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Children With Sexual Behavior Problems: Identification of Five Distinct Child Types and Related Treatment Considerations

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This research was conducted to define empirically derived and clinically relevant types of children with sexual behavior problems. A theory-driven hierarchical cluster analysis was performed using Ward's method. Five distinct types of children with sexual behavior problems emerged. Significant differences were found among the five child types on a large number of historical, diagnostic, behavioral, and demographic variables, including number of victims, degree of aggression employed during sexual acting out, sexual penetration, psychiatric diagnosis, internalizing, and externalizing. Clinical relevance of the child types was examined by analyzing change scores on an objective measure of sexualized behaviors in children who had earlier been assigned randomly to one of two treatment conditions. The analysis of treatment efficacy revealed a significant main effect of child type and a significant child type by treatment type interaction. After a short time in treatment, the highly traumatized child type derived significantly more benefit from a cognitive behavioral intervention than from an expressive therapy. This study demonstrates that distinct types of children with sexual behavior problems exist, that they can be distinguished on a wide range of clinically relevant variables, and that identification of child type may be relevant to choice of treatment modalities and outcome.

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An increase in childhood sexual behaviors is one of the most common aftereffects of sexual maltreatment. A review of 45 studies that compared maltreated and nonabused children found 13 that had collected data about children's sexualized behaviors. In these 13 studies, 28% of 1,353 sexually abused children exhibited highly sexualized behaviors. The prevalence of sexualized behaviors fluctuated across children's ages. The youngest and oldest age groups had the largest proportion of children with highly sexualized behaviors, with adolescent children manifesting relatively few such behaviors as a result of their earlier maltreatment. This finding, along with the observation that other aftereffects of abuse seem to ebb and flow in different patterns across developmental landmarks, led the authors to propose that sequelae of maltreatment may follow different developmental trajectories (Kendall-Tackett, Williams, & Finkelhor, 1993). Averaged across children's ages, sexualized behavior was one of only two symptoms found more frequently in sexually abused children than in nonabused children who were receiving clinical services. The other symptom occurring more

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frequently in sexually abused children was the diagnosis of Post Traumatic Stress Disorder (PTSD) (Kendall-Tackett et al., 1993).

Both researchers and clinicians have proposed schemata to differentiate developmentally expected and problematic sexual behaviors during childhood. All of these efforts concur that no single variable reliably differentiates expected and problematic sexual behaviors in children. Variables believed to assist differentiation of expected and problematic sexual behaviors include: (a) children's ages, (b) children's maltreatment histories, (c) differences in stature or competence that imply discrepancies in power or sophistication, (d) children's responsiveness to adult intervention and supervision, (e) sexual behaviors children have performed, (f) children's affect while engaging in the sexual activities, (g) the compulsivity of the sexual behaviors, and (h) the degree of coercion used to gain victim compliance or submission. Most theorists suggest that these criteria can be used to form a continuum of childhood sexual behaviors ranging from expected to sexually aggressive (Araji, 1997; Cunningham & MacFarlane, 1996; Friedrich, 1990; Gil & Johnson, 1993; Johnson & Feldmeth, 1993; Pithers, Gray, Cunningham, & Lane, 1993; Ryan & Blum, 1993; Sgroi, Bunk, & Wabrek, 1988).

These criteria can be useful to parents and clinicians in determining whether children have engaged in behaviors that require sexual education or professional intervention. However, because many of the criteria require subjective judgment rather than objective measurement, the reliability of differentiating expected and problematic child sexual behavior is dependent on knowledge of child development. Particularly when expected sexual behaviors are misclassified as problematic, the public and health-care professionals have cause to question whether such difficulties actually exist or are simply the product of zealousness (Okami, 1992).

Beyond developing criteria defining expected and problematic sexual behaviors, several attempts have been made to define subtypes of childhood sexual behavior problems (Berliner, Manaois, & Monastersky, 1986; Hall & Mathews, 1997). The initial effort to identify types of children with sexual behavior problems was published more than 10 years ago (Berliner et al., 1986). Based on their clinical observations, these authors distinguished three types of child sexual behavior disturbance: (a) inappropriate sexual behavior, (b) developmentally precocious behavior, and (c) coercive sexual behavior. Inappropriate sexual behavior subsumed various acts that theoretically might not suggest psychological disturbance or the need for intensive intervention (e.g., public masturbation, exposure, sexualized play). Developmentally precocious behavior was defined as developmentally unexpected attempts at intercourse that did not entail use of force. Coercive sexual behavior involved the use of force, or implied force, to gain victim submission. Because these types were based on clinical experience, they represent a good heuristic device on which research hypotheses might be based.

Rasmussen, Burton, and Christopherson (1992) emphasized the motivation for the sexual behavior or the context in which it occured (i.e., victim/perpetrator, delinquent perpetrator, and family perpetrator). Victim/perpetrators were believed to be were reacting to their own sexual victimization or to observation of explicit sexual stimuli. Delinquent perpetrators were viewed as socially inadequate or personality disordered. Family perpetrators acted against a younger sibling in the home. This taxonomy appears highly relevant to case planning and placement, particularly with juvenile sexual abusers. However, type classifications based on an assumed motive for children's misbehavior or the location in which it occurred appear somewhat limited.

Hall and Mathews (1997) used rational construction to devise three types of childhood sexual behavior: developmentally expected, sexualized, sexually intrusive, and sexually offending. Only the latter two groups were considered to have sexual behavior problems. Sexually intrusive children engaged in abusive behaviors "without force or planning," whereas sexually offending children planned their acts, which may have entailed a use of force (p. 17).

In an important advance beyond prior efforts that relied exclusively on recollections of clinical observations, Hall and Mathews (1997) based their classification on composite variables (indices), each of which consisted of an extensive array of data gathered from clinical files. Children with sexual behavior problems (i.e., sexually intrusive or offending types) had the highest scores on 17 of 18 indices, with the difference between the problematic and nonproblematic groups reaching statistical significance on 6 of the 18 indices. Although the types of childhood sexual behavior were constructed rationally rather than empirically, the work of Hall and Mathews is very promising and is a significant advance over earlier work.

All prior efforts to devise a taxonomy for children with sexual behavior problems have relied entirely on clinical experiences. These efforts have been important because they implicitly recognized the existence of and the need to define more precisely a diverse clinical population. Using variables hypothesized to be important to distinguishing types of children with sexual behavior problems, empirical methods can be

employed to statistically derive types of these children (e.g., cluster analysis).

Development of an empirically derived and clinically meaningful taxonomy for children with sexual behavioral problems may yield greater understanding of the etiology of various types of children with sexual behavior problems. As etiologically significant factors for each child type are defined, preventive programs may be developed to address those influences. To the extent that child types respond differently to various interventions (e.g., cognitive-behavioral, expressive, didactic), children and families may be assigned to treatment that demonstrably best meets their needs.

Differentiation of the clinical course followed by different types of children with sexual behavior problems could be one significant achievement of taxonomic classification. A review article on childhood aggression recently reported that "the correlation between early and later aggression was, on average, .63 (.79 when corrected for attenuation), which is as high as the stability of intelligence over time. . . . When latent antisocial behavior constructs are used, the correlations between early and later antisocial behavior often are higher, with correlations as high as .92 (Patterson, 1992)" (Loeber & Stouthamer-Loeber, 1998, pp. 242-243). Loeber and Stouthamer-Loeber cautioned that although correlations would be high, the absolute prevalence, frequency, or seriousness of such acts may change over time. We would add that the correlation of aggression over time may potentially differ across child types. One indication that this hypothesis may be well-founded is evident in the finding that highly aggressive children who have an unrealistically high view of their own competence may be a particular concern, with their high self-esteem functioning as a risk factor that predisposes additional acting out (Hughes, Cavell, & Grossman, 1997). Another indication that differentiation of types of aggressive children might have clinical utility is offered by studies that have found the probability of desistance (i.e., cessation of aggression over time) to be lowest among the most profoundly antisocial youth (Brennan, Elliott, & Knowles, 1981; Loeber, 1982). In highly aggressive youth, the prevalence of violence actually appears to increase in late adolescence and early adulthood (Loeber & Farrington, 1998). This finding is further confirmed by two longitudinal studies that have demonstrated that most violent adult offenders were highly aggressive early in life (Farrington, 1994; Magnusson, Stattin, & Duner, 1983). Loeber and Stouthamer-Loeber (1998) conclude that in light of the above data, research should be conducted to identify the variables that are associated with highly aggressive children who persist and desist. Little is currently known about these variables. Loeber and Stouthamer-Loeber concluded, "Classifications using more information about age of onset, frequency of current problem behavior, persistence of the problem behavior, and the history of behavioral development are more likely to help clinicians, probation officers, and others working with children" (pp. 246-247).

The current study represents a first attempt to empirically define a taxonomy for children with sexual behavior problems. A variety of demographic, behavioral, and psychometric variables, obtained from 127 children with sexual behavior problems and their caregivers, were subjected to a cluster analysis. Characteristics associated with each of the emergent types were further defined through multivariate and univariate analyses of variance.

METHOD

Participants

This research included 127 6- to 12-year-old children who had exhibited problematic sexual behaviors. Sexual behaviors were defined as problematic if they were: (a) repetitive; (b) unresponsive to adult intervention and supervision; (c) equivalent to adult criminal violations; (d) pervasive, occurring across time and situations; or (e) highly diverse, consisting of a wide array of developmentally unexpected sexual acts.

The 127 children came from 115 different families. Each child's primary caregiver provided informed consent for the family to participate in a treatment-outcome study. Children age 9 and above were asked to provide signed assent to participate.

Measures

At intake, children and their primary caregivers completed separate 2-hour interviews that focused on any maltreatment that the children and caregivers had experienced as well as on any abuse within their extended families. Information provided by children was corroborated during the caregivers' interviews or through released third-party documents. Both parents and children also completed a battery of behavioral observation and self-report instruments. Caregivers completed the following instruments relevant to their children's behaviors: the Child Behavior Checklist (CBCL) (Achenbach, 1991), the Child Sexual Behavior Inventory–Third Edition (CSBI-3) (Friedrich, 1995; Friedrich et al., 1992), and the Eyberg Child Behavior Inventory (ECBI) (Eyberg & Ross, 1978). Caregivers also completed the Parenting Stress Index (PSI) (Abidin, 1990), which measures the qual-

ity of interactions between children and their caregivers. Children completed the Children's Action Tendency Scale (CATS) (Deluty, 1979) and the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973). Detailed descriptions of these measures are available in other publications from this longitudinal research (Gray, Busconi, Houchens, & Pithers, 1997; Pithers, Gray, Busconi, & Houchens, 1998).

Procedure

Cluster analysis. Hierarchical cluster analysis was performed using Ward's method. This clustering procedure first sums the squared Euclidean distances between each case, then clusters the means. At each stage in the analysis, the two cases or clusters are merged, which result in the smallest increase in the overall sum of the squared within-cluster distances.

Cluster analysis identifies homogeneous groups of cases based on selected characteristics. Variables are selected for cluster analysis based on some theoretical conceptualization about what characteristics might unify and distinguish between groups of participants. In the current study, we selected variables for inclusion based on an assumption that three distinct types of children with sexual behavior problems might exist (i.e., nondisordered, highly maltreated and traumatized, and conduct disordered and delinquent). Based on this assumption, measures selected for inclusion in the analysis reflected extensiveness of maltreatment, level of psychopathology, extent of nonsexual aggressiveness, frequency of sexual activity, amount of aggression evident in sexual behaviors, intrusiveness of the sexual behavior, and frequency of delinquent behaviors. Variables entered into the cluster analysis included: (a) number of people who had physically or sexually abused the child, (b) age of onset of the child's problematic sexual behavior, (c) number of victims of the child's sexual misbehaviors, (d) number of penetrative sexual acts performed by the child, (e) a clinician's rating of aggression evident in the child's sexual behavior, (f) child's gender, (g) *T* score on the CBCL Aggressive Behavior subscale, (h) *T* score on the CBCL Sex Problems subscale, (i) *T* score on the CBCL Delinquency subscale; (j) CSBI-3 score, (k) presence or absence of conduct disorder diagnosis, (l) presence or absence of Posttraumatic Stress Disorder (PTSD), (m) presence or absence of Oppositional and Defiant Disorder (ODD), and (n) total number of psychiatric diagnoses. Gender was included in the cluster analysis because it was hypothetically linked to aggression. Given the great disparity in range and variance of scores across variables, *Z*-score transformations were performed prior to entering variables into the analysis. Once stable clusters were developed, differences between clusters on variables were explored using MANOVA, ANOVA, and subsequent tests.

Multivariate Analysis of Variance

A MANOVA was performed to determine if child clusters differed significantly on variables of interest. The following variables were included in the MANOVA: age (child's age at intake, child's age at first maltreatment, child's age at onset of problematic sexual behavior, latency in years between the child's maltreatment and onset of problematic sexual behavior), CBCL syndrome scores (total score, internalizing, externalizing), emotional management (CATS subscales on Aggression, Assertiveness, and Submissiveness; STAIC state and trait anxiety), sexual behavior characteristics (CSBI total score; clinician's ratings of sexual aggressiveness and appropriateness; number of victims; and numbers of sexual acts involving penetration, use of objects, compulsive self-stimulation, public self-stimulation, self-injury, theft of intimate apparel, public statements, or use of a weapon to gain victim submission), psychiatric disorders (attention deficit/hyperactivity disorder [ADHD], conduct disorder, oppositional and defiant disorder, posttraumatic stress disorder [PTSD], number of diagnoses), gender, maltreatment history (number of sexual victimizers, number of physical abusers, exposure to violence within the home), and special academic accommodations (use of an individual educational plan).

Analysis of the Utility of Child Types in Clinical Practice

After the intake evaluation, families were randomly assigned to one of two 32-week treatment conditions. One condition employed an expressive therapy that was created by a panel of national experts as reflecting the best practice for children with sexual behavior problems in the early 1990s. The second treatment was a highly modified form of relapse prevention, which focused on identifying and intervening in precursors to sexual acting out. The relapse prevention condition also encompassed a prevention team, which consisted of selected individuals in the families' everyday lives who were willing to support the families' efforts to adopt an abuse-prevention lifestyle. Both treatment approaches employed parallel groups for parents and children. After the first 16 weeks of treatment, children and caregivers completed another assessment battery as a process evaluation. Change scores were computed separately for each assessment and used in an ANCOVA with the intake score on the relevant assessment used as a covariate (Laird's procedure, 1983). Dependent variables in-

TABLE 1: Significant Differences Between Five Types of Children With Sexual Behavior Problems

Variable			
Child's age at intake	1 > 2, 3, 5	4 > 3	
Percentage of males in type	1, 5 > 2, 4		
Number of sexual abusers to child	3 > 1		
Number of physical abusers to child	3, 5 > 1, 2, 4		
Number of emotional abusers to child	3 > 1, 4		
Total number of abusers to child	3 > 1, 2, 4, 5	4, 5 > 1	
Additional sexual abusers in extended family	4 > 1, 3		
Age/onset of sexual behavior problem	1, 4 > 3	1 > 2, 5	
Years from abuse to behavior problem	4 > 5		
Number of sexual victims by child	5 > 1, 2, 4	3 > 2	
M sexual aggression rating	1, 4, 5 > 2, 3		
Percentage high in sexual aggressive (> 4)	1, 4 > 2, 3		
Percentage of children engaging in penetration	1, 5 > 2, 3, 4		
M number of penetrative acts	1 > 2, 3, 4, 5		
M number of psychiatric diagnoses	3, 5 > 1, 2, 4	1, 4 > 2	
Percentage of conduct disorder diagnoses	1, 5 > 2, 3		
DSM-IV CD-aggression	1, 3, 4, 5 > 2		
DSM-IV CD-property damage	4 > 2		
DSM-IV CD-deceitfulness	1, 3, 4, 5 > 2		
Percentage of ODD diagnoses	5 > 1, 2, 3, 4		
Percentage of PTSD diagnoses	3 > 1, 2, 4, 5		
Percentage of ADHD diagnoses	3, 5 > 2		
ECBI intensity score	4 > 1, 2, 3, 5		
CSBI-3 score	4 > 1, 2, 3, 5		
CBCL total *T* score	4 > 1, 2, 3, 5	5 > 1, 2	3 > 1, 2
CBCL internalizing *T* score	4 > 1, 2, 3		
CBCL externalizing *T* score	4 > 1, 2, 3, 5	5 > 1, 2	
CBCL sexual problems *T* score	4 > 1, 2, 3, 5	3, 5 > 1	
TRF total *T* score	1, 4 > 2		
TRF externalizing *T* score	4, 5 > 2, 3		
PSI parental attachment to child[a]	3, 4 > 1, 2, 5		
PSI child demandingness	4 > 1, 2		
PSI child domain score	4 > 1		
STAIC–trait anxiety	3 > 1		

NOTE: 1 = sexually aggressive; 2 = nonsymptomatic; 3 = highly traumatized; 4 = rule breaker; 5 = abuse reactive; ODD = Oppositional Defiant Disorder; PTSD = Posttraumatic Stress Disorder; ADHD = Attention Deficit Hyperactivity Disorder; ECBI = Eyberg Child Behavior Inventory; CSBI-3 = Child Sexual Behavior Inventory–3; CBCL = Child Behavior Checklist; TRF = Teacher Report Form; PSI = Parenting Stress Index; STAIC = State-Trait Anxiety Inventory for Children.
a. Higher score signifies lower level of attachment.

cluded treatment condition and child type. This study reports the significance of change scores on the CSBI-3 after 16 weeks of the 32-week treatment regimen.

A second method of analyzing treatment-related changes on psychometric measures was suggested by Jacobson and Truax (1991), who developed the concept of *clinically significant change*. These authors expressed concern that clinically insignificant changes in test scores may result in statistically significant differences. Thus, if statistically significant change on a psychometric device is used as the sole criterion for therapeutic efficacy, treatments may be found statistically effective although they produce insignificant changes in client functioning.

To avoid this potential pitfall in treatment outcome research, Jacobson and Truax (1991) recommended use of a measure of clinically significant change. In essence, these authors proposed that participants manifest clinically significant change when their post-treatment scores are at least two standard deviations different from their intake scores. Using this criterion, clients may be judged to have shown either clinical improvement or deterioration.

RESULTS

Cluster Analyses

In hierarchical cluster analyses, the number of emergent clusters is not predefined but dependent on inspection of the data. After examining the similarity and dissimilarity matrices for three-, four-, and five-cluster solutions, the five-cluster solution was selected

TABLE 2: Means (standard deviations) of Variables Across Five Types of Children With Sexual Behavior Problems

Variable	*Sexually Aggressive*	*Non-symptomatic*	*Highly Traumatized*	*Rule Breaker*	*Abuse Reactive*	*Grand Mean*
Child's age at intake	9.9 (1.8)	8.6 (2.1)	7.8 (1.9)	9.2 (2.0)	8.4 (2.5)	8.8 (2.1)
Percentage of males in type	91	44	68	43	96	65
Number of sexual abusers to child	1.2 (.4)	1.5 (.7)	2.7 (1.7)	2.2 (1.7)	2.2 (1.8)	2.0 (1.5)
Number of physical abusers to child	1.2 (.41)	1.2 (.5)	2.6 (1.6)	1.4 (.63)	2.4 (1.6)	1.8 (1.3)
Number of emotional abusers to child	1.0 (0.0)	1.4 (0.5)	2.8 (1.5)	1.2 (0.4)	2.2 (1.3)	1.8 (1.2)
Age at onset of sexual behavior problem	8.5 (1.7)	6.7 (2.3)	5.7 (2.1)	7.7 (2.4)	6.5 (2.9)	7.1 (2.5)
Years/abuse to behavior problem	3.0 (2.5)	2.6 (2.1)	2.3 (2.5)	3.9 (3.2)	1.7 (2.1)	2.8 (2.7)
Number of sexual victims by child	1.8 (1.5)	1.4 (0.6)	2.4 (1.4)	1.8 (1.0)	3.0 (2.4)	2.0 (1.5)
M number of penetrative acts	1.7 (3.1)	.2 (1.0)	0.0 (0.0)	.14 (.69)	.5 (1.2)	.5 (1.6)
M sexual aggression rating	3.4 (2.0)	2.8 (.8)	2.5 (1.1)	3.6 (1.4)	3.2 (1.6)	3.1 (1.5)
Percentage high in sexual aggression (> 4)	35	4	9	34	23	22
M number of psychiatric diagnoses	1.8 (.67)	0.8 (.68)	3.0 (.98)	2.1 (.78)	3.0 (.95)	2.1 (1.11)
Percentage of conduct disorder diagnoses	39	4	9	14	22	17
DSM-IV CD-aggression	3.1 (1.0)	0.8 (1.0)	2.4 (1.5)	2.8 (1.6)	3.1 (1.2)	2.5 (1.6)
DSM-IV CD-property damage	.44 (.59)	.14 (.36)	.52 (60)	.62 (.61)	.59 (.59)	.48 (.58)
DSM-IV CD-deceitfulness	.86 (.69)	.24 (.54)	.71 (.72)	1.16 (.85)	1.18 (.80)	.87 (.80)
DSM-IV CD-rule violations	.09 (.29)	.10 (.30)	.10 (.30)	.32 (.64)	.27 (.63)	.18 (.49)
Percentage of ODD diagnoses	0	12	18	20	96	28
Percentage of PTSD diagnoses	0	0	91	3	5	17
Percentage of ADHD diagnoses	35	24	59	34	59	41
ECBI intensity score	128.6 (33.2)	121.9 (41.6)	148.7 (39.6)	153.3 (35.5)	144.0 (26.4)	140.2 (37.3)
CSBI-3 score	.21 (.19)	.33 (.25)	.45 (.36)	.71 (.36)	.40 (.34)	.45 (.36)
CBCL total *T* score	61.0 (9.7)	61.3 (13.0)	67.1 (12.1)	76.2 (7.07)	69.8 (6.2)	67.8 (11.4)
CBCL internalizing *T* score	57.2 (9.3)	58.9 (12.8)	61.0 (11.0)	68.8 (6.6)	64.4 (9.7)	62.6 (10.6)
CBCL externalizing *T* score	61.3 (8.4)	60.6 (13.7)	66.7 (12.1)	75.8 (7.3)	69.9 (5.2)	67.6 (11.3)
CBCL sexual problems *T* score	62.3 (9.7)	63.4 (10.1)	69.3 (10.2)	74.4 (7.3)	68.6 (7.5)	68.1 (10.0)
TRF total *T* score	64.1 (8.5)	58.9 (9.0)	60.0 (6.2)	64.1 (7.3)	63.9 (6.2)	62.3 (7.8)
TRF internalizing *T* score	59.5 (10.0)	54.4 (7.3)	56.6 (6.2)	57.3 (7.0)	59.5 (9.9)	57.4 (8.4)
TRF externalizing *T* score	63.0 (9.8)	59.2 (8.1)	58.7 (7.3)	64.1 (7.9)	64.0 (6.1)	61.9 (8.2)
PSI parental attachment to child[a]	14.1 (2.8)	14.6 (4.6)	16.9 (4.0)	16.7 (3.4)	14.6 (4.0)	15.5 (3.8)
PSI child demandingness	24.1 (5.6)	25.3 (5.9)	27.6 (6.7)	29.3 (6.2)	26.9 (4.7)	26.8 (6.1)
PSI-child domain score	122.3 (25.3)	128.3 (27.4)	137.5 (25.9)	143.5 (25.8)	137.5 (18.9)	134.6 (25.8)
STAIC–trait anxiety	35.7 (8.3)	41.4 (9.2)	42.3 (8.3)	39.4 (5.9)	38.2 (7.7)	39.4 (8.0)

NOTE: ODD = Oppositional Defiant Disorder; PTSD = Posttraumatic Stress Disorder; ADHD = Attention Deficit Hyperactivity Disorder; ECBI = Eyberg Child Behavior Inventory; CSBI-3 = Child Sexual Behavior Inventory–3; CBCL = Child Behavior Checklist; TRF = Teacher Report Form; PSI = Parenting Stress Index; STAIC = State-Trait Anxiety Inventory for Children.
a. Higher score signifies a lower level of attachment.

as having the greatest potential clinical utility. After further inspection, the child clusters were accepted as child types and designated as: Type 1, sexually aggressive ($n = 23$); Type 2, nonsymptomatic ($n = 25$); Type 3, highly traumatized ($n = 22$); Type 4, rule breaker ($n = 35$); and Type 5, abuse reactive ($n = 22$).

Multivariate Analysis of Variance

Wilks's lambda (.0005) proved to be highly significant, $F(4, 98) = 3.23$, $p < .001$, demonstrating the existence of systematic differences among the child types. To more fully examine the between-type differences on these variables, each variable was analyzed through a univariate ANOVA. When significant differences between types were found, Newman-Keuls subsequent tests were employed to determine the locus of the significance. Significant differences between child types are presented in Table 1, with Table 2 containing the associated means and standard deviations for each type. Table 3 summarizes the central characteristics of each child type.

Differences Among Types: Demographics

Age. At the time of intake, the children's grand mean age was 8.83 ($SD = 2.13$). A significant difference in age was found across the child types, $F(4, 122) = 3.53$, $MSE = 4.21$, $p < .009$. Sexually aggressive children ($M = 9.9$, $SD = 1.79$) were significantly older than were the nonsymptomatic ($M = 8.6$, $SD = 2.06$), abuse reactive ($M = 8.4$, $SD = 2.46$), and highly traumatized children ($M = 7.8$, $SD = 1.89$). Rule breakers ($M = 9.2$, $SD = 2.02$) were significantly older than were highly

TABLE 3: Characteristics Associated With Each of Five Subtypes of Children With Sexual Behavior Problems

Sexually aggressive
- Males overrepresented
- Highest percentage of conduct disorder
  - ADHD diagnoses also prevalent
- Seldom acknowledge own maltreatment
  - Fewest sexual abusers to children
  - Few physical abusers to children
- Oldest children at onset of sexual problem
- Greatest percentage who penetrate victims
- Highest average number of penetrative acts
- Aggression used to gain victim submission
- Borderline clinical on CBCL total score
- Borderline clinical on CBCL externalizing
- Normal range on CBCL internalizing
- Clinical range on TRF total score
- Borderline clinical on TRF externalizing
- High-normal range on TRF internalizing

Nonsymptomatic
- Females overrepresented
- Fewest number of psychiatric disorders
  - ADHD present (24% of children)
- Mixed history of maltreatment
  - Acknowledge own sexual abuse
  - Physical abuse relatively rare
- Children have fewest number of victims
- Sexual acts very rarely involve use of force
- Penetration of victims relatively rare
- Borderline clinical on CBCL total score
- Borderline clinical on CBCL externalizing
- Normal range on CBCL internalizing
- Normal range on TRF total score
- Normal range on TRF externalizing
- Normal range on TRF internalizing

Highly traumatized
- Genders proportionately represented
- Highest number of psychiatric diagnoses
- Highest percentage of PTSD diagnoses
  - ADHD diagnoses also prevalent
- Extensive history of child maltreatment
  - Highest number of sexual abusers
  - Highest number of physical abusers
  - Highest total number of abusers
  - Second highest number of sexually abusive acts against others
- Relatively young at time of first victimization
- Children do not penetrate their victims
- Clinical range on CBCL total score
- Clinical range on CBCL externalizing
- Borderline clinical on CBCL internalizing
- Borderline clinical on TRF total score
- Normal range on TRF externalizing
- Normal range on TRF internalizing

Rule breaker
- Females overrepresented
- Mixed psychiatric diagnoses
  - ADHD, ODD, CD are present
- Mixed history of child maltreatment
  - Acknowledge own sexual abuse
  - Moderate incidence of physical abuse
  - Highest proportion of extended families with an additional sexual abuser

TABLE 3 Continued

- Longest time between own abuse and onset of behavior problem
- Aggression used to gain victim submission
- Penetration of victims relatively rare
- Highest mean CSBI-3 score
- Clinical range on CBCL total score
  - Highest group mean on total score
- Clinical range on CBCL externalizing
  - Highest group mean on externalizing
- Clinical range on CBCL internalizing
  - Highest group mean on internalizing
- Clinical range on TRF total score
- Clinical range on TRF externalizing
- Normal range on TRF internalizing

Abuse reactive
- Males overrepresented
- High number of psychiatric diagnoses
- Highest group in ODD diagnoses
  - ADHD prevalent; CD present
- High level of maltreatment
  - High number of sexual abusers
  - Moderate number of physical abusers
- Shortest latency from own abuse to problematic sexual behavior
- Children may penetrate victims
- Highest number of sexually abusive acts against others
- Aggression occasionally used during abusive acts
- Clinical range on CBCL total score
- Clinical range on CBCL externalizing
- Clinical range on CBCL internalizing
- Clinical range on TRF total score
- Clinical range on TRF externalizing
- High normal range on TRF internalizing

NOTE: ODD = Oppositional Defiant Disorder; PTSD = Posttraumatic Stress Disorder; ADHD = Attention Deficit Hyperactivity Disorder; ECBI = Eyberg Child Behavior Inventory; CSBI-3 = Child Sexual Behavior Inventory–3; CBCL = Child Behavior Checklist; TRF = Teacher Report Form; PSI = Parenting Stress Index; STAIC = State-Trait Anxiety Inventory for Children.

traumatized children. Nonsymptomatic, highly traumatized, and abuse reactive children did not differ from each other.

Gender. Of the 127 children, 83 (65%) were males and 44 (35%) were females. Only the highly traumatized type contained a proportionate representation of the two genders, composed of 68% males and 32% females. All of the remaining types contained significantly disproportionate representations of the genders. Males were significantly overrepresented among the sexually aggressive children, $\chi^2(1, N = 23) = 7.00$, $p < .008$, constituting 91% of the type, and in the abuse reactive children, $\chi^2(1, N = 22) = 8.97$, $p < .003$, composing 96% of that type. Females were overrepresented in nonsymptomatic children, $\chi^2(1, N = 25) = 4.85$, $p < .03$, composing 44% of the type, and among the rule breakers, $\chi^2(1, N = 35) = 7.54$, $p < .006$, making up 42% of that child type.

Differences Among Types: Maltreatment History

Emotional maltreatment. Of the 121 children for whom emotional maltreatment could be determined, 33% had been emotionally maltreated. The proportion of children who had been emotionally maltreated did not differ significantly across child types. Considering only children who had been emotionally maltreated, the mean number of emotional abusers was 1.85 ($SD = 1.21$). The mean number of emotional abusers differed significantly across child types, $F(4, 35) = 4.23$, $MSE = 1.10$, $p < .007$. Highly traumatized children ($M = 2.8$, $SD = 1.5$) had been emotionally maltreated by more people than had the sexually aggressive ($M = 1.0$, $SD = 0.0$) or the rule-breaking children ($M = 1.2$, $SD = 0.4$). The nonsymptomatic ($M = 1.4$, $SD = 0.5$) and abuse reactive children ($M = 2.2$, $SD = 1.3$) did not differ from any other child types.

Sexual maltreatment. Of the 127 children in this study, 109 (86%) had been sexually maltreated. Considering only children who had been sexually maltreated, the mean number of sexual perpetrators against each child was 2.0 ($SD = 1.5$). The number of sexual victimizers varied significantly across child types, $F(4, 99) = 2.82$, $MSE = 2.17$, $p < .03$. Highly traumatized children ($M = 2.7$, $SD = 1.7$) had been sexually maltreated by more abusers than had sexually aggressive children ($M = 1.2$, $SD = 0.4$). The remaining child types did not differ from any other groups: abuse reactive ($M = 2.2$, $SD = 1.8$), rule breaker ($M = 2.2$, $SD = 1.7$), and nonsymptomatic children ($M = 1.5$, $SD = 0.7$).

Physical maltreatment. Fifty-five (43%) of the children had been maltreated physically. Considering only children who had been maltreated physically, each child had been abused by an average of 1.8 people ($SD = 1.25$). Child types differed significantly in the number of physical abusers who had maltreated them, $F(4, 42) = 4.11$, $MSE = 1.30$, $p < .02$. Highly traumatized children ($M = 2.6$, $SD = 1.56$) and abuse reactive children ($M = 2.4$, $SD = 1.62$) had been maltreated physically by more perpetrators than had the other three child types: rule breaker ($M = 1.4$, $SD = .63$), nonsymptomatic ($M = 1.2$, $SD = .50$), and sexually aggressive ($M = 1.2$, $SD = .41$).

Comparing the total number of different perpetrators who had maltreated these children sexually or physically, a significant difference emerges across the child types, $F(4, 122) = 9.83$, $MSE = 3.83$, $p < .0001$. Highly traumatized children ($M = 4.3$, $SD = 2.7$) had been abused by significantly more perpetrators than had any other child type. Abuse reactive ($M = 3.0$, $SD = 2.6$) and rule-breaking children ($M = 2.7$, $SD = 2.0$) had been maltreated by more perpetrators than had the sexually aggressive children ($M = 0.9$, $SD = 0.8$). Nonsymptomatic children ($M = 1.8$, $SD = 1.1$) did not differ from the sexually aggressive, rule-breaking, or abuse reactive types. (Note that the mean number of total perpetrators was calculated on the basis of all 127 children in this research. The mean number of sexual and physical abusers to children who had been maltreated sexually or physically excluded children who had not been abused. As a result, the mean total number of perpetrators is slightly less than is the sum of the mean numbers of abusers to children who had been maltreated sexually or physically.)

Children's ages at first maltreatment. The overall mean age at which children were first sexually abused was 4.0 years ($SD = 2.3$). The age at which children were first abused did not differ significantly across child types. The group mean age at which children were first abused differed across types by slightly more than 1 year: abuse reactive ($M = 4.6$, $SD = 2.7$), sexually aggressive ($M = 4.5$, $SD = 2.5$), nonsymptomatic ($M = 4.3$, $SD = 2.0$), rule breaker ($M = 3.6$, $SD = 2.2$), and highly traumatized ($M = 3.3$, $SD = 2.3$) children.

Children's ages at first sexual misbehaviors. The mean age at which children began engaging in sexually problematic behaviors was 7.1 years ($SD = 2.5$). Age at onset of problematic sexual behaviors differed across types, $F(4, 122) = 5.23$, $MSE = 5.33$, $p < .0006$. Sexually aggressive ($M = 8.52$, $SD = 1.70$) and rule-breaking children ($M = 7.69$, $SD = 2.35$) were significantly older than were highly traumatized children ($M = 5.73$, $SD = 2.14$) at the time of the onset of their sexual behavior problems. Sexually aggressive children were also significantly older than were the nonsymptomatic ($M = 6.72$, $SD = 2.32$) and abuse reactive children ($M = 6.50$, $SD = 2.87$).

Latency between sexual victimization and misbehavior. The number of years between the first victimization experienced by children and the age at which they began manifesting sexual behavior problems was calculated and reported as a measure of abuse latency. The mean latency between victimization and acting out was 2.80 years ($SD = 2.66$). A significant difference in latency was found across child types, $F(4, 122) = 2.76$, $MSE = 6.68$, $p < .03$. Rule breakers ($M = 3.85$, $SD = 3.17$) had a significantly longer latency than did highly traumatized ($M = 2.31$, $SD = 2.53$) or abuse reactive children ($M = 1.66$, $SD = 2.11$). Sexually aggressive ($M = 2.96$, $SD = 2.54$) and nonsymptomatic children ($M = 2.61$, $SD = 2.09$) did not differ from any other types.

Differences Among Types: Problematic Sexual Behavior

Number of victims. The average number of victims sexually maltreated by these children was 2.02 ($SD = 1.50$). Child types differed significantly in mean num-

ber of victims, $F(4, 122) = 4.20$, $MSE = 2.05$, $p < .003$. Abuse reactive children ($M = 2.96$, $SD = 2.38$) had engaged in sexually problematic behaviors affecting more victims than had rule-breaking ($M = 1.80$, $SD = .99$), sexually aggressive ($M = 1.78$, $SD = 1.51$), or nonsymptomatic children ($M = 1.40$, $SD = .58$). Highly traumatized children ($M = 2.36$, $SD = 1.36$) also had significantly more victims than did nonsymptomatic children.

There was a statistically significant association between the number of people who had sexually abused these children and the number of victims the children had maltreated sexually, $r = .25$, $p < .005$. The number of people who had neglected ($r = .01$, $p < .88$), emotionally maltreated ($r = .14$, $p < .12$), or physically abused ($r = .13$, $p < .15$) these children was not significantly related to the number of victims the children had abused sexually. The age of onset of the children's sexual behavior problem ($r = -.26$, $p < .003$) and their self-perceived likelihood of responding aggressively to provocation ($r = -.19$, $p < .04$) were negatively associated with the number of the children's victims. Use of a weapon during an abusive act ($r = .21$, $p < .02$) and the number of additional sexual abusers in the extended family ($r = .26$, $p < .005$) were positively correlated with the number of victims who had been sexually abused by the children.

Aggression in sexual misbehavior. The aggression evident in the children's sexual behaviors was rated by an experienced clinician along a 7-point Likert-type scale, with higher scores representing more intensely aggressive acts. A significant difference in sexual aggression distinguished the child types, $F(4, 122) = 2.47$, $MSE = 2.03$, $p < .05$. Subsequent tests revealed that the rule-breaking ($M = 3.57$, $SD = 1.40$), sexually aggressive ($M = 3.39$, $SD = 1.97$), and abuse reactive children ($M = 3.23$, $SD = 1.60$) exhibited more aggression during their sexual behaviors than did the nonsymptomatic ($M = 2.80$, $SD = .82$) or highly traumatized children ($M = 2.50$, $SD = 1.10$).

To further explore differences in the level of aggression evident in the sexual behaviors of the child types, children who received an aggression rating greater than four were classified as highly sexually aggressive. Child types differed in the proportion of children who were classified as manifesting a high level of aggression in their sexual behaviors, $\chi^2(4, N = 127) = 12.02$, $p < .02$. Although rule-breaking, sexually aggressive, and abuse reactive children had received similar mean scores on the clinician's rating of aggression evident in their sexual behaviors, a significantly greater percentage of the sexually aggressive (35%) and rule-breaking children (34%) were categorized as having engaged in highly aggressive sexual misbehaviors than were the highly traumatized (9%) or nonsymptomatic (4%) children. Abuse reactive children (23%) did not differ significantly from any other child type.

Sexual penetration. The proportion of children who had engaged in sexual penetration varied across child types, $\chi^2(4, N = 127) = 18.83$, $p < .0008$. The criterion for penetration was genital intercourse, oral-genital sex, genital-anal intercourse, or insertion of a digit or object in the vagina or rectum. More sexually aggressive children (35%) had engaged in penetrative sexual acts than had any other type, except for rule breakers (23%). Penetrative sexual behaviors were very rare among the remaining child types: abuse reactive (6%), nonsymptomatic (4%), and highly traumatized (0%) children.

Child types differed significantly in the mean number of penetrative sexual acts they had performed, $F(4, 122) = 4.92$, $MSE = 2.28$, $p < .001$. Sexually aggressive children had engaged in more penetrative sexual behaviors ($M = 1.70$, $SD = 3.08$) than had any other child type: abuse reactive ($M = .50$, $SD = 1.18$), nonsymptomatic ($M = .20$, $SD = 1.0$), rule breaker ($M = .14$, $SD = .69$), and highly traumatized children ($M = 0.0$, $SD = 0.0$). Thus, although similar proportions of sexually aggressive and rule-breaking children had engaged in sexual penetration, the sexually aggressive children had performed more penetrative acts than had the rule breakers. Ratings of sexual aggression and penetration were significantly correlated ($r = 0.35$, $df = 127$, $p < .0010$). Neither of these variables was statistically associated with the children's ages or genders. Number of penetrative acts and number of victims maltreated by the children were positively correlated ($r = 0.26$, $df = 127$, $p < .003$).

Differences between sexually aggressive and abuse reactive penetrators. To further explore potential differences between sexually aggressive and abuse reactive children who had engaged in sexual penetration, these two subgroups of children were extracted and their scores on several variables of interest were compared via t tests with degrees of freedom adjusted for unequal samples. Sexually aggressive penetrators were older ($M = 9.8$, $SD = 1.9$) than were the abuse reactive penetrators ($M = 6.2$, $SD = 0.4$), $t(8.2) = 5.04$, $p < .001$. Ratings of aggression evident during the sexual misbehavior demonstrated that the sexually aggressive penetrators ($M = 5.1$, $SD = 1.6$) had employed significantly more force than had the abuse reactive penetrators ($M = 2.8$, $SD = 1.0$), $t(9.2) = 3.26$, $p < .009$. In addition, 75% of the sexually aggressive and none of the abuse reactive penetrators were rated as highly

aggressive in their sexual misbehavior (i.e., ratings greater than 4 on a 7-point scale of sexual aggression).

Sexually aggressive penetrators ($M = 40.1$, $SD = 6.2$) received a significantly higher T score on the CBCL Competency scales than did the abuse reactive penetrators ($M = 26.8$, $SD = 2.6$), $t(8.7) = 4.98$, $p < .001$. Sexually aggressive penetrators were viewed by their parents as demonstrating more personal and social resources than were the abuse reactive penetrators. Sexually aggressive penetrators received significantly lower T scores on CBCL externalizing ($M = 57.1$, $SD = 8.9$) and CBCL delinquent behavior ($M = 58.8$, $SD = 7.4$) than did the abuse reactive penetrators (externalizing, $M = 66.4$, $SD = 5.8$; delinquent behavior, $M = 72.5$, $SD = 0.6$). The sexually aggressive penetrators received lower scores on the PSI child domain ($M = 107.1$; $SD = 23.2$), PSI child demandingness ($M = 21.3$, $SD = 2.6$), and PSI distractability/hyperactivity ($M = 21.3$, $SD = 7.1$) than did the abuse reactive penetrators (child domain, $M = 138.4$, $SD = 23.8$; demandingness, $M = 27.4$, $SD = 4.8$; distractability, $M = 30.0$, $SD = 4.3$). The pattern of these scores suggests that the abuse reactive penetrators were the source of more general acting out, disruptiveness, and distress to their parents than were the sexually aggressive penetrators. In contrast, the sexually aggressive penetrators were viewed as possessing greater social and personal skills than were the abuse reactive penetrators.

Abuse reactive penetrators ($M = 1.6$, $SD = 0.9$) had been sexually abused by more perpetrators than had the sexually aggressive penetrators ($M = 0.5$, $SD = 0.5$), $t(5.82) = -2.49$, $p < .05$. However, on CSBI-3 items pertaining to family sexual environment, families of the sexually aggressive penetrators ($M = 2.1$, $SD = 0.9$) received a higher score than did those of the abuse reactive penetrators ($M = 1.0$, $SD = 0.7$), $t(9.8) = 2.46$, $p < .03$. The item content of the CSBI-3 family sexual environment items clearly suggests that higher scores reflect relatively weak boundaries between parents and their children (e.g., child has seen parents having sex, child has showered or bathed with a parent in the past 6 months, child can sleep with parents all night when he/she wants, child has seen a parent or other adult naked in the past 6 months). Thus, sexually aggressive penetrators had families with fewer sexual boundaries and, perhaps, parents who exercised less effective oversight of their children than did the abuse reactive penetrators.

With the exception of penetration, child types did not differ significantly in the frequency with which they had engaged in any specific sexual misbehaviors or in the proportion of children who had engaged in certain types of sexual misbehavior. Thus, sexual behavior did not play a vitally important role in defining differences between types of children with sexual behavior problems.

Differences Among Types: Child Sexual Behavior Inventory-3 (CSBI-3)

The grand mean CSBI-3 score was .45 ($SD = .36$). CSBI-3 scores differed significantly across child types, $F(4, 119) = 10.32$, $MSE = 11.54$, $p < .0010$. The mean score for rule breakers ($M = .71$, $SD = .36$) was higher than was that of all other types. The remaining types did not differ significantly from each other: highly traumatized ($M = .45$, $SD = .36$), abuse reactive ($M = .40$, $SD = .34$), nonsymptomatic ($M = .33$, $SD = .25$), and sexually aggressive children ($M = .21$, $SD = .19$).

It is important to note that children's scores on the CSBI-3 were not significantly correlated with ratings of the aggression evident in the children's sexual behaviors, the number of penetrative sexual acts they performed, or the number of victims maltreated by children. Given this finding, it appears that although the CSBI-3 is an excellent measure of the frequency of many sexual behaviors in children, it may not adequately assess highly aggressive sexual behaviors. Based partly on the results of this research, the author of the CSBI has added several experimental items intended to tap more aggressive sexual behaviors in children (W. N. Friedrich, personal communication, 1997).

Differences Among Types: Psychiatric Diagnosis

Number of psychiatric diagnoses. Every child had received at least one psychiatric diagnosis, and the grand mean number of psychiatric diagnoses per child was 2.09 ($SD = 1.11$). Child types exhibited significant differences in number of diagnoses, $F(4, 122) = 28.59$, $MSE = .66$, $p < .0010$. Highly traumatized ($M = 3.00$, $SD = .98$) and abuse reactive children ($M = 2.96$, $SD = .95$) had a significantly greater number of psychiatric diagnoses than did the remaining types. Rule-breaking ($M = 2.09$, $SD = .78$) and sexually aggressive children ($M = 1.78$, $SD = .67$) had significantly more diagnoses than did nonsymptomatic children ($M = 0.84$, $SD = .68$).

In addition to number of diagnoses, significant differences were found in the prevalence of specific disorders across child types.

Conduct disorder. The proportion of conduct disorder (CD) diagnoses differed across the child types, $\chi^2(4, N = 127) = 78.63$, $p < .0001$. Sexually aggressive children (39%) had the highest proportion of children who had received a CD diagnosis, followed by the abuse reactive children (22%). The remaining child types had a lower percentage of children with

CD diagnoses: rule breaker (14%), highly traumatized (9%), and nonsymptomatic children (4%).

CD, as conceptualized by the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*) (American Psychiatric Association [APA], 1994), entails four distinct groupings of behaviors: "[1] aggressive conduct that causes or threatens physical harm to other people or animals . . . [2] nonaggressive conduct that causes property loss or damage . . . [3] deceitfulness or theft . . . [4] and serious violations of rules" (p. 85). Each of these separate components is essential to defining the CD diagnosis in *DSM-IV*. However, the four constructs may not hold equal importance to research with or treatment of children with sexual behavior problems. Although children who are often truant from school or who have deliberately destroyed others' property have exhibited behaviors characteristic of conduct disorder, such conduct may be related less directly to children with sexual behavior problems than other features that are associated with interpersonal aggression (e.g., "has forced someone into sexual activity" (p. 90). Integration of the four distinct elements of CD into a single diagnosis that is either present or absent may mask potentially important between-group differences on each of the separate constructs. Therefore, we examined whether child types differed on the number of endorsements within each of the four behavioral groups defining the *DSM-IV* (APA, 1994) construct of CD.

Aggression toward people. The *DSM-IV* (APA, 1994) diagnostic criteria for CD consist, in part, of seven behaviors concerning aggression to people and animals. Children were assigned a score (CD-aggression) that equaled the number of items that were endorsed in this section of the diagnostic criteria, with a maximum score of 7.

The grand mean CD-aggression score was 2.50 ($SD = 1.55$). An ANOVA identified a significant difference in CD-aggression across child types, $F(4, 114) = 11.36$, $MSE = 1.78$, $p < .0001$. Nonsymptomatic children ($M = .81$, $SD = .98$) received a significantly lower group mean CD-aggression score than did any of the other child types. No significant differences were found among the remaining child types: abuse reactive ($M = 3.14$, $SD = 1.25$), sexually aggressive ($M = 3.13$, $SD = 1.01$), rule-breaking ($M = 2.78$, $SD = 1.62$), and highly traumatized children ($M = 2.38$, $SD = 1.53$).

Nonaggressive property damage. Only two criteria relating to property damage are employed by the *DSM-IV* (APA, 1994) criteria for CD (CD-property damage). The grand mean CD-property damage score was .48 ($SD = .58$). A significant difference was identified between child types, $F(4, 114) = 2.68$, $MSE = .32$, $p < .04$. Rule breakers ($M = .62$, $SD = .61$) obtained a higher group mean CD-property damage score than did nonsymptomatic children ($M = .14$, $SD = .36$). The remaining child types did not differ from each other or from the nonsymptomatic children and rule breakers: abuse reactive ($M = .59$, $SD = .59$), highly traumatized ($M = .52$, $SD = .60$), and sexually aggressive children ($M = .44$, $SD = .59$).

Deceit and theft. Three criteria relate to a child's deceitfulness in the *DSM-IV* (APA, 1994) diagnosis of CD (CD-deceitfulness). The grand mean for CD-deceitfulness was .87 ($SD = .80$). A significant difference existed between child types, $F(4, 114) = 6.26$, $MSE = .55$, $p < .0001$. Nonsymptomatic children ($M = 0.24$, $SD = 0.54$) received a significantly lower CD-deceitfulness score than did any other type: abuse reactive ($M = 1.18$, $SD = .80$), rule-breaking ($M = 1.16$, $SD = .85$), sexually aggressive ($M = .86$, $SD = .69$), and highly traumatized children ($M = .71$, $SD = .72$).

Serious violations of rules. Three items related to serious rule violations appear in the *DSM-IV* (APA, 1994) criteria for CD (CD-rule violations). The grand mean CD-rules violations score was .18 ($SD = .49$). No significant differences existed between child types on CD-rule violations, $F(4, 114) = 1.33$, $MSE = .23$, $p < .26$. The means for the child types were: rule-breaking ($M = 0.32$, $SD = 0.64$), abuse reactive ($M = 0.27$, $SD = 0.63$), nonsymptomatic ($M = 0.10$, $SD = 0.30$), highly traumatized ($M = 0.10$, $SD = 0.30$), and sexually aggressive children ($M = 0.09$, $SD = 0.29$).

Oppositional Defiant Disorder (ODD). ODD differed significantly across the child types, $\chi^2(4, N = 127) = 64.04$, $p < .0001$. Abuse reactive children had a higher percentage of children diagnosed with ODD (96%) than any other child type. The remaining child types did not differ from each other: rule breakers, 20%; highly traumatized, 18%; nonsymptomatic, 12%; and sexually aggressive children, 0%.

Post Traumatic Stress Disorder (PTSD). Diagnosis of PTSD differed significantly across the child types, $\chi^2(4, N = 127) = 100.06$, $p < .0001$. PTSD was diagnosed more frequently in highly traumatized children (91%) than in any other child type. PTSD was rarely diagnosed in any other child type: abuse reactive, 5%; rule breaker, 3%; sexually aggressive, 0%; and nonsymptomatic children, 0%.

Attention Deficit/Hyperactivity Disorder (ADHD). Child types differed significantly in diagnosis of ADHD, $\chi^2(4, N = 127) = 9.88$, $p < .04$. ADHD was found more frequently in highly traumatized (59%) and abuse reactive children (59%) than in nonsymptomatic children (24%). The prevalence of ADHD among the

sexually aggressive (35%) children and rule breakers (34%) did not differ from any other child type.

Difference Among Types: State-Trait Anxiety Inventory for Children (STAIC)

The grand mean STAIC state anxiety score was 31.46 (SD = 6.4), which is equivalent to a T score of 55. Child types did not differ significantly in state anxiety. The grand mean trait anxiety score was 39.42 (SD = 8.0), which coincides with a T score of 54. Child types differed significantly in trait anxiety, $F(4, 122)$ = 2.61, MSE = 60.8, $p < .04$. Based on children's self-reports of their sense of generalized anxiety, highly traumatized children received higher mean trait anxiety scores (M = 42.3, SD = 8.3) than did the sexually aggressive children (M = 35.7, SD = 8.3). The remaining child types did not differ from any other child types: nonsymptomatic (M = 41.4, SD = 9.2), rule breaker (M = 39.4, SD = 5.9), and abuse reactive children (M = 38.2, SD = 7.7).

The highly traumatized children who had been maltreated by a mean of 4.2 different abusers and who had the highest proportion of PTSD diagnosis (91% vs. 6% in the next highest child type) also had the highest level of generalized and chronic anxiety. Sexually aggressive children, who revealed the lowest state anxiety of any child type, also had the highest proportion of CD diagnoses (39%), the largest proportion of children whose sexual behaviors were considered highly aggressive (35%), the largest proportion of children who had engaged in penetrative sexual behaviors (35%), the highest mean number of penetrative sexual acts (1.7), and the lowest mean number of perpetrators who had abused them physically and sexually (0.9).

Difference Among Types: Eyberg Child Behavior Inventory (ECBI)

The ECBI found a significant difference in rule-breaking conduct across child types, $F(4, 122)$ = 3.79, MSE = 1,280.5, $p < .006$. Rule breakers received significantly higher scores (M = 153.3, SD = 35.5) on the ECBI Intensity scale than did any other type. The remaining types did not differ from each other: highly traumatized (M = 148.7, SD = 39.6), abuse reactive (M = 144.0, SD = 26.4), sexually aggressive (M = 128.6, SD = 33.2), and nonsymptomatic children (M = 121.9, SD = 41.6). Thus, rule-breaking children were considered to engage more frequently in nonsexual behaviors that violated social norms than were any other child type.

Differences Among Types: Child Behavior Checklist (CBCL)

Total score. A statistically significant difference in CBCL total scale T scores was found across child types, $F(4, 122)$ = 12.10, MSE = 96.03, $p < .0010$. Rule breakers (M = 76.2, SD = 7.07) obtained a higher T score than did any other child type. Abuse reactive children (M = 69.8, SD = 6.2) received a higher total T score than did the nonsymptomatic (M = 61.3, SD = 13.0) and sexually aggressive children (M = 61.0, SD = 9.7). The total T score for highly traumatized children (M = 67.1, SD = 12.1) was higher than was the score of the sexually aggressive and nonsymptomatic children. Sexually aggressive children and nonsymptomatic children did not differ significantly.

From a clinical perspective, the group mean total score T score for sexually aggressive children and nonsymptomatic children entered the borderline clinical range (i.e., T score, 60-63). Highly traumatized, rule-breaking, and abuse reactive children received total score T scores that entered the clinical range, with the score for rule breakers being 2.5 and for abuse reactive children being 2.0 standard deviations above the normative mean.

Internalizing. The grand mean T score on internalizing was 62.6 (SD = 10.6). A significant difference on the internalizing scores was found across child types, $F(4, 122)$ = 6.43, MSE = 96.88, $p < .0001$. Rule breakers received a group mean T score (M = 68.8, SD = 6.58) that was significantly higher than it was for the highly traumatized (M = 61.0, SD = 11.0), nonsymptomatic (M = 58.9, SD = 12.8), and sexually aggressive children (M = 57.2, SD = 9.3). Abuse reactive children (M = 64.4, SD = 9.7) did not differ significantly from any other child type.

Clinically, only the sexually aggressive and nonsymptomatic children received a mean internalizing T score that was within the normative range. The group mean internalizing T score for highly traumatized children was in the borderline clinical range. Rule breaker and abuse reactive children obtained clinical range internalizing T scores, with both falling approximately 1.5 standard deviations above the normative mean.

Externalizing. The grand mean externalizing T score was 67.6 (SD = 11.3). Externalizing T scores differed significantly across child types, $F(4, 122)$ = 12.88, MSE = 94.29, $p < .0010$. The mean T score for rule breakers (M = 75.8, SD = 7.3) was significantly higher than was that of any other child type. The mean T score for abuse reactive children (M = 69.9, SD = 5.2) differed significantly from that of the sexually aggressive (M = 61.3, SD = 8.4) and nonsympto-

matic children ($M = 60.6$, $SD = 13.7$). Highly traumatized children ($M = 66.7$, $SD = 12.1$) did not differ significantly from any other child types.

Again, from a clinical perspective, sexually aggressive and nonsymptomatic children received mean externalizing T scores that entered the borderline clinical range. The group mean T score of all remaining child types entered the clinical range, with the T score for rule breakers falling 2.5 standard deviations above the normative mean.

Sex problems. The grand mean sex problems T score was 68.1 ($SD = 10.0$). Sex problems T scores differed significantly across child types, $F(4, 122) = 8.71$, $MSE = 79.58$, $p < .0010$. Rule breakers obtained a significantly higher mean T score ($M = 74.4$, $SD = 7.3$) than did any other child types. Highly traumatized ($M = 69.3$, $SD = 10.2$) and abuse reactive children ($M = 68.6$, $SD = 7.5$) received higher mean T scores than did nonsymptomatic ($M = 63.4$, $SD = 10.1$) and sexually aggressive children ($M = 62.3$, $SD = 9.7$).

The mean T score for all of the child types was at least one standard deviation above the normative mean, with the T score of rule breakers rising nearly 2.5 standard deviations above the norm.

Differences Among Types: Teacher Report Form (TRF)

Total score. The grand mean TRF total T score was 62.3 ($SD = 7.8$). Group means differed significantly across child types, $F(4, 122) = 2.83$, $MSE = 56.75$, $p < .03$, with sexually aggressive ($M = 64.1$, $SD = 8.5$) and rule-breaking children ($M = 64.1$, $SD = 7.3$) receiving higher mean T scores than did nonsymptomatic children ($M = 58.9$, $SD = 9.0$). The T scores for highly traumatized ($M = 60.0$, $SD = 6.2$) and abuse reactive children ($M = 63.9$, $SD = 6.2$) did not differ from any other child type.

From a clinical perspective, only the nonsymptomatic children received a normal range TRF total T score. Highly traumatized children fell in the borderline clinical range. Sexually aggressive, rule-breaking, and abuse reactive children barely surpassed the lower threshold for clinical range scores.

Internalizing. The grand mean T score for TRF internalizing was 57.4 ($SD = 8.4$). No significant differences emerged between child types, with all receiving mean T scores that were at the upper limit of the normal range: abuse reactive ($M = 59.5$, $SD = 9.9$), sexually aggressive ($M = 59.5$, $SD = 10.0$), rule breakers ($M = 57.3$, $SD = 7.0$), highly traumatized ($M = 56.6$, $SD = 6.2$), and nonsymptomatic children ($M = 54.4$, $SD = 7.3$).

Clinically, all of the child types received TRF internalizing scores that were at the higher extreme of the normal range. Thus, teachers did not perceive the behaviors of any child type as indicating a pathological level of withdrawal or depression.

Externalizing. The grand mean T score for TRF externalizing was 61.9 ($SD = 8.2$). A statistically significant difference in externalizing T scores was noted across child types, $F(4, 122) = 2.84$, $MSE = 63.3$, $p < .03$. Rule breakers ($M = 64.1$, $SD = 7.9$) and abuse reactive children ($M = 64.0$, $SD = 6.1$) received significantly higher TRF externalizing T scores than did nonsymptomatic ($M = 59.2$, $SD = 8.1$) and highly traumatized children ($M = 58.7$, $SD = 7.3$). Sexually aggressive children ($M = 63.0$, $SD = 9.8$) did not differ from any other child types.

The TRF externalizing T scores of nonsymptomatic and highly traumatized children were within the normal range. Sexually aggressive children fell at the upper limit of the borderline clinical range. Rule breakers and abuse reactive children fell just above the clinical range threshold.

Differences Among Types: Parenting Stress Index (PSI)

PSI Parental Attachment to Child. The only Parent Domain subscale exceeding the normal range was Parental Attachment to Child ($M = 16.0$; $SD = 3.5$), which reached a percentile score of 85. Because higher scores on this scale reflect less attachment, the parents' mean score on this subscale revealed a significantly impaired attachment to their children.

Scores on the Parental Attachment to Child subscale varied significantly across child types, $F(4, 117) = 2.96$, $MSE = 14.25$, $p < .02$. Parents of highly traumatized ($M = 16.9$, $SD = 4.0$) and rule-breaking children ($M = 16.7$, $SD = 3.4$) reported feeling significantly less attached to their children than did caregivers of the nonsymptomatic ($M = 14.6$, $SD = 4.6$), abuse reactive ($M = 14.6$, $SD = 4.0$), and sexually aggressive children ($M = 14.1$, $SD = 2.78$). Despite the significant differences between child types, the mean score for every child type reflected an impaired attachment.

PSI Child Demandingness. The grand mean Demandingness score was 26.8 ($SD = 6.3$), which is equivalent to a percentile score of 96. Child types differed significantly on the Demandingness subscale, $F(4, 122) = 3.33$, $MSE = 34.6$, $p < .01$. Parents of rule-breaking children found them to be significantly more demanding ($M = 29.3$, $SD = 6.2$) than did parents of nonsymptomatic ($M = 25.3$, $SD = 5.9$) and sexually aggressive children ($M = 24.1$, $SD = 5.6$). No other differences among child types were identified.

PSI child domain score. Children obtaining high scores (> 122) on the PSI child domain generally are

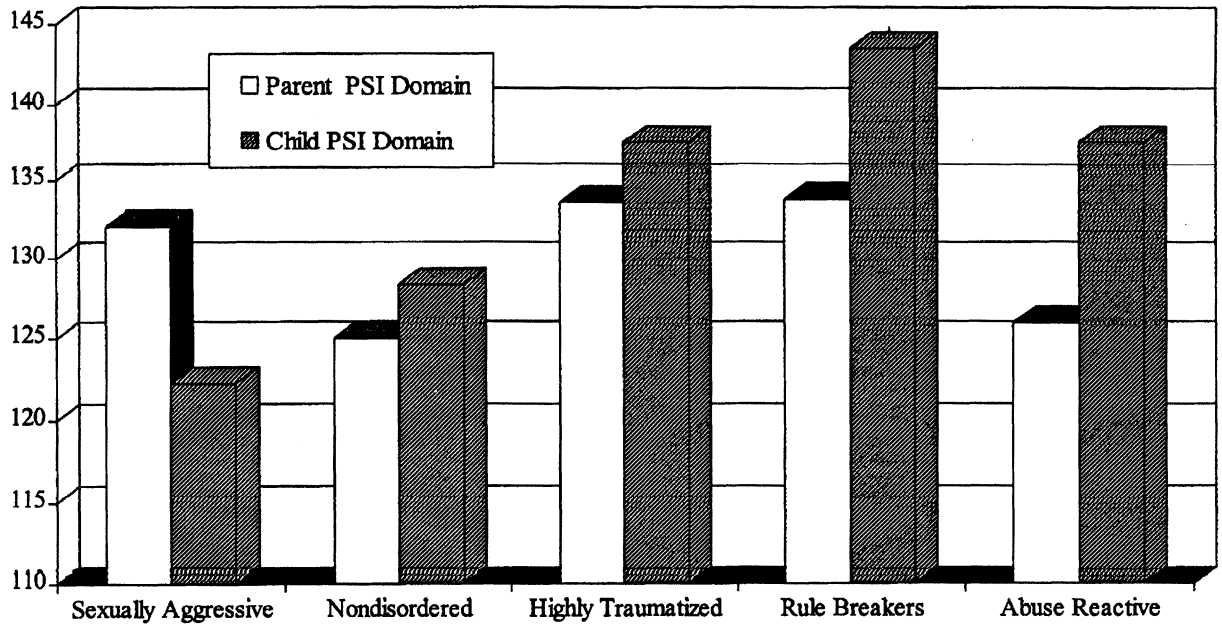

FIGURE 1: Parenting Stress Index: Parent and Child Domain Scores

viewed by their parents as having qualities that are disappointing or distressing to their parents. For the children in this research, the grand mean child domain score was 134.6 (SD = 25.8), which equals a percentile score of 97. In comparison, the normative mean child domain score is 99.7 (SD = 18.8).

A significant difference in child domain scores was found across child types, $F(4, 122) = 3.05$, $MSE = 625.4$, $p < .02$. Rule breakers received a significantly higher group mean child domain score ($M = 143.5$, $SD = 25.8$) than did the sexually aggressive children ($M = 122.3$, $SD = 25.3$). The remaining child types did not differ from each other or from the sexually aggressive and rule-breaking children: highly traumatized (M = 137.5, $SD = 25.9$), abuse reactive ($M = 137.5$, $SD = 18.9$), and nonsymptomatic children ($M = 128.3$, $SD = 27.4$).

PSI child domain relative to parent domain scale elevations. Relative scores on the PSI child and parent domains reveal whether the parents consider themselves or their children to be the primary source of distress in their relationships. As is evident in Figure 1, parents of sexually aggressive children considered themselves to be the principal cause of distress. With all the remaining child types, parents considered their children to be the major source of distress in the parent-child relationship.

Differences Among Types: Number of Additional Sexual Abusers in Extended Family

Excluding the children in this research, families that had at least one additional sexual abuser were identified. The proportion of families with an additional abuser varied across child types, $\chi^2(4, N = 127) = 12.68$, $p < .01$. Families of rule-breaking children (71%) had the highest likelihood of containing an additional abuser, followed by families of the nonsymptomatic (52%), abuse reactive (46%), sexually aggressive (30%), and highly traumatized children (29%).

Considering only the extended families that contained additional abusers, the mean number of additional abusers did not differ across child types, $F(4, 53)$ = 1.87, $MSE = 2.05$, $p < .13$. The mean number of additional abusers ranged from 1.4 in the families of sexually aggressive children to 3.0 in the families of highly traumatized children.

Differences Among Types: Analysis of the Utility of Child Types in Clinical Practice

Clinical utility of the child types was analyzed in several ways. In the first analysis, an ANCOVA was performed using change in CSBI-3 scores (Intake–Week 16 scores) as the dependent variable, intake CSBI-3 scores as a covariate, and treatment condition (expressive or cognitive-behavioral) and the five child

TABLE 4: CSBI-3 Change Scores: Treatment Week 16 Score–Intake Score[a]

Child Type	*Expressive Therapy*	*Relapse Prevention*
Sexually aggressive	.06	.00
Nonsymptomatic	–.12	–.16
Highly traumatized	.05	–.40
Rule breakers	–.34	–.28
Abuse reactive	–.12	–.16

NOTE: CSBI-3 = Child Sexual Behavior Inventory-3.
a. Negative scores indicate a decrease in CSBI-3 scores after 16 weeks of treatment.

TABLE 5: Percentage of Child Types Manifesting Clinically Significant Decreases in Scores on the Child Sexual Behavior Inventory-3 After 16 Weeks of Treatment

	Percentage of Child Type	
Child Type	*Expressive Therapy*	*Relapse Prevention*
Sexually aggressive	13	0
Nonsymptomatic	11	25
Highly traumatized	9	75
Rule breaker	55	60
Abuse-reactive	17	27

types as independent variables. The second analysis examined the proportions of the child types that demonstrated clinically significant change (Jacobson & Truax, 1991) after 16 weeks of treatment. Data were available from 93 of the 127 families on whom the development of child types had been based. The remainder of the families either refused to participate in treatment or dropped out of treatment before completing 8 weeks. Child types were evenly distributed across the two conditions, despite the treatment refusers and dropouts.

ANCOVA on CSBI change scores. An ANCOVA compared the change in each participant's CSBI score from intake to Treatment Week 16, using child type and treatment type as independent variables and intake CSBI scores as a covariate. A significant main effect of treatment type was identified, $F(1, 79) = 5.76$, $MSE = 0.24$, $p < .02$. Children in the relapse prevention treatment condition (–0.21) manifested a significantly greater reduction in CSBI-3 scores than did children in the expressive therapy (–0.10).

A significant interaction of child type by treatment type was also identified, $F(4, 79) = 2.40$, $MSE = 0.102$, $p < .05$. CSBI-3 change scores for child types within each treatment condition are presented in Table 4. Examining Table 4, the source of the significant interaction between child type and treatment type becomes apparent. Although most child types demonstrated similar levels of change in both treatment conditions, highly traumatized children achieved vastly more benefit from modified relapse prevention than expressive therapy. In fact, even the direction of change in the highly traumatized children differs across the two treatment conditions, with the expressive therapy being associated with a slight increase in sexualized behavior (+0.09) and relapse prevention demonstrating a highly significant reduction in sexual acting out (–0.40).

Clinically significant change. Examining change in CSBI-3 scores after 16 weeks of treatment, a statistically significant difference was found in the proportion of child types who surpassed the criterion for clinically significant change (Jacobson & Truax, 1991), $\chi^2(4, N = 127) = 14.87$, $p < .005$. Figure 2 presents the percentage of children who demonstrated clinically significant improvement on the CSBI-3 from intake to Treatment Week 16. More than half of the highly traumatized children (58%) manifested clinically significant reductions in problematic sexual behaviors after 16 weeks of treatment. In descending order, the following percentages of child types revealed clinically significant decreases in their sexual behaviors: highly traumatized, 27%; abuse reactive, 24%; nonsymptomatic, 18%; and sexually aggressive, 7%.

Relative to the benefits of treatment, only three of the five child types contained any children who manifested clinically significant deterioration in their sexual behaviors: sexually aggressive (7%), highly traumatized (7%), and rule breaker (4%). Deterioration did not differ significantly across child types, χ (4, $N = 127$) = 2.20, $p < .70$.

The clinically significant change measure also reveals the nature of the interaction of child type and treatment type. Table 5 presents the percentage of children, by child type and treatment condition, who demonstrated clinically significant improvement on the CSBI-3 from intake to Treatment Week 16. Table 6 shows the percentages of children who exhibited clinically significant deterioration after 16 weeks of treatment (i.e., they experienced clinically significant increases in sexually problematic behavior).

After 16 weeks of therapy, the expressive therapy enabled a slightly larger number of sexually aggressive children to make clinically significant improvements in their sexual behaviors than in their relapse prevention. However, an equal number of sexually aggressive children in expressive therapy experienced an increase in problematic sexual behaviors. In comparison, relapse prevention appeared inert with this child type.

Weighing the percentages of children who attained clinically significant change or experienced signifi-

TABLE 6: Percentage of Child Types Manifesting Clinically Significant Increases in Scores on the Child Sexual Behavior Inventory-3 After 16 Weeks of Treatment

	Percentage of Child Type	
Child Type	*Expressive Therapy*	*Relapse Prevention*
Sexually aggressive	13	0
Nonsymptomatic	0	0
Highly traumatized	9	0
Rule breaker	0	7
Abuse-reactive	0	0

cant deterioration, relapse prevention enabled a greater percentage of nonsymptomatic, highly traumatized, and abuse reactive children to attain clinically significant reductions in their problematic sexual behaviors. Relapse prevention and expressive therapy enabled similar proportions of rule-breaking and sexually aggressive children to achieve clinically significant change.

DISCUSSION

Identification of specific types of what once was perceived to be a unitary clinical syndrome holds importance to the evolution of the assessment and treatment of any behavioral problem, including children who have engaged in problematic sexual behavior. By creating reliably defined types, assessment devices may be developed that more precisely measure variables central to the etiology and maintenance of behavioral problems. Equally as important, clinical researchers may pursue treatment procedures that enable children and adults with a circumscribed disorder to more quickly make meaningful and enduring changes in their lives. Empirical definition of types of behavioral disorders fosters the art of therapy.

Five types of children with sexual behavior problems were identified in this study. The five types differed significantly in psychometric scores, maltreatment histories, observational measures of sexual and nonsexual behaviors, psychological diagnoses, and indices of aggression. The responsiveness of sexual misbehaviors to treatment also varied across child types. At least for the highly traumatized children, modified relapse prevention resulted in significantly greater reduction in sexual behaviors relative to expressive therapy after 16 weeks of a 32-week treatment regimen.

This research represents an important first step toward the creation of meaningful types of children with sexual behavior problems, yet it is only a first step. Although remarkable differences existed between the child types, it is premature to make any strong statement about the long-term prognosis of any of the types. The proportion of highly traumatized children who manifested clinically significant change after 16 weeks of treatment was greater under relapse prevention than under the expressive therapy condition, but the sample sizes were small and no replication has yet been performed. Additional research involving a larger and more diverse sample with greater geographical distribution is needed before this taxonomy can be demonstrated to hold importance for future research and clinical practice. Before this taxonomy is implemented clinically, cross validation must be demonstrated with a new sample. Given the work remaining to be done, practitioners must refrain from making significant clinical decisions on the basis of this typology. With this perspective in mind, discussion of the current findings may ensue.

Definition of Child Types: Lack of Relationship of Sexual Misbehaviors to Child Types

With the exception of penetrative and aggressive sexual behaviors, the variables most strongly predicting child type were nonsexual (i.e., CBCL Delinquency Syndrome *T* score, the number of perpetrators who had maltreated the child sexually, and diagnosis of Oppositional Defiant Disorder [ODD]). It may seem disconcerting that a taxonomy for children with sexual behavior problems did not differentiate children on the basis of their sexual behaviors. Shouldn't a taxonomy for children with sexual behaviors emphasize their sexual behaviors? To the extent that sexual behavior conveys information about children's personality, nonsexual behaviors, family environment, and treatment needs, then specific sexual behaviors may function as a meaningful foundation for a taxonomy of children with sexual behavior problems. We are not aware of any research demonstrating that knowledge of children's general sexual behaviors tells us a great deal about anything other than their sexual behaviors.

One strength of this taxonomy is that it does not emphasize differences in children's sexual misbehaviors. Instead of isolating a children's sexual conduct, this taxonomy subsumes several aspects of children's development and functioning. If distinctions among children were based exclusively on the variety of sexual misbehaviors children had performed, definition of children's type would have little relevance to treatment. Knowledge of specific sexual misbehaviors does not convey information about children's developmental or treatment needs. A classification system based on multiple dimensions of behavior provides more information about the needs and strengths of children and families (e.g., parental attachment, emo-

tional management, aggressiveness or submissiveness). Thus, the fact that sexual behavior did not play a central role in defining child types may be considered a positive aspect of this taxonomy. As clinicians, we must remember that we are not treating behaviors, we are treating children.

The Sexually Aggressive and Abuse Reactive Children

The importance of viewing children's characteristics and circumstances as a whole becomes evident when one examines the similarities and differences of children who had engaged in penetrative sexual behaviors. Both sexually aggressive and abuse reactive children engaged in penetration more than did other child types. However, the sexually aggressive and abuse reactive children who had penetrated were differentiated by an array of variables that suggest that these two types of children are quite distinct, despite the similarity of their sexual behavior.

Sexually aggressive children revealed the lowest trait anxiety of any child type, had the highest proportion of CD diagnosis (39%), the largest proportion of children whose sexual behaviors were considered highly aggressive (35%), the largest proportion of children who had engaged in penetrative sexual behaviors (35%), the highest mean number of penetrative sexual acts (1.7), the lowest mean number of perpetrators who had abused them sexually or physically (0.9), and had relatively few additional sexual perpetrators in the extended family (0.4). Relative to abuse reactive children, the sexually aggressive children were viewed by others as more socially competent. Evidence from the CSBI-3 family sexual environment score suggests that parents of sexually aggressive children may have modeled inadequate sexual boundaries.

Abuse reactive penetrators were notably more disruptive sexually and nonsexually than were the sexually aggressive penetrators. Abuse reactive penetrators were much less aggressive in their sexual behaviors; had been maltreated by more perpetrators; had a higher mean number of psychiatric diagnoses, with ODD and ADHD being most prevalent; and the time between their first victimization and their first sexual acting out was shorter. The *DSM-IV* (APA, 1994) notes that ODD may be a precursor in young children to the onset of CD at a later stage in child development. It is plausible that abuse-reactive children could be sexually aggressive children at an earlier stage of development; however, a longer follow-up will be required before this research can contribute to that discussion.

Another factor may also explain the differences between sexually aggressive and abuse reactive children. Objective ratings of children's behaviors suggest that parents of sexually aggressive and abuse reactive children differed in their child supervision. Sexually aggressive children were the only child type whose behaviors were considered less problematic by their parents than by their teachers. On all three summary scales for the Teacher Report Form and Child Behavior Checklist (i.e., Total, Internalizing, and Externalizing), teachers' ratings of the sexually aggressive children's behaviors resulted in higher *T* scores than did ratings by parents. In comparison, behavioral observations by the parents of abuse reactive children were consistent with those made by the children's teachers. These findings suggest that observations made by the parents of sexually aggressive children may have been: (a) inhibited by anxiety, (b) lax by neglect, (c) reinterpreted by superoptimism, or (d) omitted by denial. An alternate hypothesis is that the sexually aggressive children most frequently acted out in settings other than their homes, where their parents had less opportunity to observe them. The PSI demonstrated that the sexually aggressive children were the only group in which parents viewed themselves, rather than their children, as the principal source of distress in the parent-child relationship. In light of this finding, it appears reasonable to suggest that these parents may have assumed responsibility for their children's behaviors. Thus, parents of sexually aggressive children may have refrained from reporting their children's misbehaviors to lessen their own sense of personal responsibility.

The Nonsymptomatic Child

Nonsymptomatic was selected as a descriptive reference for these children because they: (a) were within normal range on most measures, (b) had the fewest victims of any child type, (c) received the lowest ratings on the aggression evident in their sexualized behaviors of any child type, and (d) were the least likely to have been diagnosed with a psychiatric disorder. Thus, there was no evidence that these children were exhibiting significant psychopathology.

Apart from the children's sexualized behaviors, the most significant clinical concerns with nonsymptomatic children involved the context in which they lived. The extended families of the nonsymptomatic children were among the most likely to contain other individuals who had perpetrated sexually abusive behaviors. Additional sexual abusers were reported in slightly more than half of the extended families of the nonsymptomatic children (52%), second only to the families of the rule-breaking children (71%).

The Rule-Breaking Child

Rule-breaking children may, at first, appear to be anomalies. This child type: (a) had a disproportionately large number of females, (b) had the longest latency between their own sexual maltreatment and their acting out behavior with others, (c) had the highest proportion of extended families that contained additional sexual abusers, (d) had the most frequent sexualized behavior of any child type, (e) had a high degree of aggression in their sexualized behaviors, (f) had the highest CBCL total score of any child type, and (g) was more externalizing, but not more internalizing, than most of the other child types. In addition to their sexualized behaviors, these children tended to act out nonsexually as well.

These data converge with what is known about gender differences in aggressive behavior. The onset of antisocial behavior appears later in females than males (Guze, 1976; McGee, Feehan, Williams, & Anderson, 1992; Robins, 1966, 1986; Zoccolillo, 1993). Specifically examining maltreated children, Rivera and Widom (1990) found that girls were more likely to become violent later in development than were boys. The prevalence of deviant extended family members and family violence has been shown to hold greater influence in the antisocial and externalizing behaviors of girls than of boys (Cloninger, Christiansen, Reich, & Gottesman, 1978; O'Keefe, 1994). The prevalence of sexual abusers in the families of the rule-breaking children, whose victims were most often other family members, may suggest that these children were exposed to a family environment that was highly sexualized and that tolerated boundary violations unacceptable in general society. The gender discrepancy in the onset of aggressive behaviors may reflect a difference in the threshold of risk factors needed to elicit aggression in the two genders. Females may exhibit aggression only after experiencing a greater number of risk factors than men (Cloninger et al., 1978; Mannuzza & Gittelman, 1984). Although aggression by female children may typically be elicited only after a number of risk factors accumulate, research data also reveal a gender paradox in which, for disorders with an unequal sex ratio, the gender with the lower prevalence rate is more seriously affected by the disorder (Loeber & Keenan, 1994). Thus, girls diagnosed with ADHD are 40 times more likely to also develop conduct disorders than girls without ADHD. Comparatively, boys are four to nine times more likely to be diagnosed with ADHD than are females (APA, 1994), but presence of ADHD increases the diagnosis of conduct disorder in males by a factor of 14.7 (Szatmari, Boyle, & Offord, 1989). Thus, the presence of specific variables that are gender rare and the accumulation of generic risk factors must be investigated more closely in future research.

The Highly Traumatized Child

Highly traumatized and abuse reactive children had more victims than any other child type. This finding may reflect factors associated with age, recency of the children's maltreatment, and the extent of the maltreatment these children experienced.

Highly traumatized and abuse reactive children were the two youngest child types emerging from this research. Although age was not significantly associated with the number of children's victims for the entire sample, these two child types had the lowest mean age and the highest mean number of victims of the five child types. Highly traumatized and abuse reactive children also had a shorter interval between their own experience of maltreatment and their first instance of sexual acting out. Furthermore, these two child types had been abused by a higher mean total of sexual and physical abusers than had any other child types. Across child types, children who had been abused by more perpetrators tended to have more victims ($r = .32$, $p < .001$). They also had been maltreated by more abusers than had any other child type, despite the fact that their own victimization had occurred more recently than that of the remaining child types. Finally, the highly traumatized children's parents reported feeling significantly less attached to their children than did any other child types. Across all participants, impairment in the attachments of parents and children was significantly correlated with the children's number of victims ($r = -.33$, $p < .001$; the correlation is negative due to the inverse scoring of the PSI Attachment to Child scale). Thus, their rate of victimization of others might reasonably be related to the degree of trauma engendered by the maltreatment they had endured and, potentially, to a lack of compassionate support.

Variables Related to Number of Victims

Is the frequency of childhood sexual behavior related to problematic sexual behavior? W. N. Friedrich (personal communication, 1997) found a significant difference in the CSBI-3 scores of sexually abused and nonabused children, reflecting a higher frequency of sexual behaviors in sexually maltreated children. Comparing Friedrich's samples of sexually maltreated and nonabused children to this sample of children with sexual behavior problems, we found that the CSBI-3 scores of children with sexual behavior problems exceeded both of the other groups (Gray, Pithers, Busconi, & Houchens, in press). Thus, children with sexual behavior problems engage in more

frequent sexual behaviors than do nonabused children and maltreated children who have not acted out sexually. For children with sexual behavior problems, CSBI-3 scores were not significantly associated with the mean number of victims, $r(90) = .014$, $p = .89$.

It is interesting to note that one study examining the etiology of sexually abusive behaviors in adults found that males who engaged in sexual behaviors with an unusually high frequency were at greater risk of engaging in sexually abusive behaviors (Malamuth, 1995). It may be that unusually frequent sexual behaviors are associated with an increased likelihood of sexually abusive behavior at any age. One potential hypothesis for this association may be that individuals who engage in high-frequency sexual behaviors use sex for many purposes, some of which are maladaptive (e.g., power needs, release of anger). The current study cannot determine the etiology of high-frequency sexual behaviors in children or the persistence of such behaviors into later development.

Relevance of Child Types to Treatment Considerations

Weighing the percentages of children who attained a clinically significant reduction or increase in their problematic sexual behavior, modified relapse prevention enabled a greater percentage of the nonsymptomatic, highly traumatized, and abuse reactive children to attain clinically significant reductions in the target behavior. Relapse prevention and expressive therapy enabled similar proportions of rule-breaking children to achieve clinically significant change. Regrettably, relatively little change was evident in the sexually aggressive children after 16 weeks in either treatment condition. A small percentage of the sexually aggressive children attained clinically significant change in the expressive therapy, but an equal proportion manifested clinically significant deterioration. If this trend continues after extended follow-up data and in research with other samples, modified relapse prevention may be considered the treatment of choice for the nonsymptomatic, highly traumatized, and abuse reactive children.

Why did relapse prevention demonstrate significantly greater clinical efficacy with highly traumatized children after a short treatment exposure? We believe this finding results from the convergence of several factors: (a) relapse prevention is a highly structured and predictable treatment model; (b) relapse prevention enables immediate acquisition of self-soothing behaviors that permit traumatized children to counter the onset of acute distress; (c) parents quickly learn adaptive responses to their children's distress; and (d) relapse prevention encourages parents and children to create a support network consisting of individuals who have regular contact with the children and families, are informed about the children's acting out, and are prepared to help.

We emphasize the importance of immediately involving the parents of highly traumatized children in treatment and specifically addressing care-giving skills that will assist them to provide compassionate support, including appropriate discipline. Caregivers of highly traumatized children were significantly more detached from their children than were the parents of nearly all other child types (with the sole exception of the parents of rule-breaking children). Because the highly traumatized children have experienced catastrophic maltreatment, assisting the parents to become involved more meaningfully and positively in their children's lives is vitally important. Because heightened attachment is also associated with a higher level of parental oversight, it may help to prevent any further victimization of these children. We believe that the highly structured nature of relapse prevention enabled the parents of highly traumatized children to gain these skills more quickly than did the less structured expressive therapy.

Although less structured than relapse prevention, expressive therapy is powerful because it is highly spontaneous, using metaphor, symbols, and creative rituals and activities to convey indirectly concepts that may be experienced through sensations as well as articulated words. These qualities hold great benefit for some clients but appear to offer little therapeutic benefit for the most highly traumatized children. In contrast, the highly structured nature of relapse prevention-based treatment provided a needed sense of order for this child type. In contrast to expressive therapy in which information about coping strategies often gained indirectly by clients, relapse prevention provides a structure that encourages a more content-oriented, didactic approach in which concepts are stated expressly rather than acquired gradually and experientially. Thus, effective methods for regulating emotions and behaviors are gained more rapidly in the relapse prevention condition. Finally, relapse prevention encourages children and parents to disclose information selectively to others who might assist their self-management efforts and support them personally, increasing the potential that these skills might be acquired and generalized across contexts.

It must be emphasized that this analysis of treatment efficacy examined data about the children's sexual behaviors after the first 16 weeks of a 32-week treatment program. Future publications will report data from additional variables at the end of treatment and throughout a posttreatment follow-up of up to 2 years.

Case Examples of Types of Children With Sexual Behavior Problems

A case example of the nonsymptomatic child. Karen was brought immediately to the clinic when her parents noticed that she had developed a habit of holding her genitalia through her clothing and had made sexualized comments and drawings. The parents seemed frustrated that Karen did not correct her behavior as quickly as they would have liked after they disciplined her. Karen's parents reported that she was not obedient, and they appeared to have very high expectations for her compliance. In observing the parents with Karen, there appeared to be a potential for emotional neglect, particularly given the parents' schedules. Karen's sexual misbehaviors were readily observed and occured without significant planning.

A case example of the highly traumatized child. Susan, age 6, was brought to the clinic by her parents. The parents felt disconcerted when they found drawings Susan had made of a large figure having sex with a much smaller figure. When they discovered that Susan had masturbated to the point of abrading her genitalia, they reluctantly brought her to the clinic. During the clinical interview, the parents recalled Susan lifting her dress to expose her genitals, making sexual comments to men not known to the family, and rubbing herself on objects and other people in a sexual way. With extreme caution, one of the caregivers alluded to the possibility that several members of her family had been abused sexually by an uncle. She became teary as she speculated that this uncle may have "gotten" Susan, too, and then she broke down sobbing. Susan's mother stated she just could not stand the thought that her daughter was hurting others. When asked how she coped with that fear, she replied, "I do my best not to think about it." Her response conveyed a degree of neglect regarding her daughter's needs. Late in the interview, the mother disclosed that she was abused sexually on several occasions as a child, was saddened that she could not keep the promise she had made to her daughter that Susan would never be victimized, and that her husband has beaten her in front of Susan on several occasions. The family appeared to be experiencing an acute exacerbation of a chronically high level of life stress. Susan's sexual behaviors typically occurred in highly public settings, were readily observed, and lacked any semblance of planning. When asked if she had sexually misbehaved, Susan simply smiled and shrugged her shoulders. Her affect while engaging in sexual misbehaviors seemed anxious. In almost every other context, Susan's affect was flat. Susan's parents reported that she had been sleepless. Her school performance had declined to the point that she had been referred for educational assistance. She also had missed many days of school. Susan reported frequent somatic complaints, such as stomach pains, which appeared psychogenic. Susan showed a high desire to please others, yet her parents indicated that she had experienced tantrums and tears, possibly representing a significant level of regression. In chaotic situations, Susan seemed to withdraw and disappear.

A case example of the abuse reactive child. Upon first meeting Ben, his therapists knew they had their hands full. Particularly when he was in the treatment group, he became acutely restless, easily distracted, and resisted efforts to redirect his focus. Ben appeared to experience quite rapid changes in demeanor. At times, he could be quite charming and at others, he seemed intent on disobeying every directive. For moments in time, when Ben was calm and charming, the therapists believed that he might be growing attached to them. However, moments after the therapists had commented positively about his improved behavior, he would display a devilish grin and smiling eyes and be off on another rather disruptive adventure. He quickly impressed the therapists as the type of child on whom you naturally find yourself wanting to keep a constant eye. However, because of his energy, this proved a challenging task. Although few of his behaviors appeared intentionally destructive, they occasionally resulted in substantial harm to someone or something. Ben's behaviors were inconsistent and disruptive at home, school, and in the treatment suite. Ben had abused animals, sexually and nonsexually.

A case example of the rule-breaking child. Michelle had an extensive history of conduct problems at school, and her parents regarded her behavior at home as incorrigible. Her anger seemed chronic. She had not been adjudicated delinquent yet, but it seemed only a matter of time until a court petition was filed; she had stolen items from stores and repeatedly taken significant sums of money from her mother and her mother's friends. She was caught breaking into the teacher's desk in an effort to find money. She simply refused to accept that rules apply to her and when caught, she lied blatantly and outrageously. When with peers, Michelle acted as an agitant, seeming at times intent on elevating order to chaos. Her highly impulsive behaviors appear nearly as destructive to herself as to others. Thus, in addition to her sexual misuse of younger children, Michelle engages in very casual sex with male peers. Her indulgence in recreational drugs seems very casual, without recognition of any potential harm. Michelle rejects social norms,

unless her self-interest is served. Michelle has been described by her therapists as undersocialized.

A case example of the sexually aggressive child. Sam, age 11, came to the attention of child protective services when his 8-year-old brother disclosed to a teacher that his brother had had anal intercourse with him. On first meeting Sam, he appeared very interested in demonstrating his compliance with the wishes of authority figures, including his parents, the parents of other children in the treatment group, and his therapists. His demeanor was relaxed, unobtrusive, and likable. His social ease did not immediately fade when he first perceived that his own behavior was being scrutinized, but he became suspicious and defensive once the examination of his conduct exceeded his personal threshold. With continued exposure, Sam's interactions became less constrained and more cunning, strategic, and subtly coercive. He was suspicious of others and, while verbally competent, his social interactions appeared superficial. Among peers, he appeared adept at subtly encouraging them to act out. Even while appearing cooperative, he allowed others to know little of his activities unless it was used to divert supervision or to reframe otherwise secretive patterns. He mimicked or parroted expected behaviors while under observation. Sam's parents reported few problem behaviors at home, but school personnel regarded Sam as a source of some difficulty in the school.

Sam and his biological parents expressed a wish to cooperate with authorities. Despite their expressed wish, the caregivers hired an attorney to protect the rights of their 11-year-old son, asserting, "We don't want him to be a victim of the system. He is already being labeled a perpetrator. We know what happened was inappropriate sex play and we won't let it happen again." The caregivers seemed intent on controlling the extent to which outside agencies could intrude into their privacy and protection of Sam. Assurances were provided that Sam's younger brother would be protected by separating the children at night and through adult supervision at all times during the day. Any suggestion that outside agencies might be able to assist the family were greeted as an unnecessary and destructive invasion by a government system that was overstepping its role and furthering family instability. To a certain extent, one gained the sense that the parents viewed the problem as the younger sibling's disclosure. The potential harm done to Sam's younger brother and the risk of recurrence were minimized jointly by the child and parents. This message, delivered by the caregivers and child alike, was initially a gentle resistance to outside intervention, which escalated into a more rigid and quietly defiant insistence that "things are under control, back off."

Importance of Parental Attachment to Behavioral Change in Children

Across all of the child types, attachment between parents and children was profoundly insecure. Parental attachment to children inhibits child maltreatment (Daro, 1993) and protects maltreated children from developing adjustment problems (Lynskey & Fergusson, 1997). Several researchers have demonstrated that the association between maltreatment and perpetration can be broken by families that support their victimized children (Burgess, Hartman, & McCormack, 1987; Fraser, 1996; Powell, 1987). Newburger (1994) reported that if maltreated children receive immediate and compassionate attention, many of the harmful effects of victimization might be abbreviated, if not avoided. She also noted that children who have been victimized twice fare more poorly overall. Given her findings, one may speculate that when abused children are met with critical judgment, neglect, or blame promoted by parental fear and anxiety, rather than with compassion and support, the second instance of maltreatment has been expressed.

In the current research, parental attachment to children was significantly correlated with a reduction in children's sexualized behaviors after 16 weeks of treatment ($r=-0.27$, $p<.01$; the correlation is negative due to the inverse scoring of the PSI Attachment to Child scale). Thus, even at the generally impaired levels of attachment evident in these families, children whose parents felt more attached to them did better in therapy.

Although further empirical investigation is needed, insecure attachment of parents and children may be a potent intervening variable that could explain the link between child maltreatment and adolescent delinquency and adult criminality, including sexual offenses (Widom, 1995). Lack of attachment disrupts a child's identification with both parental and societal values, resulting in impaired internal behavioral controls (Elliott, Huizinga, & Ageton, 1985; Hirschi, 1969). The absence of attachment between parents and children and the inhibited internalization of prosocial mores induces a social alienation rendering children vulnerable to antisocial peer influences. Compounding this vulnerability, impaired attachment has been associated with parents who exercise little oversight of their children's behaviors. Poor parental monitoring, combined with little positive involvement with one's children, has been found

commonly in families of antisocial children (Loeber & Dishion, 1983; McCord, McCord, & Howard, 1963).

For children with sexual behavior problems, caring oversight is necessary to prevent further sexually problematic behavior. When parents have relatively few coping skills and are subjected to protracted stress, days of heightened stress have been shown to covary with disrupted maternal discipline, irritability, and increased frequency of behavior problems in their children (Snyder, 1991; Wahler & Dumas, 1984). Given the vulnerability of these children to multiple forms of maltreatment, addressing parental attachment problems remains a vitally important goal of clinical intervention.

If for these factors alone, treatment of children with sexual behavior problems must involve the children's caregivers. Although parents generally had not directly maltreated their children, prolonged anxiety, depression, and social alienation may overwhelm any parent's desire to be involved positively in their children's lives. To be maximally effective, treatment must assist families to develop a cadre of positive role models for their children. Ideally, treatment will foster development of a network of individuals who are aware of the children's behaviors and the parents' need for support and who are prepared to volunteer their help. When attempting to foster change in individuals who may perceive attachments with others as perilous, others may need to be the first to extend their hands, offer reassuring comments, and model supportive behaviors.

Given that more than half of the children in this research had been maltreated both sexually and physically and that 60% had received therapy for their victimization prior to engaging in problematic sexual behaviors with others (Gray et al., 1997), one may propose that group treatment for victims of child maltreatment should include a parallel intervention for their nonabusive parents and address the victim/victimizer potential in abused children (Friedrich, 1995; Larson & Maddock, 1986). In a review of research with maltreated children, Finkelhor and Dziuba-Leatherman (1994) asserted, "The proposition that childhood victims are more likely to grow up to victimize others is firmly established" (p. 181). By more directly addressing the association between victimization and maltreatment in therapy with abused children, we hope that this link may be uncoupled.

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