Youth self-report of physical and sexual abuse: A latent class analysis

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A B S T R A C T

Objective: To determine if meaningful groups of at-risk pre-adolescent youth could be identified based on their self-report of physical and sexual abuse histories.

Methods: Youth participating in a consortium of ongoing longitudinal studies were interviewed using an audio-computer assisted self-interview (A-CASI) when they were approximately 12 years of age to obtain information about their perceived experiences of physical (18 items) and sexual (12 items) abuse. In addition, Child Protective Service records were reviewed and the taxonomy developed for defining maltreatment characteristics (Barnett, Manly, & Cicchetti, 1993) was applied. A total of 795 youth completed the age 12 interview and had their records reviewed during the period from birth to the time of their age 12 interview. A latent variable modeling approach, specifically latent class analysis (LCA), was used to generate profiles of youth based on their endorsements of the physical and sexual abuse items. These profiles were then compared to CPS reports of physical or sexual abuse to determine their validity.

Results: The LCA identified 4 interpretable classes or groups of pre-adolescent youth. Based on the pattern of responses to specific items the classes were identified as follows: (1) no physical or sexual abuse; (2) high physical abuse/low sexual abuse; (3) no physical abuse/moderate sexual abuse; and (4) high physical and sexual abuse. Follow-up analyses indicated that the odds of a CPS report for Classes 2, 3, and 4 compared to Class 1 were significantly greater (2.21, 2.55, and 5.10, respectively).

Conclusion: The latent variable modeling approach allowed for the identification of meaningful groups of youth that accounted for both the occurrence of multiple types of abuse as well as differing severities associated with each type. It is suggested that this methodological approach may be most useful in future efforts to identify the antecedents and consequences of maltreatment.

Practice implications: The results of the present study not only have implications for future research efforts, but also suggest that in practice, youth at-risk for maltreatment may be reliable and valid reporters of their physical and sexual abuse experiences.

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Introduction

Research consistently suggests that abuse and neglect in childhood derail normal development (Bolger & Patterson, 2001; Cicchetti & Toth, 1995; English et al., 2005; Repetti, Taylor, & Seeman, 2002). The experiences of abuse and neglect in childhood not only put youth at risk for immediate adverse outcomes such as poor school performance and increased psychological distress (Holt, Finkelhor, & Kantor, 2007) but may also lay the groundwork for longer-term deleterious health outcomes in adolescence and adulthood such as depression, anxiety, suicidality, and chronic pain (Anda et al., 2007; English et al., 2005; Sachs-Ericsson, Kendall-Tackett, & Hernandez, 2007; Salzinger, Rosario, Feldman, & Ng-Mak, 2007; Springer, Sheridan, Kuo, & Carnes, 2007; Vranceanu, Hobfoll, & Johnson, 2007). Researchers have sought to address these issues by using various methodologies and study designs to better understand the ways in which youth are impacted immediately and over time by maltreatment experiences (Anda et al., 2007; Sachs-Ericsson et al., 2007; Vranceanu et al., 2007). However, questions remain regarding the processes by which maltreatment impairs development.

Vital to research on child maltreatment is information about the type, severity, and frequency of exposure to child abuse and neglect (English et al., 2005; Manly, Kim, Rogosic, & Cicchetti, 2001). However, much of the research on maltreatment has used operational definitions that entail very broad labels (i.e., occurrence versus non-occurrence of a single type of abuse) based on CPS designations of findings (i.e., substantiated versus unsubstantiated) to categorize victims. These methods are limited in that they often exclude important variations in youth’s experiences of maltreatment that may account for later adversity (Litrownik et al., 2005). More specifically, the effect of an individual occurrence or type of maltreatment is less related to developmental outcomes than the cumulative impact of multiple occurrences and types of maltreatment throughout childhood (Finkelhor, Ormrod, & Turner, 2007; Lau et al., 2005). This is particularly germane to child maltreatment research because complex, chronic, and multi-type maltreatment is the rule more often than the exception for maltreated youth (De Bellis, 2001; Litrownik et al., 2005; Saunders, 2003).

Even when the complexities associated with child maltreatment sequelae are recognized, the source of this information for identifying maltreatment has typically been reports of abuse that have been substantiated by CPS. However, there are many factors that contribute to the CPS designation of substantiation (i.e., a founded CPS allegation, which receives further investigation) or lack of substantiation (i.e., an unfounded CPS allegation, which does not receive further investigation) (Drake & Pandey, 1996; English, Marshall, Coghan, Brummel, & Orne, 2002). Research comparing substantiated with unsubstantiated CPS reports suggests that youth whose cases are unsubstantiated may experience maltreatment that is just as severe as those that are substantiated. These investigations found that substantiated and unsubstantiated cases are more alike than different in terms of rate of perpetrator recidivism (Way, Chung, Jonson-Reid, & Drake, 2001), family risk factors for being re-reported to CPS (Wolock, Serman, Feldman, & Metzger, 2001), school and delinquency outcomes (Leiter, Myers, Powers, Eckenrode, & Jaklitsch, 1990; Rausch & Knutson, 1991; Stiffman, 1989). However, the results of these studies may still represent bias or inaccuracy, in that adult participants may have difficulty in accurately recalling maltreatment that occurred in childhood (Kolko, Brown, & Berliner, 2002; Widom, Raphael, & DuMont, 2004). In addition, much of what goes on in the family occurs behind closed doors; not only is this information not observable, but adults who participate may not be willing to disclose what happens. Therefore, child accounts of maltreatment are likely to reveal important information from a perspective that is unavailable from other sources.

In the maltreatment literature, youth self-reports of maltreatment have often been compared to other reporting sources as a means of evaluating their reliability as indicators of maltreatment. Overall, agreement of the youth with the CPS and parent report is highest for sexual abuse (>90% agreement) and lowest for neglect (60%), which may be related to the nature of sexual abuse versus that of neglect (McGee et al., 1995). Some studies also revealed that youth reports correlate reasonably well with CPS and parent report (Wekerle et al., 2001; Wingar & Lipshitz, 1999); while others have found poor agreement (Everson et al., 2008). When disagreement between reporting sources was found, youth usually failed to report abuse indicated by the other sources. Of note, youths’ psychological adjustment was more strongly associated with their self-report of maltreatment than with CPS determinations (Everson et al., 2008).

In considering the concordance of youth reports with other reporting sources, it is important to keep in mind that agreement is influenced by a myriad of personal, legal and ethical considerations. In addition, individual informant heuristics, privileged knowledge, and relationship to the victim generate variation in the reported account of child maltreatment. For example, in a national survey, the majority of parents interviewed endorsed the use of corporal punishment in disciplining their children; however, only 1% endorsed physical discipline, which characterized children as having been “beat up” by
parents (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Kelleher, Chafin, Hollenberg, and Fischer (1994) found that 1.4% of parents endorse using physical force when it is characterized as resulting in bruises, days in bed, or needing medical attention. However, when youth were surveyed in community-based surveys the rates of severe corporal punishment was higher, from 3% to 10% (Singer, Anglin, Song, & Lunghofer, 1995). Taken as a whole, findings to date suggest that child reports and CPS reports are both valuable indicators of child maltreatment. Meaningfully organizing child reports is an important step in integrating this information into working models of child maltreatment sequelae.

The current study attempts to address this gap by using an advanced latent variable statistical approach, Latent Class Analysis (LCA), to group youth self-reports collected proximate to maltreatment events. This analytic strategy uses shared experiences reported by youth to identify groups rather than fitting experiences into pre-determined categories. Finally, in an effort to validate the groups or class structures that result, they are examined in relationship to official CPS reports of physical and sexual abuse.

Method

Participants: Recruitment, sample selection, demographics

The sample for this study was drawn from the LONGSCAN consortium which was established in 1990 with grants from the National Center on Child Abuse and Neglect (Runyan et al., 1998). LONGSCAN operates under common protocols at five sites across the United States: the South, the East, the Midwest, the Northwest, and the Southwest. The present investigation is based on pooled data from these 5 sites. Youth from the Northwest and Southwest sites were recruited for participation because of reports of maltreatment before 3.5 years of age. For the South, the East, and the Midwest, a maltreatment report was not a requisite for inclusion; however, some of the children had been reported for maltreatment prior to 4 years of age and all were considered to be at-risk for maltreatment. The LONGSCAN consortium began interviewing youth and their caregivers when the youth were 4 years old (total n = 1354). The project is presently in its 20th year and comprehensive assessment of youth, their caregivers, and their teachers have been completed or are in progress for ages 4, 6, 8, 12, 14, 16, and 18.

Youth’s ages at the age 12 interview ranged from 11 to 13, with a mean age of 12.1 years. At the time of the analysis, a total of 795 youth had completed physical and sexual abuse measures for the age 12 interview and had complete CPS record reviews: East (n = 175), Midwest (n = 88), South (n = 155), Southwest (n = 212), and Northwest (n = 165). Gender was evenly distribution in the sample with 395 (49.6%) males and 400 (50.4%) females. The study sample represented the ethnic diversity of each of the sites in the study: Non-Hispanic White (27.1%), Black/African American (54.4%), Hispanic (6.3%), Asian/Middle Eastern (0.4%), Mixed Race (10.9%), and Other (0.5%). The sample reflects the overrepresentation of youth from ethnic minority backgrounds, which is common in child welfare and at-risk populations. Table 1 presents the percentage of youth with coded CPS allegation reports of physical and sexual abuse from birth to age 12. While the majority, 62.2% did not have a report for physical or sexual abuse, 8.3% had a report for both physical and sexual abuse, 23.7% had a report for only physical abuse, and 5.8% had a report for only sexual abuse. There were no significant differences in terms of initial demographics at the time of recruitment for those participants included in the present analysis (n = 795) versus those not included (n = 559). In addition, an examination of child problems reported longitudinally using a pattern-mixture modeling approach indicated that the data were missing at random (Anderberg, 2004).

Procedure

When the participants were 4 years of age, baseline developmental assessments of the youth were administered and the first standardized interviews were conducted with their caregivers. After this initial meeting, the youth and their caregivers were tracked and interviewed face-to-face biannually with annual contact interviews (conducted over the phone with primary caregivers) at odd years of age. In recognition of the sensitive nature of youth self-report of maltreatment and the developmental need for autonomy and privacy during adolescence, youth self-report measures of physical and sexual abuse were administered at the age 12 interview using a project-developed audio-computer assisted self-interview (A-CASI). The age 12 youth interview included a number of other standardized and project-developed measures that required anywhere from 1 to 2 h to complete. In addition, maltreatment data for each of the youth participants were collected from CPS record reviews at least every 2 years. Each site followed informed consent procedures when collecting these data approved by local Institutional or Human Subject Review Boards/Committees.

<table>
<thead>
<tr>
<th>Column total, n (%)</th>
<th>No sexual abuse, n (%)</th>
<th>Yes sexual abuse, n (%)</th>
<th>Row total, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No physical abuse, n (%)</td>
<td>495 (62.2%)</td>
<td>46 (5.8%)</td>
<td>541 (68%)</td>
</tr>
<tr>
<td>Yes physical abuse, n (%)</td>
<td>188 (23.7%)</td>
<td>66 (8.3%)</td>
<td>254 (32%)</td>
</tr>
<tr>
<td>Column total, n (%)</td>
<td>683 (85.9%)</td>
<td>112 (14.1%)</td>
<td>795 (100%)</td>
</tr>
</tbody>
</table>
Measures

Self-report of physical and sexual abuse. At the age 12 face-to-face interview, youth were asked about personal experiences of maltreatment. These were project-developed self-report measures of sexual abuse, physical abuse, emotional abuse, and assault (Everson et al., 2008). The current study utilized the sexual abuse and physical abuse self-report measures. Twelve-year-old youth were selected for self-report because they have the cognitive and emotional skills to make informed responses to complicated topics (Weithorn & Campbell, 1993), and were able to answer sensitive questions about maltreatment (Amaya-Jackson, Socolar, Hunter, Runyan, & Colindres, 2000).

The physical and sexual abuse measures were administered on a laptop computer with 18 and 12 stem items, respectively being presented to the respondent both on screen (i.e., written) and aurally. The use of stem items that ask respondents to indicate if specific experiences or injuries had ever occurred ensures that the measure is time-efficient and avoids exposing each respondent to all questions. For those items endorsed, follow-up questions ask about the timeframe of occurrence, perpetrators, impact, and attributions which were not examined in the present study. The researchers of LONGSCAN acknowledge that little is known about the impact of maltreatment disclosure in research settings; however, after careful design, pilot testing, and consideration of ethical and legal mandates, the benefits associated with self-report were determined to exceed risks for 12-year-old children (Amaya-Jackson et al., 2000; DeKraai & Sales, 1991; Knight et al., 2000, 2006).

The self-report measures were pre-tested in 24 face-to-face interviews, which included youth with CPS involvement and youth with unknown CPS histories. Results from the pretest indicated that youth were comfortable with the structure and the wording of the items (Knight et al., 2000). Clinicians administering the measures reported that maltreatment endorsements matched or slightly exceeded youth’s known histories. When endorsements exceeded known histories, the clinicians’ opinion was that the youth endorsements were accurate (Knight et al., 2000).

Child protective services report of maltreatment. Child maltreatment was measured by referrals to CPS made in the form of narrative accounts for reported maltreatment from birth to 12 years of age. Trained abstractors coded child maltreatment information from the narratives by type and severity using the LONGSCAN Modified Maltreatment Classification System (LMMCS; English, Bangdiwala, & Runyan, 2005), based on the Maltreatment Classification System (MCS) coding schema developed by Barnett et al. (1993). The modifications made to the MMCS by the LONGSCAN consortium allow for further specification of sub-type and severity of maltreatment. For the purposes of the current study, child maltreatment was operationalized as one or more allegations of physical or sexual abuse.

Coders at each site were trained to use the MMCS. Initially, experienced coders who had been trained on the MCS by one of its developers (i.e., Manley) adapted procedures that were then used to train LONGSCAN coders at each site. Following exposure to and explanations for the specific codes, trainees coded CPS report narratives until they reached a standard of 90% agreement with the gold standard. In an effort to ensure that this training resulted in reliable coding across sites, coders at all five sites coded a subsample (n = 109) of the CPS narratives that represented cases from each site. Kappas for MMCS codes from the allegation narratives of physical and sexual abuse exceeded 0.70. These kappa values are considered to be in the substantial range according to Landis and Koch (1977). In sum, the reliability of the coding of physical and sexual abuse allegations is considered good.

Analysis plan

The purpose of this study was to identify clusters of youth based on the LONGSCAN self-report measure of physical and sexual abuse. To achieve this aim, latent class analysis (LCA), was conducted with MPlus version 3.0 (Muthen & Muthen, 1998). LCA utilizes observed variables that are dichotomously measured to model the heterogeneity inherent in response patterns to abuse experiences. LCA was used to identify class membership among 11–13-year-old youth based on their responses to the physical and sexual abuse measure. This analytic strategy was particularly effective for the present study because it revealed how the probability of a child being in a particular latent class related to the items for the measure and how class membership reflected different patterns of abuse on specific items (i.e., physical and/or sexual abuse).

In the latent class models, participants’ responses (i.e., yes or no) on each item (total = 30) from the self-report measures were used to estimate the number of abuse classes in the sample and the size of each class. From these estimations, the class structure was confirmed or refuted through an iterative process beginning with a one-class solution and increasing successively until the best fitting solution was reached according to specified fit indices. The estimation procedure used in LCA was based upon the combined probability that a proportion of the population would fall into a given abuse class (i.e., latent class probability) and that a particular response to the self-report measure would occur (conditional response probability) (Lanza, Flaherty, & Collins, 2003).

The model depicted in Fig. 1 represents the latent classes and their relationships to three demographic factors and CPS official reports, or the validation measure. In this figure, the oval represents a categorical latent class variable, physical and sexual abuse. The arrows pointing from the oval to the rectangles represent the self-report items (i.e., observed variables). The arrows pointing to the oval represent background variables: CPS report, gender, ethnicity, and study site. In LCA, classes were added iteratively until the model fit the data well from both a statistical and an interpretive perspective. Statistical criteria were used in conjunction with model interpretability to determine the optimal number of classes for self-reported physical and sexual abuse. The statistical criteria used to guide this process were the lowest Akaike Information Criteria.
(AIC), the lowest sample size adjusted Bayesian Information Criterion (SS Adj. BIC), and the highest entropy. In addition, the Lo–Mendell–Rubin Likelihood Ratio significance level was used to determine if models that vary by one class significantly differ (Lo, Mendell, & Rubin, 2001; Vuong, 1989). A probability of less than 0.05 for the Lo–Mendell–Rubin test indicated that the model with more classes fit significantly better than the model with less (i.e., the 3-class solution fits significantly better than the 2-class solution). A priori model interpretability guidelines required that each class in a given model be comprised of at least 1% of the sample. Solutions that contained a class with less than 1% of the sample were considered to be poor interpretively despite adequate statistical fit.

After the best fitting model was selected using the aforementioned criteria, names were generated to describe the classes. In the present study, the terms no, low, moderate, and high were used as general descriptors for rates of affirmative response for children in a particular class. These terms were not based on numeric cutoffs but were intended to provide a broad characterization for the overall pattern of response for youth in a particular class. Then logistic regression analyses were conducted on the classes to ascertain statistically significant differences at the item level. To determine differences between the classes according to the background variables—gender, ethnicity, and study site—additional chi-square tests and logistic regression analyses were conducted. Logistic regression was also conducted to ascertain differences between the classes by CPS report of physical and/or sexual abuse. Given the large number of significance tests, a conservative \( p \)-value of 0.01 was used for these analyses.

Results

Latent class models

Analysis of the 18 physical abuse and 12 sexual abuse items (\( n = 795 \)) indicate that the 4-class model was the best fitting solution as compared to 1-, 2-, 3-, and 5-class models (see Table 2). Specifically, the 4-class solution was supported because it had adequate fit indices (highest entropy, lowest SS Adj. BIC, and lower AIC) and the Lo–Mendell–Rubin test revealed that the 4-class model fit significantly better than the 3-class model while the 5-class model was not found to fit better than the 4-class model. Membership for this 4-class solution was as follows: Class 1 had 677 (85.1%) members, Class 2 has 49 (6.2%) members, Class 3 has 46 (5.8%) members, and Class 4 has 23 (2.9%) members.

Identification of 4-class solution

The classes that comprise the 4-class solution were characterized based upon the proportion of affirmative (i.e., yes) responses for each of the 18 physical and 12 sexual abuse items. All 12 of the sexual abuse items and 14 of the 18 physical abuse items significantly differentiated between the classes. The pattern of results for each of the four classes has been represented graphically in Fig. 2 and is used to label the groups in an approach that is analogous to labeling factors based on factor coefficients that result from factor analysis. The largest group, Class 1 had a predominately flat pattern with a relative peak at one item, “being hit with less dangerous object;” based on this pattern of self-reported abuse, Class 1 is termed No Physical or Sexual Abuse. Class 2 is characterized by peaks at the following five physical abuse items: hit with less dangerous object, kicked, pushed, physically hurt, and bruised. In addition, there were some low levels of sexual abuse endorsed, for example, touched you, made you look at sexual picture. Based upon this pattern of self-reports, Class 2 is termed High
Table 2
Fit indices for latent class models, \( n = 795 \).

<table>
<thead>
<tr>
<th>Model</th>
<th>AIC(^a)</th>
<th>SSAdj BIC(^a)</th>
<th>Entropy(^b)</th>
<th>LMR</th>
<th>Classes: ( n, % )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Class</td>
<td>6839.72</td>
<td>6880.07</td>
<td>NA</td>
<td>NA</td>
<td>1: ( n = 795, 100% )</td>
</tr>
<tr>
<td>2 Class</td>
<td>5815.57</td>
<td>5907.24</td>
<td>0.93</td>
<td>1077.19(^*)</td>
<td>1: ( n = 98, 12.3% ), 2: ( n = 697, 87.7% )</td>
</tr>
<tr>
<td>3 Class</td>
<td>5695.11</td>
<td>5797.37</td>
<td>0.94</td>
<td>58.21(^*)</td>
<td>1: ( n = 59, 7.4% ), 2: ( n = 49, 6.2% ), 3: ( n = 687, 86.4% )</td>
</tr>
<tr>
<td>4 Class</td>
<td>5611.63</td>
<td>5796.47</td>
<td>0.94</td>
<td>108.88(^*)</td>
<td>1: ( n = 677, 85.1% ), 2: ( n = 46, 5.8% ), 3: ( n = 46, 5.8% ), 4: ( n = 23, 2.9% )</td>
</tr>
<tr>
<td>5 Class</td>
<td>5609.12</td>
<td>5840.55</td>
<td>0.92</td>
<td>64.33</td>
<td>1: ( n = 24, 3.0% ), 2: ( n = 23, 2.9% ), 3: ( n = 31, 3.9% ), 4: ( n = 49, 6.2% ), 5: ( n = 668, 84.0% )</td>
</tr>
</tbody>
</table>

\(^*\) \( p < 0.05 \)
\(^a\) Lower AIC and SS Adj. BIC values indicate better fit.
\(^b\) Entropy should be greater than 0.7. Values closer to 1 are better.

Physical Abuse/Low Sexual Abuse. Class 3 is characterized as having peaks at one physical abuse item (hit with less dangerous object) and six sexual abuse items that involve sexual contact without penetration: touched you, tried to touch you, made you look at sexual picture, tried to look at your private parts, tried to put something in your private parts, and put mouth on your private parts. Based upon this pattern of self-reported abuse, Class 3 is termed No Physical Abuse/Moderate Sexual Abuse. Class 4 (\( n = 23, 2.9\% \)) is characterized as having peaks at the same five physical abuse items as class 2 as well as all of the sexual abuse items. Based upon this pattern of responses Class 4 was termed High Physical and Sexual Abuse.

While the general pattern of response within each group is helpful in labeling the classes, statistical examination of items across classes provides useful information when trying to determine statistically significant differences between the classes. Follow-up logistic regression analyses were used to determine statistically significant differences among the 4 classes in the rates of affirmative (i.e., “yes”) response to the physical and sexual abuse items. For the physical abuse items, youth in Class 2 were the most likely to respond “yes” followed by youth in Class 4. Youth in Class 1 were the least likely to respond “yes” to physical abuse items. Class 3 fell between Classes 1 and 4. For the sexual abuse items, youth in Class 4 were the most likely to respond “yes” followed by youth in Class 3. Youth in Class 1 were the least likely to respond “yes” to sexual abuse items while Class 2 fell between Class 1 and Class 3.

CPS and background variables

To determine if the 4-class solution differed significantly according to background variables—gender, ethnicity, study site, chi-square \( (\chi^2) \) tests of significance were conducted. The classes did not significantly differ by gender, ethnicity, or study site. Finally, the relationship between the 4-class solution and official CPS reports of physical and/or sexual abuse was examined. The classes significantly differed by CPS report of physical and/or sexual abuse \( (\chi^2 = 27.500, p < 0.01; \text{see Table } 3) \). Compared to Class 1, the odds of having a CPS report for physical abuse and/or sexual abuse was 2.21 times more likely \( (p < 0.01) \) for Class 2, 2.55 times more likely \( (p < 0.01) \) for Class 3, and 5.10 times more likely for Class 4. Although the odds ratios were in the hypothesized direction (i.e., CPS reports were more likely as classes increased in self-reported severity) differences between Classes 2, 3, and 4 were not statistically significant.

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![Fig. 2. Profiles of physical and sexual abuse items for the 4-class solution. Physical abuse items appear first followed by the sexual abuse items.](image-url)
The purpose of this study was to determine if meaningful classes or groups of youth could be identified based on self-reported physical and sexual abuse experiences. Using a latent modeling analytic approach, four distinct groups of 11–13-year-old youths emerged based on their endorsement of the 12 sexual and 18 physical abuse items. Rather than focusing on the responses of the youth on the self-report items in an attempt to establish a measurement scale, the present approach identified groups of youth who responded to the items in a similar manner. Youth could then be described based on their group membership and pattern as opposed to receiving a score on the measure (i.e., total scale or subscale scores). Such an approach has the benefit of accommodating recent calls for recognizing that maltreatment needs to be characterized along a number of dimensions (English et al., 2005; Finkelhor et al., 2007), differentiating severe violence from less severe forms of maltreatment would be desirable (Emery & Laumann-Billings, 1998), and a significant number of children are exposed to more than one type of maltreatment (Lau et al., 2005). The latent modeling approach not only allows for the inclusion of multiple maltreatment dimensions when characterizing individuals, but also results in a single categorical variable (i.e., 4 groups) that can then be examined in relationship to hypothesized antecedents and consequences.

In addition to demonstrating the utility of this analytic approach in terms of parsimony (Patterson & Fisher, 2002) and increased power to detect subsequent relationships, the groupings that resulted were based on self-reported experiences of pre-adolescent youth. The four classes that resulted from this analytic strategy supports the use of pre-adolescent reports as one of several sources that can be used to characterize the type and severity of maltreatment experiences. While some support for the validity of the 4-class solution was obtained based on its relationship to CPS abuse reports, overall agreement between the two reporting sources was again found to be unimpressive in this high risk sample (see Everson et al., 2008). Specifically, if we assume that agreement included no CPS physical or sexual abuse reports for youth in Class 1 (No Physical of Sexual Abuse group) and a CPS report for youth in Classes 2, 3, and 4 (High Physical Abuse/Low Sexual Abuse, No Physical Abuse/Moderate Sexual Abuse, and High Physical and Sexual Abuse), then youth and CPS reports agreed just over 35% of the time in Class 1 (242/677) and almost 64% of the time in the other classes (71/111).

It is interesting to note that most of the disagreement between youth and CPS reports involved youth in Class 1 (n = 435) who failed to endorse items that might typically be considered abusive when there was a CPS report. While the reasons for such “denial” of abuse are beyond the scope of the present study, some proposed explanations include (1) the timing or age of youth when abuse was reported (i.e., lack of recall of a distal event), (2) the stigma associated with abuse (i.e., failure to disclose), and to a lesser extent given the self-reported experiences of specific acts or resultant injuries, (3) differences in interpretation of what constitutes physical and sexual abuse (Amaya-Jackson et al., 2000).

Regardless, the four classes of pre-adolescent youth based on self-reported physical and sexual abuse experiences that were identified using LCA were: (1) interpretable (i.e., had face validity), and (2) significantly related to CPS reports (i.e., evidenced validity in relationship to another indicator of abuse).

While the present findings suggest that the analytic approach to classifying self-reported abuse experiences has much promise, the specific classes or groups that were identified may be limited to the samples assessed. Specifically, LONGSCAN participants represent a variety of regions across the United States coming from both rural and urban areas, but all were determined to be at risk for maltreatment early in their lives, with a number already having been reported to CPS. The use of multiple at-risk samples likely increases generalizability in terms of geographic and urban/rural living arrangements, as well as increases the likely prevalence of self-reported physical and sexual abuse increasing the potential interpretability of identified classes or groups. On the other hand, the groupings that were found could be specific to at-risk samples, not representing what might be found in community samples.

However, it is interesting to note that overall, youth in the present investigation self-reported abuse at rates that were similar to other national youth surveys of physical and sexual abuse. For example, 9.1% of youth in the present study endorsed an item indicative of physical abuse which is at the low end of the range (6–28%) reported for 9–24-year-old participants in national surveys (Bensley, Eenwyk, Spieker, & Schoder, 1999; Costello et al., 1996; Fisher et al., 1997; Finkelhor & Dziuba-Leatherman, 1994; Kilpatrick, Acierno, Saunders, Resnick, & Best, 2000; MacMillan et al., 1997; Nelson, Higginson, & Grant-Worley, 1994a; Nelson, Higginson, & Grant-Worley, 1994b). Nearly 9% of the pre-adolescents in the current study endorsed items indicating sexual abuse, a prevalence rate somewhere in the middle of the range (5–11%) for participants aged 10–24-years in the same national surveys.

### Table 3

<table>
<thead>
<tr>
<th>Class Description</th>
<th>Yes PA and/or SA, n (%)</th>
<th>Yes PA and/or SA, n (%)</th>
<th>Odds ratio (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1: no PA and no SA</td>
<td>425 (54.7%)</td>
<td>242 (30.4%)</td>
<td>Reference</td>
</tr>
<tr>
<td>Class 2: high PA and low SA</td>
<td>22 (2.8%)</td>
<td>27 (3.4%)</td>
<td>2.21* (1.23–3.96)</td>
</tr>
<tr>
<td>Class 3: no PA and moderate SA</td>
<td>19 (2.4%)</td>
<td>27 (3.4%)</td>
<td>2.55* (1.39–4.69)</td>
</tr>
<tr>
<td>Class 4: high PA and high SA</td>
<td>6 (0.8%)</td>
<td>17 (2.1%)</td>
<td>5.10* (1.98–13.09)</td>
</tr>
<tr>
<td>Grand total</td>
<td>482 (60.6%)</td>
<td>313 (39.4%)</td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.01 as compared to reference group.
These comparisons might suggest that the at-risk sample assessed in the current study may not be that different from previously sampled community samples in terms of physical and sexual abuse experiences, at least not in terms of perceived and reported experiences. But other differences exist between these prior studies and the present investigation that might lead to different patterns of responding. Specifically, many more items were presented to participants in the current study, and items differed with respect to their specificity (i.e., behaviors or actions described, and injuries that resulted).

There is reason to expect that self-reported experiences that include appraisals of the meaningfulness of stressors are likely to be better predictors of outcomes than externally based methods of classification (e.g., CPS reports) (Grant & McMahon, 2005; Ingram & Luxton, 2005), and some recent evidence supporting this expectation (Everson et al., 2008). While suggesting that self-reports are critical in assessing abuse experiences, the high rates of non-disclosure of documented physical and/or sexual abuse indicate that abuse should not be determined by youth report alone.

The present study represents a step forward by demonstrating that various dimensions of maltreatment can be represented in a meaningful and valid way by classifying youth based on their own self-reports of physical and sexual abuse. Future efforts to characterize maltreatment experience should utilize latent modeling approaches while considering other types of self-reported maltreatment (e.g., neglect) as well as other informant sources (e.g., CPS).

References


