SYMPTOMATOLOGY ASSOCIATED WITH CHILDHOOD SEXUAL VICTIMIZATION IN A NONCLINICAL ADULT SAMPLE

JOHN BRIERE, PH.D.
University of Southern California School of Medicine, Los Angeles

MARSHA RUNTZ, M.A.
University of Manitoba

Abstract—The current study examined the incidence and long-term effects of sexual abuse in a nonclinical sample of adult women. Approximately 15% of 278 university women reported having had sexual contact with a significantly older person before age 15. On a modified version of the Hopkins Symptom Checklist, these women reported higher levels of dissociation, somatization, anxiety, and depression than did nonabused women. Abuse-related symptomatology was positively associated with the age of the abuser, the total number of abusers, use of force during victimization, parental incest, completed intercourse, and extended duration of time.

STIMULATED BY, among other things, several ground-breaking books on the incidence and impact of childhood sexual abuse [1-3], clinicians and clinical researchers have begun to develop a literature on the long-term psychological sequelae of child molestation. Studies of psychiatric inpatients and outpatients, counseling caseloads, and other clinical groups suggest that a childhood history of sexual victimization can be associated with a variety of psychological and social difficulties in adulthood, including depression, guilt, and low self-esteem [2-7], interpersonal problems, law breaking, and substance abuse [2, 4, 6, 8-11], suicidality [8, 12], sexual problems [2, 5, 8, 13], and an increased likelihood of being revictimized in the future [2, 14, 15].

Although these studies have relevance for clinicians in terms of predicting which clients may have sexual abuse histories, such data are problematic in at least two major areas. First, although symptomatology in adulthood may covary with earlier sexual abuse, in the absence of further data it is not clear whether the former is caused by the latter, or whether both are actually a function of some third variable, such as dysfunctional family dynamics [16]. Second, the findings of such clinical studies are inherently limited in terms of external validity, i.e., it is not clear whether the abuse-symptom relationships found in most recent clinical studies are applicable to other, less deviant samples, or to the general nonclinical population.

A smaller number of studies have avoided this problem by examining abuse-symptom relationships in samples of college students, respondents to newspaper advertisements, or randomly selected groups from the general population [11, 18-24]. Unfortunately, several
of these studies are limited by methodological weaknesses such as unstandardized or psychometrically problematic impact measures, inappropriate control groups, questionable statistical analyses, or overly broad definitions of sexual abuse. Also, few nonclinical studies attempt to probe the causality of any abuse-effects associations uncovered; instead they tend to interpret any statistically significant relationship as de facto evidence of the traumagenic impact of sexual victimization.

The current study was an attempt to address some of the problems of research in this area by (1) defining a nonclinical group of female sexual abuse victims; (2) comparing them to a control group of nonabused women from the same population; and (3) evaluating their level of functioning with measures theoretically likely to tap postabuse trauma. With reference to the latter point, the authors were concerned that scales based on theoretical constructs (e.g., the "psychopathic deviate" or "hysteria" scales of the MMPI) might be inappropriate measures of sexual abuse effects, since such trauma need not necessarily correspond to the patterns of disturbance associated with established psychiatric disorders. Instead, as per Conte's suggestion [25], the current investigation utilized symptom checklist items, given the immediate face validity of such measures and the wide range of dysfunctions they directly address. In addition, given the dearth of information available on the frequency with which abuse-related symptoms might occur, subjects were asked to score each checklist item twice: once for the immediate past, and once for a longer interval of time.

Finally, this study also examined the relationship between current symptomatology and individual aspects of the original abuse situation. It was thought that evidence of a differential association between certain characteristics of the abuse (e.g., presence of intercourse) and adult symptomatology would increase the likelihood that sexual abuse, per se, was etiologically related to adult dysfunction [16]. In addition, such data would indicate whether certain aspects of childhood sexual abuse are especially traumagenic, thus potentially increasing our ability to predict the negative impact of specific instances of abuse.

METHOD

A "Family Experiences Questionnaire" was administered to 278 female undergraduate students who participated in this study for partial course credit. The average age of women in this group was 19.8 years, with a range of 17 to 40 years. Only two subjects reported ever having received any sort of mental health services (i.e., psychotherapy or counseling), and none were in treatment at the time of the survey.

The full questionnaire contained a variety of items and scales, including the measures used in the present study: a modified version of Finkelhor's survey of childhood experiences [20], and two versions of the the Hopkins Symptom Checklist (HSCL) [26] with instructions modified to tap symptomatology experienced "in the last 12 months" and "within the last 7 days (including today)." In addition to the standard HSCL items, which were summed to form acute and chronic versions of five HSCL Scales (Somatization, Anxiety, Depression, Interpersonal Sensitivity, and Obsessive-Compulsive), items were created in the HSCL format to compose a sixth Dissociation Scale. Inclusion of this scale was based on the results of a recent clinical study which demonstrated greater levels of dissociation among abused than nonabused outpatients [4]. Items in this Dissociation Scale include experiences such as "not feeling like your real self" and "watching yourself from far away," each scored for the last 12 months and the last 7 days (see Appendix I).

Two discriminant function analyses [27] were performed on the current data: once using the HSCL and Dissociation Scales under the acute condition, and once under the
chronic condition. In both instances, the symptom scales were used to predict subjects’ sexual abuse status as determined by their disclosures on Finkelhor’s sexual experiences items [20]. Based on the Finkelhor inventory, sexual abuse was defined as sexual contact (i.e., touching through intercourse) between a girl under 15 years of age and an individual at least 5 years older. This definition did not include sexual assault by a same-age peer, abuse during later adolescence, exposure to exhibitionists, or sexual propositions, and thus may be considered a relatively conservative estimate of victimization [28].

In order to assess potential relationships between postabuse symptomatology and aspects of the abuse situation, simple correlations were calculated between these symptom scales found to be higher for sexual abuse victims and the following variables derived from the Finkelhor survey: victim age at her first abuse incident; age of her oldest abuser; presence of force or threat of force in at least one abuse incident; completed intercourse (vaginal, oral, or anal); sexual abuse by parent(s) or stepparent(s); total number of sexual abusers (one, two, three, or more); total duration of sexual abuse; and total number of abuse incidents.

RESULTS

Of 278 students, 41 (14.7%) reported a history of sexual abuse by the current definition. Subjects reporting sexual abuse were an average of 1.4 years older than nonabused subjects ($\bar{x} = 21$ vs. $\bar{x} = 19.6$), a difference that was statistically significant, $t(215) = -2.32, p < .021$. Fifty-four subjects (8 abused, 46 nonabused) were not included in the discriminant analyses due to missing values on at least one variable. The proportion of abused to nonabused subjects in the missing values group did not, however, differ statistically from the proportion occurring in those subjects retained for further analysis.

The typical nonclinical victim was 9 years of age at the time of her first abuse (range: 4-14), whereas her average oldest abuser was 26 years old (range: 10-65). She was abused an average of 7.2 times over a variable period: 41.4% of all abuse victims experienced a single abuse incident; 46.4% were abused on multiple occasions for up to one year; and 12.2% were abused for longer periods. Completed intercourse occurred in 7.3% of all victims, and parental incest was present in 12.2% of the victim sample. Female abusers were involved in at least one abuse incident in 14.6% of all victims. The modal number of abusers per victim was 1, although 39% of the victim group were sexually abused by more than one person. Force or threat of force occurred on at least one occasion for 51.2% of all victims.

Analysis of the Dissociation Scales (acute and chronic scoring) indicated that both were reasonably reliable measures ($\alpha = .76$ in each instance). Discriminant analysis of the Dissociation and HSCL Scales revealed significant differences between abused and nonabused subjects under both chronic scoring, $X^2(6) = 12.84, p < .046$, and acute scoring, $X^2(6) = 18.7, p < .0047$, conditions. As shown in Tables 1 and 2, sexual abuse victims scored higher than nonabused subjects on acute and chronic dissociation and somatization, as well as on chronic anxiety and depression. An examination of the discriminant structure coefficients also suggests higher acute anxiety and chronic obsessive-compulsive symptoms among sexual abuse subjects, but these differences were not confirmed by analysis of variance.

As presented in Table 3, Pearson correlation analysis indicated a number of significant relationships between abuse variables and symptomatology. Age of oldest abuser was positively related to reports of chronic anxiety and acute and chronic dissociation, whereas the use or threat of force was associated with higher acute somatization. Parental incest was related to chronic somatization, anxiety, and dissociation. Total number of
Table 1. Means and Discriminant Results for Chronic HSCL and Dissociation Scales According to Sexual Abuse History

<table>
<thead>
<tr>
<th>Scale</th>
<th>Means ANOVA</th>
<th>DFA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no abuse (n = 191)</td>
<td>abuse (n = 33)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>11.592</td>
<td>13.061</td>
</tr>
<tr>
<td>Depression</td>
<td>20.691</td>
<td>22.848</td>
</tr>
<tr>
<td>Interpersonal sensitivity</td>
<td>14.267</td>
<td>14.636</td>
</tr>
<tr>
<td>Obsessive-compulsive</td>
<td>14.691</td>
<td>15.848</td>
</tr>
<tr>
<td>Dissociation</td>
<td>6.456</td>
<td>7.394</td>
</tr>
</tbody>
</table>

* Discriminant Function Analysis structure coefficients, considered meaningful (italicized) at |c| ≥ .35.

abusers was correlated with chronic anxiety and depression, and total duration of abuse was related to higher chronic somatization, anxiety, and depression, along with acute and chronic dissociation. Victim age at first abuse, presence of intercourse, and actual number of abuse incidents were not associated with either acute or chronic symptomatology.

DISCUSSION

The data presented here document significant psychological symptomatology associated with a childhood history of sexual abuse in a nonclinical sample. University women with a sexual abuse history reported higher levels of acute and chronic dissociation and somatization, along with greater anxiety and depression, than did a comparison group of nonabused women. Although abuse-related dissociation and somatization have not been examined in nonclinical groups, the current finding of greater depressive symptoms among abuse subjects is congruent with four studies of former sexual abuse victims in community and university samples [18, 19, 24, 29]. The presence of such symptomatology in a nonclinical sample of university women is especially significant since, as noted by Runtz and Briere, "the university screening process may require a certain minimal level of general functioning" [23]. To the extent that university samples therefore include a disproportionate number of more "healthy" subjects relative to the general population, the current data may provide a conservative estimate of sexual abuse effects on nonclinical individuals. More broadly, the nonclinical data suggest the presence of numerous "silent" abuse victims, who, despite their psychological symptoms, have not sought mental health services.

The present data agree with other investigations which link symptomatology to specific

Table 2. Means and Discriminant Results for Acute HSCL and Dissociation Scales According to Sexual Abuse History

<table>
<thead>
<tr>
<th>Scale</th>
<th>Means ANOVA</th>
<th>DFA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no abuse (n = 191)</td>
<td>abuse (n = 33)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>10.209</td>
<td>11.333</td>
</tr>
<tr>
<td>Depression</td>
<td>18.105</td>
<td>19.697</td>
</tr>
<tr>
<td>Interpersonal sensitivity</td>
<td>12.089</td>
<td>12.242</td>
</tr>
<tr>
<td>Obsessive-compulsive</td>
<td>13.304</td>
<td>13.697</td>
</tr>
<tr>
<td>Dissociation</td>
<td>5.885</td>
<td>7.121</td>
</tr>
</tbody>
</table>

* Discriminant Function Analysis structure coefficients, considered meaningful (italicized) at |c| ≥ .35.
Table 3. Correlations Between Significant Symptom Scales and Abuse Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>SOM(C)</th>
<th>ANX(C)</th>
<th>DEP(C)</th>
<th>DIS(C)</th>
<th>SOM(A)</th>
<th>DIS(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victim age</td>
<td>.04</td>
<td>-.09</td>
<td>-.03</td>
<td>.02</td>
<td>.01</td>
<td>.03</td>
</tr>
<tr>
<td>Perpetrator age</td>
<td>.10</td>
<td>.26*</td>
<td>.21</td>
<td>.30*</td>
<td>.22</td>
<td>.43***</td>
</tr>
<tr>
<td>Force</td>
<td>-.10</td>
<td>-.10</td>
<td>-.03</td>
<td>.18</td>
<td>.26*</td>
<td>.20</td>
</tr>
<tr>
<td>Intercourse</td>
<td>.11</td>
<td>.16</td>
<td>.04</td>
<td>-.08</td>
<td>-.01</td>
<td>-.06</td>
</tr>
<tr>
<td>Parental incest</td>
<td>.28*</td>
<td>.34*</td>
<td>.04</td>
<td>.29*</td>
<td>-.06</td>
<td>.06</td>
</tr>
<tr>
<td>Number of perpetrators</td>
<td>.19</td>
<td>.38*</td>
<td>.32*</td>
<td>.14</td>
<td>.04</td>
<td>.04</td>
</tr>
<tr>
<td>Duration of abuse</td>
<td>.27*</td>
<td>.42**</td>
<td>.29*</td>
<td>.34*</td>
<td>.20</td>
<td>.33*</td>
</tr>
<tr>
<td>Number of incidents</td>
<td>.01</td>
<td>.02</td>
<td>-.08</td>
<td>-.11</td>
<td>12</td>
<td>00</td>
</tr>
</tbody>
</table>

Note. SOM(C) = Chronic Somatization, ANX(C) = Chronic Anxiety, DEP(C) = Chronic Depression, DIS(C) = Chronic Dissociation, SOM(A) = Acute Somatization, DIS(A) = Acute Dissociation. Statistical results are one-tailed tests. p values may vary slightly according to n (38–41).
* p < .05. **p < .01. ***p < .005.

aspects of the victimization experience. Although abuse characteristics were associated with a wide range of symptomatology, the data specifically suggest greater anxiety, dissociation, and somatization in women whose victimization involved parental incest, older abusers, and a longer history of abuse. Given other studies that have also found specific abuse-related symptomatology [4, 8, 11, 20], it may be possible to make tentative causal statements with regard to abuse and subsequent psychological dysfunction [16]. This is important because, as noted by Jehu and Gazan [30], in many cases “it is not possible to determine the extent to which these problems are a direct result of the exploitative sexual encounter, or of other circumstances in the victims’ lives.” We suggest that, at minimum, the presence of significant covariation between specific abuse characteristics and subsequent problems adds support to the notion that the abuse, itself, plays a role in later psychological disturbance.

The current finding of increased anxiety among sexually abused subjects, relative to their nonabused peers, is congruent with other studies in this area. Such symptomatology may represent conditioned responses to sexual victimization that persist into later life in a manner similar to chronic rape trauma [31]. Recent research, for example, views rape as “an in viva classical conditioning situation” where aspects of the assault become conditioned stimuli that evoke subsequent anxiety reactions in other situations [32].

The two forms of symptomatology most predictive of abuse history in the present study—dissociation and somatization—have been relatively neglected in abuse research, despite the fact that Freud attributed both to childhood sexual abuse in his earliest writings [33]. Browne and Finkelhor, for example, do not report any studies of dissociation or somatization in their comprehensive reviews of the sexual abuse literature, other than reference to an unpublished version of this paper [34, 35].

The lack of data on dissociation as a sequel of abuse may be partially due to an absence of reliable measures of this symptom. The authors are aware of only one other attempt to develop a dissociation scale [4], despite the fact that dissociation appears to be a common sequel of child abuse (see Lindberg and Distad [36, 37] and the anecdotal writings of clinicians such as Blake-White and Kline [38], Gelinas [39], Shengold [40], and Summit [41]). As described at greater length elsewhere [4], the authors hypothesize that dissociation may originally develop as a way to cognitively disengage from aversive stimuli during abuse episodes, later becoming a more autonomous symptom which is elicited under a variety of stressful circumstances.

Somatization, which Derogatis and associates define as “distress arising from perceptions of bodily dysfunction” and as including “somatic equivalents of anxiety” [26], co-varied with a history of sexual victimization for this sample of college women. Implicit in the notion of somatization is a preoccupation with bodily processes and their vulnerability...
to disease or dysfunction. Such heightened concern may arise, in part, from the experience of physical invasion and vulnerability usually involved in sexual victimization [31, 42], processes that may increase the salience of bodily stimuli. In addition, the sexual locus of such victimization may result in increased awareness of and sensitivity to pain or sensation in the primary and/or secondary sexual regions, possibly producing symptoms such as the chronic pelvic pain found among some incest victims [43]. Finally, as noted by Burgess and Holmstrom in the case of rape victims [31], anxiety arising from sexual victimization may produce chronically heightened autonomic arousal which, in turn, is associated with somatic reactions such as muscle tension, sleep problems, loss of appetite, and gastrointestinal irritability.

Despite the association between sexual abuse history and the variety of symptom scales found in the present data, it should be noted that the only other published study on psychological symptomatology among nonclinical abuse victims does not confirm this relationship. Fromuth examined the correlation between broadly defined sexual victimization and a form of the Hopkins Symptom Checklist (the SCL-90) [44] in a sample of 383 university women and found no significant relationships between abuse and symptomatology in 8 of 9 symptom scales (there was a slight relationship for “phobic anxiety”) [21]. As the author noted, however, the range of experiences included under the rubric of sexual abuse included nonphysical events (e.g., exposure to an exhibitionist), phenomena not typically shown to have long-term effects [29]. She concludes that “with such an inclusive definition, it should not be surprising that quite small correlations were found.”

As described in the Methods section, the current study utilized two versions of the HSCL: one for symptoms experienced within the last week (acute), and one for symptoms within the last year (chronic). The use of two rating systems reflected the authors’ concern that the frequency of potential abuse-related symptomatology was unknown, and thus it was unclear whether short rating periods (e.g., one week) would reveal lower frequency, yet chronic, correlates of abuse. The current data seem to support the notion that certain symptoms (i.e., abuse-related anxiety and depression) occur at relatively lower rates, and thus acute measures may not adequately tap them. Interestingly, somatization and dissociation appear to discriminate abuse history at both acute and chronic levels of occurrence—in fact, dissociation works better in the acute instance (i.e., $F = 10.7$ versus $F = 4.9$). Such data suggest that sexual abuse may be associated with low frequency increases in dysphoria (anxiety and depression), higher frequency increases in dissociation, and generalized elevation of somatization. To the extent that this differentiation is valid, it has implications both for our understanding of abuse-related phenomena and for our approach to measurement in abuse research. With regards to the latter, it is possible that impact measures may be most sensitive when they account for both qualitative and quantitative dimensions of disturbance and when they include sufficiently wide time frames [17].

**SUMMARY**

In summary, the current study reveals a relationship between childhood sexual abuse and a wide range of adult symptomatology in a nonclinical sample of university women. Although caution is always indicated in making causal inferences from correlational data, the temporal sequence between childhood abuse history and adult symptoms, along with the correlation between specific abuse characteristics and a number of symptom checklist scales, leads us to hypothesize that sexual victimization is not only relatively common but often traumagenic as well. The persistence of such potential effects into adulthood, even in as high functioning a group as the current sample, suggests that therapists should seri-
ously consider the possibility of unresolved sexual abuse trauma in clinical groups, especially when client complaints include dissociation, somatization, and dysphoria. Finally, the presence of such symptomatology in a nonclient adult sample of sexual abuse victims underlines the need for greater public education and outreach services for the many unidentified survivors of childhood sexual abuse in the general population.

NOTES AND REFERENCES

27. Discriminant function analysis (TATSUOKA, M. Multivariate Analysis, Wiley & Sons, New York, 1971) is a multivariate statistical technique, related to multiple regression analysis, which uses a linear combination of variables to discriminate between two or more groups of subjects (e.g., abused versus nonabused). This procedure produces structure coefficients, which are correlations between the original discriminating vari-
d'angoisse et de depression. La symptomatologie qui a un rapport avec les sevices subis, etait associe de facon demontre d'apres ce questionnaire de niveaux plus eleves que normalement de dissociation, de somatisation, agee qu'elles. La liste des symptomes de Hopkins modifiee a tte utilisee pour le questionnaire. Ces femmes ont

**Resumen**—El proyecto investigó la relación entre el abuso sexual en la niñez y la sintomatología en el adulto. El abuso sexual fue definido como el contacto sexual (desde el manoseo al coito) entre una niña menor de 15 años y un individuo por lo menos cinco años mayor que ella. La muestra consistió de 278 hembras estudiantes universitarias, edad promedio de 20 años, distribución 17-40 años. 14.7% relataron reabuso. La edad promedio en la primera ocasión fue de 9 años (distribución 4-14). El abuso ocurrió un promedio de 7.2 veces. 41.4% de las víctimas fueron abusadas una vez, 46.4% en múltiples ocasiones por menos de un año, 12.2% por más de un año. El coito tomó lugar con 7.3% de las víctimas, el incesto paternal con 12.2% de las víctimas. El número modal de abusadores por víctima fue 1. 39% de las víctimas fueron abusadas por más de una persona. El uso de la fuerza y la amenaza de su uso ocurrieron por lo menos una vez en 51.2% de los casos. Las víctimas del abuso sexual sufrieron más altos niveles de disociación y somatización aguda y crónica, así como más ansiedad y depresión, que en el caso del grupo de mujeres no abusadas. Los autores concluyen que el abuso sexual del niño es relativamente común y frecuentemente traumático.
APPENDIX I

Additional "Dissociation" Scale for the HSCL

1. Feeling outside of your body
2. Not feeling like your real self
3. "Spacing out"
4. Losing touch with reality
5. Watching yourself from far away

The authors suggest that these items be interspersed within the standard HSCL (or SCL-90) Inventory in the above order, occupying positions as items #5, #10, #15, #20, and #25. This scale is a brief version of a longer scale, the psychometrics of which will be reported in a later paper [45].