Revictimization and Self-Harm in Females Who Experienced Childhood Sexual Abuse

Results From a Prospective Study

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Lifetime trauma histories were ascertained for females with confirmed histories of childhood sexual abuse and comparison females participating in a longitudinal, prospective study. Abused participants reported twice as many subsequent rapes or sexual assaults (p = .07), 1.6 times as many physical affronts including domestic violence (p = .01), almost four times as many incidences of self-inflicted harm (p = .002), and more than 20% more subsequent, significant lifetime traumas (p = .04) than did comparison participants. Sexual revictimization was positively correlated with posttraumatic stress disorder symptoms (PTSD), peritraumatic dissociation, and sexual preoccupation. Physical revictimization was positively correlated with PTSD symptoms, pathological dissociation, and sexually permissive attitudes. Self-harm was positively correlated with both peritraumatic and pathological dissociation. Competing theoretical explanations for revictimization and self-harm are discussed and evaluated.

Keywords: *sexual abuse; rape; revictimization; self-harm*

Research over the past decade has documented a prospective link between rape and subsequent revictimization in short-term follow-up studies of adult victims (e.g., Gidycz, Hanson, & Layman, 1995; Kilpatrick, Acierno,

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Resnick, Saunders, & Best, 1997). The link between childhood sexual abuse and subsequent victimization that occurs later in adolescence or adulthood is less well understood. A growing body of research has documented associations between childhood sexual abuse and subsequent sexual victimization (see Messman & Long, 1996, and Briere & Runtz, 1987, for reviews; see also Arata & Lindman, 2002; Chu & Dill, 1990; Kessler & Bieschke, 1999; Koss & Dinero, 1989; Merrill et al., 1999; Messman-Moore & Long, 2000) and between childhood sexual abuse and later physical victimization including domestic violence (Arata, 1999; Collins, 1998; Gilbert, El-Bassel, Schilling, & Friedman, 1997; Krahe, Scheinberger-Olwig, Waizenhofer, & Kolpin, 1999; McClosky, 1997; Messman & Long, 1996). Other studies have documented higher rates of self-abuse or self-harm in childhood sexual abuse victims (Boudewyn & Liem, 1995; Romans, Martin, Anderson, Herbison, & Mullen, 1995; Van der Kolk, Perry, & Herman, 1991; Winchel & Stanley, 1991; Yeo & Yeo, 1993). Further, it appears that the co-occurrence of multiple types of child maltreatment (e.g., sexual abuse, physical abuse, child neglect) puts children at considerable risk for revictimization in adulthood (Briere, Woo, McRae, Foltz, & Sitzman, 1997; Dutton, Burghardt, Perrin, Chrestman, & Halle, 1994; Hillis, 2001).

Although the relationship between childhood abuse and subsequent revictimization and self-harm is beginning to receive attention, the methodological limitations of existing empirical studies have impeded attempts to systematically evaluate and understand these phenomena as causal sequelae of childhood sexual abuse. Primary among the limitations of previous research is that there have been no prospective studies following childhood victims through development, thereby making it difficult to evaluate the causal link between childhood sexual abuse and the development of later, subsequent revictimization. Much of the evidence for this link comes from retrospective cross-sectional studies of adults. The limitations imposed by retrospective cross-sectional designs have made it difficult to go beyond speculation in understanding the dynamics of revictimization.

Definitions of revictimization have varied with some studies limiting outcome variables to rape, other studies broadening the definition to include physical assault or any criminal victimization, and still others including self-harm as a type of revictimization. Although self-harm, suicide, and self-destructiveness (including risk taking, self-defeating behavior, and eating disorders) have been studied as forms of revictimization (Chewning-Korpach, 1993; Messman & Long, 1996; Sandberg, Lynn, & Green, 1994; Van der Kolk, 1989), the current study distinguishes self-harm and revictimization as separate but related behaviors. We operationally define *victimization* (either sexual or physical) as harm perpetrated by an outside source that

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serves as a reenactment of the initial abuse. Self-harm, on the other hand, implies a direct reenactment inflicted by the survivor herself and represents a certain internalization of the trauma. Therefore, self-harm is not considered a category of revictimization but will be studied as a separate and distinct phenomenon.

Even within each category of victimization or self-harm, definitions vary; for example, some studies limit sexual abuse to contact abuse, whereas others extend it to all types of inappropriate sexual conduct. Further, sample selection, data collection, and measures are widely divergent. Clearly, standardization of definitions based on a coherent theoretical framework is required. Studies need to be replicated using the same instruments and methodologies across samples. Moreover, longitudinal designs are needed to better understand mechanisms and dynamics that operate to increase the vulnerability of child sexual abuse victims to future sexual victimization. The current study was designed to address these issues. Specifically, the current study employed a prospective, longitudinal design to investigate the relationship of childhood sexual abuse to subsequent physical and sexual victimization and self-inflicted harm. In addition, to avoid the definitional problems that have plagued previous studies, particular attention was paid to the operational definitions of childhood sexual abuse, revictimization, and self-harm.

The lack of longitudinal studies has made the theoretical literature addressing revictimization and self-harm highly speculative. Thus, a coherent, empirically based literature specifically addressed to understand these phenomena has not yet emerged. Rather, a number of more general theories to explain the impact of trauma (and, more specifically, sexual abuse sequelae) have emerged. Models of traumatic etiology have focused on cognitive, affective, behavioral, and biological responses to the experience of traumatic events. Most theoretical models do not fall clearly within one domain but overlap many (see, e.g., cognitive analytic therapy, Clarke & Llewelyn, 1994). Indeed, revictimization and self-harm are likely to be multidetermined both across individuals and within a given individual. Nonetheless, it will be important to examine the mechanisms underlying these models in the service of eventually moving toward an empirically based framework for understanding the development and treatment of revictimization. Three different types of mechanisms are considered: dissociation, posttraumatic stress disorder (PTSD), and sexualized behavior.

Dissociation is a psychophysiological process whereby information—either incoming, outgoing, or stored—is actively deflected from integration with its usual or expected associations. Such a process, which may range from normal daydreaming to the extreme of multiple personality disorder, has been found empirically to occur more frequently in victims of sexual

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abuse (Putnam, 1997, 2000). Higher rates of dissociation have also been found in victims of multiple rapes and in adults evidencing self-cutting behavior (Putnam, Helmers, Horowitz, & Trickett, 1995; Van der Kolk et al., 1991; Zlotnick et al., 1994).

Dissociation has been implicated as a factor that leads to the development of revictimization. Although dissociation is thought to be useful initially as an escape from the negative affect elicited by trauma, persisting or pathological dissociation may lead to a greater vulnerability to reenactment, because the use of dissociation prevents victims from engaging in self-protective measures (see Zlotnick et al., 1994). Sandberg et al. (1994) noted that the more dissociation is used as a defense against repeated trauma, the more likely it is that the individual will use dissociation as a primary defense in adulthood. By blocking or distorting threatening material from entering conscious awareness, individuals may be less able to process danger cues and may be less likely to experience the anticipatory anxiety that normally signals the presence of danger.

Dissociation during the traumatic event is referred to as peritraumatic dissociation (Marmar, Weiss, & Metzler, 1997) and is thought to be a primitive coping mechanism that protects the child from being psychologically overwhelmed by the abusive event. When a victim dissociates from a trauma at the time of its occurrence, the memories of the event may be fragmented and inadequately assimilated with other memories, and this, in turn, can impede the victim's ability to accommodate to the traumatic experience. It has been proposed that the memory disruption associated with the tendency to dissociate peritraumatically leaves the abuse victim with an inability to learn from traumatic experiences and may make it difficult to bring the most informed judgment to bear when faced with a potentially dangerous situation (Chu, 1992). Thus, peritraumatic dissociation may lead to a proneness to reenact the trauma (Irwin, 1999).

As there are several aspects to the broad array of behaviors associated with PTSD, there are several reasons why PTSD symptomatology might be related to increased rates of reenactment. A victim who is experiencing avoidant symptoms may be prone to making inaccurate or uninformed decisions regarding potential danger because of the fact that the trauma has been denied, minimized, or otherwise not fully integrated. The reexperiencing symptoms can lead to a repetition compulsion where the failure to accommodate to a traumatic experience may lead to a subconscious drive to reenact the experience to achieve a sense of mastery over the original trauma (Van der Kolk, 1989). Avoidant symptoms are often facilitated, and reexperiencing symptoms are often numbed by alcohol and drug use, which can serve to impair judgment and defensive strategies. The concentration problems,

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distractibility, sleep disruption, and hyperarousal associated with arousal symptoms may interfere with recognizing, attending to, or reacting to danger cues appropriately. Studies have shown that adult survivors who experienced subsequent victimization reported more lifetime PTSD symptoms than survivors who had no revictimization (Arata, 1999; Sandberg, Matorin, & Lynn, 1999).

Sexual abuse may have a unique impact on sexual attitudes and activity as it may serve to shape the child's sexuality in developmentally inappropriate and dysfunctional ways (Finkelhor & Baron, 1986; Russell, 1986). From abuse experiences, the child may learn an inappropriate repertoire of sexual behaviors in addition to confusion regarding sexual morality. Moreover, the experience of being privileged or rewarded by the perpetrator may cause a child to use sexual behavior to manipulate others in a relationship (Messman & Long, 1996). Recent studies have documented the association of childhood trauma with increased sexualized behaviors and attitudes (Hillis, 2001; Noll, Trickett, & Putnam, 2000, 2003). These results suggest that there may be an increase in the exposure to highly sexed environments and an inordinate encouraging of unwanted sex advances that, in turn, increase the chance of encountering a perpetrator of assault (Sandberg et al., 1994).

The purpose of this study was to investigate the unique relationship of childhood sexual abuse to subsequent physical victimization, sexual revictimization, self-injurious behavior, and lifetime histories of significant traumas using a prospective, longitudinal design. In addition, we sought to better understand the dynamics of subsequent victimization by exploring PTSD symptoms, dissociative experiences, and sexualized attitudes as possible mediators of revictimization.

It was expected that child sexual abuse victims would have experienced higher rates of adult sexual assault, physical assault, self-injurious behavior, and significant lifetime traumas than comparison participants. PTSD symptoms, dissociative symptoms (concurrent and peritraumatic), and sexualized attitudes would be predictive of revictimization and self-harm.

METHOD

Participants

Participants were respondents in a longitudinal study of the psychobiological impact of child sexual abuse on female development that began in 1987 (Putnam & Trickett, 1987). Abused females were referred by protective service agencies in the greater Washington, D.C., metropolitan

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area. Eligibility criteria for inclusion in the study included the following: (a) the victim was female aged 6 to 16; (b) disclosure of referring abuse occurred within 6 months of participation; (c) sexual abuse involved genital contact and/or penetration; (d) the perpetrator was a family member including a parent, stepparent, mother's live-in boyfriend, or other relative; and (e) a non-abusing parent or guardian (usually the child's mother) was willing to participate. Information on the nature of the abuse was obtained from protective service files. Data compiled from these records indicated that the median age at the onset of abuse was between 7 and 8 years and the median duration of abuse was 2 years. In 70% of the cases, the abuse included vaginal or anal penetration; in all cases, it involved genital fondling. In about 60% of the cases, the abuser was the biological father, stepfather, or mother's live-in boyfriend. It is not possible to estimate with precision how similar the sample is to the average caseloads of protective service agencies; however, the information on the perpetrators, the average age of onset, and the average duration is similar to comparable information reported in national surveys of protective services caseloads (National Center of Child Abuse and Neglect, 1988).

Childhood sexual abuse was defined as sexual contact abuse involving breasts or genitals by a family member, the onset of which occurred before the age of 14 (all abused participants experienced the onset of abuse prior to age 14, thus, all are included in analyses). Fourteen years was used as a cut-off (victimization before age 14 constitutes childhood sexual abuse; victimization at 14 years or older constitutes sexual revictimization in adolescence or adulthood) for several reasons. By the age of 14, young girls have entered adolescence and are significantly more independent than they are during latency. Parents have less information concerning their children's activities and control of their behavior from this time forward. Most girls have reached puberty by the age of 14 and have many adult sexual characteristics. Finally, using 14 as a cut-off permits the inclusion of sexual aggression by adolescent peers within the category of sexual assault.

A group of comparison females was recruited via community advertising and was similar to the abused participants in terms of ethnic group, age, predisclosed socioeconomic status (SES), family constellation (one- or two-parent families), zip codes, and other nonsexual traumas. All families ranged from low to middle socioeconomic status with mean Hollingshead (1975) scores of approximately 35 (defined as blue-collar or working class).

At the initial assessment (Time 1), the sample consisted of 84 abused participants and 82 comparison participants to constitute the total sample of 166 (mean age = 11.11, SD = 3.02). Two follow-up interviews (Times 2 and 3) were conducted at 1-year intervals after the initial assessment, and a third follow-up (Time 4) was conducted 4 to 5 years subsequent to Time 3. Because of

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differential attrition rates in age, ethnicity, and SES (i.e., older, nonminority, lower SES participants dropped out by Time 4), 21 new comparison participants were recruited for participation at Time 4, all of whom were selected to balance out these subsample demographic discrepancies.

With the exception of the details of the childhood sexual abuse, data for the current analyses were taken from measures given at the Time 4 assessment (an average of 7 years after the initial assessment). The sample at Time 4 consisted of 163 participants—142 original participants and 21 new recruits for the comparison group (74 abused, 89 comparison)—resulting in an 85.5% retention rate (142/166). Four comparison participants were dropped from these analyses, because they experienced some form of sexual assault prior to entry into the study. As described above, only revictimization and self-harm rates for those over the age of 14 were considered. Nineteen participants were under the age of 14 at Time 4 and were dropped from current analyses. Therefore, the final sample for analysis consisted of 70 participants with reported histories of childhood sexual abuse and 70 comparison participants (N = 140).

The present sample was 50.01% minority (abused = 45.71%, comparison = 54.29%), reported an average Hollingshead (1975) score of 36.79 (SD = 12.35; abused = 38.06, SD = 13.30; comparison = 37.11, SD = 10.59) and ranged in age from 14.63 to 25.91 with a mean age of 18.81 (SD = 3.01; abused = 18.99, SD = 3.11, comparison = 18.61, SD = 2.93). There were no statistical differences in demographics across groups.

Measures

Comprehensive Trauma Interview (CTI). The CTI is a semistructured interview developed by Horowitz (1998) that seeks to elicit factual information concerning traumatic or upsetting life events as well as subjective responses to those events. The CTI is based on similar interviews previously tested with adolescents (Krinsley et al., 1994). The CTI is broad relative to other existing interviews, because it assesses a wide range of traumatic events, greater detail about these events, and is designed to obtain subjective ratings of how upsetting each traumatic experience was for the participant relative to a significant trauma or very upsetting event.

The first section of the interview required participants to recall and discuss their worst trauma or the most disturbing experience they have had over their lifetime. Participants were asked to speak for several minutes about the "most distressing event or series of events they had ever experienced." Interviewers were trained to help participants narrow down this worst trauma to one spe-

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cific event or category of events on which to focus. Once the focus was established, participants were asked to describe the event(s) in as much detail as possible for approximately 5 to 6 minutes or however long they would need to adequately describe the event(s). Following this spontaneous discourse, participants were asked to rate the event(s) on a scale from 1 (*not upsetting at all*) to 5 (*the most upset I have been*).

The second section assessed current and past PTSD symptomatology based on *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*) (American Psychiatric Association, 1994) criteria (described below) regarding the most distressing event or a similar event. Participants were also questioned concerning peritraumatic dissociation or dissociation occurring at the time of the distressing event via the Peritraumatic Dissociative Experiences Questionnaire (described below) also concerning the most distressing event(s) just previously disclosed.

In the third section, participants were questioned concerning the nature and extent of traumatic experiences across generally accepted domains of childhood trauma including (a) separations and losses including significant changes in residences or having family or friends move away, become very sick or die, or struggle with drug or alcohol problems; (b) physical and/or medical neglect; (c) emotional abuse and/or rejection by family; (d) physical abuse including excessive punishment; (e) other physical harm including being beaten up by other kids or gangs, being mugged, physical assault by a domestic partner, or other serious physical harm; (f) self-inflicted harm including self-mutilation and/or suicide attempts; (g) sexual abuse and/or sexual assault; (h) natural disasters; and (i) witnessing violence including seeing others harmed or abused, witnessing a serious accident, or being close to others who were seriously hurt.

Along with the specific detail of each traumatic experience, participants were asked to indicate their age at the time of the trauma (or age at onset and age at offset), the identity and ages of the parties involved (e.g., perpetrators, victims, etc.), how close they were to the parties at the time, and how distressing the event was for the participant. For this distress rating, participants were again asked to rate the event from 1 (*not upsetting at all*) to 5 (*the most upset I have been*) and were reminded of the rating they gave their most distressing event at the beginning of the interview. By having participants subjectively rate each lifetime trauma and by anchoring these ratings to the worst or most distressing eventof life, it is possible to ascertain which events are significant traumas and which are more minor in the subjective experience of the participant. Participants received 1 point for every trauma that was given a subjective distress rating of 4 or 5. These points were added up resulting in a

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comprehensive index of the number of significant lifetime traumas. For sexually abused participants, this number represents the number of significant lifetime traumas *subsequent to being sexually abused*. Traumatic events that occurred prior to sexual abuse were not counted, as these could not be considered subsequent traumas.

Rape or sexual assault. Information concerning sexual assault or rape was obtained from participants at Time 4 using information gleaned from the CTI. For purposes of this study, *rape or sexual assault* was defined as sexual contact and/or rape or attempted rape by a nonfamily member when the victim was 14 years or older (1 = experienced at least one episode, 0 = zero episodes).

Physical revictimization. Questions concerning physical revictimization were asked during the CTI. Specifically, participants were asked about incidents in which they had been beaten up by people, mugged, physically hurt by a domestic partner or boyfriend, or were seriously hurt in any other way. Incidents occurring after the age of 14 were considered and were coded as 1 = experienced at least one episode and 0 = zero episodes.

Self-harm. Questions concerning self-injury or self-harm were contained in the CTI. Participants were asked if they had ever tried to hurt themselves in any way with follow-up questions to determine the nature and severity of the self-injury. Because of difficulties assessing intent, incidents were not screened according to lethality. Thus, for purposes of this study, *self-harm* was deemed to include incidents of attempted suicide as well as efforts to inflict pain or injury (including self-mutilation such as cutting behaviors). This question was added to the CTI only after some of the initial participants admitted to these kinds of behaviors in other sections of the questionnaire. Therefore, the first 21 participants did not receive questions regarding self-harm. Incidents occurring after the age of 14 were considered and were coded as 1 = experienced at least one episode and 0 = zero episodes.

Sexual Activities and Attitudes Questionnaire (SAAQ). This computer-administered measure of sexual attitudes and voluntary sexual activity was developed by Noll, Trickett, and Putnam (2000, 2003) and includes several items from the Sex Activity Questionnaire for Girls and Boys (Udry, 1988) and the Fear of Sex subscale from the Children's Impact of Traumatic Events Scale (Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991). Two subscales were

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used in the present analyses: (a) Sexual Permissiveness (alpha = .96), including permissive attitudes toward (and a high desire for and probability of engaging in) light petting, heavy petting, and voluntary intercourse; and (b) Sexual Preoccupation (alpha = .91), including positive attitudes toward and a high frequency of masturbation, being turned-on by pornographic pictures or sexual themes, and thinking about sex frequently.

Dissociation. The Adolescent Dissociative Experiences (ADES) (Armstrong, Putnam, Carlson, Libero, & Smith, 1997) assesses the self-reported general dissociative experiences of adolescents (e.g., experiences of amnesia, perplexing forgetfulness, absorption and enthrallment, depersonalization and derealization, and passive influence phenomena) while not under the influence of alcohol or drugs (alpha = .89). Following Waller, Putnam, and Carlson (1996), 8 ADES items were used to form a Pathological Dissociation Taxon Scale (ADES-T).

Peritraumatic dissociation. Retrospective reports of peritraumatic dissociation were obtained utilizing the 10-item Peritraumatic Dissociative Experiences Questionnaire (PDEQ) (Marmar et al., 1997). As part of the CTI (described above), participants were asked to rate their dissociative behavior during or immediately following the worst lifetime traumatic event(s) (alpha = .88).

PTSD symptoms. The PTSD Symptoms Scale was derived from Davidson, Kudler, and Smith (1989) but was modified to be *DSM-IV* compliant (alpha = .88). These 18 questions were administered as part of the CTI (described above) and concern the worst lifetime trauma. Participants received 1 point for every symptom endorsed.

Procedures

Participants completed measures as part of a 3- to 4-hour session designed to assess a host of physical, psychological, and social development variables. A trained clinical interviewer administered the semistructured CTI after a 15-minute break following the computerized administration of the SAAQ. Those under the age of 18 were accompanied by a nonabusing caretaker. The caretaker was not present in the room when the assessments took place. Monetary compensation was awarded at the rate put forth by the National Institutes of Health Normal Volunteer Program.

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RESULTS

Several revictimization types correlated with demographics at the zero order. Sexual assault was associated with higher ages (r = .25, p < .001); physical revictimization was associated with higher ages (r = .31, p < .0001), lower SES (r = –.22, p < .01), and greater minority status (r = .15, p = .05); and the number of significant lifetime traumas was associated with higher ages (r = .19, p < .001). Because of these associations, age, SES, and minority status were covaried in all subsequent analyses.

A main effect for group was revealed in an omnibus MANOVA model where sexual revictimization, physical revictimization, and self-harm were modeled as dependent variables and age, SES, and minority status were covaried, F(4, 129) = 3.22, p = .01. Table 1 demonstrates that post-hoc univariate tests revealed (a) abused participants reported slightly more sexual assault or rape than did comparison-group participants, F(1, 136) = 3.18, p = .07, (b) abused participants were significantly more likely to have reported some form of physical revictimization than were comparison participants, F(1, 136) = 6.58, p = .01, (c) abused participants were significantly more likely to engage in self-harm than comparison participants, F(1, 115) = 12.72, p = .002, and (d) abused participants reported a greater number of significant lifetime traumas than did comparison participants, F(1, 136) = 9.08, p = .04. For comparison purposes, the means for each group are presented in Table 1 in terms of the percentage of occurrence for each dependent variable. p values correspond to the post-hoc univariate tests following the omnibus test for a group main effect.

Partial correlations of revictimization and self-harm with theoretical predictor variables are reported in Table 2. Lifetime PTSD symptoms correlated with revictimization in the form of rape (r = .18), physical victimization (r = .25), self-harm (trend, r = .17), and the number of significant lifetime traumas (r = .34). Pathological dissociation (ADES-T) correlated with physical victimization (r = .26) and self-harm (r = .21). Peritraumatic dissociation correlated with all forms of victimization and self-harm. However, when the high association between peritraumatic dissociation and current pathological dissociation (r = .32, p < .001) was also covaried, physical revictimiation was no longer significantly correlated with peritraumatic dissociation. Sexual permissiveness was positively correlated with physical victimization (r = .18) and the number of significant lifetime traumas (r = .19). Sexual preoccupation was positively correlated with rape or sexual assault (r = .15).

To discern the unique association between childhood sexual abuse and subsequent victimization, we sought to examine the association between retrospective, self-reported forms of other types of childhood maltreatment

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TABLE 1: Adjusted Revictimization and Self-Harm Rates Across Sexually Abused and Comparison Groups

	Total N = *140*	*Abused* n = *70*	*Comparison* n = *70*	p *Value*
Percentage experiencing rape or sexual assault	15.5	20.9	10.0	.07
Percentage experiencing physical victimization or domestic violence	41.5	51.4	31.5	.01
Percentage inflicting self-harm	20.5	32.2	8.8	.002
Number of significant (subsequent) lifetime traumas	5.48	6.13	4.83	.04
(standard deviation)	(3.94)	(4.34)	(3.42)	

NOTE: Adjustments made for minority status and socioeconomic status. *n* for self-harm = 119, abused = 62, and comparison = 57. *p* values correspond to post-hoc univariate tests of group differences following the detection of a group main effect in the omnibus test.

TABLE 2: Partial Correlations of Revictimization Types and Self-Harm With Posttraumatic Stress Disorder (PTSD), Pathological Dissociation, and Peritraumatic Dissociation (Age, Minority Status, and Socioeconomic Status Partialled; *N* = 140)

	PTSD	*ADES-T*	*PDEQ*[a]	*Sexual Permissiveness*[b]	*Sexual Preoccupation*[b]
Rape or sexual assault	.18**	.02	.23***	.10	.15**
Physical victimization or domestic violence	.25***	.26***	.12	.18**	.05
Self-harm	.17*	.21***	.23**	.08	.04
Number of significant lifetime traumas	.34***	.13	.21**	.19**	.06

NOTE: *n* for self-harm = 119, abused = 62, and comparison = 57. ADES-T = Adolescent Dissociative Experience Scale Taxon; PDEQ = Peritraumatic Dissociative Experiences Questionnaire.
a. ADES-T also partialled.
b. Marital or cohabitation status also partialled.
*$p < .10$. **$p < .05$. ***$p < .01$.

(measured by the CTI) and these variables. It should be noted that, unlike reports of childhood sexual abuse, these reports were not prospective, verified, or corroborated, and these results should be interpreted with caution. Results depicted in Table 3 indicate that all forms of childhood maltreatment were associated with the number of significant lifetime traumas. These associations are not at all surprising given that this variable is a composite of all significant traumas experienced including physical abuse, neglect, and emo-

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TABLE 3: Partial Correlations of Revictimization Types and Self-Harm With Other Forms of Childhood Maltreatment (Age, Minority Status, and Socioeconomic Status Partialled)

	Physical Abuse	*Neglect*	*Emotional Abuse*
Rape or sexual assault	.01	.10	.19*
Physical victimization or domestic violence	.18*	.24**	.13
Self-harm	.13	.06	.04
Number of significant lifetime traumas	.42**	.41**	.28**

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

tional abuse in childhood. However, additional results indicated that physical abuse and neglect were each positively correlated with subsequent physical victimization, and emotional abuse was positively correlated with subsequent sexual assault. None of these alternative forms of child maltreatment was associated with self-harm.

Logistic regression models were tested to discern whether variables representing hypothesized domains predict unique portions of revictimization and self-harm variance when in company with one another. Table 4 shows that emotional abuse was the only marginally significant predictor (trend, odds = 3.18, p = .06) of rape or sexual assault with 81.8% of the cases correctly classified. Childhood neglect (trend, odds = 4.12, p = .07), ADES-T scores (odds = 1.08, $p < .05$), and sexual permissiveness (trend, odds = 1.04, p = .08) were predictors of physical victimization or domestic violence with 84.5% of cases correctly classified. Self-harm was significantly predicted by both sexual abuse (odds = 5.64, $p < .01$) and ADES-T scores (odds = 1.07, $p < .05$) with 81.0% of cases correctly classified. Because the number of significant lifetime trauma was measured as a continuous dependent variable, a multiple regression model was tested in a similar manner, and physical abuse (Beta = .32, $p < .01$) and neglect (Beta = .35, $p < .01$) were significant predictors.

DISCUSSION

The aim of this study was to rigorously examine the prevalence of multiple forms of revictimization and self-harm, to better understand the nature and incidence of these phenomena, and to test theoretical models that have been posited to help explain each. This is the first prospective study following a child sample from the reporting of sexual abuse in childhood through adolescence and into early adulthood to report on victimization and self-harm rates. Analyses showed that, compared to nonabused participants, sexually

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TABLE 4: Logistic and Multiple Regression Models of Variables From Distinct Domains Predicting Revictimization and Self-Harm

Domain	*Sexual Assault or Rape (Odds Ratio)*	*Physical Victimization (Odds Ratio)*	*Self-Harm (Odds Ratio)*	*No. of Significant Lifetime Traumas (Beta)*[a]
Demographics				
Age	1.12	1.26**	1.06	–.02
Socioeconomic status	0.99	0.94**	0.98	.05
Minority status	1.20	1.02	0.71	.02
Married/cohabitating	0.56	0.74	0.86	.08
Maltreatment type				
Sexual abuse	1.70	1.66	5.64***	.02
Physical abuse	0.39	1.89	2.26	.32***
Neglect	2.11	4.12*	0.74	.35***
Emotional abuse	3.18*	1.27	0.57	.16
Predictors				
PTSD symptoms	1.05	1.00	1.00	.16
ADES-T	0.99	1.08**	1.07**	.02
PDEQ	1.36	1.02	1.04	.09
Sexual permissiveness	1.03	1.04*	1.04	.09
Sexual preoccupation	1.02	0.97	0.96	–.11
Model fits	81.8%	84.5%	81.0%	$R^2 = .53$

NOTE: Number of lifetime traumatic events is a continuous dependent variable, therefore, a multiple regression model was tested and standardized Beta weights are presented along with an R^2 for model fit. Logistic regression models were tested for all other dichotomous dependent variables (sexual assault or rape, physical victimization, and self-harm) and odds ratios and model fits in terms of the percent of cases correctly classified are presented. PTSD = posttraumatic stress disorder; ADES-T = Adolescent Dissociative Experience Scale Taxon; PDEQ = Peritraumatic Dissociative Experiences Questionnaire.
a. Standardized Beta weights shown.
**p* < .10. ***p* < .05. ****p* < .01.

abused participants were twice as likely to have been raped or sexually assaulted, almost four times as likely to have inflicted subsequent self-harm (in the form of suicide attempts or self-mutilation), reported significantly higher rates of physical revictimization (including domestic violence), and reported a greater number of significant subsequent lifetime traumas than comparison participants. When alternative forms of childhood maltreatment were taken into account, childhood sexual abuse was a unique predictor of self-harm.

Concurrent pathological dissociaton was shown to be predictive of physical victimization when in the company with variables from several theoreti-

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cally distinct domains. These results indicate that a persistent reliance on dissociation as a coping mechanism can place participants at increased risk for physical harm. Thus, victims who adopt pathological dissociation as the primary defense strategy in adolescence or adulthood may be less able to engage in self-protection when physically threatened. Dissociation has been thought to be associated with suicide and self-injurious behaviors, and these results confirm this association (Brodsky, Cloitre, & Dulit, 1995). Self-harm may not be a direct response to sexual abuse but to the dissociative experiences that result from efforts to cope with the abuse.

Results also indicate that being sexually active or believing that sexual activity is permissible can increase one's vulnerability for physical victimization. Although the predictive power of this variable is reduced to the trend level when in company with variables from other domains, the examination of sexually permissive attitudes may provide insight into the occurrence of physical harm. Such individuals may be sending out signals that inadvertently communicate a willingness to engage in sexual activity in the face of emotional or physical immaturity. Sexually permissive attitudes can be interpreted as green lights to potential victimizers who wish to exploit others. Also, excessive sexual activity often leads to sexual risk-taking behaviors (e.g., multiple partners, younger ages at coital initiation), placing victims in situations where various types of victimization are more apt to occur.

Sexual preoccupation was positively correlated with being raped or sexually assaulted. However, this association represents some overlap with variables from other theoretical domains and was not a unique predictor of sexual revictimization in the full logistic model. Sexual preoccupation is a condition in which sexual thoughts are easily or readily introduced into consciousness even when they are unwanted or unexpected. The repetition compulsion resulting from an association between sex and nurturing may take the form of continued recreations of sexual feelings and arousal independent of any sexual acting out. Such victims may view themselves as damaged goods and lack the self-efficacy and personal control to ward off unwanted sexual advances. Unable to glean emotional rewards from romantic relationships, these victims may confuse sex with intimacy thus placing themselves at higher risk for sexual exploitation.

The incidence of self-harm in sexual abuse victims was quite dramatic. Being sexually abused was, by far, the strongest predictor of self-harm even when in company with other forms of child maltreatment. Some of the dynamics offered by theorists to explain these behaviors include attempts at communicating internal pain, ways of claiming power over one's body, a means of affect regulation, efforts to end feelings of depersonalization, self-stimulation, and enactment of feelings of worthlessness or shame (Osuch,

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Noll, & Putnam, 1999; Winchel & Stanley, 1991). In addition, biological factors have been postulated as playing a role in self-harm with research focusing on dopamine, opiate, and serotonin systems (Winchel & Stanley, 1991).

Sexually abused participants may be reenacting the abuse perpetrated on them by placing themselves in the role of perpetrator. The experience of sexual abuse may be associated with strong negative feelings about one's own body such that abused girls may possess an underlying desire to experience pain or bodily disfigurement. Professionals should be alert to suspicious injuries that, although not necessarily a marker for sexual abuse, should raise suspicions and warrant questioning of deeper traumatic histories.

It is possible that the present sample of sexually abused females may not be representative of the entire abused population. First, the *N* is relatively small and the sample is entirely female. Also, this sample may be biased as a result of the requirement that all participants be referred to protective services and have a nonabusing caretaker as a willing participant. Those cases that have gone unreported or families with little support from a nonabusing party may characterize the more disturbed of the abused population and are not well represented here. Further, although the attrition rate is impressive relative to other longitudinal studies of high-risk populations, it is possible that the most disturbed of the abused population did not return. If these assumptions hold true for the general population of abused females, then the results of this study may be relatively conservative as there may be substantial attenuation in findings because of the assumption that only the highest functioning victims have been assessed.

It is also important to note that data concerning revictimization were provided by self-report and was not validated through other sources such as hospital records or police reports. Given the relatively small number of sexual and physical assaults that are actually reported to the police and the low lethality of many self-injuries, however, it is unlikely that such data could be effectively corroborated in any study.

This study is the first to provide empirical support for revictimization of childhood sexual abuse survivors in a primarily adolescent and early adult sample who have been repeatedly assessed for more than 7 years post-disclosure. As such, it provides disturbing data on the prevalence and early onset of revictimizing experiences and self-harm rates within the sample of abused participants. It is essential that therapists, social workers, and other professionals working with sexual abuse victims be aware of these risks. Educational and therapeutic interventions should be undertaken at an early age, particularly for those children exhibiting symptoms such as sexually permissive attitudes, sexual preoccupation, persisting pathological dissociation, and PTSD.

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This study provides strong support for the prevalence of revictimization of child sexual abuse victims at a relatively young age. The elevated rates of sexual assault, physical victimization, self-harm, and traumatic histories among sexually abused adolescent and young adult victims is stark evidence of the traumatic and persistent consequences of childhood sexual abuse. The study also highlights the complexity of research in this area given the multiple pathways and many influences in children's lives. Although it is imperative that research efforts be directed at understanding and preventing abuse itself, it is also essential that research addresses the sequelae of abuse. The alarming rates of revictimization and self-harm highlight the need for better and more targeted services to meet the critical needs of this population.

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