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# Associations between Childhood Abuse and Interpersonal Aggression and Suicide Attempt among U.S. Adults in a National Study

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## Abstract

The aim of this study is to examine associations among childhood physical, emotional, or sexual abuse and violence toward self (suicide attempts [SA]) and others (interpersonal aggression [IA]). Data were obtained from the National Epidemiologic Survey on Alcohol and Related Conditions Waves 1 and 2 ($n$ = 34,653). Multinomial logistic regression examined associations between type of childhood abuse and violence categories, adjusting for demographic variables, other childhood adversity, and DSM-IV psychiatric disorders. The prevalence of reported childhood abuse was 4.60% for physical abuse, 7.83% for emotional abuse, and 10.20% for sexual abuse. Approximately 18% of adults reported some form of violent behavior, distributed as follows: IA, 13.37%; SA, 2.64%; and SA with IA, 1.85%. After adjusting for demographic variables, other childhood adversity, and psychiatric disorders, each type of childhood abuse was significantly related to increased risk for each violence category as compared with the no violence category. Furthermore, the odds ratio of childhood physical abuse was significantly higher for SA with IA when compared with IA, and the odds ratio of childhood sexual abuse was significantly higher for SA and SA with IA when compared with IA. Childhood physical, emotional, and sexual abuse is directly related to the risk for violent behaviors to self and others. Both internalizing and externalizing psychiatric disorders impact the association between childhood abuse and violence. The inclusion of suicidal behaviors and interpersonal aggression and internalizing/externalizing psychiatric disorders within an integrated conceptual framework will facilitate more effective interventions for long-lasting effects of child abuse.

### Keywords

Childhood physical abuse; Emotional abuse; Sexual abuse; Interpersonal aggression; Suicide attempt; Violence; Psychiatric disorder; Childhood adversity



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## INTRODUCTION

Recent national surveys have documented the association between childhood physical abuse and psychiatric disorders (Afifi et al., 2008; Keyes et al., 2012; Molnar, Buka, & Kessler, 2001b; Sugaya et al., 2012). Childhood physical and sexual abuse is related to mood, anxiety, and substance abuse disorders (Afifi et al., 2008). Both minor assault (corporal punishment) and more serious physical abuse, when compared with no punishment or abuse, are related to major depression, substance use disorders (SUDs), conduct disorder, and antisocial disorders. The odds ratios for physical abuse, however, are statistically higher when compared with physical punishment (Afifi, Brownridge, Cox, & Sareen, 2006). A longitudinal study through young adulthood revealed higher and more consistent risk for mental health problems for exposure to sexual compared with physical abuse (Fergusson, Boden, & Horwood, 2008). Childhood physical abuse is associated with a broad range of specific psychiatric disorders, including attention deficit/hyperactivity disorder (ADHD), posttraumatic stress disorder (PTSD), bipolar disorder, panic disorder, major depression, generalized anxiety disorder (GAD), and SUDs (Sugaya et al., 2012). Studies have shown that psychiatric comorbidity is explained by two underlying dimensions: internalizing (mood and anxiety disorders) and externalizing (SUD and antisocial personality disorder [ASPD]; Kendler, Jacobson, Prescott, & Neale, 2003; Kendler, Prescott, Myers, & Neale, 2003; Krueger, Caspi, Moffitt, & Silva, 1998; Krueger, Markon, Patrick, & Iacono, 2005; Vollebergh et al., 2001). Exposure to childhood maltreatment (physical, sexual, and emotional abuse) increases the risk for both externalizing and internalizing psychiatric disorders (Keyes et al., 2012). Among men, physical abuse was associated with externalizing disorders, and emotional abuse was associated with internalizing disorders. Sexual abuse among men, however, was related to both dimensions. Among women, physical abuse was related to internalizing disorders while emotional and sexual abuse was related to both dimensions.

Childhood physical and sexual abuse, infant spanking, and other forms of corporal punishment have been related to physical fighting, dating violence, and other delinquent behaviors (Chung et al., 2009; Duke, Pettingell, McMorris, & Borowsky, 2010; Miller et al., 2011; Straus & Kantor, 1994; Straus, Sugarman, & Giles-Sims, 1997). In addition to various types of interpersonal aggression, physical and sexual abuse and other childhood adversities have been related to suicide attempts (Afifi et al., 2008; Dube et al., 2001; Enns et al., 2006; Molnar, Berkman, & Buka, 2001a; Sugaya, et al, 2012).

Although only a minority (approximately 8%) of persons with psychiatric disorders engage in violent behaviors, the risk of violent behavior before and after age 15 is significantly higher among persons with alcohol and drug use disorders, mood and anxiety disorders, and personality disorders (Pulay et al., 2008). The relationship between interpersonal violence and suicidal behaviors has been a focus of psychiatric studies for many years (Apter, Plutchik, & van Praag, 1993; Links, Gould, & Ratnayake, 2003; Plutchik, van Praag, & Conte, 1989; Pfeffer, Newcorn, Kaplan, Mizruchi, & Plutchik, 1989). Externalizing disorders such as SUDs and ASPD have been shown to be independently related to suicidal behaviors (Apter et al., 1991; Apter et al., 1995; Jokinen et al., 2010; Hills, Afifi, Cox,

Bienvenu, & Sareen, 2009; Verona, Sachs-Ericsson, & Joiner, 2004). In a longitudinal analysis from the Baltimore Epidemiologic Catchment Area Survey, externalizing psychopathology, adjusted for internalizing disorders, was related to suicide attempts at baseline and one-year follow-up, but baseline externalizing disorders were not related to suicide attempts at 13 years (Hills et al., 2009). In a large community study, Verona and colleagues (2004) noted that suicide attempts were related to both externalizing and internalizing disorders, and, among women, the interaction between externalizing/internalizing disorders increased the risk for suicide attempts. Fewer studies, however, have examined interpersonal violence and suicide attempts in the same study. In the 2007 Minnesota Student Survey, childhood physical and sexual abuse was significantly related to delinquent behaviors, bullying, fighting, dating violence, and suicidal behaviors. Moreover, the risk for fighting, dating violence, and suicide attempts related to sexual abuse was higher among boys than girls (Duke et al., 2010). School studies have also shown that students with risk profiles for both interpersonal violence and suicidal behaviors have a higher risk for victimization (Cleary, 2000), substance use and depression (Harford, Yi, & Freeman, 2012), and suicide attempt (Bossarte, Simon, & Swahn, 2008).

Childhood physical, emotional, and sexual abuse is related to externalizing and internalizing dimensions underlying psychiatric disorders (Keyes et al., 2012), and both dimensions are related to suicide attempts (Verona et al., 2004). Based on studies of criminal and suicidal behaviors, Kimonis and colleagues (2010) hypothesized that externalizing and internalizing disorders mediate the relationships between childhood abuse and suicidal and criminal behavior. In their study of 266 female offenders they reported that externalizing, but not internalizing, disorders fully mediated the association between childhood abuse and suicidal behaviors and partially mediated the association between abuse and criminal behavior. The absence of an effect for internalizing disorders may reflect the higher levels of externalizing behaviors in the sample.

The aim of this study is to extend the existing literature through the examination of relationships between type of childhood abuse and violence toward self (suicide attempts [SAs]) and others (interpersonal aggression [IA]). Based on the literature, it is hypothesized that childhood physical, sexual, and emotional abuse will be associated with IA and SAs independent of psychiatric disorders and other childhood adversities. It is further hypothesized that the risk from childhood abuse will be higher among those with combined forms of violence.

## METHODS

### Study design

Data for this analysis were taken from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), conducted by the National Institute on Alcohol Abuse and Alcoholism. The NESARC Wave 1 used a sample of 43,093 respondents representing the civilian noninstitutionalized population, 18 years of age and older, in the United States, including all 50 States and the District of Columbia. Military personnel living off base and residents in noninstitutionalized group housing, such as boarding houses, shelters, and dormitories, were also included in the sampling frame. Blacks, Hispanics, and young adults

ages 18 to 24 were oversampled in the NESARC. Data collection was conducted through face-to-face interviews by highly trained interviewers in 2001–2002. The overall response rate was 81%. Weights are provided in NESARC data to account for oversampling, nonresponses, and the selection of one person per household. The weights were also adjusted to match the civilian noninstitutionalized population on socioeconomic variables based on the U.S. 2000 Census. All respondents from Wave 1—except those who died, were institutionalized, left the country, or entered the military—were eligible for re-interview approximately 3 years later (2004–2005) in Wave 2 (n=39,959). The re-interview rate was 86.7%, yielding a total of 34,653 respondents for Wave 2. Because all question items on childhood abuse were asked in NESARC Wave 2, this analysis drew upon the total Wave 2 sample of 34,653 respondents and applied the sampling weights for Wave 2 to ensure that the weighted Wave 2 sample represented the original population of 2001–2002. Details about the NESARC sampling design and methodology are described elsewhere (Grant et al., 2004, 2009).

## Measures

**Violence indicators—**The measure for interpersonal violence is based on self-reports of the following 5 items: a) ever get into a lot of fights that you started; b) ever hit someone so hard that you injured them or they had to see a doctor; c) ever physically hurt another person in any way on purpose; d) ever use a weapon like a stick, knife, or gun in a fight; and e) ever get into a fight that came to swapping blows with someone like a husband, wife, boyfriend, or girlfriend. For this study, the IA measure was dichotomized as endorsement of one or more items versus none.

In the NESARC, suicide attempts were assessed among respondents who screened positive for a DSM-IV major depressive episode. In addition, NESARC Wave 2 contained a single item, “ever attempt suicide.” For this study, SA was measured based on a positive response to either item. The two violence measures, IA and SA, were cross-tabulated to yield the following categories: IA only, SA without IA, SA with IA, and None.

**Childhood physical, sexual, and emotional abuse—**All questions about adverse childhood events (ACEs) related to respondents’ first 17 years of life. Questions were adapted from the Adverse Childhood Events study (Dong, Anda, Dube, Giles, & Felitti, 2003; Dong et al., 2004) and were originally part of an extensive battery of questions appearing on the Conflict Tactics Scale (CTS; Straus, 1979; Straus & Gelles, 1990) and the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994; Wyatt, 1985). Response categories for most scale items were 1 = *never*, 2 = *almost never*, 3 = *sometimes*, 4 = *fairly often*, and 5 = *very often*. In order to distinguish physical abuse from milder forms of abuse (Afifi et al., 2006; Fergusson & Lynskey, 1997), all measures for frequent childhood abuse were dichotomized as fairly or very often versus occasional or never. The only exception related to sexual abuse which was dichotomized as almost never or more frequently versus never.

For physical abuse, two questions asked how often did parents/caregivers a) push, grab, shove, slap, or hit you and b) hit you so hard that you had marks or bruises or were injured. Physical abuse was defined as one or more of these two items.

For emotional abuse, three questions asked how often did parents/caregivers a) swear, insult, or say hurtful things to you; b) threaten to hit you or throw something at you; and c) made you fear that you would be physically hurt or injured. Emotional abuse was defined as one or more of these three items.

Childhood sexual abuse was defined by four questions developed by Wyatt (1985). The following questions asked about sexual experiences with an adult or any other person and were restricted to behaviors that respondents did not want or were experienced when respondents were too young to know what was happening: a) fondle/touch you in a sexual way; b) have you touch them in a sexual way; c) attempt sexual intercourse with you; and d) have sexual intercourse with you. Sexual abuse was defined as one or more of these four items.

**Other childhood adversities—**Items assessing physical neglect included the frequency with which respondents: a) were made to do chores too difficult or dangerous for someone their age; b) were left alone or unsupervised when they were too young to be alone; c) went without things they needed like clothing, shoes, or school supplies; d) went hungry or were not being provided with regular meals; and e) had parents or caregivers fail to get them medical treatment when respondents were sick or hurt. Physical neglect was defined as one or more of these five items.

Items assessing emotional neglect included the following: a) there was someone in the respondent's family who wanted him or her to be a success; b) there was someone in the family who helped the respondent feel important or special; c) the respondent's family was a source of strength and support; d) the respondent felt that he or she was part of a close-knit family; and e) someone in the respondent's family believed in him or her. These items were reversed coded and emotional neglect was defined as one or more of these five items.

**Domestic family violence—**Having a battered mother or female caregiver was defined by four questions from the CTS that assessed the frequency with which each respondent's father, stepfather, foster or adoptive father, or mother's boyfriend engaged in any of the following behaviors toward the respondent's mother, stepmother, foster or adoptive mother, or father's girlfriend: a) pushing, grabbing, slapping, or throwing something at her; b) kicking, biting, hitting her with a fist, or hitting her with something hard; c) repeatedly hitting her for at least a few minutes; or d) threatening her with a knife or gun, or using a knife or gun to hurt her. In the present study domestic family violence was dichotomized as one or more of these items versus none.

**Household dysfunction—**Measures of household dysfunction included six question items. The items included the following experiences before respondents were 18 years of age: having a parent or other adult with whom they lived who had an alcohol or drug problem, went to jail or prison, was treated or hospitalized for a mental illness, or attempted

or committed suicide. All questions were coded 1 = yes and 0 = no, and summed across items to yield a scale score ranging from 0 to 6. In the present study, family dysfunction was dichotomized as one or more of these items versus none.

**Psychiatric disorders—**Lifetime DSM-IV (APA, 1994) diagnoses for substance use, mood, personality, and anxiety disorders were assessed by the Alcohol Use Disorder and Associated Disabilities Interview Schedule (AUDADIS-IV), a structured interview instrument for lay interviewers (Grant, Dawson, & Hasin, 2001). Reliability and validity of the AUDADIS-IV diagnoses used in this study have been reported elsewhere (Grant et al., 2003; Ruan et al., 2008). Four groups of lifetime psychiatric disorders were included in this study: mood (dysthymia and bipolar), anxiety (panic with and without agoraphobia, social phobia, specific phobia, generalized anxiety disorder, and posttraumatic stress), substance use (alcohol, illicit drugs, and nicotine), personality disorders, plus ADHD. Because the indicators of violent behavior were selected from 5 symptom items related to conduct disorder and ASPD and attempted suicide related to major depressive disorders (MDD), ASPD and MDD were excluded from the analysis.

**Demographic variables—**These included gender (male), age, race/ethnicity (non-Hispanic White, non-Hispanic Black, non-Hispanic American Indian/Alaskan Native, non-Hispanic Asian/Native Hawaiian/Pacific Islander, and Hispanic of any races), and marital status (never married, previously married, and married).

### Analysis

Cross-tabulation was conducted to produce estimates for prevalence or percentage distributions. Multinomial logistic regression was used to assess the relationships between childhood physical, sexual, and emotional abuse and the violence typology categories, with those who reported no violent behavior as the comparison group. Several multinomial regressions were conducted to independently assess the effects for sociodemographic characteristics and potential mediating effects for other childhood adversities and psychiatric disorders. In view of gender differences for physical and emotional abuse reported by Keyes et al. (2012), additional models were conducted separately by gender.

The analyses were implemented in the statistical modeling program Mplus (Muthén & Muthén, 2010). Mplus is capable of handling sampling stratification, clustering, and weights that reflect unequal probabilities of sample selection. These three sampling features were taken into account when calculating all parameter estimates as well as their standard errors and model fit statistics.

## RESULTS

### Prevalence of childhood abuse and violence

As shown in Table 1, each category of childhood abuse was significantly more likely to have occurred among Native Americans, Blacks (sexual abuse only), and previously married individual, and less likely to have occurred among men, Asians, Hispanics (emotional abuse only), and never-married individual. Compared with younger adults (ages 18—30),

respondents in older age categories (ages 30—39, 40—49, and 50—59) were significantly more likely to report each category of abuse; however, there were no significant differences between these age groups. Sexual and emotional abuse was significantly less likely to have occurred among respondents ages 60 and older than among other age categories.

Lifetime reports for violent behaviors were distributed as follows: IA, 13.37%; SA, 2.64%; SA with IA, 1.85%, and none, 82.14%. Consistent with findings in the literature that indicate higher interpersonal violence and lower SAs among men compared with women, the gender distributions for violence categories for women were IA, 8.68%; SA, 3.68%; SA with IA, 2.11%; and none, 85.53% and for men were IA, 18.46%; SA, 1.52%; SA with IA, 1.57%; and none, 78.45%.

Distributions for type of childhood abuse by violence category are shown in Table 2. Overall, physical abuse was reported by 4.60% of respondents, (women, 5.24%; men, 3.91%); emotional abuse by 7.83% (women, 8.57%; men, 7.03%), and sexual abuse by 10.20% (women, 14.76%; men, 5.24%).

## Associations between childhood abuse and violence

As shown in Table 3, significant bivariate (unadjusted) associations existed between each type of childhood abuse and all categories of violence. The odds ratios were attenuated when adjusted for demographic variables, other childhood adversities, and psychiatric disorders, but retained significant associations across all categories of violence. Although the adjusted odds ratios of childhood abuse were greater than 1 across all violence categories, the odds ratio of physical abuse was significantly higher for SA with IA (*OR* = 2.72) when compared with IA only (*OR* = 1.43). The odds ratio of sexual abuse was significantly higher for SA (*OR* = 2.45) and SA with IA (*OR* = 2.80) when compared with IA.

Among the covariates in the model, physical neglect was significantly associated with IA (*OR* = 1.28) but not for SA or SA with IA, and emotional neglect was significantly related to SA (*OR* = 1.38) and SA with IA (*OR* = 1.72) but not IA. Family violence was not related to any violence category. Family dysfunction was significant across all categories of violence, with the odds ratio significantly higher for SA with IA than for IA.

Each of the diagnostic categories for SUD, PD, mood and anxiety disorders, and ADHD was significantly related to each violence category. The odds ratio of SUD was significantly higher for SA with IA (*OR*=4.54) when compared with SA only (1.78). The odds ratio of PD was significantly higher for SA with IA (*OR*=3.90) when compared with SA only (*OR*=2.25) and IA only (OR=2.15). The odds ratio of mood disorders was significantly higher for SA with IA (*OR*=4.85) when compared with SA only (*OR*=3.04) and IA only (*OR*=1.71), and it was significantly higher for SA than for IA. Finally, the odds ratios of anxiety disorders were significantly higher for SA and SA with IA when compared with IA.

## Gender differences

As shown in Table 4, the associations for childhood physical abuse with all types of violence were similar for both genders. The odds ratios of childhood physical abuse were significantly higher for SA with IA when compared with IA for women but not men.

Emotional abuse was significantly related to all violence categories for women, but there were no significant associations between emotional abuse and SA or SA with IA for men. Sexual abuse was significantly related to all violence categories for women, but its association with IA was not statistically significant for men. Similar to findings for the total sample, for both women and men, the odds ratios of childhood sexual abuse were significantly higher for SA and SA with IA when compared with IA.

## DISCUSSION

As hypothesized, findings from this national survey indicated that frequent childhood physical, emotional, and sexual abuse were significantly associated with IA and SA with and without IA. Although the strength of the associations was attenuated when adjusted for the presence of other childhood adversity and psychiatric disorders, the significance of the associations were maintained. Although the literature has shown consistent and strong relationships between childhood adversity and psychiatric disorders (Afifi et al., 2008; Keyes et al., 2012; Molnar et al., 2001a; Sugaya et al., 2012), the present findings yield independent effects of childhood abuse for violent outcomes. The results also partially support the hypothesis that childhood abuse has a greater impact among individuals with both SA and IA than among those with SA or IA only. Both childhood physical and sexual abuse increased the risk for SA with IA significantly more than that for IA, but not for SA. Overall, the present findings are consistent with the literature, and they extend studies of IA and suicidal behaviors in several ways.

First, earlier studies had identified a significant association between psychiatric disorders and violence (i.e., interpersonal aggression; Pulay et al., 2008), and the present findings suggest that psychiatric disorders appear to mediate the relationship between frequent childhood physical violence and interpersonal violence for men and women. The present study expanded the measure of violence used by Pulay and colleagues (2008) to include SA and identified psychiatric disorders as potential mediators for associations between physical abuse and SA. Physical abuse conveyed a significant and independent risk for SA and for SA with IA.

Second, variations in the severity of childhood abuse have previously been related to psychiatric disorders and adjustment problems (Afifi et al., 2006; Fergusson & Lynskey, 1997). The present study demonstrated that although emotional abuse may appear to be less severe than physical abuse, both had similar associations with violence. Among women, emotional abuse was not related to IA but was related to both SA categories, whereas this pattern was reversed for men. In view of the higher proportions of IA among men than among women, emotional abuse might serve as a stronger risk factor for IA for men. Emotional abuse might reflect a family context with greater risk for suicidal behaviors among women but one that does not increase the risk for IA.

Third, consistent with the literature reviewed in this paper, childhood sexual abuse was found related to both categories of violence (i.e., IA and SA). Results from the present study further indicate that childhood sexual abuse is a greater risk factor for the combined SA with IA than for IA among both men and women. Although gender patterns of its effect were

consistent for both SA categories, sexual abuse was only a significant risk factor for IA for women. The finding that physical and emotional abuse, but not sexual abuse, is a risk factor for IA among men requires further delineation of risk profiles for aggression among men.

Fourth, studies have shown strong associations among types of childhood adversity, but generally limited effects for physical and emotional neglect when adjusted for other forms of abuse. In the current study, physical neglect had independent effects on IA, but was unrelated to SAs, whereas emotional neglect was related to SAs but not IA. Physical neglect may reflect socioeconomic family contexts associated with childhood adversity (McLaughlin et al., 2011). Emotional neglect, which may be interpreted as a reflection of a lack of perceived family support/personal recognition (Sugaya et al., 2012), shared similar associations with emotional abuse, especially among women.

Fifth, the significant associations between the three types of childhood abuse in this study and each of the violence outcomes were partially mediated by significant associations between psychiatric disorders and violence. Externalizing (i.e., SUD) and internalizing (i.e., mood and anxiety) disorders were related to both IA and SA. Of particular relevance to the current literature (Hills et al., 2009; Keyes et al, 2012; Kimonis et al., 2010; Verona et al., 2004), the risk for SUD and mood disorders were significantly higher for the combined violence category (i.e., SA with IA) when compared with SA only. Keyes and colleagues (2012) found that childhood sexual abuse among women and men was related to both internalizing and externalizing dimensions, though it was more strongly related to the internalizing dimension. Although personality disorders, other than ASPD, have not been included in current classifications for externalizing/internalizing dimensions, they conferred significantly higher risk for the combined violence category (i.e., SA with IA) when compared to SA or IA only.

A number of study limitations need to be highlighted. First, although the measurement of IA in this study is consistent with general population studies (Coid et al., 2006; Corrigan & Watson, 2005; Pulay et al., 2008), it does not capture the level of severity in assessments of criminal behaviors (Kimonis et al., 2010) and may include minor instances of aggression. Despite this limitation, approximately 85% of the sample reported no aggression and the finding is consistent with the previously mentioned study of female offenders (Kimonis et al., 2010). Second, the measurement and categorization of childhood abuse in the present study is based on retrospective lifetime reports and is restricted to a limited number of question items. Retrospective assessments may introduce both recall and reporting bias. Studies suggest that false positives may be more common for these retrospective assessments, especially for sexual abuse (Widom & Morris, 1997; Widom & Shepard, 1996). Although increasing age may introduce bias related to recall of earlier childhood events, the distributions for childhood physical, emotional, and sexual abuse yielded prevalence estimates that were similar by age categories, although slightly lower among younger (18–29) and older (age 60+) respondents. Third, because violent behavior measures in this study are based on lifetime reports, the temporal order of childhood abuse and violence behaviors cannot be established. Therefore, their directionality cannot be assessed. Fourth, although the associations between childhood abuse and violence were adjusted for other childhood adversities and psychiatric disorders, other unmeasured factors may have

influenced the present findings. Infant spanking, for example, has been shown to increase the risk for behavioral problems, including low self-esteem, depression, and SUD (Chung et al., 2009). McLaughlin and colleagues (2011) have shown that child physical and sexual abuse is related to family financial hardships. Fifth, because many individuals who engage in violence may be incarcerated or homeless and thus are not included in the survey sample used in the present study, the estimates of the prevalence of violence categories are conservative.

Despite these limitations, the present findings indicate that childhood physical, emotional and sexual abuse, in addition to a variety of psychiatric disorders, are important risk factors for violent behaviors toward self and others and key factors for effective knowledge building for prevention implementation. Several clinical practice implications for the prevention of violent behaviors can be gleaned from the findings of this study. First, recognition of childhood adversity as a complex event is essential to devising comprehensive interventions for violent behaviors, interventions that are tailored for specific gender and racial/ethnic subgroups. Given the wide range of psychiatric disorders associated with childhood adversities, clinicians need to be aware of the types of adversity and the broad range of household dysfunction they may encounter. An increased awareness of the associations between specific types of childhood abuse and violent behaviors may benefit intervention for delinquent and violent youth. Pediatricians in particular who detect violent tendencies (either other- or self-directed) must make time to screen the family for potential abuse. Thus, there is need for continued medical education programs that provide pediatricians with skills to assess a wide range of these risk factors. Second, early violence prevention efforts aimed at children who experienced physical, emotional, or sexual abuse may help to break the link between the childhood abuse and violence, and thus reduce these children’s risks for the development of violent behaviors. Third, school guidance counselors, to whom high school students with symptoms of problem drinking or reported incidents of physical aggression may be referred, should be alerted to the need for screening and referral of such students for the other potentially related behaviors (i.e., suicidal ideation). Similarly, clinical and treatment providers would benefit from paying closer attention to assessment of suicide impulses among those exhibiting aggressive behaviors toward others. The same public-health message also might apply to adolescent alcohol treatment providers, child welfare workers, and juvenile probation staff. And, finally, partnerships between pediatricians, mental health specialists, social workers, teachers, and substance abuse counselors are critical for integrating information regarding emotional health, family connectedness, school achievement, and community support services, all of which are key aspects of designing comprehensive interventions.

In addition to the implications for early treatment interventions discussed here and acknowledged in all studies of childhood adversity, the present findings offer a number of directions for future research. First, although these findings from a general population sample are consistent with those obtained in a study of female offenders (Kimonis et al., 2010), a more detailed analysis for the mediating effects by internalizing/externalizing latent dimensions is needed. Second, while current conceptualizations for externalizing dimensions include both SUDs and ASPD, the prevalence of ASPD in the general population is much lower than that of SUDs. Therefore, more detailed analysis of SUDs as mediators in the

association between childhood abuse and violence are needed. Third, studies have indicated significant associations between childhood abuse and personality disorders in addition to ASPD (Johnson, Cohen, Brown, Smailes, & Bernstein, 1999; Lentz, Robinson, & Bolton, 2010). The role of these disorders in mediating relationships between childhood abuse and violence requires further study. Fourth, the extent to which the combined violence category represents a meaningful and reliable category of violence requires further detailed studies.

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**Table 1**

Percentage distributions (%)[1] and odds ratios (OR) and 95% confidence interval (95% CI) of sociodemographic characteristics by the presence of childhood physical, emotional, and sexual abuse.

| Sociodemographic characteristics | Physical abuse | | | Emotional abuse | | | Sexual abuse | | |
|---|---|---|---|---|---|---|---|---|---|
| | No N= 32,899 | Yes N= 1,754 | OR (95% CI) for physical abuse | No N= 31,742 | Yes N= 2,911 | OR (95% CI) for emotional abuse | No N= 30,799 | Yes N= 3,854 | OR (95% CI) for sexual abuse |
| **Gender** | | | | | | | | | |
| Female | 51.73 | 59.29 | 1.00 | 51.66 | 57.01 | 1.00 | 49.44 | 75.36 | 1.00 |
| Male | 48.27 | 40.71 | 0.74** (0.65-0.83) | 48.34 | 42.99 | 0.81** (0.73-0.89) | 50.56 | 24.64 | 0.32** (0.29-0.35) |
| **Age** | | | | | | | | | |
| 18-29 | 16.47 | 13.53 | 1.00 | 16.44 | 15.14 | 1.00 | 16.53 | 14.67 | 1.00 |
| 30-39 | 18.53 | 20.13 | 1.32** (1.07-1.61) | 18.51 | 21.08 | 1.24** (1.07-1.43) | 18.45 | 20.97 | 1.28** (1.12-1.47) |
| 40-49 | 21.36 | 24.51 | 1.40** (1.14-1.72) | 21.30 | 23.87 | 1.22** (1.05-1.41) | 20.96 | 26.30 | 1.41** (1.23-1.59) |
| 50-59 | 17.53 | 22.07 | 1.53** (1.27-1.85) | 17.43 | 21.41 | 1.33** (1.15-1.55) | 17.53 | 19.57 | 1.26** (1.04-1.42) |
| 60+ | 26.00 | 19.76 | 0.93 (0.76-1.13) | 26.32 | 18.51 | 0.76* (0.66-0.88) | 26.53 | 18.50 | 0.79* (0.64-0.90) |
| **Race/ethnicity** | | | | | | | | | |
| White, non-Hispanic. | 71.00 | 69.05 | 1.00 | 70.88 | 71.23 | 1.00 | 71.06 | 69.61 | 1.00 |
| Black, non-Hispanic | 11.02 | 11.67 | 1.09 (0.93-1.25) | 10.97 | 11.97 | 1.09 (0.95-1.25) | 10.79 | 13.29 | 1.26** (1.11-1.42) |
| American Indian/Alaskan Native, non-Hispanic | 2.06 | 4.84 | 2.42** (1.86-3.14) | 2.03 | 4.06 | 1.99** (1.56-2.54) | 2.01 | 3.81 | 1.94** (1.50-2.52) |
| Asian/Native Hawaiian/Pacific Islander, non-Hispanic | 4.38 | 2.16 | 0.51** (0.33-0.77) | 4.41 | 2.69 | 0.61** (0.44-0.85) | 4.52 | 2.07 | 0.47** (0.33-0.65) |
| Hispanic | 11.54 | 12.28 | 1.09 (0.92-1.31) | 11.71 | 10.05 | 0.86** (0.74-0.98) | 11.62 | 11.23 | 0.99 (0.86-1.13) |
| **Marital status** | | | | | | | | | |
| Married | 63.98 | 59.95 | 1.00 | 64.10 | 60.17 | 1.00 | 64.30 | 59.29 | 1.00 |
| Previously married | 18.51 | 26.15 | 1.51** (1.31-1.75) | 18.44 | 23.89 | 1.38** (1.14-1.54) | 18.26 | 24.19 | 1.44** (1.30-1.58) |
| Never married | 17.50 | 14.11 | 0.86 (0.71-1.05) | 17.47 | 15.94 | 0.97 (0.85-1.11) | 17.44 | 16.53 | 1.03 (0.92-1.15) |

* $p < .05$;

** $p < .01$.

[1] Percentages are weighted.

**Table 2**

Prevalence (%)[1] of childhood physical, emotional, and sexual abuse by violence category.

| Childhood abuse | Interpersonal aggression only | Suicide attempt only | Suicide attempt with interpersonal aggression | None | Total |
|---|---|---|---|---|---|
| **Total** | N=4,689 | N=996 | N=688 | N=28,280 | N=34,653 |
| Physical abuse | 9.11 | 17.78 | 28.94 | 2.90 | 4.60 |
| Emotional abuse | 15.07 | 26.73 | 38.10 | 5.36 | 7.83 |
| Sexual abuse | 13.63 | 36.58 | 44.31 | 8.02 | 10.20 |
| **Women** | N=2,019 | N=731 | N=458 | N=16,881 | N=20,089 |
| Physical abuse | 11.41 | 19.54 | 32.63 | 3.32 | 5.24 |
| Emotional abuse | 18.04 | 28.16 | 43.09 | 5.92 | 8.57 |
| Sexual abuse | 26.05 | 42.85 | 56.22 | 11.38 | 14.76 |
| **Men** | N=2,670 | N=265 | N=230 | N=11,399 | N=14,564 |
| Physical abuse | 7.93 | 13.17 | 23.55 | 2.39 | 3.91 |
| Emotional abuse | 13.55 | 22.96 | 30.81 | 4.71 | 7.03 |
| Sexual abuse | 7.29 | 20.06 | 26.87 | 4.05 | 5.24 |

[1] Percentages are weighted.

## Table 3

Multinomial logistic regression results[1]: Odds ratio (OR) and 95% confidence interval (95% CI) of childhood abuse for three violence categories (with no violence as the base group).

| Childhood abuse, other childhood adversities, and psychiatric disorders | Interpersonal aggression only (N=4,689) | Suicide attempt only (N=996) | Suicide attempt with interpersonal aggression (N=688) |
|---|---|---|---|
| | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| **Bivariate (unadjusted) ORs** | | | |
| Physical abuse | 1.59** (1.32-1.92) | 1.96** (1.40-2.75) | 3.01** (2.20-4.13) |
| Emotional abuse | 2.32** (1.99-2.71) | 2.89** (2.22-3.78) | 3.50** (2.61-4.71) |
| Sexual abuse | 1.45** (1.27-1.65) | 4.75** (3.94-5.73) | 5.48** (4.39-6.85) |
| **Adjusted ORs[1]** | | | |
| Physical abuse | 1.43** (1.15-1.77) | 1.59* (1.10-2.31) | 2.72** (1.87-3.96) |
| Emotional abuse | 1.40** (1.18-1.65) | 1.42* (1.08-1.88) | 1.56** (1.14-2.14) |
| Sexual abuse | 1.27** (1.09-1.46) | 2.45** (1.98-3.02) | 2.80** (2.20-3.55) |
| Other childhood adversities | | | |
| Physical neglect | 1.28** (1.10-1.49) | 1.08 (0.82-1.42) | 0.82 (0.61-1.11) |
| Emotional neglect | 1.03 (0.96-1.16) | 1.72** (1.39-2.12) | 1.38** (1.11-1.72) |
| Family violence | 1.04 (0.83-1.30) | 0.81 (0.57-1.14) | 1.05 (0.76-1.45) |
| Family dysfunction | 1.16** (1.07-1.27) | 1.48** (1.23-1.77) | 1.65** (1.29-2.11) |
| Psychiatric disorders | | | |
| Substance use disorders | 3.13** (1.94-3.45) | 1.78** (1.50-2.12) | 4.54** (3.39-6.09) |
| Personality disorders | 2.15** (1.52-2.37) | 2.25** (1.86-2.73) | 3.90** (2.99-5.10) |
| Mood disorder | 1.71** (1.19-1.93) | 3.04** (2.48-3.72) | 4.85** (3.84-6.13) |
| Anxiety disorder | 1.31** (1.22-1.43) | 1.75** (1.44-2.13) | 1.98** (1.54-2.54) |
| Attention deficit/hyperactivity disorder | 1.56** (1.22-1.99) | 2.44** (1.79-3.32) | 2.72** (1.93-3.45) |

* $p < .05$;

** $p < .01$.

[1] Adjusted for gender, age, race/ethnicity, and marital status.

## Table 4

Multinomial logistic regression results by gender[1]: Odds ratio (OR) and 95% confidence interval (95% CI) of childhood abuse for three violence categories (with no violence as the base group).

| Childhood abuse | Interpersonal aggression only OR (95% CI) | Suicide attempt only OR (95% CI) | Suicide attempt with interpersonal aggression OR (95% CI) |
|---|---|---|---|
| **Women** | N=2,019 | N=731 | N=458 |
| Physical abuse | 1.40* (1.03-1.51) | 1.69* (1.10-2.59) | 2.43** (1.62-3.63) |
| Emotional abuse | 1.23 (0.94-1.60) | 1.40* (1.00-1.98) | 1.57* (1.08-2.29) |
| Sexual abuse | 1.39** (1.16-1.68) | 2.53** (1.99-3.21) | 2.86** (2.17-3.77) |
| **Men** | N=2,670 | N=265 | N=230 |
| Physical abuse | 1.44* (1.05-1.97) | 1.37 (0.73-2.58) | 3.35** (1.69-6.67) |
| Emotional abuse | 1.56** (1.23-1.96) | 1.47 (0.85-2.54) | 1.44 (0.78-2.66) |
| Sexual abuse | 1.09 (0.86-1.39) | 2.26** (1.41-3.62) | 2.72** (1.63-4.55) |

* $p < .05$;

** $p < .01$.

[1] Adjusted for demographic characteristics, childhood neglect, domestic family violence, family dysfunction, and lifetime mood, anxiety, substance use, personality disorders, and attention deficit/hyperactivity disorder.