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Measuring Abuse Stress and Negative Cognitive Appraisals in Child Sexual Abuse: Validity Data on Two New Scales

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The validity of two measures assessing degree of stress associated with child sexual abuse was examined in a sample of 48 girls who had been sexually abused. The Checklist of Sexual Abuse and Related Stressors (C-SARS) assessed negative life events that were part of or were related to the abuse, and the Negative Appraisals of Sexual Abuse Scale (NASAS) assessed negative cognitive appraisals of threat, harm, or loss associated with the abuse. Total scores for victim reports of both stressful events and negative appraisals were positively and significantly related to two other measures of abuse severity: therapist ratings of abuse stress and the number of types of sexual abuse reported. Stressful event scores were also related to aggressive behavior problems, sexual concerns, and total symptom scores on the Child Behavior Checklist. Negative cognitive appraisal scores were related to victims' self-reports of depression, anxiety, and posttraumatic stress symptoms, and to parent reports of child depression and total symptoms. Regression analyses indicated that there were significant effects of negative appraisals on internalizing symptoms when controlling for the level of stressful events experienced. The results suggest that negative life events and negative appraisals associated with sexual abuse are valid constructs that help account for variability in mental health outcomes among child victims. The implications of these results and future research directions in examining variable outcomes among sexual abuse victims are discussed.

There is increasing evidence that sexual victimization is a significant risk factor for mental health problems in childhood (Beitchman, Zucker, Hood,

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daCosta, & Akman, 1992; Kendall-Tackett, Williams, & Finkelhor, 1993). Research also suggests that the adjustment of child sexual abuse victims is highly variable, with between 20% and 50% of sexually abused children showing no signs of psychopathology in the short term (Caffaro-Rouget, Lang, & Van-Santan, 1988; Conte & Schuerman, 1987; Tong, Oates, & McDowell, 1987). This paper examines one proposed explanation for variability in mental health outcomes: differences in the severity or stressfulness of the abuse. Many previous studies have addressed the issue of "abuse characteristics" and their impact on child mental health, and findings have generally been inconsistent (for reviews see Browne & Finkelhor, 1986; Kendall-Tackett et al., 1993). For example, some studies have suggested that symptomatology is positively related to abuse duration or closeness to the perpetrator (Anderson, 1981; Freidrich, Urquiza, & Beilke, 1986), whereas these effects were absent in other studies (Finkelhor, 1979; Gomes-Schwartz, Horowitz, & Cardarelli, 1990). As noted in a recent review (Spaccarelli, 1994), the research on abuse characteristics has been difficult to interpret for several reasons: (a) There are a bewildering number of ways in which victims experiences may differ, in terms of the nature of the abuse itself, and the number and types of secondary stressors that may occur as a result of the abuse and/or its disclosure; (b) studies of abuse characteristics and abuse-related stressors have defined and measured variables pertaining to abuse severity in many different ways (e.g., frequency of abuse, duration of abuse, incestuousness, number of perpetrators, etc.); (c) most studies have utilized univariate analyses, and failed to control for possible covariation between abuse variables; and (d) the potential influence of victims' perceptions or cognitive appraisals of abuse-related experiences have not been systematically evaluated.

In order to address these problems, increased attention must be paid to how variation in abuse severity is conceptualized and measured. As Gladwell (1988) has suggested, there is a need for a single measure of abuse severity that takes various aspects of the abuse into account. The present study examined the validity of the Checklist of Sexual Abuse and Related Stressors (C-SARS), a newly developed measure of stress associated with sexual victimization during childhood or adolescence. This measure conceptualizes sexual abuse as a transitional event or major stressor which tends to involve a complex series of stressful events (Spaccarelli, 1994). This set of events includes not only the episodes of abusive contact, but also perpetrator behaviors that are part of or set the stage for the abuse (e.g. inducements, manipulation, threats), events that occur as a consequence of the abuse (e.g. disruptions in family relationships, disbelief of children's disclosures), and events that occur as a consequence of public disclosure of the abuse (e.g. intrusive encounters with social service, police,

and legal professionals). The key advantage of this events-based approach to assessing sexual abuse is that it broadens the concept of abuse severity to include all of these potential sources of stress. In this study, all the events included in the newly developed measure were assumed to be negative or stressful events on theoretical grounds.

One problem with a life events approach to assessing abuse stress is that it fails to provide any information about the specific meaning of those events to victims. This is a crucial issue because studies of stress perception have indicated that event perceptions or appraisals may be important mediators of the mental health effects of stressful events (Brown & Harris, 1989; Lazarus, 1991). For example, Lazarus and his colleagues (Lazarus & Folkman, 1984) have found that the effects of stressful events on symptoms are largely accounted for by adults' perceptions of how much those events involve personal harm or loss, or how much they threaten them with future harm or loss. More recently, work in the field of sexual abuse (Johnson & Kenkel, 1991) and parental divorce (Sheets, Sandler, & West, 1994) has suggested that "primary appraisals" of threat or harm also play an important role in mediating the effects of stressful events experienced by children and adolescents. Therefore, a second new measure was developed to examine the role of victim's appraisals of threat and harm in predicting children's adjustment to sexual abuse. This measure, the Negative Appraisals of Sexual Abuse Scale (NASAS), assesses appraisals of harm, loss, and threat related to child and adolescent victims' experiences with a particular perpetrator of unwanted or inappropriate sexual contact. The NASAS assesses several categories of negative appraisals that have been theoretically linked to mental health outcomes in sexual abuse victims, including perceptions of harm to one's body, negative evaluations of self (e.g. self-blame, negative views of one's sexuality), negative evaluations by others, harm to one's close relationships or sense of security, harm to others, and criticism of others (e.g. decreased perception of a loved one's trustworthiness or helpfulness).

The primary scientific objective of this study was to examine the convergent and concurrent predictive validity of the C-SARS and the NASAS. In terms of convergent validity, it was expected that reports of abuse events and negative appraisals would be significantly correlated in a positive direction with concurrent therapist ratings of abuse stress and with victims' reports as to the number of different types of sexual contact involved. In terms of concurrent validity, it was expected that victims' reports of abuse events and negative abuse appraisals would be significantly associated with child self-report and parent-report measures of victims' psychological symptomatologies.

A second objective of the study was to consider whether victims' negative appraisals have an independent effect on psychological symptomatology when controlling for the total number of abuse and abuse-related stressful events experienced. As some theorists have argued (Hoier et al., 1992; Spaccarelli, 1994), negative appraisals may increase as a function of how severe or stressful the abuse was. However, evidence for an independent effect of appraisals would suggest that this variable is not simply a marker for a high level of stressful events, but contributes unique variance to the prediction of mental health outcomes. If the effects of negative appraisal are independent of abuse stress, it suggests that factors other than abuse variables (e.g. intrapersonal and environmental variables) play an important role in determining whether victims will perceive the experience in negative ways.

METHOD

Subjects

Participants were 48 girls and their nonoffending parents or guardians. The girls ranged in age from 11 to 18 years, with a median age of 14; they were 79% Caucasian, 15% Hispanic, and 4% Black. The participating adults included 39 mothers, 7 fathers, 1 stepmother, and 1 foster mother. The families were primarily middle and lower socioeconomic status, with a mean annual family income of $20,370. Most of the families consisted of single (79%) or separated/divorced parents (10%), and only 11% included intact marriages. Mean family size including the parent(s) was 4.0 persons.

Recruitment

Over a 15-month period, 93 young people (ages 11 to 18 years) referred to a Phoenix area nonprofit agency for therapy related to sexual victimization were recruited for participation in the study. The recruitment sample included all intake appointments in the 15-month time period for molestation and rape victims in the eligible age range, except 10 cases in which the parents or guardians refused to hear about the study when it was initially mentioned on the phone by the clinic secretary. In the 93 cases that were actively recruited, the study was explained to the parents and children in person by the investigator and/or a research assistant just before their initial intake interviews. It was explained that the purpose of the study was to learn about how abuse victims cope and to thereby develop more

effective treatment programs. It was also explained that participants' responses to the research interview would be made available to their therapists unless they requested that the information be withheld. This was suggested by clinic staff members so they could potentially make use of the information in planning and implementing each participant's treatment. No subjects requested that their answers be withheld from their therapists.

Parental informed consent and victim assent was obtained in 80 cases (86%), and 74 of those subjects (93%) were actually interviewed. Those who were not interviewed were missed because of scheduling problems in arranging an interview prior to their completion of their second therapy interview. Of the 74 interviewed subjects, 60% had been referred for treatment by parents or other family members, 12% by another mental health agency or private therapists, 10% by courts or legal professionals, 9% by social service agencies (i.e., child protective services), and 6% by schools. In all cases sexual victimization had been disclosed by either the victim (93%) or another individual (e.g., the perpetrator) prior to the referral for therapy (cases of suspected abuse were not recruited). In all cases the alleged abuse had either been previously reported to public authorities (i.e., police or protective services) or was reported at the time of intake.

After data collection, 13 subjects were excluded because they denied any sexual abuse ($n = 6$) or gave inconsistent reports about the abuse that occurred ($n = 7$). The subjects who gave inconsistent reports initially reported experiencing some abuse, then later denied any victimization when asked to identify the perpetrators who had involved them in sexual behaviors the most. It is possible that these children were inconsistent because confusion about the question itself, as well as about what happened to them. Data were incomplete for eight other subjects, resulting in total of 53 subjects (48 girls, 5 boys). As noted above, only data from the female subjects were included in the present analyses.

Procedures

A computerized interview was self-administered by each subject with constant supervision from a trained research assistant. The self-administration method was employed in order to ensure a sense of privacy and to remove the need for subjects to verbalize responses. The research assistants were trained to answer questions about interview items, and to monitor subjects for any signs of emotional distress, fatigue, or confusion related to the interview. They were instructed to stop the interview at any time at the request of the subject, or if there were any signs of emotional distress. In all cases the interview was done on the premises of the treatment center,

and experienced therapists were available to process subjects' responses to the interview or to assist them if they experienced any emotional distress as a result of the research protocol. The interview battery included 350 items and took between 90 and 120 min. to complete. A research assistant remained in the room throughout each interview to monitor the subject's progress and to answer questions. The parent or guardian who participated was asked to complete the Child Behavior Checklist (Achenbach, 1991) while the young person was completing the research interview.

Measures

Checklist of Sexual Abuse and Related Stressors. C-SARS assesses victims' reports of the occurrence of 70 stressful events related to sexual abuse experiences. In the present study, subjects who reported more than one perpetrator were asked to identify a single adult perpetrator who "involved them in sexual behaviors the most," or in the case of no adult perpetrator, to identify a single peer-age perpetrator who involved them in sexual behaviors the most. Subjects were then asked if each stressful event had ever occurred in the context of their experiences with that perpetrator. This method was utilized to avoid confusion that could have resulted if victims of multiple perpetrators were asked to generalize across their experiences with different perpetrators. Item development for the C-SARS was guided by a review of the literature concerning the types of events that make sexual abuse stressful (Spaccarelli, 1994). As a heuristic to organize the literature, that review proposed three subtypes of stressful events that were each assessed in the C-SARS: abuse specific events such as coerciveness and victim denigration (Berliner & Conte, 1990; Friedrich et al., 1986; Summit, 1983); abuse-related events such as family conflict (Sirles, Smith, & Kusama, 1989) and nonsupportive responses to disclosure (Johnson & Kenkel, 1991; Wyatt & Mickey, 1988); and public disclosure-related events such as repeated interviews (English & Tosti-Lane, 1988; Saunders, 1988) and ajudication problems (Davidson & Bulkley, 1980; Runyan, Everson, Edelsohn, Hunter, & Coulter, 1988). The specific event items included in the measure are listed in Appendix A.

Negative Appraisals of Sexual Abuse Scale. NASAS is a 5-6-item self-report measure of perceptions of threat or harm related to sexual victimization. Directions for the scale ask the victim to "tell us some of your feelings and thoughts about what happened with the person who involved you in sexual behaviors." Each item asks the victim whether he or she had certain negative feelings or thoughts about those experiences. The root of each item was worded as follows: "in relation to what happened with that

person, did it ever make you think or feel that ..." [you were a bad person, you would get sick or catch a disease, etc.]. The response format for all items was a 4-point scale (1 = not at all, 2 = a little, 3 = somewhat, and 4 = a lot). As with the C-SARS items, victims of multiple perpetrators were asked to answer all NASAS items with respect to their experiences with a single perpetrator whom they had previously identified as involving them in sexual behaviors the most. The NASAS was designed to assess eight different types of negative appraisals that were hypothesized to be relevant to children's responses to sexual abuse and related stressful events. These included negative self-evaluations related to one's character and sexuality (Alexander & Lupfer, 1987; Bukowski, 1992; Gold, 1986); critical appraisals of the character and trustworthiness of others (Peterson & Seligman, 1983); and perceptions of physical harm or damage to self (Porter, Blick, & Sgroi, 1982), important others, and important relationships or resources (Groth, Hobson, & Gary, 1982; Sheets et al., 1994). The specific items and subscales are listed in Appendix B.

Abusive Sexual Exposure Scale (ASES). This is a 28-item questionnaire that asks about the occurence of 14 types of sexual abuse and the identity (by relationship) of all perpetrators for each type of abuse (Spaccarelli, 1993). Each type of abuse asked about in this inventory was described using terms for body parts that were defined for the subject in the instructions given prior to the second part of the interview. The four terms used were (a) *penis*, (b) *vaginal area*, (c) *anal area*, and (d) *sex parts* (defined as including the previous three parts and the chest area on the female). To be sure that each term was understood, the child was asked to identify them on an anatomically detailed doll. Two items in the ASES addressed "noncontact" sexual victimization: having someone purposely expose their genitals, or being peeped at or photographed when nude. Twelve other items addressed six types of sexual contact under two conditions which were used to define the contact as abusive: (a) There was an age differential of at least 5 years between the victim and the other person involved and that person was not considered a "boyfriend" or "girlfriend," or (b) the other person was no more than 4 years older than the victim, but the sexual contact was "unwanted" by the victim. The six types of sexual contact included breast or genital fondling of victim or perpetrator, oral copulation of victim or perpetrator, digital penetration of the victim's anus or vagina, and genital penetration of the victim's anus or vagina.

Child Depression Inventory (CDI). The CDI (Kovacs, 1981) is a 27-item self-report scale that assesses affective, cognitive, and behavioral symptoms of depression. Scores on the CDI have been shown to discriminate clinically depressed and nondepressed psychiatric patients (Saylor, Finch, & Spirito, 1984). In previous studies, internal consistency reliabilities have

ranged from .71 (Kovacs, 1985) to .94 (Saylor et al., 1984); in this sample coefficient alpha was .90.

Revised Children's Manifest Anxiety Scale (RCMAS). The RCMAS (Reynolds & Richmond, 1978) is a 28-item self-report scale assessing acute anxiety. Previous studies have demonstrated the reliability of this scale (internal consistency = .85, Reynolds & Richmond, 1978) and its convergent (Reynolds, 1982) and predictive validity (Reynolds & Paget, 1981). Internal consistency in the present sample was .87.

Posttraumatic Stress Symptoms. A 20-item scale of posttraumatic stress symptoms was used that included 10 items assessing dissociative symptoms (from the Trauma Symptom Checklist for Children; Lanktree & Briere, 1990) and 10 items assessing rumination. The rumination subscale included five items from the Trauma Symptom Checklist and five additional items from Horowitz (1979). The coefficient alpha for this scale was .92.

Child Behavior Checklist. Adult reports of victim symptomatologies were provided by the nonoffending parents or guardians. Adults completed the most recent version of the Child Behavior Checklist (CBCL/4-18; Achenbach, 1991), which includes a 15-item social competence scale and a 114-item psychopathology scale. This scale is a widely used measure of child psychopathology with established reliability and validity (Achenbach & Edelbrock, 1978, 1981). The present paper reports results for the Externalizing and Internalizing factor scores and for five subscale scores. Separate subscale scores for Depression and Anxiety derived by Gersten, Beals, West, and Sandler (1987) were used to provide cross-validation for children's reports of those symptoms. In this sample, internal consistency reliability was adequate for these scales, with Cronbach alphas of .86 for Depression and .73 for Anxiety. In addition, three of Achenbach's (1991) own subscales were used: Anxiety/Depression (alpha = .74), Sexual Concerns (alpha = .49), and Aggressive Behavior Problems (alpha = .91). These data were missing for five subjects.

Therapist Report of Abuse Stress. Each participant was seen at least one time by a Master's level therapist with experience in treating child and adolescent victims of sexual abuse. After completing the initial clinical assessments and before reviewing the research interview results, therapists were asked to rate the degree of abuse stress experienced by their clients. Clinic policy advised that assessment and initial treatment planning be done after a maximum of five sessions. Therapist ratings were made, on average, after 2.2 sessions.

On a brief questionnaire, therapists were asked to make two global ratings on 1- to 10-point scales. They first rated the severity of the abuse itself, with explicit directions to *not* consider secondary family life events related to the abuse or public disclosure. In rating abuse severity they were

instructed to consider (a) type of sexual exposure, (b) perpetrator's tactics to gain compliance (i.e., coercion and inducements), (c) perpetrator's efforts to maintain secrecy or negatively label the victim, and (d) perpetrator's violation of the victim's trust. In a second global rating, therapists were asked to consider abuse-related and disclosure-related problems they believed the client had experienced. Here they were instructed to consider sources of stress such as (a) conflict and strain on family relationships, (b) victim's loss of social contact, (c) nonsupportive responses to disclosure, (d) dislocation from family, (e) interview or physical examination stress, and (f) legal system involvement.

RESULTS

Descriptive Data

Victim Reports of Abuse. The girls in this sample reported exposure to an average of 4.8 (SD = 3.1) of the 14 forms of abuse asked about in the Abusive Sexual Exposure Scale. Also, 71% reported at least one type of invasive abuse (anal or vaginal penetration or oral copulation), whereas 21% reported incidents of breast or genital fondling without penetration or oral copulation, and 8% reported only noncontact abuse. Of the 44 girls who reported contact abuse on the ASES, 50% identified only one perpetrator, 36% identified two or three, and 14% identified four or more. With respect to the identities of perpetrators, 43% of the girls reported victimization by a parent or stepparent, 13% by a sibling, 38% by a member of the extended family, and 59% by an extrafamilial perpetrator (these figures exceed 100% due to cases of multiple perpetrators). The closest perpetrator reported by the victim was a parent or stepparent in 19 cases (40%), a sibling in five cases (10%), an extended family member in nine cases (19%), and a nonfamily member in 15 cases (31%).

Abuse-Related Events and Appraisals. Descriptive data from the C-SARS and the NASAS are summarized in Tables I and II, respectively. As shown in Table I, victims in this sample reported experiencing an average of 22 C-SARS events. Intercorrelations of sum scores for the three event categories (i.e., abuse events, related events, disclosure events) ranged from .33 to .48, suggesting that these sources of stress were related but were not simply alternative measures of the same construct. Internal consistency reliability for the total C-SARS score was .93, and reliabilities were also adequate for the three subcategories of events, ranging from .66 to .93 (see Table I). The numbers of girls who reported 50% or more of the events in each event subcategory (i.e., perpetrator coercion, legal

events) are listed in column 3 of Table I. By this criterion, the most common types of stressful events in this sample were negative coercion, inducement, loss of social contact, and violations of trust, and the least common types of stress were legal events and family dislocation.

As shown in Table II, the most common negative appraisals of the abuse experience were perceiving others critically (e.g., others did something wrong, others cannot be trusted) and making global negative evaluations of oneself (e.g., blaming oneself, seeing self as "bad"). The least common negative appraisals were perceived loss of desirable resources and negative self-evaluations concerning one's sexuality (e.g. being too sexy, anticipating future sexual problems). Although coefficient alphas indicated good internal consistency for the appraisal subscales (see Table II), the average intercorrelation between the subscales was .53. Given these high intercorrelations, only the total negative appraisal sum score was used in the analyses described below. Internal consistency reliability for the total scale score was .96.

Convergent Validity: Relations Between Abuse Variables

Stressful Events. The C-SARS total events score was significantly, though moderately, correlated with therapists' overall ratings of abuse stress

Table I. Descriptive Data from the Checklist of Sexual Abuse and Related Stressors (N = 48)

Stressful event category (number of items)	Percent reporting		Scale statistics		
	None	Above 50%	Alpha	Mean	*SD*
Negative coercion (10)	25.5	38.3	.89	3.7	3.4
Inducements (14)	27.7	34.0	.89	4.6	4.4
Trust violations (4)	51.1	27.7	.74	1.3	1.5
Denigration/secrecy (6)	17.0	19.1	.57	2.1	1.5
Total abuse events (34)	6.4	27.7	.93	12.8	8.9
Family conflict (5)	43.8	19.2	.66	1.2	1.4
Nonsupportive disclosure (7)	23.4	21.3	.70	2.0	1.9
Loss social contact (8)	10.6	31.8	.56	2.6	1.8
Total related events (20)	2.1	10.6	.73	6.0	3.6
Investigation difficulty (4)	23.4	21.3	.45	1.4	1.1
Dislocation/placement (5)	66.0	4.3	.65	.6	1.1
Legal system difficulty (7)	48.9	4.3	.67	1.0	1.4
Total disclosure events (16)	17.0	4.3	.66	2.9	2.6
Total events score (70)	0.0	14.9	.93	21.6	12.5

Table II. Descriptive Data from the Negative Appraisals of Sexual Abuse Scale (N = 48)

Type of appraisal (number of items)	Percent reporting		Scale statistics		
	None/Little[a]	Some/A lot[b]	Alpha	Mean	*SD*
Harm to others (4)	35.1	34.8	.81	2.27	.92
Criticism of others (9)	21.3	36.2	.80	2.18	.68
Negative self-evaluation/ Global (9)	25.5	27.7	.90	2.18	.81
Physical damage (7)	34.0	31.9	.86	2.13	.88
Harm to relationships/ security (8)	38.3	25.5	.90	2.15	.86
Negative evaluations by others (5)	38.3	31.9	.87	2.16	.98
Loss of resources (6)	54.5	27.3	.89	2.01	1.01
Negative self-evaluation/ sexuality (8)	47.8	6.5	.78	1.81	.58

[a]Mean scale score $\leq$ 1.5 on a 4-point scale.
[b]Mean scale score $\geq$ 2.5 on a 4-point scale.

(r = .36, p < .05). Correlations across reporters (victim, therapist) were also significant within each subcategory of stressor (abuse-specific stress vs. related/disclosure stress) and were lower and nonsignificant across stressor categories. These data are consistent with viewing abuse-specific stress and stress related to the abuse or its disclosure as distinct constructs.

A significant correlation was also found between the number of stressful events reported on the events checklist, and the number of types of sexual abuse reported on the sexual exposure questionnaire (r = .40, p < .05). Abuse-specific stressors and disclosure-related stressors were significantly related to the number of types of sexual abuse the victim was exposed to (r = .45, p < .01, r = .31, p < .05, respectively), but abuse-related events were not (r = .04, n.s.).

Negative Appraisals. Total negative appraisal scores were significantly, though moderately, correlated with therapists' overall ratings of abuse stress (r = .32, p < .05). Looking separately at the two subcategories of therapist-rated stress, the level of related and/or disclosure stress was significantly correlated with negative appraisals (r = .34, p <.05), but stress pertaining to the abuse itself was not (r = .17, n.s.).

A significant correlation was also found between total negative appraisals and the number of types of sexual abuse reported on the sexual exposure questionnaire (r = .29, p < .05). There was also a significant, positive correlation between the total negative appraisal score and number of stressful events reported on the C-SARS (r = .44, p <.01).

Concurrent Validity: Relations of Abuse Variables with Symptomatology

First-order correlations between symptom variables and measures of sexual exposure, stress, and negative appraisal are shown in Table III. Correlations between victim reports of stressful events and self- or parent-reported symptomatology were positive and ranged from .13 to .38. Stressful events scores on the C-SARS were not significantly related to symptoms of depression or anxiety, for both parent report and victim self-report measures of symptoms. However, higher levels of stressful events were significantly related to parent-reported aggressive behavior problems, sexual concerns, and total symptoms.

Negative appraisal scores were also positively related to symptoms, with correlations ranging from .18 to .48 depending on the type of symptomatology. In contrast to stressful events, negative appraisals were significantly related to symptoms of depression and anxiety, and these effects were consistent across parent and victim self-report measures. Negative appraisals were also significantly related to victim reports of posttraumatic stress symptoms and to parent-reported sexual concerns. However, negative appraisals were not significantly related to parent-reported aggressive behavior problems.

In general, associations of the number of types of sexual abuse experienced to symptomatology were not as strong or as consistent as were

Table III. First-Order Correlations Between Abuse and Symptom Variables[a]

	Victim self-reported symptoms		
Abuse variables	PTSD	CDI	RCMAS
Sexual exposure	.13	.13	.05
Total events	.15	.13	.17
Negative appraisals	.48[d]	.47[d]	.47d

	Parent-reported symptoms				
Abuse variables	ANX	DEP	AG	SEX	(TOT)
Sexual exposure	.21	.01	−.09	.44[d]	.10
Total events	.15	.19	.38[c]	.30[c]	.30[c]
Negative appraisals	.30[b]	.32[c]	.18	.29[b]	.36[c]

[a]PTSD = posttraumatic stress syndrome; CDI = Children's Depression Inventory; CMAS = Children's Manifest Anxiety Scale; ANX = anxiety; DEP = depression; AG = aggression; SEX = sexual concerns; TOT = total.
[b]$p < .10$.
[c]$p < .05$.
[d]$p < .01$.

those for abuse stress or negative appraisals. All but one of the correlations between symptoms and sexual exposure were positive, with values ranging from .01 to .44. Sexual exposure was most strongly related to parent reports of victim anxiety symptoms and sexual problems. However, only the correlation with sexual problems was statistically significant.

Effects of Negative Appraisals Controlling for Stress

Multiple-regression analyses were done to examine whether negative appraisals contributed unique variance in predicting symptomatology after removing variance attributable to total abuse and related stress. (See Table IV.) Negative appraisal was a significant predictor of posttraumatic stress symptoms, and accounted for 25% additional variance, after variance attributable to abuse stress (2%) was removed. Negative appraisals also had significant effects on victim-reported depression and anxiety, after removing variance attributable to abuse stress. Abuse stress accounted for 6% and 2% of the variance in self-reported depression and anxiety, respectively, and negative appraisals accounted for an additional 29% and 23% of the variance in those two variables.

Table IV. Regression Analyses of Symptomatology Variables on Abuse Stress and Negative Appraisals[a]

	Self-reported symptoms					
	PTSD		CDI		RCMAS	
Predictor variable	*b*	R^2 change	*b*	R^2 change	*b*	R^2 change
Stress (step 1)	.20	.02	.37	.06[c]	.20	.02
Appraisals (step 2)	.52	.25[e]	.52	.29[e]	.49	.25[e]

	Parent-reported symptoms							
	Depression		Anxiety		Aggression		Sex problems	
Predictor variable	*b*	R^2 change	*b*	R^2 change	*b*	R^2 change	*b*	R^2 change
Stress (step 1)	.18	.03	.15	.02	.37	.14[c]	.30	.09[b]
Appraisals (step 2)	.29	.07[b]	.28	.07[b]	.04	.00	.21	.04

[a]PTSD = posttraumatic stress syndrome; CDI = Children's Depression Inventory; RCMAS = Revised Children's Manifest Anxiety Scale.
[b]$p < .10$.
[c]$p < .05$.
[d]$p < .01$.
[e]$p < .001$.

After removing variance attributable to total stress, the effects of negative appraisal on parent-reported depression and anxiety were only marginally significant, with negative appraisal accounting for an additional 7% of the variance in each outcome. As expected from the first-order correlations, a different pattern of results was obtained in predicting parental reports of externalizing symptoms. Total stress scores accounted for 9% ($p < .06$) of variance in sexual problems, and 14% ($p < .02$) of variance in aggressive behavior problems, and the second-order effects of negative appraisal were nonsignificant (3% and 0% additional variance explained, respectively).

DISCUSSION

This study examined two newly developed measures for assessing variability in sexual abuse cases. Results provided relatively consistent evidence that victims' reports of stressful events and appraisals of threat and harm were valid indices of the severity of the abuse. Total scores for victim reports of stressful events and negative appraisals were positively and significantly related to two other measures of abuse severity: therapist ratings of abuse stress and the number of types of sexual abuse reported. In addition, levels of stressful events and negative appraisals were each positively and significantly related to selected measures of symptomatology.

The total number of abuse and related stressors experienced by girls in this study was significantly related to their total parent-reported symptoms on the Child Behavior Checklist. However, across CBCL subscales this relationship was generally significant for externalizing, but not internalizing symptoms. Aggressive behavior problems and sexual problems were more likely in cases where girls reported more stressors, but correlations between stress and parent-reported depression and anxiety symptoms were not significant. Null results were also obtained for associations between total stress and victims' self-reported symptoms of depression, anxiety, and posttraumatic stress. This pattern of findings was somewhat unexpected, as it was assumed that shared method variance would tend to inflate stress/symptom correlations in self-report data, but not the parent-report data. This pattern of results suggests that victim responses on the stressful event checklist (C-SARS) were probably not biased by how symptomatic they were.

The observed relationship of total stress scores to aggressive behavior problems is consistent with findings of previous research on the effects of stressful life events on children (Compas, 1987; Cowen, Weissberg, & Guare, 1984; Vaux & Ruggiero, 1983). In this context, it suggests that ag-

gressive behavior problems were positively related to the number of abuse and related stressors that had occurred since the onset of sexual abuse. It is possible that exposure to a high number of stressors gradually overwhelms a victim's ability to manage feelings of anger and hostility, and these feelings manifest themselves in aggressive behavior problems. As suggested by other research on aggressive behaviors in children and adolescents, high levels of stress may also affect victims indirectly, through changes in parenting behavior. In particular, a high number of abuse-related stressful events may erode the parent's ability to maintain consistent and positive approaches to discipline (Garbarino, 1976; Mash & Johnston, 1984; Patterson, 1983).

Although the CBCL Sexual Concerns scale is only a crude measure of symptoms related to sexuality, the present findings suggest that problems such as obsessive thinking about sex and gender role dissatisfaction are related to the degree of sexual exposure involved in the abuse, and to total levels of abuse and related stressful events. There was also a significant positive correlation between sexual problems and negative abuse appraisals, although the effect of appraisals was not significant after removing variance attributable to stressful events. These findings suggest that the role of cognition in the development of childhood sexual problems may be weaker than for symptoms of depression and anxiety. Thus, high levels of sexual exposure may lead to inappropriate sexual behaviors or feelings, irrespective of victim's perceptions of how harmful or threatening the abuse was.

In this study, internalizing symptoms were strongly linked to victims' negative appraisals of their abusive experiences. Significant, positive correlations were obtained between appraisals of threat/harm and symptoms of depression and anxiety. These findings are consistent with previous research on self-blame cognitions in victims of sexual abuse (Gold, 1986; Morrow, 1991; Wolfe, Gentile, & Wolfe, 1989), and also extend those findings by suggesting that several types of negative appraisals are associated with poor outcomes. In this sample, commonly made negative appraisals included not only negative evaluations of oneself, but also feeling negatively evaluated by others, feeling critical of others, perceiving harm to others, perceiving physical damage to one's body or health, and feeling that one's close relationships or security were threatened. High intercorrelations also indicate that these different types of negative appraisals tend to co-occur. Additional research, requiring a much larger sample, is needed to examine the factor structure of these appraisals, and to see if specific types of negative cognitions might act as risk factors for specific kinds of symptoms (e.g., perceived physical damage leading to somatic symptoms or perceived threats to close relationships leading to anxiety).

The present findings are also unique in that victims' perceptions of harm and threat were related to symptoms of depression on both self- and parent-report measures of symptomatology. Therefore, the observed relation is probably not explained by a negative response bias in which children reporting high levels of perceived harm/threat are biased toward seeing themselves as depressed. Still, this finding does not address the issue of direction of causality. It is possible that depressed youths eventually come to view what happened as threatening or harmful, rather than the reverse. Longitudinal effects of appraisals measured at one time on symptoms measured at a later time are needed to demonstrate that these perceptions are indeed driving the development of internalizing symptoms.

Girls in this study who acknowledged more negative appraisals of themselves and/or others as a result of the abuse were also more likely to report symptoms of dissociation and rumination. This suggests that posttraumatic stress types of reactions may not be limited to victims who have made negative appraisals on an unconscious level. Instead, victims' conscious appraisals may play a role in the development and/or maintenance of a posttraumatic stress syndrome involving aversive reexperiencing of abuse events (i.e., ruminative thinking, and intrusive memories or flashbacks) and proneness to feelings of depersonalization, derealization, and other forms of self-distancing from one's emotions and behaviors. This finding also suggests that dissociation as a form of defensiveness or coping does not appear to be an effective way for victims to avoid making negative appraisals of their abusive experiences.

The present results are consistent with findings of Wolfe et al. (1989) showing a relationship between victims' internal causal attributions about sexual abuse and self-reported symptoms of depression, anxiety, and posttraumatic stress. Wolfe et al. developed the Children's Impact of Traumatic Events Scale (CITES) to measure specific attributions and perceptions about sexual abuse. Although that measure includes some similar items to those in the present measure of threat, harm, and loss appraisals, the conceptual bases for the two measures are rather different. One portion of the CITES was based on the Abramson, Seligman, and Teasdale (1978) model of causal attributions, and a second portion included subscales meant to tap Finkelhor and Browne's (1985) four traumagenic dynamics (i.e., betrayal, powerlessness, stigmatization, and sexualization). The attributional portion of the CITES and the construct of internal causal attributions for abuse is similar to the portion of the present measure assessing negative self-perceptions associated with the abuse. However, additional research utilizing both measures is needed to determine the relationship between these two constructs.

Also noteworthy in the present data was that the effects of negative appraisals on self-reported symptoms of depression, anxiety, and posttraumatic stress remained significant when controlling for the level of stressful abuse events experienced. In other words, even in cases of abuse involving many potential sources of stress, some victims were able to avoid making negative appraisals and these same girls experienced significantly fewer symptoms of depression, anxiety, and posttraumatic stress.

Although the study indicates that stress and appraisal indices are reasonably good predictors of short-term mental health outcomes, it also indicates that a limited amount of variability can be explained by concentrating on abuse variables. In regression analyses, stressful events and negative appraisals together accounted for a minimum of 12% (sexual problems) and a maximum of 35% (depression) of variance in symptomatology. Therefore, as suggested by research on children's resilience in facing other stressors (Garmezy, Masten, & Tellegen, 1984; Rutter, 1990), future research on mental health outcomes among victims of sexual abuse should look at intrapersonal and contextual factors (e.g. victim coping strategies, quality of family relationships) that might have main effects or interactive effects with abuse variables on symptomatology.

There are some important limitations of the present study that should also be mentioned. First, given that numerous symptomatology measures and subscales were examined, there was a consequent elevation in the risk for Type I errors. Thus, the tests of significance presented here should be interpreted with caution, until the findings are replicated. Second, the present sample was biased toward victims of relatively severe abuse involving multiple perpetrators. In this study, 71% of the cases involved penetration or oral copulation, compared with base rates of between 5% and 30% for these types of abuse in studies of college students or older women making retrospective reports (Finkelhor, 1979; Haugaard & Reppucci, 1988; Wyatt, 1985). It is likely that the treatment context for this sample probably resulted in an overrepresentation of victims who suffered relatively serious abuse, because those victims may be more motivated to seek help. Thus, the present findings may not generalize well to all victims in the community, particularly those who experienced relatively minor abuse (e.g., a single episode of fondling or noncontact abuse). A third limitation of the study was that the age range of the sample was rather wide, and the number of subjects was insufficient to group subjects by developmental level. Thus, it is unclear how well the findings generalize across the age range of the sample. As most of the sample was teenage, caution is advised in generalizing these results to preteen (ages 10 to 12 years) and younger victims. One other key study limitation pertains to the reliability of victims' reports of life events and appraisals. Potential threats

to reliability include inadequate comprehension of the questions, particularly among younger victims in this sample (those under age 12), and temporal conditions that could affect responses such as mood or test setting. Thus, future research is needed which examines test-retest reliability over a short interval

These limitations notwithstanding, the present findings indicate that the assessment of stressful events and negative appraisals in sexual abuse represents an important step toward addressing the question of how to account for variability in mental health outcomes among victims. By providing two comprehensive, standardized tools for assessing abuse severity, these measures should prove highly useful in future studies exploring how other contextual or intrapersonal factors mediate or moderate the effects of abuse variables on victims' mental health.

APPENDIX A: CHECKLIST OF SEXUAL ABUSE AND RELATED STRESSORS (C-SARS)

I. Abuse Stressors (34 items)

A. Negative coercion

1. Tell you that something bad would happen if you didn't do a sexual behavior as he/she wanted.
2. Threaten to punish you if you didn't do a sexual behavior as he/she wanted.
3. Threaten to hurt you if you didn't do a sexual behavior as he/she wanted.
4. Punish you for not doing a sexual behavior as he/she wanted.
5. Tell you that something bad happened because you didn't do a sexual behavior as he/she wanted.
6. Use physical force to make you do a sexual behavior.
7. Hurt you for not doing a sexual behavior as he/she wanted.
8. Tell you that something bad would happen if you talked to anyone else about what happened.
9. Threaten to punish you if you talked to anyone else about what happened.
10. Threaten to hurt you if you talked to anyone else about what happened.

B. Inducements

Bribes/Rewards

1. Give you extra attention.
2. Tell you good things about yourself.
3. Say how much they liked you.

4. Take you fun places or do special activities with you.
5. Give you treats or meals.
6. Buy you clothing, toys, or other presents.
7. Give you money.

Misrepresentation

1. Tell you that sexual behaviors were a grown up thing to do.
2. Tell you that sexual behaviors were something you needed to learn.
3. Tell you that sexual behaviors were something you had to do, like a responsibility.

Seduction

1. Tell you that sexual behaviors were a fun thing to do.
2. Tell you that doing sexual behaviors would make you feel better.
3. Tell you that you were sexy.
4. Use lots of sexy words around you.

C. Violations of Trust

1. Break a promise not to hurt you in the sex behaviors.
2. Break a promise not to do sex behaviors with you anymore.
3. Break a promise to give you something or do something with you if you did the sex behaviors.
4. Lie about his/her feelings for you, just to get sex.

D. Stigmatizing Messages

1. Tell you to not talk to anyone else about what happened.
2. Do things to make sure no one else would find out about what happened.

Victim Denigration

3. Tell you that the sexual behaviors were bad or naughty.
4. Tell you that it was o.k. to do bad or naughty things with him/her.
5. Tell you that you were doing bad or naughty things.
6. Call you bad names (e.g., worthless, no-good, whore, slut).

II. Abuse-Related Events (20 items)

A. Family Conflict/Dysfunction

1. Your parents started fighting more.
2. Some people in your family started bossing everyone around more.
3. Others in your family acted jealous of your relationship with the person who involved you in sexual behavior.
4. Your mother and father broke up or separated.
5. Your mother and father got a divorce.

B. Loss of Social Contacts

1. You couldn't go certain places or be with certain people.

2. Your mother spent less time with you.
3. Your father spent less time with you.
4. Your friends were less interested in being with you.
5. Your brothers and sisters were less interested in being with you.
6. You spent less time with your friends.
7. You spent less time with your brohers and sisters.
8. You did less positive things with the person who involved you in sex behaviors.

C. Non-Supportive Responses to Disclosure

1. Some people in your family were angry at you when they found out what happened.
2. The person who did this was angry at you when others found out about it.
3. Some people in your family scolded you or punished you when they found out what happened.
4. The person who did this scolded or punished you when he/she found out what happened.
5. When they found out what happened some people in your family blamed it on you.
6. When they found out what happened someone in your family protected you from the person who involved you in sexual behaviors.
7. Someone in your family gave you reassurance and emotional support when they found out what happened.

III. Public-Disclosure Events (16 items)

1. A social worker, policeman, or other helper (therapist, church leader) asked you too many difficult questions.
2. A social worker, policeman, or other helper (therapist, church leader) did not believe what you said about the sexual behaviors that happened.
3. A social worker, policeman, or other helper (therapist, church leader) said or did something that made you feel like the sexual behaviors that happened were your fault.
4. A doctor or nurse examined you in a way that was uncomfortable or invaded your privacy.
5. The court or social worker made you leave home and live with someone else in your family.
6. The court or social worker made you leave home and live in a foster home or shelter.
7. Your family had to move because the court or the social worker made you.
8. One of your parents had to go to jail because of what happened.
9. You had to go court for a hearing or trial against the person who involved you in sexual behaviors.

10. In the courtroom you had to see the person who involved you in sexual behaviors.
11. In the courtroom you had to testify or talk about what happened.
12. In the courtroom a lawyer or judge asked you too many difficult questions.
13. You had to wait a long time to find out what the court or judge would do to the person who involved you in sexual behaviors.
14. The court or judge punished the person who involved you in sexual behaviors too much.
15. The court or judge did not punish the person who involved you in sexual behaviors enough.

APPENDIX B: NEGATIVE APPRAISALS OF SEXUAL ABUSE SCALE (NASAS)

A. Physical Pain/Damage

1. Some part of your body was hurt or damaged.
2. You were sick or caught a disease.
3. Some part of your body might get hurt or damaged.
4. You might get sick or catch a disease.
5. Your body might work differently from other people's when you get older.
6. You might not be able to have children when you get older.
7. You might get pregnant.

B. Negative Self-Evaluation: Global

1. You did something bad or wrong.
2. You were not as good as other kids.
3. You made someone do bad things.
4. It was your fault.
5. It was your fault for trusting too much.
6. You are a bad person.
7. You are not as good as other kids.
8. You make people do bad things.
9. You trust people too much.

C. Negative Self-Evaluation: Sexuality

1. Your sexual feelings were out of control.
2. You were too sexy.
3. You have too many sexual feelings or thoughts.
4. You lose control of your sexual feelings.
5. You are too sexy.
6. You're not as interested in sex as you should be.
7. You won't like sex enough when you get older.

8. You will always have sex problems.

D. Negative Evaluation by Others

1. Someone you care about thought you did something bad.
2. Someone you care about was disappointed with you.
3. Someone you care about might say bad things about you.
4. Someone you care about might be disappointed with you.
5. You might get yelled at or punished.

E. Loss of Desired Resources

1. You didn't get to go somewhere you wanted.
2. You didn't get to do things you wanted.
3. You didn't get to spend time with someone you like.
4. You might not get to go somewhere you wanted.
5. You might not get to do things you wanted.
6. You might not get to spend time with someone you like.

F. Harm to Relationships/Security

1. Your mom or dad didn't care about you.
2. Your family was not as close as before.
3. Someone important didn't love you anymore.
4. You lost an important relationship.
5. Your mom or dad might not care about you anymore.
6. Your family might not be as close anymore.
7. Someone important might not love you anymore.
8. You might lose an important relationship.

G. Harm to Others

1. Someone you care about got hurt.
2. Someone you care about was treated bad.
3. Someone you care about might get hurt.
4. Someone you care about might be treated bad.

H. Criticism of Others

1. Someone you care about did something bad or wrong.
2. Someone you care about wasn't trustworthy.
3. Someone in your family didn't try to help you enough.
4. Something is wrong with your family.
5. You were ashamed of someone you care about.
6. Someone you care about might do something bad or wrong.
7. You can't trust people you care about as much as you want to.
8. You can't trust people you care about because they might want sex.
9. Someone in your family might not help you.

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