Cluster Analysis of Internalizing Symptoms of Childhood Sexual Abuse Among Impatient Adolescents: Implications for Assessment and Treatment

Candace T. Yancey, Cindy L. Nash, Katie Gill, Corrie A. Davies, Mary Fran Flood, and David J. Hansen
University of Nebraska – Lincoln

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Introduction

The prevalence of sexual abuse has become common knowledge in our society, as have the types of outcomes that are experienced by victims of childhood sexual abuse (CSA) (Kendall-Tackett, Williams, & Finkelhor, 1993). Recent reports have estimated that 217,000 children are victims of sexual abuse every year (National Center on Child Abuse & Neglect, 1996). Many researchers feel that this is a vast underestimate, as many cases of sexual abuse are neither disclosed nor reported (Kendall-Tackett et al., 1993). Research estimates suggest that actual abuse rates may be as high as one in every four girls and one in every ten boys (Faller, 1993).

Previous research shows that there is no specific pattern of outcome as a result of childhood sexual abuse (for a review see Kendall-Tackett, et al., 1993). Most studies suggest that there are four main categories, or profiles, of symptomatology (Fergusson et al., 1996; Follette, Naugle, & Follette, 1997; Kendall-Tackett et al., 1993;). The most descriptive designations for these profiles are: internalizing, externalizing, combined (both internalizing and externalizing), and asymptomatic. While there are intervening variables that account for some of the variance (some that are related to the abuse itself, penetration, duration, etc., and some that are external to the abuse, family discord, poverty, age of child, etc.), there have been no studies that could account for what may contribute to different reactions among victims of sexual abuse (Fergusson et al., 1996; Follette et al., 1997; Kendall-Tackett et al., 1993). Some studies have suggested that the different outcomes that are experienced are attributable to gender and severity of the abuse, but this has not represented all of the differences found among victims (Fergusson et al., 1996).

The present study was designed to elucidate some of the factors that may differentiate victims of sexual abuse from youth who do not have a history of maltreatment on symptoms of internalizing behaviors. After conducting cluster analyses using the Children's Depression Inventory (CDI; Kovacs, 1992) and the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985),

follow-up analyses using Linear Discriminate Functions (LDF) were conducted to identify the differences among the clusters.

Method

Participants

Participants were 110 adolescents evaluated while residing at an inpatient hospital setting. Fifty-five of the participants had a history of sexual abuse, and 55 had no history of maltreatment. The data were collected upon the adolescents' initial intake upon admission to the psychiatric inpatient unit. Clinical psychology graduate students, supervised by a licensed clinical psychologist, conducted the clinical interviews and administered the test and self-report questionnaires to the adolescents.

Measures

Children's Depression Inventory (CDI). The CDI is a 27-item measure utilized with the children and adolescents (7-17 years of age) that assesses a range of depressive symptomatology (Kovacs, 1992). The CDI is the most widely used measure for the assessment of depressive symptoms in children and adolescents, for both clinical and research purposes (Craighead, Curry, & Ilhardi, 1995). The CDI generates subscale scores for the following six areas: Negative Mood, Anhedonia, Negative Self-Esteem, Interpersonal Problems, Ineffectiveness, and Total Depression (this score combines the scores of the five previous subscales). The CDI is designed to assess the level of agreement from the respondent with a statement regarding his or her attitudes over the past two-week period. The CDI has good internal consistency ($r = .71$ to $.89$) and acceptable temporal stability (Kovacs, 1992).

Revised Children's Manifest Anxiety Scale (RCMAS). The RCMAS is a 37-item self report questionnaire designed for children and adolescents ages 6 to 19 years (Reynolds & Richmond, 1978, 1985). This scale is designed to assess general anxiety symptoms by having respondents answer each question Yes or No as to whether it describes them. The RCMAS yields three subscale scores for Physiological Anxiety, Worry/Oversensitivity, and Social Concerns/Concentration. There is also a Total Anxiety Score and a Lie scale, which determines a child's defensiveness or inability to understand the questions. Reliability coefficients for the RCMAS are .83 (Reynolds & Richmond, 1978).

Procedures

Data for this study were obtained from archival records from adolescents evaluated at an inpatient psychiatric unit in a community hospital in the Midwest. Graduate students in a clinical psychology doctoral program conducted the psychological evaluations supervised by licensed clinical psychologists. The adolescents completed several self-report measures (e.g. CDI, RCMAS, MMPI-A, MACI) and a clinical interview. Trained research assistants read the psychological reports and coded for demographic information and information related to sexual abuse. These research assistants also scored the self-report questionnaires.

Results

Cluster analysis using the subscales of the CDI and RCMAS for youth having experienced sexual abuse resulted in four distinct clusters. The clusters were created using the Wards method for hierarchical clustering. The groups' patterns differed significantly, with one group displaying severe internalizing outcomes, especially on the Interpersonal Problems and Negative Self-Esteem subscales of the CDI (Severe; n = 4). Another group had slightly elevated scores, which were consistent across all subscales on the measures (Elevated; n = 18). The third group had scores near the mean across all subscales (Average; n = 23). The last group had scores that fell below the mean on all subscales (Asymptomatic; n = 10). See Graph 1

Cluster analysis using the subscales of the CDI and RCMAS for youth having no history of maltreatment resulted in three distinct groups, whose scores were similar to the Average, Elevated, and Asymptomatic groups found in the youth with a history of sexual abuse. These results failed to identify a Severe group among those youth with no history of maltreatment. T he groups are as follows: Elevated (n = 14), Average (n = 23), and Asymptomatic (n = 18). See Graph 2

Conclusions

These findings support previous research which demonstrated that not all youth with a history of sexual abuse show similar outcomes. Also, youth with a history of sexual abuse, with the exception of those displaying severe symptoms, did not differ from non-maltreated youth on internalizing symptoms in

this inpatient setting. This research emphasizes the importance of taking into account family functioning and maltreatment when assessing youth in inpatient settings. By taking these factors into account, more individualized treatment recommendations can be made, in the hopes of promoting better outcomes. Plans for future research with these populations will include other variables, such as severity of abuse, relationship of perpetrator to victim, gender differences, and duration of abuse, in order to better examine the differences found among the clusters.

References

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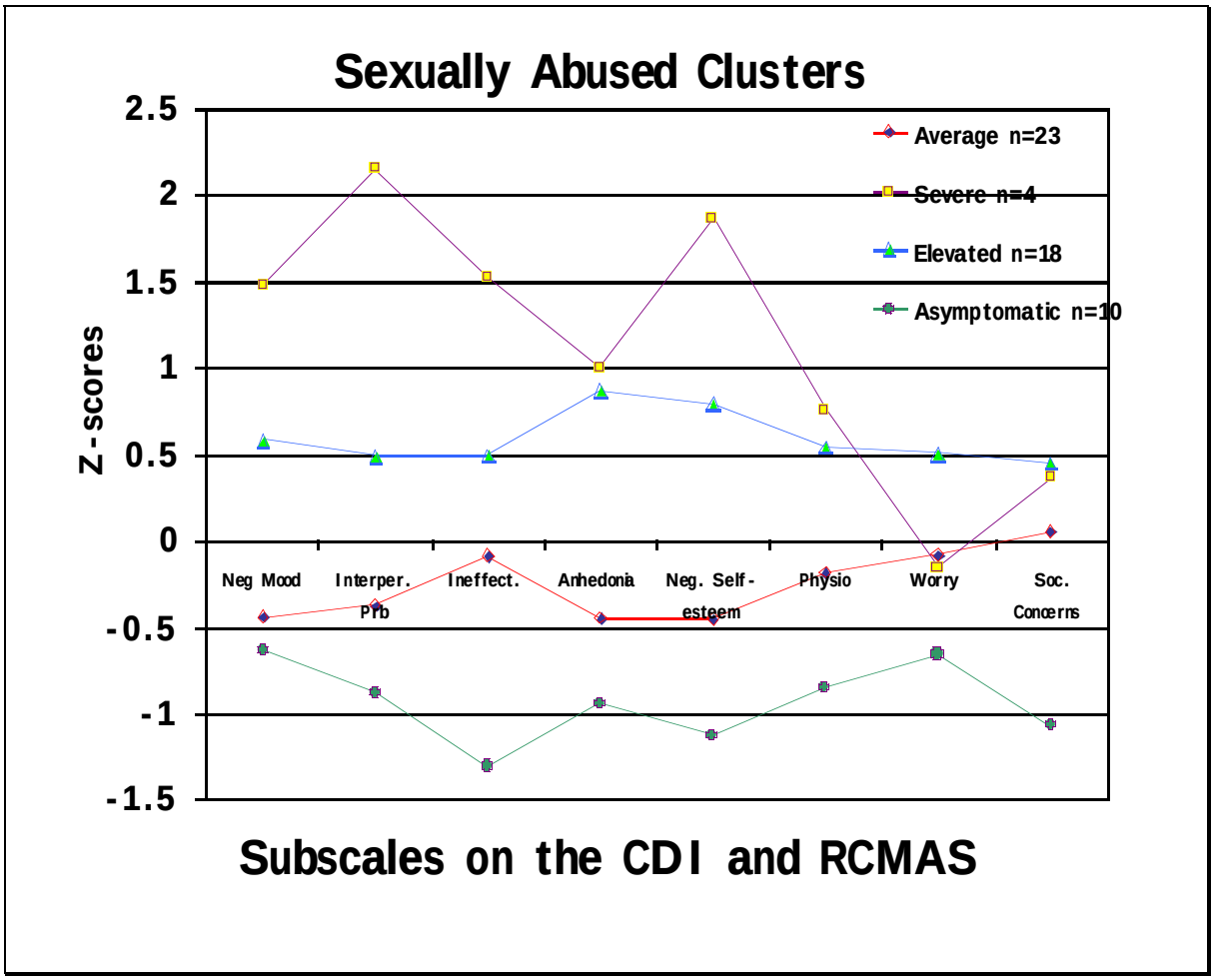
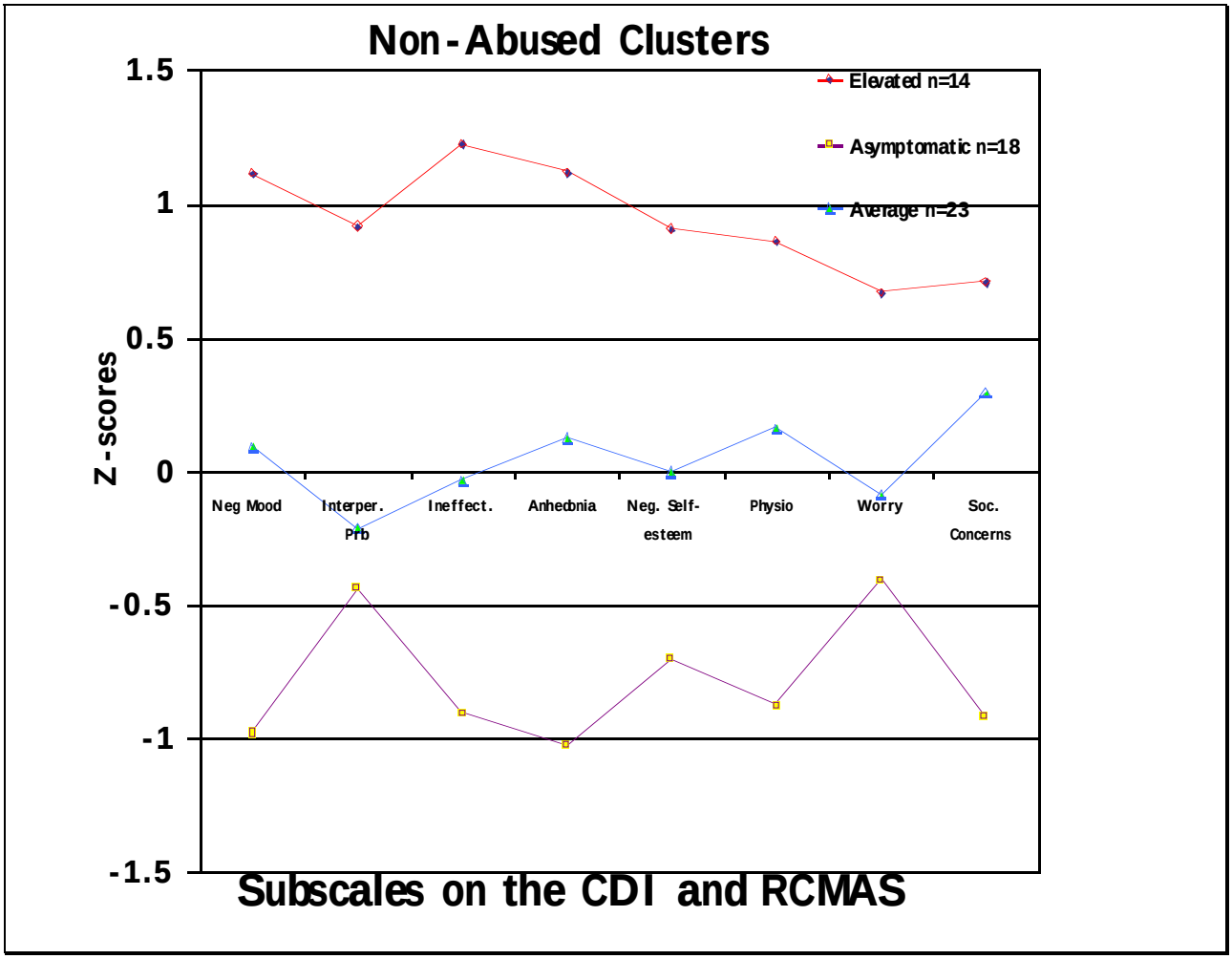
Graph 1



Sexually Abused Youth

- Age Range: 7-17
- Mean Age: 12.62
- Males: 19 (34.5%)
- Females: 36 (65.5%)
- African American:2 (3.6%)
- Caucasian: 48 (87.3%)
- Multi-Racial: 5 (9.1%)

Graph 2



Non-Maltreated Youth

- Age Range: 7-17
- Mean Age: 13.16
- Males: 26 (47.3%)
- Females: 29 (52.7%)
- African American: 1 (1.8%)
- Native American: 1 (1.8%)
- Caucasian: 51 (92.7%)
- Multi-Racial: 2 (3.6%)