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Childhood adversity and personality disorders: Results from a nationally representative population-based study

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ABSTRACT

Background: Although, a large population-based literature exists on the relationship between childhood adversity and Axis I mental disorders, research on the link between childhood adversity and Axis II personality disorders (PDs) relies mainly on clinical samples. The purpose of the current study was to examine the relationship between a range of childhood adversities and PDs in a nationally representative sample while adjusting for Axis I mental disorders.

Methods: Data were from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; $n = 34{,}653$; data collection 2004–2005); a nationally representative sample of the United States population aged 20 years and older.

Results: The results indicated that many types of childhood adversity were highly prevalent among individuals with PDs in the general population and childhood adversity was most consistently associated with schizotypal, antisocial, borderline, and narcissistic PDs. The most robust childhood adversity findings were for child abuse and neglect with cluster A and cluster B PDs after adjusting for all other types of childhood adversity, mood disorders, anxiety disorders, substance use disorders, other PD clusters, and sociodemographic variables (Odd Ratios ranging from 1.22 to 1.63). In these models, mood disorders, anxiety disorders, and substance use disorders also remained significantly associated with PD clusters (Odds Ratios ranging from 1.26 to 2.38).

Conclusions: Further research is necessary to understand whether such exposure has a causal role in the association with PDs. In addition to preventing child maltreatment, it is important to determine ways to prevent impairment among those exposed to adversity, as this may reduce the development of PDs.

Exposure to childhood adversity is known to be associated with mental health impairment that can persist into adulthood. There are strong associations between adverse childhood experiences such as abuse, neglect, exposure to intimate partner violence, and parental divorce and suicidal behavior and adult Axis I mental disorders such as mood, anxiety, impulse control, and substance use disorders in representative population-based samples (Afifi et al., 2006, 2008, 2009, 2010; Bruffaerts et al., 2010; Enns et al., 2006; Kessler et al., 1997; MacMillan et al., 2001; Scott et al., 2010). Studies involving nationally representative samples have shown a relationship between traumatic events occurring in childhood and personality traits such as high neuroticism and openness to experiences (Allen and Lauterbach, 2007). Although, the relationship between childhood adversity and Axis I mental health conditions is well established, research on the link between childhood adversity and Axis II personality disorders (PDs) has focused mainly on clinical samples (Battle et al., 2004; Johnson et al., 2004; Rettew et al., 2003; Yen et al., 2002; Luntz and Widom, 1994; Zanarini et al., 1989, 1997, 2000, 2002; Bierer et al., 2003). PDs are generally persistent overtime, are often represented by patterns of behaviors and experiences that can negatively impact areas of cognition, affect, interpersonal functioning, and impulse control, and are frequently associated with impairment (American Psychiatric Association, 1994, 2000). Clinical studies

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have indicated that the childhood experience of physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect are common among patients with PDs (Battle et al., 2004; Johnson et al., 2004; Rettew et al., 2003; Yen et al., 2002; Luntz and Widom, 1994; Zanarini et al., 1989, 1997, 2000, 2002; Bierer et al., 2003). Studies involving convenience (Gibb et al., 2001; Grover et al., 2007; Tyrka et al., 2009) and small community samples (Johnson et al., 1999, 2000, 2006) have also supported this association, but it remains unclear whether the relationship between childhood adversities and all PDs exists in representative general population samples.

Another important limitation is the narrow examination of child adversity. To date, collectively, studies have looked at parenting behaviors and multiple types of child abuse and neglect. However, some studies have only examined child abuse (Yen et al., 2002; Gibb et al., 2001), neglect (Johnson et al., 2000), or a have combined child abuse and neglect together (Grover et al., 2007; Johnson et al., 1999; Luntz and Widom, 1994; Tyrka et al., 2009; Zanarini et al., 2000). Collapsing multiple types of child maltreatment is often necessary due to lack of statistical power based on small sample sizes. However, this approach precludes understanding the specific relationship between subtypes of maltreatment and impairment, such as PDs. The limited research involving community samples has all been based on a study of two New York State counties. The investigators combined multiple types of child maltreatment into child abuse and neglect categories (Johnson et al., 1999, 2000), only examined neglect (Johnson et al., 2000), and investigated parenting behaviors not including child abuse or neglect (Johnson et al., 2006).

Another limitation of the current literature is the focus on only one or limited types of PDs. For example, there are numerous clinical studies showing a link between exposure to child sexual abuse and borderline personality disorder (Murray, 1993). Although this is an important association, less attention has been paid to other types of childhood adversity and PDs. An examination of a wider range of adverse childhood events with all PDs in a population-based sample would significantly extend the existing literature. Finally, only a few studies investigating childhood adversity and PDs have taken into account the effects of Axis I mental disorders on this relationship (Tyrka et al., 2009; Grover et al., 2007; Gibb et al., 2001). This is an important methodological consideration since Axis I mental disorders are highly comorbid with Axis II PDs (McGlashan et al., 2000; Lenzenweger, 2008).

To our knowledge, this study is the first to examine the relationship between a wide range of adverse childhood experiences including child maltreatment and household dysfunction with all types of Axis II PDs in a nationally representative population-based sample. It builds upon the existing literature, which is based on clinical and small community samples. Furthermore, we adjust for Axis I disorders, an important consideration, given the high prevalence of comorbidity between Axis I and Axis II disorders.

1. Methods

1.1. Survey

Data were from the second wave of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) collected in 2004 to 2005 ($n = 34{,}653$). The NESARC is a representative sample of the adult (20 years of age or older), civilian, non-institutionalized population of the United States; it included respondents living in households and assorted non-institutional group dwellings such as college quarters, group homes, and boarding houses. The response rate for Wave 2 was 86.7%. Interviews for both waves of the NESARC were conducted face-to-face by trained lay interviewers. Further details of the NESARC have been published elsewhere (Ruan et al., 2008b; Grant et al., 2005).

1.2. Measures

1.2.1. Childhood adversity

1.2.1.1. Child maltreatment: abuse and neglect. Respondents' experiences of a variety of adverse childhood events (events occurring before the age of 18) were assessed using questions based on those from the Adverse Childhood Experiences study (Dong et al., 2003; Dube et al., 2003). These questions were in turn a subset of the items from the Conflict Tactics Scale (Straus, 1979; Straus et al., 1996) and the Childhood Trauma Questionnaire (Bernstein et al., 1994). Respondents were asked to respond to all questions pertaining to abuse, neglect (except emotional neglect), and having a battered mother on a five-point scale (never, almost never, sometimes, fairly often, or very often). Emotional neglect questions employed an alternative five-point scale of never true, rarely true, sometimes true, often true, or very often true. All questions pertaining to general household dysfunction required yes/no responding (except questions regarding having a battered mother, as mentioned above).

From the list of questions, several types of childhood adversity were coded. Physical abuse was defined as a response of "sometimes" or greater to either question when asked how often a parent or other adult living in the respondent's home (1) pushed, grabbed, shoved, slapped, or hit the respondent; or (2) hit the respondent so hard it left marks or bruises, or caused an injury. Emotional abuse was identified as a response of "fairly often" or "very often" to any question when asked how often a parent or other adult living in the respondent's home (1) swore at, insulted, or said hurtful things to the respondent; (2) threatened to hit or throw something at the respondent (but did not do it); or (3) acted in any other way that made the respondent afraid he/she would be physically hurt or injured. These definitions are consistent with child maltreatment definitions employed in the Adverse Childhood Experiences study (Dube et al., 2003; Dong et al., 2003).

Sexual abuse was examined using a series of four questions (Wyatt, 1985). These questions were adapted for use in the AUDADIS-IV and were rated on the same five-point scale that was used for all other abuse and physical neglect questions. The questions examined the occurrence of sexual touching or fondling, attempted intercourse, or actual intercourse by any adult or other person when the respondent did not want the act to occur or was too young to understand what was happening. Any response other than "never" on any of the questions was taken to indicate sexual abuse.

Physical neglect was defined as any response other than "never" on a series of four relevant questions. These questions explored respondents' experiences of being left unsupervised when too young to care for themselves or going without needed clothing, school supplies, food, or medical treatment. Other studies using the Adverse Childhood Experiences Study have defined physical neglect differently than we have here (Dong et al., 2003; Dube et al., 2003); however, we were unable to follow the conventions outlined by these previous researchers because of the exclusion of one of the original physical neglect questions by the AUDADIS-IV (the original series included five questions examining physical neglect). To compensate for this discrepancy, an alternative definition of physical neglect was developed. Examination of the distribution of summed responses to all physical neglect questions in our dataset indicated a clear break in the distribution between those responding with "never" to all items versus those responding with "almost never" or higher to at least one item (74.4% of respondents