The Impact of Childhood Abuse and Neglect on Adult Mental Health: A Prospective Study*

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This paper examines the impact of three types of victimization in childhood—sexual abuse, physical abuse, and neglect—on lifetime measures of mental health among adults. In contrast to research that relies on retrospective recall of childhood victimization, this work uses a prospective sample gathered from records of documented court cases of childhood abuse and neglect in a midwestern city around 1970. These subjects were interviewed about twenty years later. In addition, this research compares outcomes of the 641 members of the abuse and neglect group with a matched control group of 510 persons who did not have documented cases of abuse or neglect. The results indicate that men who were abused and neglected as children have more dysthymia and antisocial personality disorder as adults than matched controls, but they did not have more alcohol problems. Abused and neglected women report more symptoms of dysthymia, antisocial personality disorder, and alcohol problems than controls. After controlling for stressful life events, however, childhood victimization had little direct impact on any lifetime mental health outcome. This research indicates the importance of adopting an approach that places childhood victimization in the context of other life stressors and of prospective changes over the life course.

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Few associations in the mental health literature are as well established as the relationship between child abuse and neglect and adverse psychological consequences among adults (e.g. Browne and Finkelhor 1986; Kendall-Tackett, Williams, and Finkelhor 1993; Polusny and Follette 1995; Kessler et al.1997). Adults who report experiences of abuse and neglect as children, compared to those who do not, also report considerably higher rates of virtually every type of psychopathology including depression, anxiety, drug and alcohol disorders, personality disorders, and generalized distress. The evidence led the President's Commission on Mental Health to
conclude that severe traumas in childhood have profound, enduring effects into adulthood (U.S. Department of Health and Human Services 1999: 231). Nevertheless, the many studies of childhood victimization and adult mental health suffer from a number of serious theoretical and methodological limitations.

Theoretically, most studies of the consequences of childhood victimization are implicitly or explicitly limited in two major ways. First, they conceive of early victimization as an isolated event that can be considered with little regard to the structural context in which it occurs (e.g. Herman and Schatzow 1987; Wyatt and Powell 1988; Terr 1994; Weiss, Longhurst and Mazure 1999). As Briere (1992) notes, for studies of childhood sexual abuse, “there has been a tendency for investigators to examine sexual abuse in a relative vacuum” (p. 199). Yet, a considerable body of research indicates that life experiences, including those that occur in childhood, do not occur in isolation from socio-economic, familial, and relational contexts (Pearlin 1989; Aneshensel 1992; Turner, Wheaton, and Lloyd 1995; Turner and Lloyd 1995). Childhood victimization is typically part of a matrix of environmental problems such as poverty, unemployment, parental alcohol and drug problems, and inadequate family functioning (Straus and Gelles 1989; Widom and White 1997; Kruttschnitt, McLeod, and Dornfeld 1994).

The unique contribution of childhood victimization to later symptomatology, after taking into account conditions such as family disruptions and stressors, persistent poverty, and broader patterns of social deprivation, is not well understood (Mullen et al. 1993).

A related theoretical deficiency of most studies of childhood victimization is the assumption that there is a simple causal direction leading from childhood abuse and neglect to mental health outcomes in later life. In contrast, a life course perspective assumes that the influence of childhood experiences is contingent upon historical changes across the lives of affected individuals (Elder, George, and Shanahan 1996; Gotlib and Wheaton 1997; Elder 1998). Traumatic events that occur in the early stages of the life course are unlikely to have uniform and straightforward mental health impacts in later stages of life, regardless of subsequent social conditions (Brown 1986; Kagan 1998). Several studies show that the lasting impact on adults of childhood experiences—such as growing up with a mentally ill parent (Rutter and Quinton 1984), placement in official care settings (Quinton and Rutter 1984), and the death of a parent in childhood (Brown, Harris, and Bilfultco 1986; Umberson and Chen 1994)—depends on later factors such as the strength of adult marriages and other social relationships, educational and occupational attainment, and the adequacy of family functioning. We know very little, however, about how subsequent stressors and life trajectories shape the later mental health consequences of childhood victimization (Bifulco, Brown, and Adler 1991).

Research on the impact of childhood traumas also suffers from important methodological limitations (Widom 1989a). Almost all evidence about how childhood experiences affect later mental health stems from responses of adults to questions about their experiences of abusive events as children. Retrospective reporting should not have a major impact on the accurate recall of discrete and objective events such as the loss of a parent through death or divorce (Brown et al. 1986; McLeod 1991; Kessler and Magee 1994). In contrast, issues of recall of childhood victimization, especially of sexual abuse, are highly controversial (Russell 1983; Ofshe and Watters 1994; Loftus 1993; Williams 1994; Hacking 1995; Freyd 1996; Lindsay and Briere 1997). Abusive events in early life are not encoded in memory as objective occurrences, but recollections of what constitutes abusive experiences in the past change in light of later events and definitions of abuse (Loftus 1993; Prager 1998). The almost exclusive reliance on retrospective data to establish the mental health effect of childhood traumas raises issues about the reliability of the findings of existing studies (Widom and Shepard 1996; Widom and Morris 1997).

Most research about the traumatic impact of childhood abuse is not only retrospective but is also cross-sectional. Because studies obtain measures of prior abusive events and current states of mental health at the same time, present states of mental health may influence people’s recollections of the occurrence of past traumatic events (Brown and Harris 1978). In general, people with poor mental health have a bleaker view of the world, including their prior life course, than those with higher psychological well-being (Coyne 1976; Beck et al. 1979; Burbach and Bordin 1986). Thus, they may be more likely to engage in what Brown and
Harris (1978) call “effort after meaning” and interpret earlier events as abusive in order to explain their current psychological problems and life difficulties. The uniformly high correlation between later mental health and past childhood abuse might in part result from factors having to do with the past and the present, thus blurring the temporal order between recalled childhood events and subsequent psychological outcomes. Prospective studies, however, can overcome some of the problems that stem from retrospective reports of childhood adversities (Kessler et al. 1997).

The inadequate samples that most studies rely on also seriously limit the conclusions we can draw about the later impacts of childhood trauma. Most studies use samples of college students, patients in clinical treatment, or respondents to newspaper advertisements (e.g. Herman and Schatzow 1987; Rind, Tromovitch, and Bauserman 1998; Weiss et al. 1999; Heim et al. 2000). Few include adequate control groups of equivalent but non-victimized children. Yet high rates of pathology among adults who were abused as children are only meaningful when these rates are higher than comparable, non-abused groups. Controls are especially necessary because rates of childhood abuse and neglect are particularly high among disadvantaged populations that also have poor mental health as adults (Straus and Gelles 1989; Mullen et al. 1993; Kruttschnitt et al. 1994). A third factor such as disadvantaged socio-economic circumstances or family adversities may lead to both abuse in childhood and to poor adult mental health. The lack of control groups of non-abused children from comparable backgrounds precludes establishing the effect of abuse, as opposed to the impact of the matrix of socio-economic disadvantage within which abuse may occur on later states of mental health.

A final methodological limitation of existing research on the impact of childhood victimization on later mental health lies in the limited nature of the outcome variables used to indicate mental health (Kessler et al. 1997). Many studies only use measures of internalized mental health outcomes, especially depression (Weiss et al. 1999). Yet the use of single outcome variables can systematically distort comparisons of mental health impacts of victimization between different social groups (Aneshensel, Rutter, and Lachenbruch 1991; Horwitz, White, and Howell-White 1996). Males and females, for example, may react in different ways to childhood stressors. Hence, the finding that women who report childhood abuse are more likely than abused males to report depression as adults (Weiss et al. 1999) may stem from the failure to measure male-related outcomes such as alcohol problems or criminal behavior. The need to use a variety of outcome variables is especially important in considering the impact of child abuse and neglect because there is little research that compares the consequences of childhood victimization for males and females separately (Widom 2000).

The current study is designed to overcome some of the limitations of past attempts to demonstrate the impact of adverse circumstances in childhood on subsequent mental health. The data are prospective rather than retrospective. They also stem from cases of childhood abuse and neglect based on documented cases that occurred independently of subsequent states of recall. The group that experienced childhood abuse or neglect is matched with a group of children from comparable environments who did not have court documented cases of childhood victimization. The study also assesses the extent to which subsequent lifetime and past year stressors affect the relationship between early trauma and later mental health. Finally, the data include several mental health outcomes that reflect a diversity of possible consequences of childhood abuse and neglect on lifetime measures of mental health.

This paper has three goals. First, it examines whether experiences of childhood abuse and neglect are related to subsequent mental health using a prospective-cohorts design and a matched comparison group. Second, it tests the extent to which stressful life events alter the relationship between childhood trauma and subsequent mental health. Finally, it assesses whether the impact of childhood abuse is similar or different for abused males and females. In these ways, we hope to better specify the conditions under which traumatic events that occur early in the life course become risk factors for later states of mental health.

METHODS

Sample

Nature of the sample. The data used in this...
study stem from a large group of children who were abused or neglected between the years of 1967 to 1971 (Widom 1989b; Widom and White 1997). Cases were drawn from the records of county juvenile and adult criminal courts in a midwestern city. The sample consists of court-substantiated cases involving the physical abuse, sexual abuse, or neglect of a child under the age of eleven during this period. A control group for the maltreated group was developed through the use of school records to create a matched child of the same sex, race, date of birth (+ or -6 months), grade in elementary school, and home address within a five-block radius. County birth records were used to match children who were not yet of school age with children of the same sex, race, date of birth (+ or -1 week), and hospital of birth. In 11 cases, controls were found to have official records of neglect or abuse; these cases were eliminated from the sample. Matches were obtained for 74 percent of the maltreated group. The control group establishes the base rate of pathology we would expect in a sample of adults from comparable circumstances who did not come to court attention in childhood as victims of abuse or neglect.

Approximately 20 years after the time of documented abuse or neglect, between 1989 and 1995, both the maltreated and the control subjects were located and interviewed using a double blind approach. Interviewers were blind both to the purpose of the study and to whether subjects were members of the maltreated or the control group. Subjects were told they were participating in a study of persons who grew up in the area during the late 1960s and early 1970s, so they were also blind to the purpose of the research.

The original sample from the 1967–1971 years consisted of 1,575 persons, 908 obtained from court records and 667 from controls. Of these, 1,307 (83%) have been located and 1,196 (76%) interviewed between 1989 and 1995. Of the persons who were not interviewed, 43 were deceased, 8 were incapable of being interviewed, 268 could not be located, and 60 refused to participate (a refusal rate of 3.8%). There are no significant differences in the interview compared to the initial sample in terms of age or the percentage male, percentage white, victims of abuse or neglect, or poverty in childhood census tract. The interviewed group is somewhat more likely to have an official criminal arrest record than the original sample (50% vs. 45%), most likely because people with a criminal history are easier to locate through the use of official records. The data in this paper stem from the 1,151 individuals (641 maltreated and 510 controls) for whom complete or near complete data are available on the variables used here.

Sample characteristics. About half of the sample (48.7%) is female and about two thirds is white (62.9%). The mean age of the sample at the time of the interview was 28.7 (SD = 3.84). Sample members completed an average of 11.47 (SD = 2.19) years of school, indicating a relatively low socioeconomic status. Based on the Hollingshead Occupational Coding Index (Hollingshead 1975) that ranges from 1 (laborer) to 9 (professional), the median occupational level was semi-skilled worker. Less than 7 percent of the overall sample was in levels 7–9 (managers to professionals). The control group had higher occupational attainment (p < .001) and more education (12.09 years) than the maltreated group (10.99 years) (p < .001).

Measures

Independent Variables. Childhood victimization experiences include three types, all of which are determined from official court records. As noted below, court records may contain systematic biases and do not encompass cases of victimization that do not come to public attention (Widom 1988). Physical abuse cases involved injuries such as bruises, welts, burns, abrasions, lacerations, wounds, cuts, bone and skull fractures, and other evidence of physical injury. Sexual abuse cases were based on legal charges including “assault and battery with intent to gratify sexual desires,” “fondling or touching in an obscene manner,” sodomy, rape, and incest. Finally, neglect cases indicate a judgment that parental care was severely deficient in the provision of food, clothing, shelter, and medical attention below community standards at the time.

The measure of lifetime events sums the number of stressful life events respondents experienced in their lifetimes. It is adapted from Cochrane and Robertson (1973), with modifications that Egeland and Deinard (1975) suggest. It includes the following 14 events: unemployment, fired from more than
one job, held three or more jobs within a five year period, money problems, homelessness, birth or fathering of a child, child care problems, divorce, separation, death of a parent, parent or sibling ever had a drug or alcohol problem, and parent or sibling ever arrested. Each event is coded one if respondents experienced it and 0 if they did not. Respondents also reported how many of nine additional events they experienced in the year prior to the interview such as hospitalizations, increasing number of arguments with spouses or partners, trouble with other relatives, custody problems, and problems surrounding pregnancy and abortion. On average, respondents experienced 9.39 of the possible 23 adverse events.

We also use three demographic variables. Parents on welfare is a dichotomous measure indicating whether the subject’s parents were on welfare for any amount of time during their childhood (coded 1) or did not receive welfare (coded 0). This variable serves as a proxy for socio-economic status in this disadvantaged sample. Age is a continuous measure of a respondent’s age at the time of interview. Race is coded 1 for white and 0 for black.

Outcome variables. Mental health assessments were gathered through the National Institute of Mental Health Diagnostic Interview Schedule (DIS-III-R), a structured interview that provides computer-generated psychiatric assessments based on DSM-III-R criteria (Robins et al. 1989). We use three indicators of states of mental health that rely on measures of whether respondents have ever experienced various symptoms over their lifetimes. We use measures of lifetime, rather than of current, mental health because the latter measures are highly responsive to immediate life circumstances and so can mask long term but fluctuating mental health effects of childhood experiences. In addition, reliance on current outcome measures would eliminate persons who suffered form adverse psychological consequences that were not ongoing at the time of the interview. The use of lifetime measures, however, raises issues of cause and effect. Although we know that in nearly every case the occurrence of symptoms follows, rather than precedes, childhood victimization (see below), our reliance on lifetime diagnoses of mental health means that we cannot use these data to untangle the causal sequences between states of mental health and various stressors over the life course.

The first mental health measure is dysthymia. Dysthymia refers to a pattern of depressed symptoms that has persisted for “most of the day more days than not” for at least a two-year period (American Psychiatric Association 1987, 349). Its symptoms include difficulties in eating and sleeping, low self-esteem, fatigue, poor concentration, and hopelessness. Dysthymia is distinguished from depression by the more chronic and longer-lasting nature of its symptoms and its lesser intensity than major depression. The longer duration of dysthymic symptoms may make dysthymia a more appropriate indicator than depression because this paper’s purpose is to establish the long-term mental health consequences of childhood events rather than adult outcomes that may be more responsive to immediate social circumstances. Eighty percent of persons with diagnoses of dysthymia report the onset of their first symptom at age eleven or later.

Alcohol abuse or dependence is defined by symptoms described in the DSM-III-R (American Psychiatric Association 1987, 181). A positive diagnosis of alcohol abuse or dependence requires the presence of at least three of the following nine symptoms: alcohol taken in larger amounts or over a longer period than the person intended; persistent desire or one or more unsuccessful efforts to cut down or control substance use; a great deal of time spent in activities necessary to get the substance, take the substance, or recover from its effects; frequent intoxication or withdrawal symptoms when expected to fulfill major role obligations of work, school, or home; important social, occupational, or recreational activities given up or reduced because of use; continued use despite knowledge of having a persistent or recurrent social, psychological, or physical problem that is caused or exacerbated by use; marked tolerance and need for markedly increased amounts of the substance; characteristic withdrawal symptoms; and frequent use to relieve or avoid withdrawal symptoms. In addition, the diagnosis of alcohol abuse or dependence requires that some symptoms of the disturbance have persisted for at least one month or have occurred repeatedly over a longer period of time. The youngest age of a reported alcohol abuse symptom was thirteen, and so every symptom and diagnosis of alcohol abuse or dependence necessarily follows any documented childhood victimization.
Antisocial Personality Disorder is also defined through DSM-III R criteria. A diagnosis requires the demonstration of at least three out of twelve behaviors—such as truancy, fighting, and physical cruelty—before age 15 and at least four of ten behaviors since age 15, such as potentially criminal acts, fighting, lying, and impulsivity (American Psychiatric Association 1987, 344–46). The criteria for antisocial personality disorder mean that, by definition, diagnoses of this disorder are subsequent to the age of official victimization.

The use of diagnostic measures of mental health that categorize respondents into those having or not having a disorder has become increasingly common (e.g. Kessler et al. 1994; Miech et al. 1999). The consequences of social stressors, however, might be gradations of distress rather than distinct, categorical disorders (Pearlin 1989). Using diagnoses as measures can limit the information available from traits that are continuous in nature (Mirowsky and Ross 1989). We present both dichotomous diagnoses and continuous measures that sum the number of symptoms of dysthymia, alcohol abuse or dependence, and antisocial personality disorder. To reduce skewness, we use the logarithmic transformation of each continuous outcome.

Because our substantive interest is in the sex-specific consequences of childhood abuse and neglect, we present all results separately for males and females. There are significant differences between men and women in both number of symptoms and diagnoses for each of the three outcome variables: Women report more dysthymia and fewer alcohol problems and antisocial personality disorders than men (tables not shown).

FINDINGS

Table 1 presents the means and tests of significance for the differences between the maltreated group and the control group in the variables considered here. For men, the results show significant differences between the maltreated and control groups for two of the three outcome measures. Abused and neglected males, compared to control males, report more dysthymia and antisocial personality disorder in both the symptom and diagnostic measures. There are no significant differences in numbers of lifetime alcohol symptoms or diagnoses of alcohol abuse or dependence between male victims of childhood abuse and neglect and the control group. Female victims of child abuse and neglect, compared to control females, report more symptoms of all three outcomes and also have more diagnoses of alcohol abuse or dependence. There are no differences in diagnoses of dysthymia or of antisocial personality disorder between women in the maltreated and control groups, although the result for antisocial personality disorder for women is significant at the \( p < .10 \) level.

These prospective results indicate that victims of early childhood abuse and neglect report worse mental health as adults compared to controls when documented cases of childhood victimization are used, although the consequences of childhood victimization depend on the outcome measure used. Table 1 also indicates that both men and women who were victimized as children report more stressful life events over their lifetimes than the control sample, suggesting that early child abuse and neglect is part of a broader constellation of life stressors. In addition, abused and neglected males and females are more likely than controls to have grown up in families that received welfare, possibly indicating that officially reported childhood victimization co-occurs with particularly disadvantaged circumstances. Finally, there are no racial or age differences between the abused and neglected and control groups.

The results in Table 1 also indicate that the rates of dysthymia, alcohol abuse or dependence, and antisocial personality disorder in the control and, especially, in the abuse/neglect group are considerably higher than the rates found in the general population (Robins et al. 1984; Kessler et al. 1994). For example, the lifetime rates of dysthymia, alcohol dependence, and antisocial personality disorder in a nationally representative population sample are 6.4 percent, 14.1 percent, and 3.5 percent compared to 14.6%, 54.3%, and 17.9% in the maltreated group and 8.2 percent, 51.1 percent, and 11.2 percent in the control group (Kessler et al. 1994). These differences most likely indicate the disadvantaged social circumstances in both our sample groups compared to the general population.

We use hierarchical regressions to determine the impact of childhood victimization on the continuous measures of lifetime mental health. At the first step, we enter the socio-
demographic measures of age, race, and parental welfare receipt. The second step compares respondents who suffered any childhood victimization (sexual abuse, physical abuse, or neglect) to the control group after controls for demographics. The final step enters the occurrence of lifetime stressors. The second panel of each regression shows the results of comparable logistic regressions with the dichotomous diagnostic outcomes. All results from the regressions are shown separately for males and females.

Table 2 shows the impact of early abuse and neglect and other stressors on dysthymia. Panels A and C show the results for the continuous measure of dysthymic symptoms, and Panels B and D show the results of logistic regressions on the dichotomous diagnostic outcome of dysthymic diagnoses for men and women, respectively. As expected from past studies, membership in the abused or neglected group significantly predicts more lifetime dysthymic symptoms for both men and women, net of controls for the demographic variables. However, at the final step, when the occurrence of lifetime stressors is included in the regression, the impact of early child abuse and neglect on symptoms of dysthymia becomes negligible for both men and women. The measure of lifetime stressors is far more strongly related to dysthymic symptoms than is childhood abuse and neglect. At the final step, there are few impacts of the demographic variables on either outcome: Both males growing up in families that received welfare and older females have fewer dysthymic symptoms. These results suggest that stressful life events provide important contexts for how much impact childhood victimization will have on lifetime mental health.

Panels B and D of Table 2 indicate some differences in the impact of childhood abuse and neglect and stressors on diagnostic compared to symptom measures of dysthymia. Abused and neglected males have more dysthymic diagnoses compared to same sex controls, but abused and neglected females do not. The significant association of childhood victimization and diagnoses of dysthymia for men remains after controls for lifetime stressors. Stressful life events are strongly related to dysthymic diagnoses for both men and women. None of the socio-demographic indicators are related to dysthymic diagnoses for men, while older females receive more of these diagnoses. Finally, in the full sample, the sex by abuse interaction term is marginally significant in predicting dysthymic symptoms ($p = .083$) so that the impact of being abused or neglected is stronger for women than men and not quite significant in predicting diagnoses of dysthymia ($p = .102$). This interaction suggests the impact of abuse and neglect on diagnosis is stronger for men than for women (results not shown). 

In population samples, dysthymia is consistently more prevalent among women than men (Weissman et al. 1991; Kessler et al. 1994). The predominance of dysthymia among male victims of childhood abuse and neglect, com-
### Table 2. OLS and Logistic Regressions of Lifetime Dysthymia (logged) on Demographics, Childhood Abuse and Neglect and Lifetime Events, by Sex

<table>
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<tr>
<th></th>
<th>Male (N = 587)</th>
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<th>Female (N = 561)</th>
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<tr>
<td></td>
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<td>.086</td>
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<td>.823***</td>
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† p < .1; * p < .05; ** p < .01; *** p < .001

Note: Standardized coefficients in parentheses
pared to male controls, but not among comparable females suggests that childhood victimization might be related to gender-anomalous mental health outcomes among men.

The next regressions in Table 3 report the results when the same models are used to test the impact of childhood victimization on lifetime alcohol abuse or dependence among adults. Surprisingly, men who were abused or neglected as children do not report more problematic symptoms of alcohol use over their lifetimes, compared to control males. Nor do abused and neglected males receive more diagnoses of alcohol abuse or dependence than comparison males. When lifetime stressors enter the regression, males in the maltreated group actually report significantly fewer symptoms of alcohol problems than the control group ($p < .05$). Similarly, the inverse association between diagnoses of alcohol abuse or dependence and abuse or neglect for men is of marginal statistical significance ($p = .08$).

Further analyses of these relationships indicate that only abused and neglected men with few life events are less likely to report problems with alcohol than controls. In contrast to the findings for males, abused and neglected females do report more symptoms related to alcohol problems than control females. Likewise, the association between more diagnoses of alcohol abuse or dependence among abused and neglected women, compared to controls, is nearly statistically significant ($p = .06$). These associations, however, disappear when lifetime stressors enter the regression in the third step.

For both men and women, lifetime stressors are strongly related to both continuous and diagnostic measures of alcohol abuse or dependence. In addition, whites consistently report more alcohol problems than blacks at each step of the regressions for both sexes and both outcome measures. Neither age nor parental welfare status is related to alcohol abuse or dependence.

As with dysthymia, these results for alcohol abuse or dependence indicate gender anomalous outcomes of childhood victimization. In population samples, diagnoses of alcohol abuse and dependence are usually more than 200 percent higher among men than women (Helzer, Burnam, and McEvoy 1991; Kessler et al. 1994). In this sample, net of socio-demographic variables and lifetime stressors, abused and neglected males report fewer alcohol problems than male controls, while abused and neglected females report more of these symptoms than female controls. In the full sample, there is a significant interaction between sex and victimization for both the symptoms and diagnostic measures of alcohol abuse or dependence.

Table 4 reports the results when the same regressions are conducted for antisocial personality disorder. Both males and females who suffered child abuse or neglect have more symptoms of antisocial personality disorder, and a higher proportion of males receive diagnoses of antisocial personality disorder than same sex controls. In every case, however, the significant relationships between childhood victimization and subsequent antisocial personality disorder disappear when controls for lifetime stressors are introduced. In contrast, lifetime stressors are strongly related to symptoms of antisocial personality disorder for both sexes. Race and age have little relationship to diagnoses of antisocial personality disorder.

Children of both sexes whose families received welfare also report more symptoms of antisocial personality disorder, and women whose families received welfare receive more diagnoses of antisocial personality disorder, although this relationship either disappears or reverses sign when the measures of stressors enter the regression. In contrast to the gender anomalous findings for the dysthymic and alcohol problems outcomes, both abused and neglected males and females report more symptoms of antisocial personality disorder than same sex controls, net of socio-demographic variables. In the full sample, there is no sex by abuse interaction for either the diagnostic or the symptom measures of antisocial personality disorder (results not shown).

**DISCUSSION**

A common and widespread assumption is that early abuse or neglect in childhood is directly related to poor mental health among adults (e.g., Finkelhor and Browne 1988; Kendall-Tackett, Williams, and Finkelhor 1993; Terr 1994; Weiss et al. 1999). Research based on retrospective reports of adults who recall past events consistently shows strong impacts of childhood stressors on adult mental health (e.g., Brown and Harris 1978; Browne and Finkelhor 1986; Turner and Lloyd 1995;
**TABLE 3. OLS and Logistic Regressions of Lifetime Alcohol Abuse/Dependence (logged) on Demographics, Childhood Abuse and Neglect and Lifetime Events, by Sex**

<table>
<thead>
<tr>
<th>Race (white = 1)</th>
<th>Panel A: Lifetime Symptoms</th>
<th>Panel B: Lifetime Diagnosis</th>
<th>Panel C: Lifetime Symptoms</th>
<th>Panel D: Lifetime Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male (N = 588)</td>
<td>Female (N = 561)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Race (white = 1)</td>
<td>.268***</td>
<td>.269***</td>
<td>.259***</td>
<td>.711***</td>
</tr>
<tr>
<td>(1.65)</td>
<td>(1.66)</td>
<td>(1.60)</td>
<td>(1.90)</td>
<td>(1.85)</td>
</tr>
<tr>
<td>Age</td>
<td>.011</td>
<td>.011</td>
<td>.010</td>
<td>.020</td>
</tr>
<tr>
<td>(0.56)</td>
<td>(0.55)</td>
<td>(0.51)</td>
<td>(0.035)</td>
<td>(0.035)</td>
</tr>
<tr>
<td>Welfare</td>
<td>.039</td>
<td>.047</td>
<td>-.089</td>
<td>-.015</td>
</tr>
<tr>
<td>(0.26)</td>
<td>(0.30)</td>
<td>(0.08)</td>
<td>(0.030)</td>
<td>(0.030)</td>
</tr>
<tr>
<td>Abuse/Neglect</td>
<td>-.027</td>
<td>-.141*</td>
<td>-.095</td>
<td>-.095</td>
</tr>
<tr>
<td>(.017)</td>
<td>(.091)</td>
<td>(.091)</td>
<td>(.103)</td>
<td>(.085)</td>
</tr>
<tr>
<td>Lifetime events</td>
<td>.068***</td>
<td>.347</td>
<td>.151***</td>
<td>.091</td>
</tr>
<tr>
<td>Intercept</td>
<td>.669**</td>
<td>.680**</td>
<td>.212</td>
<td>-.343</td>
</tr>
<tr>
<td>R²</td>
<td>.172***</td>
<td>.173***</td>
<td>.366***</td>
<td>.172***</td>
</tr>
</tbody>
</table>

† p < .10; *p < .05; ** p < .01; *** p < .001

Note: Standardized coefficients in parentheses
| Table 4. OLS and Logistic Regressions of Lifetime ASPD (logged) on Demographics, Childhood Abuse and Neglect and Lifetime Events, by Sex |
|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | Male (N = 588)  | Female (N = 561) |                  |                  |                  |                  |                  |                  |                  |
|                   | Panel A: Lifetime Symptoms | Panel B: Lifetime Diagnosis | Panel C: Lifetime Symptoms | Panel D: Lifetime Diagnosis |                  |                  |                  |                  |                  |
|                   | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 | Model 3 |
| Race (white = 1) | .007   | -.003  | -.020  | -.197  | -.230  | -.372  | -.088  | -.099  | -.121* | -.268  | -.298  | -.387  | -.055  | -.062  | -.075  |
| Age              | .007   | .007   | .006   | .008   | .008   | .008   | -.010  | -.009  | -.007  | -.022  | -.018  | -.011  | -.051  | -.044  | -.033  |
| Welfare         | .235***| .189** | -.036  | .584** | .463*  | .002   | .144*  | .098   | -.143* | .490   | .383   | -.201  | .092   | .063   | -.092  |
| Abuse/Neglect   | .172** | .123   | -.023  | .486*  | .100   | .113** (.577) | .235*** | .081   | (.149) | .591   | .208   | (.051) | (.11)  | (.112) |
| Lifetime events | .113** | .310*** | .333   | -.666* | -.888* | -.451*** | .129*** | .115*** | .235   | -.999  | -.241† | -.548*** | (.539) | (.539) | (.539) |
| Intercept       | 1.18***| 1.11***| .333   | -.666* | -.888* | -.451*** | 1.29*** | 1.15*** | .235   | -.999  | -.241† | -.548*** | (.539) | (.539) | (.539) |
| R²              | .154** | .188***| .568*** |         |         |         | .126*  | .193***| .536*** |         |         |         |         |         |         |

† p < .10; * p < .05; ** p < .01; *** p < .001

Note: Standardized coefficients in parentheses.
The Impact of Childhood Abuse and Neglect

Kessler and Magee 1993; Browning and Laumann 1997; Heim et al. 2000). In contrast to previous studies, the measures of childhood abuse and neglect used here stem from documented cases (officially recorded events) of childhood that are independent from the self-reports of adult respondents. In addition, adult mental health outcomes among this maltreated group are compared to outcomes among a matched control group from similar socio-economic backgrounds.

Our results indicate that childhood abuse and neglect have some impact on mental health over the roughly twenty years that encompass the span of this study. Adult men who were victims of sexual or physical abuse or severe neglect as children have more symptoms and diagnoses of dysthymia and antisocial personality disorder than matched controls. Both of these outcomes are, by definition, long-term conditions because the symptoms of dysthymia must persist for at least two years duration while those of antisocial personality disorder must include both childhood and adult behaviors. Adult women who were abused or neglected as children report more symptoms of dysthymia and antisocial personality disorder than same-sex controls. Abused and neglected women also report more lifetime symptoms of alcohol abuse or dependence, although they are not diagnosed with any of the three disorders more than controls.

These findings indicate that some impacts of early childhood victimization on adult mental health are not artifacts of retrospective recall or of the failure to use a matched comparison group. Adults who suffer sexual and physical abuse or severe neglect as young children are more likely to suffer from dystymic symptoms and to act out and adult women are more likely to have more symptoms of alcohol problems than persons who grew up in comparable environments but did not suffer from court substantiated cases of childhood abuse and neglect. The results, however, also clearly indicate that there is no consistent or straightforward relationship between abuse and neglect in early childhood and subsequent mental health effects. They show that much of the perceived impact of childhood victimization that other studies without control groups report is likely to stem from a matrix of disadvantage that abused and neglected children suffer from, only one part of which consists of the abuse and neglect itself (Kruttschnitt, McLeod, and Dornfeld 1994). Comparisons of only the abused and neglected group with national averages would show that the rates of dysthymia are more than double, rates of alcohol abuse or dependence are nearly four times higher, and rates of antisocial personality disorder are over five times higher than non-abused persons (Kessler et al. 1994). Yet rates of these disorders in the control group that also grew up in disadvantaged social circumstances also greatly exceed rates in random population samples, particularly for alcohol dependence and antisocial personality disorder. In fact, whether respondents were in the abused or neglected or control group explains less than 2 percent of the variance on each mental health outcome.14 Childhood abuse and neglect do result in adverse subsequent mental health outcomes, but these outcomes are not independent of broader socio-economic contexts (Aneshensel 1992; Mullen et al. 1993; Pearlman 1989; Turner et al. 1995).

The second purpose of this paper was to test the extent to which the occurrence of stressful life events affects the relationship between childhood victimization and subsequent mental health. The abused and neglected group reports not only more symptoms of psychopathology as adults than controls but also a greater number of lifetime stressors. With controls for lifetime stressors, six of the seven statistically significant relationships between childhood victimization and the subsequent mental health outcome disappear. In one other case (symptoms of alcohol abuse or dependence for males), controls for stressors uncover a suppressed inverse relationship between abuse and neglect in childhood and subsequent symptoms. In contrast to the results for childhood victimization, there is a consistently strong relationship between lifetime stressors and lifetime measures of mental health. Adults who report more lifetime stressors have considerably more lifetime dysthymia, alcohol dependence, and antisocial personality disorder than those reporting fewer events.

As the life course literature emphasizes, these results indicate that experiences occurring early in life do not have uniform consequences for mental health outcomes in later life (Harris, Brown, and Bifulco 1990; Elder et al. 1996). Instead, the influence of these early childhood experiences varies depending on what happens to adults in subsequent stages of the life course. In particular, stressful life
events that occur later in the life course influence how much effect childhood victimization will have on subsequent outcomes. When childhood victims of abuse or neglect do not experience more stressors than controls, they do not have worse mental health outcomes (alcohol problems, dysthymia, or antisocial personality disorder) as adults. Thus, not only do early childhood events affect later life experiences, but these later experiences also affect how consequential these earlier events will be for subsequent mental health (Brown 1986; Elder 1998; Kagan 1998).

Although the results of this study clearly indicate that the subsequent impact of childhood victimization on the mental health of adults must be grounded in a broader context and in life course trajectories, they do not specify the causal links among childhood victimization, lifetime stressors, and subsequent mental health. One possible interpretation of these findings is that childhood victimization produces poor mental health outcomes among children. Poor early mental health could elevate the risk of experiencing subsequent life stressors such as getting fired from jobs, unemployment, and divorce, which in turn are strongly related to poor mental health among adults (Kessler et al. 1997; Kessler, Davis, and Kendler 1998). In this interpretation, the psychological consequences of abuse and neglect in childhood serve as stress proliferators that amplify the disadvantage of persons in stressful environments (cf. Pearlin 1989). Another possible interpretation of our findings is that childhood victimization does not precede life stressors but is a correlate of other lifetime stressors such as family isolation and disorganization (Belsky 1993; Romans et al. 1995). If so, preexisting familial contexts could account both for childhood victimization and for subsequent life stressors. In addition, children from disorganized families might have weakened social support networks as adults, exacerbating their vulnerability to stressful life conditions. Our findings only indicate a general relationship between childhood victimization, subsequent stressors, and mental health impacts. Our findings do not allow for causal statements about the relationship among these factors. It is important that future research specifies both the pathways through which childhood victimization elevates the risk of suffering subsequent stressors and the possible mediating and buffering factors that protect some victims of child abuse and neglect from adverse consequences in later stages of their lives.

The final purpose of this study was to see whether childhood victimization has different effects on males and females. These findings indicate substantial sex differences in the mental health impacts of childhood abuse and neglect. Consistent with a large literature on sex specific mental health outcomes (e.g., Widom 1984; Aneshensel et al. 1991; Horwitz et al. 1996), women are far more likely than men to report dysthymic symptoms, and men are far more likely than women to report symptoms of alcohol abuse or dependence and antisocial personality disorder. However, sex-specific comparisons of abused and neglected men and women with male and female controls indicate that childhood victimization produces some gender anomalous mental health outcomes. Men abused or neglected as children are more likely than male controls to be dysthymic as adults. Conversely, compared to female controls, abused and neglected women are more likely to have alcohol problems as adults. Childhood victimization thus not only has different impacts on men and women but also is associated with some outcomes that are atypical for both sexes.

The finding that rates of alcohol abuse or dependence are higher for abused and neglected females but not for abused and neglected males when compared to same sex controls is consistent with the conclusions of a recent meta-analysis that child sexual or physical abuse is associated with alcohol problems among adult females but not among adult males (Langeland and Hartgers 1998). Such gender-anomalous outcomes could indicate what Widom, Ireland, and Glynn (1995) call a "saturation effect." Because males from disadvantaged social circumstances already have such high rates of alcohol abuse or dependence and females from these backgrounds such high rates of dysthymia, childhood victimization may not have an additional effect on these outcomes for men and women, respectively. Childhood victimization, however, might elevate the risk of experiencing symptoms that would not otherwise occur, in this case, dysthymia for men and alcohol abuse or dependence for women. These speculations, however, must be tested in further research.

Although the data used in this study overcome some of the limitations of prior research,
they also have a number of limitations. The reports of childhood abuse and neglect used here stem from official records that may contain systematic biases (Widom 1988). Therefore, our results cannot be generalized beyond court documented cases of childhood victimization to abuse and neglect in persons whose cases did not come to the attention of the courts. Another limitation of this sample is that cases reported to child protection agencies are skewed toward the lower end of the socioeconomic spectrum; the matched control group is also a primarily lower class sample (Widom, 1989b). Therefore, these results cannot be generalized to abused and neglected children from the middle and upper classes. In addition, although potential controls with official records of childhood abuse and neglect were eliminated from the sample, an unknown number of control group members might have suffered childhood victimization that did not come to the attention of officials. Further, the study has only one period of follow-up that occurred about twenty years after the childhood victimization. We do not know how much additional pathology the abused and neglected group would have reported in interviews gathered nearer the time of childhood abuse or neglect. In addition, the average age of our adult sample is 28.7 years, and so we cannot say how the impact of childhood victimization will continue to unfold over the life course.

Another limitation stems from our measures of symptoms that respondents report over their lifetimes. Although all symptoms of alcohol abuse or dependence and antisocial personality disorder and 80 percent of first symptoms of dysthymia arose after the reported victimization, our measures of these outcomes do not allow us to distinguish persons whose symptoms are chronic and persistent over the life course from those whose symptoms fluctuate or emerge and then disappear. Only repeated measurements over shorter time periods would provide better indicators of varying symptom courses and, in particular, the extent of chronic mental health impacts among childhood victims of abuse and neglect.

Finally, because childhood victimization is associated with more subsequent stressful life events, these data suggest that childhood victimization has stronger indirect than direct effects on adult mental health. They do not, however, provide detailed information about the time sequences for childhood victimization, subsequent life stressors, and adult mental health that could generate causal statements about the relationships among these factors.

CONCLUSION

The results of this study indicate the need to take contextual and life course changes into account in considering the impact of childhood victimization on subsequent mental health. The impact of dire childhood experiences on later psychological outcomes is not simple and direct (Brown 1986; Elder 1998). Instead, the way early experiences affect later mental health varies in light of events that occur across the life course. Even the individuals represented by these court documented cases of childhood sexual and physical abuse and neglect do not have inevitable, direct and unmediated psychological consequences. The long-term mental health impacts of childhood victimization unfold within the context of a lifetime of stressors. Further, these effects diverge considerably for men and women. These results indicate the importance of the structural and temporal contexts of life experiences (Pearlin 1989; Turner et al. 1995; Turner and Lloyd 1995; Elder et al. 1996).

NOTES

1. The age at which abuse was recorded was 0–3 for 24.7% of the sample, 4–5 for 10.5%, and 6–11 for 64.6%.

2. Non-matches occurred for a number of reasons. For matches through birth records, non-matches occurred where the abused or neglected child was born outside the state or when date of birth information was missing. For school records, non-matches occurred because class registers were unavailable because of the closing of the elementary school over the last 20 years or because of the lack of adequate identifying information for the abused and neglected child. Because we were not equally successful in finding the abused and neglected individuals and matched controls in the follow-up, the number of matched pairs is substantially smaller and we would lose considerable power if we restricted our analyses to only the matched pairs in the follow-up. Other analyses indicate that
results are comparable when findings use all cases or exclude abuse and neglect cases that did not have matches (Widom 1989b; Maxfield and Widom 1996).

3. More detailed information about how the abused and neglected and control groups were gathered is found in Widom 1989b.

4. We use age at interview instead of age at officially-recognized abuse because the latter is not significantly related to any of the outcome variables in the regressions.

5. The data contain numerous measures of mental health status. The measures of dysthymia, alcohol problems, and anti-social personality disorder used here are representative of the wide range of outcomes available and also capture the different responses males and females can have to childhood victimization.

6. Although the symptom scales are constructed from the same items as the diagnostic scales, they slightly diverge from the diagnostic measures. This is because the diagnosis establishes cut-offs for symptoms and do not take into account additional symptoms once these cut-offs are met (e.g. antisocial personality disorder requires 3 of 12 symptoms before age 15, and 4 of 10 symptoms after age 15 but treats additional symptoms as irrelevant.) In the symptom scale, it is therefore possible to have "more or less" of a disorder for those who meet the diagnostic criteria.

7. The figures from the national population are not directly comparable to the figures from this study because they stem from persons in a broader age range (15 to 54 years old).

8. The entry of the interaction term for sex by life events renders the interaction of sex by abuse insignificant for dysthymic symptoms, but the entry of this term into the model for dysthymic diagnoses leads the sex by abuse interaction term to become marginally significant ($p = .92$).

9. Parental welfare status is related to alcohol symptoms among females, but this association disappears in the final step of the regression.

10. The interaction term for sex by abuse remains significant when the interaction term for sex by life events enters the model.

11. The sole exception is that black women report fewer symptoms of antisocial personality disorder in the final step of the regression.

12. We also conducted the same regressions separately for each of the three types of childhood abuse and neglect (results not shown). Results are virtually identical for sexual abuse, physical abuse, and neglect when analyses are not separated for men and women. When analyses are conducted separately for men and women for each type of abuse, the same patterns are also present, although the drastic decline in the number of cases in each analysis means that results are often not statistically significant.

13. The entry of a sex by events interaction term does not change the non-significant relationship of the sex by abuse interaction term with either the symptom or the diagnostic measures of antisocial personality disorder.

14. Data are available from authors upon request.

15. This, however, would not negate the purpose of the control group, which is to establish a baseline rate of adult outcomes among persons comparable to the abused and neglected group who did not come to court attention as children.

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