EFFECTS OF CHILD SEXUAL ABUSE ON YOUTH

Signs of Resilience in Sexually Abused Adolescent Girls in the Foster Care System

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ABSTRACT. In a sample of 99 sexually abused adolescent girls in the foster care system (64% in congregate living situations and 36% in family/foster care homes), nearly half were psychologically functioning well despite having experienced moderate-to-severe emotional, physical, and sexual abuse. It was hypothesized that these girls with resilient trajectories would differ from the currently symptomatic girls on several protective factors: education, future orientation, family support, peer influence, and religion. The results revealed that the girls with resilient trajectories were significantly more certain of their educational plans and optimistic about their future and had more positive peer influences. [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> © 2006 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Resilience, foster care system, sexual abuse, adolescents

Childhood sexual abuse has been shown to result in numerous negative emotional and psychological difficulties that can last a lifetime (e.g., Beitchman, Zucker, Hood, DaCosta, & Cassavia, 1992; Desai, Arias, Thompson, & Basile, 2002; Thompson, Arias, Basile, & Desai, 2002). For those sexual abuse survivors who are placed in the foster care system, there is the hope of the abuse ending but it comes at the cost of separation from their families. Both events constitute significant stressors that can disrupt normal development. Youths who have had these experiences are psychologically at risk for developing mental health and behavioral problems that can negatively affect their life trajectories. Yet, there are those who, despite having had such painful experiences as child sexual abuse and placement in the foster care system, appear to be functioning well. This paper provides an empirical examination of a group of sexually abused adolescent girls who are in the foster care system, some of whom seem to be psychologically well adjusted and some of whom are struggling with serious mental health and behavioral problems. This within group difference provides an opportunity to study signs of resilience in a population that has not been previously studied by resilience researchers.
Resilience is a complex construct that has been used to describe a process or phenomena of positive adaptation in the face of significant adversity (Luthar & Cicchetti, 2000; Luthar, Cicchetti, & Becker, 2000; Luthar & Zelaro, 2003). In order to understand this construct, it is essential that its components be clearly defined. Adversities are stressors that vary in intensity and severity, and can disrupt normal functioning and development (Masten, 1994). Chronic child maltreatment is considered to be an example of an adversity of immense severity (Masten, 1994). Positive adaptation is based on evidence of competence in specific domains of concern, such as mental functioning, external behavior, or developmental tasks following exposure to some adversity (Masten, 1994). The absence of pathology and maladaptive behavior in children exposed to such high-risk circumstances as chronic child maltreatment reflects positive adaptation, which has been identified as an indicator of resilience (Luthar & Cushing, 1999). Resilience cannot be directly measured; rather, it is inferred from this process of examining positive adaptation in conjunction with adversity (Luthar & Zelaro, 2003).

There is a lack of agreement in the scientific community as to the level of competence needed to reflect positive adaptation, and whether it is required in more than one domain, given the multidimensional influences that children experience (Luthar et al., 2000). It has been recommended that priority be placed on domains for which there is particularly high risk for negative outcomes, and that in situations of severe adversity (e.g., serious childhood trauma), the absence of clinically significant symptoms should be seen as sufficient evidence of positive adaptation (Luthar et al., 2000; Luthar & Zelaro, 2003).

Masten and her colleagues have delineated three types of resilient phenomena: being at high-risk and doing better on outcomes than expected, adapting well under stressful experiences, and recovering from trauma (Masten, 1994; Masten, Best, & Garmezy, 1990). Although resilience was initially viewed as primarily the result of personal characteristics of the resilient child, over time a conceptual framework for resilience has emerged that emphasizes three interactive factors that are seen as contributing to the development of resilience: characteristics of the child, their family, and their social environment (Luthar et al., 2000). This resilience framework has moved the field away from viewing resilience as a personality trait and has greatly broadened our understanding of the processes that facilitate resilience. To further support that shift in thinking, researchers and practitioners have been encour-
RISK AND PROTECTIVE FACTORS

The study of resilience is also concerned with the interplay between risk and protective factors in order to determine behavioral and mental health outcomes for children and adolescents. Risk factors refer to characteristics of a group that increase the statistical probabilities of experiencing negative outcomes (Masten, 1994). Different definitions exist for protective factors, but when a study is using a main effect model, which we are, they are defined as “those [factors] that distinguished high-functioning children at risk from those who developed serious problems” (Luthar et al., 2000, p. 546). They facilitate more positive outcomes in people who have been exposed to serious adversities (Masten, 1994). Education, future orientation, family support, peer influence, and religion are among those individual, family, and community protective factors that have been shown to be important in the promotion of resilient trajectories.

Education

Several researchers have emphasized the importance of educational experiences as protective factors against stressful family experiences. In a national study of adolescent health, school connectedness was identified as a protective factor against every health risk except teenage pregnancy (Resnick et al., 1997). For sexually abused adolescents, school success was found to significantly reduce the likelihood of experiencing mental health or behavioral problems (Luster & Small, 1997). Hyman and Williams (2001) found education to be critical for developing options for youths whose lives have been shaped by poverty and distress. They found that if adolescents feel they are accomplished in an area, such as athletics or academics, they fare better, even in the face of ongoing stress.

Future Orientation

Several studies have connected optimism, which involves positive expectations about the future, to good physical health and adaptive coping (Scheier & Carver, 1985, 1987; Wyman, Cowen, Work, & Kerley,
1993). For example, future orientation was found to be a protective factor in a study of early adolescents exposed to life stress (Wyman et al., 1993). They found that having positive expectations reduced the negative effects of high levels of stress on participants’ self-rated sense of competency. Werner and Smith (1992) noted how resilient members of their study often developed vocational plans by early adulthood. They saw future expectations as often differentiating those who overcame adversity from those who did not. Qualitative research has echoed the findings of quantitative studies. For example, Henry (1997) investigated how children who have experienced maltreatment by a primary caregiver cope with living in an abusive family, and found that future orientation emerged as one of five themes elucidating how children successfully navigated this process.

Family Support and Peer Influence

In a landmark study on resilience, Werner and Smith (1982) found that the absence of behavioral problems at school, and sources of support in the family, neighborhood, school, and community were important correlates of resilience. They found that many of the youth who were initially viewed as having a poor prognosis were able to rebound and lead stable adult lives when sufficient social support was made available to them. Luster and Small (1997) found that sexually abused adolescents that had supportive relationships with their parents were less likely to binge drink or to have suicidal thoughts. In addition, Blundo (2002) documented the importance of social networks such as schools, churches, and other community agencies in supporting resilience. The findings revealed that interactions with peers and social relationships are prime ways to reduce stress and promote mental health.

Religion

In recent years, a number of studies have examined the significance of religion in people’s lives and its potential beneficial effects as a protective factor against mental health and substance abuse difficulties. In a comprehensive review conducted by Masten, Best, and Garmezy (1990), several studies identified membership in a congregation and faith in a higher power as protective factors. A spiritual relationship with a benevolent, higher power has also been cited as a crucial factor in enduring significant trauma over time and reclaiming a sense of meaning and agency in spite
of abuse (Williams, Lindsey, Kurtz, & Jarvis, 2001), a finding with particular relevance for sexual abuse survivors.

**FOSTER CARE YOUTHS AND CHILDHOOD SEXUAL ABUSE**

Mental health problems have been shown to be common among youths in the foster care system. Trupin, Tarico, Benson, Jemelka, and McClellan (1993) found that 72% of the children in Washington’s child welfare system exhibited profiles of severe emotional disturbance indistinguishable from a criterion group of children in the state’s most intensive mental health treatment programs. Pilowski’s (1995) review of studies published from 1974 through 1994 support this conclusion, noting that externalizing disorders in particular may be more prevalent than internalizing disorders in the foster care population. Nine more studies reviewed by Landsverk, Litrownik, Newton, Ganger, and Remmer (1996) also confirm this widely accepted conclusion.

The deleterious emotional and behavioral consequences of childhood sexual abuse among adolescents are also well documented (e.g., Bagley & Mallick, 2000; Briere & Elliott, 1994; Elze, Auslander, McMillen, Edmond, & Thompson, 2001; Kendall-Tackett, Williams, & Finkelhor, 1993; Rowan & Foy, 1993). Multiple studies have identified internalizing problems, particularly depression, as common sequelae of childhood sexual abuse (Beitchman et al., 1992; Browne & Finkelhor, 1986; Kendall-Tackett et al., 1993; Rowan & Foy, 1993; Silverman, Reinhertz, & Giaconia, 1996; Stiffman, 1989). Other mental health symptomatology found among adolescent sexual abuse survivors includes anxiety, post-traumatic stress disorder, substance use, and behavioral disorders (e.g., Bensley, Spieker, Van Eenwyk, & Schoeder, 1999; Briere & Elliott, 1994; Kendall-Tackett et al., 1993; Rowan & Foy, 1993; Silverman et al., 1996). Furthermore, findings linking childhood sexual abuse with mental health and behavioral problems hold true across a wide variety of both clinical and community samples (Briere & Elliott, 1994).

In our previous study of adolescent girls in the foster care system, those who had been sexually abused had significantly more mental health and behavioral problems than those who had experienced other types of abuse or neglect, without sexual abuse (Edmond, Auslander, Elze, McMillen, & Thompson, 2003). Among the girls who had been sexually abused, 51% were exhibiting borderline to clinically significant levels of mental health and behavioral problems, compared to 27%
of the non-sexually abused girls, $\chi^2(2, N = 189) = 10.9, p = .004$. However, 49% of the sexually abused girls were not experiencing mental health or behavioral problems. The absence of these problems in adolescents who have experienced so much adversity indicates the presence of resilience and warrants further study. Although numerous articles have been written about resilience, none of that literature has specifically examined resilience among adolescent girls in the foster care system, with histories of sexual abuse.

Thus, the purpose of this study is to examine the differences between those sexually abused adolescent girls in the foster care system identified as having resilient trajectories ($n = 49$), with the sexually abused adolescent girls in the foster care system who are experiencing clinically significant mental health and behavioral problems ($n = 50$). To answer this research question, our research design will employ a main effect model, rather than an interaction model that would be used to examine moderating processes (Luthar, 1993, p. 600). Specifically, we will determine whether protective factors such as education, future orientation, family support, peer influence, and religion differentiate these two groups of sexually abused girls in the foster care system. In this paper, we refer to the girls exhibiting clinically significant mental health and behavioral problems as “currently symptomatic,” even though it is understood that they might also be exhibiting signs of resilience in other domains of social functioning that were not measured in this study.

METHODS

Participants

The study participants included 351 youth, aged 15 to 18 years ($M = 16.33, SD = .85$) in foster care or out-of-home placements. Over half of the sample (54%; $n = 190$) was female, and 54% ($n = 102$) of those girls indicated that they had experienced some form of sexual abuse in their lifetime. However, missing data on several mental health indicators required dropping three of the sexually abused girls from the current study, resulting in a final sample of $n = 99$. The average age of the sexually abused girls in the sample was 16 ($SD = .95$). The majority of the girls were youths of color (58%), and the remainder were white (42%). Of the 99 girls, 64% were living in a congregate living setting (i.e.,
group home, residential center), and 36% were living in a family or foster care home situation.

**PROCEDURES**

Data were gathered during a baseline assessment of a longitudinal study designed to evaluate an HIV prevention and life skills program. The purpose of the program was to help youths attain the life skills needed to prepare them for independent living once discharged from state custody. Trained masters level social work graduate students conducted individual structured interviews with each participant that lasted approximately one hour. The interviews included the use of standardized instruments described in the measurement section. Participants were referred to the study by either social workers from the Division of Family Services (DFS) of St. Louis County, Missouri, group home workers, foster parents, or their biological parents. Informed consent was obtained from the youths’ legal guardian before the initial group meeting.

**MEASURES**

*Adversity: Severity and Type of Child Maltreatment*

Childhood sexual abuse was assessed with three questions about unwanted sexual experiences. These questions were adapted from those used by Russell (1986) to be more age-appropriate and clear to adolescents. Since youths are placed in foster care for a wide range of child maltreatment, and not all types of abuse experienced are necessarily documented, the researchers thought it was important to collect this information directly from the participants. This decision was also influenced by awareness that subsequent abuse might have occurred after entering foster care that had never been disclosed. If a youth answered “yes” to any of the following three questions regarding unwanted sexual experiences, she was classified as having been sexually abused: (a) “Did anyone get you to touch their private parts against your wishes?” (b) “Did anyone touch your private parts against your wishes?” and (c) “Has anyone ever had vaginal sex, anal sex, or oral sex with you against your wishes?”
Other forms of child abuse often accompany sexual abuse, and experiencing multiple types of abuse can result in greater degrees of negative psychological outcomes for survivors (Bagley & Mallick, 2000; Luster & Small, 1997). Therefore, information about other kinds of childhood maltreatment (i.e., emotional and physical abuse or neglect) was assessed to capture any potential differences between the two groups of girls so that it could be used as a control variable in the protective factor analysis if significant differences were found.

Four subscales of the Childhood Trauma Questionnaire (Bernstein & Fink, 1998) were used: (a) Emotional Abuse \( (r = 0.85) \); (b) Physical Abuse \( (r = 0.86) \); (c) Emotional Neglect \( (r = 0.87) \); and (d) Physical Neglect \( (r = 0.82) \). Each subscale contains five items with five-point Likert-type response choices: never true, rarely true, sometimes true, often true, and very often true. Higher scores reflect a greater severity of abuse.

**Positive Adaptation: Mental Health and Behavioral Problems**

The Youth Self-Report (YSR) version of the Child Behavior Checklist (CBCL; Achenbach, 1991) was used to assess the mental health and behavioral problems of the participants. The YSR is a widely used measure that provides a multidimensional assessment of mental health and behavioral problems in each of the following areas: (a) Withdrawn, (b) Somatic Complaints, (c) Anxious/Depressed, (d) Unpopular/Social Problems, (e) Thought Disorder, (f) Attention Problems, (g) Delinquent Behavior, (h) Aggressive Behavior, and (i) Self Destructive Behavior. Internalizing and externalizing subscales can be generated from the measurement, and the YSR can be totaled. The borderline cut-point (\( T \geq 60 \)) from the total score is used to differentiate clinically and non-clinically significant scores. The Cronbach’s alpha coefficient for the Total Youth Self Report scale was \( r = 0.94 \) (Achenbach, 1991).

**Operationalization of Resilience**

One reliable indication of resilience noted by researchers is the absence of pathology and maladaptive behavior in the face of adversity (Luthar & Cushing, 1999). Because mental health and behavioral problems have been consistently identified as consequences of childhood sexual abuse, girls in the study without such problems were categorized as having *resilient trajectories*. Specifically, the inclusion criterion for
being categorized as having a resilient trajectory was having a normal cut-off score on the YSR scale. Conversely, those sexually abused girls identified as having a borderline or clinical cut off score on the YSR scale, which indicates significant symptoms of mental health and behavioral problems were categorized as currently symptomatic. The girls with resilient trajectories had a mean score of 38.9 (SD = 11.37) on the YSR scale, which falls in the normal range, while the currently symptomatic girls’ mean score was 79.4 (SD = 17.9), indicative of clinically significant mental health and behavioral problems. This is congruent with the definition of resilience used by Radke-Yarrow and Brown (1993), who stated that it is “having no diagnoses and not being on the borderline of reaching criteria for a diagnosis. Non resilience was defined as the presence of one or more diagnoses of a serious nature, with problems persisting over time” (p. 583).

**Protective Factors**

**Individual Level Protective Factors**

*Future orientation.* A 12-item scale was used to measure future orientation. Six of the items came from the Life Orientation Test-Revised (LOT-R), which measures optimism in terms of generalized expectation (good or bad) about life outcomes (Scheier, Carver, & Bridges, 1994). The full LOT-R scale contains 10 questions, four of which are filler questions that are not used in the scoring of the measure. The filler questions were not included in this study. Six additional items were taken from the Future Time Perspective Inventory (FTO), a 14-item measure that has four factors: involvement, anticipation, occupation, and speed (Gjesme, 1979). The six items included in this study all came from the involvement factor, which primarily addresses thinking about and being concerned about the future. The involvement factor accounted for a larger amount of variance than any of the other factors in the FTO and included questions most relevant for this study. For each item, the response set included a 4-point Likert-type scale from “Strongly Agree” to “Strongly Disagree.” The items were then summed for a total scale score ($r = 0.70$).

**Family Level Protective Factors**

*Family support.* Supportive family relationships were measured with seven positively worded questions from the Childhood Trauma Ques-
tionnaire (Bernstein & Fink, 1998), an instrument previously used and validated with abused and neglected youths. The seven items capture information about emotional and physical support that the child may have experienced in their family. Examples include questions such as “When I was growing up I felt loved,” “When I was growing up people in my family felt close to each other,” and “When I was growing up, my family was a source of strength and support.” The response options were on a 5-point scale that ranged from “never true” to “very often true” with higher scores on those questions reflecting more supportive family relationships. Cronbach’s alpha coefficient for this scale is $r = .90$.

**Community Level Protective Factors**

*Education.* Several educational variables were measured: school status, school stability, school problems, and plans for school. To measure these descriptive variables, several items from a structured questionnaire developed by Slonim-Nevo, Auslander, and Ozawa (1995) were used. The items included questions regarding year in school, frequency of skipping school, frequency of fighting with teachers and students, number of different schools attended due to placement changes, the youths’ educational goals (i.e., vocational or technical school, job-training program, junior college, or part or full-time four-year college), and their level of confidence in their ability to achieve their educational goals.

*Peer influence.* A total of 13 questions were used to measure peer behavior, all of which were drawn from work previously conducted by Stiffman, Dore, Cunningham, and Earls (1995) and Baker, Jodrey, Intagliata, and Straus (1993). The 13 questions were used to create three subscales: positive peer behavior ($r = .58$), negative peer behavior ($r = .83$), and peer substance use ($r = .83$). Positive peer behavior was measured with three of the questions (“How many of your friends... plan to or go to college; have a job; save money”). Negative peer behavior was measured with eight questions related to failing grades, fighting, having sex, being a teen parent, and having trouble with police. Peer substance abuse was measured with two questions involving peers using alcohol or drugs. All of the response options were on a 4-point scale that ranged from “none” to “all.”

*Religion.* Two questions were used to measure religious membership and attendance in this study. The first question asked “What is your religion?” and the second asked “How often do you go to religious ser-
vices?” Both questions had categorical response sets, however the latter question was rank ordered from “almost every week” to “never, almost never.”

**Demographics and Background Living Situation**

A structured questionnaire that had been adapted from previous research with youths in group homes (Slonim-Nevo et al., 1995; Slonim-Nevo, Auslander, Ozawa, & Jung, 1996) was used to measure demographic, background living situation, and other descriptive characteristics of the youths in the study. The demographic variables that were used in the current study included: race, gender, age, number of group home or foster care placements, type of current living situation (i.e., group home or foster home), and number of years living in out-of-home care.

**Data Analysis**

Descriptive statistics were used to report the demographics of the sample. To determine the extent to which significant differences existed between the sexually abused girls with resilient trajectories and the currently symptomatic sexually abused girls, a series of chi-square and t-tests were computed. In addition, logistic regression was run with the variables that were significantly correlated with the girls with resilient trajectories to determine which variables were most predictive of having a resilient trajectory.

**RESULTS**

**Demographic Characteristics by Group**

Within the group with resilient trajectories, 63% (n = 31) were youths of color and 37% (n = 18) were white; among the currently symptomatic sexually abused girls, 52% (n = 26) were youths of color and 48% (n = 24) were white. There were no significant differences between the two groups on race, age, living situation, length of time in their living situation, or in the number of changes in foster families. However changes in group home placements approached significance (p = .054), with the currently symptomatic girls averaging 4.7 (SD = 3.8) changes and the girls with the resilient trajectories experiencing 3.2 (SD = 3.5) changes.
Adversity: Severity of Child Maltreatment

There were no significant differences between the two groups of girls in terms of type or severity of childhood maltreatment experienced. Ninety-one percent ($n = 90$) indicated that someone had touched their private parts against their wishes, 70% ($n = 69$) responded that they had been forced to touch someone else’s genitals, and 71% ($n = 70$) reported that they were forced to have sexual intercourse. On average, the girls were 9.7 ($SD = 3.9$) years old the first time they experienced forced sexual intercourse. The majority of the girls (72%; $n = 71$) indicated that physical force was used during the sexual abuse. Over half of the sample (54%) had experienced moderate-to-severe levels of emotional neglect, and 64% experienced moderate-to-severe emotional abuse. Similarly, 50% of the girls had experienced moderate-to-severe physical neglect and 65% experienced moderate-to-severe physical abuse.

Psychological Outcomes

Mental Health and Behavioral Problems

As indicated previously, the YSR (Achenbach, 1991) was used to assess the mental health and behavioral problems of the sexually abused girls in the study. Those girls with total YSR scores that fell in the normal functioning range were categorized as having resilient trajectories and those that had borderline-clinically significant symptoms were categorized as currently symptomatic. Not only was there a significant difference between them on the total YRS score, but significant between group differences were found for every subscale. The currently symptomatic girls had higher scores on every indicator, across multiple domains of mental health and behavioral problems, both in terms of internalizing and externalizing behaviors. These differences are shown in Table 1.

It should be noted that the bivariate analyses of these mental health and 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 approach, all of the subscale scores remained significantly different between the two groups of girls, revealing multiple dimensions of psychosocial competence of positive adaptation in terms of the mental health of the girls with the resilient trajectories.
TABLE 1. Mean Scores and Standard Deviations on Mental Health and 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>Resilient Trajectories</td>
<td>4.4 (2.4)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>6.6 (2.7)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>Resilient Trajectories</td>
<td>3.3 (3.4)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>6.6 (3.0)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Anxious Depressed</td>
<td>Resilient Trajectories</td>
<td>5.5 (3.2)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>14.2 (5.7)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Social Problems</td>
<td>Resilient Trajectories</td>
<td>2.2 (1.6)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>5.0 (2.8)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Thought Problems</td>
<td>Resilient Trajectories</td>
<td>2.6 (1.8)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>6.1 (2.8)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Attention Problems</td>
<td>Resilient Trajectories</td>
<td>4.6 (2.3)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>9.2 (3.0)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Delinquent Behavior</td>
<td>Resilient Trajectories</td>
<td>3.6 (2.0)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>7.1 (3.0)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Aggressive Behavior</td>
<td>Resilient Trajectories</td>
<td>7.1 (4.1)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>14.4 (5.5)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Self Destructive</td>
<td>Resilient Trajectories</td>
<td>1.7 (1.5)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>6.3 (3.7)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Internalizing(^a)</td>
<td>Resilient Trajectories</td>
<td>12.6 (9.1)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>26.1 (8.5)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Externalizing(^b)</td>
<td>Resilient Trajectories</td>
<td>10.7 (4.7)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>21.5 (7.4)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Resilient Trajectories</td>
<td>38.9 (11.4)</td>
<td>49</td>
<td>&lt; .001</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>79.4 (17.9)</td>
<td>50</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.
Protective Factors

Education

Educational status and plans. At the time of the interview, the majority of the girls were still in high school (72%). Of those still in school, two girls were planning to dropout without pursuing a GED, 31% were planning to get a GED, and 67% were planning to complete high school. There were no significant differences between the two groups of girls in educational status. Seventy-seven percent of the girls indicated that they were planning to go to college for two or more years, with no significant differences emerging between the two groups.

Certainty of educational plans. Although there were no significant differences between the groups in their educational status or plans, there were differences in the certainty of their plans. Eighty-eight percent of the girls with resilient trajectories indicated that they were “very sure” of their high school plans, while only 60% of the currently symptomatic girls expressed that level of certainty, $\chi^2(1, N = 88) = 8.8, p = .003$. Likewise, the girls with resilient trajectories were significantly more certain of their plans for college, with 67% indicating they were “very sure” of their plans, while such was the case for only 38% of the currently symptomatic girls, $\chi^2(1, N = 97) = 8.66, p = .003$.

School stability. On average, the girls in this sample had changed schools or school districts 4.9 times ($SD = 3.7$), indicating a substantial degree of school instability, with no significant differences between the two groups of girls. Despite the presence of school instability, the girls with resilient trajectories only reported skipping school an average of 3.7 days ($SD = 6.5$) during the last school year, while the currently symptomatic girls skipped 8.7 days ($SD = 28.1$); a difference that was not statistically significant, but may be considered clinically significant. Although the girls with resilient trajectories engaged in less verbal and physical fighting with teachers and other students than the currently symptomatic girls (1.9 versus 3.1), the difference was not significant.

Future Orientation

There was a significant difference between the girls in terms of future orientation based on the total score for the full scale. The girls with resilient trajectories had a higher total score on the future orienta-
tion scale \( t = -2.23; \text{df} = 96; p = .03 \), indicating a more overall positive future orientation. (See Table 2 for means and standard deviations.)

**Family Support**

There were no significant differences between the girls with the resilient trajectories and the currently symptomatic girls in terms of supportive family relationships. The means and standard deviations can be found in Table 2.

**Peer Influence**

There were significant differences between the two groups of girls on the positive peer behavior \( t = -2.41; \text{df} = 96; p = .02 \), negative peer behavior \( t = 3.99; \text{df} = 96; p < .001 \), and peer substance use subscales \( t = 3.24; \text{df} = 96; p = .002 \). The girls with resilient trajectories had a higher score on the positive peer behavior scale, and lower scores on the negative peer behavior and peer substance use scales, reflecting that their friends were engaging in less negative behavior, and less peer substance use than the currently symptomatic girls. (See Table 2 for means and standard deviations.)

**Religion**

Nearly 75% of the girls reported having a religious affiliation, and while 30% of the girls never or almost never attended religious service, 25% attended almost every week, and 32% went more often than just on holidays. There were no differences between the groups in religious affiliation or attendance at religious services.

**Multivariate Analysis to Predict Resilient Trajectories**

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 (resilient trajectories or currently symptomatic). Logistic regression is recommended when one is interested in predicting group membership from a mix of discrete, continuous, or dichotomous variables (Tabachnick & Fidell, 2001), which is the case in this study. Using the SPSS logistic procedure, the analysis was performed with resilience trajectory status as the outcome, and four predictor variables: future orientation, positive
peer behavior, negative peer behavior, and certainty of high school plans. Two other variables were systematically dropped from the model: peer substance use (due to multicollinearity) and certainty of college plans (reduced the predictive accuracy of the model). All of the predictor variables were continuous except certainty of high school plans, which was a dichotomous variable categorized as very certain—yes or no. Fourteen cases with missing values were deleted, leaving 85 sexual abuse survivors available for the analysis. The missing cases reflect those girls in the sample who were no longer in high school and for whom the question had no applicability.

The full model was tested with all four predictor variables against the constant-only model and was found to be statistically significant ($\chi^2 [4, N = 85] = 29.61, p < .001$), indicating that the predictors were able to distinguish between the girls with a resilient trajectory and the girls who

<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>Future Orientation</td>
<td>Total Scale</td>
<td>32.8 (4.4)</td>
<td>49</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Resilient Trajectories</td>
<td>30.3 (3.9)</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>31.6 (4.3)</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Family Support</td>
<td>Resilient Trajectories</td>
<td>22.8 (7.6)</td>
<td>49</td>
<td>.728</td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>22.2 (8.2)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Sample</td>
<td>22.5 (7.9)</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>Peer Influence</td>
<td>Positive Peer Behavior</td>
<td>2.2 (.88)</td>
<td>49</td>
<td>.018</td>
</tr>
<tr>
<td></td>
<td>Resilient Trajectories</td>
<td>1.7 (.88)</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>1.9 (.90)</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative Peer Behavior</td>
<td>1.4 (.66)</td>
<td>49</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Resilient Trajectories</td>
<td>1.9 (.76)</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>1.6 (.76)</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer Substance Abuse</td>
<td>1.3 (1.1)</td>
<td>49</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Resilient Trajectories</td>
<td>2.0 (1.1)</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Currently Symptomatic</td>
<td>1.6 (1.1)</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>
were currently symptomatic. The model was correct in predicting group membership 77% of the time. 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 $R^2 = .39$.

Table 3 provides a summary of the most relevant statistics for the odds ratios for each of the four predictors. The Wald chi-square statistic was used to test the statistical significance of the odds ratio, and both the negative peer behavior score ($\chi^2 [1, N = 85] = 7.8, p = .005$) and certainty of high school plans ($\chi^2 [1, N = 85] = 6.0, p = .014$) were significant predictors of resilience status. Neither positive peer behavior ($\chi^2 [1, N = 85] = 1.9, p = .167$) nor future orientation ($\chi^2 [1, N = 85] = 2.1, p = .148$) reached the established significance level needed to be significant predictors.

For every one-unit increase in score on the certainty of high school plans, one is 5 times more likely, in terms of odds, to be in the group with resilient trajectories. For every one-unit increase in score on the negative peer behavior scale, one is 64% less likely (1-.36) to be in the group with resilient trajectories (see Table 3).

**DISCUSSION**

The adolescent girls in this study have experienced a significant degree of adversity in their lives. All of the girls had been sexually abused at some point in their childhood, with the majority experiencing forced sexual intercourse before the age of 10. Most of the girls experienced multiple forms of maltreatment that in addition to sexual abuse included moderate to severe emotional and physical neglect and abuse. All were in the foster care system as a result of abuse or neglect, and on average had entered the foster care system by the time they were 12 years old. They experienced numerous placements and school changes during their time in the foster care system and were more likely to be living in a group home or residential facility than with a foster family.

It is not surprising that half of the girls in this sample were exhibiting clinically significant symptoms of mental health and behavioral problems, considering the severity of the abuse in their lives, along with being removed from their families and placed in the foster care system. How-
ever, despite the harshness of their life experiences, half of these girls were functioning well across multiple mental health dimensions. This point is particularly important because it has been noted in the literature that functioning well in terms of external behavior can at times come at the expense of internal distress (Luthar et al., 2000). For example, some young people may appear resilient because they are getting along with others, following social norms, performing well at school, but are experiencing a great deal of anxiety or depression internally. Luthar and Zelaro (2003) refer to this as “covert distress underlying manifest competence” (p. 539). The girls with resilient trajectories in this study are showing positive adaptation, both internally and externally, i.e., exhibiting emotional and behavioral resilience (Luthar et al., 2000).

Given that family dysfunction and severity of abuse can account for differences in negative psychological outcomes of childhood abuse (Nash, Hulsey, Sexton, Harralson, & Lambert, 1993), it is striking that there were no significant differences between the two groups in terms of type or severity of child maltreatment (sexual and nonsexual), or in levels of supportive family relationships. These results suggest that the signs of resilience observed are not accounted for by these factors. The girls with resilient trajectories are doing better than the currently symptomatic girls despite experiencing comparable levels of child maltreatment and family dysfunction.

The literature on resilience indicates that education, future orientation, family support, peer influence, and religion each can serve as protective factors. However, little is known about resilience among sexually abused adolescent girls in the foster care system. This study examined whether these protective factors might be relevant among sexually abused adolescent girls in the foster care system that were showing signs of resilience. The results indicate that the differences do relate to education, future orientation, and peer influence.

### TABLE 3. Logistic Regression Analysis of Girls with Resilient Trajectories

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>β</th>
<th>Wald Test</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Future Orientation</td>
<td>.094</td>
<td>2.09</td>
<td>1.10</td>
<td>.967 - 1.25</td>
</tr>
<tr>
<td>Negative Peer Behavior</td>
<td>-1.01</td>
<td>7.78</td>
<td>.364</td>
<td>.179 - .740</td>
</tr>
<tr>
<td>Positive Peer Behavior</td>
<td>.429</td>
<td>1.91</td>
<td>1.54</td>
<td>.836 - 2.82</td>
</tr>
<tr>
<td>Certainty of High School Plans</td>
<td>-1.67</td>
<td>6.04</td>
<td>5.30</td>
<td>1.40 - 20.10</td>
</tr>
</tbody>
</table>
As hypothesized, educational factors emerged as a protective factor for the girls with resilient trajectories. On several indicators related to education, the girls with the resilient trajectories clinically appeared to be doing better than the currently symptomatic girls in that they skipped school less frequently, and were less likely to fight with students or teachers. In terms of statistical significance, the girls with the resilient trajectories were more certain of their educational plans for both high school and college. In fact, the logistic regression indicated that the most significant predictor of being in the group with resilient trajectories was the certainty of their educational plans for high school. This finding was reinforced by the fact that the girls with the resilient trajectories had a significantly higher score on the future orientation scale, indicating that they were more optimistic about their futures. This is an important finding considering that being optimistic about one’s future has been shown to reduce the negative effects of adverse experiences (Werner & Smith, 1992; Wyman et al., 1993).

Although there was no difference between the two groups of girls in terms of their educational plans, there were differences in the certainty of those plans. Nearly all of the girls in high school were planning to get their GED or to finish high school, and approximately three out of four indicated that they plan to go to college. Although this can be viewed as a strength that should be built upon, these numbers are vastly higher than the rates of GED attainment, high school completion, or college attendance found in numerous studies that have examined educational outcomes of youths in the foster care system (Blome, 1997; Buehler, Orme, Post, & Patterson, 2000; McMillen & Tucker, 1998; Scannapieco, Schagrin, & Scannapieco, 1995). This would indicate that some of these aspirations might have been unrealistic, which might account for the significant differences found between the two groups of girls in terms of their certainty of those plans.

This discrepancy places workers in a challenging position of needing to effectively assist in the development of meaningful educational plans that realistically match the youth’s abilities without inadvertently selling them short. The level of skill needed in negotiating this process and matching educational needs with resources may require special expertise. McMillen, Auslander, Elze, White, and Thompson (2003) recommend using “educational advocates” with well-developed expertise in both the educational and foster care systems to optimize educational opportunities. In addition, researchers and practitioners need to identify the factors that account for this gap between educational aspirations and
achievement to more effectively tailor interventions with youth in the foster care system.

Supportive family relationships were examined in this study and the positive aspects of these relationships were expected to be more present in the lives of the girls with resilient trajectories. There were, however, no significant differences between the girls in terms of supportive family relationships. It may not have been reasonable to expect that there would be significant differences between the two groups of girls in terms of supportive family relationships, given that they are in the foster care system as a result of parental abuse and/or neglect. Perhaps for adolescent girls in the foster care system, there is a greater likelihood of finding social support in relationships with other significant adults in their lives such as teachers, mentors, spiritual leaders, or social workers, rather than within their families. It is possible that the girls with the resilient trajectories had some other significant adults in their lives providing more positive social support than the currently symptomatic girls received that was simply not captured in the study. Future studies of resilience with adolescent girls in the foster care system should take this into consideration when attempting to measure social support.

The girls with resilient trajectories had peers that were engaging in more positive behaviors and were less likely to engage in negative behaviors or to use substances than the currently symptomatic girls. However, even though there were significant findings regarding peer behaviors, it should be noted that only three of the thirteen items involved positive peer behaviors and those three items were quite limited in scope. Consequently, rather than being able to emphasize the presence of positive peer influences as a protective factor differentiating the two groups of sexually abused girls, the findings are weighted more heavily toward having peers that were less likely to engage in negative behaviors. Future studies should strive to place greater emphasis on measuring a wide range of positive peer behaviors, rather than stressing negative peer behaviors.

There are unique challenges for adolescent girls in the foster care system that may significantly limit the amount of social support available in their lives. As mentioned above, being placed in foster care indicates that there is a lack of social support available from family members. In addition, being in a congregate living situation such as a group home or a residential center, limits the type of peers with whom they have access. Clearly, a significant number of the youth in the foster care system are struggling with mental health and behavioral problems, thereby potentially making it harder to find positive peer groups. This is particularly salient for sexually abused girls considering that they are more likely to be
placed in congregate care than in a foster family (Edmond et al., 2002). In this study, 61% of the sexually abused girls were in congregate living situations, which may restrict their access to social support from positive peers. Moreover, adolescents in family type placements receive more support and are more prepared for independent living (Mech, Ludy-Dobson, & Hulseman, 1994).

Practitioners working with adolescents in the foster care system need to be careful to avoid making assumptions about those who disclose a history of childhood sexual abuse. There is a tendency within the foster care system to make decisions about mental health service needs based on the type of child maltreatment experienced, rather than upon actual psychological need; with sexual abuse survivors being 4.5 times more likely to receive such services (Garland, Landsverk, Hough, & Ellis-Macleod, 1996). The assumption of need for mental health services may be accompanied by an erroneous assumption that these adolescents are too psychologically distressed to be placed in a family or foster care home situation. This is an assumption that impacts levels of social support available and could have serious negative repercussions in the lives of sexually abused adolescent girls.

Despite the fact that previous studies have found religion to be a protective factor, it was not a significant variable in this study. It is possible that there was a lack of significance because only two categorical questions were used to measure it, affiliation and attendance. The results may have been different if the study had included an instrument that captures a range of indicators of religiosity including both attitudes and behaviors. The strength of one’s beliefs and their religious behaviors outside of religious institutions may provide a stronger indication of the impact that religion has as a protective factor. Future studies on resilience should include a multidimensional measure of religiosity to more comprehensively assess this protective factor.

Although there were no significant differences between the two groups of girls in terms of race, there have been calls for examining cross-cultural variations in resilience research (Luthar & Zelaro, 2003, p. 525). Stevens (2002) provides an example of the rich potential in studying cultural context as she theorizes, “that black female adolescents develop intersubjective attributes of assertion, recognition, and self efficacy to mediate exposure to risk elements” (p. xiii). She suggests that as African American girls develop their social identity they learn important and affirming knowledge about their culture from their families and communities that counters the racist assumptions of the dominate culture, which provides experiences of learning to resist inter-
nalizing negative appraisals from outside oneself. In essence, an African American girl’s socialization process involves learning how to deal with racial injustice through which she gains experience, knowledge, and skills that help her cope with other adversities in life. Future studies should prioritize examining cultural context and ethnic identity to deepen our understanding of the roles they play in protecting adolescents from the harmful effects of adverse events.

It is likely that there are many differences between the girls with resilient trajectories and the currently symptomatic girls on variables that were not included in the study. For example, in terms of their sexual abuse histories it would have been useful to know about age at onset, relationship to the offender, frequency and duration of abuse, and type of sexual acts involved, but information on those variables was not collected. Since resilience as reflected in terms of good mental health and prosocial behavior does not mean resilience across all domains in life and problems in mental health or behavior do not preclude competence in other domains, it is possible that a different picture of resilient trajectories might have emerged if other outcomes had been used to measure positive adaptation or if other protective factors had been examined. It would have been useful for example to examine learning abilities, academic achievement, and involvement in extracurricular activities, such as sports as protective factors. These educational variables have been identified in other studies as powerful protective factors, but since the data collected in this study was originally intended for a study of an HIV prevention intervention, rather than a resilience study, such educational measures were not included. Future studies on resilience within this population should consider including direct measures of learning ability, academic achievement, and involvement in extracurricular activities.

There are other limitations in this study that must be acknowledged. For example, the information gathered about their abuse histories (sexual and non-sexual), mental health and behavioral problems was based on self-report leaves. This opens the possibility of bias and creates a threat to the validity of these findings. Future studies on resilience with this population should consider obtaining information on the adversities experienced and current levels of functioning from multiple sources. Second, our sample may not be representative of all sexually abused adolescent girls, in that our study includes girls who chose to participate in an independent living skills program. It is also important to point out that this study only included sexually abused adolescent girls; consequently, the findings cannot be generalized to adolescent male sexual abuse survivors in the foster care system. Future research in this area
should include both male and female sexual abuse survivors to determine whether there are important differences in terms of risk and protective factors that can inform our intervention strategies.

Furthermore, this was a cross-sectional study; thus, only information from one point in time was used. It is possible that longitudinal data would have revealed changes in mental health and behavioral problems across time between and within both groups, thereby providing a different picture of resilience. Moreover, the cross-sectional nature of this study does not allow for causal inference when considering the relationships between the statistically significant protective factors (i.e., certainty of educational plans, positive peer behavior, positive future orientation) and the positive adaptation observed (i.e., absence of mental health and behavioral problems). It is possible, for example, that the positive mental health of the girls with the resilient trajectories led to increased confidence about their educational plans, the selection of a more healthy and positive peer group, and a more positive view of the future, rather than the assumption that protective factors increased the likelihood of a resilient trajectory (i.e., positive mental health). This illustrates that the relationship between protective factors and positive adaptation is complex and bidirectional.

Despite these limitations and given the lack of existing literature on resilience in sexually abused adolescent females in the foster care system, this exploratory, descriptive study is an important first step, and one that has been acknowledged as necessary and useful in underdeveloped areas of resilience research (Luthar & Cicchetti, 2000; Windle, 1999). However, the next step requires a more rigorous longitudinal research design, theoretically driven, developed specifically to study the underlying processes that facilitate resilience. This would provide the data necessary to move beyond description, to begin to explain the underlying mechanisms by which protective factors effect positive adaptation in adolescent female survivors of childhood sexual abuse who are in the foster care system.

**CONCLUSION**

This study has identified potential protective factors that differentiate girls with resilient trajectories from their counterparts with clinically significant symptoms of mental health and behavioral problems. Specifically, the girls with the resilient trajectories have a positive view of their future, which engenders a sense of hopefulness, and they are doing
well in school, which increases their likelihood of experiencing multiple positive outcomes in their lives. Every effort should be made to provide the supports that are needed to facilitate their continued success. It is also essential that practitioners and researchers develop a greater awareness and understanding of the factors that differentiate the girls with resilient trajectories from the currently symptomatic girls. In addition, we must look for the strengths in the currently symptomatic girls and recognize that they too may have the potential to overcome adversity.

REFERENCES


