SPECIAL FEATURE

Long-Term Sequelae of Childhood Sexual Abuse: Perceived Family Environment, Psychopathology, and Dissociation

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In this study, 105 abused and nonabused women were examined for patterns of adult psychopathology associated with childhood sexual abuse and to test the extent to which these patterns are independent of other pathogenic properties of the family environment. Clinical and nonclinical Ss completed the Family Environment Scale, the Minnesota Multiphasic Personality Inventory (MMPI), the Rorschach, and the Stanford Hypnotic Susceptibility Scale. Greater nonspecific impairment among abused women may be a consequence, at least in part, of pathogenic family structure rather than sexual abuse per se. However, MMPI and Rorschach responses suggest sexual abuse may render victims especially vulnerable to specific disturbances involving soma and self. Abuse was associated with greater use of dissociation, but covariance analysis revealed this effect to be accounted for by family pathology. There was no evidence that sexual trauma is associated with hypnotizability.

A satisfying, empirically based understanding of how childhood sexual abuse affects later adult adjustment remains quite elusive despite extensive study. This problem has been aggressively pursued in two relatively noninteracting clinical research traditions—not surprisingly, findings and inferences have appeared disconnected and sometimes at odds.

In the general developmental psychopathology literature, childhood sexual abuse has been associated with the following in a broad spectrum of adult symptoms and pathology across both Axis I and Axis II of the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM–III;* American Psychiatric Association, 1980): anxiety, depression, self-destructiveness, object relations pathology, substance abuse, antisocial personality, borderline personality, psychosis, sexual dysfunction, and somatization (Browne & Finkelhor, 1986). In short, adult women who were sexually abused in childhood score higher than their nonabused peers on a host of psychopathology measures. Although many claims have been made, no delimited, replicable pattern of sequelae to early sexual abuse has emerged. It is, of course, quite possible that none exists and that abuse may have a nonspecific, deleterious effect on adult psychological functioning.

Clinical researchers and theorists who focus specifically on trauma have argued that early sexual trauma and dissociative pathology are causally linked (Briere & Runtz, 1988; Kluft, 1987; Putnam, 1985; B. Sanders & Giolas, 1991). Basing their interpretation of the data on a relatively cohesive clinical theory, these researchers posit that sexual trauma leads to repeated overuse of dissociation until it becomes the individual's primary psychological defense, manifesting itself in dramatic and often pathological alterations in the experiences of self and the world—experiences reminiscent of hypnosis. Indeed, a history of sexual abuse and high hypnotizability is characteristic of most, if not all, dissociation-disordered patients (Bliss, 1984; Frischholz, 1985), but a direct link between early sexual trauma and the presumed markers of high dissociation and high hypnotizability has not been compellingly established.

Although somewhat insulated from one another, these clinical research traditions share some important methodological problems that, in part, account for the slow progress in researchers' understanding of the effects of sexual abuse (Browne & Finkelhor, 1986). Notable among these are three.

1. *Inadequate control groups.* Studies carried out in academic settings have typically compared nonclinical abused subjects with nonclinical nonabused subjects (e.g., Fromuth, 1986). In clinical or medical school settings, clinical samples of abused subjects have been compared with clinical samples of nonabused subjects (e.g., Walker et al., 1988). Sampling across all four possible groups (abused–clinical, abused–nonclinical, nonabused–clinical, and nonabused–nonclinical) is clearly preferable. In only two studies were three of the four possible groups used (Bagley & McDonald, 1984; Tsai, Feldman-Summers, & Edgar, 1979). We could find no study that used all four groups.

2. *Weak dependent measures.* Until recently, the scales and measures used to index the effects of abuse have been fairly weak, nonstandardized, and non-normed measures of adjustment. Controlled studies with widely used assessment tools, such as the Rorschach and the Minnesota Multiphasic Personality Inventory (MMPI), are rare.

3. *Confounding of abuse with other pathogenic factors.* Fami-

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lies in which abuse occurs seem to be more pathological than nonabusing families, with higher levels of role or boundary confusion, more rigid behavioral control, and less cohesiveness and adaptability (Alexander & Lupfer, 1987; Harter, Alexander, & Neimeyer, 1988; Hoagwood & Stewart, 1988). More important, recent empirical work suggests that some adult pathology associated with childhood sexual abuse may reflect the effects of a broadly pathogenic home environment rather than those of sexual abuse per se (Fromuth, 1986; Harter et al., 1988; Wyatt & Newcomb, 1990).

In the present study, we addressed these conceptual and methodological issues by examining the relationship between childhood sexual abuse and adult pathology with a 2 × 2 factorial design (Abused–Nonabused × Clinical–Nonclinical), a package of standard well-normed dependent measures, and a procedure to index and control for the effects of perceived family environment. Because any differences between the abused–clinical and nonabused–clinical groups are particularly relevant to questions of clinical practice and differential diagnosis, an a priori or planned comparison between these two groups was implemented on all analyses.

We tested two hypotheses and one exploratory proposition.

1. Sexual abuse per se is associated with broad-spectrum, general psychological impairment independent of the effects of perceived family environment. Accordingly, there should be a main effect for abuse status across four MMPI-based measures of gross psychological impairment (the Infrequency Scale [or the F scale] Neurotic Triad, Psychotic Triad, and mean score on nine MMPI clinical scales), with abused subjects scoring higher than control subjects. We should obtain this effect even when using family environment as a covariate.

2. Sexually abused women are more dissociative and more hypnotizable than nonabused women. Sexually abused women should score higher on two MMPI-based measures of dissociative experience. They should also score higher on a standardized and well-normed behavioral measure of hypnotic susceptibility. If these effects are associated with sexual abuse per se, group differences should not be fully explained by variance on the family environment measure.

3. There is a specific pattern or cluster of symptoms that distinguishes abused from nonabused subjects, independent of the effects of family environment. If there is a circumscribed cluster of impairment related to history of abuse per se, an exploratory multivariate analysis of Rorschach and MMPI responses may reveal its nature.

Method

Subjects

Subjects were obtained from three sources: self-referral in response to articles in the community and university print media, referral from the University of Tennessee Psychology Clinic (a training facility serving primarily the community), and referral from community mental health agencies. Requests for participation described the investigation as a research study of "women who have, and have not, experienced sexual abuse as a child." All self-referred and referred subjects were admitted into the study until all four cells had at least 25 subjects. One hundred thirteen women were assessed. Eight subjects failed to com-

plete the Rorschach and MMPI, and their data were not included in the study, leaving a sample size of 105. The location and nature of our subject recruitment, as well as the specific mention of sexual abuse in the study description, presumably had a dramatic effect on the percentage of abused women and women in treatment who participated. Thus, the 105 women assessed cannot be viewed as a random sample of the Knoxville, Tennessee, area female population, at least in terms of sexual abuse prevalence and treatment status.

There were four groups: abused–clinical, sexually abused women receiving outpatient psychological treatment ($n = 24$); abused–nonclinical, sexually abused women who were receiving no form of psychological treatment ($n = 32$); nonabused–clinical, women who were receiving outpatient psychological treatment but who reported having not been sexually abused ($n = 23$); and nonabused–nonclinical, or normal controls, women who reported having not been sexually abused and who were not in treatment ($n = 26$). Abuse status was determined by subject response to the Sexual Abuse Questionnaire (Finkelhor, 1979).

For the purpose of this study, sexual abuse was defined as the occurrence of sexual contact between a child less than 17 years old and an adult at least 5 years older. Contact must involve at least genital manipulation to orgasm of, or by, the child.[1] Other seductive physical acts that did not involve genital contact did not meet our criteria for sexual abuse.

Materials

Subjects completed a demographic questionnaire and the Sexual Abuse Questionnaire adapted from Finkelhor (1979), the Rorschach Inkblot test, and the MMPI, Form R. The Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A; Weitzenhoffer & Hilgard, 1959), was chosen as the hypnotizability scale for this study because it was deemed less likely than other hypnotizability measures to threaten or disturb our clinical subjects. The SHSS:A is a thoroughly standardized 13-point behavioral measure of hypnotic responsiveness. Its validity, interrater reliability, and test–retest reliability are in the .90, .90, and .85 ranges, respectively (Weitzenhoffer & Hilgard, 1959).

The Family Functioning Scale (FFS; Bloom, 1985; Bloom & Lipetz, 1987) consists of 81 Likert-type items that require subjects to rate various aspects of their family life. This scale is a comprehensive and valid measure of the respondent's perception of his or her family functioning (Bloom, 1985), and it is empirically derived from four previous family scales. The FFS has 15 subscales, for which Cronbach's alphas ranged from .40 to .85 with a mean of .71. Interscale correlations between two versions of the test ranged from .78 to .89 (Bloom, 1985).

To examine the role of family functioning in the development of psychopathology, we derived an index of general family functioning by summing the Z scores on subscales corresponding to aspects of family functioning found previously by researchers to differentiate abusive from nonabusive families (Alexander, 1985; Alexander & Lupfer, 1987; Blick & Porter, 1982; Hoagwood & Stewart, 1988; Mrazek & Bentovim, 1981; Pelletier & Handy, 1986). The nine subscales included were Cohesion, Expressiveness, Family Sociability, Family Idealization, Democratic Family Style, Conflict, Locus of Control, Authoritarian Family Style, and Enmeshment. The directions of some scores were reversed to ensure that high scores would represent more pathology. The total average Z score on the nine subscales was transformed to a local stan-

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[1] A correction and clarification of the orgasm criterion is noted in the rejoinder to this article.

dard T score ($M = 50$, $SD = 10$, for this sample).[2] Similar T score transformations were carried out on Exner's (1991) eight conceptual categories of the Rorschach. Quantification of each Rorschach category necessarily ignores important qualitative aspects of the Rorschach response that are central to Exner's interpretive system.[3]

In sum, our design includes various measurement methods: one behavioral measure (SHSS:A), three self-report measures (the Sexual Abuse Questionnaire, the MMPI, and the FFS), and one projective measure (the Rorschach).

Procedure

Subjects responding to public notices and referrals telephoned our research office to arrange an individual appointment and to hear an explanation of the procedure. Those who were students in psychology classes were eligible to receive extra credit for their participation, but no other compensation was offered to subjects.

There were two testing sessions. During Session 1, subjects completed the demographic questionnaire and the Sexual Abuse Questionnaire, the FFS, and the MMPI. During Session 2, at least 1 day after Session 1, the subjects completed the Rorschach and the SHSS:A. All personality assessment and hypnosis procedures were administered by one of three doctoral-level graduate students trained and supervised in the administration of such scales. The experimenters were blind to the clinical and abuse status of subjects.

Results

Characteristics of the Sample

To minimize the probability of overlooking preexisting sample differences on demographic variables, we established an alpha level of .20. Even with the more liberal cutoff, group differences failed to reach significance across income, hometown population, and educational level (sample median income of $4,000–$6,000; hometown population of 25,000–100,000; and education less than 2 years post-high school). This profile reflects the economically stressed nature of an urban and rural Appalachian population. Unemployment and racial characteristics of the groups did not differ beyond a .20 level of certainty. The sample was 96% White, with 28% unemployed. Similarly, the recruitment sources for the four groups were analyzed: For the abused–clinical group, 25% were self-referred, 33% were from the University of Tennessee Psychological Clinic, and 42% were from community agencies; for the same recruitment sources, the nonabused–clinical group percentages were 22%, 39%, and 39%, respectively. These differences were nonsignificant at the .20 level. All abused–nonclinical and nonabused–nonclinical subjects were self-referred. Tables 1 and 2 summarize important family and abuse characteristics of the sample. Significant differences in family history (e.g., physical punishment, parent's marriage, family pathology, and presence of stepfather) are to be expected when comparing abused to nonabused subjects (Friedrich, 1990). However, in our sample, abused subjects were significantly older than nonabused subjects at the time of testing (mean age of abused = 31.05, mean age of nonabused = 27.53), $F(1, 97) = 8.71$, $p = .004$. Accordingly, we decided that if significant effects obtained on planned analyses of variance (ANOVAs), they must be reexam-

ined with age as a covariate for all variables having a significant correlation with age.[4]

Sexual Abuse and General Psychological Impairment

Table 3 summarizes the findings relevant to our first hypothesis about general psychological impairment. First, we performed a multivariate ANOVA (MANOVA) to examine effects across all four MMPI-based measures of psychopathology—Neurotic Triad: mean scores on the Hypochondriasis (Hs), Depression (D), and Hysteria (Hy) scales; Psychotic Triad: mean scores on the Paranoia (Pa), Schizophrenia (Sc), and Hypomania (Ma) scales; overall clinical scales: mean scores on the Hs, D, Hy; Psychopathic Deviate (Pd), Pa, Psychasthenia (Pt), Sc, Ma, Social Introversion (Si); and the F scale. There was a significant multivariate main effect on these variables for clinical status, approximate $F(4, 98) = 8.88$, $p < .001$, and abuse status, approximate $F(4, 98) = 4.53$, $p = .002$. There was no significant interaction effect. Second, univariate 2×2 ANOVAs were carried out on these scales. There were main effects for clinical status and abuse status on all four variables. Patients reported more pathology than nonpatients: F scale, $F(1, 101) = 10.44$, $p = .002$; Neurotic Triad, $F(1, 101) = 21.96$, $p < .001$; Psychotic Triad, $F(1, 101) = 11.66$, $p = .001$; all clinical scales, $F(1, 101) = 26.37$, $p < .001$. Abused subjects reported more pathology than nonabused subjects: F scale, $F(1, 101) = 16.70$, $p < .001$; Neurotic Triad, $F(1, 101) = 9.74$, $p = .002$; Psychotic Triad, $F(1, 101) = 10.26$, $p = .002$; all clinical scales, $F(1, 101) = 14.69$, $p < .001$. This pattern of significant findings was unchanged when age of subject was used as a covariate. For all variables, the abused–clinical group mean was highest and the nonabused–nonclinical group mean was lowest. The planned comparison of the abused–clinical and nonabused–clinical group means yielded no significant difference on the four measures of general psychological impairment.

As planned, we carried out a second analysis of these data with the summary measure of family pathology as a covariate. Before we summarize our finding on this series of multivariate analyses of covariance (MANCOVAs) and ANCOVAs, we must

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[2] Although the FFS is a standardized and well-normed instrument, use of the scale with such a specialized population called for re-analysis of its reliability within this study. For the present study, Cronbach's alphas for the 15 scales had a range from .78 to .95. The Cronbach's alpha for the Z sum score was .91.

[3] A scoring reliability procedure for the Rorschach was implemented according to standards established by the Society for Personality Assessment (Weiner, 1991): To determine scoring reliability, two examiners scored 20 protocols, 5 randomly chosen from each of the four cells. Percentage agreement was calculated for location, determinants, and form level scores. The agreement ratings were all above 80%—the minimum standard suggested by Weiner (1991). The interrater reliability coefficients for Exner's eight conceptual variables were, with one exception, above .80, with a range of .8033 to .9794. The exception was interpersonal perception, with a coefficient of only .5308.

[4] For variables correlated with age, multivariate and univariate analyses in the following sections were recalculated with age added as a covariate. The pattern of significant findings was unchanged in all cases.

Table 1
Family and Abuse Characteristics for Subjects in Each Group

Characteristic	Abuse clin (n = 24)	Abuse nclin (n = 32)	Nabuse clin (n = 23)	Nabuse nclin (n = 26)	Significance[a]		
					Clin status	Abuse status	Abuse clin vs. nabuse clin
Age at testing (years)	32.79	29.71	27.70	27.38	ns	.004	.033
Punishment injuries[b]	9.2	3.6	1.3	0.2	.038	.014	.017
Parents' marriage[c]	2.5	2.4	2.9	3.8	ns	.003	ns
Family pathology[d]	56.67	53.61	48.59	40.64	.001	.000	.006
Age at abuse onset (years)	8.75	9.28	—	—	—	ns	—
No. of abuse occurrences	8.11	8.23	—	—	—	ns	—
Duration of abuse (months)	27.62	21.89	—	—	—	ns	—
Age of perpetrator (years)	30.43	31.88	—	—	—	ns	—

Note. Abuse clin = abused–clinical; Abuse nclin = abused–nonclinical; Nabuse clin = nonabused–clinical; Nabuse nclin = nonabused–nonclinical.
[a] No significant interactions. [b] Mean number of times punishment led to injury. [c] Parents' marriage was rated as 1 = *unhappy,* 2 = *not very happy,* 3 = *somewhat happy,* and 4 = *happy.* [d] Family pathology was determined as the sum of nine items from the Family Functioning Questionnaire (Bloom, 1985; standard scores with $M = 50$ and $SD = 10$ for this sample of 105 women).

note the pattern of findings for the covariate itself (see Table 3). There were significant main effects for clinical status and abuse status on family pathology, with patients reporting more family pathology than nonpatients, $F(1, 101) = 11.95$, $p = .001$, and abused subjects reporting more family pathology than nonabused subjects, $F(1, 101) = 39.18$, $p < .001$. This pattern of significant main effects was obtained on all nine constituent scales of our summary family pathology measure: Abused subjects reported their family of origin to be less cohesive, expressive, sociable, ideal, and democratic, and more conflictual, enmeshed, authoritarian, and prone to blaming others. Furthermore, the planned comparison between abused–clinical and nonabused–clinical subjects on the summary measure of family pathology was significant, with abused–clinical subjects reporting more family pathology than nonabused–clinical subjects, $F(1, 45) = 8.42$, $p = .006$.

We performed a MANCOVA to examine effects across all four psychopathology measures, with family pathology as a covariate. There was a main effect for clinical status, approximate $F(4, 97) = 6.13$, $p < .001$, but not for abuse status or the interaction. Main effects for clinical status were maintained for all

four measures of general pathology on univariate analysis: F scale, $F(1, 100) = 4.27$, $p = .041$; Neurotic Triad, $F(1, 100) = 14.86$, $p < .001$; Psychotic Triad, $F(1, 100) = 6.91$, $p = .01$; all clinical scales, $F(1, 100) = 16.85$, $p < .001$. Thus, even when the substantial effects of family pathology were controlled, patient responses were more pathological than those of nonpatients.

However, the main effect for abuse status failed to reach significance on the four general pathology scales when family pathology was used as a covariate. Thus, when we statistically controlled for family pathology, abused and nonabused subjects no longer differed on these MMPI-based measures of general psychological impairment.

Sexual Abuse and Dissociation

Table 4 summarizes the findings for group differences on measures of dissociation and hypnotizability (Hypothesis 2). Univariate analysis revealed that for both scales of dissociation there was a significant main effect for abuse status, with abused subjects reporting more dissociative experiences than nonabused subjects: Indiana Dissociation Scale, $F(1, 101) = 4.62$,

Table 2
Mean Percentages for Family and Abuse Characteristics in Each Group

Characteristic	Abuse clin	Abuse nclin	Nabuse clin	Nabuse nclin	χ^2 significance
Has stepfather	29	19	0	13	.0498
Has stepmother	0	23	18	13	ns
Male perpetrator	88	97	—	—	ns
Perpetrator convicted	4	6	—	—	ns
Intercourse	25	31	—	—	ns
Manipulation/oral sex	75	69	—	—	ns

Note. Abuse clin = abused–clinical; Abuse nclin = abused–nonclinical; Nabuse clin = nonabused–clinical; Nabuse nclin = nonabused–nonclinical.

Table 3
Group Means Unadjusted and Adjusted for Family Pathology on General Psychological Impairment

Scale	Abuse clin (n = 24)	Abuse nclin (n = 32)	Nabuse clin (n = 23)	Nabuse nclin (n = 26)	Clinical status	Abuse status	Abuse clin vs. nabuse clin
							Significance[a]
				Unadjusted for family pathology			
Family pathology	56	54	49	41	.001	.001	.006
F scale	68	63	61	51	.002	.001	ns
Neurotic Triad	66	60	63	51	.001	.002	ns
Psychotic Triad	69	64	64	56	.001	.002	ns
All clinical scales	68	63	65	54	.001	.001	ns
				Adjusted for family pathology			
F scale	65	61	61	56	.041	ns	ns
Neurotic Triad	64	59	63	53	.001	ns	ns
Psychotic Triad	67	63	65	58	.010	ns	ns
All clinical scales	67	61	65	56	.001	ns	ns

Note. Pearson correlations of perceived family pathology with F, Neurotic Triad, Psychotic Triad, and clinical scales were .51, .40, .38, and .48, respectively ($Fs < .001$ for each). Abuse clin = abused–clinical; Abuse nclin = abused–nonclinical; Nabuse clin = nonabused–clinical; Nabuse nclin = nonabused–non-clinical.
[a] No significant interactions.

$p = .034$; Dissociation Content Scale, $F(1, 101) = 4.48$, $p = .037$. The pattern of group differences on dissociation measures was not obtained when family pathology was used as a covariate: Indiana Dissociation Scale, $F(1, 100) = 0.77$, *ns;* Dissociation Content Scale, $F(1, 100) = 0.79$, *ns.* The planned comparison between abused–clinical and nonabused–clinical groups (not corrected for family pathology) was significant for the Indiana Dissociation Scale, $F(1, 45) = 4.90$, $p = .032$, with abused pa-

tients reporting more dissociation than nonabused patients; the comparison was marginally significant for the Dissociation Content Scale, $F(1, 45) = 3.45$, $p = .067$.

The relationship between hypnotic susceptibility and abuse was nonsignificant, $F(1, 101) = 0.69$, $p = .41$. There was no main effect for abuse status on any measure of hypnotizability, even on SHSS:A items proposed by others to be especially dissociative. There was, however, a main effect for clinical status,

Table 4
Dissociation and Hypnotizability Scores for Subjects in Each Group

Scale	Abuse clin (n = 24)	Abuse nclin (n = 32)	Nabuse clin (n = 23)	Nabuse nclin (n = 26)	Clinical status	Abuse status	Abuse clin vs. nabuse clin
							Significance[a]
Indiana Dissociation Scale	2.47	1.66	1.39	1.27	ns	.034	.032
Dissociation Content Scale	12.45	9.44	10.07	7.77	.007	.037	ns
SHSS:A	5.88	8.25	7.45	7.79	.049	ns	ns
SHSS:A 11 & 12	0.61	1.29	0.86	0.96	.023	ns	ns
SHSS:A (Amnesia)	0.30	0.58	0.57	0.48	ns	ns	ns
SHSS:A (Posthypnotic suggestion)	0.30	0.71	0.29	0.48	.002	ns	ns

Note. Indiana Dissociation Scale (ranging 0–8; Levitt, 1989); Dissociation Content Scale (ranging 0–25; S. Sanders, 1986); Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A; ranging 0–12; Weitzenhoffer & Hilgard, 1959); SHSS:A 11 & 12 represent the sum of Items 11 and 12, Amnesia and Posthypnotic Suggestion, from the SHSS:A. There were significant regression effects for family pathology on the Indiana Dissociation Scale ($p < .018$) and the Dissociation Content Scale ($p < .010$), but not for the SHSS:A ($p > .4$). Abuse clin = abused–clinical; Abuse nclin = abused–nonclinical; Nabuse clin = nonabused clinical; Nabuse nclin = nonabused–nonclinical.
[a] No significant interactions.

with nonpatients being significantly more hypnotizable than patients; for SHSS:A, $F(1, 101) = 4.09$, $p < .049$. To test whether severity of abuse was related to hypnotizability, with more severely abused subjects being more hypnotizable, we correlated hypnotizability with age of abuse onset, duration of abuse, frequency of abuse, and whether there was intercourse. We found no significant correlations. We also constructed a "severity of abuse" scale that used the sum of z scores for the same four variables. No significant relationship emerged between this measure and hypnotizability.

Sexual Abuse and Specific Psychological Impairment

Table 5 summarizes the findings relevant to specific psychological impairments. First, an overall MANOVA tested for multivariate main effects across all clinical scales (Hs, D, Hy, Pd, Pa, Pt, Sc, Ma, and Si). There was a significant main effect across

these variables for clinical status, approximate $F(9, 93) = 6.32$, $p < .001$, and abuse status, approximate $F(9, 93) = 5.29$, $p < .001$. There was no significant interaction. Significant univariate main effects for abuse status were obtained on Hs, $F(1, 101) = 18.29$, $p = .001$; Pd, $F(1, 101) = 12.12$, $p = .001$; Pa, $F(1, 101) = 13.16$, $p < .001$; Sc, $F(1, 101) = 13.74$, $p < .001$; and Si, $F(1, 101) = 10.11$, $p = .002$, with abused subjects scoring higher on these scales than nonabused subjects. The main effect for abuse on Scale D was nearly significant, $F(1, 101) = 3.87$, $p < .052$. The planned comparison of the abused–clinical and nonabused–clinical group means yielded only one significant difference: Hs, with abused patients scoring higher on this scale than nonabused patients, $F(1, 45) = 8.43$, $p = .006$.

We used a MANCOVA to examine effects across all nine measures, with family pathology as a covariate. There was a significant main effect for clinical status, approximate $F(9, 92) = 4.67$, $p < .001$, and abuse status, approximate $F(9, 92) =$

Table 5

Group Means Unadjusted and Adjusted for Family Pathology on MMPI Scales and Rorschach Personal Perception

MMPI scale	Abuse clin ($n = 24$)	Abuse nonclin ($n = 32$)	Nabuse clin ($n = 23$)	Nabuse nonclin ($n = 26$)	Clinical status	Abuse status	Clinical status × Abuse status	Pt only[a]
	Uncorrected scale scores							
Hs	65	60	55	51	.038	.000	ns	.006
D	68	59	69	48	.000	.052	.006	ns
Hy	65	60	63	55	.001	ns	ns	ns
Pd	78	67	72	55	.000	.001	ns	ns
Mf	44	45	42	45	ns	ns	ns	ns
Pa	69	63	65	54	.000	.000	ns	ns
Pt	68	62	68	53	.000	ns	ns	ns
Sc	74	68	68	53	.000	.000	ns	ns
Ma	63	61	61	61	ns	ns	ns	ns
Si	62	57	58	47	.000	.002	ns	ns
Personal perception[b]	54	51	48	46	ns	.005	ns	.024
Family pathology[b]	56	54	49	41	.001	.000	.050	.006
	Scores corrected for family pathology[c]							
Hs	63	59	55	53	ns	.006	ns	.035
$D**$	65	58	70	52	.000	ns	.024	ns
Hy	64	60	63	56	.003	ns	ns	ns
$Pd*$	75	66	72	59	.000	ns	ns	ns
Mf	44	45	42	46	ns	ns	ns	ns
Pa	68	63	65	56	.000	.022	ns	ns
$Pt*$	66	60	69	56	.000	ns	ns	ns
$Sc*$	71	66	68	57	.008	ns	ns	ns
Ma	62	61	61	62	ns	ns	ns	ns
$Si**$	59	55	58	52	.014	ns	ns	ns

Note. Minnesota Multiphasic Personality Inventory (MMPI) variables with significant regression effects with family pathology are marked with asterisks. Abuse clin = abused–clinical; Abuse nonclin = abused–nonclinical; Nabuse clin = nonabused–clinical; Nabuse nclin = nonabused–nonclinical. MMPI scale abbreviations are as follows: Hs = Hypochondriasis; D = Depression; Hy = Hysteria; Pd = Psychopathic Deviate; Mf = Masculinity–Femininity; Pa = Paranoia; Pt = Psychasthenia; Sc = Schizophrenia; Ma = Hypomania; Si = Social Introversion.
[a] A comparison of scores for the abused–clinical and nonabused–clinical groups. [b] Scores were corrected for family pathology by requesting "pmeans" from SPSS procedure multivariate analysis of variance. [c] Local T scores.
$* p < .05$. $** p < .01$.

2.56, $p = .011$; the interaction was not significant. As indicated in Table 4, univariate main effects for clinical status generally remained significant, but this significance did not remain for abuse status. When family pathology was used as a covariate, abuse effects were significant only for Hs, $F(1, 100) = 7.93$, $p = .006$, and Pa $F(1, 100) = 5.39$, $p = .022$. The planned comparison of the abused–clinical and nonabused–clinical group means again yielded a significant difference on Hs, $F(1, 44) = 4.71$, $p = .035$.

Finally, we carried out similar analyses on the eight Rorschach constructs. A MANOVA yielded no significant multivariate main effect for clinical status, but there was a significant effect for abuse status, approximate $F(9, 93) = 2.28$, $p < .024$. The interaction was not significant. Univariate analysis revealed one construct on which a significant main effect for abuse status was obtained: for self-perception, with abused subjects scoring in a more pathological direction, $F(1, 101) = 8.09$, $p < .005$. The planned comparison of the abused–clinical and nonabused–clinical group means on this variable yielded a significant difference, with abused–clinical subjects scoring higher than the nonabused–clinical subjects, $F(1, 45) = 5.46$, $p = .024$. The MANCOVA, testing effects across the eight Rorschach constructs with family pathology as covariate, did not yield a significant main effect for abuse status, approximate $F(9, 92) = 1.39$, $p < .21$. However, the univariate effect for abuse on personal perception persisted when family pathology was used as a covariate, $F(1, 100) = 4.08$, $p = .046$. The corrected abused–clinical/nonabused–clinical comparison for personal perception did not reach significance, $F(1, 44) = 3.18$, $p = .08$.

Discussion

Our first hypothesis, that sexual abuse itself is associated with broad-spectrum, general psychological impairment, independent of the effects of perceived family environment, was not supported by the findings. Perceived family environment appears to be an important mediating variable in determining general level of adult psychological distress, so important that we found no significant residual effect for abuse per se on the extent of general psychological impairment. For some victims, sexual abuse may be a signal variable that the home environment is profoundly and broadly pathogenic. Subsequent adult impairment may be an effect not only of abuse but of the context in which it was embedded. We echo the caution voiced by others (Follette, Alexander, & Follette, 1991; Harter et al., 1988) that, in studying the pathogenic properties of sexual abuse, researchers must take care to consider all the pathogenic factors (e.g., social, economic, familial) in which the abuse may be embedded. To this, we add another caution: As Conte (1986) pointed out, attributional distortions made by abuse victims about their family could complicate interpretation of retrospective studies; that is, sexually abused subjects may overestimate the degree of disruption in their family precisely because they were abused. Although retrospective, clinically based methodologies can illuminate associations between *perceived* event and symptom, only prospective designs can reliably examine the relationship between *historical* event and symptom.

Our findings lend some modest support for our second hy-

pothesis that a history of early sexual trauma is associated with an exaggerated reliance on dissociative defenses; however, whether this prevalence of dissociative experience is a product of sexual abuse, a pathogenic home environment, or an interaction between the two is unclear. Clinical observations that sexually abused patients are more dissociative seem to be accurate. Attributing the dissociation to sexual abuse per se may be incorrect. We found no evidence that sexual abuse was related to hypnotizability. We feel that whatever association may exist among early sexual trauma, dissociation, and hypnotizability is complex, embedded within the interpersonal context, and not linear in nature.

Our exploratory proposition that there would be a specific pattern or cluster of symptoms associated with sexual abuse per se was partially supported across the MMPI and Rorschach findings. In general, controlling for family context rendered effect sizes for abuse nonsignificant, but there were two important and related exceptions. Higher scores for abused subjects on the Hs scale of the MMPI suggest excessive preoccupation with bodily functions and soma-based, stress-related difficulties. Similarly, elevations on the Rorschach cluster Self-Perception suggest bodily concerns (An + Xy, and Morbid content), a damaged sense of self (Morbid content), painful self-introspection (FD and Vista), and egocentricity (Egocentricity Index). Thus, even when we controlled for family environment, even when we compared our abused patients with very troubled nonabused patients, we found that women who were sexually abused in childhood must more often contend with a distressing sense that something about them is fundamentally damaged.

Adults who have been sexually abused as children may be especially prone to disturbance of the self, and this disturbance may be dramatically expressed as somatic symptomatology; these findings are consistent with research findings from a variety of disciplines. The pediatric literature suggests that within 2 years of abuse children report unusually frequent physical problems such as sleep disturbance, eating disorders, stomach problems, and headaches (Adams-Tucker, 1982). Epidemiological figures in obstetrics and gynecology suggest that 65% of women who were sexually abused report chronic pelvic pain and other related complaints, a significantly greater incidence than in the general public (Walker et al., 1988). Browne and Finkelhor's (1986) review of the psychological literature cited self, self-esteem, and somatic problems among women with a history of childhood sexual abuse. We contend that, although much of the adult pathology observed to be associated with childhood sexual abuse may be a product of a generally pathogenic family environment, the experience of sexual abuse renders the child especially vulnerable to experiencing her self and her body as fundamentally damaged and painfully inadequate.

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