Differences Between Sexually Abused and Non-Sexually Abused Adolescent Girls in Foster Care

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ABSTRACT. This descriptive study examines the differences between sexually abused and non-sexually abused adolescent females in the foster care system who were participating in an independent living program. Fifty-four percent of the 190 girls met the criteria for being categorized as sexually abused. Those who experienced sexual abuse had also experienced significantly more of other types of child maltreatment. In addition, those who had been sexually abused were much more likely to be living in a congregate living setting, such as a group home or residential
center, than those who were not sexually abused. The girls who had been sexually abused exhibited significantly more behavioral difficulties, including internalizing and externalizing problems, with 51% of them having clinically significant scores on the Youth Self-Report version of the Child Behavior Checklist. When co-occurrence of substance use and mental health problems were examined, sexually abused girls were significantly more likely than the non-sexually abused girls to meet the established criteria. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com> © 2002 by The Haworth Press, Inc. All rights reserved.]

**KEYWORDS.** Foster care, sexual abuse, child abuse, adolescents, mental health

It has been well established that the short and long term consequences of child maltreatment can have devastating and long lasting emotional and psychological effects (for a review, see Beitchman, Zucker, Hood, DaCosta, & Akman, 1991; Beitchman, Zucker, Hood, DaCosta, Akman, & Cassavia, 1992). Based on information from the National Child Abuse and Neglect Data System (NCANDS) approximately 879,000 children were abused or neglected in 2000. The vast majority of children (63%) were neglected, 19% physically abused, 10% sexually abused, and close to 8% emotionally or psychologically abused (U.S. Department of Health and Human Services, 2002). In an effort to end the maltreatment of a child and reduce the potential for ongoing harm, placement in foster care is sometimes necessary. In 2000, nearly one fifth of those identified victims of child maltreatment (21%) were removed from their homes and placed in foster care (U.S. Department of Health and Human Services, 2002). Unfortunately the report by the U.S. Department of Health and Human Services did not provide information about the type of maltreatment that led to those children being placed in foster care.

One study, however, provided information about the type of maltreatment leading to children being placed in foster care. Garland, Landsverk, Hough and Ellis-MacLeod (1996) found that the majority (54%) of children were placed due to neglect or caretaker absence. About one fifth of the children were placed in foster care as a result of being physically abused, 11% for being sexually abused and 8% for a
combination of sexual, physical and emotional abuse. Six percent of the children had been removed for protective reasons, meaning there was not necessarily evidence that they had been abused, but reason to think they were at risk (e.g., being the sibling of an abused child).

It has been estimated that there are more than 500,000 children in foster care in this country as a result of some form of child maltreatment (Maza, 1996). Unfortunately, there is growing evidence that many foster care youth remain in care for an extended period of time who, upon leaving to live on their own, experience a variety of functional difficulties that seriously compromise their future (e.g., Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 1998). Among the difficulties that are most often cited in the literature on foster care youth are problems related to mental health, substance use and education.

**NATIONAL DATA ON MENTAL HEALTH AND SUBSTANCE USE**

The 2001 National Household Survey on Drug Abuse (NHSDA), which is conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), provides the most current information available on the illicit use of alcohol and drugs by noninstitutionalized civilians aged 12 and older in the United States (SAMHSA, 2002). In addition to the information it provides on substance and alcohol use, it includes information on mental health treatment. Among youth between the ages of 12 and 17, 4.3 million (18.4%) received mental health treatment within the previous 12 months. Nearly 8% of those youth were hospitalized for their treatment. The primary reasons cited for treatment were for feeling depressed (45%), acting out (22%) and thinking about suicide (17%). Girls were somewhat more likely than boys to receive mental health treatment (20% vs. 17%), and their rates of treatment increased with age, while that of boys declined (age 16-17; 22% vs. 14%). In addition, those youth that reported using illicit drugs in the previous 12 months had higher rates of mental health treatment than those who did not use drugs (26% vs. 16%). Nearly 11% of youths between the ages of 12 and 17 reported being users of illicit drugs, with boys revealing slightly higher rates of use than girls (11% vs. 10%). Seventeen percent of those youth had consumed alcohol in the previous month, with 10% being identified as binge drinkers and 2.5% as heavy drinkers. Rates of alcohol use were virtually identical between males and females (17.2% vs. 17.3%), but males had higher rates of binging and drinking heavily (SAMHSA).
MENTAL HEALTH AMONG FOSTER CARE YOUTH

Youth in foster care appear to have a much greater need for mental health services than the youth surveyed in the SAMHSA (2002) study. Although definitions of mental health vary, a number of studies provide evidence of the prevalence of mental health problems among foster care youth. Hulsey and White (1989), using the Achenbach Child Behavior Checklist, determined that children in out-of-home-care had significantly more problematic behavior than a control group. In the Iglehart (1994) study, 22% of the foster care youth were found to have mental health problems, while Cook and colleagues (1991) concluded that 38% of their sample was mentally disturbed. In a study conducted by Trupin and associates (1993), 72% of the youth in foster care exhibited emotional disturbances sufficiently severe as to be indistinguishable from a criterion group of youth in intensive mental health treatment programs. Mech, Ludy-Dobson, and Hulseman (1994) reported that over half of the foster care youth in their study had social-emotional adjustment problems. One study found that 60 to 80% of their sample had psychiatric problems (Thompson & Fuhr, 1992). In 1995, Pilowski reviewed studies that had been published between 1974 through 1994 and concluded that among foster care youth, externalizing disorders were more prevalent than internalizing disorders.

Mental health problems have been shown to be significant barriers in the development of independent living skills needed to successfully transition out of care (Iglehart, 1994). Youth, who have had higher rates of placement disruptions, in conjunction with emotional and behavioral problems, appear to be the least prepared for independent living (Cooper, Peterson, & Meier, 1987, as cited in Iglehart, 1994; Iglehart, 1994; Proch & Taber, 1985, as cited in Iglehart). Length of time in care as well as placement location, both of which can affect one’s mental health, also have been found to have an effect on a youth’s ability to be ready for and experience positive outcomes upon exiting care (Iglehart, 1994; Courtney & Barth, 1996).

SUBSTANCE USE AMONG FOSTER CARE YOUTH

Although data on the prevalence of substance abuse among foster care youth are limited, it has been identified as a factor that can substantially negatively impact successful self-sufficiency upon exiting from the foster care system (Barth, 1990; Cook, McLean, & Ansell, 1991). In
an early study, Jones and Moses (1984) found that 20% of the foster care youth in their study had alcohol problems. Barth (1990) found that 19% of his sample reported drinking at least once per week and 56% had used illegal drugs while in care; 20% had used in the past month. Of those who had used drugs, half of them had done so at least once a week during their last month in care. Fifty-six percent of the sample reported using drugs after becoming too old to remain in care (Barth, 1990). The study conducted by Cook and colleagues (1991) found that 17% of the youth exiting care were identified as having drug abuse problems and 12% had alcohol problems. Overall, in comparison to the youths in the 2001 National Household Survey on Drug Abuse, these studies seem to indicate that youth in foster care are using alcohol and drugs with more frequency than the average adolescent in the country.

EDUCATION

In an effort to provide the best estimate of high school completion rates among foster care youth, Mech (1994) reanalyzed data from four previous studies (Barth, 1990; Cook, McLean & Ansell, 1991; Festinger, 1983; Jones & Moses, 1984) and found that 58% of foster care youth completed high school. In a recent study by Blome (1997), which was conducted with a nationally representative sample, a number of important distinctions regarding education were found between foster care and non-foster care youth. The foster care youth studied less, were less likely to take college preparatory classes and dropped out with greater frequency (37% versus 16%). They were also more likely to have been disciplined in school and to have changed schools with more frequency. Despite these differences, however, foster care and non-foster care youth did not differ significantly in terms of educational aspirations.

THE CURRENT STUDY

Reviewing the literature provides a compelling picture of the many difficulties that foster care youth experience. This literature, however, does not differentiate the ways in which these problems may be explained by differing forms of child maltreatment. In fact, the broader literature on child maltreatment fails to address such differences, preferring to compare maltreated and non-maltreated populations, which could result in a loss of critical information needed to strengthen intervention
strategies (Garland, Landsverk, Hough, & Macleod, 1996). This study will examine such differences by comparing sexually abused and non-sexually abused girls in foster care through a sample of 190 females involved in the foster care system in one Midwest suburban county. While a number of factors will be examined, education, mental health, and substance abuse will be emphasized given their demonstrated importance on future outcomes for foster care youth.

**METHOD**

**Participants**

Participants were youths age 15 through 19 in foster care or out-of-home placements through the Division of Family Services (DFS) of St. Louis County, Missouri. Referrals to the study were made by social workers from DFS, group home workers, foster or biological parents, and the youths themselves.

The original study sample consisted of 351 foster care youth aged 15 to 19 years ($M = 16.33$, $SD = .85$), more than half of whom (54%; $n = 190$) were female. It is the female portion of the sample that is the focus of the current study. The average age of the girls in the sample was 16 ($SD = .86$) and 54% ($n = 102$) of them indicated having experienced some form of sexual abuse in their lifetime. Fifty-eight percent of the girls identified their racial background as Black, 33% as White, and 9% as Other. Ninety-two of the girls reported living with a biological parent at some point in their lives. However, at the time of the pretest interviews, 51% of the girls lived in a congregate living setting (group home or residential center), while the remaining 49% lived in a family or foster care home situation. Seventeen percent of the girls reported that they had at some point lived on the street. At the time they were interviewed, twelve of the girls had children and two were pregnant.

**Procedures**

Data for this study were collected during a baseline assessment of a larger study to evaluate an 8-month HIV prevention and life skills program. The purpose of the program was to assist youths in attaining life skills to prepare them for discharge from state custody. Trained graduate students pursuing a master’s degree in social work conducted structured interviews, which lasted approximately one hour. The structured
interviews consisted of several standardized instruments and questionnaires designed to capture data on the variables of interest described in detail in the measurement section.

Masters-level students in social work were trained to conduct the structured interviews. The training was delivered over the course of 20 hours. Interviewers were given an overview of the study and trained in the informed consent and confidentiality procedures. Each standardized instrument and questionnaire included in the interview was reviewed in detail. Students were taught general interviewing skills, and also underwent sensitivity training. Full-length interview role-plays were required of all students before they were able to begin conducting the structured interviews with study subjects.

Prospective participants for the present study were excluded if they displayed any of the following characteristics: (1) severe learning problems; (2) severe behavioral problems such as violent behavior not under control; or (3) severe emotional problems whose symptoms would prohibit their participation in a group situation. Eligibility was assessed by social workers through a brief screening interview. Before each youth was screened, consent was obtained from their legal guardian.

The screening criteria were established to exclude foster care youth with problems so severe that they would be incapable of meaningfully participating in the project (e.g., severe learning problems to the extent of being unable to read or write). The intention was to include as many youth as possible, recognizing that it was highly likely that the youth would have many problems. In actuality, no youth were excluded based on severe learning problems or emotional problems, despite the fact that some of the youth had to be hospitalized in a mental health facility while participating in the project. Only four youth were excluded from the project for severe behavioral problems because they were seen as being incapable of participating without seriously disrupting the group process.

Measures

Demographics and Background Living Situations. Demographic, background living situation, and other descriptive characteristics of the youths were measured via a structured questionnaire that was adapted from previous research on HIV prevention with youths in group homes (Slonim-Nevo, Auslander, & Ozawa, 1995; Slonim-Nevo, Auslander, Ozawa, & Jung, 1996). Demographic variables assessed included: age, race, gender, primary caretaker, current legal guardian, number of foster or group home placements, number of years living in out-of-home
care, type of current living situation (i.e., group home or foster home), and educational levels of important adults in the youths’ lives.

**Education.** Descriptive educational information was obtained through items in a structured questionnaire developed by Slonim-Nevo, Auslander, and Ozawa (1995) for an earlier HIV prevention study for youths in residential treatment centers. The items provided data such as year in school, youths’ plans in terms of educational goals (i.e., vocational or technical school, job-training program, junior college, or part or full-time four-year college), level of confidence in their ability to actually achieve their educational goal, number of different schools attended due to placement changes, number of suspensions/expulsions and reasons for same, whether the youth was held back a grade, frequency of skipping school, and fighting with teachers (coded as either yes or no). In addition, frequency of fighting was also obtained (Slonim-Nevo, Auslander, & Ozawa, 1995). For the variable “school instability,” two items were utilized: number of school districts and number of mid-year school changes.

**Sexual Abuse and Childhood Trauma Questionnaire.** Two measures were utilized to assess childhood trauma. Child sexual abuse was assessed with three questions about unwanted sexual experiences that were adapted from those used by Russell (1986) and several subsequent researchers. The questions were modified to be more age-appropriate and potentially less confusing to youth. Consequently, words such as intercourse, genitals and rectal were replaced with words such as sex, private parts and anal sex. In Russell’s original questions, she also put age parameters around the questions (e.g., before turning 14), which did not seem relevant for the foster care youth. Consequently, the adapted questions that were used with the foster care youth were as follows: (1) “Did anyone get you to touch their private parts against your wishes?” (2) “Did anyone touch your private parts against your wishes?” and (3) “Has anyone ever had vaginal sex, anal sex, or oral sex with you against your wishes?” If a youth answered in the affirmative to any one of the three questions, she was categorized as having been sexually abused.

The Childhood Trauma Questionnaire (Bernstein & Fink, 1998) was used to assess other kinds of childhood maltreatment. Four subscales measured the following constructs, utilizing five items per scale: (1) Emotional Abuse \( r = 0.85 \), (2) Physical Abuse \( r = 0.86 \), (3) Emotional Neglect \( r = 0.87 \), and (4) Physical Neglect \( r = 0.82 \). Response choices are on a five-point Likert-type scale: never true, rarely true, sometimes true, often true, and very often true. Higher scores reflect a greater severity of abuse.
Mental Health and Behavioral Problems. The Youth Self-Report (YSR) version of the Child Behavior Checklist (CBCL) (Achenbach, 1991) was used to assess the behavioral problems and competencies of the participants. The YSR includes the following problem scales: (1) Withdrawn, (2) Somatic Complaints, (3) Anxious/Depressed, (4) Unpopular/Social Problems, (5) Thought Disorder, (6) Attention Problems, (7) Delinquent Behavior, (8) Aggressive Behavior, (9) Self Destructive Behavior, (10) Internalizing, and (11) Externalizing (Achenbach, 1991). For this study, 94 of the original 103 items were utilized; items measuring socially desirable characteristics and social competence were removed in order to shorten the instrument. Previous research showed that criterion validity has been established by the ability of the YSR to discriminate between referred and non-referred children (partialling for demographic effects) on the basis of quantitative scales (Achenbach, 1991). For the present study, internal consistency reliability (Cronbach’s alphas) was as follows: Internalizing subscale ($r = 0.90$), Externalizing subscale ($r = 0.85$), and Total Behavior Problems ($r = 0.94$).

Alcohol and Other Drug Use. Portions of the alcohol and drug use sections of the Diagnostic Interview Schedule for Children-Revised Version (DISC-R) initially developed by Costello and colleagues was used to measure substance use, abuse and dependence (Costello, Edelbrock, Dulcan, Kalas, & Klaric, 1984). The scale measuring alcohol dependence and abuse consists of 21 items and the scale measuring substance use and abuse consists of 18 items. The DISC-R assesses a wide range of symptom information in language suitable for use with children ages 6-18. For this study, six items were used to assess frequency and problems related to alcohol use (e.g., “In the past six months, have you drunk any beer, wine, wine coolers, hard liquor, or any other alcoholic drinks?” “On how many occasions have you drunk...in the past six months?”, etc.). Other drug use, such as marijuana use, was measured by inquiring about use in the past six months. Frequency of drug use during the past six months was assessed by providing six possible responses: 40+, 20 to 39, 10 to 19, 6 to 9, 3 to 5, and 1 to 2 times. Youths were also asked if they had been in trouble while using drugs, with responses being coded as yes = 1 or no = 0. Inter-rater reliability and validity have been reported to be high in previous research (Shaffer et al., 1996; Shaffer et al., 1993).

Future Orientation. Future orientation was measured by combining six items derived from the Life Orientation Test (Scheier, Carver, & Bridges, 1994) and six items derived from the Future Time Perspective Inventory (Gjesme, 1979). Items measured youths’ expectations for
things to go their way, concern about the present, and feelings of uncertainty about the future. Sample items from the Life Orientation Test included, “I usually expect the best” and “If something will go wrong for me it will.” Sample items from the Future Time Perspective included, “The future seems very unclear and uncertain to me” and “I am most concerned about how I feel now in the present.” For each item, youths responded using a 4-point Likert-type scale from “Strongly Agree” to “Strongly Disagree.” The total scale reflects the summed scores for the 12 items. The scale had a normal distribution with an internal consistency of \( r = 0.70. \) Three subscales were also developed: a 3-item “Optimistic” subscale \( (r = 0.65), \) a 4-item “In the present” subscale \( (r = 0.53), \) and a “Negative View” 3-item subscale \( (r = 0.41). \)

**RESULTS**

**Demographic and Background Characteristics**

Chi-squares and t-tests were run to determine differences in demographic and background characteristics between the sexually abused and non-sexually abused adolescent girls. With regard to demographics, there were more similarities than differences between the groups. There were no significant differences between the groups in terms of age, ethnicity, education level, or religious attendance.

**Educational Plans**

Approximately 76% of the sample of adolescent girls was in school at the time that their interviews were conducted. On average, they were in the tenth grade \( (SD = .96) \). They indicated that they had changed schools or school districts 1.5 times since the seventh grade. There was a significant difference between the sexually abused and non-sexually abused girls in school \( (\chi^2(1) = 4.66, p = .031) \), such that 84% of the non-sexually abused girls reported being in school, while only 71% of the sexually abused girls did so.

Most of those in high school were planning to finish (77%), while nearly everyone else (22%) was planning to get a GED. Here again, a significant difference was found between the two groups as 89% of the non-sexually abused girls, versus 66% of the sexually abused girls, were planning to finish high school \( (\chi^2(2) = 13.1, p = .001) \). In addition,
of those planning to get a GED ($n = 38$), the largest percentage (76%) were those who had been sexually abused ($\chi^2(2) = 13.1, p = .001$).

Overall, the girls felt relatively confident in their plans, with 85% of the non-sexually abused, and 73% of the sexually abused, indicating they were very sure of their plans. Furthermore, 96% of the sample had educational plans for after high school without any meaningful differences emerging between the groups. Nearly 10% of the sample intended to obtain vocational or job training, 10% to join the military, 27% to attend a two-year college, 28% to attend a four-year college, and 22% to go beyond college. The confidence levels for these educational plans were not as strong, however, as those expressed with regard to completing high school. Nonetheless, 73% of the non-sexually abused girls and 51% of the sexually abused girls felt very sure of their educational plans, with only 2.8% of the girls (all of whom were sexually abused; $n = 5$) indicating that they were not very sure of their plans ($\chi^2(2) = 11.04, p = .004$).

### Future Orientation

The groups appeared to be nearly identical in terms of future orientation. Both the sexually abused and the non-sexually abused girls had a mean of 2.2 on the full future orientation scale, 2.7 on the “In the Present” subscale, and 2.5 on the “Negative View” subscale. On the “Optimism” subscale, a non-significant minor difference between groups was found with the sexually abused girls having a slightly higher mean score ($M = 1.9; SD = .55$) than the non-sexually abused girls ($M = 1.8; SD = .54$). These findings indicate that there were no meaningful differences in future orientation between sexually abused and non-sexually abused girls in this sample of adolescents in foster care.

### Current Living Situation

Girls who had been sexually abused were much more likely to be living in a congregate living setting such as a group home or residential center (64% vs. 35%), whereas the non-sexually abused girls were more likely to be in a family or foster care home situation ($\chi^2(2) = 17.1, p < .001$). Additionally, while sexually abused girls reported having been in an average of four different group homes, the non-sexually abused girls had been in an average of two ($t(181) = -4.64, p < .001$). In terms of foster families, the sexually abused girls were slightly higher in their av-
verage number of placements (2.12 versus 1.4) than the non-sexually abused girls ($t (182) = -1.9, p = .059$), although the difference was not statistically significant. The non-sexually abused girls reported having been in their current placement for an average of 18.6 months, compared to the sexually abused girls who had been at their residence 13.7 months, which appears to indicate more stability in length of time in placement. However, this difference was not found to be significant ($t (187) = 1.37, p = .18$).

**Childhood Abuse History**

As indicated previously, 54% ($n = 102$) of the girls met the criteria for being categorized as sexually abused, a percentage comparable to that found among children in out-of-home care reported by Hargrave (1991). Ninety-one percent of those who had been sexually abused ($n = 92$) reported that they had experienced unwanted touching of their genitals, 71% ($n = 72$) had been forced to have sex, and 70% ($n = 71$) had been forced to touch someone else’s genitals.

On each of the Childhood Trauma questionnaire subscales, the sexually abused girls had significantly higher scores, indicating more abuse experience than the non-sexually abused girls. The differences were significant for each of the subscales. These differences are reported in Table 1.

**Mental Health and Behavioral Problems**

A striking difference found was that 37% of the girls who had been sexually abused had been in a mental health facility in the previous year as compared to only 18% of the non-sexually abused girls ($\chi^2(1) = 5.18, p = .02$). Similar rates were found when looking at whether they had ever been in a mental health facility with 41% of the sexually abused and 21% of the non-sexually abused answering in the affirmative ($\chi^2(1) = 8.9, p = .003$).

In addition, a significantly higher percentage (74%) of the sexually abused girls were taking some form of prescription medication as compared to the non-sexually abused girls (47%) ($\chi^2(1) = 13.8, p < .001$). Given the large number of girls who had previously been in a mental health facility, it seemed relevant to determine the percentage of the girls taking medication for mental health conditions. Forty-five percent of the sexually abused girls and 24% of the non-sexually abused girls were taking some type of psychotropic medication, a difference that approached, but did not reach, significance ($\chi^2(1) = 8.7, p = .003$).
As indicated previously, the Youth Self-Report (Achenbach, 1991) was used to assess the behavioral problems and competencies of youths in the study. Significant between group differences were found for every subscale. The sexually abused girls had consistently higher scores on every indicator, reflecting more behavioral problems, both in terms of internalizing and externalizing behaviors, than the non-sexually abused girls. These differences are shown in Table 2.

Combining the scores from each of the subscales (with the exception of the internalizing and externalizing subscales), a total Youth Self-Report score was derived. Not surprisingly, the between group comparison revealed that the sexually abused girls were experiencing significantly more behavioral problems overall than the non-sexually abused girls (t (180) = 4.28, p < .001) (see Table 2). Furthermore, on the Youth Self-Report the borderline cut-point (T ≥ 60) is used to differentiate clinically significant from nonclinically significant scores. Fifty-one percent of the sexually abused girls had clinically significant

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>Mean Score (SD)</th>
<th>n</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Neglect</td>
<td>Sexually Abused</td>
<td>11.3 (5.5)</td>
<td>101</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>9.1 (4.6)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>Sexually Abused</td>
<td>14.0 (6.5)</td>
<td>100</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>10.4 (5.1)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>Sexually Abused</td>
<td>14.8 (5.6)</td>
<td>102</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>11.9 (5.4)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>Sexually Abused</td>
<td>15.6 (5.9)</td>
<td>102</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>10.8 (5.3)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Non-Sexual Trauma Total Score</td>
<td>Sexually Abused</td>
<td>55.5 (20.4)</td>
<td>100</td>
<td>&lt; .001</td>
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<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>42.2 (16.4)</td>
<td>87</td>
<td></td>
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</tbody>
</table>

Notes: Childhood Trauma Questionnaire Subscales. Ranges for each subscale are as follows: Physical Neglect, 5-25; Physical Abuse, 5-25; Emotional Neglect, 5-25; Emotional Abuse, 5-25. Non-Sexual Trauma Total Score, 20-100.
scores, compared to 27% of the non-sexually abused girls, a difference that was statistically significant ($\chi^2(2) = 10.9$, $p = .004$).

It should be noted that the bivariate analyses of these behavioral problems were conducted using 12 separate t-tests, which creates a risk for committing a Type 1 error given an alpha level of .05. A more conservative approach to interpreting the data involves using Bonferroni’s correction to set the alpha level at .0042. Even with such a conservative

### TABLE 2. Mean Scores and Standard Deviations on Behavioral Problems by Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Mean (SD)</th>
<th>n</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawn</td>
<td>Sexually Abused</td>
<td>5.6 (2.8)</td>
<td>102</td>
<td>.001</td>
</tr>
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<td></td>
<td>Non-Sexually Abused</td>
<td>4.2 (2.8)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>Sexually Abused</td>
<td>5.0 (3.4)</td>
<td>102</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>3.6 (3.0)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Anxious Depressed</td>
<td>Sexually Abused</td>
<td>9.8 (6.3)</td>
<td>101</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>5.8 (4.6)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Social Problems</td>
<td>Sexually Abused</td>
<td>3.7 (2.7)</td>
<td>102</td>
<td>.001</td>
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<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>2.5 (2.3)</td>
<td>87</td>
<td></td>
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<tr>
<td>Thought Problems</td>
<td>Sexually Abused</td>
<td>4.4 (3.0)</td>
<td>102</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>3.4 (2.4)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Attention Problems</td>
<td>Sexually Abused</td>
<td>7.0 (3.5)</td>
<td>101</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>5.2 (3.5)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Delinquent Behavior</td>
<td>Sexually Abused</td>
<td>5.3 (3.1)</td>
<td>102</td>
<td>.018</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>4.3 (2.7)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Aggressive Behavior</td>
<td>Sexually Abused</td>
<td>10.8 (6.0)</td>
<td>101</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>8.4 (5.6)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Self Destructive</td>
<td>Sexually Abused</td>
<td>4.0 (3.6)</td>
<td>101</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>2.0 (2.4)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Internalizing$^a$</td>
<td>Sexually Abused</td>
<td>19.4 (10.0)</td>
<td>101</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>13.1 (8.5)</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>Externalizing$^b$</td>
<td>Sexually Abused</td>
<td>16.2 (8.1)</td>
<td>101</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>12.7 (7.4)</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Sexually Abused</td>
<td>59.4 (25.2)</td>
<td>99</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Non-Sexually Abused</td>
<td>44.2 (21.9)</td>
<td>83</td>
<td></td>
</tr>
</tbody>
</table>

$^a$ The Internalizing subscale is a summation of the Withdrawn, Anxious/Depressed, and Somatic Complaints subscales.

$^b$ The Externalizing subscale is a summation of the Delinquent and Aggressive subscales.
approach, all but three of the behavioral problems (thought, delinquent and aggressive) remained significantly different between the groups, consistently revealing more behavioral problems for the sexually abused girls than the non-sexually abused girls.

**Delinquent Behavior**

Runaway behavior was relatively frequent for both groups without a significant difference between the two (t (186) = -1.84, p = .07), despite the fact that the sexually abused girls ran away nearly twice as often (M = 4.95; SD = 11.9) as the non-sexually abused girls (M = 2.4; SD = 4.9). In terms of having ever been in detention or jail, 41% of the sexually abused girls and 24% of the non-sexually abused girls had the experience at some point in their lives (33% of sample), a difference that was significant (χ²(1) = 6.1, p = .013). In fact, the sexually abused girls had been in detention or jail an average of 3.3 times (SD = 3.8), which was only slightly more often as the non-sexually abused girls (M = 2.4; SD = 1.3), a difference that was not significant (t (61) = -1.8, p = .08).

**Sexual Behavior**

A significantly higher percentage of sexually abused girls (82%) had sexual intercourse than non-sexually abused girls (70%) (χ²(1) = 4.12, p = .042). In addition, the sexually abused girls had had significantly more sexual partners (M = 4.8) than the non-sexually abused girls (M = 2.9) (t (138) = -2.13, p = .035). However, in terms of age at the time of first having non-coercive sexual intercourse, although the sexually abused girls were slightly younger (M = 13.9) than the non-sexually abused girls (M = 14.5), the difference found was not significant (t (141) = 1.9, p = .056).

Thirty-one percent of the sexually abused girls versus 12.6% of the non-sexually abused girls indicated that they had oral sex at some point, a difference that was significant (χ²(1) = 9.0, p = .003). When asked about having had sex under the influence of drugs and/or alcohol, 57% of the sexually abused girls, versus 28% of the non-sexually abused girls, answered in the affirmative. This difference was significant (χ²(1) = 11.7, p = .001). A small number of girls (n = 11) acknowledged having traded sex for food, drugs or money, and nine of those girls were sexual abuse survivors (χ²(1) = 2.7, p = .10). A similarly small number of girls acknowledged having had anal sex (n = 14) and
again, the vast majority (86%) were sexual abuse survivors ($\chi^2(1) = 6.2, p = .013$).

Alcohol and Substance Use

In general, there did not appear to be much difference between sexually and non-sexually abused girls in terms of alcohol and drug use. In assessing use of alcohol or marijuana over the preceding six months, no significant differences were found. Over half of the girls indicated that they had not used either alcohol or drugs in the preceding six months. Of the girls who did report using alcohol or drugs, 13% used alcohol only, 10% used marijuana only and 27% used both. Within this later category, 33% of the sexually abused girls, versus 18% of the non-sexually abused girls, indicated using both in the previous 6 months. As stated above, this difference was not statistically significant. It should be noted that numerous questions were asked about other types of drugs, but those items were so seldom endorsed as to make analysis of them impossible.

Co-Occurrence of Substance Use and Mental Health Problems

A chi-square test was run to look at between group differences on four categories that were developed to examine issues of co-occurrence: substance use problems only, mental health problems only, both substance use and mental health problems, and neither substance use nor mental health problems. The results indicated that the between group differences were significant ($\chi^2(3) = 12.29, p = .006$). Perhaps most striking was the fact that 46% of the non-sexually abused girls fell into the category of having neither a history of substance use nor mental health problems, compared to 25% of the sexually abused girls. In contrast, 29% of the sexually abused girls versus 16% of the non-sexually abused girls had both substance use and mental health problems. The girls that had been sexually abused were almost twice as likely as those who had not been sexually abused to have only mental health problems (21% versus 11%). As indicated in the previous section, no meaningful differences were noted in terms of substance use. However, a slightly higher percentage of the non-sexually abused girls (28%) than the sexually abused girls (24%) fell in the substance use only category.
**Multivariate Analysis**

Based on the bivariate relationships found in the initial analyses, multivariate analyses were run in the form of direct logistic regression to determine which variables could predict group membership (sexually abused or non-sexually abused). Logistic regression is recommended when one is interested in predicting group membership from a mix of discrete, continuous, or dichotomous variables (Tabachnic & Fidell, 2001), which is the case in this study. Using the SPSS logistic procedure, the analysis was performed with sexual abuse status as the outcome and three predictor variables: Total Non-Sexual Childhood Trauma score, Total Youth Self Report score on behavior problems, and current living situation.

The Total Non-Sexual Childhood Trauma score was based on a summation of scores of the four subscales (emotional abuse, physical abuse, emotional neglect, and physical neglect) used from the Childhood Trauma Questionnaire. Likewise, the Total Youth Self Report score was based on combining the scores of several problem subscales (withdrawn, somatic complaints, anxious/depressed, unpopular/social problems, thought disorder, attention problems, delinquent behavior, aggressive behavior, self-destructive behavior). Current living situation was a dichotomous variable categorized as either congregate living (group home or residential facility) or a family/foster family home situation. Nine cases with missing values were deleted, leaving 181 female adolescents available for the analysis: 98 sexually abused adolescents and 83 non-sexually abused adolescents.

The full model was tested with all three predictor variables against the constant-only model and was found to be statistically significant ($\chi^2 = 30.73, p < .0001$) indicating that the predictors were able to distinguish between sexually abused and non-sexually abused adolescent females in foster care. Given that the dependent variable is dichotomous, there is no traditional $R^2$ indicating the amount of variance explained; however, a pseudo-measure of explained variance can be computed for the model using the log-likelihood estimates (Nagelkerke, 1991). Therefore, an estimate of the strength of the model was calculated using Nagelkerke-$R^2' = .21$.

Table 3 provides a summary of the most relevant statistics for the odds ratios for each of the three predictors. The Wald chi-square statistic was used to test the statistical significance of the odds ratio, and both the Total Non-Sexual Childhood Trauma score ($\chi^2 = 9.6, p = .002$) and
Youth Self Report on behavior problems ($\chi^2 = 7.4, p = .006$) effectively predicted sexual abuse status. Current living situation did not reach the established significance level needed to be effective as a predictor ($\chi^2 = 1.6, p = .20$). The Wald test also provides a way to evaluate the contribution of each of the predictor variables to the model. Total Non-Sexual Childhood Trauma appeared to make the biggest contribution as a predictor in the model ($\chi^2 = 9.6$), followed by Youth Self-Report of problem behaviors ($\chi^2 = 7.4$) and current living situation ($\chi^2 = 1.6$).

For every one-unit increase in score on the Total Non-Sexual Childhood Trauma measure, there is a 3% increase in the predicted odds of being in the sexually abused group. For every one-unit increase in score on the total Youth Self-Report scale, there is a 2% increase in the predicted odds of being in the sexually abused group.

**DISCUSSION**

The findings from this study reveal that there are both similarities as well as important differences between sexually abused and non-sexually abused adolescent girls in foster care. For the most part, the girls did not differ significantly in terms of their delinquent behavior, alcohol and substance use, educational plans or future orientation. Perhaps surprisingly, a substantial percentage of both groups of girls were refraining from using alcohol or substances, were in school and planning to finish, and were relatively confident about their post-high school educational plans. The groups were virtually identical in terms of future orientation, with both expressing moderately positive views about their futures.

One of the patterns that emerged from the data is that girls who had experienced some form of sexual abuse had also experienced signifi-
cantly more emotional and physical neglect and abuse, compared to the girls who had not reported any sexual abuse experiences. The presence of multiple forms of childhood trauma makes it difficult to discern the unique impact that the sexual trauma contributes to their functional difficulties. However, a recent study by Bagley and Mallick (2000) indicated that after controlling for the effects of emotional and physical abuse, sexual abuse continued to be significantly associated with emotional problems.

Nevertheless, it should be noted that some of the effects typically attributed to sexual abuse might be more associated with a pathogenic home environment (Harter, Alexander, & Neimeyer, 1988; Nash, Hulsey, Sexton, Harralson, & Lambert, 1993; Wyatt & Newcomb, 1990). Given that this study involves a sample of adolescent girls in foster care it seems reasonable to assume that each of the youths has come from a pathogenic home environment. Furthermore, one would expect that each of the youths would be suffering from some degree of psychological difficulty as a result of the trauma and family disruptions experienced. So, to what extent does the experience of sexual abuse seem to differentiate these girls in foster care?

When type of maltreatment was taken into consideration, the sexually abused girls showed a consistent pattern of marked increase in clinically significant symptomology compared to the youth that had not experienced sexual abuse. The most significant differences were seen around mental health and behavioral problems. The sexually abused girls had higher scores (more behavioral problems) on every subscale of the Total Youth Self-Report. Even with a conservative interpretation of the data, the sexually abused girls were more likely than the non-sexually abused girls to be withdrawn, have somatic complaints, be anxious and depressed, have social and attention problems, engage in self-destructive behaviors, and to externalize as well as internalize their distress.

The sexually abused girls were also more likely to have been hospitalized and to be taking psychotropic medications. Although the data do not provide any information about the reasons for hospitalization, suicide ideation is a possible explanation; it is a symptom often exhibited by survivors of childhood sexual abuse (Briere & Runtz, 1986; Bryer, Nelson, Miller, & Krol, 1987). Alternatively, it is possible that the differences in hospitalization and medication were enhanced by a propensity within the foster care system to emphasize mental health treatment for children who have been identified as sexual abuse survivors (Garland, Landsverk, Hough, & Ellis-MacLeod, 1996).
Although a higher percentage of sexually abused girls than non-sexually abused girls were found to be experiencing serious mental health and behavioral problems, it is clear that across types of maltreatment a large percentage of the girls in this sample are in psychological distress. One would hope that needed mental health services would be made available in foster care. Garland and her colleagues (1996) found that 56% of the youth in foster care in their sample had, within the first six months of being in care, received mental health services. Interestingly, service utilization was driven by type of maltreatment experienced rather than by actual psychological need. Those youth identified as having been sexually abused were found to be 4.5 times more likely to receive services than the non-sexually abused youth, regardless of level of need.

Thus, the type of maltreatment experienced may determine the mental health treatment made available rather than the degree of symptomology. This means that many of the non-sexually abused girls in the current study who are in need of mental health services may be at risk for not receiving them. And, while the sexually abused girls are more likely to receive services if their abuse is known, given their clinically significant level of problems identified, one could argue that what they have received has not been sufficient to meet their needs.

Within the HIV prevention study, from which the current study was drawn, the type of maltreatment experienced, leading to placement in foster care, was not recorded. As a result, the system-identified type of maltreatment experienced by the youth was not available for analysis in the current study. Consequently, it is quite possible that a number of the sexually abused girls were placed because of physical abuse or neglect, and are not known within the system as having been sexually abused. It is also possible that subsequent to placement some form of sexual abuse occurred that was never disclosed. As indicated above, this could seriously affect their access to mental health services.

Given the documented correlation between childhood sexual abuse and substance abuse, it was remarkable to see that there were no significant differences on this issue between the groups. In fact, given the prevalence of substance use among adolescents in the general population, it was surprising to see that over 50% of the girls in this sample indicated they had not used alcohol or marijuana in the previous six months. While it is possible that the respondents underreported their alcohol and drug use, research suggests that self-reports are relatively reliable indicators of use (Maisto, Connors, & Allen, 1995). Perhaps there was a lack of significance because adolescence is a time in life where
experimentation with alcohol and drugs occurs aside from precipitating life events. Another possible explanation is that while one would expect to see significant differences in alcohol and drug use within the general population, a troubled population, such as foster care youth, may not have as much of a range in consumption patterns. It is also possible that the environments in which foster care youth reside play some role in their not using. Nonetheless, it is significant that 27% of the sample reported using alcohol and/or drugs within the previous 6 months.

The analysis of co-occurrence of substance use and mental health problems revealed that there were significant differences between sexually abused and non-sexually abused adolescent girls. It seems clinically significant that 29% of the sexual abuse survivors and 16% of the non-sexual abuse survivors (23% of the sample) met the criteria for co-occurrence. Although formal diagnoses of substance abuse disorders and mental health disorders were not conducted in this study, other studies have shown that in the presence of a substance abuse disorder it is very common to find at least one co-existing disorder (Burkstein, Brent & Kaminer, 1989; Clark & Neighbors, 1996). Among girls with a substance abuse disorder there is a tendency to find comorbidity with internalizing types of disorders such as PTSD and depression (Clark et al., 1997). Given the internalizing symptomology of the sexually abused girls in the sample, those who are using substances would appear to be at an increased risk for the development of such a comorbid condition. Furthermore, the comorbidity of substance abuse and depression has been found to be common among adolescents who have completed suicide (Carlson & Grayson, 1991). In addition, an association with suicide attempts has been found for adolescents who have experienced physical and/or sexual abuse (Deykin & McNamera, 1985; Stone, 1993). Thus, the girls that met criteria for co-occurrence in our study would appear to be at an increased risk for attempting suicide.

It was disturbing to see the significantly elevated frequency of placing sexually abused girls in congregate living situations. Adolescents in congregate living environments have been found to have lower readiness assessment levels for independent living than do adolescents in foster home placements (Mech, Ludy-Dobson, & Hulseman, 1994). Moreover, previous studies have indicated that youth that have been living in family types of placements have more support and are better prepared for independent living. Nevertheless, sexually abused girls seem to have a particular disadvantage in the foster care system, in that they are harder to place in family environments. Certainly the emotional in-
stability and numerous behavioral problems exhibited by sexually abused girls present serious challenges.

Youth who are in need of more intensive and structured care are more likely to be placed in congregate living settings (Barth & Berry, 1989). As this study illustrates, sexually abused girls appear to experience a greater number of mental health and behavioral problems than non-sexually abused girls, which might make it necessary to place them in group homes or other residential environments. Certainly, the fact that so many of the sexually abused girls had been in a mental health facility speaks to the degree of psychological distress and instability experienced by them. Consequently, their mental health and behavioral problems may make them harder to place. Foster families may be reluctant to take adolescent youths with such challenging backgrounds and problems. They may feel that they do not possess the skills needed to adequately meet the needs of these adolescents. Their reluctance might be intensified by fears of the possibility of sexually abused girls lodging false allegations of sexual abuse against them, a concern that is garnering increasing amounts of attention in the literature (Swan, 1997).

More needs to be done to increase the opportunities for family type placements for sexually abused girls. Swan (1997) suggests the idea of using and supporting alternatives to the traditional form of family (heterosexual mother and father conforming to socially expected gender roles). For example, one non-traditional family form that she recommends includes shared parenting. Swan challenges the notion of gender-based care-taking models to encourage the equal involvement of foster fathers in the parenting process. She also recommends placing sexually abused girls with lesbian couples or single women as additional models of non-traditional families. In addition, she advocates for more extensive and specialized training so that foster families can be better prepared for addressing the needs of these girls and less frightened by fears of false allegations. This is a serious issue that requires attention. To continue to relegate the sexually abused to congregate living maintains a system of care that places them at increased risk for negative outcomes upon exiting care.

**LIMITATIONS**

The data used in this study were collected during a baseline assessment of a larger study designed to evaluate an 8-month HIV prevention and life skills program. As a result, a number of variables that might
have been useful in more fully exploring the similarities and differences between sexually abused and non-sexually abused adolescent females in foster care were not gathered. For example, the severity of the impact of childhood sexual abuse has been found to be associated with a number of abuse-specific variables: age at onset, relationship to the offender, frequency and duration, type of sexual acts involved, and use of force (Beitchman et al., 1991; Beitchman et al., 1992). However, such information about the nature of the sexual abuse was not solicited given the purpose of the HIV prevention study.

Likewise, there are limitations to the definition of sexual abuse. Three questions were asked that capture various aspects of unwanted sexual contact, which given the age of the respondents, can be classified as sexual abuse. However, there was no way to discern whether the sexual abuse occurred inside or outside of the home, or whether it was perpetrated by a parent, sibling, relative, acquaintance, dating partner or stranger. Thus, it is unclear whether we were looking at incest, non-familial sexual abuse, or dating violence, which has potential implications for the severity of the effects, as well as the findings.

Moreover, some researchers have found that to increase the likelihood of disclosure of sexual abuse, multiple questions need to be asked in different ways (Bolen & Scannapieco, 1999; Williams, Siegel, & Jackson, 2000). It is possible that the three questions asked were not sufficient to facilitate full disclosure from the sample. Shame, stigma, denial, and dissociation can all contribute to a sexual abuse survivor not disclosing their sexual abuse history. Thus, some of the girls in this study who were categorized as non-sexually abused, might actually be sexual abuse survivors who did not disclose. If that is the case, it may account for some of the lack of significant differences between the two groups.

In addition, the girls in this study may not be representative of all the girls in foster care. Participation in an independent living program is an option available to foster care youth, but not all youth are equally aware of that option or choose to participate. As such, there may be significant differences between those who know about and choose to participate and those that are not aware or decline the offer to participate. In addition, some foster care youth are not eligible to participate if they have severe learning, behavior or emotional problems. It is possible that without the eligibility requirements more distinct differences between the sexually abused and non-sexually abused girls might have emerged. Finally, the data used in this study are cross-sectional, only capturing information from one point in time. Perhaps longitudinal data would re-
veal different trends in terms of between group differences on measures of substance use, mental health and behavioral problems.

CONCLUSION

Not surprisingly, the results of this study provide much about which to be concerned clinically. The constellation of problems identified places these youth at high risk for negative independent living outcomes, such as unemployment, poverty, mental illness, addiction, homelessness, incarceration, revictimization and suicide. Every effort must be made to provide the mental health services needed by these youths, both for the remainder of their time in care and after exiting. Furthermore, additional research is needed to examine the unique ways in which type of maltreatment experienced affects the psychosocial needs of youth in foster care. As research and practice help clarify these distinctions, perhaps more effective abuse-specific interventions can be developed, implemented and evaluated.

It is important, however, to also acknowledge that a sizable number of these girls, both the sexually abused and non-sexually abused, were functioning well and were optimistic about their future. Twenty-five percent of the sexually abused girls had neither a history of substance use nor mental health problems. Practitioners cannot assume that an adolescent who has experienced maltreatment and been in foster care is by default someone with mental health or behavioral problems. Care must be taken to ensure that these girls who have survived great difficulties are not stereotyped and pathologized. While childhood sexual abuse is a very traumatic experience, there is an emerging literature documenting the incredible resiliency of survivors (Lam & Grossman, 1997; Valentine & Feinauer, 1993). More research is needed in this area, particularly with a population of adolescent girls in foster care.

REFERENCES


