Intimate Partner Violence and Children's Human Capital

Non-technical report

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Motivation

Intimate partner violence (IPV) is the most common form of violence worldwide. It is a gendered problem, where the majority of victims are women [Oram et al., 2022], and one in three women are estimated to have experienced physical and/or sexual violence from an intimate partner during adulthood [OECD, 2022]. Besides the indubitable adverse impact of IPV on the victim's physical and mental health [Pico-Alfonso et al., 2006, Graham-Bermann and Miller, 2013], children living in abusive households are increasingly being recognized as victims in their own right, where witnessing IPV represents a grave stress factor, implying a form of maltreatment or neglect [Wathen and MacMillan, 2013]. In addition, stressful home environments have been shown to affect children's human capital [Currie and Tekin, 2012, Schurer et al., 2019, Moroni et al., 2019], so it is natural to expect that exposure to IPV would imply similar consequences, however, evidence documenting the effects of IPV exposure on children's human capital and approaches to offset the effects remains limited.

Approach

In this study we document how exposure to IPV affects the formation and accumulation of children's human capital, defined by their cognitive and socio-emotional skills, and contribute to a highly influential and rapidly growing economic literature that emphasizes the importance of early conditions for human capital development [Cunha and Heckman, 2007, 2008, Attanasio et al., 2020a,b, 2022]. We combine and augment recent theoretical approaches and estimation techniques [Cunha et al., 2010, Agostinelli and Wiswall, 2016b,a, Del Bono et al., 2020, Attanasio et al., 2020b, Aucejo and James, 2021], to build a model of the skill accumulation process where the development of skills is affected by exposure to IPV. In the model, IPV affects the child's human capital *directly*, through the distress of witnessing abuse itself, but also *indirectly* through reduced time and monetary investments provided by their mother, and through less productive interactions due to the mother's worsened mental health. Using this approach we answer three important research questions:

Research Questions

(i) What are the *total effects*, measured by percentile gaps in the distribution of skills, of differing experiences of early-childhood exposure to IPV?

(ii) What are the relative contributions of the *direct* and *indirect* effects to the percentile gaps, and do the contributions vary across skills?

(iii) Is it possible to offset the *total effects* of IPV exposure through policy interventions, and how important is timing and targeting for the overall effectiveness of interventions?

Data: The ALSPAC

To estimate the model we exploit data from the Avon Longitudinal Study of Parents and Children (ALSPAC), a UK based longitudinal cohort study. The ALSPAC is internationally unique because it contains high frequency and reliable measures of the child's cognitive and socio-emotional skills, household level measures of parental investments, measures of mother's mental health, while also containing self-reported indicators of IPV incidence. Our estimation sample includes 3,007 mothers, observed (roughly) annually, allowing us to study skill

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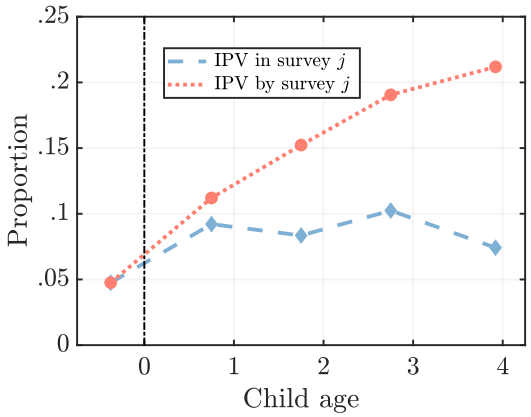
development from birth until the child is just over four years old, over three distinct development periods. To construct our indicator of IPV incidence we combine the mother's responses to two questions, asked in each survey wave: 'Your partner was physically cruel to you' and 'Your partner was emotionally cruel to you'. In total, our sample contains 15,035 mother-time observations of IPV, with an average incidence rate of 20.7 percent that is similar to corresponding recent estimates for the UK as a whole (29 percent, OECD 2022). In Figure 1 below, we show the dynamics of IPV incidence in our estimation sample by highlighting the proportion of mothers that are victims of IPV in survey j (blue dashed line), and the proportion of mothers that are victims of IPV at least once by the time of survey j (red dotted line).

Figure 1: IPV incidence in the ALSPAC estimation sample



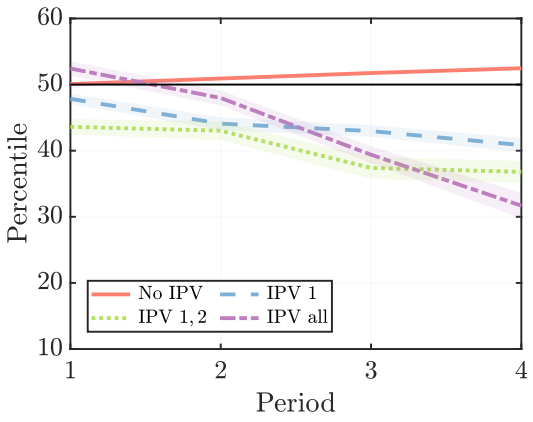
The proportions in Figure 1 indicate that IPV increases sharply after the child is born and persists until the child is aged at least four years old, with an average incidence rate of around 8 percent in each survey wave. Moreover, the cumulative incidence rate increases consistently in each period, revealing that over 20 percent of the mothers in the estimation sample will have been a victim of IPV at least once by the time their child is four years old. Our data also shows that mothers are 45 percentage points more likely to report IPV in the current survey than mothers that did not report IPV in the previous survey, implying that it is often the same mothers, and their children, that are victims in each period, confirming that IPV is a persistent phenomenon.

Main Results

We answer question (i) by using our model to simulate child skills from birth, across all future periods, for four distinct paths that vary by increasing levels of cumulative exposure to IPV. The results are shown below in Figure 2, with children that are never exposed to IPV as the baseline comparison group (red solid line).

Figure 2: Evolution of skills by differing paths of exposure to IPV

(a) Cognitive skills



(b) Socio-emotional skills

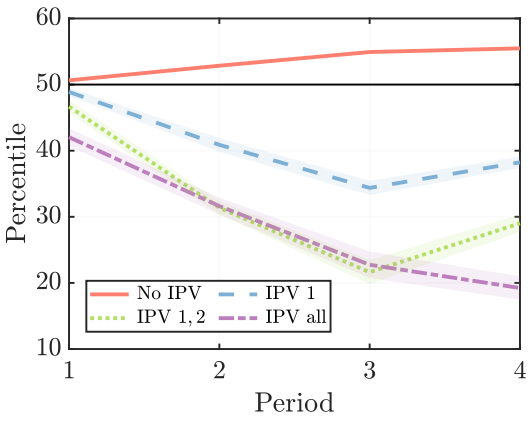


Figure 2 shows that exposure to IPV creates large percentile gaps (*total effects*), for both skills, with the striking feature that skill gaps materialise immediately. By the end of the first period, children that are never exposed to IPV are 7 percentiles higher in the distribution of cognition than children exposed to IPV only in period 1 (dashed blue line), 8 percentiles higher than children exposed to IPV in periods 1 and 2 (dotted green line), and 4 percentiles higher than children exposed to IPV in all periods (dash-dotted purple line), with corresponding gaps for socio-emotional skills that are more pronounced at 12, 21, and 21 percentiles respectively. The gaps are also increasing in cumulative IPV exposure, with the consequence that children exposed to IPV in all periods are 20 (36) percentiles lower in the distribution of cognitive (socio-emotional) skills by period 4, showing that persistent exposure to IPV creates significant disadvantages for children before they have even entered the formal schooling system. Notably, Figure 2 also shows that the *total effects* persist into periods where the child is no longer exposed to IPV, showing that the consequences are long-lasting, and that in absence of intervention the gaps are unlikely to close.

Then, to answer question (ii) we use the model to simulate the child's skills where we only allow IPV to affect skills: (a) *directly*, (b) *indirectly* via parental investment decisions, and (c) *indirectly* via impacts on mother's mental health. By combining the results of each scenario we are able to decompose and quantify the relative contributions of each mechanism to the *total effects* of IPV in each period. For cognitive skills, the decomposition suggests that each mechanism contributes significantly to the *total effect* in each period. However, as the child ages, the *direct effect* and the *indirect effect* of changes in mother's mental health contribute less, while the *indirect effect* of changes in parental investments becomes more consequential. Interestingly, for socio-emotional skills, the *direct effect* also contributes relatively less as the child ages, and the majority of gap is instead determined by the *indirect effect* via changes in mother's mental health. This is noteworthy because although exposure to IPV creates significant and comparable percentile gaps for both skills, the mechanisms that determine the gaps are indeed different across skills. Moreover, it implies that policies targeting a specific mechanism may therefore be ineffective in offsetting gaps for both skills.

Policy Implications

Finally, we provide the answer to question (iii) through two related exercises. In the first exercise, we use the model to simulate the impact of policy interventions that would increase (a) parental investments, (b) mother's mental health, and (c) household income. The interventions that we simulate specifically target abusive households, and are implemented at the beginning of period 1. The results of this exercise show that interventions in period 1 can be effective for eliminating gaps at period 2, however, the exercise also shows that the benefits of each intervention are completely absorbed in the long-run due to the consequences of simultaneous and subsequent exposure to IPV. The key implication is that if we are unable to identify and remove the sources of current and future IPV, offsetting the long-run effects will require interventions that not only improve initial outcomes, but that are also facilitated and compounded by follow-up interventions.

In the second exercise, we consider the problem of the policymaker and assume that their objective is to offset the percentile gaps in period 4, shown in figure 2, through a sequence of interventions that target the same input in each period. Then, using the model, we solve for the optimal sequence of interventions to (a) parental investment, (b) mother's mental health, and (c) household income, in order to achieve this objective. For both skills the results reiterate the importance of early interventions, suggesting that the largest transfers should occur during the initial period. In addition, the results also reiterate the need for follow-ups where, for each path of IPV exposure and for each intervention considered, the optimal transfers are positive in every period. This result is particularly salient when we consider children that are exposed to IPV only in period 1 as, despite facing two subsequent periods of non-exposure, follow-ups are still required to counteract the long-lasting effects that their single period of IPV exposure generates. Finally, the exercise shows the importance of targeting. Specifically, while cognitive skills are similarly receptive to each intervention (e.g. increases in: parental investments, mother's mental health, and household income), the exercise shows that transfers to household income would be highly inefficient if the goal is to offset socio-emotional skill gaps.

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