The Long-Term Clinical Correlates of Childhood Sexual Victimization

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Despite the contention of some clinicians and researchers that sexual child abuse is not necessarily traumatic or harmful,[1-3] most recent studies indicate that sexual victimization during childhood produces both short- and long-term psychological effects. In their comprehensive review of over 35 studies, most of which were published or presented since 1980, Browne and Finkelhor conclude that "sexual abuse is a serious mental health problem, consistently associated with very disturbing subsequent problems in some important portion of its victims."[4] Among other difficulties, it appears that women sexually abused as children are more likely than their nonabused peers to report depression, guilt, feelings of inferiority, and low self-esteem,[5-9] interpersonal problems, delinquency, and substance abuse,[5,7,9-11] suicidality,[5,12,13] anxiety and chronic tension,[5,6,12,14] sexual problems,[5,7,10,15,16] and a tendency toward revictimization in adulthood.[5,17,18] These findings appear to be relatively stable across a variety of groups (i.e., clinical, university student, and community samples), and may hold for both males and females.[19]

Until very recently, in what may be referred to as the "first wave" of sexual abuse research, investigators devoted considerable time and energy to "effects research"—documenting that adults with histories of childhood sexual abuse have more mental health problems than similar adults with no such history. As reflected in the Browne and Finkelhor[4] review, this goal has been more or less accomplished. What remains in this area may be described as the "second wave" of investigation—determining the actual relationship between aspects of the abuse (what Finkelhor[20,21] refers to as "traumagenic" factors) and specific psychological symptomatology. Such data are important, since they (a) offer clinicians and others a greater understanding of abuse-related symptom development, potentially leading to more specific and effective treatment procedures, and (b) increase our ability to identify and treat sexual abuse victims who are specifically "at risk" for certain types of problems (e.g., suicidality or substance abuse) later in life, by virtue of the specific type(s) of trauma they experienced. Finally, such research is "good science," increasing our ability to explain and predict sexual victimization effects. Unfortunately, as noted by Browne and Finkelhor,[4] "only a few studies on the effects of sexual abuse have had enough cases and been sophisticated enough methodologically ... [to study traumagenic factors] empirically," and little consensus has been reached regarding specific abuse-effects relationships.

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The present study was undertaken in order to replicate "first wave" studies on the "effects"[b] of childhood sexual abuse, and attempt a "second wave" analysis of the relationship of these specific effects to certain aspects of the abuse experience. With regard to the second goal, a sufficient number of former sexual abuse victims were obtained to permit the use of multivariate techniques, thereby allowing a more detailed study of the longterm sequelae of sexual victimization. Specifically, canonical correlation analysis was applied to the sexual abuse subgroup data. This statistical procedure allows for the simultaneous consideration of multiple abuse and effects variables, and is able to determine multiple, independent sources of variance between these variable sets.

The abuse characteristics examined in the present study (e.g., duration of sexual abuse, presence of intercourse, presence of incest) were those identified in some research[6,9,12,13,18,22] (although not in others) as having specific impacts on psychological functioning. In addition, based on clinical experience, a new abuse variable—"bizarreness"—was included in the present analysis. Reflecting the presence of rituals (e.g., "black magic" rites, symbolic or pseudoreligious ordeals), especially repugnant acts (e.g., anal or vaginal insertion of objects, forced sexual contact with animals), or multiple perpetrators per act (e.g., sex rings, "orgies," gang rape), this form of abuse is thought by many clinicians to produce especially severe longterm effects,[23] despite the absence of empirical data in this area. Finally, the present study included aspects of psychosocial or behavioral functioning (e.g., substance addiction, suicidality, revictimization), as opposed to solely "mental health" variables, since fewer studies have been conducted on the former.

Based on the above, the hypotheses of the current investigation were (a) that a variety of psychological problems would be more common among abused than nonabused subjects, (b) that among subjects with a history of sexual abuse, certain aspects of their victimization experience would have had specific traumatic impact, thereby increasing levels of psychological difficulty, and (c) that abuse involving bizarre features would be especially associated with psychological symptoms and problems.

METHOD

Subjects

Subjects in the present study were 195 female clients of an outpatient crisis intervention service, described in more detail in an earlier paper on sexual abuse and suicidal behaviors.[13] This sample consisted of a preponderance of former sexual abuse victims relative to the number of never-abused subjects (133 vs. 61, respectively), in order to allow for a more detailed and multivariate study of sexual abuse effects. The average age of the entire sample was 27 years, with nonabused subjects being an

[b] It may not be entirely appropriate to refer to mental health correlates of sexual abuse as "effects," since these sequelae may be a function of some "third" set of variables, such as family environment or socio-economic status. A number of studies, however, have found that various abuse-effects relationships either remain after other relevant variables have been controlled, or vary as a function of abuse-specific events.[6,9,17,22,24,25]

average of 3.3 years older than abused subjects. Forty-three percent had never been married, 31% were married or living as married, and 26% were divorced or separated.

Sexual abuse in this study was defined as sexual contact (ranging from fondling to intercourse) on or before age 16, with someone 5 or more years older. Within the sexual abuse subsample, 43% of subjects reported sexual contact with a parent or stepparent (parental incest), 77% had experienced oral, anal, or vaginal intercourse during the abuse, and 56% were also physically abused (violent parental contact beyond spanking). "Bizarre abuse," which included reports of ritualistic sexual contact, multiple simultaneous perpetrators, use of animals, insertion of foreign objects, and/or sexual torture, occurred on at least one occasion in 17% of all sexual abuse subjects. The mean lifetime number of sexual abuse perpetrators per victim was 1.8, and the average duration of sexual abuse per victim was 5.9 years.

Procedure

Analysis of the clinical effects of sexual abuse proceeded in three stages. At stage 1, discriminant function analysis was used to compare abused and nonabused subjects on a number of variables: scores on the dissociation, sleep disturbance, sexual problems, and anger subscales of the Crisis Symptom Checklist[5] (CSC), history of rape or sexual assault during adulthood (since age 16), client reports of self-mutilatory behavior (cutting or burning of body parts without suicidal intent), and an overall measure of previous suicidal behavior (0 = no history of suicide attempts; 1 = low lethality attempts only; 2 = at least one moderately lethal suicide attempt, but no highly lethal suicide attempts; 3 = at least one highly lethal suicide attempt in the past).

Stages 2 and 3 involved the use of, respectively, canonical and simple correlation analysis of abuse effects within the sexual abuse subsample. In stage 2, canonical correlation analysis examined the relationship between characteristics of the abuse (presence of intercourse, bizarreness of abuse, and lifetime number of sexual abuse perpetrators) and the clinical variables listed at stage 1. Although multivariate techniques are appropriate for samples of this size (n = 133), the standardized weighting coefficients may be somewhat unstable for sample sizes of less than two or three hundred. For this reason, the canonical structure coefficients were interpreted as meaningful only when the absolute value of c was at least .40 (a relatively conservative criterion).

In stage 3, simple correlations were calculated for those abuse and effects variables found meaningful at stage 2, in order to allow a post-hoc evaluation of the canonical results. Given the number of correlations, the minimum p value for statistical significance was set at .01.

RESULTS

Discriminant Function Analysis

Discriminant analysis, using the CSC scales and other effects variables to predict childhood history of sexual abuse, was highly significant, Rc = .53, $\chi^2(9)$ = 62.10,

$p < .0001$. The discriminant structure coefficients and univariate ANOVA results indicated that former sexual abuse victims scored higher on the dissociation, sleep disturbance, sexual problems, and anger scales of the CSC, reported more alcoholism and drug addiction, were more likely to have been raped or sexually assaulted as an adult, had been more suicidal in the past, and reported more self-mutilation than subjects with no self-reported sexual abuse history (see TABLE 1).

Canonical Correlation Analysis

Canonical analysis of abuse and effects variables within the subsample of sexually abused subjects revealed two significant canonical variates; Roots 1 through 5; $F(54,606) = 1.66, p < .003$; Roots 2 through 5: $F(40,522) = 1.51, p < .03$. Inspection of the structure coefficients for the first variate indicated a relationship between longer periods of sexual abuse, concommitant physical abuse, bizarre sexual abuse, and multiple perpetrators, and five effects variables: sexual problems, alcoholism, drug addiction, rape or sexual assault during adulthood, and suicidality. The second variate suggested that abuse involving sexual intercourse was related to dissociation and suicidality (see TABLE 2).

Simple Correlation Analysis

Characteristic of the abuse situation correlated with a number of effects variables. As indicated in TABLE 3, bizarre abuse was associated with sexual problems, anger, and alcoholism; concurrent physical abuse was related to alcoholism, drug addiction,

TABLE 1. Discriminant Function Analysis Using Effects Variables to Predict Sexual Abuse Status

Effects Variables	$\bar{x}$ Abused ($n = 133$)	$\bar{x}$ Nonabused ($n = 61$)	ANOVA F (1,193)	ANOVA $p <$	$c^{str[a]}$
Dissociation	.53	.29	26.18	.0001	*.59*
Sleep problems	.76	.60	11.85	.0007	*.40*
Sex problems	.65	.40	27.23	.0001	*.60*
Anger	.49	.32	11.54	.0008	*.39*
Alcoholism	.28	.03	17.23	.0001	*.48*
Drug addiction	.32	.08	14.26	.0002	*.44*
Sexual assault	.43	.13	18.52	.0001	*.50*
Self-mutilation	.08	.00	5.53	.0197	*.27*
Suicidal lethality	1.11	.42	16.02	.0001	*.46*

[a] Discriminant structure coefficients, considered meaningful (italicized) if $|c| > .25$.

TABLE 2. Canonical Correlation Results for Abuse and Effects Variable Sets

Variable	Variate Number 1	Variate Number 2
Abuse variable set		
Incest	−.22	.35
Duration	*−.47*	.06
Concurrent physical abuse	*−.63*	−.39
Intercourse	−.29	*−.75*
Bizarreness	*−.70*	.22
Lifetime number of perpetrators	*−.63*	.24
Effects variable set		
Dissociation	−.21	*−.61*
Sleep disturbance	−.39	.00
Sex problems	*−.45*	−.06
Anger	−.39	.27
Alcoholism	*−.58*	.12
Drug addiction	*−.66*	.06
Sexual assault	*−.51*	.05
Self-mutilation	−.39	.39
Suicidal lethality	*−.58*	*−.54*

NOTE: Canonical structure coefficients considered meaningful (italicized) if $|c| > .40$.

and suicidality; abuse involving intercourse was correlated with sexual problems and suicidality; and multiple perpetrators was associated with drug addiction.

DISCUSSION

The results of the current investigation, as do those of other recent studies, offer strong support for the notion that sexual abuse in childhood produces long-term psychological problems. Former sexual abuse victims scored higher on four scales of the Crisis Symptom Checklist, reported greater substance addiction and self-destructiveness, and were more likely to be sexually revictimized as adults.

Given such data and the focus of the current study, the issue then becomes whether such effects are the general results of victimization per se, or specific aspects of sexual abuse are traumatic above and beyond any general abuse effects. According to the present canonical and simple correlation results, certain abuse characteristics are, in fact, associated with certain psychological problems and symptoms. The first canonical variate suggests that extended sexual abuse, victimization involving bizarre acts, multiple perpetrators, and concommitant physical abuse may produce a variety of psychological problems; whereas the second variate indicates that, in addition to these effects, sexual intercourse during abuse may result in especially high levels of dissociation and suicidality. The presence of such relationships is all the more significant given the likelihood of decreased validity coefficients in this case—arising from the limitations inherent in a "within group" analysis of this type (e.g., increased subject homogeneity and restriction of range in the dependent variables).

It was hypothesized at the outset that sexual victimization involving rituals or especially repugnant acts ("bizarre abuse") would be associated with significantly higher levels of trauma. Both the canonical and simple correlation results support this hypothesis—in fact, in both cases the highest coefficients were those reflecting the relationship between bizarre abuse and psychological effects. According to the simple correlation results, bizarre abuse was associated with sexual problems, anger, and alcoholism; whereas the canonical results suggest that bizarre abuse is one of several variables that combine to produce especially negative effects. Although the basis for the aversive impact of bizarre abuse cannot be ascertained from the present data, it is likely that such events produce "stigmatization," described by Finkelhor and Browne[21] as "the negative connotations . . . that are communicated to the child around the experiences and that then become incorporated into the child's self-image." Specifically, it has been the author's clinical experience that if a child is exposed to especially high levels of humiliation and disgust (e.g., as a result of forced sexual acts

TABLE 3. Simple Correlations between Abuse and Effects Variables

Variable	Duration	Concurrent Physical Abuse	Parental Incest	Intercourse	Bizarre Abuse	Number of Perpetrators
Dissociation	−.05	.17	−.15	.17	.08	−.07
Sleep disturbance	.15	.09	−.02	.03	.12	.08
Sex problems	.04	−.01	.06	.22[a]	.29[b]	.15
Anger	.00	.02	−.03	−.05	.24[b]	.14
Alcoholism	−.02	.21[a]	.00	−.04	.22[a]	.18
Drug addiction	.20[a]	.19[a]	.08	.06	.17	.20[a]
Sexual assault	.11	.18	.08	.02	.15	.10
Self-mutilation	.14	.10	.13	−.11	.09	.14
Suicidality	.17	.27[c]	−.03	.22[b]	.06	.15

[a] $p \leq .01$.
[b] $p \leq .005$.
[c] $p \leq .001$.

with animals or with other children, or through vaginal insertion/masturbation with objects), the child may come to the conclusion that she or he must "deserve" such treatment, and therefore must be as disgusting and abhorrent as whatever was done to her or him[23] (see Jehu, Klassen, and Gazan[26] for other common attributions and assumptions made by victims of severe sexual abuse). Such cognitions may be especially prevalent when the former victim finds herself/himself in (even slightly) similar situations later in life (hence the sexual problems noted earlier), and may motivate self-destructive thoughts and feelings.[13,20,21]

As is apparent from the canonical results, most abuse variables (all except incest) and many effects variables (all but sleep problems, anger, and self-mutilation) are meaningfully related, suggesting that—as indicated earlier—certain aspects of abuse are significantly traumagenic. Viewed from another perspective, however, the specificity of individual abuse variable effects may be questioned. With the exception of intercourse and two effects variables—dissociation and suicidality—most abuse and effects variables load (or nearly load) on the same canonical variate, suggesting a

broader cause-and-effect relationship than might have been hypothesized. Instead of specific relationships between individual abuse and effects variables, the canonical results point to a general "traumagenic" abuse factor and a general "negative impact" effects factor, which are strongly associated. Such a lack of specificity suggests that abuse-related symptom development may proceed in response to the general aversiveness of various types of sexual victimization, rather than as a reaction to certain events.

The exception to this phenomenon may be the relationship of intercourse to dissociation and suicidality. These variables formed their own orthogonal variate, indicating their distinctness from the general abuse-effects relationship described above. As suggested elsewhere,[6] abuse-related dissociation may serve as a defense against emotional and physical pain, wherein the victim learns to escape sensory input by cognitively disengaging or "going away" during aversive experiences. The current data support this possibility, since dissociation was associated with intercourse during sexual abuse (an extremely intrusive and painful event for a child) and—marginally—concommitant physical abuse. The presence of suicidality on this variate is intriguing, since suicide has also been described as a type of escape behavior (in fact, a complete dissociation) for some sexual abuse victims.[13,27]

In summary, data from the present study reinforce the findings of other studies with regard to the probable harmfulness of childhood sexual abuse. These data also suggest that there may be a general "traumagenic" process in sexual abuse, which can be triggered by a number of abuse-related events or processes. Whether sexual abuse produces long-term effects in the absence of these characteristics cannot be answered by the current findings, although it is the author's hypothesis that sexual abuse is traumatic per se, becoming even more destructive in the presence of certain characteristics such as bizarreness and extended duration. Finally, the present data indicate that sexual intercourse during abuse (and perhaps concommitant physical abuse) is specifically associated with later dissociation and suicidality.

Because of the multivariate nature of the present study and the only moderate sample size, the data reported here should be replicated with other samples—preferably using equivalent statistical techniques. To the extent that the findings can be generalized, however, the current study indicates the complexity of the sexual victimization process. Further study of traumagenesis in sexual abuse can only increase our understanding of abuse-related symptomatology, potentially leading to more effective interventions for the sexual abuse victim.

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