Published in final edited form as:

*Crim Justice Behav*. 2023 October 10; 50(11): 1661–1678. doi:10.1177/00938548231202801.

# PARENTAL INCARCERATION IN CHILDHOOD AND ADULT INTIMATE PARTNER VIOLENCE PERPETRATION:

## Race/Ethnicity and Sex Differences

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## Abstract

Few studies have examined associations between parental incarceration (PI) and violence perpetration in adulthood. We used Wave I and Wave IV of the National Longitudinal Study of Adolescent to Adult Health to investigate such associations with intimate partner violence (IPV) perpetration. Exposure to PI was found significantly associated with increased risk of all IPV perpetration behaviors in adulthood, except forced sex. The association of PI exposure with issuing threats, pushing, and throwing objects did not differ by race/ethnicity or sex. Associations of PI exposure with slapping, hitting, or kicking and injuring a partner were stronger for non-Hispanic White persons than for non-Hispanic Black persons. Differing patterns of elevated violence risk in adults with PI history suggest tailored preventive strategies may be of value.

### Keywords

parental incarceration; intimate partner violence; perpetration; race/ethnicity; sex

A small number of studies have indicated that parental incarceration (PI) is associated with general violent behaviors in young adulthood (Lee & Luo, 2023; Muftic & Smith, 2018). Gaps, however, exist with respect to the association between PI in childhood and specific forms of violence in adulthood, such as intimate partner violence (IPV), and whether such associations differ by race/ethnicity or sex. It is particularly important to understand the implications of the interaction of incarceration and partner violence for children given that one in seven Americans is partnered with someone with a history of incarceration (Enns et al., 2019), and research suggests rates of partner violence among incarcerated and reentering individuals and their partners are higher than rates in the general population (McKay et al., 2018; Wildeman, 2012). The current study addresses some of these research gaps.

Although the literature on PI has been growing rapidly over the last couple of decades, it does not include studies that examine associations between a parent's history of



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The authors have no conflicts of interest to report.

incarceration and a respondent's later IPV perpetration behavior. A related literature on adverse childhood experiences (ACEs), which includes household member with an incarceration history (HMI) as an adversity, has found mixed results with respect to the relationship between HMI and later IPV perpetration. Roberts and colleagues (2011) found that a significant association between HMI and IPV for both males and females in bivariate analyses became non-significant in adjusted models. Lee and colleagues (2022) did not include a multivariate model that specifically assessed the association between HMI and later IPV in their analyses, but found a significant, though counterintuitive association between the measures in bivariate analyses. Nikulina and colleagues (2021) tested a multivariate model and found a significant association between HMI and perpetration of physical aggression. Given limited findings in the PI literature and mixed findings in the ACEs literature, additional studies that utilize multivariate models and specifically investigate relationships between respondent report of childhood PI and later IPV behaviors can help address important gaps related to impacts of exposure to PI.

Stressful life events have a range of negative consequences for families (McCubbin et al., 1983). Incarceration, characterized as a life event or a chronic stressor, can have significant and stressful impacts on relational, economic, and other aspects of family life during and after a parent's incarceration (Foster & Hagan, 2013; Turney, 2014). Individuals who have experienced incarceration often face a number of informal and formal sanctions (Council of State Governments Justice Center, 2021) and destabilizing interactions with power structures (Garcia-Hallett, 2019). These challenges or postincarceration barriers may inhibit normal functioning. Additional household stressors may be created as a result of trying to navigate such barriers. Elevated household stress may in turn lead to elevated risk of family violence. Research indicates that exposure to family violence can negatively affect children's long-term behaviors and relationships. Both direct (physical and sexual abuse; Fang & Corso, 2007; McKinney et al., 2009) and indirect exposure (parental IPV; Ehrensaft et al., 2003; McKinney et al., 2009) to family violence have been found associated with later intimate partner aggression.

In addition to elevated stressors in families affected by incarceration, research also indicates that a parent's childhood experiences may elevate risk of a child's violence exposure and hence later behaviors. Individuals with incarceration histories are more likely to have experienced ACEs (Henry, 2020), such as childhood physical abuse, sexual abuse, and childhood witnessing of parental IPV. A parent's exposure to ACEs increases their likelihood of victimization and perpetration which subsequently increases their own child's exposure to such ACEs. Research also indicates that certain subgroups, such as female prisoners, are more likely than never incarcerated women to be disproportionately exposed to ACEs during childhood and at greater risk of IPV victimization as adults (Jones et al., 2018). Thus, parents who experience incarceration are at increased risk of having an ACE history which may increase their risk of violence victimization and perpetration in adult relationships and their children's risk of witnessing such violence. This aligns with findings reported by Muftic and Smith (2018) that individuals exposed to PI during childhood were also significantly more likely to report exposure to IPV as children. Findings by Stansfield and colleagues (2020) on family member release from incarceration and subsequent family violence (i.e., IPV and child abuse) also shed light on the increased likelihood of childhood

exposure to violence among children exposed to PI. IPV and child abuse were noted in 25% and 15% of the 26 papers included in the review, suggesting the experience of indirect (e.g., witnessing IPV) or direct (e.g., child abuse) family violence is not uncommon for children of parents with an incarceration history.

In summary, exposure to PI may elevate risk of later IPV perpetration for a number of reasons. Incarceration may elevate the level of stress families face, thereby increasing the likelihood of family conflict and violence. The level of stress experienced by families may interact with a parent's history of incarceration and a parent's history of childhood adversity to increase the likelihood of family violence. Elevated risk of family violence may result in children of parents with incarceration histories witnessing IPV or experiencing child abuse directly. Such experiences may then increase the likelihood that these children will perpetrate IPV in adulthood, perhaps as a result of having developed internal scripts that facilitate their endorsement of norms in support of the use of violence (Copp et al., 2019).

## DISTRIBUTION OF RISK BY RACE/ETHNICITY AND SEX

When considering strategies to prevent negative outcomes, it is valuable to investigate whether certain subgroups disproportionately bear the burden of elevated risk. Due to processes linked to systemic racism, Black and Hispanic persons disproportionately experience incarceration (Cole, 2011; National Resource Center on Justice Involved Women, 2016). As such, the children of Black and Hispanic persons are at elevated risk of experiencing PI during childhood (Wildeman, 2009). Furthermore, research indicates that biases and barriers resulting from experiences with incarceration are not equally distributed across groups in society and certain groups experience more negative incarceration-related impacts (Garcia-Hallett, 2019). A study of justice-involved individuals (Blankenship et al., 2018) specifically found that compared with White respondents, Black respondents reported a larger number of impacts of criminal justice involvement on well-being. Black respondents reported higher likelihood of multiple forms of surveillance and incarcerations both as juveniles and adults compared with White respondents. Furthermore, Black respondents were also more likely than White respondents to report that incarceration negatively affected education and employment and contributed to family estrangement. These findings suggest that individuals from populations disproportionately exposed to incarceration may be at greater risk of experiencing elevated family stress and related negative outcomes. It then follows their children may be at elevated risk of exposure to family stress and family violence, which places them at increased risk of later perpetrating IPV in adulthood.

Although type of family violence may matter (e.g., child abuse only, witnessing IPV only, or both), both males and females exposed during childhood are at risk of later perpetrating various forms of IPV (McKinney et al., 2009). A small number of studies on links between PI and violence-related child outcomes have examined differences by child sex and have found that associations are generally more pronounced for male children (Wildeman, 2010). Geller and colleagues (2012) noted that effects of incarceration on aggression are significant for both sexes but are almost twice as large for boys as for girls. One study, though, on adolescent delinquency found that an association with PI was significant for female children if they lived with their fathers prior to the incarceration event (Swisher & Shaw-Smith,

2015). Given that the limited literature on associations between PI and violence-related outcomes has more frequently noted associations for males and suggests under certain circumstances associations may exist for females, there is value in examining sex variation in risk of later IPV perpetration.

## THE CURRENT STUDY

More clearly specifying links between PI and different forms of violence such as IPV and identifying whether associations differ by respondent's sex or race/ethnicity may help guide investigations of processes associated with PI that need to be interrupted to mitigate intergenerational transmission of risk. Understanding how subgroups differ may facilitate development of more effective preventive and interventive strategies to reduce violence in individuals, families, and communities. The current study used data from a nationally representative, longitudinal study to examine the relationship between PI experienced in childhood/adolescence and perpetration of IPV in early adulthood, and whether race/ethnicity and sex of respondent influences this relationship. Given what is known about the multiple disadvantages (Purdie-Vaughns & Eibach, 2008) that children of Black and Hispanic persons face, it was expected that the relationship between PI and perpetration of IPV would be stronger within Black and Hispanic subgroups. Given the limited literature on impacts of PI by child sex suggests that there are more pronounced impacts on male children, the expectation was that the relationship between PI and adult IPV behaviors would be stronger for males exposed to PI.

## METHOD

### SAMPLE

The present study utilizes data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a longitudinal study following a nationally representative probability sample of adolescents in Grades 7 through 12 in the 1994–1995 school year (Harris, 2009). Participants provided written informed consent for participation in all aspects of Add Health in accordance with the University of North Carolina School of Public Health Institutional Review Board guidelines that are based on the Code of Federal Regulations on the Protection of Human Subjects 45CFR46 (Add Health, n.d.). The present study was based on participants who were interviewed during Wave I (1994–1995) and Wave IV (2007–2008) and have a sampling weight. Demographic information was obtained from Wave I and information on focal measures such as PI and IPV from Wave IV. The full sample for Wave IV included 15,701 participants or 80.3% of the eligible participants from Wave I. The mean ages of participants during the first and fourth Waves of data collection were 15.7 years and 28.8 years, respectively. During Wave IV, many respondents were in the parenting phase of the life course and behaviors exhibited during this period have important implications for intergenerational transmission of risk. This is also a time when anti-social and criminal behavior, including violence, generally is on the decline after peaking in late teen years (Sweeten et al., 2013). Thus, efforts to prevent multigenerational patterns of violence may benefit from understanding whether by early adulthood elevated risks, including those that contribute to IPV, desist or persist among those exposed to PI.

Of the 15,701 participants who participated in both Wave I and Wave IV interviews, 14,800 participants had a sampling weight at Wave IV interview which could be used to compute population estimates. An additional 2,355 respondents were excluded because they were mainly missing information on outcome variables (IPV measures) or key independent variable (PI), or reported PI first occurred during adulthood. This resulted in a final analytic sample of 12,445 participants. Respondents excluded from the analysis were compared on key demographic characteristics to respondents included in the analysis and were not found to be notably different. For data analysis, data describing participants' sociodemographic characteristics from Wave I of the Add Health study were combined with Wave IV self-reported PI history and IPV behavior outcomes. Because data on the key independent variable, PI history, was collected during Wave IV, causal relationships could not be tested.

## MEASURES

**Dependent Variables—**During the Wave IV data collection, survey respondents were asked four IPV-related questions about their current or most recent partner that were derived from the Conflict Tactics Scale: How often in the past year (1) {have/did} you threatened {first name} with violence, pushed or shoved {him or her}, or thrown something at {him or her} that could hurt?; (2) {have/did} you {slapped/slap}, hit, or {kicked/kick} {first name}?; (3) {have/did} you {insisted/insist} on or {made/make} {first name} have sexual relations with you when {he or she} didn't want to?; and (4) {has/did} {first name} {had/have} an injury, such as a sprain, bruise, or cut because of a fight with you? The questions were recoded into dichotomous variables coded "1" if a respondent positively endorsed the item and "0" if the respondent indicated they did not engage in the behavior. The first IPV measure was labeled "threatened, pushed, or threw object at a partner," the second IPV measure was labeled "slapped, hit, or kicked a partner," the third measure was labeled "forced sex on a partner," and the fourth measure was labeled "injured a partner." In addition to the individual dichotomous IPV measures, a composite IPV measure was constructed. For the composite measure, if the respondent had a positive response to any of the four individual IPV measures, they were coded a "1" for "Any IPV." Alternatively, if they were coded "0" on all four individual IPV measures, they were coded "0" for "No IPV" in the composite measure.

**Key Independent Variable—**PI was a dichotomous variable indicating a parent was incarcerated either before the respondent was born or during their childhood (0 through 18 years of age). This variable was used in models with the full sample. At Wave IV, respondents were asked if their biological mothers or fathers had ever spent time in jail or prison. Respondents were also asked the age at which this first occurred. Respondents who indicated their mother and/or father had ever been incarcerated were first coded as having a "PI" history. Among this group, those who reported PI onset before or during age 18 were maintained in the study sample; others who reported PI were excluded. All other respondents were coded as "no PI" history.

**Control Variables—**Several sociodemographic and individual-level factors that could potentially relate to both the parent's incarceration and the respondents later IPV behaviors were included in the models to control for potential confounders. Sociodemographic factors

included race/ethnicity (non-Hispanic White, non-Hispanic Black, and Hispanic, and Other), sex (male/female), foreign born status, childhood family structure (two biological parents, two parents [one biological], single parent, or other), biological father's education (less than high school, high school, some college, college, and graduate school), biological mother's education (less than high school, high school, some college, college, and graduate school), and whether the family received public assistance. Individual-level risk factors included whether the respondent reported child abuse victimization (i.e., emotional abuse, physical abuse, and sexual abuse) and whether their biological father or mother experienced alcoholism. Grade in school (i.e., Grades 7–12 in 1994–1995) was included to capture cohort effects. All control variables except those related to child abuse and neglect were measured during Wave I. Child abuse was retrospectively measured at Wave IV. Missing data for biological father's education and biological mother's education, family's receipt of public assistance, and biological father's alcoholism and biological mother's alcoholism were treated as separate categories and retained in the analyses.

### ANALYSIS

Logistic regression models were run for each of the IPV behavior outcomes to assess whether PI was associated with IPV when potential confounding factors were accounted for. Next, interaction models were run to assess whether the relationships between PI and IPV behaviors were moderated by factors such as racial/ethnic group (i.e., non-Hispanic White, non-Hispanic Black, and Hispanic) and sex (male/female). If a significant ($p < .05$) interaction term between PI and race/ethnicity or sex was found, a stratified analysis by race/ethnicity or sex was conducted. All the analyses were conducted using Stata 15. No prior studies have used the Add Health data to examine the association of PI with IPV perpetration behaviors, or the potential moderation of the relationship by race/ethnicity or sex.

## RESULTS

In descriptive analysis (see Table 1), 12.9% of respondents were exposed to PI and 15.8% of respondents reported any IPV perpetration. For specific IPV perpetration measures, 12.2% of respondents reported they threatened, pushed, or threw an object at a partner, 8.6% reported they slapped, hit, or kicked a partner, 2.9% reported they injured a partner, and 3.1% reported they forced sex on a partner. The respondents' grades in school in 1994–1995 were largely evenly distributed, ranging from 15.0% to 18.3% for Grades 7 to 12. Female and male participants were almost equal (49.7% vs. 50.3%). More than two thirds of participants were non-Hispanic White persons (68.8%), followed by non-Hispanic Black persons (14.8%) and Hispanic persons (11.6%). More than one fourth of participants (26.9%) reported emotional abuse, 16.8% reported physical abuse, and 4.5% reported sexual abuse.

In cross-tabulation analyses (see Table 2), for each IPV perpetration measure and the composite *Any IPV perpetration measure*, higher prevalence of IPV perpetration was found among PI-exposed respondents compared with non-PI-exposed respondents. The differences were statistically significant. This pattern was the same within all racial groups and for both

males and females when looking at respondents who reported they threatened, pushed, or threw an object at a partner. In addition, compared with their non-PI-exposed counterparts, both male and female PI-exposed respondents had significantly higher prevalence of reporting that they slapped, hit, or kicked a partner and that they injured a partner. When assessing whether the relationship between PI and IPV perpetration behaviors varied in different racial/ethnic groups, we found significantly higher prevalence of reports of slapping, hitting, or kicking a partner among non-Hispanic White and non-Hispanic Black persons with PI history when compared with their counterparts who did not report PI history. This difference was not found when comparing Hispanic persons by PI status. In addition, higher prevalence of reports of injuring a partner was only found among non-Hispanic White persons who experienced PI compared with non-Hispanic White persons who had not experienced PI. With respect to forced sex, the only significant difference found by PI status was among Hispanic persons (9.0% vs. 3.9%, $p = .027$). Specifically, Hispanic persons who reported a history of PI during childhood more frequently reported perpetrating forced sex than Hispanic persons who did not report such history and the difference in reporting this behavior was statistically significant. Also, unlike the other IPV measures, males with PI exposure had significantly higher reports of perpetrating forced sex compared with males who were not PI exposed (7.4% vs. 4.6%, $p = .024$); there were no differences when comparing females by PI exposure status.

Unadjusted and adjusted (including potential confounders) regression analyses were run and produced odds ratios (ORs). Findings indicated that PI was significantly associated with increased risk of all IPV behaviors, except forced sex, when potential confounding factors were included in models (see Table 3). After controlling for potential confounders, the ORs were attenuated but remained relatively robust. For example, the OR for “threatened, pushed, or threw object at a partner” reduced from 2.09 in the unadjusted model to 1.50 in the adjusted model but remained statistically significant. Compared with those who had no PI exposure, those who were exposed to PI in childhood had 1.5 times the odds of engaging in such behaviors in adulthood. Across the three IPV outcomes where significant associations were found, the adjusted ORs narrowly ranged from 1.50 to 1.59. When tests for moderation were introduced (Table 4), race/ethnicity was found to moderate the relationships between PI and two measures of IPV—slapped, hit, or kicked a partner and injured a partner. The relationships between PI and the two measures of IPV were stronger for non-Hispanic White persons than for non-Hispanic Black persons. Results of moderation analyses suggested that the analytical models should be stratified by race/ethnicity. Results of the separate models by race/ethnic group (Table 5) indicate that non-Hispanic White persons who were exposed to PI had significantly higher odds of reporting that they slapped, hit, or kicked a partner (adjusted OR = 1.77; 95% confidence interval [CI] = [1.20, 2.63]) and reporting that they had injured a partner (adjusted OR = 2.13; 95% CI = [1.23, 3.68]) compared with non-Hispanic White persons not exposed to PI. These relationships were not significant when examining the effect of PI exposure within the Black and Hispanic subgroups. In addition, tests for moderation (Table 4) did not indicate that the relationship between PI and IPV outcomes differed by sex. Thus, results suggest that the risk conferred by PI does not differ by sex.

## DISCUSSION

Consistent with studies examining the relationship between PI and perpetration of violence in adulthood (Lee & Luo, 2023; Muftic & Smith, 2018), results of the multivariate logistic regression models in the current study indicate exposure as a child to PI was associated with increased risk of IPV perpetration behaviors in adulthood. However, examination of the moderating factors of race/ethnicity and sex resulted in mixed and unexpected findings. Although no significant moderating effects by sex were found, the relationship between PI and two measures of IPV perpetration were stronger for non-Hispanic White persons than for non-Hispanic Black persons.

The risk of engaging in behaviors where one threatened, pushed, or threw objects at a partner was not found to be significantly different when looking across racial/ethnic subgroups and at males and females exposed to PI. PI was not found to be significantly associated with slapping, hitting, or kicking a partner or injuring a partner for the Black and Hispanic subgroups, but was found to be significantly associated with both outcomes for the White subgroup. Risk of slapping, hitting, or kicking a partner and injuring a partner did not differ by sex. So, though Black and Hispanic children are disproportionately exposed to PI, compared with their counterparts who were not exposed to PI, exposure to PI did not significantly increase their risk of perpetrating later IPV behaviors such as slapping, hitting, or kicking a partner. Likewise, though PI has more frequently been associated with aggression in male children (Geller et al., 2012; Wildeman, 2010), the association between PI and later adult IPV behaviors was not significantly different for male and female respondents who reported exposure to PI as children.

Results of this analysis supplement findings of earlier research to suggest that PI confers risk of later violence perpetration and depending on the specific outcome, risk may vary by racial/ethnic subgroup (Lee & Luo, 2023). The earlier research found PI was linked to elevated risk of violence (i.e., fighting, fighting that injured someone, and any violent behavior), and risk of fighting in adulthood was particularly elevated among Hispanic and Black persons exposed to PI compared with their counterparts who were not exposed. The current analysis specifically suggests that racial/ethnic subgroups may differ by specific IPV perpetration behaviors. Also, in contrast to the earlier study, the racial/ethnic group least likely to experience PI (i.e., White persons), and according to other research the group less likely to report significant negative incarceration-related impacts to well-being (McKay, 2022), was the subgroup where significant associations were identified between PI and perpetration of two specific IPV behaviors. Understanding how PI differentially influences later violence perpetration behaviors among specific racial/ethnic subgroups may inform development of tailored prevention and intervention strategies. As such, additional research is needed to better understand contextual factors and processes that may explain these differential patterns of risk. It would be of value for future research to investigate (1) racial/ethnic variation in parental life histories; (2) racial/ethnic variation in child's experience of stressors (including ACEs) before, during, and after a parent's incarceration; and (3) whether variations in parent and child experiences by racial/ethnic subgroup explains variance in later risk of IPV perpetration by PI-exposed children.

Variation in parental life history characteristics may help explain differences in later IPV behaviors of individuals exposed during childhood to PI. Although a wide number of studies have investigated backgrounds of imprisoned individuals, there has been a dearth of examination of variation by racial/ethnic subgroup, sex, or PI status (Miller et al., 2017). A couple of exceptions are studies conducted by Carlson and Shafer (2010; Carlson et al., 2010) which examine racial/ethnic variation in a population of male and female inmates in Arizona. In those studies, Black, Latino, and Asian imprisoned parents were found significantly different in comparison to White imprisoned parents. Specifically, compared with imprisoned parents from other racial/ethnic groups, White imprisoned parents had higher reports of exposure to IPV and lifetime family violence (Carlson et al., 2010). Thus, it appears that in the sample used in the Carlson study, at least, White imprisoned parents more likely experienced IPV as an adult, which may mean their children potentially were more likely to have witnessed IPV. Given witnessing IPV as a child is a risk factor for later perpetration behaviors (McKinney et al., 2009), these differential parental life experiences may help explain results found in the current study.

Variation in child experience of PI may also contribute to increased risk of later IPV. As discussed earlier, incarceration can be characterized as a stressor that influences development of poor outcomes in families. Different family subgroups, though, may be affected by different sets of stressors. Specifically, stressors may cluster differently by race/ethnicity and consequently influence variation in long-term outcomes among individuals exposed to PI during childhood. For example, PI may affect the number and quality of caregiver arrangements (Daillaire, 2007), number and extent of residential moves (Geller et al., 2009; Muentner et al., 2019; Tasca et al., 2011), number and chronicity of ACEs (Turney, 2018), types of economic strains faced by families and extended family networks (Arditti et al., 2003; Wildeman, 2014), and levels of incarceration-related stigma (Foster & Hagan, 2007; Phillips & Gates, 2011). Should these factors vary by race/ethnicity, the likelihood of stressors influencing family violence may also differ. This may result in children from different racial/ethnic subgroups being exposed to different levels of violence. It may also influence how children adjust to the stressors in their familial households. All of these factors may result in differential long-term impacts on their own interactions with intimate partners.

There continues to be a dearth of literature on variation of child experience of PI by race/ethnicity. As such, there is less information on unique experiences of subgroups, particularly White children who are less likely to experience PI. Researchers, however, have posited that incarceration may be an especially stressful life event among children who are least likely to be exposed to it and hence most harmful to children when it is an uncommon experience (Eaton, 1978; Finkeldey & Dennison, 2020; Turney, 2017). Similarly, Finkeldey and Dennison (2020) applied the concept of relative deprivation (Runciman, 1966) to an examination of how neighborhood-level rates of PI may moderate the consequences associated with children's experiences of PI. Specifically, they posited it may be possible that areas with high rates of PI shape a collective experience among children that ultimately minimizes the deleterious consequences; while alternatively, children exposed to PI who live in neighborhoods where PI is uncommon may experience more negative effects because there is less opportunity to connect at the community level around a shared, though negative,

experience. Consistent with this notion, their study findings indicated that the effect of PI is weaker in contexts where PI is common.

One possible application of how the effect of PI may differ by community context is in relation to impacts of social stigma. Studies have found that children who experience PI also tend to experience increased levels of social stigma (Foster & Hagan, 2007) which may influence development of maladaptive coping behaviors including physical aggression. Such coping behaviors and responses may persist into young adulthood, thereby increasing the risk of engaging in different forms of violence such as IPV. Easterling and Feldmeyer (2017) in a study of White, rural, incarcerated mothers conclude that although mothers of all races experience stigma from incarceration, mothers in their sample appeared to uniquely contextualize their experiences and amplify a sense of spoiled identity. They described their families (extended families and their children) as being subject to a magnified sense of stigma and alienation connected to their status as an imprisoned mother. As incarceration was uncommon in their rural and White communities, the family members of these imprisoned women were seen as highly visible and subject to exceptionally pronounced informal sanctions and stigma. Easterling and Feldmeyer (2017) report that the effect of such sanctions and stigma compelled some of these families to relocate away from these towns to “escape the stigma.” Such responses to incarceration may generate additional stressors, including residential instability, challenges with connectedness (e.g., to schools, communities), and financial strain. Relocating “to escape the stigma” may result in reduced access to support networks that can help families manage stressful circumstances. Lack of social support may lead to feelings of social exclusion, higher levels of stress, maladaptive coping, conflict, and IPV (Eckhardt et al., 2022). In addition, adjusting to such stressors may affect children in ways that increase their risk for aggression and later IPV perpetration behaviors. The small qualitative study by Easterling and Feldmeyer (2017) provides insight which helps contextualize the subgroup differences identified in this study. Additional studies that contribute to understanding racial/ethnic variation in child and family experience and the potential implications of those differences could be of value in developing strategies to prevent violence associated with exposure to PI.

## LIMITATIONS

The findings of this study which indicate associations between PI in childhood and IPV perpetration in adulthood should be considered within the context of several limitations. First, due to data limitations, causality cannot be established. The study utilized a measure of lifetime history of PI reported in adulthood concurrent to questions regarding IPV perpetration in adulthood. In addition, the measure of incarceration did not parse out whether the parent spent time in jail or prison; survey questions did not allow for inclusion of measures of duration or frequency of incarceration. It was also not possible to identify whether the respondent lived with the parent prior to incarceration or to distinguish between respondents who experienced infrequent and/or brief periods of PI from individuals who experienced chronic and/or long episodes of PI over the course of their childhood. The violence measures in the study are limited to past year reports and focus on current intimate partner relationships. Thus, if a respondent has perpetrated IPV, but not in the relationship they were in at the time of the survey, they will be misclassified as non-perpetrators.

In addition, the potential for recall bias exists, particularly since respondents were first asked about whether a mother or a father had a history with incarceration during Wave IV of data collection when they were young adults. Furthermore, incarceration history and IPV may be perceived as sensitive due to potential for stigma. As such, responses may be affected by social desirability and could be underestimated. Finally, non-significant associations between PI and IPV in some racial/ethnic subgroups may be partly due to their small cell sizes. Power analyses were conducted to calculate the sample sizes required to detect significant associations between PI and IPV among those groups and confirmed the actual sample sizes were smaller than the required ones. Add Health is one of the few nationally representative, longitudinal data sets that allows examination of the effects of PI and a number of papers have identified robust associations between PI, health, and social outcomes (Lee et al., 2013; Roettger & Swisher, 2011; Swisher & Shaw-Smith, 2015). Additional data, however, are still needed to effectively examine differences by race/ethnicity and sex.

## CONCLUSION

Families exposed to PI face a number of stressors during and after a parent has been incarcerated. Such stressors may increase children's likelihood of violence exposure and later violence perpetration. Additional research is needed to identify underlying mechanisms linking PI to later IPV behaviors. Furthermore, given patterns of impact appear to differ by racial/ethnic subgroup, investigations are needed to further explore how PI differentially affects families and consequent violence outcomes. Although additional studies are needed to address gaps in our understanding of how PI links to violence outcomes, evidence from existing research suggests early interventions are warranted.

Such interventions may prevent or buffer the impact of risks associated with incarceration exposure and other ACEs such as witnessing parental IPV and substance abuse as well as experiencing child abuse and neglect. Centers for Disease Control and Prevention (CDC) has produced a suite of resources to help states and communities take advantage of the best available evidence to prevent violence and other exposures in the home and community that adversely affect children (Centers for Disease Control and Prevention, 2019). These documents outline strategies that primarily focus on changing norms, environments, and behaviors in ways that can prevent ACEs from happening in the first place. This includes ensuring that children have a good start by implementing programs such as home visitation that have been shown to prevent IPV and child abuse. In addition to strategies aimed at preventing exposure before it happens, other strategies involve mentoring programs that connect youth to other caring adults and prosocial activities and provision of trauma-informed services to lessen immediate and long-term harms.

The United States has the highest incarceration rate and number of incarcerated people in the world (Institute for Crime & Justice Policy Research, 2021; Minton et al., 2021). Given the majority of incarcerated persons are adults of childbearing age (Federal Bureau of Prisons, 2023), a significant number of children are exposed to PI and face increased risk of negative outcomes across their life course (Lee et al., 2013; Roettger & Swisher, 2011; Swisher & Shaw-Smith, 2015). The results of this study indicate that PI in childhood

increases the risk of later adult IPV perpetration behaviors and that associations vary by racial/ethnic group. Given the large pool of individuals affected by incarceration in the United States and that myriad impacts may persist across generations, it is important that research is conducted to better understand mechanisms driving these associations. Findings of such research can be used to tailor services for specific racial/ethnic groups to address immediate and long-term harms and to inform structural changes to prevent incarceration and its resulting stressors on families.

## ACKNOWLEDGEMENT

Add Health is directed by Robert A. Hummer and funded by the National Institute on Aging cooperative agreements U01 AG071448 (Hummer) and U01AG071450 (Aiello and Hummer) at the University of North Carolina at Chapel Hill. Waves I-V data are from the Add Health Program Project, grant P01HD31921 (Harris) from *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), with cooperative funding from 23 other federal agencies and foundations. Add Health was designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill.

This research did not receive any specific grant funding from agencies in the public, commercial, or not-for-profit sectors. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

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**TABLE 1:**

Descriptive Statistics of Variables

| Variable | Unweighted count | Weighted percentage | 95% CI of weighted percentage |
|---|---|---|---|
| Parental incarceration exposure | 1,661 | 12.9% | [11.6%, 14.4%] |
| Threatened, pushed, or threw object at partner | 1,560 | 12.2% | [11.3%, 13.3%] |
| Slapped, hit, or kicked a partner | 1,122 | 8.6% | [7.8%, 9.4%] |
| Injured a partner | 379 | 2.9% | [2.4%, 3.4%] |
| Forced sex on a partner | 439 | 3.1% | [2.7%, 3.6%] |
| Any IPV behavior | 2,029 | 15.8% | [14.7%, 17.0%] |
| Grade in school in 1994–1995 | | | |
| Seventh | 1,743 | 18.3% | [14.8%, 22.5%] |
| Eighth | 1,657 | 16.5% | [13.1%, 20.5%] |
| Ninth | 2,208 | 16.9% | [14.8%, 19.3%] |
| Tenth | 2,383 | 16.1% | [14.2%, 18.3%] |
| Eleventh | 2,366 | 15.0% | [13.3%, 17.0%] |
| Twelfth | 2,088 | 17.1% | [15.0%, 19.4%] |
| Sex | | | |
| Female | 6,625 | 49.7% | [48.3%, 51.0%] |
| Male | 5,820 | 50.3% | [49.0%, 51.7%] |
| Race/ethnicity | | | |
| Non-Hispanic White | 6,942 | 68.8% | [62.9%, 74.2%] |
| Non-Hispanic Black | 2,538 | 14.8% | [11.3%, 19.2%] |
| Hispanic | 1,990 | 11.6% | [8.6%, 15.4%] |
| Other | 975 | 4.8% | [3.5%, 6.7%] |
| Childhood family structure | | | |
| Two biological parents | 7,212 | 59.41% | [57.0%, 61.7%] |
| Two parents: one biological | 1,820 | 13.89% | [13.0%, 14.8%] |
| Single parent | 3,230 | 25.03% | [23.0%, 27.1%] |
| Other | 183 | 1.68% | [1.2%, 2.2%] |
| Receipt of public assistance | | | |
| Yes | 2,400 | 19.3% | [17.0%, 21.8%] |
| Missing | 1,603 | 11.5% | [10.3%, 13.0%] |
| Foreign born | 984 | 5.5% | [4.0%, 7.5%] |
| Emotional abuse | 3,281 | 26.9% | [25.6%, 28.2%] |
| Physical abuse | 2,208 | 16.8% | [15.7%, 18.0%] |
| Sexual abuse | 580 | 4.5% | [3.9%, 5.0%] |
| Biological father’s education | | | |
| Less than high school | 1,834 | 14.2% | [12.4%, 16.2%] |
| High school | 3,992 | 33.3% | [31.0%, 35.6%] |
| Some college | 2,011 | 16.2% | [15.1%, 17.4%] |
| College | 2,282 | 18.5% | [16.7%, 20.5%] |
| Graduate school | 1,169 | 8.6% | [6.8%, 10.9%] |

| Variable | Unweighted count | Weighted percentage | 95% CI of weighted percentage |
|---|---|---|---|
| Missing | 1,157 | 9.1% | [7.9%, 10.6%] |
| Biological mother's education | | | |
| Less than high school | 1,890 | 14.4% | [12.4%, 16.6%] |
| High school | 4,281 | 37.3% | [34.9%, 39.7%] |
| Some college | 2,385 | 18.9% | [17.6%, 20.3%] |
| College | 2,399 | 18.1% | [16.3%, 20.0%] |
| Graduate school | 985 | 7.1% | [5.8%, 8.7%] |
| Missing | 505 | 4.2% | [3.6%, 5.0%] |
| Biological father's alcoholism | | | |
| Yes | 1,310 | 11.3% | [10.3%, 12.4%] |
| Missing | 2,370 | 17.0% | [15.4%, 18.7%] |
| Biological mother's alcoholism | | | |
| Yes | 260 | 2.3% | [1.9%, 2.7%] |
| Missing | 1,844 | 12.5% | [11.1%, 14.0%] |

*Note*. The analytical sample had 12,445 participants. Both unweighted counts and weighted percentages were reported. The weighted percentages represent the population estimates. CI = confidence interval; IPV = intimate partner violence.

**TABLE 2:**

Prevalence of Intimate Partner Violence Behaviors by Parental Incarceration, by Total, Race/ethnicity, and Sex, National Longitudinal Study of Adolescent to Adult Health Waves I and IV

| Intimate partner violence behaviors | No PI | PI | Pearson $\chi^2$ statistic *p*-value | Sample size |
|---|---|---|---|---|
| Threatened, pushed, or threw object at partner | 1,245 (11.0%) | 315 (20.5%) | <.001 | 12,445 |
| By race/ethnicity | | | | |
| Non-Hispanic White | 601 (9.9%) | 147 (19.7%) | <.001 | 6,942 |
| Non-Hispanic Black | 324 (15.0%) | 107 (22.6%) | .001 | 2,538 |
| Hispanic | 199 (12.2%) | 48 (20.5%) | .020 | 1,990 |
| By sex | | | | |
| Male | 448 (8.8%) | 103 (15.6%) | <.001 | 5,820 |
| Female | 797 (13.2%) | 212 (25.3%) | <.001 | 6,625 |
| Slapped, hit, or kicked a partner | 890 (7.6%) | 232 (15.4%) | <.001 | 12,445 |
| By race/ethnicity | | | | |
| Non-Hispanic White | 414 (6.5%) | 104 (15.4%) | <.001 | 6,942 |
| Non-Hispanic Black | 240 (11.6%) | 83 (16.0%) | .033 | 2,538 |
| Hispanic | 147 (9.4%) | 35 (14.5%) | .096 | 1,990 |
| By sex | | | | |
| Male | 244 (4.6%) | 61 (9.3%) | <.001 | 5,820 |
| Female | 646 (10.6%) | 171 (21.4%) | <.001 | 6,625 |
| Injured a partner | 292 (2.4%) | 87 (6.0%) | <.001 | 12,445 |
| By race/ethnicity | | | | |
| Non-Hispanic White | 118 (1.8%) | 39 (6.5%) | <.001 | 6,942 |
| Non-Hispanic Black | 86 (4.2%) | 32 (6.6%) | .146 | 2,538 |
| Hispanic | 52 (3.8%) | 11 (2.5%) | .442 | 1,990 |
| By sex | | | | |
| Male | 113 (2.2%) | 32 (5.1%) | <.001 | 5,820 |
| Female | 179 (2.7%) | 55 (7.0%) | <.001 | 6,625 |
| Forced sex on a partner | 358 (2.9%) | 81 (4.5%) | .030 | 12,445 |
| By race/ethnicity | | | | |
| Non-Hispanic White | 140 (2.3%) | 32 (3.3%) | .141 | 6,942 |
| Non-Hispanic Black | 97 (4.2%) | 26 (5.4%) | .466 | 2,538 |
| Hispanic | 68 (3.9%) | 20 (9.0%) | .027 | 1,990 |
| By sex | | | | |
| Male | 276 (4.6%) | 60 (7.4%) | .024 | 5,820 |
| Female | 82 (1.3%) | 21 (1.6%) | .472 | 6,625 |
| Any IPV behavior | 1,639 (14.5%) | 390 (25.1%) | <.001 | 12,445 |
| By race/ethnicity | | | | |
| Non-Hispanic White | 786 (12.9%) | 181 (23.9%) | <.001 | 6,942 |
| Non-Hispanic Black | 419 (19.3%) | 132 (27.5%) | <.001 | 2,538 |
| Hispanic | 268 (16.7%) | 64 (27.1%) | .007 | 1,990 |
| By sex | | | | |

| Intimate partner violence behaviors | No PI | PI | Pearson $\chi^2$ statistic *p*-value | Sample size |
|---|---|---|---|---|
| Male | 666 (12.7%) | 146 (21.2%) | <.001 | 5,820 |
| Female | 973 (16.3%) | 244 (28.9%) | <.001 | 6,625 |

*Note*. Counts are unweighted. Percentages are weighted, representing prevalence of IPV perpetration behaviors by parental incarceration in different population groups. Results are not shown for the "Other" race/ethnicity category because many cell sizes are less than 10, the reporting threshold for data confidentiality. Numbers in the "Sample size" column are the denominators for the percentages. Race/ethnicity does not add up to the total because reporting of the "Other" race category is suppressed. The *p*-value is a statistic for the Pearson $\chi^2$ test for the independence of the rows (IPV perpetration behaviors) and columns (parental incarceration). Respondent was categorized as experiencing PI if they reported that during their childhood (prior to age 19) they experienced having a biological mother and or father who had been incarcerated. PI = parental incarceration; IPV = intimate partner violence.

**TABLE 3:**

Relationship between Parental Incarceration and Intimate Partner Violence Behaviors, National Longitudinal Study of Adolescent to Adult Health Waves I and IV

| Outcome | Parental incarceration (unadjusted OR, 95% CI) (Reference: no PI) | Parental incarceration (adjusted OR, 95% CI) (Reference: no PI) |
|---|---|---|
| Threatened, pushed, or threw object at a partner | 2.09*** [1.72, 2.54] | 1.50** [1.20, 1.88] |
| Slapped, hit, or kicked a partner | 2.22*** [1.77, 2.78] | 1.54** [1.18, 2.02] |
| Injured a partner | 2.59*** [1.86, 3.59] | 1.59* [1.05, 2.41] |
| Forced sex on a partner | 1.55* [1.04, 2.32] | 1.08 [0.68, 1.73] |
| Any intimate partner violence behavior | 1.98*** [1.66, 2.36] | 1.46*** [1.19, 1.77] |

*Note*. Adjusted ORs controlled for the following Wave 1 characteristics: grade (proxy for age), sex, family structure, foreign born status, race/ethnicity, father and mother education, father and mother alcoholism, family receipt of public assistance, history of emotional, physical, and sexual abuse. Respondent was categorized as experiencing PI if they reported that during their childhood (prior to age 19) they experienced having a biological mother and or father who had been incarcerated. OR = odds ratio; CI = confidence interval; PI = parental incarceration.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

**TABLE 4:**

Moderation of Relationship between Parental Incarceration and Intimate Partner Violence Behaviors by Race/ethnicity or Sex, National Longitudinal Study of Adolescent to Adult Health Waves I and IV

| Variable | Threatened, pushed, or threw object at a partner | Threatened, pushed, or threw object at a partner | Slapped, hit, or kicked a partner | Slapped, hit, or kicked a partner |
|---|---|---|---|---|
| Parental incarceration (PI) (Ref: no PI) | .52** [.21, .82] | .45** [.19, .72] | .65** [.28, 1.01] | .45** [.15, .74] |
| Race/ethnicity (Ref: NHW) | | | | |
| NHB | .49*** [.27, .72] | .42*** [.21, .63] | .61*** [.33, .90] | .47** [.20, .74] |
| Hispanic | .16 [−.13, .44] | .13 [−.10, .37] | .27 [−.00, .55] | .20 [−.05, .44] |
| Sex (Ref: Female) | −.41*** [−.56, −.25] | −.38*** [−.55, −.22] | −.87*** [−1.06, −.68] | −.85*** [−1.09, −.62] |
| PI × Race/Ethnicity (Ref: No PI × NHW) | | | | |
| PI × NHB | −.29 [−.69, .10] | | −.57* [−.1.06, −.09] | |
| PI × Hispanic | −.11 [−.71, .50] | | −.35 [−.00, .29] | |
| PI × Sex (Ref: No PI × Female) | | −.11 [−.47, .26] | | −.04 [−.51, .44] |
| **Variable** | **Injured a partner** | **Injured a partner** | **Any IPV behavior** | **Any IPV behavior** |
| Parental incarceration (PI) (Ref: No PI) | .90** [.38, 1.41] | .48* [.00, .96] | .47** [.20, .74] | .41** [.17, .64] |
| Race/ethnicity (Ref: NHW) | | | | |
| NHB | .82*** [.40, 1.24] | .58** [.19, .97] | .48*** [.27, .69] | .43*** [.23, .63] |
| Hispanic | .43 [−.10, .96] | .09 [−.38, .56] | .19 [−.07, .45] | .18 [−.04, .40] |
| Sex (Ref: Female) | −.18 [−.47, .11] | −.16 [−.51, .18] | −.24** [−.38, −.11] | −.23** [−.38, −.08] |
| PI × Race/Ethnicity (Ref: No PI × NHW) | | | | |
| PI × NHB | −.79* [−1.58, −.01] | | −.24 [−.62, .14] | |
| PI × Hispanic | −1.55* [−2.82, −.29] | | −.05 [−.59, .48] | |
| PI × Sex (Ref: No PI × Female) | | −.04 [−.76, .69] | | −.07 [−.44, .30] |

*Note*. Parameter estimates and their 95% confidence intervals were reported. All models controlled for the following Wave 1 characteristics: grade (proxy for age), sex, family structure, foreign born status, race/ethnicity, father and mother education, father and mother alcoholism, family receipt of public assistance, history of emotional, physical, and sexual abuse. Results are not shown for the "Other" race/ethnicity category because many cell sizes are less than 10, the reporting threshold for data confidentiality. Respondent was categorized as experiencing PI if they reported that during their childhood (prior to age 19) they experienced having a biological mother and or father who had been incarcerated. Ref = reference; NHW = non-Hispanic White; NHB = non-Hispanic Black; IPV = intimate partner violence.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

**TABLE 5:**

Relationship between Parental Incarceration and Intimate Partner Violence Behaviors Stratified by Race/ethnicity, National Longitudinal Study of Adolescent to Adult Health Waves I and IV

| Outcome stratified by sex or race/ethnicity | Parental incarceration (unadjusted OR, 95% CI) (Reference: no PI) | Parental incarceration (adjusted OR, 95% CI) (Reference: no PI) | Sub-sample size |
|---|---|---|---|
| Slapped, hit, or kicked a partner | | | |
| By race/ethnicity | | | |
| Non-Hispanic White | 2.61*** [1.94, 3.52] | 1.77** [1.20, 2.63] | 6,942 |
| Non-Hispanic Black | 1.46* [1.03, 2.06] | 1.24 [0.83, 1.85] | 2,538 |
| Hispanic | 1.64 [0.91, 2.96] | 1.67 [0.87, 3.20] | 1,990 |
| Injured a partner | | | |
| By race/ethnicity | | | |
| Non-Hispanic White | 3.84*** [2.48, 5.96] | 2.13** [1.23, 3.68] | 6,942 |
| Non-Hispanic Black | 1.62 [0.84, 3.14] | 1.41 [0.71, 2.80] | 2,538 |
| Hispanic | 0.64 [0.20, 2.02] | 0.64 [0.19, 2.19] | 1,990 |

*Note.* Adjusted ORs controlled for the following Wave 1 characteristics: grade (proxy for age), sex, family structure, foreign born status, race/ethnicity, father and mother education, father and mother alcoholism, family receipt of public assistance, history of emotional, physical, and sexual abuse. The stratified analysis for the "Other" race/ethnicity category was not conducted because some cell sizes were less than 10, the reporting threshold for data confidentiality. Respondent was categorized as experiencing PI if they reported that during their childhood (prior to age 19) they experienced having a biological mother and or father who had been incarcerated. OR = odds ratio; CI = confidence interval; PI = parental incarceration.

*$p < .05$.

**$p < .01$.

***$p < .001$.