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Escaping Domestic Violence: Empowering Women through Employment, Earnings and Wealth in India

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ESCAPING DOMESTIC VIOLENCE: EMPOWERING WOMEN THROUGH EMPLOYMENT, EARNINGS AND WEALTH IN INDIA^{*}

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Abstract

Using data from two detailed, nationally representative, household datasets – the National Family Health Survey and the India Human Development survey – we explore whether women who are economically empowered (through work, earnings, or wealth) are less likely to experience domestic violence. We find that, while working women may be at a greater risk of violence, higher earnings are associated with a reduction in violence. Although these findings are informative, they do not necessarily establish a causal link between economic empowerment and violence. To test for causality, we exploit arguably exogenous variation in state laws designed to equalize the inheritance rights of sons and daughters. Additional variation comes from the fact that these state laws did not apply to some women based on their religious affiliation and date of marriage. We find some evidence that women who were subject to these laws are less likely to report being victims of domestic violence.

Keywords: Domestic Violence, Inheritance Laws, Women's Empowerment
JEL Codes: J12, J18, K11

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1. Introduction

Violence against women takes place in all countries and all cultures. However, the problem is particularly severe in India. A 2012 survey by Thomson Reuters Foundation ranks India as the worst of the G-20 major economies for women (Baldwin 2012). Further, according to Ramadurai (2013), among 15-19 year olds in India, 57 percent of boys and 53 percent of girls find wife beating acceptable. This is troubling since research suggests that women who justify wife beating are also more likely to report being subject to domestic violence (Kimuna et al. 2013). Data from the National Crime Records Bureau (NCRB), an agency that collects data on crime in India, suggest that there were 244,270 crimes committed against women during 2012 (a rate of 41 crimes per 100,000 women). These crimes include 24,923 rapes (4 per 100,000 women), 8,233 dowry-related murders (1 per 100,000 women), and 106,527 instances of abuse by a husband or his relatives (18 per 100,000 women).¹

One of the most comprehensive, nationally representative data sources on domestic violence in India is the National Family Health Survey (NFHS), an initiative of the Indian government that was first launched in 1992-1993. While the focus of the survey has been on family welfare, maternal and child health, and nutrition, subsequent rounds of the survey, launched in 1998-1999 and 2005-2006 have included questions relating to wife beating and domestic abuse. The 2005-06 survey, in particular, has an extensive set of questions on wife beating. According to this survey, 36 percent of ever-married women have experienced some form of physical abuse from their spouse, such as being pushed, slapped, punched, kicked,

¹ Crime data were downloaded from the National Crime Records Bureau's 2012 "Crime in India" report, available at http://ncrb.gov.in/CD-CII2012/Additional_Tables_CII_2012/Additional%20Tables.htm. The crime counts reported come from Table 3e ("All India Crimes against Women during 2001-2012") and were converted to rates using a total female population of 586,469,174, as reported in the 2011 Indian Census (available at http://www.censusindia.gov.in/2011-prov-results/data_files/india/Final_PPT_2011_chapter5.pdf).

strangled, burned, or threatened with a weapon. The problem is exacerbated because almost three quarters of women who have experienced violence report that they have never sought help. This suggests that the NCRB database suffers from severe under-reporting, and that the problem is deeper than even those data suggest.²

This paper focuses on the factors that might explain the prevalence of domestic abuse, by using household-level data from the National Family Health Survey (NFHS) as well as the India Human Development Survey (IHDS). Both of these surveys attempt to measure the prevalence of domestic violence by asking questions specifically of the women in the household. However, the difference is that the NFHS directly asks women whether they have experienced abuse, while the IHDS asks women whether specific types of violence are “usual” in their communities. Both approaches have advantages and disadvantages. If women are reluctant to open up to an interviewer about their experience, the NFHS data might underestimate the incidence of domestic violence. On the other hand, asking women about the prevalence of wife-beating in the community may lead to ambiguity about whether the women are in fact responding based on their own personal experience or based on their perception of their neighbors’ or friends’ experiences. An additional advantage of the NFHS data is that the domestic questions were asked in two waves separated by more than 5 years, unlike the IHDS which only has one round of data. Although the NFHS is not a panel – the two waves represent repeated cross sections – it does provide us with additional temporal variation.

The basic question we seek to answer is whether women’s empowerment – as indicated by working outside the home, earning income, or possessing wealth – is in fact associated with a

² The NCRB data indicate that, over the period 2001-2011, there has been a 20 percent increase in dowry deaths and a 117 percent increase in the category of crime labeled “cruelty by husband or his relatives.” A large part of this increase is likely to be higher reporting rather than simply higher incidence of abuse, due in part to the 2005 Protection of Women from Domestic Violence Act, which strengthened domestic violence protections for women.

decline in domestic abuse. On the one hand, income and wealth can improve the household bargaining position of wives relative to their husbands. On the other hand, husbands may view more empowered wives as a threat to their own status, and may retaliate with violence. Some prior research suggests that working women are more likely to be beaten, and we confirm this with the NFHS data. In the IHDS data, however, there is no correlation between working and being beaten; in addition, an increase in hours worked is not associated with an increase or decrease in the probability of domestic violence. These correlations are consistent with the view that working outside the home does not reduce – and may even increase – a woman’s risk of domestic violence. But when we consider earnings from work – available only in the IHDS – as an explanatory variable, a very different picture emerges: women with higher earnings are less likely to experience domestic abuse.

While these findings are suggestive, they do not establish a causal relationship between economic empowerment and domestic violence because income and work are likely to be simultaneously determined with domestic violence. For example, the husband’s (unobservable) attitude towards the role of women may play a significant role in determining whether and how much the wife works, as well as whether she is beaten. Thus, we turn to an alternative, arguably exogenous proxy for women’s economic status: variation in state-level inheritance laws. Until a national-level reform in 2005, India’s main inheritance law, the Hindu Succession Act – which applies to Hindus, Buddhists, Jains, and Sikhs – put daughters at a disadvantage relative to sons with respect to the inheritance of family property. However, during the 1970s through the 1990s, several states adopted inheritance laws that put married daughters on a more equal footing relative to sons. These state laws only applied to women who were married after the law was passed. A woman who is subject to one of these state laws is likely to be wealthier than one who

is not. Thus, we use variation in these laws across women (differentiated by state, religion, and date of marriage) to proxy for women's wealth. In the NFHS, we find evidence to suggest that empowering women through higher wealth reduces the chances of them becoming victims of domestic violence. However, we find no such relationship in the IHDS. The lack of a relationship in the IHDS could be driven by the fact that the survey asks about whether violence is common in the community, rather than whether the respondent has experienced violence herself.

In the next section, we briefly review the literature on domestic violence and women's empowerment in India. In section 3, we provide background on the Hindu Succession Act and the various state-level reforms to inheritance law. In section 4, we describe our two datasets. In section 5, we present our methodology and results. Section 6 concludes.

2. Prior Research on Women's Empowerment and Violence in India

Theoretical models suggest that the effect of women's economic empowerment on domestic violence is ambiguous. For example, a woman's wealth and income may increase total household resources, which may both reduce economic stress (lowering the risk of violence) and alter household bargaining in her favor (Farmer and Tiefenthaler 1997; Tauchen, Witte, and Long 1991). On the other hand, husbands who feel threatened by the increased economic strength of their wives may retaliate by committing more domestic violence. Tauchen, Witte, and Long (1991) also argue that household income in general can increase violence if the abuser's marginal utility of violence is increasing in the welfare of the victim.

Empirical studies from India confirm this ambiguity.³ Some studies find a lower risk of domestic violence among women who work (Bhattacharya, Bedi and Chhachhi 2009), earn more income (Rao 1997), or have greater wealth (Panda and Agarwal 2005). Panda and Agarwal (2005) further find that women who own assets are also more likely to leave their homes if they experience violence. Amaral (2013) finds that state-level amendments to the Hindu Succession Act, aimed at equalizing the inheritance rights of sons and daughters, are associated with lower reported crimes against women at the state level. Rao (1997) also confirms the theoretical prediction that a woman's income may have a differential effect on violence than income earned by other family members. In particular, the woman's income plays a larger role in explaining reductions in violence than the incomes of other family members. On the other hand, Jejeebhoy (1998) finds no statistically significant relationship between domestic violence and a woman's paid employment, and Kishor and Johnson (2004), Eswaran and Malhotra (2011), Kimuna et al. (2013) and Krishnan et al. (2010) find an increase in the risk of domestic violence among women who work for pay.

With only a few exceptions, these studies utilize datasets that are restricted to small, regional communities or specific states. Kishor and Johnson (2004), Kimuma et al. (2013), and Eswaran and Malhotra (2011) use the nationally representative NFHS, but focus exclusively on women's employment status, rather than earnings, due to the lack of earnings data in the survey. Amaral (2013) uses aggregate state-level data on reported crimes, rather than micro-data from households, to measure the incidence of violence against women. Thus, one contribution of our

³ There is a large literature on the determinants of domestic violence in general. Providing a full review is not feasible here; therefore, we focus on the literature that is specific to India. Many studies on domestic violence outside India find a negative relationship between women's economic empowerment and her risk of domestic violence (see, e.g., Gelles 1976; Bowlus and Seitz 2006; Aizer 2007; Farmer and Tiefenthaler 1997). In addition, there are a number of studies using Indian data that focus on other domestic violence risk factors besides women's empowerment (e.g., Martin et al. 1999; Jeyaseelan et al. 2007). We focus in this section on those related to the work status, income, and wealth of the wife and her family.

paper is exploring the association between violence and a wider range of measures of women's empowerment – including not just work, but also earnings and wealth – using nationally representative household surveys.

A related strand of this literature focuses on the link between domestic violence and dowry payments in India. Bloch and Rao (2002) construct a theoretical model in which violence is used to capture resources in the form of dowry. In their model, the payoff from violence – and therefore observed violence – should rise with the wealth of the bride's family. They confirm this prediction using data from the state of Karnataka and also find that the incidence of violence is reduced when the couple has more male children. In a related vein, Srinivasan and Bedi (2007) find that larger dowry payments are associated with a lower risk of domestic violence, while Rocca et al. (2009) find a positive association between violence and requests by the husband's family for extra dowry after the marriage has taken place.

3. The Hindu Personal Inheritance Law

One of our key measures of women's empowerment comes from the Hindu Succession Act – which governs the disposal of the property of intestate Hindus, Buddhists, Jains, and Sikhs – and various state-level amendments that were aimed at reducing its bias against women.⁴ There have historically been two legal doctrines governing Hindu inheritance, which later laid the foundation for contemporary Indian inheritance law. These legal doctrines are known as the Mitakshara and Dayabhaga schools of law. Under Mitakshara, there was a distinction between a family's ancestral or joint property, and the separate property of its members. In contrast, under Dayabhaga, all property was treated as separate. Mitakshara gave sons, grandsons, and great-grandsons a legal right to the ancestral family property, on an equal footing with the legal claim

⁴ Our description of the Hindu Succession Act, its history, and its amendments draws heavily on Roy (2008).

of the father. However, female descendants had no claim over joint family property. Women were entitled to inherit their fathers' separate property under both the Dayabhaga and Mitakshara schools, but the claims of male heirs and the widowed mother took precedence. Notably, both schools put women at a disadvantage relative to men.

The Hindu Succession Act of 1956 tried to attenuate the bias against daughters; however significant gender inequalities persisted. Under the Act, daughters had the same right as sons to inherit their fathers' separate property, as well as the father's "notional" share of the family's ancestral property. However, sons were further entitled to their own, independent share of the family's ancestral property. Sons were also allowed to request that the ancestral property be divided, while daughters had no such right. While the Act eliminated gender inequality under the Dayabhaga school (which recognized only separate property), it persisted under the more widely used Mitakshara system.

After the 1956 Act some states enacted legislation to amend the Act in order to make it more gender neutral. These states include Kerala (1976), Andhra Pradesh (1986), Tamil Nadu (1989), Maharashtra (1994), and Karnataka (1994). These amendments gave women in the affected states an independent claim to the family's ancestral property. However, they only applied to women who were not married when the legislation was passed. These arguably exogenous changes in inheritance law provide a natural experiment for our study, as they allow us to test whether women who were "treated" by the amendments experienced different outcomes than other women who were unaffected by the amendments. This is a particularly interesting law to look at since a large share of wealth in India consists of land (Roy 2008). Our treatment group includes women in the states that adopted the amendments, who were married after the passage of the amendments. Moreover, because the Hindu Succession Act explicitly

excludes Muslims, Christians, Parsis, and Jews from its provisions, women in these religious groups were not treated, even if they live in a state that amended the law and were unmarried when the amendment was passed.

As discussed in the previous section, Amaral (2013) exploits this variation in inheritance laws to study the impact of inheritance law on aggregate crime measures. In addition, a number of studies test for the effect of these reforms on other outcomes for women, including autonomy (Roy 2008), the inheritance of land, and educational attainment (Deininger et al. 2013). These findings corroborate the idea that inheritance legislation empowered women and improved their bargaining status within households.⁵

4. Data

As discussed above, we use two sources of data in our analysis. The Indian Human Development Survey (IHDS) is a cross-section dataset based on a survey carried out in 2004-05. The National Family Health Survey (NFHS) is a series of repeated cross sections. The two waves that include questions on domestic violence were carried out in 1998-1999 and 2005-2006. We begin with a brief description of each dataset and present summary statistics of all the variables used in our analysis.

a. IHDS Data, 2004-2005

The India Human Development Survey (IHDS) is a nationally representative survey covering 41,554 households in 1,503 villages and 971 urban neighborhoods across India. The data cover the period 2004-2005 and provide the most extensive set of data on issues relating to

⁵ There are similar findings for other measures of women's empowerment, both within India and outside. For example, Duflo (2003) finds that, in South Africa, giving pension payments to women rather than men improves the height and weight of girls. In India, exogenous increases in female income among lower castes significantly increased investment in schooling, particularly for girls (Luke and Munshi 2010).

domestic violence as well as women's earnings and employment. The IHDS collects information from both individuals and households, and the domestic violence questions are asked of an "eligible woman" from each household. We retain individual-level observations for these eligible women and merge in the corresponding household-level information for each woman. After excluding observations with missing values for any of the variables used in the regressions, we are left with 31,958 individual-level observations.

The IHDS asks eligible women if, "in your community, it is usual for husbands to beat their wives" in a variety of circumstances, including leaving home without notifying him, failing to pay a dowry, neglecting household responsibilities, not cooking meals that are up to standard, and conducting extramarital affairs. We consolidate the responses to all of these questions to construct our dependent variable, which is an indicator that takes on a value of one if the answer to any of these questions is yes and zero if the answer to all of these questions is no.

Our key independent variables are measures of women's empowerment, including whether she worked in the previous year, the number of hours per year that she worked, her earnings from work, and a proxy for her independent wealth. Hours worked and earnings are available directly from the IHDS, and reported values refer to the previous year. As discussed above, our proxy for wealth is based on arguably exogenous variation in state inheritance laws. In particular, we define control and treatment groups as follows: a woman is in the treatment group if she lives in a state that reformed its inheritance law, is not Christian, Muslim, Parsi or Jewish and was married on or after the date the reform was passed in her state. All remaining women are considered part of the control group.⁶ Because women in the treatment group were covered by the reformed inheritance laws in their states, they are likely to have higher

⁶ We utilize the IHDS variable GROUPS8 in defining an individual's religion. This variable contains information on both caste and religion. The caste and religious groups represented in the IHDS include Brahmin, High Caste, Other Backwards Caste, Dalit, Adivasi, Muslim, Sikh, Jain, and Christian.

(exogenous) wealth than the other women in the sample. In 2005, the Hindu Succession Act was amended at the national level to remove gender discrimination and grant daughters the same inheritance rights as the sons. Since our sample period ends in 2005 in the IHDS data, it is unlikely that this change would be reflected in the results. Following the strategy adopted by Roy (2008), we drop all women who were married in 2005 or later from our sample.

In addition to the empowerment variables, we select other control variables based in part on those found to be relevant in the prior studies summarized above. Table 1 presents summary statistics for the dependent variable as well as all independent variables used in the regressions. Around 24 percent of women in our sample worked in the previous year, with a wide range of reported hours. Separate calculations indicate that employment tends to be higher among women belonging to the lower castes (Dalits, Adivasis, and Other Backward Castes). Among these groups, at least 25 percent of women in the sample work. Women's earnings are quite low, with a mean of Rs. 2,600. In comparison, the mean of the family's other income (besides the woman's earnings) is more than Rs. 50,000. In addition, around 14 percent of our sample is in the treatment group based on their state of residence, marriage date, and religion. In our regressions, we also control for a variety of demographic and personal characteristics. The women in our sample range in age from 15 to 50. All women in our sample were once married, and Table 1 indicates that 94 percent are still married. The remainder are widowed, separated, or have a spouse who is absent. Around half the women in our sample were married before the age of 18. Around 14 percent of our sample are either Muslim or Christian, and therefore not covered by the Hindu Succession Act and the associated state-level reforms. The two education variables refer to the highest education level completed by a male and a female in the household, not specifically to the education levels of the respondents and their spouses.

Table 2 presents additional information on the violence-related variables. In particular, we report the fraction of women reporting a positive response to each of the questions about the prevalence of beatings. The fractions reported in Table 2 utilize the IHDS sample weights to make them representative of the nationwide population. Beatings for extramarital affairs are most common, but roughly 30-40 percent of the sample report beatings for the other four reasons as well. As shown in the last row, overall, 85 percent of women report that it is usual for beatings to occur for at least one of the reasons stated in Table 2. Studying the responses across states and regions (Table 3) suggests that there are pronounced regional differences in the prevalence of domestic violence. In states in the northeast, such as Sikkim, Assam, and Arunachal Pradesh, less than 25 percent of women report that beatings (for any reason) are common. In contrast, in most other states, 80 or more report that violence is common. Kerala and Tamil Nadu, two states in the South with a reputation for being progressive, were among the handful that averaged 70 percent or less.

b. National Family Health Survey, 1998-99 and 2005-2006

The National Family Health Survey (NFHS) is conducted by the Ministry of Health and Family Welfare of the Government of India. There have been three waves so far, with the first two in the years 1992-1993 and 1998-99 and the third in 2005-06. In this paper, we work with the two waves conducted in 1998-99 and 2005-2006 since these waves had information on domestic violence. As with the IHDS, our sample consists only of ever-married women. In 2005-06, some women were randomly assigned to be interviewed for a domestic violence module, which collected much more detailed information than the earlier wave. For 2005-06, we keep

only women who participated in this module. Across the two waves of data, our sample size is 148,152 women.

We use two alternative dependent variables in our NFHS analysis. The first is an indicator for whether the respondent has been subjected to violence by her spouse. The second is whether the respondent has been subjected to violence by anyone (including her spouse). For our key independent variables, we construct measures of women's empowerment. Unfortunately, the NFHS data does not provide information on the earnings of the responding women or their families. However, it does ask whether the woman is currently employed. The survey also contains information about the type of work performed (seasonal, year-round, etc.) and occupation in the previous year. This information can serve as a proxy for earnings. In addition, we construct the same treatment dummy as we did for the IHDS. A woman is considered treated if she is not Christian, Muslim, Parsi, or Jewish⁷, and was married after the enactment of inheritance law reform in her state. Again, we drop all women who were married in 2005 and later.

Table 4 shows the summary statistics for these variables, as well as other controls included in the regressions. Overall the women in the NFHS sample seem to be similar to those in the IHDS sample in terms of their age, their religion, their education level, whether they work, the number of sons they have, their current marital status, and their age at marriage. This is not surprising given that both surveys are intended to be nationally representative. The fraction of women reporting actual beatings in the NFHS is lower than the fraction of women reporting that beatings are common in the IHDS. One reason for this discrepancy might be that many women

⁷ The religious groups in the NFHS include Hindu, Muslim, Christian, Sikh, Buddhist/Neo-Buddhist, Jain, Jewish, Parsi/Zoroastrian, No Religion, Donyi Polo, Other, and two small, unlabeled groups. We exclude women from the treatment group only if they are identified as Muslim, Christian, Jewish, or Parsi/Zoroastrian. In constructing the religion dummies used as controls in the regressions, we combine Jain, Jewish, Parsi/Zoroastrian, No Religion, Donyi Polo, Other, and the two unlabeled groups into the "Other" category.

who have not personally been beaten have female friends or relatives who have been. Alternatively, violence may be underreported in the NFHS if women are reluctant to tell the interviewer that they have been beaten. Because the NFHS does not ask about income and wealth, we include a proxy. The NFHS calculates a standard of living index based on the features of the family's home, the family's ownership of its home and agricultural land, and its belongings. The index is used to classify families into three standard-of-living categories: low, medium, and high.

Table 5 shows the fraction of women reporting different kinds of violence in both waves of the survey. The figures in Table 5 utilize sample weights to make them representative of the national population.⁸ The top panel of the table presents data from the 2005-06 wave, and the spousal violence indicator, shown in the second-to-last row of the panel, was constructed from the sub-categories of violence in the first six rows. Overall, in 2005-06, 36 percent of women report experiencing some form of violence by their spouse, most commonly slapping. A slightly higher percentage of women have been physically harmed by anyone (including their spouse). Notably, among those who report ever being harmed, just over a quarter report that they sought help. The domestic violence questions in the 1998-99 wave are far less detailed, and perhaps as a result, the levels of reported violence are lower. Only 19 percent report ever being beaten by a spouse, and 21 percent report ever being beaten by anyone (including their spouse).⁹ To account

⁸ For the 1998-99 wave, we utilize individual-level sample weights. For the 2005-06 wave, we utilize the domestic violence module weights.

⁹ The 2005-06 wave of the survey includes two summary variables for spousal violence, one indicating whether the respondent has "experienced any less severe violence" (including the responses in the first four rows of the top panel of Table 5), and another indicating whether the respondent has "experienced any severe violence" (including the responses in the last three rows of the top panel of Table 5). Our spousal violence variable takes on the value of 1 if either of these responses is positive, and zero if both of these responses are negative. The 2005-06 wave also includes a summary indicator for whether the respondent has been hurt by someone other than her spouse. Our indicator for being subjected to any violence takes on the value of 1 if the respondent has been subjected to violence by her spouse (spousal violence variable equal to 1) or someone other than her spouse. It takes on the value of zero if the respondent has not been subjected to violence by either her spouse or by anyone other than her spouse. The

for cross-wave differences in measuring domestic violence, all of our NFHS regressions include wave dummies.

5. Estimation Strategy and Results

We estimate probit regressions to explain the dependent variables described in the previous section. For the IHDS data, the dependent variable is a dummy that takes on a value of 1 if a responding woman reports that any kind of beating is common in her community. For the NFHS data, the dependent variable is, alternately, a dummy that takes on the value of 1 if a woman has ever been beaten by her spouse, or a dummy that takes on the value of 1 if she has ever been beaten by anyone. For each dataset, we estimate multiple specifications with various combinations of the women's empowerment variables (work status, hours worked, earnings, type of work, and the wealth proxy based on inheritance law). The other controls include the demographic, employment, and wealth variables shown in Tables 1 and 4. We also include a set of state dummies in every regression, and standard errors are clustered by state.

Table 6 presents results from the IHDS data. The coefficients reported in the table are marginal effects, and standard errors are reported in parentheses. Columns (1) and (2) of the table suggest that there is no statistically significant relationship between reported beatings and either work status or hours worked. However, column (3) suggests that women with higher earnings are slightly less likely to report that beatings are common. In particular, an increase of Rs. 10,000 (a large increase relative to the average woman's earnings reported in Table 1)

1998-99 wave of the survey includes indicators for whether the respondent has ever been beaten since age 15, and specifically whether her husband has ever beaten her. Our indicator for being subjected to any violence is directly based on the survey indicator for whether the respondent has been beaten since age 15. If the respondent indicates having been beaten by her husband, we set the spousal violence variable equal to 1. If the respondent indicates that she has never been beaten by anyone, or that she has been beaten but not by her husband, we set the spousal violence variable to zero.

reduces the probability of reporting that beatings are common by 0.5 percentage points. In comparison, an increase in family income other than the woman's earnings is associated with a smaller (but still statistically significant) reduction in the probability of reporting beatings. Column (4) suggests that there is no evidence of a relationship between reported beatings and the treatment dummy based on inheritance law, and column (6) shows that none of these results change much when all three empowerment indicators are included together. The results in Table 6 also indicate that women who are older, women who were 18 or older at the time of marriage, women who live in an urban area, and women from households where the females are more educated are less likely to report that beatings are common. In addition, there are statistically significant differences in reported beatings across castes and religious groups. However, we find no evidence of a relationship between domestic violence and the number of sons or the highest male education in the household.

While the IHDS results are consistent with the story that women's empowerment – through employment and earnings – lowers the risk of domestic violence, we cannot establish that this is a causal effect. In particular, there are likely to be many unobservable factors (e.g., the husband's attitude towards women) that jointly determine both a woman's earnings and her risk of being beaten. Our plausibly exogenous measure of empowerment – the dummy for treatment by inheritance law changes – does not exhibit a statistically significant relationship with domestic violence. One reason for the lack of significance may be that the IHDS questions refer to whether violence is common in the respondent's community, rather than whether the respondent has had personal experience of violence. If a community includes both treated and untreated women, the treated women may report that they have heard that violence is common even if they have not personally been a victim.

Next, we turn to the NFHS data. Because the NFHS dataset includes two cross sections separated by several years, we have additional within-state variation to identify the effects of our independent variables. Table 7 presents our regression results from the NFHS. Columns (1)-(4) present the regressions in which the dependent variable is the probability of being beaten by the spouse. Columns (5)-(8) present the results in which the dependent variable is the probability of being beaten by anyone. Columns (1) and (5) indicate that being employed is actually associated with a higher risk of violence, either by one's spouse or by someone else. In particular, women who are currently working have a probability of being beaten that is 5-6 percentage points greater than women who are not. This is consistent with Kishor and Johnson (2004), Eswaran and Malhotra (2011), Kimuna et al. (2013) and Krishnan et al. (2010), who find that work status is positively correlated with domestic violence. Columns (2) and (6) indicate that, relative to year-round workers (the omitted group), seasonal workers are more likely to report violence. As year-round workers are likely to earn more income, this result is consistent with the IHDS results indicating that greater earnings from work are associated with a lower probability of violence. Similarly, women who work in occupations other than the relatively highly paid Professional, Technical, and Managerial category (the omitted group) are more likely to be beaten. In other words, while employment per se may be associated with a higher risk of domestic violence, higher earnings tend to reduce the likelihood of violence.

Columns (3) and (7) suggest that women in the treatment group are significantly less likely to be beaten by their spouses (significant at the 10 percent level) or anyone (significant at the 5 percent level) than women in the control group. In particular, their probability of being beaten is roughly 2.5 percentage points lower than that of women in the control group. Columns (4) and (8) suggest that our results are not substantially altered by including all three

empowerment measures simultaneously. Hence our results point to the significance of inheritance rights as a means to addressing the problem of domestic abuse.

In addition, consistent with the IHDS results, we find that women whose families have a higher standard of living, women with more education, and women who were married at age 18 or older are less likely to be beaten.¹⁰ However, in contrast with the IHDS results, in most specifications there is no statistically significant relationship between a woman's age and her likelihood of being beaten. Having a spouse with a secondary or higher education (relative to no education) reduces the likelihood of being subjected to violence, while having a spouse with a primary education increases it. In contrast to some earlier findings in the literature, the number of sons is positively associated with violence.

Overall, the NFHS data provide stronger support for the hypothesis that empowering women through income and wealth reduce the likelihood that they will become a victim of domestic violence. While women who work are more likely to be beaten, higher earnings from work are associated with less violence. Again, these results by themselves do not provide strong evidence for a causal link between empowerment and domestic violence. However, our plausibly exogenous measure of empowerment – the treatment dummy based on changes to state-level inheritance laws – is indeed associated with a lower risk of violence, possibly because the violence measures in the NFHS are more precise than those in the IHDS.

There are a number of channels through which women's inheritance rights might influence the probability that they experience domestic violence. Inheritance rights are likely to increase women's wealth, thereby increasing their bargaining power and importance within the household. Even in cases where actual inheritance has not occurred, the probability that a woman

¹⁰ In India, early marriages have also been shown to be associated with lower educational attainment, higher maternal mortality and high levels of child malnutrition (Caldwell et al. 1983).

could inherit land and property may have a similar effect. Alternatively, Deininger et al. (2013) suggest that strengthening a woman's inheritance rights may alter her marriage market outcomes. Their results suggest that the state-level amendments to the Hindu Succession Act tended to increase women's age at marriage relative to the men's, a result that is indicative of better marriage outcomes.¹¹ In our context, a woman with stronger inheritance rights may be more likely to marry a non-abusive spouse.

6. Conclusion

This paper investigates whether measures of women's empowerment are associated with a lower risk of domestic violence. We use two different nationally representative household datasets and several alternative measures of women's empowerment. We establish that, while working is not associated with a reduction in the probability of experiencing violence (and may even be associated with an increase in it), wife beating is less commonly reported by women with higher levels of earnings than women with lower levels of earnings. This finding provides additional evidence to supplement earlier findings which simply focused on whether women worked, rather than their earnings, and concluded that employment was positively related to abuse. In addition, we exploit a natural experiment wherein five states made amendments to their inheritance laws allowing daughters equal status as sons in the right to inherit the joint property of the father. We use this arguably exogenous variation to study whether the improvement in women's autonomy in these states as a result of the passage of this law had any impact on their likelihood of being victims of domestic abuse. Our results using data from the National Family Health Survey suggest that these state amendments significantly reduced the likelihood of abuse

¹¹ Field and Ambrus (2008) and Jensen and Thornton (2003) have shown that the woman's age at marriage is associated with a number of outcomes, including educational attainment, bargaining power, domestic violence, and control over reproduction.

for women who benefited from these laws. In general, results from this paper support the idea that more autonomy for women is an essential step forward in the fight against domestic abuse.

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Table 1: IHDS Summary Statistics

| Variable | Mean | Std. Dev. | Min | Max |
|----------------------------------|--------|-----------|--------|--------|
| Beatings Common | 0.85 | 0.35 | 0 | 1 |
| Worked in Previous Year | 0.24 | 0.43 | 0 | 1 |
| Hours Worked (previous year) | 297.75 | 644.76 | 0 | 5040 |
| Earnings (Rs.)/10,000 | 0.26 | 1.17 | 0 | 36.9 |
| Treated | 0.14 | 0.34 | 0 | 1 |
| Other Income (Rs.)/10,000 | 5.18 | 7.90 | -10.83 | 652.03 |
| Age | 33.25 | 7.87 | 15 | 50 |
| Age at Marriage \geq 18 | 0.49 | 0.50 | 0 | 1 |
| Number of Sons | 1.37 | 1.04 | 0 | 10 |
| Married | 0.94 | 0.24 | 0 | 1 |
| Rural | 0.65 | 0.48 | 0 | 1 |
| Urban | 0.33 | 0.47 | 0 | 1 |
| Urban Slum | 0.02 | 0.14 | 0 | 1 |
| Brahmin | 0.06 | 0.23 | 0 | 1 |
| High Caste | 0.17 | 0.38 | 0 | 1 |
| Other Backward Caste | 0.34 | 0.47 | 0 | 1 |
| Dalit | 0.20 | 0.40 | 0 | 1 |
| Adivasi | 0.08 | 0.27 | 0 | 1 |
| Muslim | 0.12 | 0.32 | 0 | 1 |
| Sikh, Jain | 0.02 | 0.13 | 0 | 1 |
| Christian | 0.02 | 0.12 | 0 | 1 |
| Female Education<10 Years | 0.78 | 0.42 | 0 | 1 |
| Female Education \geq 10 Years | 0.22 | 0.41 | 0 | 1 |
| Female Education Missing | 0.00 | 0.06 | 0 | 1 |
| Male Education<10 Years | 0.60 | 0.49 | 0 | 1 |
| Male Education \geq 10 Years | 0.36 | 0.48 | 0 | 1 |
| Male Education Missing | 0.04 | 0.20 | 0 | 1 |

Notes: All summary statistics based on 31,958 observations of eligible women. Data are unweighted.

Table 2: Reported Violence in the IHDS

| <i>In your community is it usual for husbands to beat their wives if ...</i> | Fraction |
|--|----------|
| She goes out without telling him | 0.39 |
| Her natal family does not give expected money, jewelry, or other items | 0.29 |
| She neglects the house or the children | 0.34 |
| She doesn't cook food properly | 0.29 |
| He suspects her of having relations with other men | 0.83 |
| Any of the above reasons (dependent variable) | 0.85 |

Notes: Based on sample of 31,958 eligible women used in regressions, although number of observations for sub-categories may be smaller. IHDS sample weights used.

Table 3: State-level Variation in Violence

| <i>State</i> | <i>Beating common?</i> |
|--------------------|------------------------|
| Sikkim | 0.10 |
| Arunachal Pradesh | 0.16 |
| Assam | 0.21 |
| Tripura | 0.46 |
| West Bengal | 0.47 |
| Meghalaya | 0.50 |
| Pondicherry | 0.52 |
| Nagaland | 0.52 |
| Kerala | 0.66 |
| Chhatishgarh | 0.68 |
| Manipur | 0.68 |
| Tamil Nadu | 0.70 |
| Goa | 0.80 |
| Dadra+Nagar Haveli | 0.80 |
| Delhi | 0.83 |
| Madhya Pradesh | 0.84 |
| Gujarat | 0.85 |
| Mizoram | 0.86 |
| Jammu & Kashmir | 0.91 |
| Jharkhand | 0.94 |
| Karnataka | 0.95 |
| Bihar | 0.95 |
| Orissa | 0.95 |
| Rajasthan | 0.95 |
| Haryana | 0.96 |
| Andhra Pradesh | 0.96 |
| Maharashtra | 0.97 |
| Punjab | 0.97 |
| Uttar Pradesh | 0.97 |
| Himachal Pradesh | 0.98 |
| Daman & Diu | 0.99 |
| Uttaranchal | 0.99 |
| Chandigarh | 1.00 |

Notes: Based on sample of 31,958 eligible women used in regressions. IHDS sample weights used.

Table 4: Summary Statistics, NFHS

| Variable | Mean | Std. Dev. | Min | Max |
|--|-------|-----------|-----|-----|
| Ever beaten by Spouse | 0.23 | 0.42 | 0 | 1 |
| Ever Beaten | 0.26 | 0.44 | 0 | 1 |
| Employed | 0.36 | 0.48 | 0 | 1 |
| Treated | 0.10 | 0.29 | 0 | 1 |
| Employment - Don't Work/Missing | 0.61 | 0.49 | 0 | 1 |
| Employment - Occasional | 0.02 | 0.13 | 0 | 1 |
| Employment - Seasonal | 0.12 | 0.32 | 0 | 1 |
| Employment - All Year | 0.26 | 0.44 | 0 | 1 |
| Industry - Not Working/Missing | 0.61 | 0.49 | 0 | 1 |
| Industry - Professional, Technical, Managerial | 0.03 | 0.17 | 0 | 1 |
| Industry - Clerical | 0.01 | 0.10 | 0 | 1 |
| Industry - Sales | 0.02 | 0.14 | 0 | 1 |
| Industry Agricultural - Self-Employed | 0.08 | 0.27 | 0 | 1 |
| Industry - Agricultural - Employee | 0.15 | 0.35 | 0 | 1 |
| Industry - Household and Domestic | 0.01 | 0.08 | 0 | 1 |
| Industry - Services | 0.02 | 0.14 | 0 | 1 |
| Industry - Skilled Manual | 0.06 | 0.25 | 0 | 1 |
| Industry - Unskilled Manual | 0.02 | 0.13 | 0 | 1 |
| 2005-06 Wave | 0.40 | 0.49 | 0 | 1 |
| Partner Industry - Not Working/Missing | 0.03 | 0.17 | 0 | 1 |
| Partner Industry - Professional, Technical, Managerial | 0.09 | 0.29 | 0 | 1 |
| Partner Industry - Clerical | 0.05 | 0.22 | 0 | 1 |
| Partner Industry - Sales | 0.12 | 0.32 | 0 | 1 |
| Partner Industry Agricultural - Self-Employed | 0.21 | 0.41 | 0 | 1 |
| Partner Industry - Agricultural - Employee | 0.10 | 0.30 | 0 | 1 |
| Partner Industry - Household and Domestic | 0.00 | 0.04 | 0 | 1 |
| Partner Industry - Services | 0.06 | 0.23 | 0 | 1 |
| Partner Industry - Skilled Manual | 0.28 | 0.45 | 0 | 1 |
| Partner Industry - Unskilled Manual | 0.06 | 0.23 | 0 | 1 |
| Low Living Standard | 0.26 | 0.44 | 0 | 1 |
| Medium Living Standard | 0.42 | 0.49 | 0 | 1 |
| High Living Standard | 0.33 | 0.47 | 0 | 1 |
| Age | 31.79 | 8.40 | 15 | 49 |
| No Education | 0.46 | 0.50 | 0 | 1 |
| Primary Education | 0.16 | 0.37 | 0 | 1 |
| Secondary Education | 0.29 | 0.45 | 0 | 1 |
| Higher Education | 0.09 | 0.29 | 0 | 1 |
| Education Missing | 0.00 | 0.01 | 0 | 1 |
| Partner - No Education | 0.25 | 0.43 | 0 | 1 |
| Partner - Primary Education | 0.17 | 0.38 | 0 | 1 |
| Partner - Secondary Education | 0.41 | 0.49 | 0 | 1 |
| Partner - Higher Education | 0.17 | 0.38 | 0 | 1 |
| Partner Education - Don't Know | 0.00 | 0.07 | 0 | 1 |
| Hindu | 0.77 | 0.42 | 0 | 1 |
| Muslim | 0.11 | 0.32 | 0 | 1 |
| Christian | 0.06 | 0.24 | 0 | 1 |
| Sikh | 0.02 | 0.15 | 0 | 1 |
| Buddhist | 0.01 | 0.11 | 0 | 1 |
| Other Religion | 0.01 | 0.11 | 0 | 1 |
| Low Caste | 0.61 | 0.4878711 | 0 | 1 |
| Married | 0.94 | 0.2356512 | 0 | 1 |
| Age at Marriage≥18 | 0.46 | 0.50 | 0 | 1 |
| Number of Sons | 1.36 | 1.12 | 0 | 10 |

Notes: All summary statistics based on 148,152 observations. Data are unweighted.

Table 5: Reported Violence in the NFHS

| | Fraction |
|---|----------|
| <i>2005-06</i> | |
| Spouse pushed, shook, or threw something | 0.09 |
| Slapped by spouse | 0.25 |
| Punched by spouse | 0.07 |
| Kicked or dragged by spouse | 0.07 |
| Spouse tried to strangle or burn | 0.01 |
| Spouse threatened with weapon | 0.01 |
| Any violence by spouse (dependent variable) | 0.36 |
| Ever physically hurt (dependent variable) | 0.39 |
| <i>1998-99</i> | |
| Ever beaten by spouse (dependent variable) | 0.19 |
| Ever beaten (dependent variable) | 0.21 |

Notes: Based on sample of 148,152 women used in regressions, though sample size for sub-categories may be smaller. NFHS sample weights used (individual sample weights for 1998-99 data and domestic violence module sample weights for 2005-06 data).

Table 6: Determinants of the Probability of Beating, IHDS

| VARIABLES | (1) | (2) | (3) | (4) | (5) |
|---------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Working | 0.003 (0.007) | | | | |
| Hours Worked | | -0.000 (0.000) | | | 0.000 (0.000) |
| Earnings (Rs.)/10,000 | | | -0.005** (0.001) | | -0.006** (0.002) |
| Treated | | | | 0.010 (0.013) | 0.010 (0.012) |
| Other Income | -0.001* (0.000) | -0.001* (0.000) | -0.001* (0.000) | -0.001* (0.000) | -0.001* (0.000) |
| Age | -0.001+ (0.000) | -0.001+ (0.000) | -0.001+ (0.000) | -0.001 (0.001) | -0.001 (0.000) |
| Age at Marriage≥18 | -0.019* (0.010) | -0.019* (0.010) | -0.019* (0.010) | -0.020* (0.010) | -0.020* (0.010) |
| Number of Sons | 0.001 (0.002) | 0.001 (0.002) | 0.000 (0.002) | 0.000 (0.002) | 0.000 (0.002) |
| Married | 0.033* (0.016) | 0.032* (0.016) | 0.031+ (0.016) | 0.032* (0.016) | 0.031* (0.016) |
| Urban | -0.036* (0.015) | -0.037* (0.015) | -0.036* (0.015) | -0.036* (0.015) | -0.035* (0.015) |
| Urban Slum | -0.010 (0.031) | -0.010 (0.032) | -0.010 (0.032) | -0.010 (0.032) | -0.010 (0.031) |
| High Caste | 0.023 (0.017) | 0.023 (0.017) | 0.023 (0.017) | 0.023 (0.017) | 0.023 (0.017) |
| Other Backward Caste | 0.034** (0.011) | 0.035** (0.011) | 0.034** (0.011) | 0.034** (0.011) | 0.034** (0.011) |
| Dalit | 0.042** (0.015) | 0.043** (0.015) | 0.043** (0.014) | 0.043** (0.015) | 0.042** (0.015) |
| Adivasi | -0.005 (0.018) | -0.003 (0.018) | -0.003 (0.017) | -0.004 (0.018) | -0.004 (0.018) |
| Muslim | 0.052** (0.018) | 0.052** (0.018) | 0.051** (0.018) | 0.053** (0.018) | 0.053** (0.018) |
| Sikh, Jain | 0.061* (0.026) | 0.061* (0.026) | 0.060* (0.026) | 0.061* (0.026) | 0.059* (0.026) |
| Christian | 0.048** (0.014) | 0.048** (0.014) | 0.049** (0.013) | 0.054** (0.016) | 0.054** (0.016) |
| Female Education≥10 Years | -0.025** (0.006) | -0.024** (0.006) | -0.023** (0.006) | -0.025** (0.006) | -0.023** (0.006) |
| Female Education Missing | 0.006 (0.028) | 0.005 (0.028) | 0.005 (0.028) | 0.006 (0.028) | 0.006 (0.028) |
| Male Education≥10 Years | -0.005 (0.006) | -0.006 (0.006) | -0.006 (0.006) | -0.005 (0.006) | -0.005 (0.006) |
| Male Education Missing | -0.011 (0.016) | -0.009 (0.016) | -0.009 (0.016) | -0.010 (0.016) | -0.010 (0.016) |
| Observations | 31,895 | 31,895 | 31,895 | 31,895 | 31,895 |

Standard errors in parentheses

** p<0.01, * p<0.05, + p<0.1

Notes: Coefficients shown are marginal effects. Sixty-three observations from Chandigarh dropped because they perfectly predict the dependent variable.

IHDS sample weights used. All specifications also include state dummies.

Standard errors clustered by state.

Table 7: Determinants of the Probability of Beating, NFHS

| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|--|---------------------|--------------------|--------------------|--|--------------------|--------------------|--------------------|
| | <i>Probability of being beaten by spouse</i> | | | | <i>Probability of being beaten by anyone</i> | | | |
| Employment - Don't Work/Missing | | -0.069** (0.026) | | -0.065* (0.025) | | -0.058* (0.024) | | -0.053* (0.025) |
| Employment - Occasional | | -0.005 (0.017) | | -0.004 (0.016) | | -0.007 (0.019) | | -0.006 (0.019) |
| Employment - Seasonal | | 0.026** (0.008) | | 0.026** (0.008) | | 0.025** (0.008) | | 0.025** (0.008) |
| Industry - Not Working/Missing | | 0.090** (0.026) | | 0.090** (0.026) | | 0.070* (0.028) | | 0.070* (0.028) |
| Industry - Clerical | | 0.063** (0.023) | | 0.062** (0.023) | | 0.049* (0.022) | | 0.048* (0.022) |
| Industry - Sales | | 0.081** (0.028) | | 0.080** (0.028) | | 0.076** (0.026) | | 0.074** (0.025) |
| Industry Agricultural - Self-Employed | | 0.058+ (0.030) | | 0.057+ (0.030) | | 0.048 (0.030) | | 0.047 (0.030) |
| Industry - Agricultural - Employee | | 0.074** (0.028) | | 0.073** (0.028) | | 0.071* (0.029) | | 0.070* (0.029) |
| Industry - Household and Domestic | | 0.126** (0.031) | | 0.125** (0.031) | | 0.131** (0.031) | | 0.129** (0.031) |
| Industry - Services | | 0.109** (0.029) | | 0.108** (0.028) | | 0.102** (0.028) | | 0.101** (0.028) |
| Industry - Skilled Manual | | 0.079** (0.024) | | 0.079** (0.024) | | 0.073** (0.023) | | 0.073** (0.023) |
| Industry - Unskilled Manual | | 0.109** (0.035) | | 0.107** (0.035) | | 0.103** (0.033) | | 0.102** (0.032) |
| Employed | 0.054** (0.007) | | | 0.005 (0.008) | 0.057** (0.007) | | | 0.005 (0.010) |
| Treated | | | -0.024+ (0.014) | -0.022+ (0.013) | | | -0.025* (0.013) | -0.022+ (0.012) |
| 2005-06 Wave | 0.179** (0.019) | 0.175** (0.019) | 0.183** (0.019) | 0.177** (0.019) | 0.183** (0.021) | 0.179** (0.020) | 0.187** (0.021) | 0.181** (0.020) |
| Partner Industry - Not Working/Missing | -0.014 (0.009) | -0.013 (0.009) | -0.017+ (0.010) | -0.012 (0.010) | -0.016 (0.010) | -0.014 (0.009) | -0.018+ (0.010) | -0.013 (0.010) |
| Partner Industry - Clerical | -0.004 (0.011) | -0.001 (0.011) | -0.009 (0.010) | -0.001 (0.011) | -0.005 (0.011) | -0.003 (0.011) | -0.010 (0.010) | -0.002 (0.011) |
| Partner Industry - Sales | 0.006 (0.008) | 0.007 (0.008) | 0.002 (0.008) | 0.007 (0.008) | 0.005 (0.008) | 0.006 (0.008) | 0.001 (0.008) | 0.006 (0.008) |
| Partner Industry Agricultural - Self-Employed | 0.002 (0.011) | 0.006 (0.010) | 0.008 (0.011) | 0.006 (0.010) | -0.006 (0.011) | -0.002 (0.010) | 0.001 (0.011) | -0.002 (0.010) |
| Partner Industry - Agricultural - Employee | 0.008 (0.012) | 0.007 (0.014) | 0.012 (0.011) | 0.007 (0.014) | -0.001 (0.013) | -0.003 (0.015) | 0.003 (0.013) | -0.003 (0.015) |
| Partner Industry - Household and Domestic | -0.057 (0.038) | -0.061+ (0.037) | -0.055 (0.038) | -0.061+ (0.036) | -0.037 (0.042) | -0.043 (0.041) | -0.036 (0.042) | -0.042 (0.041) |
| Partner Industry - Services | -0.003 (0.007) | -0.004 (0.007) | -0.005 (0.007) | -0.004 (0.007) | -0.004 (0.008) | -0.006 (0.007) | -0.007 (0.008) | -0.005 (0.007) |
| Partner Industry - Skilled Manual | 0.015* (0.007) | 0.014* (0.007) | 0.013+ (0.007) | 0.015* (0.007) | 0.012 (0.007) | 0.011 (0.008) | 0.010 (0.007) | 0.011 (0.008) |
| Partner Industry - Unskilled Manual | 0.028** (0.011) | 0.022** (0.008) | 0.028** (0.011) | 0.023** (0.008) | 0.022* (0.011) | 0.017* (0.009) | 0.022* (0.011) | 0.017* (0.009) |

Table 7 (continued): Determinants of the Probability of Beating, NFHS

| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|-------------------------------|--|---------------------|---------------------|---------------------|--|---------------------|---------------------|---------------------|
| | <i>Probability of being beaten by spouse</i> | | | | <i>Probability of being beaten by anyone</i> | | | |
| Medium Living Standard | -0.037** (0.007) | -0.034** (0.007) | -0.041** (0.006) | -0.035** (0.007) | -0.039** (0.007) | -0.035** (0.008) | -0.042** (0.007) | -0.035** (0.008) |
| High Living Standard | -0.087** (0.011) | -0.083** (0.012) | -0.095** (0.011) | -0.083** (0.012) | -0.088** (0.012) | -0.083** (0.013) | -0.096** (0.011) | -0.083** (0.013) |
| Age | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000* (0.000) |
| Primary Education | 0.008 (0.006) | 0.008 (0.005) | 0.004 (0.006) | 0.008 (0.005) | 0.016* (0.006) | 0.016** (0.006) | 0.012+ (0.006) | 0.016** (0.006) |
| Secondary Education | -0.045** (0.006) | -0.043** (0.006) | -0.051** (0.006) | -0.043** (0.006) | -0.030** (0.007) | -0.027** (0.006) | -0.036** (0.007) | -0.027** (0.006) |
| Higher Education | -0.121** (0.011) | -0.116** (0.010) | -0.119** (0.011) | -0.115** (0.010) | -0.093** (0.010) | -0.087** (0.009) | -0.091** (0.010) | -0.086** (0.009) |
| Missing Education | -0.030 (0.063) | -0.037 (0.059) | -0.032 (0.059) | -0.036 (0.058) | -0.041 (0.062) | -0.048 (0.058) | -0.043 (0.059) | -0.046 (0.057) |
| Partner - Primary Education | 0.010* (0.004) | 0.011** (0.004) | 0.008+ (0.004) | 0.011** (0.004) | 0.010* (0.004) | 0.011** (0.004) | 0.009+ (0.004) | 0.011** (0.004) |
| Partner - Secondary Education | -0.024** (0.005) | -0.022** (0.005) | -0.028** (0.005) | -0.022** (0.005) | -0.028** (0.004) | -0.026** (0.004) | -0.032** (0.005) | -0.026** (0.004) |
| Partner - Higher Education | -0.059** (0.008) | -0.057** (0.008) | -0.064** (0.008) | -0.057** (0.008) | -0.063** (0.008) | -0.060** (0.008) | -0.068** (0.007) | -0.060** (0.008) |
| Partner Education Missing | -0.040+ (0.023) | -0.040+ (0.022) | -0.039+ (0.023) | -0.040+ (0.022) | -0.040+ (0.022) | -0.041+ (0.022) | -0.040+ (0.023) | -0.041+ (0.022) |
| Muslim | 0.023 (0.015) | 0.025+ (0.015) | 0.012 (0.014) | 0.022 (0.015) | 0.020 (0.014) | 0.022 (0.014) | 0.008 (0.013) | 0.019 (0.015) |
| Christian | 0.016 (0.011) | 0.015 (0.010) | 0.010 (0.014) | 0.008 (0.012) | 0.023* (0.012) | 0.022* (0.011) | 0.017 (0.013) | 0.015 (0.012) |
| Sikh | 0.011 (0.013) | 0.012 (0.013) | 0.006 (0.013) | 0.012 (0.013) | 0.006 (0.012) | 0.007 (0.012) | 0.000 (0.011) | 0.006 (0.012) |
| Buddhist | 0.058** (0.014) | 0.056** (0.014) | 0.055** (0.013) | 0.056** (0.014) | 0.056** (0.016) | 0.053** (0.016) | 0.052** (0.015) | 0.054** (0.016) |
| Other/Missing Religion | -0.036 (0.027) | -0.039 (0.026) | -0.037 (0.028) | -0.039 (0.026) | -0.032 (0.027) | -0.036 (0.026) | -0.034 (0.027) | -0.036 (0.026) |
| Low Caste | 0.021** (0.007) | 0.020** (0.007) | 0.026** (0.008) | 0.020** (0.007) | 0.022** (0.008) | 0.020** (0.007) | 0.027** (0.008) | 0.020** (0.007) |
| Married | -0.030* (0.014) | -0.028* (0.014) | -0.038* (0.015) | -0.028+ (0.014) | -0.036* (0.015) | -0.034* (0.014) | -0.045** (0.015) | -0.034* (0.014) |
| Age at Marriage≥18 | -0.035** (0.005) | -0.035** (0.005) | -0.036** (0.005) | -0.033** (0.005) | -0.030** (0.004) | -0.030** (0.005) | -0.031** (0.005) | -0.029** (0.005) |
| Number of Sons | 0.016** (0.001) | 0.016** (0.001) | 0.016** (0.001) | 0.016** (0.001) | 0.015** (0.002) | 0.015** (0.002) | 0.015** (0.002) | 0.015** (0.002) |
| Observations | 148,152 | 148,152 | 148,152 | 148,152 | 148,152 | 148,152 | 148,152 | 148,152 |

Standard errors in parentheses

** p<0.01, * p<0.05, + p<0.1

Notes: Coefficients shown are marginal effects. NFHS sample weights used (individual sample weights for 1998-99 data and domestic violence module sample weights for 2005-06 data). All specifications also include state dummies. Standard errors clustered by state.