

Childhood Abuse and Neglect: Specificity of Effects on Adolescent and Young Adult Depression and Suicidality

JOCELYN BROWN, M.D., M.P.H., PATRICIA COHEN, PH.D., JEFFREY G. JOHNSON, PH.D.,
AND ELIZABETH M. SMAILES, M.PHIL.

ABSTRACT

Objective: To investigate the magnitude and independence of the effects of childhood neglect, physical abuse, and sexual abuse on adolescent and adult depression and suicidal behavior. **Method:** A cohort of 776 randomly selected children was studied from a mean age of 5 years to adulthood in 1975, 1983, 1986, and 1992 during a 17-year period. Assessments included a range of child, family, and environmental risks and psychiatric disorders. A history of abuse was determined by official abuse records and by retrospective self-report in early adulthood on 639 youths. Attrition rate since 1983 has been less than 5%. **Results:** Adolescents and young adults with a history of childhood maltreatment were 3 times more likely to become depressed or suicidal compared with individuals without such a history ($p < .01$). Adverse contextual factors, including family environment, parent and child characteristics, accounted for much of the increased risk for depressive disorders and suicide attempts in adolescence but not in adulthood ($p < .01$). The effects of childhood sexual abuse were largest and most independent of associated factors. Risk of repeated suicide attempts was 8 times greater for youths with a sexual abuse history (odds ratio = 8.40, $p < .01$). **Conclusions:** Individuals with a history of sexual abuse are at greater risk of becoming depressed or suicidal during adolescence and young adulthood. Adolescence is the most vulnerable period for those youths who may attempt suicide repeatedly. Many of the apparent effects of neglect, in contrast, may be attributable to a range of contextual factors, suggesting broader focus for intervention in these cases. *J. Am. Acad. Child Adolesc. Psychiatry*, 1999, 38(12):1490–1496. **Key Words:** depression, suicidality, child abuse and neglect.

Abundant research has shown that adults who report having been abused as children are at increased risk for distress and mental disorders (Bemporad and Romano, 1993; Famularo et al., 1992; Silverman et al., 1996). However, it is not clear whether the risk is specifically attributable to the abuse experience. The family circumstances in which abuse and neglect take place are often extremely complex, involving a range of other potential risks for subsequent disorders in the offspring. These risks include at least 4 major domains: risk factors in the child such as handicap, chronic illness, or difficult temperament; dysfunctional child-rearing and family rela-

tionships; parental substance abuse, poor health, or very young age; and poverty and related stresses in the family and the community (Belsky, 1993; Brown et al., 1998). Because these contextual factors are often and perhaps usually present, it is unclear whether the negative outcomes in the child that are attributed to abuse are actually specific effects of abuse. Alternatively, they may be due to the environmental and familial context in which abuse and neglect occur. If so, our attention to identified cases of abuse would need to focus heavily on these associated risks, rather than on more limited efforts to prevent further outright abuse or neglect.

To disentangle the specificity of these effects, it is necessary to measure the context of abuse. However, most studies have not assessed the effects of the abuse milieu independently from the assessment of the abuse. Longitudinal research has shown that combinations of these risks, assessed independently and prospectively, were powerful predictors of abuse and neglect (Brown et al., 1998; Fergusson et al., 1996). In the single report of which we are aware, adolescents who reported childhood sexual

Accepted June 29, 1999.

From the College of Physicians and Surgeons, Columbia University, New York.

This study was supported by NIMH grants R01 MH49191 to Patricia Cohen and 44791 for underrepresented minority investigators to Jocelyn Brown.

Reprint requests to Dr. Brown, Department of Pediatrics, Director, Child Advocacy Center, Vanderbilt Clinic VC4-402, 622 West 168th Street, New York, NY 10032; e-mail JB58@columbia.edu.

0890-8567/99/3812-1490©1999 by the American Academy of Child and Adolescent Psychiatry.

abuse showed elevated rates of adolescent depression independently of these associated childhood and family risk factors (Fergusson et al., 1996). However, maltreatment in this study was limited to self-reported sexual abuse.

Evidence about the type of child maltreatment that constitutes the greatest risk for depressive disorder is relatively sparse because most studies are limited to particular types or combinations of maltreatment types. Thus, a number of studies have shown depression to be related to childhood physical abuse (Duncan et al., 1996; Fergusson and Lynskey, 1997; Flisher et al., 1997; Kaplan et al., 1997) or to sexual abuse (Beitchman et al., 1992; Boney-McCoy and Finkelhor, 1996; Dhaliwal et al., 1996; Fergusson et al., 1996; Kendall-Tackett et al., 1993; Tebutt et al., 1997). Other studies have examined depression in those who have experienced 2 or more kinds of maltreatment (Cohen et al., 1996; Kaufman, 1991; Silverman et al., 1996; Toth et al., 1992; Toth and Cicchetti, 1996). Few studies have either examined the comparative effects of physical abuse, sexual abuse, and neglect or investigated simultaneously the effects of physical abuse, sexual abuse, and neglect. Focusing on one type of abuse may be misleading not only because different types of abuse often coexist (Cicchetti and Rizley, 1981; McGee et al., 1995), but also because some long-term psychological sequelae may be specifically associated with certain types of abuse (Briere and Runtz, 1990).

Research on depression among victims of childhood maltreatment either has focused on its short-term impact during childhood (Swanston et al., 1997; Wozencraft et al., 1991) or has been based on the retrospective self-reports of adults who were abused as children. Few studies have examined both adolescent and adult outcomes (Stevenson, 1999). Thus, it is of particular interest to investigate whether the effects of childhood maltreatment persist during adolescence and early adulthood.

Relationship Between Child Maltreatment and Adolescent or Adult Suicidal Behavior

Several retrospective studies have shown that a history of abuse is associated with increased risk for suicide attempts (Brent et al., 1993b; Davidson et al., 1996; Deykin et al., 1985; Deykin and Buka, 1994; Shaunesey et al., 1993; Silverman et al., 1996), but other studies have not (Brent et al., 1993a; Flisher et al., 1997; Spirito et al., 1987). These differences may stem in part from design differences in the studies and differential definition of abuse. In addition, these studies have not been able to consider the potentially

confounding effects of other childhood factors that predispose both to maltreatment and to later suicidal behavior. Suicidal behavior has been associated with poor parent-child relationships (Fergusson and Lynskey, 1995), family stress (Brent et al., 1993a), and parental psychopathology (Garfinkel et al., 1982; Shaffer et al., 1988), factors also implicated in child maltreatment (Wagner, 1997). Thus, the meaning of the association with suicidal behavior remains unclear.

The study reported here has several characteristics that made it possible to address these questions. First, the sample consists of a large random sample of persons studied from childhood to adulthood. Thus a range of factors related to the incidence of child maltreatment were assessed prospectively by parental and child interview and interviewer observation. Second, reports of child maltreatment were obtained both by report of study members when they became adults and from official records. Third, all 3 types of childhood maltreatment—neglect, physical abuse, and sexual abuse—were assessed.

METHOD

Participants and Procedure

The participants in this study were members of a random sample of families with one or more children between the ages of 1 and 10 years drawn in 1975 on the basis of residence in either of 2 upstate New York counties (Kogan et al., 1977). This sample was seen for follow-up interviews in 1983, 1986, and 1992. The 1983 sample of 776 families, including a subsample drawn to replace excess loss from areas of urban poverty, was a close match to the area population of children in this age range, according to U.S. Census data on family income and structure (Cohen and Cohen, 1996). Approximately 20% of the sample had an income below the poverty level at some time since the child's birth. Attrition since 1983 has been less than 5%. At each follow-up, mothers and one child, who had been selected randomly from among age-eligible offspring at intake, were interviewed separately in their homes. Interviews included psychiatric assessments of the child as well as assessment of a broad array of potential risks for substance use or psychiatric disorder. At each assessment, written informed consent was obtained from all youths and their parents after the study procedures had been fully explained (Bird et al., 1992).

The 639 youths in this study (334 males and 305 females) consisted of those who were older than 18 at the time of the fourth assessment for whom we were able to obtain information regarding childhood maltreatment from New York State records. Participants for whom childhood maltreatment data were not available did not differ from the rest of the sample with regard to family income, welfare support, urbanicity, or race, but they were more likely to be male (60% compared with 48% of the sample with maltreatment data) and their mothers had fewer years of education (mean = 12.26 years compared with 12.64 years in the families with maltreatment information).

Assessment of Adolescent and Young Adult Depression and Suicidal Behavior. Children's psychiatric disorders were assessed with the National Institute of Mental Health Diagnostic Interview Schedule

for Children (DISC) (Costello et al., 1984), using algorithms for *DSM-III-R* diagnoses which combine information from parent and child and require associated impairment. Previous research has supported the reliability and validity of the DISC-I and of the *DSM-III* Axis I diagnostic algorithms that were used in the present study. Suicide attempts were reported and described by children with regard to method, frequency, and associated treatment (Lewis et al., 1988; Velez and Cohen, 1988). Suicide attempts in adolescents are not uncommon and often are impulsive (Shaffer, 1974). Therefore, we also examined those who reported repeated attempts, which are likely to have a higher risk of lethality.

Assessment of Childhood Maltreatment. Data regarding child maltreatment were obtained from the New York State Central Registry for Child Abuse and Neglect (NYSCR). In accordance with state guidelines at the time this study was conducted, only those cases reported to official agencies and determined to be valid cases of abuse are retained in the NYSCR. Information regarding whether records pertaining to the families participating in the present study were included in the NYSCR files was determined by NYSCR trained staff. Information including the source of the report, type of abuse, and the perpetrator's relationship to the child was abstracted by one of the authors under the supervision of the NYSCR staff. The names identified were matched to identification number and kept in separate locked files, to maintain participants' confidentiality. Abuse history data were then added to the data files without identifying information, resulting in a "blind deck" that was used for all of the statistical analyses that were conducted for this report. Self-reports of child abuse were also obtained in the young adult follow-up in 1992. Young adults were asked during childhood whether (1) someone with whom they lived hurt them physically so that they were still injured or bruised the next day, could not go to school, or needed medical attention, and if so, how often (physical abuse); (2) they had been left overnight or longer without an adult caretaker before age 10 (neglect); and (3) any older person (not a boy/girlfriend) ever touched them or played with them sexually or forced them to touch the older person before age 18. Sexual abuse was considered to have been experienced when 2 or more such experiences were reported.

For the current report we combined official and self-reported abuse and neglect, for a total of 81 identified cases. Because of the limitations in the self-report questions, and in the frequency with which sexual abuse can be officially documented, most cases of neglect ($n = 39$) were

identified by official record and most cases of sexual abuse ($n = 22$) were identified by self-report. For 24 of the 81 children with either neglect or abuse, more than one type was present (see Brown et al., 1998, for a more complete presentation and discussion of source differences in reports).

Assessment of Risks for Abuse or Neglect. As detailed in our earlier report (Brown et al., 1998), the following prospectively assessed risks were significantly associated with childhood neglect, physical abuse, or sexual abuse: the youth's sex, ethnicity, IQ, difficult childhood temperament, low maternal education, low maternal self-esteem, maternal alienation, anger, dissatisfaction, external locus of control, sociopathy, serious maternal illness, low maternal and paternal involvement, low paternal warmth, low religious participation, teenage mother when the youth was born, single parenthood, welfare support, low family income, large family size, and poor marital quality.

Data Analysis

Data analyses began with examination of bivariate associations between childhood maltreatment and risk for depressive disorders and suicidal behavior during adolescence and young adulthood, including statistical control for effects of age and sex. Logistic regression analyses determined whether these associations were potentially attributable to the effects of the previously identified contextual risk factors for maltreatment. These analyses were repeated for separate consideration of adolescent and young adult outcomes. In addition, analyses determined whether the effects were limited to specific kinds of child maltreatment.

RESULTS

The first question addressed was whether a history of child abuse or neglect predicted depressive disorders in adolescence or young adulthood. Both dysthymia and major depressive disorder were elevated in those with a history of abuse or neglect, and these disorders were elevated in both adolescence and young adulthood (Table 1). The odds of a depressive disorder was 3.4 to 4.5 times

TABLE 1
Risk of Adolescent or Young Adult Depressive Disorders and Suicidality Associated With Childhood Abuse or Neglect

	558 Nonabused and Nonneglected Youths: % (<i>n</i>)	81 Abused or Neglected Youths: % (<i>n</i>)	OR: Net of Age and Sex (95% CI)	OR: Net of Other Risks (95% CI)
Dysthymia	3 (17)	12 (10)	4.52 (1.95–10.51)	4.83 (1.89–12.44)
Major depressive disorder	7 (37)	20 (16)	3.38 (1.74–6.60)	3.00 (1.43–6.33)
Any depressive disorder	8 (44)	25 (20)	3.78 (2.06–6.94)	3.15 (1.59–6.27)
Adolescents	4 (20)	10 (8)	3.28 (1.33–8.10)	2.63 (0.90–7.64)
Young adults	5 (28)	6 (13)	3.60 (1.74–7.43)	3.95 (1.75–8.86)
Any suicide attempt	6 (31)	21 (17)	4.06 (2.08–7.90)	3.29 (1.94–16.74)
Adolescents	3 (18)	10 (8)	2.67 (1.10–6.44)	1.48 (0.52–4.17)
Young adults	2 (13)	11 (9)	4.05 (1.61–10.19)	3.50 (1.24–9.89)
Repeated attempts	2 (11)	7 (6)	3.34 (1.16–9.66)	3.06 (0.84–11.17)
Adolescents	1 (4)	6 (5)	8.68 (2.20–34.19)	30.29 (1.70–539.80)
Young adults	1 (7)	1 (1)	0.69 (0.08–5.94)	0.60 (0.04–8.63)

Note: OR = odds ratio; CI = confidence interval.

TABLE 2
Depressive Disorders and Suicidality Associated With Specific Types of Child Maltreatment, Net of Contextual Factors

	39 Neglected Youths: % (n)	44 Physically Abused: Youths: % (n)	22 Sexually Abused: Youths: % (n)	Neglect OR: Net of Risks (95% CI)	Physical OR: Net of Risks (95% CI)	Sexual OR: Net of Risks (95% CI)
Dysthymia	8 (3)	7 (3)	27 (6)	2.47 (0.51–11.97)	2.38 (0.55–10.34)	9.74 (2.79–34.27)
Major depressive disorder	15 (6)	16 (7)	27 (6)	2.49 (0.74–8.37)	2.37 (0.88–6.36)	3.17 (1.04–9.56)
Any depressive disorder	20 (8)	18 (8)	36 (8)	2.48 (0.83–7.45)	2.23 (0.87–5.70)	4.07 (1.46–11.40)
Adol depression	10 (4)	2 (1)	18 (4)	1.41 (0.30–6.48)	0.36 (0.04–3.14)	2.80 (0.76–10.35)
Adult depression	13 (5)	16 (7)	18 (4)	3.45 (0.97–12.35)	3.83 (1.38–10.58)	3.22 (0.88–11.75)
Suicide attempt	15 (6)	16 (7)	36 (8)	1.42 (0.34–5.93)	1.79 (0.62–5.15)	5.71 (1.94–16.74)
Adol attempt	10 (4)	4 (2)	18 (4)	1.95 (0.29–13.34)	0.97 (0.19–5.45)	3.54 (0.90–13.88)
Adult attempt	5 (2)	11 (5)	18 (4)	0.29 (0.02–3.52)	2.35 (0.61–9.07)	6.15 (1.48–25.81)
Repeated suicide attempts	5 (2)	7 (3)	18 (4)	2.26 (0.16–32.51)	2.97 (0.57–15.43)	8.40 (1.86–38.06)
Adol repeated attempts	5 (2)	4 (2)	14 (3)	4.41 (0.61–31.80)	10.74 (1.06–108.72)	15.78 (2.14–116.65)
Adult repeated attempts	0	2 (1)	4 (1)	—	1.39 (0.09–22.67)	3.34 (0.30–37.37)

Note: OR = odds ratio; CI = confidence interval; Adol = adolescent.

greater in those for whom child maltreatment was identified. In adolescents, at least some fraction of this elevated risk appears to have been attributable to the other contextual factors that were associated with childhood abuse or neglect; in fact, the odds ratio (OR) decreases from 3.28 to 2.63 after controlling for these factors. In young adulthood, in contrast, the estimated risk after controlling statistically for these associated factors remained high (OR = 3.95, $p < .01$).

Suicidal behavior was also strongly associated with a history of childhood maltreatment. As Table 1 shows for the combined period, both any suicide attempts (OR = 4.06, $p < .01$) and repeated attempts (OR = 3.34, $p < .05$) were elevated in those with such a history. When these are broken down by age, we see that suicide attempts were more common among maltreated youths in both adolescence (OR = 2.67, $p < .05$) and young adulthood (OR = 4.05, $p < .01$). However, in adolescence the data are consistent with the interpretation that other factors that are associated with elevated risk for maltreatment may account for the elevation in adolescent suicide attempt (OR = 1.48, $p > .05$).

Despite the small numbers, the data appear to be quite different when we examine repeated suicide attempts. In adolescence more than half (5/9) of all those who reported repeated suicide attempts were among the one eighth of the sample with reported childhood maltreatment. This elevation in risk persisted when other childhood negative prognostic factors were added to the equation (OR = 30.29, but note the very large confidence limits on this estimate). Youths with and without abuse history had an equal

risk of repeated suicide attempt in young adulthood (OR < 1). We also calculated the population attributable risk of suicide attempt due to sexual abuse, which was 16.4%.

We next examined the specific types of child maltreatment to determine whether they were differentially related to depression and suicidal behavior.

Differential Risk Associated With Type of Childhood Maltreatment

The associations of depressive disorder and suicidal behavior with each of the specific types of maltreatment are shown in Table 2. These rates may be contrasted with the rates for the youths for whom no maltreatment was identified, as shown in Table 1. In almost all cases the raw rates of disorder or suicidal behavior were elevated. An examination of the raw rates also shows that without exception the rates were highest for those youths who had experienced sexual abuse. More than one third of these persons (8/22) met criteria for a depressive disorder in either adolescence or adulthood or both, and an equal number reported having attempted suicide.

The next columns in Table 2 examine the odds of each disorder associated with each type of maltreatment in comparison with the group without reported maltreatment. These equations included the potentially confounding contextual factors that, as noted above, have been shown to be related to the incidence of maltreatment. Examination of the column of ORs associated with neglect shows that with only 2 exceptions the estimates exceeded 1.4, and in 6 of 11 cases they exceeded 2.0.

However, as indicated by the magnitude of the confidence intervals (CIs), in no case was depression or suicidal behavior unambiguously attributable to childhood neglect. These findings are consistent with the relatively large magnitude of the contextual influence on childhood neglect.

The findings with regard to physical abuse are somewhat more mixed. Not only are the point estimates a little larger, but in addition 2 ORs are greater than 1.0, namely that for adult depressive disorder ($OR = 3.83$, $CI = 1.38-10.58$, $p < .01$) and that for repeated suicide attempts by adolescents ($OR = 10.74$, $CI = 1.06-108.72$, $p < .05$). Note that overall the impact of neglect, physical abuse, and sexual abuse appears to be comparable with regard to adult depression, with respective ORs of 3.45, 3.83, and 3.22.

As was true for the unadjusted rates, the ORs associated with sexual abuse are generally both larger and more independent of other risks, despite the very small sample size. Risk for dysthymia and major depression was greatly elevated among the sexually abused, with ORs of 9.74 and 3.17, respectively. The rate of suicide attempt was elevated in the combined youth and adult time period ($OR = 5.71$, $CI = 1.94-16.74$, $p < .01$). The largest elevation of risk was found for repeated suicide attempts, in which the overall risk was elevated more than 8 times ($OR = 8.40$, $CI = 1.86-38.06$, $p < .01$), and the risk among adolescents was even more elevated ($OR = 15.78$, $p < .01$), although the small sample makes these estimates very unstable. One third of the 9 adolescents who had made repeated suicide attempts were in this small group of persons who had experienced childhood sexual abuse.

DISCUSSION

This study addressed 3 questions regarding the magnitude of risk of depression and suicidality associated with child maltreatment, the independence of these effects from effects of contextual factors known to be associated with risk for maltreatment, and differential risk associated with type of maltreatment.

Regarding the first question, our findings indicate that being abused as a child makes an adolescent or an adult 3 to 4 times more likely to become depressed or suicidal. This is in accordance with the findings of previously published studies (Beitchman et al., 1992; Fergusson et al., 1996; Kendall-Tackett et al., 1993; McCord, 1983; Silverman et al., 1996).

Second, some relationships of childhood maltreatment with depression and suicidal behavior may be

explained by adverse contextual factors in the areas of family environment and parent and child characteristics. These findings were both developmentally and abuse-specific. The child abuse milieu accounts for a significant increase in the risk of depressive disorders and suicide attempts in adolescence and adulthood; however, the former effect was greater.

Our finding that physical abuse is associated with suicidal behavior and depression is consistent with previous findings on the effects of physical abuse (Malinosky-Rummell and Hansen, 1993; Silverman et al., 1996). Our findings also suggest that childhood neglect alone is not likely to be responsible for depressive disorders and suicidal behavior as its effects cannot be separated from those of other risk factors.

Third, this study adds new information on the differential risks that are associated with different types of childhood maltreatment. Sexual abuse carries the greatest risk of depression and suicide, independently of the contextual risks under which the abuse occurs. This is in accordance with other longitudinal studies (Fergusson et al., 1996). Furthermore, the estimate from this study of the population attributional risk is comparable with Fergusson and colleagues' data (1996) suggesting that between 16.5% and 19.5% of suicide attempts in young adults may be due to exposure to child sexual abuse. Our findings suggest that adolescence is the most vulnerable time for sexually abused youths, who are more prone to make repeated suicide attempts. Physical abuse alone also contributes to repeated suicide attempts during adolescence and to adult depression.

Limitations of the Current Study

Because most cases of sexual abuse in this study were self-reported, it is possible that depressed individuals were particularly prone to recall sexual abuse. In addition, we have undoubtedly missed a good many of the cases of neglect because the question on self-reported neglect was so limited. On the other hand, while the sensitivity of our question was inadequate, the specificity should have been good, and specificity is a more critical issue for accurate estimation of risk (Cohen, 1988). Unfortunately, the timing and chronicity of abuse could not be evaluated. Unlike Fergusson and colleagues (1996), we did not have a measure of severity of sexual abuse. It is likely that, apart from the contextual factors under which child abuse occurs, individuals most at risk for suicidal ideation and repeated attempts tend to have experienced the most severe forms of sexual abuse. In future studies, characteristics of the abuse,

such as relationship of the perpetrator, duration, frequency, and severity, should be defined and taken into account.

Clinical Implications

These data have several implications for the field. First, it seems clear from this study that clinicians evaluating depressed and suicidal youths should screen specifically for the presence of different types of abuse, alone or in combination. Second, the milieu under which the abuse occurs should be assessed carefully; possible contributors to depression are familial risks such as maternal sociopathy, early separation from mother, and poor marital quality; parental risks such as low paternal involvement; and environmental risks such as welfare dependence and maternal young age. These data suggest that contextual factors such as family conflict, parental substance abuse, and illegal activities should be addressed and dealt with in the treatment of depressed and suicidal adolescents who have been neglected in childhood. Third, clinicians evaluating depressed and suicidal youths should screen for prior history of sexual abuse; when appropriate, a forensic team with expertise in interviewing, colposcopic examinations, and reporting laws should be consulted; and monitoring of the sexually abused adolescent with previous suicide attempt is imperative (Green, 1993). Furthermore, a baseline assessment for depressive disorder and suicide should be part of every program diagnosing and reporting child sexual abuse. Strategies to follow these victims into adolescence should be developed, ensuring monitoring through community prevention programs, primary care providers, or foster care agencies.

From a public health point of view, our findings are encouraging: they suggest that interventions such as the nurse home visitation programs, developed by Olds and colleagues (1997), may reduce not only the rate of child abuse and neglect but also its mental health consequences. Such programs that have shown effectiveness in keeping adolescent offspring off welfare, deter from criminal activities, and delay age of first pregnancy may also reduce adolescent and adult depression (Olds et al., 1998). Our study suggests that children who have been neglected are less likely to become depressed or suicidal if the contextual risks that comprise their lives could be changed.

REFERENCES

- Beitchman JH, Zucker KJ, Hood JE, Da Costa GA, Akman D, Cassavia E (1992), A review of the long term effects of child sexual abuse. *Child Abuse Negl* 16:101-118

- Belsky J (1993), Etiology of child maltreatment: a developmental-ecological analysis. *Psychol Bull* 111:413-434
- Bemporad JR, Romano S (1993), Childhood experience and adult depression: a review of studies. *Am J Psychoanal* 53:301-315
- Bird HR, Gould M, Staghezza B (1992), Aggregating data from multiple informants in child psychiatry epidemiological research. *J Am Acad Child Adolesc Psychiatry* 31:78-85
- Boney-McCoy S, Finkelhor D (1996), Is youth victimization related to trauma symptoms and depression after controlling for prior symptoms and family relationships? A longitudinal prospective. *J Consult Clin Psychol* 64:1406-1416
- Brent DA, Kolko DJ, Wartella ME et al. (1993a), Adolescent psychiatric inpatients' risk of suicide attempt at 6 month follow-up. *J Am Acad Child Adolesc Psychiatry* 32:95-105
- Brent DA, Perper JA, Moritz G et al. (1993b), Stressful life events, psychopathology, and adolescent suicide: a case control study. *Suicide Life Threat Behav* 23:179-187
- Briere J, Runtz M (1990), Differential adult symptomatology associated with three types of child abuse histories. *Child Abuse Negl* 14:357-364
- Brown J, Cohen P, Johnson JG, Salzinger S (1998), A longitudinal analysis of risk factors for child maltreatment: findings from a seventeen-year prospective study of self-reported and officially recorded child abuse and neglect. *Child Abuse Negl* 22:1065-1078
- Cicchetti D, Rizley R (1981), Developmental perspectives on the etiology, intergenerational transmission and sequelae of child maltreatment. *New Dir Child Dev* 11:31-55
- Cohen P, Cohen J (1996), *Adolescent Life Values and Mental Health*. Mahwah, NJ: Erlbaum
- Cohen PR (1988), The effects of instruments and informants on ascertainment. In: *Relatives at Risk for Mental Disorder*, Dunner DL, Gershon ES, Barrett JE, eds. New York: Raven, pp 31-52
- Cohen Y, Spirito A, Sterling C et al. (1996), Physical and sexual abuse and their relation to psychiatric disorder and suicidal behavior among adolescents who are psychiatrically hospitalized. *J Child Psychol Psychiatry* 37:989-993
- Costello EJ, Edelbrock CS, Duncan MK, Kalas R (1984), *Testing of the NIMH Diagnostic Interview Schedule for Children (DISC) in a Clinical Population: Final Report to the Center for Epidemiological Studies, NIMH*. Pittsburgh: University of Pittsburgh
- Davidson JRT, Hughes DC, George LK, Blazer DG (1996), The association of sexual assault and attempted suicide. *Arch Gen Psychiatry* 53:550-555
- Deykin EY, Alpert JJ, McNamara JJ (1985), A pilot study of the effect of exposure to child abuse or neglect on adolescent suicidal behavior. *Am J Psychiatry* 142:1299-1303
- Deykin EY, Buka SL (1994), Suicidal ideation and attempts among chemically dependent adolescents. *Am J Public Health* 84:634-639
- Dhaliwal GK, Gauzas L, Antonowicz DH, Ross RR (1996), Adult male survivors of childhood sexual abuse: prevalence, sexual abuse characteristics and long term effects. *Clin Psychol Rev* 16:619-639
- Duncan RD, Saunders BE, Kilpatrick DG, Hanson RF, Resnick HS (1996), Childhood physical assault as a risk factor for PTSD, depression and substance abuse: findings from a national survey. *Am J Orthopsychiatry* 66:437-448
- Famularo R, Kinscherff R, Fenton T (1992), Psychiatric diagnosis of maltreated children: preliminary findings. *J Am Acad Child Adolesc Psychiatry* 31:863-867
- Fergusson DM, Horwood J, Lynskey M (1996), Childhood sexual abuse and psychiatric disorder in young adulthood, II: psychiatric outcomes of childhood sexual abuse. *J Am Acad Child Adolesc Psychiatry* 35:1365-1374
- Fergusson DM, Lynskey MT (1995), Childhood circumstances, adolescent adjustment and suicide attempts in a New Zealand birth cohort. *J Am Acad Child Adolesc Psychiatry* 34:612-622
- Fergusson DM, Lynskey MT (1997), Physical punishment/maltreatment during childhood and adjustment in young adulthood. *Child Abuse Negl* 21:617-630
- Flisher AJ, Kramer RA, Hoven CW et al. (1997), Psychosocial characteristics of physically abused children and adolescents. *J Am Acad Child Adolesc Psychiatry* 36:123-131
- Garfinkel BD, Froese A, Hood J (1982), Suicide attempts in children and adolescents. *Am J Psychiatry* 139:1257-1261

- Green AH (1993), Child sexual abuse: immediate and long term effects and intervention. *J Am Acad Child Adolesc Psychiatry* 32:890-902
- Kaplan SJ, Pelcovitz D, Salzinger S, Mandel F, Weiner M (1997), Adolescent physical abuse and suicide attempts. *J Am Acad Child Adolesc Psychiatry* 36:799-808
- Kaufman J (1991), Depressive disorders in maltreated children. *J Am Acad Child Adolesc Psychiatry* 30:257-265
- Kendall-Tackett KA, Meyer Williams L, Finkelhor D (1993), Impact of sexual abuse on children: a review and synthesis of recent empirical studies. *Psychol Bull* 113:164-180
- Kogan LS, Smith J, Jenkins S (1977), Ecological validity of indicator data as predictors of survey findings. *J Soc Serv Res* 1:117-132
- Lewis SA, Johnson J, Cohen P, Velez CN, Garcia M (1988), Attempted suicide in youth: its relationship to school achievement, educational goals and socioeconomic status. *J Abnorm Child Psychol* 16:459-471
- Malinosky-Rummell R, Hansen DJ (1993), Long term consequences of childhood physical abuse. *Psychol Bull* 114:68-79
- McCord J (1983), A forty year perspective on effects of child abuse and neglect. *Child Abuse Negl* 7:265-270
- McGee RA, Wolfe DA, Yuen SA, Wilson SK, Carnochan J (1995), The measurement of maltreatment: a comparison of approaches. *Child Abuse Negl* 2:233-249
- Olds D, Henderson CR Jr, Cole R et al. (1998), Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *JAMA* 280:1238-1244
- Olds DL, Eckenrode J, Henderson CR Jr et al. (1997), Long-term effects of home visitation on maternal life course and child abuse and neglect: fifteen-year follow-up of a randomized trial. *JAMA* 278:637-643
- Shaffer D (1974), Suicide in childhood and early adolescence. *J Child Psychol* 15:275-291
- Shaffer M, Garland A, Gould M, Fisher P, Trautman P (1988), Preventing teenage suicide: a critical review. *J Am Acad Child Adolesc Psychiatry* 27:675-685
- Shaunese K, Cohen JL, Plummer B, Berman A (1993), Suicidality in hospitalized adolescents: relationship to prior abuse. *Am J Orthopsychiatry* 63:113-119
- Silverman AB, Reinherz HZ, Giaconia RM (1996), The long term sequelae of child and adolescent abuse: a longitudinal community study. *Child Abuse Negl* 20:709-723
- Spirito A, Stark L, Fristad M, Hart K, Owens-Stively J (1987), Adolescent suicide attempters hospitalized on a pediatric unit. *J Pediatr Psychol* 12:171-189
- Stevenson J (1999), The treatment of the long-term sequelae of child abuse. *J Child Psychol Psychiatry* 40:89-111
- Swanston HY, Tebutt JS, O'Toole BI, Oates RK (1997), Sexually abused children 5 years after presentation: a case-control study. *Pediatrics* 100:600-608
- Tebutt J, Swanston H, Oates K, O'Toole BI (1997), Five years after child sexual abuse: persisting dysfunction and problems of prediction. *J Am Acad Child Adolesc Psychiatry* 36:330-339
- Toth SL, Cicchetti D (1996), Patterns of relatedness, depressive symptomatology and perceived competence in maltreated children. *J Consult Clin Psychol* 64:32-41
- Toth SL, Todd Manly J, Cicchetti D (1992), Child maltreatment and vulnerability to depression. *Dev Psychopathol* 4:97-112
- Velez CN, Cohen P (1988), Suicidal behavior and ideation in a community sample of children: maternal and youth reports. *J Am Acad Child Adolesc Psychiatry* 27:349-356
- Wagner BM (1997), Family risk factors for child and adolescent suicidal behavior. *Psychol Bull* 121:246-298
- Wozencraft T, Wagner W, Pellegrin A (1991), Depression and suicidal ideation in sexually abused children. *Child Abuse Negl* 15:505-511

Mothers With Histories of Domestic Violence in a Pediatric Emergency Department. Susan J. Duffy, MD, MPH, Meghan E. McGrath, BA, Bruce M. Becker, MD, MPH, James G. Linakis, MD, PhD.

Objective: To determine the prevalence of domestic violence against mothers in a pediatric emergency department and the relationship of their children to the abusers. **Design:** Cross-sectional survey of a convenience sample of mothers seeking treatment for their children. **Setting:** An urban pediatric emergency department. **Participants:** A total of 157 mothers with children <3 years of age. Women were excluded if older children or partners were present. **Results:** A total of 52% of women reported histories of adult physical abuse, 21% reported adult sexual abuse, and 28% reported childhood sexual abuse. A total of 10% of women were in abusive relationships in the past year. Victims of adult physical abuse were more likely to report histories of adult sexual abuse (relative risk [RR]: 4.93) or childhood sexual abuse (RR: 3.13). Intimate partners perpetrated 67% of physical and 55% of sexual abuse. Relatives perpetrated 66% of childhood sexual abuse. Women who revealed histories of childhood sexual abuse were more likely to report adult sexual abuse (RR: 4.93). A total of 40% of the perpetrators of adult physical abuse, 73% of the perpetrators of past year physical abuse, and 10% of the perpetrators of adult sexual abuse had regular contact with their victims' children. Health care providers screened only 21% of the women for past violence. Victims of domestic violence were no more likely to have been screened than those without histories of physical or sexual abuse. **Conclusions:** Mothers of young patients in a pediatric emergency department are often victims of domestic violence. Perpetrators are often close relatives and thus place the victims' children at risk for abuse and for the psychological trauma of witnessing violence. Given the prevalence of domestic violence, families may benefit from routine violence screening and interventions in pediatric emergency departments. *Pediatrics* 1999;103:1007-1013. Reproduced by permission of *Pediatrics*, copyright 1999.