Heterogeneity of Symptom Presentation in Sexually Abused Youth: 
Complex Profiles of a Complex Problem

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Introduction

In recent decades, considerable attention has been given to child sexual abuse and many 
studies have focused on the short-term and long-term consequences of the abuse. Results have 
continually indicated that sexually abused children and adolescents display a considerable 
breadth of symptoms, including anxiety, depression, poor self-esteem, substance abuse, self-
harm behavior, post-traumatic stress symptoms, sexual behavior problems, cognitive distortions, 
attrition errors, and disturbed relatedness (e.g., Kendall-Tackett et al., 1993; Paolucci, Genuis, 
& Violato, 2001). From this literature, one theme has continually emerged: victimization does 
not necessarily have an inevitable pattern or a unified symptom presentation for the majority of 
youth. Rather, sexually abused youth display a multitude of patterns of symptoms at varying 
levels of severity. Another important finding within the area of child sexual abuse has been that 
some youth exhibit little to no symptomatology after the abuse (Hecht & Hansen, 1999; Kendall-
Tackett et al., 1993).

Despite the consistent finding that sexually abused youth are a heterogeneous group who 
display a wide range of symptoms, few studies have examined the within-group variability or 
attempted to further understand the different patterns displayed by sexually abused youth. 
Instead, many studies have treated sexual abuse as a single phenomenon, assuming homogeneity 
of the sample. Friedrich (1998) stated that more studies need to employ multivariate statistical 
procedures (e.g., cluster analysis) to help better understand the range of symptoms displayed by 
these youth. To date, only a few studies have utilized cluster analysis to examine the within-
group variability of victims of sexual abuse (e.g., Bennett, Hughes, & Luke, 2000; Follette, 
Naugle, & Follette, 1997), and only one of these used a sample of sexually abused youth (Sedlar, 
2001). While these findings provide useful groundwork, the limited examination of sexually 
abused children and the small sample sizes in the above studies restrict the generalizability of the 
findings. The purpose of the proposed study is to elucidate the clinical profiles of emotional and 
behavioral adjustment that are present within a sample of sexually abused children

Method

Participants

Participants included 112 sexually abused youth and their non-offending caregivers. 
Participants were recruited primarily from a Child Advocacy Center that completed sexual abuse 
screenings. The children ranged in age from 6.92 to 16.75 years with a mean age of 11.48 years 
(\(SD = 2.78\)). Ninety (80.4%) of the youth were female and 80.2% were Caucasian. Most of the 
victims were abused by only one perpetrator (83.0%) with 93.6% of the offenders being male 
and 46.3% being family members. Only nine children experienced non-contact forms of abuse 
(i.e., exposure, pornography) and the most common type of sexual abuse behaviors identified in 
this sample was fondling (69.6%).
Of the non-offending parents, the mean age was 36.39 (SD = 7.39; range of 23 to 72). The majority of non-offending caregivers were a biological parent with eighty-one (76.4%) being the biological mother and fourteen (13.2%) being the biological father. The vast majority of caregivers (92.2%) identified themselves as Caucasian. The sample was predominately lower to lower-middle class and approximately half were married.

**Measures**

Multiple measures were used to provide information on areas of child sexual behavior, internalizing and externalizing problems, and post-traumatic stress symptoms. Child report measures included the Children’s Depression Inventory (CDI; Kovacs, 1992), Children’s Manifest Anxiety Scale-Revised (CMAS-R; Reynolds & Richmond, 1985), the Coopersmith Self-Esteem Inventory (SEI; Coopersmith, 1981), the Children’s Fears Related to Victimization Scale (CFRV; Wolfe & Wolfe, 1986), and the Children’s Impact of Traumatic Events-Revised (CITES-R; Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991). Caregiver report measures included the Child Behavior Checklist (CBCL; Achenbach, 1991) and the Child Sexual Behavior Inventory (CSBI; Friedrich et al., 2001).

**Results**

**Hierarchical Cluster Analyses**

Hierarchical cluster analyses were conducted on scores from parent- and child-report measures in order to identify patterns of functioning and adjustment associated with child sexual abuse. The hierarchical cluster analysis was formed using several measures: (a) CBCL Externalizing Problems subscale, (b) CBCL Internalizing Problems subscale, (c) CITES-R PTSD subscale, (d) CSBI Total, (e) CDI Total Scale, (f) SEI Total Self Scale, (g) CMAS-R Total Anxiety Scale, and (h) the CFRV Total. Scores were transformed to standardized z-scores for the cluster analysis. Cases were linked using Ward’s method and Squared Euclidean distance was selected as the measure of similarity. Based upon the agglomeration schedule, a four cluster solution was chosen. For the four-cluster solution, 32 youth (28.6%) fell into the first cluster, 16 youth (14.3%) comprised the second cluster, 31 (26.3%) were included in the third, and 33 youth (28.0%) comprised the fourth. Figure 1 provides a graphical representation of the four cluster profiles.

Cluster 1, “Problem Behaviors,” is characterized by high scores on the CBCL Internalizing and Externalizing Scales and the CSBI indicating the existence of several problem behaviors. Cluster 2 is termed “Highly Distressed” due to the significant elevations on all of the child report measures. The third cluster (herein termed “Subclinical”) revealed a profile in which individuals did not show clinically elevated scores on measures of psychological adjustment. In fact, the means on some measures (e.g., CMAS-R, CDI) were actually below the standard mean of 50. Cluster 4 is characterized by moderate elevations of multiple measures of psychological adjustment, and, therefore, termed “Moderately Distressed.” Table 1 presents the results of one-way ANOVAs on the four groups for each measure used in the cluster analysis, including means, standard deviations, and LSD pairwise comparisons. ANOVAs and LSD pairwise comparisons showed significant differences across the profiles on all variables.

**Follow-up ANOVAs and Chi-Squares**

Follow-up analyses were conducted to examine demographic and abuse history characteristic differences across clusters of sexually abused youth (see Table 2). One-way analyses of variance (ANOVA) were conducted to assess differences in child age, child age at abuse onset, and child age at offset. The remaining demographic and abuse characteristics were
dichotomous variables and chi-square analyses were conducted to obtain differences across clusters, including child gender, perpetrator relationship to victim, abuse severity/intrusiveness, and abuse duration. Results revealed no significant differences across clusters on any of the demographic or abuse history characteristics.

Discussion
The purpose of the present study was to elucidate the clinical profiles of emotional and behavioral adjustment that are present within a sample of sexually abused children. In this study, the clinical presentation in sexually abused children can be characterized by four distinct and meaningful clinical profiles. First, a “Problem Behaviors” cluster marked by high levels of overt behaviors, including sexual behavior problems and externalizing difficulties. Second, a “Highly Distressed” profile, noted by pervasive elevations across the various measures. Third, a “Subclinical” profile characterized by a lack of clinically significant elevations on the selected measures of behavioral and emotional adjustment. Fourth, a “Moderately Distressed” cluster characterized by moderate levels of difficulties across various measures. Results indicated that the clusters significantly differed from each other on all measures, but that there were no distinct differences across demographic or abuse history variables. Interestingly, the Problem Behaviors cluster and the Highly Distressed cluster differed primarily on who was the reporter of symptoms and adjustment as all parent report measures were elevated on the Problem Behaviors cluster and all child report measures were similarly elevated on the Highly Distressed cluster.

Results provide further evidence for the heterogeneity of symptomatology in child sexual abuse and the importance of examining this complexity when working with sexually abused youth. The multiple, potential psychological and behavioral symptoms experienced by sexually abused youth highlight the challenges and complexity involved in understanding the interrelationship of these symptoms as well as the difficulties researchers and clinicians continually face in their work. Implications for this study include recognizing that treatments for youth may be improved by tailoring interventions to distinct subgroups of sexually abused children.

References


Figure 1. Clinical profiles (based on Z-scores) of adjustment and functioning for four clusters

Cluster 1: Problem Behaviors
Cluster 2: Highly Distressed
Cluster 3: Subclinical
Cluster 4: Moderately Distressed
Table 1.
**Between-Group Differences Means and Standard Deviations for Measures of Adjustment Across Four Clusters**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cluster 1 Problem Behaviors (n = 32)</th>
<th>Cluster 2 Highly Distressed (n = 16)</th>
<th>Cluster 3 Subclinical (n = 31)</th>
<th>Cluster 4 Moderately Distressed (n = 33)</th>
<th>F*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI Total</td>
<td>M: 50.78a SD: 9.87</td>
<td>M: 75.19b SD: 9.88</td>
<td>M: 43.48c SD: 5.07</td>
<td>M: 55.91d SD: 9.07</td>
<td>50.43</td>
</tr>
<tr>
<td>CFRV Total</td>
<td>M: 50.22a SD: 9.12</td>
<td>M: 64.75b SD: 5.25</td>
<td>M: 48.61a SD: 9.08</td>
<td>M: 50.52a SD: 10.90</td>
<td>12.16</td>
</tr>
<tr>
<td>CMAS-R Total</td>
<td>M: 49.47a SD: 8.18</td>
<td>M: 69.69b SD: 11.44</td>
<td>M: 38.55c SD: 8.72</td>
<td>M: 60.00d SD: 6.28</td>
<td>61.31</td>
</tr>
<tr>
<td>SEI Total Self Scale^1</td>
<td>M: 66.19a SD: 12.23</td>
<td>M: 35.88b SD: 12.17</td>
<td>M: 82.26c SD: 11.90</td>
<td>M: 57.00d SD: 13.97</td>
<td>51.36</td>
</tr>
<tr>
<td>CBCL Internalizing Scale</td>
<td>M: 70.16a SD: 8.51</td>
<td>M: 64.19b SD: 12.63</td>
<td>M: 52.03c SD: 8.44</td>
<td>M: 62.45b SD: 8.19</td>
<td>21.35</td>
</tr>
<tr>
<td>CBCL Externalizing Scale</td>
<td>M: 73.13a SD: 8.31</td>
<td>M: 61.63b SD: 11.70</td>
<td>M: 50.19c SD: 10.45</td>
<td>M: 58.94b SD: 8.73</td>
<td>30.79</td>
</tr>
<tr>
<td>CSBI Total</td>
<td>M: 15.60a SD: 12.43</td>
<td>M: 8.00b SD: 9.76</td>
<td>M: 2.54c SD: 4.13</td>
<td>M: 5.12b,c SD: 4.19</td>
<td>15.02</td>
</tr>
</tbody>
</table>

* df = 3, 108; p > .001
^1 Higher scores on this measure indicates better functioning. For all other scales, higher scores suggest poorer functioning.

**Note.** Means with dissimilar subscripts differ significantly at p < .05.
Table 2.
Prevalence (%) and Means of Demographic and Abuse History Characteristics Among Four Cluster Profiles.

<table>
<thead>
<tr>
<th></th>
<th>Cluster 1 Problem Behaviors</th>
<th>Cluster 2 Highly Distressed</th>
<th>Cluster 3 Subclinical</th>
<th>Cluster 4 Moderately Distressed</th>
<th>F (3, 108)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Age</td>
<td>11.64</td>
<td>12.56</td>
<td>10.93</td>
<td>11.31</td>
<td>1.30</td>
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<tr>
<td>Age of abuse onset</td>
<td>8.37</td>
<td>9.73</td>
<td>9.12</td>
<td>8.47</td>
<td>.896</td>
<td>.446</td>
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<tr>
<td>Child Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>25.0%</td>
<td>12.5%</td>
<td>19.4%</td>
<td>18.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>75.0%</td>
<td>87.5%</td>
<td>80.6%</td>
<td>81.8%</td>
<td>1.15</td>
<td>.766</td>
</tr>
<tr>
<td>Relationship to Perpetrator</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Intrafamilial</td>
<td>46.9%</td>
<td>53.3%</td>
<td>20.0%</td>
<td>33.3%</td>
<td>7.00</td>
<td>.072</td>
</tr>
<tr>
<td>Extrafamilial</td>
<td>53.1%</td>
<td>46.7%</td>
<td>80.0%</td>
<td>66.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Penetration</td>
<td>34.4%</td>
<td>43.8%</td>
<td>38.7%</td>
<td>48.5%</td>
<td>4.99</td>
<td>.173</td>
</tr>
<tr>
<td>Penetration</td>
<td>65.6%</td>
<td>56.2%</td>
<td>61.3%</td>
<td>51.5%</td>
<td></td>
<td></td>
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<tr>
<td>Duration</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1 time</td>
<td>52.0%</td>
<td>53.8%</td>
<td>50.0%</td>
<td>33.3%</td>
<td>2.76</td>
<td>.430</td>
</tr>
<tr>
<td>More than once</td>
<td>48.0%</td>
<td>46.2%</td>
<td>50.0%</td>
<td>66.7%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>