Socioeconomic Status and Intimate Partner Violence *

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First Draft: May 2015
Current Version: September 2015

Abstract

One in three ever-partnered women worldwide has experienced intimate partner violence (IPV), yet there is little systematic evidence on the association between socioeconomic status (SES) and IPV. This paper uses information from more than one-quarter of one million female respondents age 15-49 in IPV modules from 34 Demographic Health Surveys (DHS) to provide detailed evidence on IPV gradients around the world. I find relatively large negative IPV-SES gradients for respondent years of schooling and household wealth. Marriage and higher age are generally associated with lower IPV, whereas the physical violence-age profile follows an inverted U-shape.

Keywords: domestic violence; gender based violence; intimate partner violence; health gradient; socioeconomic status

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1 Introduction

A large body of evidence suggests that socioeconomic status and health are positively associated (Smith 1999, Cutler et al. 2006). Individuals with higher socioeconomic status enjoy a variety of improved health outcomes, including, but not limited to, higher life expectancy (Cutler et al. 2006) and lower risk of chronic stress (Cohen et al. 2006), diabetes (Hwang and Shon 2014), stroke (Cox et al. 2006), cardiovascular disease (Woodward et al. 2015), low infant birthweight (Parker et al. 1993), infant mortality (Finch 2003), and poor child health more generally (Case et al. 2002). Intimate partner violence (IPV) is a highly prevalent health outcome, with 1 in 3 ever-partnered women worldwide experiencing IPV (WHO 2013). Despite its prevalence (García-Moreno et al. 2006) and the attention to this question (Rennison 2014), there appears to be little systematic global evidence on the association between household socioeconomic status (SES) and IPV. I examine the association between SES and IPV within standardized national household surveys from more than thirty countries around the world.

Economic, sociological, and criminological theories of IPV generate ambiguous and competing predictions about the sign of the relationship between SES and IPV. For example, the household bargaining model in economics suggests that IPV will fall as female SES (or income) rises within households relative to male SES (Aizer 2010) and the male backlash theory in sociology predicts IPV will increase (Macmillan and Gartner 1999). Moreover, neither model generates clear predictions about the relationship between household-level SES and IPV. Likewise, exposure theory in criminology indicates that IPV should fall as the time an individual is exposed to their partner falls (Dugan et al. 1999), yet it is not clear whether exposure increases or decreases with SES. Sociological theories of compensation (Evans and Bartolome 1986, Gutek et al. 1988), patriarchal bargaining (Kandiyoti 1998, Yount 2011), and spillover (Crouter 1984, Perry-Jenkins et al. 2000) generate competing interdisciplinary claims about the likely sign of the relationship between IPV
and female (or household) SES.

I examine the association between SES and annual IPV incidence within national household surveys from 34 low- and middle-income countries from around the world. For each measure of SES, I begin by estimating the within-country relationship between SES and IPV in the pooled sample of all 34 national household surveys. Then, using non-parametric and semi-parametric regression techniques, I estimate the within-country relationship between SES and IPV separately by country and examine each country-specific relationship to explore heterogeneity possibly underlying the main pooled estimate. I conclude by examining the relative importance of each of the SES measures and IPV in a pooled multivariate regression framework.

My analysis yields three main results. First, IPV is rapidly declining in respondent years of schooling and in household wealth. For example, completing primary and secondary school is associated with a nearly 50% reduction in the incidence of physical IPV and a roughly 50% reduction in the incidence of sexual IPV. Second, marriage and higher age are generally associated with lower IPV, whereas the physical violence-age profile follows an inverted U-shape. Third, for respondent years of schooling, household wealth, and age, these patterns are relatively stable across countries, whereas the pattern for marital status is very heterogenous across countries.

health and socioeconomic status using other health outcomes (e.g. see Smith 1999, Cutler et al 2006), although not all of the evidence (e.g. Fortson 2008). My results are also consistent the household bargaining model of IPV (Aizer 2010) and with the spillover theory of IPV (Crouter 1984, Perry-Jenkins et al 2000, Yount et al 2014). The descriptive nature of my analysis means that the results are not contrary to the predictions of alternative models of the relationship between SES and IPV such as found in male backlash theory (Macmillan and Gartner 1999), compensation theory (Evans and Bartolome 1986, Gutek et al 1988), or exposure theory (Duggan et al 1999).

The rest of the paper is organized as follows. Section 2 describes the data. Section 3 presents the results. In Section 4, I discuss the results, including what they reveal about the mechanisms linking SES and IPV. Section 5 concludes.

2 Data and Statistical Methods

2.1 Intimate partner violence

Demographic and Health Surveys (DHS) from many countries provide information from female respondents on their experiences with intimate partner violence. I focus on recent IPV experience instead of lifetime IPV experience because recent IPV experience should be more likely to reflect contemporaneous SES. In total, as of early 2014, thirty-four countries provided a DHS with information about IPV in the 12 months prior to the survey date. I restrict the analysis to the most recent survey round for each of these countries, resulting in a final sample of more than one-quarter of one million women in over 9,000 distinct survey clusters.¹

I construct four IPV measures. Emotional violence, (non-sexual) physical violence, and sexual

violence are indicator variables for these categories. Any violence is an indicator variable equal to one if the respondent reported experiencing any of the three forms of violence.

Self-reported IPV may measure actual IPV with substantial error. Concerns about privacy and potential repercussions may mean respondents experiencing IPV do not always report their IPV experience. Women who experience IPV leading to mortality are not alive to report their IPV in these modules, although mortality may instead be negatively correlated with IPV. IPV measurement error that is not correlated with SES would result in classical attenuation bias and make it less likely to observe an association between SES and IPV even if one exists.

Table 1 presents descriptive statistics for IPV in the twelve months leading to the survey date. One-quarter of the sample reported experiencing any intimate partner violence during this period. Approximately one-sixth reported emotional violence and one-sixth reported physical violence. Approximately one out of fourteen women reported sexual violence.²

Table 2 presents the correlations between the three distinct IPV measures. The correlations between these IPV measures is moderately low. For each of pairwise matches of measures, the correlation is approximately 0.4.

### 2.2 Demographic and socioeconomic variables

I focus on five main demographic and socioeconomic variables contained in the DHS and commonly used in studies of the health-SES gradient (Smith 1999, Cutler et al 2006, Fortson 2008): respondent age, respondent years of schooling, total types of consumer durables owned in the household, marital status, and urban/rural residence.³

Table 1 presents descriptive statistics for these demographic and socioeconomic variables for

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²Several DHS IPV countries do not ask questions about sexual violence. Likewise, several DHS IPV countries do not ask questions about emotional violence.
³These household consumer durables are: improved quality floor, electricity, toilet, refrigerator, television, telephone, radio, car, motorcycle, and bicycle.
the female respondents in my sample of countries. The average age in the sample is approximately thirty-two years and the average years of schooling is approximately six. The vast majority of the sample is married, roughly two-fifths of women reside in urban areas, and the average household owns four of the consumer durables measured in the DHS.

2.3 Statistical methods

My main statistical methodology is multivariate regression analysis. First, I pool respondents across countries and estimate fixed effects (FE) ordinary least squares (OLS) regressions of the form:

\[ IPV_{ic} = \alpha + \beta SES_{ic} + \eta_c + \epsilon_{ic} \] (1)

where \( IPV_{ic} \) is an indicator variable equal to one if the respondent \( i \) in country \( c \) experienced IPV during the 12 months leading to the survey date and zero otherwise, \( SES_{ic} \) is the socioeconomic status of respondent \( i \), \( \eta_c \) are country fixed effects, and \( \epsilon_{ic} \) is an idiosyncratic error term.\(^4\) Country fixed effects address concerns about unobserved and observed heterogeneity across countries in the sample data.\(^5\) After estimating the pooled regressions, I estimate locally weighted smoothed regressions of IPV on SES separately by country (i.e. locally weighted \( \beta_c \)'s). I conclude by pooling respondents across countries and using OLS with country FEs to estimate an expanded version of Equation (1) that includes the full set of SES measures simultaneously.

\(^4\)In all OLS regressions, I estimate heteroskedasticity robust standard errors and cluster the standard errors at the DHS cluster level.

\(^5\)For example, the total number of consumer durables variables included in a DHS survey instrument depends on the DHS country, leading to systematic variation across countries in the total number of consumer durables reported.
3 Results

3.1 Age and IPV

Table 3 presents the semi-parametric pooled FE-OLS regression estimates of the IPV-age profile. The profile estimates for any violence appear in Column 1, emotional violence appears in Column 2, physical violence appears in Column 3, and sexual violence appears in Column 4. The table reveals a subtle, yet significant inverted U-shape in the relationship between non-sexual violence and age. For example, women in age groups 20-24 and 25-29 are between 2 and 3 percentage points more likely to report physical violence than respondents age 15-19 (statistically significant at the 1 percent levels). Women are 40-44 and 45-49 are between 1 and 3 percentage points less likely to report physical violence than respondents age 15-19 (statistically significant at the 1 percent levels). In contrast to physical and emotional violence, the likelihood of sexual violence is strictly declining in age (although the difference between age 15-19 and age 20-24 (or age 25-29 or age 30-34) is not statistically significant). Relative to mean risk, these reductions are large. For example, the more than 5 percentage point difference in physical violence between the lowest risk age group (i.e. age 45-49) and the highest risk age group (i.e. age 25-29) is more than a 20 percent reduction in IPV incidence.

Figure 1 (see Appendix) presents the non-parametric locally weighted smoothed regression estimates of the association between age and physical violence, estimated separately for each country. Figure 2 (see Appendix) repeats the analysis for sexual violence. The figures suggest some heterogeneity across countries. For physical violence, most countries follow the inverted U-shape pattern or a exhibit declining likelihood with age. For sexual violence, Columbia is a noticeable outlier in that the likelihood of sexual violence is increasing with age.
3.2 Education and IPV

Table 3 presents the semi-parametric pooled FE-OLS regression estimates of the IPV-education gradient. As in the previous regression table, each column examines a different type of IPV. All forms of violence exhibit declining likelihood of IPV with increases in schooling. For example, the likelihood of experiencing physical violence is approximately 3 percentage points lower for respondents who had completed primary school than for those who had not (statistically significant at the 1 percent level) and nearly an additional 6 percentage points lower for those who had completed secondary school (statistically significant at the 1 percent level). Relative to mean risk of physical violence, completing primary and secondary school is associated with approximately a 50% reduction in IPV incidence.

Figures 3 and 4 (see Appendix) present the non-parametric locally weighted smoothed regression estimates of the physical violence-age profile (and sexual violence-age profile, respectively), with separate estimates for each country. For both measures, the relationship between IPV and schooling is relatively homogenous across countries.

3.3 Household wealth and IPV

Table 5 presents parametric pooled FE-OLS regression estimates of the IPV-wealth gradient. As in the previous regression tables, each column examines a different type of IPV. The regression estimates reveal a clear negative association between household wealth and incidence of IPV. For each of the three distinct forms of IPV, a one standard deviation (i.e. two unit) increase in total types of consumer durables owned is associated with a 1 to 4 percentage point (i.e. approximately one-tenth of a standard deviation) reduction in the likelihood of IPV (statistically significant at the

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6 In order to estimate education regressions pooled across countries with difference schooling systems, I define primary school completion as seven or more years of schooling and secondary school completing as twelve or more years of schooling.
1 percent level). The magnitude of the association for sexual violence is approximately one-half of that for non-sexual violence. Again, these reductions are large relative to mean risk.

Figures 5 and 6 (see Appendix) present the non-parametric locally weighted smoothed regression estimates of the IPV-wealth gradient for physical violence (or sexual violence, respectively), estimated separately for each country. The relationship between household wealth and physical violence is relatively homogenous across countries, as is somewhat the relationship between household wealth and sexual violence. For physical violence, all countries exhibit mild to moderate rates of decline in consumer durables ownership. In India and in Rwanda, these gradients are particularly steep. For sexual violence, there is a greater heterogeneity across countries in the IPV-wealth gradient. Sexual violence is declining in wealth in most countries and quite rapidly in a handful of countries (e.g. Congo Democratic Republic, India, Rwanda, Zambia), yet is slightly increasing in wealth in Mali and Mozambique.

### 3.4 Marital status and IPV

Pooled FE-OLS estimates of the association between marital status and IPV appear in Table 6. Each column examines a different IPV measure. For all measures, married respondents report lower IPV incidence than do non-married respondents. For sexual violence, the reduction relative to mean risk is very high. Being married is associated with a nearly 50 percent reduction in violence (statistically significant at the 1 percent level).

Figures 7 and 8 (see Appendix) display the non-parametric OLS regression estimates of the association between marital status and physical violence (or sexual violence, respectively), estimated separately for each country. The relationship between marriage and IPV is fairly heterogeneous across countries. Columbia, Ukraine, India, and several countries in Sub-Saharan Africa exhibit large reductions in physical violence and sexual violence associated with marriage or cohabitation.
In contrast, Gabon and Rwanda, for example, exhibit large and statistically significant increases in IPV associated with marriage for physical violence but not sexual violence.

3.5 Urban/rural status and IPV

Table 7 presents pooled FE-OLS regression estimates of the association between urban residence and IPV. These basic regressions that only control for country fixed effects indicate that the likelihood of IPV is approximately one-half of one percentage point lower in urban areas than in rural areas (statistically significant at the 1 percent level) for all outcomes except for emotional violence.

Figures 9 and 10 (see Appendix) display the non-parametric OLS regression estimates of the association between urban residence and physical violence (or sexual violence, respectively), estimated separately for each country. The relationship between urban residence and IPV is fairly heterogenous across countries. In Kenya, Rwanda, Uganda, India, and Pakistan, for example, urban residence is associated with large reductions in physical violence and sexual violence (although the reduction is not statistically significant for sexual violence in Uganda). In Mozambique, Haiti, Columbia, and Honduras, urban residence is associated with large increases in physical violence. In only Columbia and Honduras is urban residence associated with a large and statistically significant increase in sexual violence.

3.6 Multivariate analysis

Table 8 presents semi-parametric pooled multivariate FE-OLS regression estimates of the association between various SES measures and IPV. These regressions include the full set of SES measures, addressing concerns about correlation among SES measures and disentangling the relative conditional association between a given SES measure and IPV. The majority of the parameter estimates for the SES measures are relatively robust to including the full set of SES measures. One exception
is that urban residence is now associated with increased IPV for all violence measures (statistically significant at the 1 percent level). In addition, the magnitude of the association between household wealth and sexual violence has fallen by approximately one-half.

4 Discussion

The regression analysis yielded three main results about the IPV-SES gradient. First, IPV is declining in respondents’ years of schooling and in household wealth. It seems unlikely that IPV is causing lower schooling because schooling outcomes for most respondents are determined prior to the twelve-month interval over which IPV is measured. Moreover, these results are robust to including the full set of controls in Table 8. The negative association between female education and IPV is consistent with the empirical evidence from many of the other studies on this question (Jewkes 2002, Koenig et al 2003, Panda and Agarwal 2005, Koenig et al 2006, Bhattacharyya et al 2001).

Second, marriage and higher age are generally associated with lower IPV, whereas the relationship between physical violence and age follows an inverted U-shape. Marriage and higher age may confer protective effects. Alternatively, the decreased likelihood of violence associated with marriage may reflect selection into marriage. Previous studies have found little association between age and IPV (Hotaling et al 1986, Martin et al 1999, International Clinical Epidemiologists Network 2000, Jewkes 2002, Jewkes et al 2002), yet many of the studies may not have allowed for a sufficiently flexible relationship between age and IPV.

Third, these patterns for respondent years of schooling, household wealth, and age are relatively stable across countries, whereas the pattern for marital status is very heterogeneous across countries. Previous studies have found that marriage may be disempowering in some settings (Ellsberg et al 1999, Bloch and Rao 2002, Jewkes 2002), protective in other settings (Jewkes 2002), or even
unrelated to IPV (Jewkes et al 2002).

A fourth, slightly less clear, result is that urban residence may be associated with IPV. Although the coefficient estimates for the urban indicator variables are mostly statistically significant, the sign of the estimate is very sensitive to the inclusion of other SES variables as controls. The lack of a clear association between urban residence and IPV is consistent with other evidence on this issue (Ellsberg et al 1999, Jewkes et al 2002), although subsequent literature has noted that urban residence is associated with increased violence (Kishor and Johnson 2004) and the association is sensitive to controlling for wealth (Chin 2012a).

5 Conclusion

This paper provides large-scale evidence on the relationship between socioeconomic status and intimate partner violence. I analyze national household survey data from 34 countries including more than one-quarter of one million adult female respondents who provided information on IPV incidence in the year preceding the survey date. This yields three main findings. First, IPV is declining in respondents’ years of schooling and in household wealth. For example, women who have completed primary school and secondary school are approximately 50% less likely to experience physical IPV. Second, marriage, rural residence, and higher age are generally associated with lower IPV, with a main exception being that the relationship between physical violence and age follows an inverted U-shape. Third, these patterns for respondent years of schooling, household wealth, and age are relatively stable across countries, whereas the patterns for marital status and urban residence are very heterogenous across countries.

Systematic evidence on IPV gradients allows for improved targeting of IPV programs. This may be particularly important for health outcomes such as IPV that are often not observable to health workers or to policymakers through administrative data. My results suggest that policymakers
should explore targeting IPV resources toward low-SES women and younger women.

An important caveat about the analysis is that it is primarily descriptive and cannot assign causality to SES in explaining IPV. Nonetheless, I present evidence using within-country variation from across a wide variety of SES and cultural settings indicating that IPV is declining in female schooling and in household income. This suggests that improvements in female schooling and in household income may have protective effects, highlighting at least two hypotheses that future research should address.
6 References


Table 1: Descriptive Statistics for Female Respondents to DHS and for Female Respondents to IPV Module

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced any violence in past year</td>
<td>0.26</td>
<td>0.44</td>
</tr>
<tr>
<td>Experienced emotional violence in past year</td>
<td>0.15</td>
<td>0.36</td>
</tr>
<tr>
<td>Experienced physical violence in past year</td>
<td>0.18</td>
<td>0.39</td>
</tr>
<tr>
<td>Experienced sexual violence in past year</td>
<td>0.07</td>
<td>0.25</td>
</tr>
<tr>
<td>Age of respondent</td>
<td>32.03</td>
<td>8.39</td>
</tr>
<tr>
<td>Years of education</td>
<td>5.92</td>
<td>5.14</td>
</tr>
<tr>
<td>Total consumer durables</td>
<td>4.20</td>
<td>2.09</td>
</tr>
<tr>
<td>Married</td>
<td>0.92</td>
<td>0.28</td>
</tr>
<tr>
<td>Urban</td>
<td>0.41</td>
<td>0.49</td>
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<td>Observations</td>
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Table 2: Correlations Between IPV Measures

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<th>Dependent variable:</th>
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<th>Sexual violence</th>
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<td>Emotional violence</td>
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<td></td>
</tr>
<tr>
<td>Physical violence</td>
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<td>1</td>
<td></td>
</tr>
<tr>
<td>Sexual violence</td>
<td>0.305***</td>
<td>0.353***</td>
<td>1</td>
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</table>

Notes: Table of Pearson correlations coefficients reported

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Table 3: Semi-Parametric Pooled OLS Regression Estimates of Association Between Age and IPV

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Any violence</th>
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<th>Physical violence</th>
<th>Sexual violence</th>
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<td>b/se</td>
<td>b/se</td>
<td>b/se</td>
<td>b/se</td>
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<tr>
<td>Age 20-24</td>
<td>0.030***</td>
<td>0.021***</td>
<td>0.026***</td>
<td>-0.000</td>
</tr>
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<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.003)</td>
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<tr>
<td>Age 25-29</td>
<td>0.030***</td>
<td>0.026***</td>
<td>0.022***</td>
<td>-0.002</td>
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<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.003)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Age 30-34</td>
<td>0.019***</td>
<td>0.020***</td>
<td>0.012***</td>
<td>-0.003</td>
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<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.003)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Age 35-39</td>
<td>0.009*</td>
<td>0.020***</td>
<td>-0.002</td>
<td>-0.006*</td>
</tr>
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<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.002)</td>
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<td>Age 40-44</td>
<td>-0.005</td>
<td>0.011***</td>
<td>-0.015***</td>
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<td>(0.004)</td>
<td>(0.004)</td>
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<tr>
<td>Age 45-49</td>
<td>-0.026***</td>
<td>-0.002</td>
<td>-0.028***</td>
<td>-0.015***</td>
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<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.003)</td>
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<tr>
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<td>246449</td>
<td>298032</td>
<td>280861</td>
</tr>
</tbody>
</table>

Notes: Data from Demographic Health Surveys.  
Age categories are indicator variables that are equal to one if a respondent is within that age range.  
Age 15-19 is the omitted age group indicator variable.  
Heteroskedasticity-robust standard errors clustered at DHS cluster levels are reported in parentheses.
Table 4: Semi-Parametric Pooled OLS Regression Estimates of Association Between Years of Schooling and IPV

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Any violence</th>
<th>Emotional violence</th>
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<th>Sexual violence</th>
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<td>b/se</td>
<td>b/se</td>
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<tr>
<td>Completed primary</td>
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<td>-0.016***</td>
<td>-0.027***</td>
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<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
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<td>(0.001)</td>
</tr>
<tr>
<td>Completed secondary</td>
<td>-0.063***</td>
<td>-0.034***</td>
<td>-0.056***</td>
<td>-0.023***</td>
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<td>(0.002)</td>
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<td>Observations</td>
<td>298033</td>
<td>246449</td>
<td>298032</td>
<td>280861</td>
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</table>

Notes: Completed primary education is an indicator variable equal to one if the respondent completed primary school. Completed secondary is an indicator variable equal to one if the respondent completed secondary education. Heteroskedasticity-robust standard errors clustered at DHS cluster levels are reported in parentheses.
Table 5: Parametric Pooled OLS Regression Estimates of Association Between Consumer Durables and IPV

<table>
<thead>
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<th>Dependent variable:</th>
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<td>b/se</td>
<td>b/se</td>
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<tr>
<td>Total consumer durables</td>
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<td>-0.010***</td>
<td>-0.019***</td>
<td>-0.006***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
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Notes: Data from Demographic Health Surveys.
Total consumer durables indicates total household consumer durables.
Heteroskedasticity-robust standard errors clustered at DHS cluster levels are reported in parentheses.
Table 6: Non-Parametric Pooled OLS Regression Estimates of Association Between Marital Status and IPV

<table>
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<th>Dependent variable:</th>
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<th>Sexual violence</th>
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<td>b/se</td>
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<tr>
<td>Married</td>
<td>-0.044***</td>
<td>-0.017***</td>
<td>-0.062***</td>
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<td>(0.003)</td>
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<td>(0.002)</td>
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<tr>
<td>Observations</td>
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<td>298032</td>
<td>280861</td>
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</tbody>
</table>

Notes: Data from Demographic Health Surveys.
Married is an indicator variable equal to one if the respondent is married.
Heteroskedasticity-robust standard errors clustered at DHS cluster levels are reported in parentheses.
Table 7: Non-Parametric Pooled OLS Regression Estimates of Association Between Urban/Rural Residence and IPV

<table>
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<tr>
<th>Dependent variable:</th>
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<th>Physical violence b/se</th>
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Notes: Data from Demographic Health Surveys.
Urban is an indicator variable equal to one if the respondent lives in an urban area.
Heteroskedasticity-robust standard errors clustered at DHS cluster levels are reported in parentheses.
<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Any violence b/se</th>
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<th>Physical violence b/se</th>
<th>Sexual violence b/se</th>
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Notes: Data from Demographic Health Surveys.
Age categories are indicator variables that are equal to one if a respondent is within that age range.
Age 15-19 is the omitted age group indicator variable.
Completed primary education is an indicator variable equal to one if the respondent has at least 6 years of education.
Completed secondary is an indicator variable equal to one if the respondent has at least 11 years of education.
respondents with less than 6 years of education are omitted.
Total consumer durables indicates total household consumer durables.
Married is an indicator variable equal to one if the respondent is married.
Urban is an indicator variable equal to one if the respondent lives in an urban area.
Heteroskedasticity-robust standard errors clustered at DHS cluster levels are reported in parentheses.
Figure 1: Non-Parametric Country-Specific Locally Weighted Smoothed Regressions of Physical Violence on Age
Figure 2: Non-Parametric Country-Specific Locally Weighted Smoothed Regressions of Sexual Violence on Age

Coefficient estimate

<table>
<thead>
<tr>
<th>Country</th>
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Age

95% CI

Ipoly smooth: Sexual violence
Figure 3: Non-Parametric Country-Specific Locally Weighted Smoothed Regressions of Physical Violence on Years of Schooling
Figure 4: Non-Parametric Country-Specific Locally Weighted Smoothed Regressions of Sexual Violence on Years of Schooling

Azerbaijan | Burkina Faso | Cameroon | Colombia | Comoros | Congo Democratic Republic
---|---|---|---|---|---
Cote d Ivoire | Dominican Republic | Egypt | Gabon | Ghana | Haiti
Honduras | India | Jordan | Kenya | Kyrgyz Republic | Mali
Mozambique | Namibia | Nepal | Nigeria | Peru | Philippines
Rwanda | Sao Tome and Principe | Sierra Leone | Tajikistan | Uganda | Ukraine
Zambia | Zimbabwe

Coefficient estimate

Years of education

95% CI

Ipoly smooth: Sexual violence
Figure 5: Non-Parametric Country-Specific Locally Weighted Smoothed Regressions of Physical Violence on Consumer Durables Index

Total consumer durables

95% CI

Ipoly smooth: Physical violence
Figure 6: Non-Parametric Country-Specific Locally Weighted Smoothed Regressions of Sexual Violence on Consumer Durables Index
Coefficient estimate

95% confidence interval

Notes: Data from Demographic Health Surveys (DHS).
Heteroskedasticity robust standard errors in parentheses clustered at DHS cluster level.
Notes: Data from Demographic Health Surveys (DHS). Heteroskedasticity robust standard errors in parentheses clustered at DHS cluster level.
Figure 9: Non-Parametric Country Specific OLS Regression Estimates of Association Between Urban Residence and Physical Violence

Notes: Data from Demographic Health Surveys (DHS).
Heteroskedasticity robust standard errors in parentheses clustered at DHS cluster level.
Notes: Data from Demographic Health Surveys (DHS).
Heteroskedasticity robust standard errors in parentheses clustered at DHS cluster level.