# The Impact of Exposure to Parental Intimate Partner Violence on Adolescent Precocious Transitions to Adulthood

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## Abstract

**Introduction**—Precocious transitions can create stress by placing excessive demands on adolescents and are associated with adverse outcomes that extend into adulthood. The current study assessed whether exposure to parental intimate partner violence (IPV) is associated with adolescent precocious transitions to adulthood.

**Methods**—Data come from 33,360 individuals aged 18+ years in the United States who participated in the National Epidemiologic Surveys of Alcohol and Related Conditions. Six precocious transitions (leaving home early, early sex, early marriage, early parenthood, early full-time employment, and dropping out of high school) were examined. Robust Poisson regression was used to calculate relative risks for the association between IPV exposure and each precocious transition, adjusting for confounders. We assessed effect modification by gender and by exposure to childhood abuse or neglect.

**Results**—Participants exposed to IPV in childhood were at higher risk of engaging in early sex; dropping out of high school; entering into early full-time employment; entering into early marriage; and entering into early parenthood relative to participants not exposed to IPV. Significant interactions between gender and exposure to IPV were detected for early sex and early full-time work outcomes, such that the associations were stronger for females compared to males. Participants exposed to more frequent or more severe IPV in childhood were at even higher risk for experiencing precocious transitions.

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**Conclusions—**Individuals exposed to IPV in childhood are more likely to experience precocious transitions to adulthood. Findings highlight the need for interventions to mitigate adverse outcomes in adolescence for children exposed to IPV.

## Keywords

Intimate partner violence; adolescence; precocious transitions

## Introduction

Adolescence is a critical period of development marking the transition from childhood to adulthood (Viner et al., 2015). The life course approach takes into account the multitude of physical and social exposures that occur during specific phases of life and how these events influence health and behavior later in life (Viner et al., 2015). Prematurely advancing through adolescent stages and reaching milestones hallmarking adulthood earlier than the norm can cause undue stress that shapes the future trajectory of an individual's health and behavior (Wickrama, Lee, & O'Neal, 2015). Commonly known as "precocious transitions," these behaviors can be thought of as a rush to adulthood that creates stress by placing excessive demands on adolescents before they are both emotionally prepared and socially supported to attain adult milestones (Wickrama, Wickrama, & Baltimore, 2010).

Prior research has shown that precocious transitions are associated with adverse outcomes that extend into adulthood (Wickrama, Conger, Wallace, & Elder Jr., 2003). A nationally representative study provided evidence that adolescents who experienced any of a number of precocious transitions (e.g., early sexual activity, marriage, full-time work) were at significantly higher risk of physical and mental health problems in young adulthood including smoking, obesity, physical inactivity, diabetes, hypertension, sexually transmitted diseases, and depression (Wickrama et al., 2010). Furthermore, different transitional events were associated with different health problems, depending on the type of harm the event may have been likely to cause (e.g., changing behavior, decreasing healthcare access) (Wickrama et al., 2010). Premature transitions into adult roles can also facilitate adoption of or exacerbate existing maladaptive coping mechanisms, including substance abuse (Carbone-Lopez & Miller, 2012; Martin, Blozis, Boeninger, Masarik, & Conger, 2014).

Given the negative consequences of precocious transitions, it is critical to understand the relevant precursors and predictors to aid in identifying points of intervention. Exposure to violence, both directly as a victim and indirectly as a witness, in adolescence has been linked to precocious transitions including running away from home, dropping out of high school, early marriage, and early parenthood (Hagan & Foster, 2006; Haynie, Petts, Maimon, & Piquero, 2009; Kuhl, Warner, & Wilczak, 2012; Warner, Warner, & Kuhl, 2017). These prior analyses have focused largely on exposure to violence in adolescence; however, a similar framework can be applied more broadly to exposure to violence anytime during childhood leading to precocious transitions as adaptations to stressful circumstances (Haynie et al., 2009). It is well-established that exposure to violence in childhood is a prevalent early life experience that is associated with multiple adverse outcomes. More than 15 million children in the United States live in families where IPV occurs, and approximately 6% of children

witness an assault between parents in a year (Finkelhor, Turner, Shattuck, & Hamby, 2015; McDonald, Jouriles, Ramisetty-Mikler, Caetano, & Green, 2006). Childhood exposure to parental IPV has been linked to psychological, social, physical and cognitive consequences (e.g., emotional dysregulation, internalizing and externalizing behaviors, academic performance, adjustment problems, trauma symptoms) from infancy through adolescence (Bair-Merritt, Zuckerman, Augustyn, & Cronholm, 2013; Evans, Davies, & DiLillo, 2008; Howell, Barnes, Miller, & Graham-Bermann, 2016; Kernic et al., 2002, 2003; Vu, Jouriles, McDonald, & Rosenfield, 2016). Exposure to parental IPV in childhood may undermine and alter perceptions of agency, self-efficacy, sense of control, and self-worth, while demanding maturity and self-sufficiency at an early age, both of which may lead individuals to try to escape the confines of adolescence where they may not feel they have control of their lives (Haynie et al., 2009; McLaughlin, 2016; Nurius, Green, Logan-Greene, & Borja, 2015). More directly, adolescents may still be living in a situation where the abuse is happening and believe that leaving home, getting married or going to work full-time will allow them to escape that reality. Alternately or additionally, adolescents may seek out early formal partnerships out of a desire for the intimacy, safety, support, and trust lacking in their primary family (Kuhl et al., 2012). Concerningly, childhood exposure to IPV within the family is known to be associated with future victimization and perpetration of IPV in adulthood, and entering into intimate relationships early may place those exposed at even greater risk of experiencing IPV in these relationships (Howell et al., 2016). It is important to note that adolescents who engage in these premature behaviors are often extremely limited by their circumstances (e.g., poverty, discrimination, adverse family conditions, lack of community resources and opportunities), potentially leading to choices they may not have made in a different context or if they were not under high stress.

Gender is a key factor shaping adolescent relationships and outcomes. There is evidence to suggest that the effects of IPV exposure in childhood may differ by gender, and that certain gender differences may be more or less apparent depending on age (e.g., boys exhibit more externalizing behaviors and girls exhibit more internalizing behaviors as they go through adolescence) (Evans et al., 2008; Howell et al., 2016; Wood & Sommers, 2011). Furthermore, prior literature has shown that females may be more likely to experience precocious transitions (Augustyn & Jackson, 2017; Campa, Bradshaw, Eckenrode, & Zielinski, 2008; Wickrama, Merten, & Elder, 2005), and these transitions may impact females and males differently. The detrimental impact of early sex, early marriage, and high school dropout on health outcomes (e.g., smoking, diabetes, hypertension) was found to be stronger for females compared to males (Wickrama et al., 2010). Using an intersectional framework, Augustyn and Jackson highlighted varying effects of precocious transitions on adult antisocial behavior across identities defined by gender, race/ethnicity, and socioeconomic status (Augustyn & Jackson, 2017). However, the effects of adolescent violent victimization on the timing of dating debut and risk of union formation and the influence of community disadvantage on precocious transitions did not differ by gender (Kuhl et al., 2012; Warner et al., 2017; Wickrama et al., 2005). These prior findings underscore the importance of examining if and how the effects of IPV exposure on precocious transitions might differ by gender.

The present study investigates the association between exposure to parental IPV in childhood and adolescent precocious transitions into adulthood. We hypothesized that individuals exposed to parental IPV in childhood would be at higher risk of the precocious transitions of leaving home early, early sex, early marriage, early parenthood, early full-time employment, and dropping out of high school, compared to individuals not exposed to IPV.

## Methods

### Sample

This retrospective cohort study utilized data from the National Epidemiologic Study on Alcohol Related Conditions (NESARC), a nationally representative survey of adults in the United States. The study methodology has been described in detail elsewhere (Grant et al., 2006). Wave 1 (W1) was conducted in 2001–2002 and Wave 2 (W2) in 2004–2005 to obtain a representative sample of the civilian, non-institutionalized population aged 18 years residing in the United States. We limited the initial participating NESARC sample of 43,093 to respondents who participated in both W1 and W2 (n=34,653 [80.4%]) and among those 34,653 to those who lived with at least one biological parent at any time before age 18 (n=33,608 [97.0% of those participating in W1 and W2; and 78.0% overall]). Compared to included participants, those excluded were significantly more likely to be older, male, non-US born, non-white, and more likely to have experienced childhood abuse and neglect (p < 0.05) but were similar in exposure to parental IPV. Two outcomes of interest were further limited as described below.

### Measures

**Primary exposure: childhood exposure to parental IPV (measured at W2)—**
Exposure to IPV was assessed with the following series of questions adapted from the Conflict Tactics Scale (Cronbach's $\alpha$ = .90): "Before age 18, how often did your father/ other adult male…": 1. "push, grab, slap or throw something at your mother?"; 2. "hit your mother with a fist or something hard?"; 3. "repeatedly hit your mother for at least a few minutes?"; and 4. "threaten your mother with a knife/gun or use a knife/gun to hurt her?" (Straus, Gelles, & Smith, 1990). Any participant responding "almost never," "sometimes," "fairly often" or "very often" to any of these items were categorized as positive for childhood exposure to parental IPV, whereas those who responded "never" to all four of these items were categorized as negative for childhood exposure to parental IPV. IPV exposure was further characterized into a trichotomous variable (no IPV exposure; less frequent, less severe IPV exposure; or frequent or severe IPV exposure) as operationalized in previous NESARC research (Roberts, Gilman, Fitzmaurice, Decker, & Koenen, 2010; Roberts, McLaughlin, Conron, & Koenen, 2011). Specifically, those participants who responded "fairly often" or "very often" to Item 1; "sometimes," "fairly often" or "very often" to Item 2; or "almost never," "sometimes," "fairly often" or "very often" to either Item 3 or Item 4 were classified as exposed to more frequent or severe IPV. All other participants positive for childhood exposure to parental IPV were classified as less frequent, less severe IPV exposure.

**Outcomes: precocious transitions (measured at W1 and/or W2)**—Precocious transitions to adulthood were operationalized largely to be consistent with prior literature in the US; however, we acknowledge that what is considered early or precocious may vary across cultures and generations with different legal and social norms (Bozick, 2006; Campa et al., 2008; Schoon & Mullin, 2016; Wickrama et al., 2005; Wickrama et al., 2010). Each precocious transition was examined as a separate outcome: 1. ran away from home at least twice (or once "for a longer time") prior to age 15 years (W1); 2. early sexual experience defined as first sex/sexual intercourse at age 15 or younger (we excluded child sexual abuse survivors from this analysis given the "age at first sex" item did not differentiate based on child abuse involved and non-child abuse involved sexual experiences; W2); 3. dropped out of high school (limited to those who completed 8th grade to focus on those most likely to have some decision-making power in dropping out of high school; W1 and W2); 4. early full-time employment defined as beginning full-time employment (30+ hours/week) at age 17 or younger (W1); 5. early marriage defined as entering marriage at age 19 years or younger (W1 and W2); and 6. early entry into parenthood defined as the first child having been born or started living with respondent at age 19 years or younger (W1 and W2).

**Covariates**—Potential confounders were identified through prior research on precocious entry into adulthood and on adverse outcomes associated with childhood IPV exposure (Haynie et al., 2009; Howell et al., 2016; Kuhl et al., 2012). In our analyses, the effects of potentially confounding factors were evaluated for their independent and combined effects on the risk estimate. Comparison was made between the unadjusted risk estimate and that obtained following adjustment. A 10% change in the risk estimate was used as a minimal guideline for inclusion of confounders (Maldonado & Greenland, 1993).

**Demographic variables (measured at W1 and/or W2).:** Demographic variables assessed as potential confounders included gender (asked only as male vs. female; W1); race/ethnicity (White; Black; American Indian or Alaskan Native; Asian, Native Hawaiian or Pacific Islander; Hispanic or Latino; W1); US born (yes, no; W1); and family ever received governmental assistance prior to participant age of 18 years as a proxy for childhood poverty (yes, no; W2).

**Childhood experience of abuse or neglect (measured at W2).:** Summary child abuse and neglect variables were developed following protocols used in prior NESARC research (Afifi, Henriksen, Asmundson, & Sareen, 2012). Five dichotomous measures (yes, no) of childhood abuse or neglect occurring prior to age 18 (sexual abuse, physical abuse, emotional abuse, physical neglect, and emotional neglect) were created and evaluated as potential confounders and moderators in study analyses.

**General household dysfunction (measured at W2).:** Childhood exposure to general household dysfunction prior to age 18 (yes, no) was operationalized based on prior NESARC research (Roos et al., 2013) with the exception of the removal of childhood exposure to parental IPV victimization item from this construct given it is the exposure of interest in this study. General household dysfunction was coded positively if any of the following were endorsed: exposure to parental depression (either biological parent ever

depressed or any parent/other adult in childhood home treated or hospitalized for depression); parental substance abuse (parent or other adult in childhood home was a problem drinker or had a drug problem); or parent or other adult in childhood home went to jail or prison.

**Psychiatric diagnosis prior to outcome (measured at W1 and W2).:** Psychiatric diagnoses (and age of onset) were assessed in NESARC using the semi-structured psychiatric diagnostic interview schedule, AUDADIS-IV (Grant et al., 2003). We evaluated the following diagnostic groups as potential confounders: any mood disorder (major depressive disorder, dysthymia, manic/hypomanic disorder), any anxiety disorder (panic disorder, agoraphobia, social phobia, specific phobia, generalized anxiety disorder, post-traumatic stress disorder), conduct or anti-social personality disorder, and substance abuse (alcohol abuse or dependence; drug abuse/dependence (other than nicotine)). If age of onset preceded the age of outcome (or prior to age 12 for the runaway outcome and prior to age 16 for the high school dropout outcome; specific age of outcome was not collected for either of these outcomes), the participant was considered positive for that diagnostic group. Given runaway status is a criterion for conduct disorder diagnosis, we eliminated conduct or anti-social personality disorder diagnosis for consideration as a confounder in the analysis for participant having run away from home before age 15.

### Analyses

Descriptive bivariate analyses were run on study sample characteristics by exposure to parental IPV victimization. Chi-square tests were used to test statistical significance. Robust Poisson regression was used to allow for the direct calculation of relative risks (RR) and 95% confidence intervals (CI) given that our outcomes are relatively common thereby biasing RR estimation achieved via logistic regression analyses (Zou, 2004). Separate models were run for each of the outcome variables. Moderation of IPV exposure by gender and by each of the five types of childhood abuse or neglect (separately) were examined for all outcomes by testing the significance of an interaction term between IPV exposure and each moderator. Separate risk estimates were generated when significant moderation was detected. Analysis was conducted using Stata 14.2. Stata's survey commands were utilized to accommodate study weights and strata, and Stata's subpop command was used to account for variance correction given our analyses involved a subsample of NESARC participants.

## Results

Of the 33,360 participants in our study sample, 5,413 (16.2%) reported having experienced childhood exposure to parental IPV, and the remaining 27,947 (83.8%) reported no such exposure. Of the 5,413 reporting childhood exposure to parental IPV, 2,285 (44.6%) were exposed to less frequent and less severe IPV, and the remaining 3,128 (55.4%) were exposed to frequent or severe IPV.

Table 1 describes the characteristics of the study sample by childhood exposure to any parental IPV. Most differences in demographic variables between the study groups were rather modest with the exception of the sole indicator of childhood poverty status (family received governmental assistance before the participant reached age 18). Concurrent

exposure to childhood abuse or neglect in childhood and most psychological disorders were more prevalent among those exposed to parental IPV in childhood.

Results from the robust Poisson regression analyses of the effect of any childhood exposure to parental IPV relative to no parental IPV exposure (referent group) are provided in Table 2. Both crude (unadjusted) and adjusted relative risks are displayed. Significantly elevated rates of all precocious adulthood entry outcomes were found in crude analyses; all but one remained significant after adjustment for confounding. After adjustment for confounding, participants exposed to parental IPV were more likely to have engaged in early sex (aRR[overall]= 1.22 (95% CI: 1.12, 1.34); aRR [males] = 1.19 (95% CI: 1.06, 1.33); aRR [females]= 1.45 (95% CI: 1.25, 1.69)); dropped out of high school (aRR= 1.11 (95% CI: 1.01, 1.23)); entered into early full-time employment (aRR[overall]= 1.22 (95% CI: 1.16, 1.29; aRR [males]= 1.17 (1.09, 1.25); aRR [females]= 1.45 (1.25, 1.69)); entered into early marriage (aRR= 1.37 (1.28, 1.46)); and entered into early parenthood (aRR= 1.30 (1.20, 1.40)) relative to participants not exposed to IPV. Significant interactions between gender and exposure to IPV were detected for early sex and early full-time work outcomes, such that the association between IPV exposure and early sex and early full-time work was stronger for females compared to males. No significant interactions were found between participant exposure to any type of childhood abuse or neglect and exposure to IPV (i.e., the associations between IPV exposure and precocious transitions did not differ by history of childhood abuse or neglect).

Results from the dose-response analyses comparing no IPV exposure to less frequent, less severe IPV exposure; and frequent or severe IPV exposure are provided in Table 3. For each precocious transition outcome, risk estimates were consistent with a dose-response relationship such that associations were stronger for individuals with frequent or severe childhood exposure to IPV compared to those with less frequent, less severe IPV exposure. Significantly elevated rates of precocious adulthood entry outcomes were largely consistent with findings with the dichotomous IPV exposure variable, however, two outcomes (high school dropout and early parenthood) were no longer significantly elevated for those exposed to less severe, less frequent IPV, but did remain elevated for those exposed to frequent or severe IPV. Significant interactions between gender and exposure to childhood IPV were detected for early sex and early full-time work outcomes such that the associations were stronger for females compared to males, consistent with the analyses using the dichotomous exposure variable.

## Discussion

The findings from this large nationally representative study provide evidence that individuals exposed to IPV in childhood are more likely to experience precocious transitions to adulthood compared to those who are not exposed. Specifically, children exposed to IPV are at increased risk of early entry into sex, full-time work, marriage, parenthood, and dropping out of high school. Approximately 16% of the sample reported IPV exposure in childhood, which is in line with prior representative studies (Finkelhor et al., 2015). These results add to the long list of adverse outcomes resulting from this early exposure to violence (Bair-Merritt, Blackstone, & Feudtner, 2006; Howell et al., 2016) and align with the substantial

literature of negative mental, physical, and behavioral effects of exposure to IPV in childhood (Bair-Merritt et al., 2006; Howell et al., 2016; Kitzmann, Gaylord, Holt, & Kenny, 2003; Wood & Sommers, 2011). Given the number of children facing exposure to parental IPV and the breadth of deleterious effects associated with this exposure, there have been efforts to encourage healthcare providers and other professionals interacting with children to screen for parental IPV exposure and be familiar with community resources for appropriate referrals (McTavish, MacGregor, Wathen, & MacMillan, 2016). It is important to note that while these results show that individuals exposed to IPV in childhood are more likely to experience precocious transitions, exposure to IPV in childhood is not deterministic as outcomes, coping strategies, and resilience can vary greatly across individuals (Hines, 2015; Howell, 2011).

Furthermore, we found that children exposed to more frequent or more severe IPV were at even higher risk for experiencing precocious transitions. Prior literature that has considered dose-response relationships have generally found similar results with more frequent or more severe violence exposure being associated with higher risk of more negative outcomes (Haynie et al., 2009; Howell et al., 2016; Wood & Sommers, 2011). Research on psychosocial outcomes of children exposed to IPV posited that the effects of severe violence may be more similar to child abuse and neglect, while less severe IPV exposure may produce adverse effects more in line with witnessing marital conflict and invoking of less traumatic mechanisms in children (Kitzmann et al., 2003). This may explain why for some precocious outcomes (here, dropping out of high school and early parenthood), only individuals exposed to frequent or severe IPV, but not individuals exposed to less frequent or less severe IPV, were at increased risk. These results point to the need to recognize different levels of IPV exposure when identifying or screening children, since some children may require more intensive interventions to protect against subsequent negative outcomes (Graham-Bermann & Hughes, 2003). Further research into the mechanisms that lead to precocious transitions would be helpful to identify protective factors and inform targeted interventions for children exposed to IPV.

We found evidence of effect modification by gender for two outcomes – early sex and early full-time work – such that the association between IPV exposure and early sex and early full-time work was stronger for females compared to males. For all other precocious transition outcomes significantly associated with IPV exposure (early marriage, parenthood, and dropping out of high school), females and males had similar levels of risk. Prior literature on whether childhood IPV exposure has different effects for boys and girls has been mixed and may be complicated by age (Kitzmann et al., 2003). Data used in this study were collected from adults of all ages, many of whom came of age when female education was given lower priority compared to male education. It is possible that males had more opportunities to attend college to leave home, while females had to be employed in a job to gain their independence. There was also a stronger association between IPV exposure and early sex for females. Adolescents may seek partnerships out of a desire for intimacy and trust after exposure to interparental conflict (Kuhl et al., 2012), and adolescent girls tend to date older partners compared to adolescent boys, which increases the seriousness of these relationships and may lead to earlier sexual initiation (Volpe, Hardie, Cerulli, Sommers, & Morrison-Beedy, 2013). In addition, from witnessing their mothers as victims of abuse, girls

may themselves feel low self-esteem and a lack of power to refuse sex with a partner. In partial contrast to our findings, the studies on adolescent violent victimization found no gender differences for early union formation or earlier dating debut (Kuhl et al., 2012; Warner et al., 2017). These premature behaviors are strongly shaped by the circumstances and context (e.g., poverty, adverse family conditions, limited access to community services) these individuals experience in childhood and adolescence.

There has been an increasing trend in more recent literature to focus on polyvictimization rather than distinct forms of victimization. Here, we focus primarily on exposure to IPV (e.g., witnessing) rather than a global measure of all victimization experiences. It is important to acknowledge that each of these research goals are important and serve distinct roles. While polyvictimization serves the purpose of examining cumulative trauma, examining distinct exposures allows for the study of the impact of distinct exposures for their unique effects on outcomes of interest. While we found that the associations between IPV exposure and precocious transitions did not differ by history of childhood abuse or neglect, experience of these more direct forms of victimization may still be an important predictor of adolescent precocious transitions. There is robust evidence that both witnessing and experiencing violence are associated with adverse outcomes and thus should both be measured (e.g., Cadely, Mrug, & Windle, 2019). Furthermore, our analyses included history of abuse or neglect only by parents or caregivers, so we may be missing information about abuse by other individuals (e.g., other family members, peers, acquaintances). Peer victimization, including someone pulling a weapon or shooting, has been identified as a risk factor for early marriage (Kuhl et al., 2012). Given the significant overlap in exposure to multiple types of violence, future research should consider both witnessing and experiencing violence across contexts (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008).

These results are subject to several limitations. First, the study relies on retrospective self-report of all variables, which may be subject to recall and/or social desirability bias. However, our exposure and outcome variables are salient, memorable yet distinct markers in their own right, therefore differential recall seems unlikely. We did not have information on timing of childhood IPV exposure, only that it occurred before age 18. Therefore, some outcomes could have preceded exposure. We think this is unlikely given most childhood exposure to IPV first occurs in early childhood (Howell et al., 2016). In addition, although women do experience a disproportionate share of severe and chronic IPV, the survey asked only about exposure to IPV perpetrated by the father/other adult male against the participant's mother, so we were unable to include exposure to IPV perpetrated by the mother. Finally, there may be unmeasured confounders or residual confounding by social class (given we had only one proxy for poverty during childhood which assessed whether family ever received governmental assistance in childhood). However, we were able to include a wide range of covariates found to be significant in prior literature.

Despite these limitations, the present study documents the independent influence that childhood exposure to IPV victimization has on risk of precocious transitions into adulthood. The findings from this study underscore the critical importance of both the primary prevention of IPV and provision of support for children who have been exposed to IPV. While there are few effective interventions for primary prevention of IPV, there are a

number of promising interventions for children exposed to IPV including child-parent psychotherapy in mother-child dyads, trauma-focused cognitive behavioral therapy, and community-based group therapy, which can improve children's behavioral and mental health outcomes post-exposure (McTavish et al., 2016; Wathen & MacMillan, 2013). IPV can have long-term and harmful effects for children, who require intervention to prevent or mitigate adverse outcomes. Long-term and meaningful solutions are necessary to ensure that precocious transitions into adulthood do not contribute to even greater risk of negative outcomes later in life. Future research into the relationships between exposure to IPV, adolescent precocious transitions, and physical and mental health outcomes in early and later adulthood would be beneficial.

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**Table 1.**

Study sample characteristics by childhood exposure to parental IPV

| | Total (n = 33,360) | IPV Exposure (n = 5,413) | No IPV Exposure (n = 27,947) | p-value[1] |
|---|---|---|---|---|
| **Demographics** | | | | |
| Sex | | | | |
| Male | 48.0 (14,071) | 44.8 (2,117) | 48.6 (11,954) | <0 001 |
| Female | 52.0 (19,289) | 55.2 (3,296) | 51.4 (15,993) | |
| Race/ethnicity | | | | |
| White | 71.4 (19,602) | 65.8 (2,811) | 72.4 (16,791) | |
| Black | 10.9 (6,237) | 13.8 (1,238) | 10.3 (4,999) | |
| American Indian | 2.2 (550) | 3.5 (144) | 1.9 (406) | <0.001 |
| Asian, Native Hawaiian, Pacific | 4.2 (909) | 3.6 (144) | 4.3 (774) | |
| Islander | 11.4 (6,062) | 13.2 (1,085) | 11.1 (4,977) | |
| Hispanic or Latino[2] | | | | |
| Age[3] (years) | | | | |
| 18-24 | 13.1 (3,847) | 12.1 (594) | 13.3 (3,253) | |
| 25-34 | 18.4 (6,009) | 19.5 (1,060) | 18.2 (4,949) | |
| 35-44 | 21.2 (7,258) | 25.1 (1,377) | 20.5 (5,881) | <0 001 |
| 45-54 | 18.9 (6,285) | 21.9 (1,194) | 18.4 (5,091) | |
| 55-64 | 12.3 (4,232) | 12.3 (679) | 12.3 (3,553) | |
| 65 | 16.1 (5,729) | 9.1 (509) | 17.4 (5,220) | |
| Government assistance before age 18 | 13.2 (4,971) | 27.0 (1,597) | 10.8 (3,374) | <0.001 |
| US born | 86.4 (28,297) | 88.1 (4,684) | 86.1 (23,613) | 0.01 |
| **Childhood history before age 18** | | | | |
| Sexual abuse | 10.1 (3,675) | 26.1 (1,505) | 7.3 (2,170) | <0.001 |
| Physical abuse | 17.2 (6,044) | 48.6 (2,621) | 11.7 (3,421) | <0.001 |
| Emotional abuse | 7.7 (2,762) | 27.9 (1,525) | 4.2 (1,237) | <0.001 |
| Physical neglect | 30.5 (10,450) | 61.5 (3,332) | 25.0 (7,118) | <0.001 |
| Emotional neglect | 9.1 (3,191) | 22.6 (1,214) | 6.7 (1,977) | <0.001 |
| Household dysfunction | 26.7 (9,109) | 63.5 (3,415) | 20.2 (5,694) | <0.001 |
| Biological/adoptive parent died | 9.8 (3,625) | 10.2 (621) | 9.8 (3,004) | 0.44 |
| **Mental health history by outcomes** | | | | |
| Mood disorder | | | | |
| Prior to early sex | 5.4 (1,763) | 7.3 (404) | 5.0 (1,359) | <0.001 |
| Prior to full-time work | 8.2 (2,955) | 12.6 (727) | 7.4 (2,228) | <0.001 |
| Prior to early marriage | 10.9 (3,820) | 17.2 (976) | 9.8 (2,844) | <0.001 |
| Prior to early parenthood | 11.9 (3,982) | 17.1 (914) | 10.9 (3,068) | <0.001 |
| Prior to high school dropout | 3.2 (1,058) | 6.3 (341) | 2.7 (717) | <0.001 |
| Prior to runaway | 1.6 (517) | 3.2 (172) | 1.3 (345) | <0.001 |
| Anxiety disorder | | | | |
| Prior to early sex | 11.8 (4,035) | 17.6 (974) | 10.8 (3,061) | <0.001 |

| | Total (n = 33,360) | IPV Exposure (n = 5,413) | No IPV Exposure (n = 27,947) | p-value[1] |
|---|---|---|---|---|
| Prior to full-time work | 14.7 (5,167) | 22.9 (1,289) | 13.2 (3,878) | <0.001 |
| Prior to early marriage | 16.6 (5,840) | 25.9 (1,453) | 14.9 (4,387) | <0.001 |
| Prior to early parenthood | 17.4 (6,015) | 26.2 (1,432) | 15.9 (4,583) | <0.001 |
| Prior to high school dropout | 10.5 (3,573) | 17.6 (962) | 9.2 (2,611) | <0.001 |
| Prior to runaway | 8.3 (2,867) | 14.7 (796) | 7.2 (2,071) | <0.001 |
| Conduct or antisocial personality disorder | | | | |
| Prior to early sex | 2.6 (775) | 5.5 (264) | 2.0 (511) | <0.001 |
| Prior to full-time work | 3.1 (946) | 6.9 (333) | 2.4 (613) | <0.001 |
| Prior to early marriage | 3.5 (1,073) | 7.9 (382) | 2.7 (691) | <0.001 |
| Prior to early parenthood | 3.5 (1,065) | 7.8 (375) | 2.7 (690) | <0.001 |
| Prior to high school dropout | 3.1 (959) | 7.1 (342) | 2.4 (617) | <0.001 |
| Prior to runaway[4] | 1.7 (522) | 3.7 (180) | 1.4 (243) | <0.001 |
| Substance abuse | | | | |
| Prior to early sex | 7.2 (2,113) | 8.0 (386) | 7.0 (1,727) | 0.09 |
| Prior to full-time work | 11.5 (3,678) | 15.1 (766) | 10.9 (2,912) | <0.001 |
| Prior to early marriage | 25.5 (7,878) | 32.3 (1,622) | 24.3 (6,256) | <0.001 |
| Prior to early parenthood | 26.7 (8,087) | 32.8 (1,582) | 25.6 (6,505) | <0.001 |
| Prior to high school dropout | 2.5 (787) | 5.5 (274) | 2.0 (513) | <0.001 |
| Prior to runaway | 0.35 (102) | 0.95 (44) | 0.25 (58) | <0.001 |

Note: Data are presented as % (n). All n values were unweighted, and all percentages were weighted.

[1] p-values based on $\chi^2$-tests

[2] Non-Hispanic data presented for White, Black, American Indian, and Asian, Native Hawaiian, & Pacific Islanders

[3] Age presented is at Wave 1 interview

[4] Provided for informational purposes only; not examined as confounder (see text)

**Table 2.**

Multivariable analysis of childhood exposure to parental IPV on adolescent precocious transitions

| | % (n) referent with outcome | Unadjusted RR (95% CI) | Adjusted[*] RR (95% CI) |
|---|---|---|---|
| Ran away before age 15[1] | 1.8 (513) | **3.59 (2.99, 4.32)** | 1.29 (0.98, 1.68) |
| Early sex[2,3] | | | |
|    Male | 19.5 (2,378) | **1.59 (1.43, 1.77)** | **1.19 (1.06, 1.33)** |
|    Female | 10.7 (1,683) | **1.98 (1.72, 2.27)** | **1.45 (1.25, 1.69)** |
| High school dropout[4] | 11.8 (3,406) | **1.38 (1.27, 1.51)** | **1.11 (1.01, 1.23)** |
| Early full-time work[2] | | | |
|    Male | 40.0 (3,971) | **1.17 (1.09, 1.25)** | **1.17 (1.09, 1.25)** |
|    Female | 26.9 (3,147) | **1.36 (1.26, 1.46)** | **1.36 (1.26, 1.46)** |
| Early marriage | 18.3 (5,245) | **1.37 (1.28, 1.46)** | **1.37 (1.28, 1.46)** |
| Early parenthood[4] | 19.5 (4,020) | **1.58 (1.47, 1.70)** | **1.30 (1.20, 1.40)** |

Note: Data in first column are presented as % (n). All n values were unweighted, and all percentages were weighted Bold indicates p < 0.05

[*] Confounders for each outcome were chosen based on the comparison made between the unadjusted and adjusted risk estimate (<10% change)

[1] Adjusted for experience of emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect, receipt of family assistance and other household dysfunction in childhood

[2] Significant interaction between childhood exposure to IPV and sex

[3] Adjusted for experience of emotional abuse and physical abuse, receipt of family assistance and other childhood dysfunction in childhood

[4] Adjusted for receipt of family assistance and other household dysfunction in childhood

**Table 3.**

Multivariable analysis of trichotomous measure of childhood exposure to parental IPV on adolescent precocious transitions

|  | Less Frequent, Less Severe IPV Exposure | Frequent or Severe IPV Exposure |
|---|---|---|
|  | Adjusted* RR (95% CI) | |
| Ran away before age 15[1] | 1.28 (0.93, 1.78) | 1.29 (0.96, 1.73) |
| Early sex[2,3] | | |
|   Male | **1.18 (1.01, 1.37)** | **1.21 (1.04, 1.40)** |
|   Female | **1.41 (1.12, 1.78)** | **1.48 (1.25, 1.77)** |
| High school dropout[4] | 0.83 (0.72, 0.96) | **1.35 (1.19, 1.52)** |
| Early full-time work[2] | | |
|   Male | **1.10 (1.00, 1.22)** | **1.23 (1.13, 1.35)** |
|   Female | **1.20 (1.07, 1.36)** | **1.46 (1.34, 1.59)** |
| Early marriage[5] | **1.26 (1.13, 1.40)** | **1.64 (1.52, 1.77)** |
| Early parenthood[6] | 0.96 (0.87, 1.12) | **1.32 (1.19, 1.45)** |

Bold indicates p < 0.05

*
Confounders for each outcome were chosen based on the comparison made between the unadjusted and adjusted risk estimate (<10% change)

[1]
Adjusted for experience of emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect, receipt of family assistance and other household dysfunction in childhood

[2]
Significant interaction between childhood exposure to IPV and sex

[3]
Adjusted for experience of emotional abuse and physical abuse, receipt of family assistance and other childhood dysfunction in childhood

[4]
Adjusted for receipt of family assistance and other household dysfunction in childhood

[5]
Adjusted for substance abuse diagnosis before early marriage

[6]
Adjusted for experience of emotional abuse and sexual abuse, receipt of family assistance and other childhood dysfunction in childhood