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Adverse childhood experiences and intimate partner violence: testing psychosocial mediational pathways among couples

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ABSTRACT

Purpose: Adverse childhood experiences (ACEs) are associated with an increased likelihood of intimate partner violence (IPV) in adulthood. We tested whether psychosocial factors, such as depression, anxiety, impulsivity, and problem drinking, mediate associations between ACEs and IPV.
Methods: Couple data from a cross-sectional sample of married/cohabiting couples residing in 50 medium-to-large California cities (n = 1861 couples) were used. Hypothesized relationships among male and female ACE, male-to-female partner violence (MFPV) and female-to-male partner violence (FMPV), frequency of intoxication, depression, impulsivity, and anxiety were tested with structural equation path models, and the significance of both individual direct paths and indirect associations was determined.
Results: Male and female partners had positive direct associations between ACEs and depression, anxiety, and impulsivity. Males' anxiety and impulsivity and females' depression were positively related to MFPV. Males' depression and frequency of intoxication and females' depression, were positively related to FMPV. Indirect associations between male ACEs and MPFV via depression; male ACEs and FMPV via anxiety and impulsivity; and female ACEs and MPFV and FMPV via depression were all positive and significant.
Conclusions: Adverse childhood experiences impact IPV partially through psychosocial characteristics. Interventions targeted at reducing ACEs and subsequent psychosocial outcomes may help reduce adult IPV.

Introduction

Exposure in early life to adverse childhood experiences (ACEs), including physical, psychologic, and sexual abuse [1], is associated with an increased likelihood of intimate partner violence (IPV) in adulthood. Witnessing or experiencing violent events as a child has been hypothesized to lead to the intergenerational transfer of violence through imitating or tolerating similar behaviors in adult relationships [2]. By using a variety of measures of childhood abuse and partner violence, in previous studies authors have found significant associations between ACEs and IPV [3–6]. Although there is a strong, consistent association between ACEs and IPV, relationships differ across types of childhood trauma and types of partner violence. In one study authors found child sexual abuse to be associated with female-to-male partner violence (FMPV) and male-to-female partner violence (MFPV), whereas physical abuse was associated with MFPV only [7]. Some evidence points to alcohol use, stressors, and antisocial personality disorder as potential mediators of associations between ACEs an adult IPV [4,8], but research on these mechanisms is sparse.

Impulsivity, by itself or through increased alcohol abuse, may mediate the relationship between ACEs and IPV. Although neurobiologic mechanisms have not definitively been established, it is plausible that childhood abuse and trauma may result in greater levels of impulsivity in adulthood [9]. Numerous studies indicate that impulsivity is positively associated with IPV [10,11]. ACEs are linked with increased risk of adult alcohol abuse [12]; in turn, problem drinkers are at greater risk for IPV, particularly among men [11,13,14].

Psychosocial factors such as depression and anxiety are also potential mediating factors linking ACEs and adult IPV. ACEs often lead to depression and anxiety [1,15], with a graded relationship between number of ACEs and severity of adult depression [16]. Besides being a consequence of childhood maltreatment and/or family dysfunction, depression is a risk factor for both reciprocal [17] and unidirectional IPV [18,19]. Ehrensaft et al [20] found that psychiatric disorders in adolescence predicted partner violence in

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early adulthood, whereas past-week depressive symptoms were associated with partner violence in a sample of adolescents [18]. In a study using the World Health Organization Mental Health Survey, investigators estimated the population-attributable risk for partner violence from premarital psychiatric conditions to be 17.2% [21].

Much of the current literature emphasizes the role of depression as a consequence of, rather than a risk factor for, IPV [22–25], with this relationship varying by type of partner violence. For example, Caetano and Cunradi [26] found that FMPV, but not MFPV, was a risk factor for both partners' depression. In contrast to previous studies' emphasis on depression as a result of IPV, this analysis focuses on the importance of psychosocial factors in the pathway between ACEs and adult IPV. In this regard, the current study builds upon findings reported by Schafer et al. [13], in which pathways between childhood abuse and IPV were mediated by each partner's impulsivity and alcohol problems.

In this study, partner-specific pathways between ACEs and MFPV and FMPV are tested to determine whether depression, anxiety, impulsivity, and problem drinking are mediators of these relationships and whether associations differ across partners. A structural equation model of these relationships was estimated using data from a sample of couples drawn from 50 medium-sized California cities. Depression, impulsivity, and anxiety were expected to be associated with both ACEs and MFPV and FMPV. We also hypothesized that indirect pathways between ACEs and IPV through psychosocial characteristics would be significant. No previous studies, to our knowledge, have used couple data on both MFPV and FMPV to determine whether depression, anxiety, and impulsivity are in the pathway between ACEs and MFPV and FMPV.

Methods

Data source and measures

Couples were sampled from 50 California cities with populations 50,000 to 500,000. Couples were recruited by telephone from a purchased sample of household addresses and telephone numbers. Eligible households included those with couples who were married or cohabiting, had lived together for at least 12 months at the time of the survey interview, were between 18 and 50 years of age, and were fluent in English or Spanish. Trained survey interviewers first spoke with the female partner in the couple by using computer-assisted telephone interviewing procedures. If the female partner reported experiencing severe IPV, operationalized as the female reporting that her male partner used a knife or gun on her; punched or hit her with something that could hurt; choked her; slammed her against a wall; beat her up; burned or scalded her on purpose; or kicked her [27], the interviewer asked her permission before contacting her male partner for his interview (in which no questions about IPV were asked). Otherwise, the male partner was contacted for the full interview following completion of the female partner's interview. All procedures were approved by the Institutional Review Board of the Pacific Institute for Research and Evaluation. In addition, a Certificate of Confidentiality was obtained from the National Institute on Alcohol Abuse and Alcoholism. The full Council of American Survey Research Organizations response rate was 59.5%, whereas the cooperation rate was 78.3% [28]. The calculation of the Council of American Survey Research Organizations response rate takes into account the large number of potential respondents whose eligibility is unknown. Couples in the sample ($n = 1861$ couples) used in the models reported here had a mean age of 41.8 years (SD 5.5).

The occurrence of any past 12-month IPV was measured with the physical assault subscale of the revised Conflict Tactics Scales [27]. The subscale asks about the occurrence of 12 behaviors (e.g., pushing or shoving, grabbing, choking) that the respondent may have perpetrated against his or her spouse/partner and that his or her spouse/partner may have perpetrated. Separate variables were created for MFPV and FMPV. Violence was considered to have occurred if at least one partner reported a violent incident, independent of the other partner's report. Thus, if either partner reported occurrence of an incident, the partner violence variable (MFPV or FMPV, depending on the gender of the perpetrator) was coded "1"; if neither reported an incident, the variable was coded "0." This method allows for the correction of underreporting of violence common in one partner data [29]. Because agreement between partners about the occurrence of aggression is low [30,31], this method provides upper-bound estimates of MFPV and FMPV that compensate for the bias inherent in one-partner accounts of couple aggression [29]. Level of agreement between partners as to the occurrence of past-year MFPV and FMPV was tested using Cohen's kappa statistic [30]. Level of dyadic agreement beyond chance as to the occurrence of MFPV ($\kappa = .22$) and FMPV ($\kappa = .32$) was low.

Childhood exposure to violence and other adverse events was measured with a modified version of the Adverse Childhood Experiences (ACE) scale [1]. The modified ACE [32] covers 6 categories of childhood experiences, including sexual, physical, or psychological abuse, exposure to a mentally ill or alcoholic person in the home, and violence against the mother. A scale, ranging from 0 to 6, was created by summing the number of affirmative responses. A separate ACE score was computed for each partner (Cronbach's $\alpha = .66$ and .59 for females and males, respectively).

Impulsivity was measured with 3 questions used in previous IPV studies [10,11,29]. Each partner was asked to rate how well each of the following statements described them: I often act on the spur-of-the-moment without stopping to think; you might say I act impulsively; and many of my actions seem to be hasty. Response options ranged from quite a lot to not at all (scored from 1 to 4). Items were reverse-coded before we computed composite scores (Cronbach's $\alpha = .76$ and .78 for females and males, respectively). Frequency of intoxication was measured with a continuous variable created from each respondent's report of how many times during the past 12 months he or she drank "enough to feel intoxicated or drunk." We applied a square root transformation to these scores for use in our path models.

Both depression and anxiety were measured with scales from the Hospital Anxiety and Depression Scale [33]. This scale has good sensitivity and specificity (approximately 0.80) and has been used in numerous studies [34]. Depression was measured with six items, scored from 1 to 4: I still enjoy the things I used to enjoy; I can laugh and see the funny side of things; I feel cheerful; I feel as if I am slowed down; I have lost interest in my appearance; and I look forward with enjoyment to things. Anxiety was also measured with six items, scored from 1 to 4: I feel tense or wound up; I get a sort of frightened feeling as if something awful is about to happen; Worrying thoughts go through my mind; I can sit at ease and feel relaxed; I get a sort of frightened feeling like butterflies in the stomach; and I feel restless as if I have to be on the move. Items were coded with a higher score representing greater depression (or anxiety) and averaged to create composite scores for each partner (depression: Cronbach's $\alpha = .62$ and .67 for females and males, respectively; anxiety: Cronbach's $\alpha = .70$ for females and males).

Other variables in the model included unemployment, highest level of education received, and race/ethnicity. Unemployment status was measured using a dichotomous indicator for each partner's report of unemployment status, with self-reports of unemployment scoring 1, and self-reports being of employed, student, homemaker, retired, or disabled scoring 0. A 5-category measure of race/ethnicity for each partner (Hispanic/Latino, non-Hispanic