The Relationships Between Childhood Sexual Abuse, Social Anxiety, and Symptoms of Posttraumatic Stress Disorder in Women

Margaret M. Feerick¹,² and Kyle L. Snow¹

The relationships between childhood sexual abuse, social anxiety, and symptoms of posttraumatic stress disorder were examined in a sample of 313 undergraduate women. Thirty-one percent of the women reported some form of sexual abuse in childhood. Women with a history of sexual abuse reported more symptoms of anxiety, distress in social situations, and posttraumatic stress disorder than other women. Women who experienced attempted or actual intercourse reported more avoidance than women with no history of abuse and women with exposure only, and more PTSD symptoms than all other groups of women. Women who experienced fondling reported more PTSD symptoms than women with no history of abuse. Pressure, age of onset of abuse, abuse by a family friend, and abuse by other perpetrators were all significant abuse characteristics in predicting adult social anxiety. Implications of these results for research and interventions are discussed.

KEY WORDS: childhood sexual abuse; long-term effects; social anxiety; PTSD.

Childhood sexual abuse has been increasingly recognized as a major issue in the lives of women. Data from official sources suggest that more than 80,000 children are victims of substantiated sexual abuse each year and more than 300,000 are harmed or endangered by sexual abuse (U.S. Department of Health and Human Services, 1996, 2003). Among women, estimates of the prevalence rate of childhood sexual abuse have ranged from 2 to 75% depending on both the definition and particular sample used (Finkelhor, 1994; Polusny & Follette, 1995). Although determining the exact number of children sexually abused is a continuing challenge, recent years have seen an explosion in the number of studies designed to examine the short- and long-term effects of sexual abuse when it does occur.

CONSEQUENCES OF CHILDHOOD SEXUAL ABUSE

Victims of childhood sexual abuse suffer from a variety of short- and long-term consequences in cognitive, affective, and behavioral domains (see reviews by Beitchman et al., 1991, 1992; Cahill et al., 1991; Kendall-Tackett et al., 1993; Neumann et al., 1996; Oddone Paolucci et al., 2001). Several researchers have reported associations between sexual abuse and somatic complaints (e.g., eating and sleep disturbances), anxiety, interpersonal difficulties, feelings of isolation, inappropriate sexual behavior, increased risk for victimization, suicidal behavior, delinquency, depression, and self-destructive behavior (e.g., Abdulrehman & DeLuca, 2001; Basta & Peterson, 1990; Briere, 1992; Douglas, 2000; Gomes-Schwartz et al., 1990; Green et al., 1999; Kolko & Moser, 1988; Lipman et al., 2001; Lipovsky et al., 1989; Mannarino et al., 1989; Messman-Moore et al., 2000; Pillay & Schoubben-Hesk, 2001; Romans et al., 2001; Schechter et al., 2000; Tremblay et al., 2000; Zweig et al., 1999). In a study of sexual abuse among adolescent girls aged 13–18 years, Pillay and Schoubben-Hesk (2001) found that abused girls scored significantly higher than

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nonabused girls on scales of depression, hopelessness, and anxiety, a finding consistent with earlier research by Bendixen et al. (1994) showing that a history of sexual abuse was associated with increased levels of anxiety, depression, feelings of shame and guilt, fear of persons of the opposite sex, and suicidal ideation among a sample of college students.

Some researchers have observed effects of child sexual abuse that indicate a range of difficulties in social and interpersonal situations. These include such short-term effects as fear, anger/hostility, guilt, shame, low self-esteem, poor social functioning, and posttraumatic stress disorder (see Beitchman et al., 1991; Cahill et al., 1991; Kendall-Tackett et al., 1993; and Neumann et al., 1996, for reviews). Adults who experience childhood sexual abuse also show more social adjustment problems in the form of fewer friends and social contacts (Abdulrehman & DeLuca, 2001), and in higher levels of social phobia (Chartier et al., 2001). Other research has suggested that women with a history of childhood sexual abuse are more anxious as parents (e.g., Douglas, 2000). Abused children often feel stigmatized, isolated, and different from others around them (Beitchman et al., 1992; Briere, 1992). Raczek (1992) examined the association between childhood sexual abuse and the development of social dysfunction in the form of personality disorders. Results revealed that the abused subjects were twice as likely as nonabused subjects to have personality disorders. Raczek contended that the high number of subjects with borderline and antisocial personality disorders reflected abuse that resulted in the development of aggression, impulsiveness, emotional instability, difficulty in interpersonal relationships, antisocial behavior, and a tendency toward self-destructive behavior.

Sexual Abuse and Posttraumatic Stress

Posttraumatic stress disorder (PTSD) is a psychiatric diagnosis consisting of three general symptom categories: (1) feelings of re-victimization or re-experiencing the initial trauma, (2) avoiding traumatic event-related stimuli, and (3) increased arousal and attentional problems. Initially identified as a response to the trauma experienced in wartime, PTSD is now considered as possibly resulting from any number of traumatic experiences. As McCloskey and Walker (2000) point out, PTSD is a somewhat unique psychiatric identification because it is linked specifically to an experienced event: the person must have experienced and lived through a traumatic event. The specific nature of the “necessary” event may depend upon a number of features, including the actual or real severity of the trauma, the developmental epoch during which it occurs, and its frequency and chronicity. Although difficult to accurately quantify, epidemiological studies suggest that PTSD afflicts 3-4% of adults (Heltzer et al., 1987).

Putnam and Trickett (1993) provide a review of research showing childhood sexual abuse as representing a form of chronic trauma. This framework provides additional context for early work that examined childhood sexual abuse as a traumatic experience analogous to those that result in PTSD (Finkelhor & Browne, 1985; Goodwin, 1988). A large body of research with diverse samples has found relationships between experiences of childhood sexual abuse and symptoms of PTSD (e.g., Elliott & Briere, 1992; Goodwin, 1988; Matsunaga et al., 1999; McLeod et al., 1992; McLeod et al., 1994; Lindbergh & Distad, 1985; Roesler & McKenzie, 1994; Williams, 1993). Indeed, although PTSD is most frequently associated with war veterans, Elhai et al. (2000) found that war veterans and survivors of childhood sexual abuse had similar clinical presentations on the MMPI-2. In this conceptualization, childhood sexual abuse can be seen as a stressor that triggers social anxiety in certain people (Davis & Siegel, 2000).

There may be important differences, however, between the trauma of war or specific violence and the trauma of sexual abuse. First, Putnam and Trickett (1993) point out that unlike many other forms of trauma, childhood sexual abuse is characterized by a pervasive threat and is often chronic in nature, with a large literature indicating the high frequency of abuse once it is experienced. Terr (1991) has argued that trauma related to single events (Type I) is likely to lead to PTSD, whereas trauma that results from chronic events (Type II) leads to coping mechanisms which may evolve into personality or interpersonal problems later in life. Also, unlike the traumatic events associated with PTSD as it occurs in war veterans, a sexually abused child “lives in a situation where he or she is continually socially exposed to current or potential traumatizers with attendant stress and anxiety” (Putnam & Trickett, 1993, p. 84). When the abuse has occurred within the context of an expected environment of safety, such as between a family member and the child, as occurs in the vast majority of abuse incidents involving girls, relationships themselves may become active “triggers” of stress and anxiety throughout development.

An additional difference, suggested by Finkelhor (1988) is that unlike the traumatic events typically associated with PTSD, childhood sexual abuse tends not to involve the same levels of physical threat or danger to the child, but much of the trauma is due to psychological forces, such as the meaning of the act, and its impact on how the child processes the act itself. For example, Field et al. (2001) argue that early sexual abuse
Sexual Abuse, Social Anxiety, and PTSD

experiences impact the way victims process future traumatic events such that they are primed to attend to trauma-related stimuli. Because of this difference in processing traumatic experiences, adults with histories of childhood sexual abuse who are re-victimized in later life experience more severe psychological consequences than those without re-victimization experiences (e.g., Clasen et al., 2001; Messman-Moore et al., 2000; Nishith et al., 2000). Another possible explanation may be found in the growing body of literature examining the physiological effects of early trauma, including sexual abuse. When such experiences occur early in life, the long-term impact on the nervous system’s response to stress may result in heightened sensitivity to (and increased physiological reaction to) stress in later life (Heim et al., 2000). Such physiological processes may underlie the persistence of PTSD symptoms among victims of childhood sexual abuse (e.g., Perry & Pollard, 1998).

Finally, Barker-Collo et al. (2000) have proposed a cognitive-behavioral model that incorporates factors about the traumatic event, coping and appraisal strategies (such as locus of control; Porter & Long, 1999) and affective outcomes (Dunmore et al., 1999). Similarly, McCann & Pearlman (1990) have suggested some of the beliefs, assumptions, and schemata that are altered as a result of a traumatic experience. The cognitive-behavioral model is consistent with the traumagenic model proposed by Finkelhor (1988), the developmental model proposed by Cole and Putnam (1992), and the transactional model of development proposed by Sameroff and Fiese (1990) in that all implicate a disruption of the normal development of how a victim of childhood sexual abuse perceives, processes, and responds to social situations later in life. Importantly, all of these possible models lead to the conclusion that more frequent victimization (either in childhood or through childhood and into adulthood) leads to more severe posttraumatic symptomology.

Factors Influencing the Impact of Childhood Sexual Abuse

Williams (1993) posited that beliefs, coping skills, and appraisals interact with abuse variables to mediate the victim’s behavior, cognitions, emotions, and relationships with others. Thus, abuse factors (e.g., duration of abuse, frequency of abuse, relationship to the perpetrator, type of abuse, presence of coercion, and age of victimization) interact with personality variables (e.g., intelligence, persistence) and home environment (Johnson & Kenkel, 1991) to determine the nature of the consequences experienced by the abuse victim. There is, however, only limited data relating the long-term consequences of childhood sexual abuse to characteristics of the abuse, and what literature exists suggests that only a modest amount of the variance in mental health outcomes is accounted for by these variables (e.g., Beitchman et al., 1991, 1992; Kendall-Tackett et al., 1993). For example, research has shown that repeated abusive experiences lead to greater severity of PTSD as indicated by total number of symptoms among young children (aged 3–7 years; Glod & Teicher, 1996; Hall, 1999) and adolescent girls (Pillay & Schoubben-Hesk, 2001). Similarly, Lucenko et al. (2000) found greater posttraumatic symptomatology in women who were sexually abused by noncaretakers than those abused by caretakers, suggesting the importance of the perpetrator’s relationship to the victim (see also Feinmauer, 1988). In a study of dissociation and amnesia for traumatic events among adult survivors of childhood abusive experiences, Chu et al. (1999) found that women who experienced more frequent sexual abuse, and those whose abuse experiences occurred at an earlier age showed higher levels of dissociative symptoms than those not reporting any abuse experiences (see also Feiring et al., 1999). However, this literature has often lacked theoretical models specifically linking characteristics of the abuse experience to mental health outcomes (Spaccarelli, 1994). As outlined above, this study examined childhood sexual abuse as a specific form of early trauma which, when coupled with theories concerning long-term effects of trauma, suggests an important role for characteristics of the abuse in predicting later interpersonal forms of anxiety (of which PTSD may be one manifestation), as well as interpersonal forms of anxiety. For example, as noted, Terr’s (1991) distinction between acute traumatic events that may result in PTSD and chronic events, which may result in more generalized anxiety, suggests that frequency of abuse may be an important indicator of the ultimate symptoms experienced. Likewise, to the extent that such generalization may occur, the nature of the relationship and age of the child when abuse occurs may be important factors in the degree to which symptoms are generalized into the individual’s models of, and functioning within, social relationships.

The current study was designed to examine the relationship between childhood sexual abuse and symptoms of a range of social anxiety disorders in adulthood. First, we examined the relationship between histories of sexual abuse and its characteristics and symptoms of PTSD. This frequently reported association was expected even among this sample of college students. Second, on the premise that PTSD is but one response to the trauma of childhood sexual abuse and may occur as part of a set of additional related symptoms, and possibly comorbidity of psychiatric conditions (Keane & Wolfe, 1990), the study examined the relationship between a history of
childhood sexual abuse and symptoms of social anxiety in adult relationships. To the extent that childhood sexual abuse is a traumatic event that occurs within the context of what are expected to be positive social situations, associations between the abuse and its resultant trauma may be generalized to anxiety in social situations later in life. For example, operating from an object-relations framework, Haviland et al. (1995) found that childhood sexual abuse was related to both PTSD symptoms and measures of difficulty in interpersonal relationships, including insecure attachments and egocentrism.

In this study, social anxiety was conceptualized in terms of anxiety in social situations, interpersonal sensitivity, and other symptoms and behaviors indicative of difficulty managing anxiety and distress. It was hypothesized that college women with histories of sexual abuse would show more symptoms of PTSD and greater levels of distress and anxiety in social situations than women with no history of sexual abuse. In addition, other factors that contribute to adulthood social anxieties, such as family history of mental illness and socioeconomic status (during childhood), were examined and statistically controlled to disentangle the effects of demographic and family background characteristics from those due to sexual abuse experiences. Finally, characteristics of abuse experiences, including the nature of the abuse, age of onset of abuse, duration and frequency of abuse, identity and number of perpetrators, and the degree to which force was used, were examined for their differential effects on adulthood social anxiety.

METHOD

Participants

Data were collected on 313 undergraduate women who were recruited from classes in psychology and human development at Cornell University. The average age of the women was 20 years (with a range from 17 to 36) and the average occupational level of their parents was a 6 (e.g., small business owner) on a 7-point scale, ranging from semiskilled or unskilled laborer to professional or managerial. Seventy-four percent of the women were Caucasian, 5% were Latina, 4% were African American, 13% were Asian, and 5% were from other ethnic groups.

Procedure

Questionnaires were distributed in three large lecture classes, representing students from a diversity of undergraduate majors. At the beginning of class sessions a brief description of the study was given, and students who were interested in participating were provided with anonymous questionnaires that they could complete at home for extra credit. Questionnaires were returned during subsequent class sessions. Of the 500 questionnaires that were distributed, 313 were returned completed, giving a participation rate of 63%. An additional 12 questionnaires that were returned were excluded, because missing information on all or the majority of the questionnaire.

Measures

Measures included in the questionnaires were selected to provide information about family background, childhood and adolescent experiences with sexual abuse, and current adjustment and relationship functioning including the following measures used in this study.

Demographic and Family Background Information

Because there are a number of known demographic and family factors associated with adult psychological functioning, it is important when teasing apart the effects of sexual abuse to be able to account for variation due to these known factors. Demographic information was gathered pertaining to the age of the participants, ethnicity, and parents’ occupational status. In addition, several items asked participants to indicate if either parent, sibling, or other relatives had experienced: severe depression, alcoholism, drug abuse, psychiatric hospitalizations, or suicide. Participants were classified as having a family history for each health item if any family member had shown that problem. A cumulative measure of family mental health risks was calculated by summing the number of specific risks.

Child Sexual Abuse

Participants reported on childhood sexual abuse experiences using questions from the Childhood Sexual Abuse Interview (CSAI; Wyatt, 1985, modified by Miller, 1990). Derived from Wyatt’s (1985) Sexual History Questionnaire, the CSAI consists of a series of 11 questions for adults which evaluate history of specific sexual abuse experiences prior to the age of 18 with someone 5 years older than the respondent or with anyone who forced the respondent to engage in sex against her will. Sexual experiences ranging from exposure to intercourse are scored by the presence or absence of each item, and information is gathered with respect to the characteristics of such experiences (e.g., age of onset, identity and number of perpetrators, duration). For the purpose of this study, participants
were classified as having been sexually abused if they indicated having at least one sexual experience before they were 18 with someone 5 or more years older than them or with someone of any age if the experience was against their will (excluding noncoercive experiences between the ages of 13 and 18 with a friend or boyfriend). Although psychometric properties for this measure have not been established, based upon the high test–retest reliabilities (.82–1.0) observed for demographic questions over 9 months, Wyatt (1985) suggested that subjects responses to the sexual abuse questions were also consistent over time.

**Social Anxiety**

Because social anxiety is defined in this study as a range of symptoms arising from, or potentially impacting, adult social functioning, a range of measures was included to capture this broad dimension of functioning. Social Anxiety was assessed using the Anxiety and Interpersonal Sensitivity Scales of the Hopkins Symptom Checklist (Derogatis et al., 1974), and the Social Avoidance and Distress Scale (Watson & Friend, 1969). The Anxiety Scale of the Hopkins Symptom Checklist is a 6-item scale used to assess symptoms and behaviors associated with high anxiety such as restlessness, nervousness, and tension. In addition, items touching upon free-floating anxiety and panic attacks are also included. The scale has shown high internal consistency, test–retest reliability, and interrater reliability, and has been found to differentiate anxious and depressed patients (Derogatis et al., 1974).

The Interpersonal Sensitivity Scale of the Hopkins Symptom Checklist is a 7-item scale used to assess symptoms of personal inadequacy and inferiority, particularly in comparison to other persons. Specific items tap self-deprecation, feelings of uneasiness, and marked discomfort during interpersonal interactions, as well as self-consciousness and negative expectations regarding interpersonal communications. Reliability estimates for the scale range from .80 to .85 and the scale has demonstrated high criterion-related and construct validity (Derogatis et al., 1974).

The Social Avoidance and Distress Scale (SAD) is a 28-item self-report inventory that measures social avoidance and distress in social situations, using a true-false format. Fourteen items measure social anxiety and 14 measure social distress. The SAD has a test–retest reliability estimate of .68 (Watson & Friend, 1969) and scores on the SAD have been found to correlate highly with other measures of social anxiety and shyness (Jones et al., 1986).

**Posttraumatic Stress Symptoms**

Symptoms of Posttraumatic Stress Disorder (PTSD) were measured using questions developed from the PTSD module of the Structured Clinical Interview for DSM-III-R/IV (Spitzer et al., 1993). The PTSD module of the Structured Clinical Interview for DSM-III-R/IV (SCID) evaluates the presence or absence of symptoms of re-experiencing, avoidance, and arousal, according to DSM-IV criteria for posttraumatic stress disorder. For the purpose of this study, a total symptom score was computed by summing the total number of symptoms of re-experiencing, avoidance, and arousal reported. The SCID is a widely used instrument that has shown test-retest reliability estimates ranging from .60 to .75 in field trials (Nunes et al., 1993).

**RESULTS**

Thirty-one percent of women in this sample (n = 98) reported a history of childhood sexual abuse. Of the women who reported sexual abuse, 27% reported non-contact exposure experiences only, 37% reported fondling or touching (but not attempted or actual intercourse), and 36% reported attempted or actual intercourse experiences (oral, anal, or vaginal). Fourteen percent of the women were abused by a father, 29% by other relatives or family members, 16% by family friends, 40% by strangers, and 44% by other perpetrators (e.g., acquaintances, boyfriends, babysitters). The mean number of perpetrators reported was 2.0 (SD = 1.57), with a range from 1–9. Thirty-three percent of the women experienced only 1 incident of abuse, 23% experienced 2–3 incidents, 10% experienced 4–5 incidents, and 34% had experienced more than 5 incidents. The average age of onset of sexual abuse was 9.85 (SD = 4.29), and the average pressure reported was a 4.15 (SD = 2.46) on a 7-point scale, ranging from no pressure to extreme pressure. Forty percent of the women had never discussed the abuse with anyone, 58% had discussed it rarely or sometimes, and 2% had discussed it often.

**Childhood Sexual Abuse and Family Background Variables**

Table I summarizes demographic and family background characteristics of the sample by history of sexual abuse. Women who were sexually abused were more likely to come from families with a history of parental divorce than other women, χ²(1) = 4.18, p < .05. On all
Table I. Demographic and Family Background Characteristics of Sample by History of Childhood Sexual Abuse

<table>
<thead>
<tr>
<th></th>
<th>Sexually abused</th>
<th>Nonabused</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 98 )</td>
<td>( n = 215 )</td>
</tr>
<tr>
<td>Age ethnicity (%)</td>
<td>20.46 (2.35)</td>
<td>20.08 (2.05)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>70</td>
<td>76</td>
</tr>
<tr>
<td>Latina</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>African American</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Asian</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Parents’ occupation</td>
<td>5.88 (1.87)</td>
<td>6.23 (1.55)</td>
</tr>
<tr>
<td>Parental divorce (%)</td>
<td>28</td>
<td>18</td>
</tr>
<tr>
<td>Family history (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Drug abuse</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Psychiatric hospitalization</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>Suicide</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Cumulative family mental health risks</td>
<td>.97 (1.21)</td>
<td>.73 (1.09)</td>
</tr>
</tbody>
</table>

Note. Numbers in parentheses are standard deviations.

Sexual Abuse and Social Anxiety in Adulthood

Table II presents the group means and standard deviations for the measures of social anxiety in adulthood. There were no significant differences between women with a history of sexual abuse and those with no history of sexual abuse on the sensitivity scale of the HSCL, or the Avoidance scale of the SAD. However, women with a history of sexual abuse reported significantly more anxiety on the HSCL, \( t(154) = -2.03, p < .05 \), more distress, \( t(158) = -2.35, p < .05 \), on the SAD, and more symptoms of posttraumatic stress disorder, \( t(153) = -4.21, p < .001 \), than other women.

In order to assess the relative effects of sexual abuse on the social anxiety measures, after controlling for demographic and family background variables, a series of hierarchical multiple regression analyses were conducted. In each of these analyses, age, ethnicity (coded as white or non-White), parents’ occupational status, history of parental divorce, and the cumulative measure of family mental health risks were entered first as a block, followed by history of sexual abuse in the second block. The results of these analyses are presented in Table III.

As can be seen, there were no effects of sexual abuse on the interpersonal sensitivity scale of the HSCL, or the Avoidance scale of the SAD, after accounting for demographic and family background variables. There were, however, significant effects of childhood sexual abuse on the anxiety scale of the HSCL, the distress scale of the SAD, and on the number of posttraumatic stress disorder symptoms reported, indicating that women with a history of sexual abuse reported greater anxiety and social distress than women with no history of sexual abuse, and more symptoms of posttraumatic stress disorder. In the regression predicting anxiety on the HSCL, demographic and family background variables (parents occupation, cumulative family mental health risks, and history of parental divorce) had significant effects, accounting for a total of 7% of the total variance. After accounting for this set of family risk factors, a history of sexual abuse contributed an additional 1% of unique variance. In the regression predicting distress on the SAD, demographic and family background variables accounted for about 2% of the total variance, and sexual abuse accounted for 2% of additional variance. Finally, in the regression predicting symptoms of posttraumatic stress disorder, demographic and family background variables (age, cumulative family mental health risks, and parental divorce) were significant, accounting for 12% of the total variance and history of childhood sexual abuse accounted for 4% of additional variance.
Table III. Results of Hierarchical Regression Analyses Predicting Social Anxiety From History of Childhood Sexual Abuse

<table>
<thead>
<tr>
<th>Predictor variable(s)</th>
<th>HSCL-anxiety</th>
<th>HSCL-sensitivity</th>
<th>SAD-Avoidance</th>
<th>SAD-Distress</th>
<th>PTSD symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$ change</td>
<td>$F$ change</td>
<td>$R^2$ change</td>
<td>$F$ change</td>
<td>$R^2$ change</td>
</tr>
<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographic variables*</td>
<td>0.07</td>
<td>4.25***</td>
<td>0.05</td>
<td>3.48**</td>
<td>0.03</td>
</tr>
<tr>
<td>Block 2</td>
<td>0.01</td>
<td>4.29***</td>
<td>0.00</td>
<td>0.64</td>
<td>0.01</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td>0.08</td>
<td>4.26***</td>
<td>0.06</td>
<td>0.64</td>
<td>0.04</td>
</tr>
</tbody>
</table>

*Demographic variables include the following control variables: age, ethnicity, parents' occupation, parental divorce, and cumulative family mental health risks.
**$p < .01$; ***$p < .001$.

Type of Sexual Abuse and Social Anxiety in Adulthood

In order to examine whether the effects of childhood sexual abuse might vary by type of abuse experienced, a multivariate analysis of covariance (MANCOVA) was conducted for the measures of social anxiety. In each of these analyses, most severe type of abuse experienced (exposure, contact, or intercourse—attempted or completed) was used as the grouping variable, and age, ethnicity, parents' occupation status, cumulative measure of family mental health risks, and history of parental divorce were included as covariates. If a significant MANCOVA emerged, a univariate analysis of covariance (ANCOVA) was performed on each of the dependent measures.

Adjusted means for women experiencing each type of abuse are presented in Table IV. The MANCOVA for the effect of type of abuse on social anxiety was significant, Wilks's lambda $F(18, 767) = 2.84$, $p < .001$. The univariate ANCOVAs indicated that the groups differed on the Avoidance scale of the SAD, $F(3, 276) = 2.92$, $p < .05$, and in terms of number of PTSD symptoms reported, $F(3, 276) = 9.30$, $p < .001$. Post hoc analyses for the Avoidance scale of the SAD revealed that women who had experienced attempted or actual intercourse reported more avoidance than women with no history of abuse and women with exposure only. Post hoc analyses of the measure of PTSD symptoms indicated that women who had experienced attempted or completed intercourse reported more PTSD symptoms than the other three groups of women. In addition, women who had experienced fondling or touching reported more symptoms than women with no history of abuse.

Characteristics of Sexual Abuse and Social Anxiety

A final series of hierarchical regression analyses were conducted to determine the relative effects of abuse characteristics in predicting social anxiety among women with a history of sexual abuse. In each of these analyses age, ethnicity, parents' occupational status and history of parental divorce were entered first as a block, followed by the following abuse variables in the second block: age of onset, number of perpetrators, frequency (number of incidents), having talked about the abuse, pressure, abuse by father, abuse by other relatives of family members, abuse by family friend, abuse by stranger, and abuse by other perpetrators. A stepwise regression procedure was used for the second block to identify significant abuse variables after controlling for family background variables. The results of these analyses are presented in Table V.

Table IV. Adjusted Means on Social Anxiety Measures by Type of Abuse Experienced

<table>
<thead>
<tr>
<th>Type of abuse</th>
<th>Measure</th>
<th>None ($n = 215$)</th>
<th>Exposure ($n = 27$)</th>
<th>Contact ($n = 36$)</th>
<th>Intercourse ($n = 35$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HSCL-anxiety</td>
<td>3.42</td>
<td>3.92</td>
<td>4.85</td>
<td>4.34</td>
</tr>
<tr>
<td></td>
<td>HSCL-sensitivity</td>
<td>6.71</td>
<td>7.01</td>
<td>6.62</td>
<td>8.44</td>
</tr>
<tr>
<td></td>
<td>SAD-avoidance</td>
<td>16.16a</td>
<td>16.95c</td>
<td>16.95ab</td>
<td>17.74b</td>
</tr>
<tr>
<td></td>
<td>SAD-distress</td>
<td>17.01</td>
<td>16.96</td>
<td>18.15</td>
<td>18.50</td>
</tr>
<tr>
<td></td>
<td>PTSD</td>
<td>2.27a</td>
<td>2.94ab</td>
<td>4.45</td>
<td>7.19b</td>
</tr>
</tbody>
</table>

Note. Means with different subscripts differ at $p < .05$. HSCL, Hopkins Symptom Checklist; SAD, Social Avoidance and Distress Scale; PTSD, Posttraumatic Stress Disorder.
Table V. Results of Hierarchical Regression Analyses Predicting Social Anxiety From Abuse Characteristics

<table>
<thead>
<tr>
<th>Predictor variable(s)</th>
<th>HSCL-anxiety</th>
<th></th>
<th></th>
<th>SAD-avoidance</th>
<th></th>
<th></th>
<th>PTSD symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( R^2 )</td>
<td>( F )</td>
<td>change</td>
<td>( R^2 )</td>
<td>( F )</td>
<td>change</td>
<td>( R^2 )</td>
</tr>
<tr>
<td>Block 1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Demographic variables(^a)</td>
<td>.11</td>
<td>2.30*</td>
<td>.10</td>
<td>1.61</td>
<td>.03</td>
<td>.49</td>
<td>.04</td>
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<td>Block 2</td>
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<tr>
<td>Abuse characteristics(^b)</td>
<td></td>
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<tr>
<td>Total ( R^2 )</td>
<td>.11</td>
<td>.10</td>
<td>.14</td>
<td>.17</td>
<td>.41</td>
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Note. HSCL, Hopkins Symptom Checklist; SAD, Social Avoidance and Distress Scale; PTSD, Posttraumatic Stress Disorder.

\(^a\)Demographic variables include the following control variables: age, ethnicity, parents' occupation, parental divorce, and cumulative family mental health risks.

\(^b\)Only abuse variables identified as significant through stepwise procedure are represented in the model. For Avoidance and Distress on the SAD, significant abuse variables included pressure and age of onset; for PTSD symptoms, frequency of abuse, pressure, age of onset, abuse by family friend, and abuse by other perpetrators were all significant variables.

\(* p < .05; \quad \text{***} p < .001.\)

Abuse variables were not significant predictors of anxiety or interpersonal sensitivity on the HSCL, after accounting for demographic and family background variables. However, abuse characteristics had significant effects on the Avoidance and Distress scales of the SAD, and the number of PTSD symptoms reported. In the regreessions predicting Avoidance and Distress on the SAD, both pressure and age of onset of abuse were identified as significant variables, such that greater pressure and earlier age of onset of abuse were associated with greater social avoidance and distress. For Avoidance, abuse characteristics accounted for 12% of unique variance; for distress they accounted for 13%. Finally, in the regression predicting PTSD symptoms, frequency of abuse, pressure, age of onset, abuse by family friend, and abuse by other perpetrators were all significant abuse characteristics, accounting for 31% of unique variance. Greater frequency, pressure, and a later age of onset of abuse were associated with greater symptomatology, whereas abuse by family friend or other perpetrators was associated with fewer symptoms.

DISCUSSION

Previous research has shown relationships between experiences of childhood sexual abuse and social anxiety lasting into adulthood (e.g., Bendixen et al., 1994; Beitchman et al., 1992; Chartier et al., 2001). This study shows elevated, but nonclinical levels of anxiety in a number of both intrapersonal and interpersonal domains among women with a history of sexual abuse.

This investigation found a history of childhood sexual abuse in 31% of college women, a figure higher than what is typically seen in the literature, although this study included noncontact exposure, experienced by more than one quarter of the women with a history of abuse, as well as non-intercourse contact (more than one third) and attempted or actual intercourse (about one-third).

This current findings add to the refinement of the research literature on the long-term impact of childhood sexual abuse by showing that there are effects of sexual abuse, even after controlling for family and demographic factors. Childhood sexual abuse was related to adulthood anxiety, social distress, and number of symptoms of posttraumatic stress disorder even after controlling for significant family and demographic variables. Analyses of these data show that even when background and demographic variables are significant predictors of adult functioning, a history of sexual abuse explains a significant (although small) amount of independent variance.

This study also reached beyond the dichotomy of "abused versus nonabused" by examining how characteristics of childhood sexual abuse differentially affected adulthood functioning. Data here indicated that women's whose abuse included actual or attempted intercourse had higher scores for social avoidance and had more symptoms of PTSD than nonabused women, and often more than women with other forms of abuse (such as exposure or fondling). In addition, women who had experienced fondling experienced more symptoms of PTSD than women with no history of abuse (but not as many symptoms as women who experienced attempted or completed intercourse).

In addition to the type of abuse experienced, characteristics of the abuse incidents, such as age of onset,
duration, frequency, number of perpetrators and identity of perpetrators, were also considered as possible predictors of adulthood functioning. The age of onset was a significant predictor of avoidance and distress, as well as the number of PTSD symptoms experienced. Women who experienced abuse at younger ages had more avoidance and distress but fewer symptoms of PTSD than those who were abused later in childhood. Although the relationship between early age of onset and more avoidance and distress is directly in line with previous research (e.g., Bendixen et al., 1994), the finding that early age of onset was associated with fewer PTSD symptoms runs counter to what one would expect given the various models of PTSD in the literature (e.g., Barker-Collo et al., 2000; Field et al., 2001; Heim et al., 2000). There are several possible reasons for this incongruence that deserve further research. First, avoidance and distress are interpersonal anxiety responses, unlike PTSD which may be characterized as an intrapersonal anxiety response to external stimuli. As a result, early abuse experiences may impact the child’s developing sense of relationships in ways that persist into adulthood. On the other hand, PTSD symptoms tend to be more severe immediately following the event, and decline over time (in the absence of repeated events). It may be the case that as college-age women, victims of childhood sexual abuse in early life have already developed coping strategies, whereas college-age victims of sexual abuse later in childhood may still be developing the coping skills that their peers who had been abused earlier in life have already developed.

In addition, women who reported feeling greater pressure to participate during the abuse situation scored higher on avoidance and distress, and reported more symptoms of PTSD. Consistent with expectations stemming from cognitive-behavioral models of traumatic stress, both of these findings underscore the lack of power these women felt they had as children (due either to youthfulness or greater pressure during the abuse) which would lead to feelings of powerlessness, and hence more distress and avoidance, later in life. Additionally, one would expect a relationship between pressure (and its associated increase in distress during the event) and the severity of distress symptoms following the event.

Collectively, the findings from this study suggest that women with histories of childhood sexual abuse, especially when that abuse occurred early in life, occurred frequently, and involved pressure, experienced varying anxieties into adulthood. Higher scores on the HSCCL and SAD for anxiety and social distress, suggest that these women approach social situations with apprehension and fearfulness. Although this finding in itself is an extension and addition to earlier work, it suggests several important implications for recovery. First, experiencing sexual abuse likely initiates a cycle of social anxiety met with less competent social interactions, which results in heightened anxiety over time. Breaking out of this cycle may well be an important determinant to ultimate recovery, but given its synergistic nature suggests that interventions to ease social anxiety must be undertaken carefully.

One possible explanation for the link between childhood sexual abuse and adulthood social and personal anxiety may be due to internalized representations of social situations that have been shaped by the abuse experience. It is possible that when abuse is the typical social event in childhood, women develop anxiety and distress at the probability of it occurring again in adulthood. If these abused women had other, more positive social and interpersonal experiences, perhaps their internal representations would be affected by these positive experiences in concert with the negative experiences of abuse. One aspect of such relationships is the nature of attachment relationships between the women and their parents in childhood. There is little research examining the role of attachment in mediating and moderating the link between childhood sexual abuse and adult adjustment, and virtually no research examining this role in relation to characteristics of the abuse. For example, a single abuse experience at the hands of a stranger may be buffered by a strong secure attachment to parents. Alternatively, an insecure attachment to parents may offer some protection against the effects of abuse especially if the abuse was at the hands of a parent or other trusted adult.

It must be acknowledged that this study included a sample of undergraduate women. Even those that had elevated scores on measures of social anxiety or other measures did not reach clinical levels of symptomatology. This is not surprising, as one would expect that clinical levels of such distress, especially if untreated, would limit these women’s chances of success in college. Do the same mechanisms and relationships appear in clinical samples?

ACKNOWLEDGMENTS

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Sexual Abuse, Social Anxiety, and PTSD


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