freedom.

TABLE 4. ANOVAs for Cognitive/Coping Variables by Coerced Assault

Variable	Coerced Assault	Mean	SD	F	р
Self-efficacy	Yes	29.0	4.47	9.34	.003
	No	33.35	4.69		
Internal LOC	Yes	32.77	8.31	8.98	.004
	No	38.20	5.31		
Positive coping	Yes	13.92	13.96	7.91	.006
	No	25.55	13.41		

Note. All ANOVAs calculated on (1,71) degrees of freedom.

Predicting Adult Assault

In order to obtain a best-fit model for predicting adult sexual victimization, as well as due to the high inter-correlations among variables, logistic regression was used. The first logistic regression in this series evaluated variables providing independent contributions to explained variance in *any adult sexual assault experience*. In this analysis, sexual abuse acted as the single strongest predictor of any type of adult assault, $\beta = .517$, p < .01, Nagelkerke $R^2 = .238$. For women reporting any non-consensual sexual experience in adulthood, 78% were classified correctly on the basis of CSA alone and no other variable added significant variance to the equation.

The second logistic regression evaluated variables providing independent contributions to explained variance in experience of *forced adult sexual assault*. In this analysis, CSA again acted as the single strongest predictor of adult sexual assault, $\beta = -.427$, p = .006, Nagelkerke

 R^2 = .232. For women who reported forced adult non-consensual sexual experiences, 90% were classified correctly on the basis of CSA alone. No other variable added significant variance to the equation; however, a trend for low scores on positive coping was indicated.

The third logistic regression evaluated variables providing independent contributions to explained variance in experience of *coerced adult sexual experience* (see Table 5). Among adults who reported coerced non-consensual sexual experiences, the experience of CSA, the use of positive coping strategies, and an internal LOC all made significant and independent contributions to explained variance, with 89% of individuals classified correctly based on these three variables. With these variables taken into account, scores on self-efficacy did not provide additional variance. No interaction terms were significant, indicating the absence of a moderating effect.

DISCUSSION

In general, the results of this study were consistent with the suggested hypotheses. As expected, the experience of CSA was related to adult sexual assault. Notably, 75% of the women who reported CSA also reported a non-consensual sexual experience in adulthood. This finding supports previous research on revictimization and emphasizes the importance of identifying and treating CSA survivors as they may be at greater risk for adult assault. Also consistent with previous literature, the

TABLE 5. Logistic Regression of Coerced Sexual Experience

Variable	В	SE	р
Step 1			r
Sexual abuse	547	.179	.002
Step 2			
Sexual abuse	596	.206	.004
Internal LOC	.133	.066	.046
Step 3			
Sexual abuse	558	.221	.011
Positive coping	.062	.032	.054
Internal LOC	.160	.072	.026

Note. Step 1 Nagelkerke R^2 estimate = .290; Step 2 Nagelkerke R^2 estimate = .365; Step 3 Nagelkerke R^2 estimate = .441.

results supported the hypothesis that cognitive variables, such as coping styles, LOC, and self-efficacy differ in women with and without adult assault experiences. When these cognitive factors were examined as part of a predictive model that incorporated childhood sexual experiences, the cognitive variables were not as strongly linked to forced sexual assault; however, low internal LOC and low positive coping were highly associated with coerced victimization experiences.

For women who experience forced sexual assault, it appears that cognitive variables, such as coping strategies, may not make as great a difference in the relation between CSA and revictimization involving force; rather, coping strategies and feelings of control may be more important in attempting to resist coercive assaults. These findings support previous empirical work documenting intrapersonal factors related to coerced assault (Testa & Dermen, 1999; Tyler, Hoyt, & Whitbeck, 1998), and suggest that children who have experienced sexual abuse may internalize lowered perceptions of control and poor coping skills that may incapacitate them when faced with future stressful situations. In trying to effectively resist a coercive experience, it seems imperative that the potential victim believes in his/her own ability to change a situation and can utilize adaptive coping strategies in doing so.

Though college women represent a subset of the population at high risk for adult sexual assault, future research should include a more heterogeneous sample that is more representative of the full range of women at risk for adult assault. More specifically, sexual assault researchers should attempt to recruit samples of young adult women working full time in the community in order to ascertain whether these relationships vary across non-student populations. While this study reveals that adverse childhood experiences are associated with adult sexual victimization, and that independent cognitive variables may influence this relationship, analyses were limited by the sample size and the homogeneity of the sample under study. That is, the findings from the present investigation may not generalize across all minority populations, particularly given the low number of Black and Latina participants. Future research endeavors should attempt to recruit a greater number of participants, with particular attention to over-sampling ethnically and culturally diverse minorities. Consistent with this notion, it may be important for researchers to consider the potential moderating impact of variables such as ethnicity and socioeconomic status when examining outcomes related to sexual assault.

In this study, only 4 of the 16 women who reported CSA were not assaulted in adulthood, rendering analyses examining a mediational model of resilience to assault impractical. Furthermore, it is important to note

that because measurement was conducted at one point in time, causality cannot be inferred from the findings, which allows for multiple interpretations of the results. For example, it is difficult to discern whether decreased cognitive and coping skills are actually precursors to adult assault or whether participants with adult assault experiences may be reporting lower levels of cognitive and coping skills as a result of the assault and ensuing psychological distress. Prospective research is needed to establish that positive coping and internal LOC do reduce the risk of assault.

For the purposes of this study, unwanted sexual experience obtained via verbal coercion and the use of alcohol and/or drugs to engage in both were subsumed under the single category of coerced sexual assault. Future studies should examine each type of coercive assault separately to gain a full understanding of the correlates of coercive sexual assault. Furthermore, this study assessed adult assault experiences vis-à-vis a dichotomous yes-no questions; prospective endeavors should collect more information about the assault experience, such as whether it happened more than once, the subjective severity of the assault experience, and whether the perpetrator was known to the victim. Finally, future investigations would be strengthened by the use of multi-modal approaches that integrate traditional survey methods with more innovative qualitative practices including focus groups or portraiture.

Limitations of the study notwithstanding, the current research yielded noteworthy findings of potential clinical utility. In particular, this study highlights the prevalence of CSA and adult assault in college samples and the importance of identifying CSA survivors and providing intervention and treatment focused on preventing future sexual assaults. Importantly, the finding that LOC and coping strategies impact the relation between CSA and adult assault suggests that trauma clinicians may wish to incorporate a LOC and coping strategies-enhancement component in treatment with CSA survivors.

REFERENCES

Abbey, A., BeShears, R., Clinton-Sherrod, A. M., & McAuslan, P. (2004). Similarities and differences in women's sexual assault experiences based on tactics used by the perpetrator. *Psychology of Women Quarterly*, 28, 323-332.

Arata, C. (1999). Sexual revictimization and PTSD: An exploratory study. *Journal of Child Sexual Abuse*, 8, 49-65.

Arata, C. (2000). From child victim to adult victim: A model for predicting sexual revictimization. *Child Maltreatment*, *5*, 28-38.

- Arata, C. (2002). Child sexual abuse and sexual revictimization. *Clinical Psychology: Science and Practice*, 9, 135-164.
- Bagley, C. & Ramsay, R. (1985). Sexual abuse in childhood: Psychosocial outcomes and implications for social work practice. *Journal of Social Work and Human Sexuality*, 4, 33-47.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego, CA: Academic Press, 1998).
- Banyard, V. L., Plante, E. G., Cohn, E. S., Moorhead, C., Ward, S., & Walsh, W. (2005). Revisiting unwanted sexual experiences on campus: A 12-year follow-up. *Violence Against Women, 11*(4), 426-446.
- Basile, K. C. (1999). Rape by acquiescence: The ways in which women "give in" to unwanted sex with their husbands. *Violence Against Women*, *9*, 1036-1058.
- Baum, K. & Klaus, P. (2005). Bureau of Justice Statistics special report on the violent victimization of college students, 1995-2002. Washington, DC: U.S. Department of Justice.
- Bernstein, D. P. & Fink, L. (1998). *Childhood Trauma Questionnaire: A retrospective self-report questionnaire and manual.* San Antonio, TX: The Psychological Corporation.
- Bolstad, B. & Zinbarg, R. (1997). Sexual victimization, generalized perception of control, and posttraumatic stress disorder symptom severity. *Journal of Anxiety Disorders*, 11, 523-540.
- Catalano, S. M. (2004). Bureau of Justice Statistics National Crime Victimization Survey: Criminal victimization, 2003. Washington, DC: U.S. Department of Justice.
- Cleveland, H. H., Koss, M. P., & Lyons, J. (1999). Rape tactics from the survivors' perspective: Contextual dependence and within-event independence. *Journal of Interpersonal Violence*, 14, 532-547.
- Cloitre, M., Tardiff, K., Marduk, P. M., & Leon, A. C. (1996). Childhood abuse and subsequent sexual assault among female inpatients. *Journal of Traumatic Stress*, 9, 473-482.
- Cole, P. M. & Putnam, F. W. (1992). Effect of incest on self and social functioning: A developmental psychopathology perspective. *Journal of Consulting and Clinical Psychology*, 60, 174-184.
- Feinauer, L. & Stuart, D. (1996). Blame and resilience in women sexually abused as children. *The American Journal of Family Therapy*, 24, 31-40.
- Folkman, S. & Lazarus, R. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.
- Frazier, P., Steward, J., & Mortensen, H. (2004). Perceived control and adjustment to trauma: A comparison across events. *Journal of Social and Clinical Psychology*, 23, 303-324.
- Gibson, L. E. & Leitenberg, H. (2001). The impact of child sexual abuse and stigma on methods of coping with sexual assault among undergraduate women. *Child Abuse* and Neglect, 25, 1343-1361.
- Gold, S. R., Sinclair, B. B., & Balge, K. A. (1999). Risk of sexual revictimization: A theoretical model. *Aggression and Violent Behavior*, *4*, 457-470.

- Grauerholz, L. (2000). An ecological approach to understanding sexual revictimization: Linking personal, interpersonal, and sociocultural factors and processes. *Child Maltreatment*. 5, 5-17.
- Himelein, M. & McElrath, A. (1996). Resilient child sexual abuse survivors: Cognitive coping and illusion. *Child Abuse and Neglect*, 20, 747-758.
- Koss, M., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology*, *55*, 162-170.
- Kuyken, W. & Brewin, C. (1999). The relation of early abuse to cognition and coping in depression. *Cognitive Therapy and Research*, 23, 665-677.
- Lam, J. & Grossman, F. (1997). Resiliency and adult adaptation in women with and without histories of childhood sexual abuse. *Journal of Traumatic Stress*, 10, 175-196.
- Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H. M. Lefcourt (Ed.), *Research with the locus of control construct* (Vol. 1, pp. 15-63). New York, NY: Academic Press.
- Livingston, J. A., Buddie, A. M., Testa, M., & VanZile-Tamsen, C. (2004). The role of sexual precedence in verbal sexual coercion. *Psychology of Women Quarterly*, 28, 287-297.
- Mannarino, A. P. & Cohen, J. A. (1996). Abuse-related attributions and perceptions, general attributions, and locus of control in sexually abused girls. *Journal of Interpersonal Violence*, 11, 162-180.
- Marx, B. P., Calhoun, K. S., Wilson, A. E., & Meyerson, L. A. (2001). Sexual revictimization prevention: An outcome evaluation. *Journal of Consulting and Clinical Psychology*, 69, 25-32.
- Messman, T. L. & Long, P. J. (1996). Child sexual abuse and its relationship to revictimization in adult women: A review. *Clinical Psychology Review*, *16*, 397-420.
- Messman-Moore, T. L. & Long, P. J. (2000). Child sexual abuse and revictimization in the form of adult sexual abuse, and adult psychological maltreatment. *Journal of Interpersonal Violence*, 15, 489-502.
- Messman-Moore, T. L. & Long, P. J. (2002). Alcohol and substance use disorders as predictors of child to adult sexual revictimization in a sample of community women. *Violence and Victims*, *17*, 319-340.
- Messman-Moore, T. L. & Long, P. J. (2003). The role of childhood sexual abuse sequelae in the sexual revictimization of women: An empirical review and theoretical reformulation. *Clinical Psychology Review*, 23, 537-571.
- Mohler-Kuo, M., Dowdall, G. W., Koss, M. P., & Wechsler, H. (2004). Correlates of rape while intoxicated in a national sample of college women. *Journal of Studies on Alcohol*, 65, 37-45.
- Moran, P. & Eckenrode, J. (1992). Protective personality characteristics among adolescent victims of maltreatment. *Child Abuse and Neglect*, 16, 743-754.
- Noll, J. G., Horowitz, L. A., Bonanno, G. A., Trickett, P. K., & Putnam, F. W. (2003). Revictimization and self-harm in females who experienced childhood sexual abuse: Results from a prospective study. *Journal of Interpersonal Violence*, 18, 1452-1471.
- Nurius, P. S., Norris, J., Macy, R. J., & Huang, B. (2004). Women's situational coping with acquaintance sexual assault. *Violence Against Women*, *10*, 450-478.

- Porter, C. & Long, P. (1999). Locus of control and adjustment in female adult survivors of childhood sexual abuse. *Journal of Child Sexual Abuse*, 8, 3-25.
- Roodman, A. A. & Clum, G. A. (2001). Revictimization rates and method variance: A meta-analysis. *Clinical Psychology Review*, *21*, 183-204.
- Scher, C. D., Stein, M. B., Asmundson, G. J. G., McCreary, D. R., & Forde, D. R. (2001). The childhood trauma questionnaire in a community sample: Psychometric properties and normative data. *Journal of Traumatic Stress*, 14, 843-857.
- Scholz, U., Gutierrez-Dona, B., Sud, S., & Schwarzer, R. (2002). Is perceived self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment*, 18, 242-251.
- Schwarzer, R. & Jerusalem, M. (1993). Generalized Self-efficacy Scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.
- Silliman, M. (1993). Self-esteem and locus of control of women who report sexual abuse during childhood. *Psychological Reports*, 72, 1294.
- Simmons, J. T. & Weinman, M. L. (1991). Self-esteem, adjustment, and locus of control among youth in an emergency shelter. *Journal of Clinical Child Psychology*, 19, 277-280.
- Spaccarelli, S. (1994). Stress, appraisal, and coping in child sexual abuse: A theoretical and empirical review. *Psychological Bulletin*, 116, 340-362.
- Spitzberg, B. H. (1999). An analysis of empirical estimates of sexual aggression victimization and perpetration. Violence and Victims, 14, 241-260.
- Testa, M. & Dermen, K. H. (1999). The differential correlates of sexual coercion and rape. *Journal of Interpersonal Violence*, 14, 548-561.
- Tyler, K. A., Hoyt, D. R., & Whitbeck, L. B. (1998). Coercive sexual strategies. *Violence and Victims*, 13, 47-61.
- Valentine, L. & Feinauer, L. (1993). Resilience factors associated with female survivors of childhood sexual abuse. The American Journal of Family Therapy, 21, 216-224.
- Widom, C. S. & Kuhns, J. B. (1996). Childhood victimization and subsequent risk for promiscuity, prostitution, and teenage pregnancy: A prospective study. *American Journal of Public Health*, 86, 1607-1612.
- Wyatt, G. E., Guthrie, D., & Notgrass, C. M. (1992). Differential effects of women's child sexual abuse and subsequent sexual revictimization. *Journal of Consulting* and Clinical Psychology, 60, 167-173.

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