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Sexual Abuse History and Problems in Adolescence: Exploring the Effects of Moderating Variables

This study explores the relationship between sexual abuse and two problem outcomes, binge drinking and suicidal ideation, in a sample of 42,568 adolescents. The effects of current and prior sexual abuse on these outcomes were examined for females and males separately. Of particular interest were factors related to the likelihood of problem behaviors among adolescents who had been sexually abused. Adolescents who had been both physically abused and sexually abused exhibited more problems than those who experienced only one type of abuse. High levels of parental monitoring and high levels of support from at least one parent decreased the risk of problem outcomes among sexually abused adolescents. School success also reduced the risk of problem outcomes for some of the groups studied.

In 1993, there were approximately 150,000 substantiated cases of child sexual abuse in the United States (Finkelhor, 1994). The prevalence of

child sexual abuse is likely to be much higher, however. Based on retrospective reports by adults, Finkelhor estimated that approximately 500,000 children are sexually abused each year. Although estimates of the prevalence of sexual abuse vary considerably from study to study, Finkelhor concluded that approximately 20% of females and from 5% to 10% of males are sexually abused in childhood or adolescence.

During the past decade, researchers have found that a history of sexual abuse is associated with a range of problem behaviors in childhood, adolescence, and adulthood. (See Briere & Elliott, 1994, and Kendall-Tackett, Williams, & Finkelhor, 1993 for recent reviews.) Those who have been sexually abused are more likely than others to experience various emotional problems, including posttraumatic stress disorder, sexualized behavior, depression, anxiety, high levels of anger and aggression, and low self-esteem. Interpersonal difficulties are also more common among victims of sexual abuse.

Based on their review of studies involving victims of abuse who were 18 years old or younger, Kendall-Tackett and her colleagues (1993) concluded that the symptoms displayed by minors may depend on their age. The symptoms that were commonly found in adolescents who had been abused included “depression; withdrawn, suicidal, or self-injurious behaviors; somatic complaints; illegal acts; running away; and substance abuse” (p. 167).

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Briere and Elliott (1994) concluded that victims of sexual abuse resort to a variety of methods to cope with the pain associated with this traumatic experience; many activities used to cope with the pain, however, are problematic because they tend to be self-destructive or lead to further problems or both. Avoidance behaviors used by victims of sexual abuse include the use of alcohol and other drugs, indiscriminate sexual behavior, and bulimia. For example, Briere and Runtz (1987) found that adult females who had been sexually abused were twice as likely as females in a comparison group to suffer from alcoholism. Research on minors, however, has not yet shown that alcohol abuse or other forms of substance abuse are more common in victims of sexual abuse (Kendall-Tackett et al., 1993). In this study, we examine the relationship between sexual abuse history and alcohol abuse among adolescents.

Some victims of abuse may resort to even more drastic methods to cope with the pain. Sexual abuse has been linked to an increased risk of suicidal ideation and suicide attempts in adults (Briere & Runtz, 1986). As Briere and Elliott (1994) note, "The ultimate avoidance strategy may be suicide" (p. 60). Although research has established that many adolescent victims of abuse are suicidal, there is little evidence yet that abuse victims are more likely to be suicidal than other adolescents (Kendall-Tackett et al., 1993). This possibility is examined in this study.

There is mounting evidence that the aftermath of sexual abuse is associated with problem behaviors. However, there are marked individual differences in how victims of abuse function. Some victims of abuse engage in self-destructive coping behaviors, and others seem to cope successfully with this trauma and experience few adverse effects (Kendall-Tackett et al., 1993). What accounts for the resilience of these individuals? In discussing directions for future research, Briere and Elliott (1994) point out that there is limited research on this question. "Only a second wave of research—focusing on potential ameliorating or exacerbating variables in the genesis of abuse effects—can provide a more complete picture of the complexities of childhood sexual victimization and its psychological impacts," they suggest (p. 64).

This study examines the relationship between a history of sexual abuse and two problem outcomes—alcohol abuse and suicidal ideation—in a large sample of adolescents. Of particular interest are factors that are related to the risk of these problems among adolescents who have experi-

enced abuse. These two problem outcomes are particularly relevant during adolescence due to the high morbidity rates associated with them. The leading cause of death among adolescents is motor vehicle accidents, the majority of which are related to alcohol use (Rosen, Xiangdong, & Blum, 1990). The third leading cause of death during the adolescent years is suicide (Tishler, 1992). These two outcomes provide an interesting contrast because alcohol abuse is typically viewed as an externalizing problem, and suicidal ideation (an indicator of depression) often is viewed as an internalizing problem. Are the protective mechanisms associated with a decreased likelihood of problem behavior the same for both outcomes?

Numerous potential factors may exacerbate or ameliorate problems associated with sexual abuse. These include factors directly related to the actual experience of sexual abuse, such as the recency of the abuse, the length of abuse, the use of force, and the relationship with the perpetrator (Kendall-Tackett et al., 1993). We explore the recency of the abuse. We expected to find that teens currently in abusive relationships would show more problems than those abused earlier. Consistent with this hypothesis are the results of recent longitudinal studies showing that there can be an abatement of symptoms for victims of abuse over time (Kendall-Tackett et al., 1993); however, some children appear to get worse over time.

In addition to variability in the experience of sexual abuse, victims differ in terms of whether or not they have experienced other types of abuse. It is now well established that many children experience more than one form of maltreatment (Belsky, 1993). In this study we test the hypothesis that adolescents who have experienced physical abuse as well as sexual abuse are more likely to have problems than adolescents who experienced only sexual abuse. Previous studies typically have been constrained by small sample sizes and, therefore, could not investigate this possibility (Briere & Elliott, 1994). However, one recent study of adults reported findings consistent with this hypothesis. Those who experienced more than one type of abuse appeared to be at greater risk for both health and psychological problems than those subjected to only one form of abuse (Moeller, Bachman, & Moeller, 1993).

The family context of the victim is likely to be an important factor in how well children cope with a history of abuse. The research on stressors and protective factors, generally, and the abuse literature, specifically, suggest that having a very

supportive relationship with at least one parent can do much to ameliorate the effects of stress on children (Rutter, 1987; Werner, 1993). In particular, the importance of the support of the mother has been studied and documented in the sexual abuse literature. Victims of sexual abuse have fewer symptoms when mothers believe them and are supportive following disclosure, and they have more problems if the family is dysfunctional (Briere & Elliott, 1994; Kendall-Tackett et al., 1993; Spaccarelli & Kim, 1995). In this study, we examine two family processes—having a high level of support from at least one parent and parental monitoring of the adolescent's behavior. We expected that the level of support would be important for protecting against both alcohol abuse and suicidal ideation, but we thought it would be particularly important for decreasing the incidence of suicidal ideation. Parental support should decrease the likelihood that teens are suffering from depression and pondering the notion that life is not worth living. We expected close parental monitoring, on the other hand, to be particularly helpful in reducing the incidence of alcohol abuse by adolescents. Children who are closely monitored should have fewer opportunities to engage in risk-taking behaviors (Luster & Small, 1994; Small & Luster, 1994).

Past research suggests that some children are more vulnerable to the effects of abuse than others (Walker, Downey, & Bergman, 1989). Children could be more or less vulnerable for genetic reasons or because of their developmental histories. Based on Rutter's (1987) work, we hypothesized that adolescents who had experienced success in other domains that bolstered their feelings of self-worth would cope better with sexual abuse than adolescents who did not have such accomplishments to draw upon when thinking about the self. Specifically, we examined the effects of school success on coping processes. We expected students who experienced more success in school, indicated by higher grade point averages, to cope better with abuse than their less successful peers. School success is likely to depend, at least in part, on a person's intelligence and ability to persevere when faced with challenges. Past research has found that more intelligent children tend to be more invulnerable in the face of stress (Rutter, 1987; Werner, 1993).

A final characteristic of the person that may be important for understanding the consequences of sexual abuse is gender. Much of the literature on the sequelae of sexual abuse has focused on fe-

male victims. Therefore, the question of whether or not the effects of sexual abuse are similar for males and females requires further study (Kendall-Tackett et al., 1993).

In summary, this study investigates the relationship between sexual abuse and two common problem outcomes in adolescents, binge drinking and suicidal ideation. Of particular interest is the role of possible moderating variables. Conceptually, a moderator is a variable that affects the strength or direction of relationship between two other variables—a predictor (or independent) variable and an outcome (or dependent) variable (Baron & Kenny, 1986). In this case, we wish to explore factors that may affect the relationship between sexual abuse history and the two problem outcomes. The moderating variables of interest fall into three categories: (a) a history of physical abuse or no history of physical abuse, (b) the current family context (supportive parents vs. nonsupportive parents, high parental monitoring vs. low parental monitoring), and (c) characteristics of the adolescent (a successful student or a less successful student and gender of the adolescent). Following the process-person-context approach of Bronfenbrenner (1989), it is suggested that the effects of sexual abuse are likely to depend on characteristics of the context (e.g., family characteristics) and characteristics of the developing person (e.g., academic ability). Victims of sexual abuse who are resilient may be able to cope effectively with their adverse experiences because of their personal strengths or the support they receive in the family. Also of interest is the recency of the sexual abuse. Is the adolescent currently in an abusive relationship, or has the sexual abuse stopped?

Most past studies of the consequences of sexual abuse have involved adult survivors of abuse or victims of abuse who have been identified through agency records. In these cases, typically the abuse has taken place in the past, often many years ago. In addition, because many of these individuals have been identified through social service agencies and self-help groups, they are unlikely to be representative of the larger population of individuals who have been abused. In fact, a national survey of the U.S. population showed that 42% of male victims and 33% of female victims never disclosed their experiences of sexual abuse to anyone (Finkelhor, Hotaling, Lewis, & Smith, 1990). The present study attempts to overcome these common shortcomings by surveying a large, representative sample of adolescents, some

of whom have been abused and some of whom have not. This sample provides us with an unusual opportunity to examine the effects of abuse among adolescents who may not be known to Child Protective Services or other agencies. It also allows us to study adolescents who report that they are currently in abusive relationships; we are not aware of any other studies that have examined the effects of current abuse.

METHOD

Sample

Data were collected from 42,568 adolescents enrolled in grades 7 through 12 in a Midwestern state. Students were fairly evenly distributed across grade levels; the number of students in each grade ranged from 6,313 12th graders to 7,483 ninth graders. The data were originally collected as part of a series of community-based surveys sponsored by local organizations and school districts. Trained survey administrators collected the data in schools. Depending on the school district, between 90% and 95% of students who were attending school on the day the survey was given participated in the study. The primary purpose of the survey was to provide program administrators, local policymakers, and parents with information that could be used to guide program development and local policy decisions and to educate parents and other members of the community about the needs, interests, and behavior of local youth. For this study, we aggregated data from numerous communities into a statewide sample. The data are not representative of all students in the state because communities were not chosen at random for the study. However, the sample is representative of adolescents from the participating communities, and the communities were diverse in size and economic resources and other factors.

The sample is evenly divided by gender. Ninety-five percent are Caucasian, reflecting the racial composition of the region. The mean age of the sample was 14.9 years. Most of the adolescents were living with both biological or adoptive parents (70%); 16% were living with a parent and step-parent, 12% were living with a single parent, and the remaining adolescents were living with another relative (1%), in a group home (1%), or alone (1%).

The key subsample of interest was adolescents with a history of sexual abuse. About 1% of the sample or 443 adolescents reported that they currently were experiencing sexual abuse. About 7%

or 2,798 reported being sexually abused at an earlier time but that the abuse had stopped. About 1% of students in each grade reported currently being sexually abused (range from .9% to 1.2%). The percentage of seventh-grade students reporting prior sexual abuse was 4.3%, eighth-grade students: 5.6%, ninth-grade students: 6.6%, 10th-grade students: 7.3%, 11th-grade students: 8.4%, and 12th-grade students: 9.3%. Females (12.2%) were more likely than males (3.6%) to report ever being sexually abused.

Procedure

Students were administered a 160-item self-report questionnaire in classroom settings by trained data collectors during scheduled class periods. The survey was anonymous and assessed a variety of attitudes, beliefs, and behaviors, as well as basic demographic and scholastic information. Of interest in the present study are measures of abuse history, alcohol use, suicidal ideation, grade point average, and family relationships.

Measures

Sexual abuse. Sexual abuse was assessed with the following question: "Have you ever been sexually abused by an adult or someone older than you? (Sexual abuse is when someone in your family or another person does sexual things to you or makes you do sexual things to them that you don't want to do.)" The possible responses were "no," "I am currently being sexually abused," and "I was sexually abused, but the abuse has stopped."

Physical abuse. A history of physical abuse was determined by responses to the following question: "Have you ever been physically abused by an adult (for example, beat up, hit with an object, kicked, or some other form of physical force)?" The possible responses were "no," "I am currently being physically abused," and "I was physically abused, but the abuse has stopped." For the analyses in this study, individuals reporting that they had never been physically abused were scored 0; those reporting current or past abuse were scored 1.

Alcohol consumption. The question about alcohol consumption was: "During the past month, have you had five or more alcoholic drinks at one time? (A 'drink' is a glass of wine or beer, a shot

of liquor, or a mixed drink.)” The possible responses to this question were: never (0); yes, once (1); yes, twice (2); yes, 3–5 times (3); yes, 6–9 times (4); and yes, 10 or more times (5). Because some items on the survey instrument were added or revised over time, the question about binge drinking was not asked in every community. In all, 36,533 adolescents responded to this question about binge drinking.

Suicidal ideation. Suicidal thoughts were assessed with a single item: “During the past month, have you thought about killing yourself?” The response categories were: no (0); yes, once or twice (1); yes, some of the time (2); yes, most of the time (3); and yes, all of the time (4).

Parental monitoring. Parental monitoring was a four-item measure derived from an earlier measure developed by Small and Kerns (1993). It assesses the extent to which parents know the whereabouts of their child and show an interest in whom their youngster spends time with and what the adolescent does in his or her free time. Each item was assessed on a 5-point scale (from *never* to *always*), and the average score of the four items was used in the analysis. The higher the score, the greater the level of parental monitoring (Cronbach’s $\alpha = .82$). When used as a dichotomous variable, those with an average score of 3 or more were put in the high monitoring group; those in this group reported that, on average, their parents monitored them “a lot of the time.”

Parental support. We assessed the support of each parent separately with two items: (a) “My mother/father cares about me,” and (b) “my mother/father is fair when it comes to enforcing rules.” Each item was scored on a 5-point scale, with responses ranging from *never* to *always*. The measure is adapted from Armsden and Greenberg’s (1987) Parent-Adolescent Attachment Inventory.

We viewed an adolescent as receiving high support from a parent if the adolescent believed that the parent “always” cared about him or her and if the adolescent perceived that the parent was fair “a lot of the time” or “always.” Adolescents who received high support from at least one parent (mother, father, or both parents) were given a score of 1 on this measure. Those without a supportive parent were given a score of 0. Seventy-one percent had at least one supportive parent based on the criteria.

Grade point average (GPA). We used the self-reported grade point average as an indicator of the adolescents’ degree of success in school. Letter grades were converted to their equivalent on a traditional 4-point scale. For the present study, we considered 3.0 or higher a high GPA; a low GPA was less than a 3.0 average.

RESULTS

Is a history of sexual abuse associated with binge drinking and suicidal ideation among adolescents? Clearly it is. As the first step in the analyses, 2 (gender) \times 3 (current sexual abuse, prior sexual abuse, and never sexually abused) ANOVAs were run, with binge drinking and suicidal ideation as the respective dependent variables. The results of these analyses are presented in Table 1. For both outcomes there was a significant main effect for sexual abuse history. Follow-up, one-way ANOVAs, with Scheffe post hoc comparisons, showed that for both males and females, those with a history of prior abuse experienced more problems than those who had never been abused, and those who were currently experiencing sexual abuse had higher mean scores than adolescents in the other two groups.

For binge drinking, there was also a significant main effect for gender. Overall, males engaged in more binge drinking than females. The interaction

TABLE 1. SEXUAL ABUSE HISTORY AND MEAN PROBLEM BEHAVIORS FOR FEMALES AND MALES

| | Never Sexually Abused | Prior Sexual Abuse | Current Sexual Abuse | F for Main Effect of Sexual Abuse | F for Main Effect of Gender | F for the Interaction |
|-------------------|-----------------------|--------------------|----------------------|-----------------------------------|-----------------------------|-----------------------|
| Binge drinking | | | | | | |
| Females | .55 | .99 | 1.80 | 376.4** | 298.1** | 3.4* |
| Males | .78 | 1.24 | 2.39 | | | |
| Suicidal ideation | | | | | | |
| Females | .41 | .85 | 1.94 | 1350.3** | 149.0** | 19.8** |
| Males | .30 | .97 | 2.10 | | | |

* $p < .05$. ** $p < .01$.

between gender and history of sexual abuse was significant as well. Following the suggestion of Jaccard, Turrisi, and Wan (1990), we used interaction comparisons to discern the nature of the interaction effect. Interaction comparisons involved running a series of 2×2 ANOVAs. In these ANOVAs, gender was one factor and sexual abuse group was the second factor, but only two sexual abuse groups were included in the analysis each time (i.e., current and prior abuse, current abuse and never abused, and prior abuse and never abused). The interaction term in each of the 2×2 ANOVAs was examined in order to understand the nature of the interaction that was detected in the original 2×3 ANOVA. These analyses showed that the difference in binge drinking scores between males and females was greater for those who were currently being abused than for those who had no history of sexual abuse. When those who were abused at a prior time were compared with adolescents in the other two groups, the interaction term was not significant in either analysis.

There was also a significant interaction between gender and sexual abuse history when suicidal ideation was the dependent variable. Among those who had never been abused, females had higher suicidal ideation scores than males. Among those currently being abused and those who had been abused at an earlier time, males had higher suicidal ideation scores than females.

Exploring the Effects of Potentially Moderating Variables

After establishing a link between sexual abuse and problem behavior, we next examined whether some factors were associated with an increased or a decreased likelihood of problem behavior occurring among teens with differing histories of sexual abuse. More specifically, we asked, does experiencing both physical abuse and sexual abuse put teens at greater risk for problem behaviors? Does a supportive family context reduce the risk of problem behaviors? Does success in school help to buffer the harmful effects of sexual abuse?

We used a series of ANCOVAs to determine if variables that we conceptualized as moderating variables (e.g., parental monitoring) were related to the likelihood of problem behavior among teens, and if the influence of the moderating variables were greater for teens who had been abused than for those without a history of abuse, or vice

versa. Our hypothesis was that the effect of the moderating variables would be most pronounced for those who had been abused. For each set of analyses, one of the moderating variables (coded dichotomously) and the three-category sexual abuse variable were entered as factors. We examined the *F* ratio for the interaction term (sexual abuse history \times the hypothesized moderating variable) to determine if variables like parental monitoring and support functioned as moderating variables (i.e., had a greater effect on one group than another, Baron & Kenny, 1986). We used the age of the teen as a covariate in these analyses because some variables in the analyses, such as binge drinking and prior abuse, are likely to vary as a function of age. We conducted separate analyses for females and males.

The results for binge drinking for the females are presented in Table 2. For all of the analyses, there was a highly significant main effect of sexual abuse history and a highly significant main effect for each of the hypothesized moderating variables. A review of the cell means in the table shows clearly the effect of each factor. These analyses not only highlight the importance of sexual abuse as a predictor of binge drinking, but also the association between the moderating variables and binge drinking. For each category of sexual abuse, mean binge drinking scores were almost twice as high if the teens had been physically abused. Regardless of sexual abuse history, binge drinking scores tended to be lower if the teens were closely monitored, had a very supportive relationship with at least one parent, and experienced success in school.

Of particular interest was the interaction between sexual abuse history and the moderating variable. For alcohol consumption, the interaction term was statistically significant for three of the four hypothesized moderating variables; the interaction term involving GPA was the exception. Interaction comparisons were run to understand the nature of the interaction effects. These analyses showed that physical abuse increased the likelihood of binge drinking the most for those who were currently being sexually abused. Parental monitoring and parental support decreased the likelihood of problem drinking the most for those who were in the currently abused group. When we ran analyses with only those who had never been abused and those with a history of prior abuse (i.e., excluding the current abuse group from the analyses), the interaction term was not significant in any of these analyses.

TABLE 2. MEAN BINGE DRINKING SCORES FOR FEMALES GROUPED BY SEXUAL ABUSE HISTORY AND LEVEL OF MODERATOR VARIABLE

| Moderator Variable | Never Sexually Abused | Prior Sexual Abuse | Current Sexual Abuse | F for Main Effect of Sexual Abuse | F for Main Effect of Moderator Variable | F for the Interaction |
|--------------------------|-----------------------|--------------------|----------------------|-----------------------------------|---|-----------------------|
| Physical abuse | 1.00 | 1.27 | 2.28 | 83.2** | 419.1** | 6.9** |
| No physical abuse | .49 | .79 | 1.09 | | | |
| Low parental monitoring | 1.05 | 1.39 | 2.28 | 117.5** | 1479.1** | 6.0** |
| High parental monitoring | .32 | .65 | 1.02 | | | |
| Low parental support | .70 | 1.07 | 2.27 | 127.1** | 163.5** | 12.5** |
| High parental support | .46 | .92 | .98 | | | |
| Low grade point average | .86 | 1.25 | 2.08 | 130.3** | 793.3** | 2.9 |
| High grade point average | .37 | .69 | 1.38 | | | |

* $p < .05$. ** $p < .01$.

When the outcome was suicidal ideation, there was a highly significant main effect for sexual abuse and a highly significant main effect of each of the moderating variables for females. In addition, the interaction term was statistically significant for three of the four analyses for females. The exception this time was for physical abuse (see Table 3). Similar to the findings for binge drinking, parental monitoring and parental support reduced the risk of suicidal ideation the most for those currently being abused. A high GPA reduced the risk of suicidal ideation more for those who were abused at a prior time than for those who had never been abused. For comparisons involving the currently abused groups, the interaction term did not reach statistical significance, yet it is noteworthy that a high GPA had no discernible effect on suicidal ideation among those in the currently abused group.

The same analyses were done for males, and the results are presented in Tables 4 and 5. Again, the main effect of sexual abuse history and the main effect for each of the hypothesized moderat-

ing variables were highly significant in each analysis. When binge drinking was the outcome, only one out of the four interaction terms (sexual abuse \times GPA) was significant for males. A high GPA had the least impact on drinking for males who were currently abused, but it did reduce substantially the frequency of binge drinking among those who were abused at a prior time. The interaction term was significant if the prior abuse group was compared with either the never-abused or the currently abused groups. The interaction term was also significant when the never-abused group was compared with the currently abused group.

For suicidal ideation, the interaction was significant in three out of the four analyses for males (see Table 5). Physical abuse increased the risk of suicidal ideation the most for males who were currently being abused. Parental monitoring decreased the risk of suicidal thoughts more for the currently abused males than for the never abused males. Parental support reduced the risk of suicidal ideation more for those who were formerly

TABLE 3. MEAN SUICIDAL IDEATION SCORES FOR FEMALES GROUPED BY SEXUAL ABUSE HISTORY AND LEVEL OF MODERATOR VARIABLE

| Moderator Variable | Never Sexually Abused | Prior Sexual Abuse | Current Sexual Abuse | F for Main Effect of Sexual Abuse | F for Main Effect of Moderator Variable | F for the Interaction |
|--------------------------|-----------------------|--------------------|----------------------|-----------------------------------|---|-----------------------|
| Physical abuse | .86 | 1.13 | 2.23 | 270.0** | 1007.7** | 2.8 |
| No physical abuse | .35 | .62 | 1.43 | | | |
| Low parental monitoring | .64 | 1.02 | 2.40 | 466.8** | 777.2** | 17.3** |
| High parental monitoring | .30 | .68 | 1.26 | | | |
| Low parental support | .66 | 1.10 | 2.28 | 355.4** | 953.0** | 15.4** |
| High parental support | .29 | .63 | 1.16 | | | |
| Low grade point average | .54 | .98 | 1.95 | 471.3** | 357.9** | 3.8* |
| High grade point average | .33 | .68 | 1.93 | | | |

* $p < .05$. ** $p < .01$.

TABLE 4. MEAN BINGE DRINKING SCORES FOR MALES GROUPED BY SEXUAL ABUSE HISTORY AND LEVEL OF MODERATOR VARIABLE

| Moderator Variable | Never Sexually Abused | Prior Sexual Abuse | Current Sexual Abuse | F for Main Effect of Sexual Abuse | F for Main Effect of Moderator Variable | F for the Interaction |
|--------------------------|-----------------------|--------------------|----------------------|-----------------------------------|---|-----------------------|
| Physical abuse | 1.28 | 1.45 | 2.64 | 106.6** | 269.5** | .72 |
| No physical abuse | .73 | 1.03 | 1.93 | | | |
| Low parental monitoring | 1.20 | 1.56 | 2.68 | 146.5** | 1039.7** | 2.9 |
| High parental monitoring | .42 | .84 | 1.46 | | | |
| Low parental support | .98 | 1.38 | 2.34 | 103.6** | 163.9** | .29 |
| High parental support | .67 | 1.03 | 2.02 | | | |
| Low grade point average | 1.05 | 1.50 | 2.43 | 169.9** | 670.6** | 6.2** |
| High grade point average | .48 | .69 | 2.31 | | | |

* $p < .05$. ** $p < .01$.

abused than for those who were never abused, but the interaction term was not significant when the currently abused males were compared with the males in the other two groups. The interaction term involving GPA was not significant.

Comparison of Background and Current Family Contexts of Adolescents with Varying Sexual Abuse Histories

As the previous analyses showed, victims of sexual abuse are less likely to experience problem outcomes such as binge drinking and suicidal ideation if they have supportive relationships, are closely monitored, and are successful in school. Although a supportive family context may be especially valuable to victims of sexual abuse, we expected that victims of sexual abuse would be less likely than those without a history of sexual abuse to experience supportive family contexts and success in school. We also expected that they would be more likely to have experienced physical abuse. A series of cross-tabulations were con-

ducted to compare the background and current circumstances of adolescents in the three sexual abuse groups (current, prior, and never abused). The results of these analyses are presented in Table 6.

The results show that victims of sexual abuse, particularly those who are currently in abusive situations, are more likely to have to been physically abused and are less likely to experience a supportive family context. In addition, they are less likely to have high grades in school. The findings were similar for female and male adolescents. The one finding that is somewhat surprising is that a slightly higher percentage of males who reported currently experiencing sexual abuse had high GPAs than males who experienced sexual abuse at a prior time (36% vs. 30%).

For the purposes of these analyses, we treated family structure as a dichotomous variable—two biological or adoptive parents versus all other family types. Biological and adoptive parents were grouped together as one possible response category in the survey and, therefore, could not be

TABLE 5. MEAN SUICIDAL IDEATION SCORES FOR MALES GROUPED BY SEXUAL ABUSE HISTORY AND LEVEL OF THE MODERATOR VARIABLE

| Moderator Variable | Never Sexually Abused | Prior Sexual Abuse | Current Sexual Abuse | F for Main Effect of Sexual Abuse | F for Main Effect of Moderator Variable | F for the Interaction |
|--------------------------|-----------------------|--------------------|----------------------|-----------------------------------|---|-----------------------|
| Physical abuse | .71 | 1.20 | 2.53 | 541.8** | 817.9** | 27.8** |
| No physical abuse | .25 | .63 | 1.33 | | | |
| Low parental monitoring | .42 | 1.11 | 2.24 | 779.7** | 455.8** | 8.6** |
| High parental monitoring | .18 | .81 | 1.51 | | | |
| Low parental support | .48 | 1.14 | 2.04 | 536.5** | 506.3** | 3.2* |
| High parental support | .21 | .68 | 1.74 | | | |
| Low grade point average | .38 | 1.07 | 2.10 | 839.9** | 231.3** | 2.9 |
| High grade point average | .21 | .77 | 2.10 | | | |

* $p < .05$. ** $p < .01$.

TABLE 6. COMPARISONS OF THE BACKGROUND AND FAMILY CHARACTERISTICS OF ADOLESCENTS WITH VARYING SEXUAL ABUSE HISTORIES (BY PERCENTAGE)

| | Never Sexually Abused | Prior Sexual Abuse | Current Sexual Abuse | Phi |
|--|-----------------------|--------------------|----------------------|-------|
| Females | | | | |
| History of physical abuse | 12 | 43 | 61 | .29** |
| High parental monitoring | 60 | 45 | 31 | .11** |
| High parental support | 70 | 58 | 41 | .09** |
| High grade point average | 63 | 46 | 37 | .11** |
| Living with two biological or adoptive parents | 73 | 48 | 47 | .18** |
| Mother's education | | | | .11** |
| Less than high school | 3 | 9 | 18 | |
| Postsecondary education | 48 | 41 | 39 | |
| Father's education | | | | .09** |
| Less than high school | 5 | 11 | 17 | |
| Postsecondary education | 50 | 41 | 35 | |
| Males | | | | |
| History of physical abuse | 11 | 51 | 67 | .26** |
| High parental monitoring | 42 | 34 | 16 | .06** |
| High parental support | 72 | 50 | 33 | .11** |
| High grade point average | 46 | 30 | 36 | .05** |
| Living with two biological or adoptive parents | 70 | 49 | 52 | .08** |
| Mother's education | | | | .04** |
| Less than high school | 3 | 7 | 8 | |
| Postsecondary education | 49 | 47 | 50 | |
| Father's education | | | | .05** |
| Less than high school | 5 | 11 | 11 | |
| Postsecondary education | 51 | 47 | 50 | |

** $p < .01$.

separated for purposes of analysis. The analyses showed that victims of sexual abuse were less likely to live with two biological or adoptive parents than in other family structures. Parental education was recoded into three categories for this analysis—less than a high school education, high school graduate, and some postsecondary education or more. Adolescents with a history of sexual abuse were more likely to live with a parent who had not completed high school. However, the relation between parental education and sexual abuse was not strong, especially for males. For all of these analyses, the phi coefficients were modest. The highest coefficient for both males and females was for the relationship between sexual abuse and physical abuse.

DISCUSSION

This study explored the relationship between sexual abuse history and problem outcomes in adolescence and examined factors that increased or decreased the likelihood that victims of sexual abuse will engage in binge drinking or experience thoughts of suicide. Like earlier studies of adults, this study shows a clear relationship between sex-

ual abuse history and alcohol abuse and suicidal ideation among adolescents.

Unlike most earlier studies that focused on adult survivors of abuse or samples of children or adolescents identified through the legal or social service system after disclosure of the abuse, it was possible in this study to focus on a representative subsample of adolescents who reported current abuse. For both males and females, the mean scores on the problem indices tended to be about twice as high for the currently abused group as for the prior abuse group; those in the prior abuse group were, in turn, more likely to engage in binge drinking and have suicidal thoughts than those in the never abused group.

Of even greater interest to us was the role that other factors played in exacerbating or ameliorating the effects of sexual abuse. Not surprisingly, the data showed that teens who experienced physical abuse in addition to sexual abuse showed more problems than those who experienced only one type of abuse. For females, the effect of physical abuse on binge drinking appeared to be greatest for those who were currently sexually abused. Among males, physical abuse increased the frequency of suicidal thoughts the most for those

who were currently experiencing sexual abuse; for binge drinking, physical abuse tended to affect all three groups of males similarly.

We were particularly interested in resilient adolescents and the role that families may play in promoting positive outcomes in victims of sexual abuse. The results showed that the current family context was important for predicting the extent of problematic outcomes. High parental monitoring was associated with a decreased risk of problems among teens generally and particularly among teens in the current abuse group. This was true for both outcomes for female participants and for suicidal ideation for males. It is not clear why parental monitoring would have an effect on suicidal ideation. We suspect that parental monitoring is a proxy for other family processes (e.g., parental concern and involvement and consistent enforcement of rules), which may actually account for the lower levels of suicidal ideation among teens who are closely monitored.

For females, parental support reduced the risk of both problem outcomes the most for those who were currently being abused. In other words, when those with high levels of parental support were compared with those with low levels of parental support, the largest differences in mean scores on the outcomes were found among the group of female adolescents who were currently being abused. High parental support was associated with better outcomes for females in both the prior abuse group and the never abused group, as well. However, the differences in the mean binge drinking and suicidal ideation scores of those with high and low levels of parental support were smaller for the never abused group and the prior abuse group than they were for the currently abused group. For males, the results were not as straightforward. Parental support reduced the risk of binge drinking about equally for all three abuse groups. For suicidal ideation, parental support appeared to have a greater impact on those in the prior abuse group than on adolescents currently abused or those who had never been abused.

For females, the interaction between sexual abuse and GPA was significant when suicidal ideation was the outcome. For males, there was a significant interaction between sexual abuse and GPA for binge drinking. In both analyses, a high GPA appeared to have the most positive effect on those in the prior abuse group. Moreover, a review of the cell means shows that success in school had no discernable effect on the rates of suicidal ideation among females or males who

were currently abused, even though there was a significant main effect for school success for both males and females.

Because of the questions we posed, we have focused mostly on the interactions between sexual abuse history and the moderating variables. However we also should call attention to the fact that there was a significant main effect for each of the moderating variables for both outcomes and both genders, and these effects also clearly have developmental significance. Regardless of sexual abuse history, adolescents were less likely to have suicidal thoughts or to engage in binge drinking if they had supportive relationships and were closely monitored by parents. Success in school also was associated with fewer problems among adolescents generally. A history of physical abuse increased the risk of problem outcomes for all sexually abused groups. Thus, the variables selected as moderator variables not only affected the relationship between sexual abuse and the two outcomes of interest in most analyses, but also predicted individual differences in the two outcomes after the effects of sexual abuse were taken into consideration.

In several analyses, those currently being abused appeared to benefit the most from supportive family contexts. Unfortunately, the analyses presented in Table 6 show that these were the adolescents who were least likely to experience favorable circumstances. They were also least likely to excel in school. The experience of sexual abuse is likely to contribute to poorer performance in school, especially when the abuse is occurring. The anxiety and intrusive thoughts often reported by victims of sexual abuse also may contribute to poor school performance long after the sexual abuse has stopped.

Although the data set provided a unique opportunity to explore the relations among the variables of interest with an unusually large and fairly representative sample, we also would like to note possible limitations of the data. First, the data were collected in one Midwestern state, and the sample is predominantly Caucasian. Further research is needed to determine if the results of this study are generalizable to other groups from other regions of the country. Second, as with any self-report survey, we have no way to verify the accuracy of the adolescents' self-reports. It would be valuable to have additional information about the adolescents, their circumstances, and their histories of abuse from another source, but it would not be practical to collect such data in large scale surveys like the ones used for this study.

A third limitation is that several other factors that may influence adolescents' responses to sexual abuse could not be examined with the available data. For example, we have no information on the perpetrator, the length of the abuse, or the nature of the sexual abuse (e.g., unwanted touching vs. rape). It is possible that the recency of abuse is confounded with duration of abuse. Those who are currently being abused may have been abused longer than those who reported prior abuse, and we cannot sort out the independent contributions of these two variables with the available data. The response categories to the question about sexual abuse also did not permit us to identify any adolescents who are currently being abused and who were abused at an earlier time, possibly by another perpetrator.

It also would be helpful to know if the perpetrator was a family member, particularly the father. However, findings from a prior study using a national probability sample indicate that parents are typically not the perpetrators of sexual abuse (Finkelhor et al., 1990). In the Finkelhor study, the identified perpetrator was not a parent for any of the 169 men who reported a history of sexual abuse. For women, the natural father was the perpetrator for 3% of the 416 women who had been sexually abused; a stepfather was the perpetrator in 3% of the cases.

We also do not know if the abuse has been disclosed, and what the response was from family members and the legal system for those who did disclose. Recent research has shown that the handling of the case by the legal authorities can exacerbate or ameliorate the trauma children experience (Henry, 1994; Kendall-Tackett et al., 1993; Runyan, Everson, Edelson, Hunter, & Coulter, 1988). As Henry points out, children may feel betrayed by the system when they are repeatedly interrogated about their painful experiences once the abuse is disclosed. In contrast, if protective services workers, prosecutors, or others involved in the case are unusually sensitive and supportive, victims of abuse report less trauma.

Although we made frequent references to main effects and interaction effects when discussing the ANOVA results, we also should clarify that it is not possible to determine causal relations with the available data. In fact, as Kendall-Tackett and her colleagues (1993) noted, some researchers have proposed that the poor outcomes observed in victims of sexual abuse may be due to family dysfunction or a general environment of maltreatment, rather than to the experience of sexual

abuse itself. However, there are a number of findings reported by Kendall-Tackett and colleagues that suggest that the relationship between sexual abuse and problem outcomes cannot be explained completely by a third variable like family dysfunction. For example, victims of sexual abuse tend to show more problems than their nonabused siblings who are raised in the same families. Moreover, the fact that the nature of the sexual abuse (e.g., use of force, penetration) tends to predict problem outcomes argues against viewing abuse history as simply a proxy for family dysfunction.

Although the moderating variables were associated with the two outcomes of interest in predictable ways, we also do not know if these associations reflect causal processes. For example, success in school tended to be associated with fewer problems among victims of sexual abuse, especially in cases of prior abuse. It is possible that school success contributes to fewer problems among adolescents who have been victims of abuse, but it is also possible that both school success and positive adjustment among these adolescents (i.e., not being suicidal or not engaging in binge drinking) are explained by a third variable (e.g., a resiliency factor).

In conclusion, the data from this study showed a very clear relationship between sexual abuse and problems in adolescence. Unlike most earlier studies that focused primarily on females, this study indicated that the relationships between sexual abuse and problems in adolescence are similar for both sexes, at least for the two outcomes we studied. Another unusual feature of this research was the opportunity to study adolescents who were currently experiencing abuse (and presumably were not involved with the legal system yet). Those currently experiencing abuse exhibited, by far, the poorest outcomes of the three groups. However, those who were currently abused also appeared to benefit the most from a supportive family context and to experience the most negative consequences from a history of physical abuse.

Even though a very large sample is needed to do this type of research, future research needs to continue to probe the reasons why some abused adolescents are functioning better than others. Although the results are consistent with the view that the effects of abuse are devastating for many adolescents, they also indicate that poor outcomes are not inevitable for victims of abuse. More information about what leads to successful coping

among victims is needed. This type of research is likely to be valuable to both those who study risk and resilience and those who work directly with victims of sexual abuse and their families.

NOTE

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