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The Unhappy Marriage of Women's Work and Spousal Violence in India

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Abstract

Gender-based violence against women is a public health crisis that highlights the persistent gender inequalities present in our society. Informed by theories in several disciplines, spousal violence can be modelled as a multi-faceted phenomenon arising from the intersection of many factors, that may either be a risk or buffer factors. This paper tries to understand if a woman's employment is a risk or buffer factor for spousal violence. We use the NFHS 4 data-set and develop linear probability models to understand the different channels through which employment may change the likelihood of violence. We find that, being employed makes a woman more vulnerable to spousal violence, particularly if the woman earns more than the husband. Adding to that, we find evidence suggesting 'female guilt' present in working wives, where they justify spousal violence especially if 'the wife is unfaithful'. We argue the need to account for different forms of violence while studying spousal violence, which has not been studied previously in the literature and present results for the same.

Keywords : *Spousal Violence, Women's Employment, Household Bargaining, Male Backlash*

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1 Introduction

India has seen an increasing number of women leave the labour force over the past decade. Such low levels of women's labour force participation can be attributed to the economic, cultural and social restrictions women face in accessing the labour market. Even if institutional barriers faced by women from entering the workforce are overcome, it is important to investigate the reaction of households after the women becomes employed. The question is whether employment will empower women and thereby safer in their homes.

In the backdrop of declining female labour force participation, domestic violence has remained the highest proportion of reported crimes against women in India, across years. (NCRB, 2016, 2017, 2019, 2020). These figures are particularly alarming, given that the national crime data highlights only a part of the overall prevalence of domestic violence in the country. NFHS-4 (2017), a nationally representative household survey identifies that 33% of women have experienced physical, emotional, or sexual abuse by their spouses, with only 14% of them having sought help. Further 52% of women and 42% of men in India believe it is reasonable for a husband to beat his wife, revealing the inherent patriarchal norms in society. Failure to identify abuse, stigma around reporting, and lack of support are a few challenges faced by victims of spousal violence in India (Bhattacharya, 2015).

To develop any intervention in preventing spousal violence, it is imperative to understand the motivation behind violence. Informed by theories in disciplines such as criminology, psychology, sociology, feminism, and economics, assumptions on the husband's motivation to commit violence have contributed to single factor theories of spousal violence. Over time, researchers have adopted an ecological framework, where spousal violence is a multi-faceted phenomenon arising from the intersection of personal, situational, and socio-cultural factors (Heise, 1998). This shift in the theoretical understanding of domestic violence has contributed to empirical work on identifying risk and protective factors for spousal violence.

Economic theories of the household perceive any intervention that increases women's bargaining power as a viable protective factor against spousal violence. They believe that employment or increased wage rates will empower women against facing violence. While implementing an economic policy, culture can be a constraining factor that derails the predicted economic outcomes. Having accounted for the institutional frameworks of society, sociological theories perceive women empow-

erment as a threat to patriarchal norms. With regards to spousal violence, women employment has been identified as a risk factor in sociological literature. Similar to theoretical differences across disciplines, prior empirical work studying the correlation of women employment and spousal violence have also produced competing results, placing women's employment at different positions within the spectrum of riskiness and protectiveness.

This paper aims to investigate the possible mechanisms discussed in the different literature on women's employment and spousal violence in the context of India using NHFS-4 data. It provides evidence for certain mechanisms, that helps us to understand the underlying economics and cultural factors. It adds to the existing literature by raising a few important questions that haven't been discussed before. Acknowledging that both women's decision to work and experiencing spousal violence are confounded with each other and the presence of unidentified societal norms, this study will refrain from having a causal interpretation.

Existing mechanisms in the discipline such as male backlash, female guilt, bargaining power, exposure reduction, agency are investigated in the paper through the use of basic linear probability models. We also check for any difference in effects of mechanisms across different wealth categories. Contributing to the existing literature, we argue the need to study different forms of violence and present evidence that raise new points of inquiry.

Our paper finds strong evidence for male backlash similar to Dhanaraj and Mahambare (2021) and Kjelsrud and Sjurgard (2020) and the evidence that suggests the presence of 'female guilt' as studied by Dhanaraj and Mahambare (2021). We find that being employed makes a woman more vulnerable to spousal violence than those who are unemployed, more so in employed woman who earn more than their husbands. In our results pertaining to different forms of violence, we see considerable variation between forms of violence. This suggests that the mechanisms through which employment may change the likelihood of violence is also dependent on the type of violence that is being studied.

The paper is divided into six subsequent sections with ii) a review of literature across relevant concepts discussed in different disciplines, iii) a brief on the choice of data and summary statistics, iv) methodology of the study v) discussion of results classified into different mechanisms. vi) conclusion with a discussion of limitations of this paper and scope for further research.

2 Literature review

2.1 Modelling marriage

The application of economic theory and its methodologies to understand non-market spheres, especially within the context of a household, is a recent branch in the discipline. In micro economic theory, an household is perceived as basic decision unit that operates on the ideals of constraint optimization present in consumer theory (Chiappori & Bourguignon, 1992). Economic theories on household behaviour can be broadly classified into two approaches. The first approach referred as are "common preference" approach was popular from the 1950's until the 1980's. According to Samuelson (1956)'s consensus model, each spouse despite their individual preferences of consumption, by consensus, maximize the household's social welfare function. The objective of the household is to maximize this common utility function subject to the joint budget of pooled income. (Lundberg & Pollak, 1996)

Through his New Household Economics, Gary Becker (1974) pioneered one of the early theories of the household, in the discipline. Unlike the Samuelson (1956)'s, this model consisted of a benevolent dictator who maximized the household's overall utility. (Lundberg & Pollak, 1996; Nelson, 1995). With an increase in divorce rates and economic studies on divorce, the bargaining models of the '90s overcame the common preference weakness of the unitary model by using bargaining theory. By accounting for different utility function between the spouses, the household was modeled as a strategic interaction between two players and referred to as the household bargaining model. Household bargaining models in economics fall into the spectrum of being either cooperative or non cooperative (Agarwal, 1997).

Retaining the assumption of income pooling, cooperative bargaining models argue that married partners choose collective outcomes over threats such as divorce. Distinct individual preferences of spouses shape a cooperative utility function for the household. While optimizing the cooperative function, spouses will have to achieve a solution that is greater than or at least equal to what each spouse can attain outside of the marriage. This is referred to as the threat point within the bargaining model. (Farmer & Tiefenthaler, 1997). On the other hand, non-cooperative models account for asymmetry by relaxing assumptions such as income pooling (Manser & Brown, 1980; McElroy & Horney, 1981). Situated between the cooperative and non-cooperative models of household bargain-

ing, the separate spheres model of Lundberg and Pollak (1996) perceived threat internal to marriage. Manser and Brown (1980) argue that "extra household environmental parameters" that are not pertinent to marital utility, can also affect the threat point of an individual.

Feminist economists use marriage bargaining models to understand the prevailing intra-household inequality. They perceive it as a site of cooperative conflict, where cooperation occurs for tasks such as child-rearing amidst conflicting self-interests. Similar to Lundberg and Pollak (1996) and Manser and Brown (1980) scholars like Agarwal (1997) and Sen (1987) argue that prevalent gendered norms also affect an individual's bargaining capacity.

2.2 Domestic violence and Women Employment

2.2.1 Employment as a Buffer Factor

For Becker (1991), the marriage market is determined by the characteristics of married individuals, therefore any negative behaviour or conflict such as domestic violence ¹ would offset due to the prevailing competition in the market. With regard to women's employment, Becker would conceptualise a partner being employed as an addition to the household income. In his unitary utility function, the intra-household distribution of income does not matter.

Similarly in other collective models as long as the assumption of income pooling remains, any flow of income between spouses or relative income levels of each other, have no impact on their individual bargaining power. That is, woman's employment results in an increased household income and the partners may avoid the threat of spousal violence.

Moving away from collective models, the theoretical frameworks on domestic violence in economics are an extension of household bargaining models. While spousal violence is a threat point in the cooperative bargaining model, it is a punishment strategy in a non-cooperative model. Violence can either be an expression or an instrument used to attain a particular outcome for the husband, who is the dominant decision-maker. Tauchen et al. (1991) argue that a change in income of the injurer and the victim will have opposite effects on spousal violence, with the an increase in income of the injurer increasing violence and of the victim decreasing spousal violence. This idea of

¹We use 'Domestic violence' in this context in order to stay true to the arguments made by Becker in his book. Through the paper, the use of 'domestic violence' has been either to the use of the phrase in the cited literature or in the data set. We would like to clarify that the paper only concerns spousal violence in married couples, whereas domestic violence is an umbrella term which may include unmarried or other members in the household

decreasing spousal violence with an increase in women's employment is not new to feminist and microeconomics of development theories that argue for women empowerment through employment to reduce economic dependency on their spouses. With employment, women are expected to gain more bargaining power within the household and be able to attain the outcomes that are more aligning to their preferences. (Agarwal, 1997; Sen, 1987). The additional income makes them a more valued member and more able to leave an abusive relationship, thereby reducing spousal violence. This is explored in the threat point model of Lundberg and Pollak (1996).

In his paper, Chin (2012) discusses the non-monetary protective nature of women employment through positive impacts on reporting and the availability of a support group in their workplace.

2.2.2 Employment as a Risk Factor

The exposure reduction argument in criminology supports the use of women employment as an intervention to prevent spousal violence. The rationale being that employment at a place that is away from a violent husband can act as protective factor by reducing the woman's physical exposure to violence. (Dugan et al., 1999). While not much evidence is found to verify this mechanism in India, Chin (2012) presents evidence for exposure reduction theory using NFHS-3.

Bhattacharya (2015) argues that employment may not be a tool for emancipation but a channel for financial exploitation. The extraction effect occurs when the husband uses violence to extract his wife's earnings (Bloch & Rao, 2002). In her paper, Sarma (2019) finds an increase in spousal violence when payments were made as cash transfers, suggesting a possible extraction channel for spousal violence.

While employment status is an indicator of access to economic resources, understanding its impact within marriage bargaining not only requires attention to who has decision making power but more focus on the symbolic nature of employment (Macmillan & Gartner, 1999). Studies of employment beyond its economic aspects have been the root of other feminist and sociological theories, wherein the employment status of both partners has implications on marriage relations. Women employment threatens the masculine role of being the sole breadwinner. The breakdown of socially constructed gender roles and notions of masculinity within the household faces coercive retaliation or male backlash. Therefore, it is necessary to view the impact of a wife's employment relative to their husband's employment status within a bargaining model. In their research, Roychowdhury and

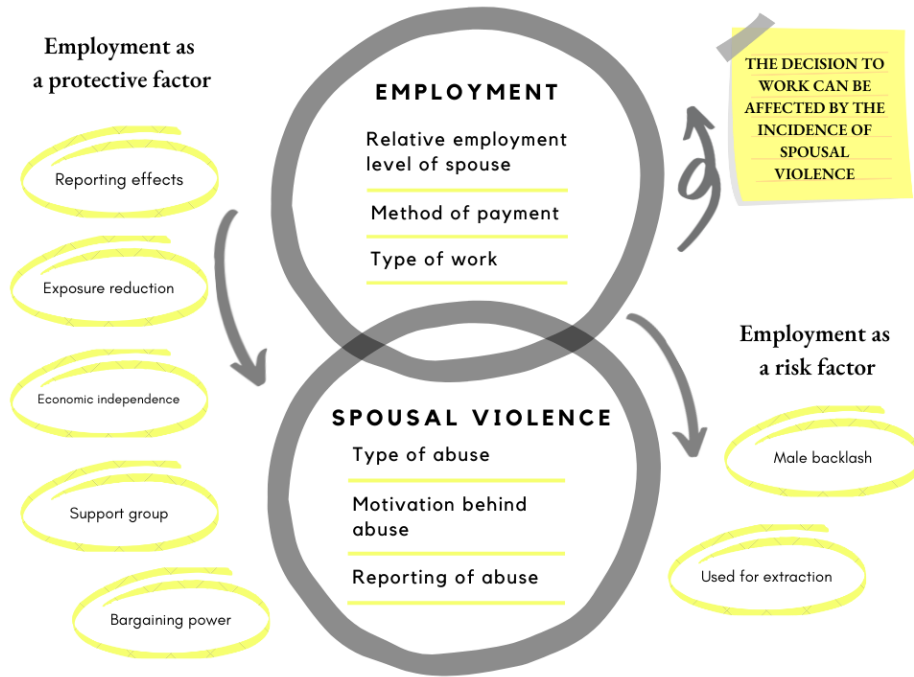
Dhamija (2021) find that the presence of hypergamy-when the wife's economic status exceeds that of the husband- has a causal effect on spousal violence, not only through backlash but as an instrument to sabotage her labour market prospects. The presence of male backlash is also found by Kjelsrud and Sjugard (2020) that studies the impact of MNREGA on spousal violence.

Beyond the identification of male backlash, Dhanaraj and Mahambare (2021) contribute to existing literature by studying the presence of a 'female guilt channel' that makes employed women justify violence against them in comparison to their unemployed counterparts. This study has opened a new pathway for more research in this field.

2.2.3 Empirical Evidence

While some studies find a positive correlation (Jeyaseelan et al., 2007; Kjelsrud & Sjugard, 2020; Krishnan et al., 2010; Roychowdhury & Dhamija, 2021; Sarma, 2019), others find a negative correlation between employment and spousal violence in India (Chin, 2012), or mix of both (Vyas & Watts, 2009). Although the prevalence of contradictory empirical results can be due to varying cultural backgrounds and time periods, we need to understand the underlying mechanism of culture and patriarchal norms to inform policies that improve women employment as an intervention to prevent spousal violence. In some instances, empirical works have varying results due over-simplified models that lack an interdisciplinary approach and fail to account for the endogeneity of women employment and spousal violence, where the latter may affect a woman's decision to work (Chin, 2012).

A visual summary of possible effects of women employment on spousal violence



2.3 Understanding forms of Violence

In the literature discussed above, particularly in those that trace the relationship between employment and spousal violence, violence has been restricted to either physical abuse, sexual abuse or both. In the sociology literature, physical violence, sexual violence, emotional violence and economic violence are the identified types of violence that are predominantly discussed. (Bhat & Ullman, 2014). In the Indian context, dowry related deaths are also studied under the umbrella term of domestic abuse as mentioned by Bhat and Ullman (2014) . In their paper, (Bloch & Rao, 2002) discuss dowry deaths and bargaining power extensively. While it is of convenience to construct a single index for all forms of violence, it is equally important to understand how women’s employment characteristics influence different types of violence faced by them. We believe there is more scope for study and research in exploring different forms of violence faced by women, and this paper presents results that support it.

3 Data

In India, there are very few reliable data sources that collect information on spousal violence. They include National Crime Registry Bureau (NCRB), Indian Human Development Survey (IHDS), the

National Family and Health Survey (NFHS) at the national level and other selective surveys conducted for research. Of the three data sets mentioned above, the NFHS data set, also referred to as the DHS-India is conducted using an extensive gendered-based questionnaire.

In the NFHS, information on both spousal violence as well as employment is available, making it the best fit for the purposes of this research. Unlike data collected through crime rates and hospital intakes, the rates of spousal violence are less affected by under-reporting. Other useful information like attitudes toward domestic violence, controlling behavior of spouses, decision making power within the household and mobility are also present, making it more relevant for this research. Owing to relevance and availability of data, we will use the fourth round of NFHS conducted in 2015-16 instead of the 5-th round conducted more recently. Since variables about the spouse’s attitudes and demographics are important for the relevance of our model, the couples recode file is used for the analysis. Of the total number of participants whose spouse’s information was also collected, 47514 women were selected for the domestic violence module.

3.1 Summary statistics from the domestic violence module

	Mean	Standard Deviation
Age	32.48	7.68
Husband’s age	37.18	8.19
Years of Education	6.01	5.15
Husband’s years of education	7.78	6.51
Employed	0.33	0.47
Husband employed	0.98	0.16
Privileged caste	0.61	0.49
Hindu	0.75	0.43
Urban Place of Residence	0.30	0.46
<i>N</i>	47514	

Table 1: Summary Statistics of demographic variables for those selected for the DV module

Table 1 presents the summary statistics of demographic variables of the domestic violence module. Within the module, 33 % women are employed and 98 % of women have husband’s who are employed. A third of women selected in the domestic violence module reside in urban areas. In this module, the women’s average age is 32 years, with about 6 years of education. The average age of their husbands’ is 37 years, with about 7 years of education. Of all the women in this module, 75 % are Hindu and 61 % belong to a privileged caste group.

	Mean	Standard Deviation
Violence	0.31	0.46
Less severe physical violence	0.28	0.45
Severe violence physical violence	0.07	0.26
Emotional violence	0.12	0.32
Sexual violence	0.06	0.24
Is afraid of husband	0.87	0.34
Justifies spousal violence	0.42	0.49
Husband justifies spousal violence	0.29	0.46
Husband is controlling	0.47	0.50
<i>N</i>	47514	

Table 2: Summary Statistics of variables pertaining to marriage for those selected for the DV module

Table 2 presents summary statistics of variables of interest pertaining to spouses and their marriage. Of those selected for the domestic violence module, one in three women have experienced any form of violence which includes physical, sexual and emotional abuse by husband/partner. There is significant variation between different forms of violence, ranging from 28 % women experiencing less severe physical violence to 7 % women experiencing severe physical violence. Over 80 % of respondents in the module revealed that they were somewhat afraid of their husbands, but only 12 % have been found to experience emotional violence. Within the module, over 42 % women justify spousal violence and 29 % of their husbands justify the same. Of all the women selected for the module, 47 % of women's husband had exhibited controlling behaviour.

4 Methodology

This paper used basic linear probability models to study the effect of different mechanisms through which women's employment may affect their likelihood of experiencing spousal violence. Spousal violence is a binary indicator that takes the value one if the woman has experienced any form of violence which includes physical, sexual and emotional abuse by husband/partner.

Initially we run a baseline regression with violence as the dependent variable and employment as the independent variable along with other controls used in relevant literature.

$$\begin{aligned}
Violence_i = & \beta_0 + \beta_1 employed_i + \beta_2 age_i + \beta_3 hus.age_i + \beta_4 priv.caste_i \\
& + \beta_5 hindu + \beta_6 edu.years_i + \beta_7 hus.edu.years_i \\
& + \beta_8 hus.alcohol_i + \beta_{10} gen.violence_i \\
& + \beta_{11} men.gen.violence_i + \beta_{12} pr.rshp_i + \beta_{13} urban + \epsilon_i
\end{aligned}$$

Here, *employed* is a binary variable which takes the value one if women has worked in the past 12 months. *age*, *hus.age*, *edu.years* and *hus.edu.years* are continuous variables that indicate women's age, her husband's age, women's education years and her husband's education years respectively. *gen.violence* and *men.gen.violence* are binary variables that capture intergenerational transfer of violence that takes the value one if the women or her husband has witnessed their father beat their mother. Other binary variables, *hus.alcohol* (Husband drinks alcohol) ; *pr.rshp* (Related to husband prior to their marriage) ; *hindu* (Being Hindu) ; *priv.caste* (Belonging to privileged caste) and *urban* (Urban place of residence) were controlled in consideration with the literature.

Unlike previous empirical work in this field of study, we investigate how employment changes the likelihood of experiencing different forms of violence. To do this, we use interaction variables to see the change in different forms of violence due to characteristics of women's employment such as type of earning, type of employer and relative earning level.

In order to understand mechanisms in isolation we use a curated list of independent variables for each of their regression models across employed and unemployed women. While there are some overlaps in the choice of dependent variables for any two mechanisms, the motivation to include them differ. For example, the difference in education levels between the spouses is perceived as a buffer when checking for bargaining power as opposed to a risk while looking for male backlash. The interpretation of a factor being buffer or a risk factor relies on the sign of their regression coefficient. Comparison between magnitude of the coefficients reveal how much more protective or risky a factor from experiencing spousal violence.

Models used to understand mechanisms are then further applied to understand variation in results between different wealth categories and forms of violence. To determine wealth category, the

wealth indicator (calculated through PCA analysis) present in NFHS survey is utilised. Lastly, we use the models to understand how employment changes the likelihood of experiencing spousal violence by changing the dependent variable as different forms of violence.

5 Results

5.1 Baseline with relevant variables

To have a preliminary understanding of spousal violence, a baseline OLS regression was run. In Table 3 different regression models with additional controls for demographic variables are presented. We see that the *Woman employed* variable has a positive coefficient is significant at the 1 percent level across all the controls. We find that an addition in her *Age* seems to increase violence as opposed to her *Husband's age* which seems to decrease violence. Since the *Age* coefficient is mostly insignificant across controls, the relationship between age and violence is inconclusive. We can see that woman *Being Hindu* as opposed to other religions is more likely to experience violence at a significant level.

As observed in Table 3 there is an increase in spousal violence faced by woman *Being in privileged caste* than woman of marginalized caste groups. As discussed by Rege (1996), within dominant caste Hindu households, the ultimate duty of a wife is to serve her husband and manage the house by being *pativrata & grahalaxmi*. She argues that with elevation in the caste ladder, we can witness a withdrawal of women from working outside, a luxury that is not affordable to Dalit women. This result is evidence that penalty faced by upper-caste women is not devoid of the power structures that maintain the caste system.

Intuitively, we can expect fall in spousal violence when either partner is well educated, and the results tell us the same. We can see that is no significant relationship between the place of residence and violence. Variables such inter generational violence, relationship of spouses prior to marriage and alcohol consumption that are commonly studied in literature, are controlled for in the baseline and their coefficients are statistically significant. We see that the coefficients of the variable *Husband witnessed violence between his parents* is not significant, which is different from what is expected given theories on spousal violence. When the magnitudes of the coefficient's are compared, the coefficient of *Husband drinks alcohol* is the highest followed by *Woman Employed* and *Being Hindu* and . For the

Table 3: Baseline regression model by controlling for demographics and other relevant variables: NFHS-4

	Violence	Violence	Violence	Violence	Violence	Violence	Violence	Violence	Violence	Violence	Violence	Violence	Violence
Woman employed	0.115*** (0.005)	0.115*** (0.005)	0.107*** (0.005)	0.105*** (0.005)	0.091*** (0.005)	0.089*** (0.005)	0.070*** (0.005)	0.069*** (0.005)	0.069*** (0.005)	0.068*** (0.005)	0.069*** (0.005)	0.069*** (0.005)	0.069*** (0.005)
Age	0.001*** (0.000)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Husband's age	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.001** (0.001)	-0.001** (0.001)	-0.001** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Being a privileged caste			-0.038*** (0.005)	-0.044*** (0.005)	-0.016*** (0.005)	-0.014*** (0.005)	0.015*** (0.004)	0.017*** (0.004)	0.017*** (0.004)	0.016*** (0.004)	0.017*** (0.004)	0.016*** (0.004)	0.016*** (0.004)
Being Hindu				0.059*** (0.005)	0.055*** (0.005)	0.057*** (0.005)	0.044*** (0.005)	0.047*** (0.005)	0.047*** (0.005)	0.049*** (0.005)	0.047*** (0.005)	0.049*** (0.005)	0.049*** (0.005)
Educational level					-0.015*** (0.000)	-0.014*** (0.000)	-0.013*** (0.000)	-0.012*** (0.000)	-0.012*** (0.000)	-0.012*** (0.000)	-0.012*** (0.000)	-0.012*** (0.000)	-0.013*** (0.000)
Husband's educational level						-0.003*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
Husband drinks alcohol							0.237*** (0.005)	0.233*** (0.005)	0.233*** (0.005)	0.233*** (0.005)	0.233*** (0.005)	0.233*** (0.005)	0.233*** (0.005)
Witnessed violence between her parents								0.18*** (0.001)	0.18*** (0.001)	0.18*** (0.001)	0.18*** (0.001)	0.18*** (0.001)	0.18*** (0.001)
Husband witnessed violence between his parents									0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Related to husband prior to marriage										0.045*** (0.006)	0.045*** (0.006)	0.044*** (0.006)	0.044*** (0.006)
Urban place of residence													0.006 (0.005)
Intercept	0.250*** (0.009)	0.261*** (0.010)	0.282*** (0.010)	0.239*** (0.011)	0.377*** (0.012)	0.386*** (0.012)	0.303*** (0.011)	0.292*** (0.011)	0.291*** (0.011)	0.283*** (0.011)	0.291*** (0.011)	0.283*** (0.011)	0.283*** (0.011)
N	47514	47514	45383	45383	45383	45383	45383	45383	45383	45383	45383	45383	45383

¹ Standard errors in parentheses

² * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

other variables, despite their statistical significance, small magnitudes of the coefficient imply a lack of economic significance when compared to *Woman employed*.

When the baseline regression was run across different wealth categories as shown in Appendix Table A1, except for the wealth level of richest, the coefficient of variable *Woman employed* is positive and significant for the remaining wealth level categories. *Woman employed* has the highest coefficient value for women belonging to the poorer and middle level wealth category. This means that for women in the poorer and middle wealth category, being employed is more of a risk factor than for those belonging to other wealth level categories. On a close inspection, we can see that the coefficient value seems to be much lower in the poorest and richer wealth level categories, indicating a possible inverted U shaped relationship between wealth level category and the riskiness of employment for women.

5.2 Different forms of Violence

	<i>Less severe physical violence</i>	<i>Severe physical violence</i>	<i>Sexual violence</i>	<i>Emotional violence</i>
Employed	0.061*** (0.004)	0.027*** (0.003)	0.023*** (0.002)	0.0364*** (0.003)
Employed X Works for family member /Self Employed	0.061*** (0.005)	0.028*** (0.003)	0.023*** (0.003)	0.037*** (0.003)
Employed X Works for others	0.065*** (0.011)	0.023*** (0.007)	0.019*** (0.006)	0.029*** (0.008)
Employed X Earns in kind or a mix of both	0.053*** (0.007)	0.010* (0.004)	0.028*** (0.004)	0.037*** (0.005)
Employed X Earns in Cash	0.066*** (0.005)	0.036*** (0.003)	0.020*** (0.003)	0.036*** (0.004)
Employed X Earns less than or equal to husband	0.055*** (0.005)	0.023*** (0.003)	0.021*** (0.003)	0.031*** (0.003)
Employed X Earns more than husband	0.102*** (0.010)	0.057*** (0.006)	0.035*** (0.006)	0.070*** (0.007)
Observations	45382	45382	45382	45382

¹ This table contains coefficients of sixteen separate regression models. In every model, the dependent variable is a form of violence with interaction variable and other baseline variables controlled for. Results are presented in this fashion for ease in comparison.

² Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ The demographic variables presented in the previous table were also controlled for

Table 4: How employment affects different forms of Violence

Unlike analysis done in previous research, we wanted to look at how characteristics of employment affected different forms of violence. This was to see if any characteristic increased or decreased

a particular form of violence more than another. In Table 4, we have used the four regression models across four different forms of violence, making it a total of sixteen separate regression models. The first model is the baseline regression run across dependent variable being different forms of violence. The coefficients of the *Employed* variable are presented in the first row segment of Table 4. The coefficient of the variable is positive and highest in magnitude for less severe form of violence as compared to other forms of violence, implying that employed women are more susceptible to less severe physical violence than their unemployed counterparts.

In the subsequent row segments, the regression models have a specific form of violence as the dependent variable that is regressed on a characteristic of employment (an interaction) and other baseline controls. The coefficient values of each variable mentioned is to be interpreted in comparison to women being unemployed. For example, if the coefficient is positive it implies that women with given employment characteristic are more likely to face spousal violence by the given magnitude than unemployed women.

In the second model, we see that the coefficient values of interactions *Works for a family member/Self employed* and *Works for others* are both positive and of similar magnitude across all forms of spousal violence. As per the exposure reduction argument we would expect employed women working for a family member or self employed to have a higher coefficient given that they may be more exposed to the place of violence in comparison to those working for others. This is seen for sexual and emotional violence as opposed to physical forms of spousal violence. Without any information on the place of work (a variable that has been dropped after NFHS-3) we cannot claim the presence or absence of evidence for exposure reduction.

In the third model, the coefficients of *Earns in Cash* is higher than the coefficients of *Earning in Kind or a mix of both* for physical forms of violence. This result suggests the presence of extraction channel, where the spouse uses physical violence to extract earnings. In the fourth model, we find important evidence on ‘male backlash’, where for all forms of violence earning more than husband makes employed women more likely to face violence. The magnitude of the difference is highest for less severe physical violence, implying that employed women earning higher than their husband is most at risk of experiencing violence more than unemployed women and employed women earning lesser or equal to their husband.

In conclusion, employed women are more likely to experience violence than their unemployed

counterparts for all forms of violence. There are variations on how different characteristics interacts with different forms of violence, this suggests the need for more theoretical and empirical study on this area.

5.3 Mapping different channels as models

In the previous section, we looked at the interactions of employment characteristics and different forms of violence and found significant variations. In this section, we use basic linear probability models with select variables to further understand the different mechanisms through which employment may affect the likelihood of spousal violence as discussed in existing literature.

5.3.1 Bargaining Power

Bargaining models of the household as conceptualized by Agarwal (1997), Lundberg and Pollak (1994), and Sen (1987) assume spouses to have individual preferences based on which they bargain and maximize their own outcomes. According to Sen (1987), employment increases a woman's (in this case wife's) 'perceived contribution' to the household, giving her bargaining power to attain a more desirable equilibrium. He argues that outside earning roles tend to have a strong impact on household behaviour. In the separate spheres model of marriage by Lundberg and Pollak (1994), an increase in economic opportunity relative to that of the spouse would increase a woman's outcome outside of marriage, which will reduce her tolerance to spousal violence within the marriage, thereby reducing the incidence of spousal violence. Similarly, Farmer and Tiefenthaler (1997) and Tauchen et al. (1991) argue that empowerment of the woman through employment will decrease spousal violence. In summary, the bargaining power channel predicts that women are less likely to experience spousal violence because of their employment, where employment acts as a buffer factor.

To capture bargaining power we used the following variables *Is more educated than husband*, *Difference in age*, *Decisions taken only by Husband*, *Relationship with husband prior to marriage*, *Number of Children* and *Earns more than husband*. The rationale was to include characteristics that are of different levels between spouses and see if their impact on spousal violence changed when the women is employed. The *Number of children* and the *Related to husband prior to marriage* were chosen based on insights from the household economics literature.

Table 5 shows the coefficient value for each variable for women belonging to two groups, em-

	Employed	Unemployed
	<i>Violence</i>	<i>Violence</i>
Earns more than husband	0.041*** (0.011)	0.000 (.)
Decisions taken only by Husband	0.013*** (0.003)	0.015*** (0.002)
Number of Children	0.037*** (0.003)	0.035*** (0.002)
Relationship with husband prior to marriage	0.050*** (0.011)	0.045*** (0.008)
Is more educated than husband	-0.001** (0.001)	-0.001*** (0.000)
Difference in age	-0.001 (0.001)	0.003*** (0.001)
<i>N</i>	15000	30383

¹ Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

² Other controls include belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table 5: How employment affects violence? : Bargaining Power

employed and unemployed. Though there isn't much difference in magnitude is found between the two groups, the positive and significant coefficients of variables such as *Decisions taken only by husband*, *Number of Children* and *Relationship with husband prior to marriage* indicate a possible decrease in woman's bargaining power to decrease violence irrespective of their employment status. It is interesting to see that the *Difference in age* variable's coefficient changes signs between the two groups, despite the coefficient value not being significant for women who are employed. This means, that employed women who are elder to their husband by their age acts as a buffer, not by only magnitude but also by direction when compared to unemployed women who are elder to their husband. As per bargaining channel, we would have expected to see a negative coefficient for the variable *Earns more than husband*. Our result counteracts the bargaining power theory, with a positive and significant coefficient for the variable *Earns more than husband*.

In Appendix Table B1 , when the same model was run across different wealth level categories, most of the variables did not have significant coefficient values. The coefficients of the variable *Number of children's* was significant across all wealth level categories at the 1 percent level. Employed women belonging to the richest wealth level had the highest coefficient value for *Number of children* variable compared to other wealth levels. The coefficient was higher even in comparison with unem-

ployed women of the same wealth level. We can see that the coefficient values of *Number of Children* variable in the unemployed group to resembles an inverted U shaped relationship that peaked in the Richer wealth level category. This implies that, the having more number of children is not only a risk factor, but particularly more in magnitude for unemployed women in the middle wealth levels. This result needs further investigating within this field of research.

In Appendix Table C1 the dependent variable in the model was different types of violence and the model was run for both employed and unemployed women. Earning more than the husband is more of risk for less severe physical abuse followed by emotional abuse and severe physical abuse. We find that the coefficient for relative earning, is not significant at the 5 percent level for sexual abuse. It is interesting to note that relative earning is more riskier for certain forms of violence, especially those that a survivor might have failed to identify as spousal violence.

In conclusion, we don't find differences of economic significance between employed and unemployed women in terms of their bargaining power indicated by the chosen variables. In fact, we find a counter intuitive result of employed women being more likely to have experienced spousal violence.

5.3.2 Exposure Reduction

	Employed	Unemployed
	<i>Violence</i>	<i>Violence</i>
Works for a family member/ Self employed	-0.005 (0.012)	0.000 (.)
Been away from home for six months or more	0.055*** (0.014)	0.044*** (0.010)
Husband been away from home for six months or more	0.044*** (0.010)	0.040*** (0.007)
<i>N</i>	15000	30382

¹ Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

² Other controls include age of husband and wife, education level of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table 6: How employment affects violence? : Exposure Reduction

As per criminology literature put forward by Dugan et al. (2003), Dugan et al. (1999), the exposure reduction argument suggests that any act that reduces the time in contact with an abusive partner or time away from an abusive environment such as one's home, will reduce the occurrence

of spousal violence.

To capture the effect of exposure reduction, variables such as *Working for a family member*, *Been away from home for six months or more*, *Husband been away from home for six months or more* were controlled for. In Table 6 we can see the variable *Works for a family member* has a negative coefficient. Corollary to the exposure reduction argument, our results imply that women are less likely to face spousal violence if they working for a family member as opposed to working for others, which is more likely to be outside of their homes. Since the result is not significant do not find sufficient evidence to reject the exposure reduction argument.

Controlling for the place of work would have been more informative, but this variable has been dropped after NHFS-3. While *Working for a family member/ Self employed* can be used as a proxy for the place of work, the alternative of working for others doesn't shed light on the physical space of work, whether it is different from the place of violence. The coefficients for both *Husband been away from home for six months or more* and *Been away from home for six months or more* are slightly higher in magnitude for women who are employed. Yet again, this is a counter intuitive result if exposure to place of violence determines the likelihood of facing violence. A similar result was found by Aizer (2010), where an increase in economic opportunity for women decreased incidence on weekends than on weekdays. In conclusion, we find no evidence to support the exposure reduction theory in this study.

In Appendix Table B2 when the model was run for different wealth level categories we didn't find significant coefficients most of the variables. Owing to which, we refrain from drawing inferences on the effect of exposure reduction across different wealth level categories. In Appendix Table C2 with changed the dependent variable to different forms of violence, we see that the variable *Been away from home for six months or more* has a higher coefficient value for employed women, we can see more difference in terms of the magnitude for severe physical abuse and sexual abuse. It is interesting to see that the coefficient value of *Works for a family member/ Self employed* change signs between different forms of violence, acting as a buffer factor for physical forms of violence as opposed to a risk factor for emotional and sexual violence. Since the coefficients are not statistically significant we cannot infer much from this result.

	Employed	Unemployed
	<i>Violence</i>	<i>Violence</i>
Earns strictly in Cash	0.005 (0.008)	0.000 (.)
Owens a Bank A/c	0.006 (0.008)	-0.012** (0.005)
Owens a mobile phone	-0.026*** (0.009)	-0.037*** (0.006)
Has money for herself	-0.000 (0.008)	0.005 (0.005)
Owens an asset	0.042*** (0.012)	0.028*** (0.008)
Is allowed to leave home by herself	-0.013*** (0.003)	-0.010*** (0.002)
<i>N</i>	15000	30383

¹ Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

² Other controls include age of husband and wife, education level of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table 7: How employment affects violence? : Agency

5.3.3 Agency

The Agency channel predicts that woman's employment increases the agency of woman which gives them more financial autonomy and decision making power to leave an abusive marriage. As discussed by Chin (2012) another mechanism would be employed woman being more likely to seek peer support and report occurrence of spousal violence.

While women's agency is a complex characteristic to measure quantitatively, we use variables such as *Earning strictly in Cash*, *Owens a Bank A/c*, *Owens a mobile phone*, *Has money for herself*, *Owens an asset* and *Is allowed to leave home by herself* to see if the how financial independence and autonomy may change the outcome of spousal violence.

In Table 7 the coefficient value for the *Earns strictly in Cash* is not significant, leaving us with no evidence for extraction effect, which suggests that spouse's earnings might result in the use of violence by the husband in order to extract it. We can see a change in the sign of coefficients for *Owens a Bank A/c* between women who are employed and unemployed. While the negative coefficient value for unemployed women is significant at 5 % level, the positive coefficient for employed women is not significant. From this, we can arrive at a counter intuitive result of *Owens a Bank A/c* give more agency and reduces spousal violence for unemployed women more than their employed peers.

Despite the coefficients for the variable *Having money for herself* not being statistically significant, it is interesting to see that the sign of the coefficient is negative and more in magnitude for employed women as opposed to unemployed women. *Owning a mobile phone* sees a fall in violence by a higher coefficient value for employed women than those who are unemployed. An important result is that while the positive coefficient of *Owens an asset* indicates asset ownership to be a risk factor, a higher coefficient is witnessed for employed women. This means that women who are employed and own an asset makes them more susceptible to spousal violence than unemployed women who own an asset. In conclusion, we find mixed evidence that lacks statistical significance to claim the effect of the agency channel.

In Appendix Table B3, when the model was run across different wealth level categories, we didn't find significant coefficients most of the variables. Owing to the same, we refrain from drawing inferences on the effect of Agency across different wealth level categories. In Appendix Table C3, with the dependent variable to different forms of violence, we see that the variable *Owens an asset* has a higher coefficient value for employed women across different types of violence. The coefficients of the variable *Earns in Cash* being positive and higher in magnitude for severe physical violence is suggestive of spousal violence being used to extract money.

	Employed	Unemployed
	<i>Violence</i>	<i>Violence</i>
Earns more than Husband	0.032*** (0.011)	0.000 (.)
Is more educated than husband	-0.002*** (0.001)	-0.002*** (0.000)
Degree in which husband justifies violence	0.028*** (0.004)	0.020*** (0.003)
Justifies violence if wife is unfaithful	0.016 (0.011)	0.019** (0.008)
Justifies violence if wife is disrespectful	0.015 (0.011)	0.010 (0.007)
Husband witnessed violence between parents	0.001 (0.002)	0.002 (0.001)
<i>N</i>	15000	30383

¹ Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

² Other controls include age of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if respondent witnessed violence between her parents

Table 8: How employment affects violence? : Male Backlash

5.3.4 Male Backlash

Sociology literature has suggested any action that acts as a threat to existing patriarchal norms within the household may face backlash, particularly from the male members of the household Macmillan and Gartner (1999). Rege (1996) views woman's employment as a movement away from the gendered roles ascribed by patriarchal society that is reinforced by the use of violence in upper caste societies.

To model Male Backlash we control for specific variables such as, *Earns more than husband*, *Is more educated than husband*, *Degree in which husband justifies violence*, *Justifies violence if wife is unfaithful*, *Justifies violence if wife is disrespectful*, *Husband witnessed violence between parents*. Here the relative educational and employment level between the spouses and the husband's attitude towards violence tries to capture any form of backlash that they wife may experience.

In Table 8, similar to results seen in the previous channels, the coefficient of *Earns more than Husband* is positive and significant at 1 percent level. This implies that employed women earning more than their husbands are more likely to experience spousal violence as opposed to those earning less than or equal to their husband, a strong evidence for the presence of male backlash. The coefficient of woman's relative education level seems to have a negative effect on spousal violence for both employed and unemployed women. The other variables about justification of violence have similar coefficient values for both groups of women, with no economically significant differences between them.

In Appendix Table B4 when this model was run across different wealth level categories, we see that the coefficient of the variable *Degree in which husband justifies violence* is significant across all wealth level categories for both the groups. Between the groups, we see higher coefficient values for employed women than unemployed women for every wealth level category, this difference holds even when the dependent variable is different forms of violence except sexual violence as shown in Appendix Table C4. While the variable *Is more educated than the husband* is more protective against less severe abuse for employed women than their unemployed counterparts, the opposite holds for severe abuse and emotional abuse. Owing to statistical insignificance we can't make such a comparison of sexual abuse.

Table 9: Male Backlash across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Earns more than Husband	0.042* (0.024)	0.046* (0.024)	0.061** (0.024)	0.033 (0.026)	0.002 (0.025)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Is more educated than husband	-0.000 (0.001)	0.000 (0.001)	-0.002 (0.001)	-0.003** (0.001)	-0.003 (0.003)	0.000 (0.001)	-0.002* (0.001)	-0.001 (0.001)	-0.003** (0.001)	-0.003** (0.001)
Degree in which husband justifies violence	0.026** (0.007)	0.023** (0.007)	0.025** (0.008)	0.020** (0.010)	0.040** (0.012)	0.013** (0.006)	0.013** (0.006)	0.020** (0.006)	0.016** (0.005)	0.016** (0.006)
Justifies violence if wife is unfaithful	-0.012 (0.023)	-0.018 (0.023)	0.046* (0.024)	0.030 (0.028)	0.050 (0.032)	0.025 (0.020)	0.026 (0.018)	-0.018 (0.017)	0.017 (0.016)	0.033** (0.017)
Justifies violence if wife is disrespectful	0.006 (0.022)	0.035 (0.022)	0.017 (0.022)	0.022 (0.026)	-0.020 (0.028)	0.003 (0.019)	0.000 (0.017)	0.030* (0.016)	0.007 (0.015)	0.024* (0.015)
Husband witnessed violence between parents	0.002 (0.004)	-0.002 (0.004)	-0.003 (0.005)	0.004 (0.006)	-0.002 (0.006)	-0.005 (0.004)	-0.001 (0.003)	0.000 (0.003)	0.003 (0.003)	0.005 (0.003)
<i>N</i>	3830	3756	3189	2451	1774	4929	5786	6255	6640	6773

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include belonging to privileged caste, being Hindu, being primarily related to husband, husband drinking alcohol, and if husband or wife witnessed violence between their parents

	Employed	Unemployed
	Violence	Violence
Earns more than Husband	0.037*** (0.011)	0.000 (.)
Is more educated than husband	-0.001** (0.001)	-0.001*** (0.000)
Degree in which she justifies violence	0.024*** (0.003)	0.027*** (0.002)
Justifies violence if she is unfaithful	0.095*** (0.010)	0.063*** (0.007)
Justifies violence if she is disrespectful	-0.002 (0.011)	-0.001 (0.008)
Is afraid of her spouse sometimes	-0.215*** (0.011)	-0.220*** (0.007)
Has witnessed violence between parents	0.018*** (0.002)	0.020*** (0.002)
<i>N</i>	15000	30383

¹ Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

² Other controls include age of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband witnessed violence between her parents

Table 10: How employment affects violence? : Female Guilt

5.3.5 Female Guilt

Discussed by Dhanaraj and Mahambare (2021) in their paper, the female guilt channel argues that employed women, perceive themselves to be moving away from their traditional roles of care taking and feel guilty about it. The authors argue that this guilt makes them more likely to accept any retaliation through spousal violence.

To see if being employed makes women feel guilty that they normalize spousal violence, we used a model controlling for the variables, *Earns more than Husband*, *Is more educated than husband*, *Degree in which she justifies violence*, *Justifies violence if she is unfaithful*, *justifies violence if she is disrespectful* and *Is afraid of her spouse sometimes*.

Similar to what we observed in Table 8 we see a negative coefficient value for *Is more educated than husband* and its of a greater magnitude for women who are employed in this channel. While other variables that capture attitudes towards violence are have similar results between the two groups, it is particularly interesting to see the variable *Justifies violence if she is unfaithful* to have a higher coefficient value in women who are employed. This can be an evidence of guilt faced by women and their normalization of spousal violence against them. The difference in magnitude between the

two groups is economically significant to understand the perception of women with regard to their employed status. It is interesting to see that *Is afraid of spouse sometimes* to have a negative coefficient. A possible interpretation of this that having persistent fear of the husband reaffirms the gendered norms of male dominance, therefore acts as a protective factor against spousal violence.

In Appendix Table B5, when this model was run across different wealth level categories, the coefficient of the variables *Degree in which husband justifies violence*, *Justifies violence if she is unfaithful* and *Is afraid of spouse sometimes* were found to be significant for almost all wealth level categories for both the groups. One of the important results, is that women who are employed have higher coefficient values for the variable *Justifies violence if she is unfaithful* than those who are unemployed across all wealth level categories, reflecting the presence of a 'female guilt', that takes higher values in lower wealth level categories for both groups. In Appendix Table C5 when the dependent variable is changed to different forms of violence, we see similar results for the variables discussed above.

6 Conclusion

In this paper, after modelling different channels through which woman's employment may change the likelihood of spousal violence, we find that employment overall increases woman's likelihood of experiencing spousal violence, with characteristics of employment determining the magnitude. This positive correlation is similar to the results found in Jeyaseelan et al. (2007), Krishnan et al. (2010), Roychowdhury and Dhamija (2021), and Sarma (2019). Unlike Chin (2012) we were unable to provide much evidence for exposure reduction using the available variables in this round of the survey. We find the prevalence of a backlash effect, female guilt as studied by Dhanaraj and Mahambare (2021) and the role of education in decreasing spousal violence.

We see owning an asset makes employment more of a risk factor for employed women. When different forms of violence were investigated, we found varying coefficient values of variables and their significance among them, while some of them were intuitive, some raise further questions. Though the research doesn't offer any casual evidence on how the different channels operate, it persuades the need for economic policy to be cognizant of possible socio-cultural feed backs that may end up having a counterproductive impact for woman, in this case, by increasing their likelihood to spousal violence when they are employed. Especially when employed women earn more than their

Table 11: Male Backlash across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Earns more than Husband	0.045* (0.023)	0.053** (0.024)	0.054** (0.024)	0.042* (0.026)	0.002 (0.025)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Is more educated than husband	-0.000 (0.001)	0.001 (0.001)	-0.001 (0.001)	-0.003** (0.001)	-0.002 (0.002)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002** (0.001)	-0.002** (0.001)
Degree in which she justifies violence	0.016** (0.006)	0.021** (0.006)	0.026** (0.006)	0.033** (0.007)	0.015* (0.009)	0.019** (0.005)	0.028** (0.005)	0.025** (0.005)	0.030** (0.004)	0.019** (0.005)
Justifies violence if she is unfaithful	0.091** (0.020)	0.094** (0.019)	0.090** (0.021)	0.075** (0.023)	0.089** (0.026)	0.069** (0.017)	0.059** (0.016)	0.065** (0.015)	0.057** (0.014)	0.045** (0.013)
Justifies violence if she is disrespectful	-0.007 (0.022)	-0.012 (0.021)	-0.002 (0.022)	0.002 (0.026)	0.034 (0.030)	-0.006 (0.019)	-0.009 (0.018)	0.009 (0.017)	-0.027* (0.016)	0.024 (0.016)
Is afraid of her spouse sometimes	-0.185** (0.019)	-0.202** (0.020)	-0.197** (0.024)	-0.216** (0.030)	-0.229** (0.034)	-0.218** (0.017)	-0.250** (0.016)	-0.221** (0.017)	-0.178** (0.016)	-0.168** (0.016)
gen_violence	0.018** (0.004)	0.015** (0.004)	0.011** (0.005)	0.016** (0.006)	0.042** (0.007)	0.015** (0.004)	0.015** (0.003)	0.015** (0.003)	0.022** (0.003)	0.028** (0.003)
N	3830	3756	3189	2451	1774	4929	5786	6255	6640	6773

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband witnessed violence between his parents

husbands, they are more likely to face violence. This result is similar to those discussed by other papers in the literature that look at the role of targeted employment generation policies such as NREGA and its effect of increasing spousal violence. (Kjelsrud & Sjurgard, 2020; Sarma, 2019).

6.1 Discussion and Limitations

This paper adds to the existing empirical work using the NFHS-4 data set by exploring how characteristics of employment changes different forms of violence, something that is worth exploring further. The limitations of this study include but are not restricted to endogeneity and omitted variable bias. While Chin (2012), Dhanaraj and Mahambare (2021), and Sarma (2019) account for the endogenous relationship between spousal violence and employment through the use of instruments, a causal interpretation is beyond the scope of this paper. Roychowdhury and Dhamija (2021) reason their choice of education over employment by arguing that education decisions for woman are more likely to happen before facing spousal violence, therefore it is not as endogenously related to spousal violence as employment. This research suffers from this limitation of not knowing if the violence experienced was before or after woman started working.

The data set utilised, NFHS-4 doesn't have information on household income or consumption variables, rather a wealth level indexes constructed using PCA. Given India's left skewed income distribution, the wealth index may not be the best representation of the country's income levels. Therefore differences across wealth categories may fall or increase when income data is used instead.

Since this study aims to provide evidence at a national level state wise differences have not been accounted for. Not accounting for regional differences in gender norms is a limitation of this study.

This paper is the first to account for different kinds of violence while investigating for different channels through which employment may affect the likelihood of experiencing spousal violence. Due to which, the paper lacks theoretical backing to support its evidence of changing coefficient values between the forms of violence. This highlights the scope for more research on the prevalence and composition of spousal violence, especially in studying state wise or cross country differences.

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7 Appendix

	Poorest	Poorer	Middle	Richer	Richest
	<i>Violence</i>	<i>Violence</i>	<i>Violence</i>	<i>Violence</i>	<i>Violence</i>
Woman employed	0.059*** (0.011)	0.077*** (0.010)	0.074*** (0.010)	0.068*** (0.010)	0.019* (0.010)
Age	-0.001 (0.002)	0.000 (0.001)	0.002* (0.001)	0.004*** (0.001)	0.003** (0.001)
Husband's age	0.001 (0.002)	0.000 (0.001)	-0.003** (0.001)	-0.004*** (0.001)	-0.003** (0.001)
Being a privileged caste	0.020* (0.010)	0.037*** (0.010)	0.049*** (0.010)	0.008 (0.010)	0.023** (0.011)
Being Hindu	0.051*** (0.014)	0.044*** (0.012)	0.046*** (0.011)	0.050*** (0.011)	0.029*** (0.010)
Educational level	-0.008*** (0.002)	-0.006*** (0.001)	-0.008*** (0.001)	-0.010*** (0.001)	-0.010*** (0.001)
Husband's educational level	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002** (0.001)
Husband drinks alcohol	0.264*** (0.010)	0.247*** (0.010)	0.234*** (0.010)	0.209*** (0.010)	0.161*** (0.010)
Witnessed violence between her parents	0.017*** (0.003)	0.015*** (0.003)	0.012*** (0.003)	0.021*** (0.003)	0.031*** (0.003)
Husband witnessed violence between his parents	-0.001 (0.003)	-0.001 (0.003)	0.000 (0.003)	0.004 (0.003)	0.004 (0.003)
Related to husband prior to marriage	0.065*** (0.018)	0.036** (0.014)	0.028** (0.013)	0.051*** (0.013)	0.060*** (0.013)
Urban place of residence	0.021 (0.023)	0.054*** (0.015)	0.046*** (0.011)	0.043*** (0.009)	0.013 (0.009)
Intercept	0.238*** (0.028)	0.184*** (0.027)	0.210*** (0.027)	0.216*** (0.028)	0.218*** (0.027)
<i>N</i>	8759	9542	9444	9091	8547

Standard errors in parentheses

* $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

Table A1: Baseline regression model by controlling for demographics and other relevant variables across different wealth categories : NFHS-4

Table B1: Bargaining Power across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Earns more than husband	0.047** (0.024)	0.055** (0.024)	0.067** (0.024)	0.039 (0.026)	0.005 (0.025)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Decisions taken only by Husband	-0.002 (0.005)	0.011** (0.005)	0.020** (0.006)	0.016** (0.007)	0.015* (0.008)	0.015*** (0.004)	0.010*** (0.004)	0.011*** (0.004)	0.012*** (0.004)	0.012*** (0.004)
Number of Children	0.021*** (0.005)	0.025*** (0.006)	0.030*** (0.007)	0.027*** (0.008)	0.065*** (0.009)	0.017*** (0.004)	0.023*** (0.004)	0.030*** (0.004)	0.040*** (0.004)	0.025*** (0.005)
Is more educated than husband	-0.000 (0.001)	0.001 (0.001)	-0.001 (0.001)	-0.002 (0.001)	-0.000 (0.003)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002* (0.001)	-0.002** (0.001)
Difference in age	-0.003 (0.002)	-0.003 (0.002)	-0.002 (0.002)	0.005** (0.002)	0.004 (0.003)	0.001 (0.002)	0.001 (0.002)	0.005*** (0.001)	0.003** (0.001)	0.002* (0.001)
<i>N</i>	3830	3756	3189	2451	1774	4929	5786	6255	6640	6773

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol, and if husband or wife witnessed violence between their parents

Table B2: Exposure Reduction across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Works for a family member/ Self employed	-0.025 (0.030)	-0.025 (0.027)	-0.030 (0.028)	0.001 (0.029)	0.017 (0.022)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Been away from home for six months or more	0.045 (0.028)	0.021 (0.029)	0.082** (0.033)	0.071** (0.034)	0.079** (0.032)	0.032 (0.029)	0.061** (0.026)	0.047** (0.023)	0.029 (0.020)	0.055*** (0.019)
Husband been away from home for six months or more	0.048** (0.019)	0.043** (0.021)	0.030 (0.024)	0.028 (0.027)	0.044 (0.027)	0.042** (0.017)	0.037** (0.016)	0.035** (0.016)	0.038*** (0.015)	0.024* (0.014)
<i>N</i>	3830	3756	3189	2451	1774	4929	5786	6255	6640	6772

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, education level of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table B3: Agency across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Earns strictly in Cash	-0.007 (0.016)	-0.001 (0.017)	0.045** (0.018)	0.021 (0.021)	-0.018 (0.024)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Owens a Bank A/c	-0.006 (0.017)	0.034** (0.016)	0.006 (0.018)	-0.010 (0.021)	0.024 (0.026)	-0.019 (0.015)	0.003 (0.013)	-0.017 (0.012)	-0.008 (0.011)	0.000 (0.011)
Owens a mobile phone	0.048** (0.024)	-0.018 (0.019)	-0.026 (0.018)	0.019 (0.022)	-0.074** (0.030)	0.012 (0.018)	-0.017 (0.013)	-0.046** (0.012)	-0.028** (0.011)	-0.029** (0.012)
Has money for herself	0.001 (0.017)	0.011 (0.016)	-0.006 (0.017)	-0.002 (0.019)	0.021 (0.022)	0.019 (0.016)	0.040** (0.014)	0.011 (0.012)	-0.018* (0.011)	-0.001 (0.010)
Owens an asset	0.018 (0.026)	0.048* (0.025)	0.043 (0.026)	0.062** (0.028)	0.056** (0.027)	-0.018 (0.021)	0.030 (0.020)	0.028 (0.019)	0.047** (0.017)	0.026* (0.016)
Is allowed to leave home by herself	-0.012* (0.006)	-0.003 (0.006)	-0.012* (0.007)	-0.034** (0.008)	-0.013* (0.008)	0.006 (0.005)	-0.016** (0.005)	-0.018** (0.004)	0.001 (0.004)	-0.017*** (0.004)
<i>N</i>	3830	3756	3189	2451	1774	4929	5786	6255	6640	6773

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, education level of husband and wife, belonging to privileged caste, being Hindu, being primarily related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table B4: Male Backlash across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Earns more than Husband	0.042* (0.024)	0.046* (0.024)	0.061** (0.024)	0.033 (0.026)	0.002 (0.025)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Is more educated than husband	-0.000 (0.001)	0.000 (0.001)	-0.002 (0.001)	-0.003** (0.001)	-0.003 (0.003)	0.000 (0.001)	-0.002* (0.001)	-0.001 (0.001)	-0.003** (0.001)	-0.003** (0.001)
Degree in which husband justifies violence	0.026** (0.007)	0.023** (0.007)	0.025** (0.008)	0.020** (0.010)	0.040** (0.012)	0.013** (0.006)	0.013** (0.006)	0.020** (0.006)	0.016** (0.005)	0.016** (0.006)
Justifies violence if wife is unfaithful	-0.012 (0.023)	-0.018 (0.023)	0.046* (0.024)	0.030 (0.028)	0.050 (0.032)	0.025 (0.020)	0.026 (0.018)	-0.018 (0.017)	0.017 (0.016)	0.033** (0.017)
Justifies violence if wife is disrespectful	0.006 (0.022)	0.035 (0.022)	0.017 (0.022)	0.022 (0.026)	-0.020 (0.028)	0.003 (0.019)	0.000 (0.017)	0.030* (0.016)	0.007 (0.015)	0.024* (0.015)
Husband witnessed violence between parents	0.002 (0.004)	-0.002 (0.004)	-0.003 (0.005)	0.004 (0.006)	-0.002 (0.006)	-0.005 (0.004)	-0.001 (0.003)	0.000 (0.003)	0.003 (0.003)	0.005 (0.003)
<i>N</i>	3830	3756	3189	2451	1774	4929	5786	6255	6640	6773

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include belonging to privileged caste, being Hindu, being primarily related to husband, husband drinking alcohol, and if husband or wife witnessed violence between their parents

Table B5: Male Backlash across employment groups and wealth levels

	Employed					Unemployed				
	Poorest	Poorer	Middle	Richer	Richest	Poorest	Poorer	Middle	Richer	Richest
Earns more than Husband	0.045* (0.023)	0.053** (0.024)	0.054** (0.024)	0.042* (0.026)	0.002 (0.025)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Is more educated than husband	-0.000 (0.001)	0.001 (0.001)	-0.001 (0.001)	-0.003** (0.001)	-0.002 (0.002)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.002** (0.001)	-0.002** (0.001)
Degree in which she justifies violence	0.016*** (0.006)	0.021*** (0.006)	0.026*** (0.006)	0.033*** (0.007)	0.015* (0.009)	0.019*** (0.005)	0.028*** (0.005)	0.025*** (0.005)	0.030*** (0.004)	0.019*** (0.005)
Justifies violence if she is unfaithful	0.091*** (0.020)	0.094*** (0.019)	0.090*** (0.021)	0.075*** (0.023)	0.089*** (0.026)	0.069*** (0.017)	0.059*** (0.016)	0.065*** (0.015)	0.057*** (0.014)	0.045*** (0.013)
Justifies violence if she is disrespectful	-0.007 (0.022)	-0.012 (0.021)	-0.002 (0.022)	0.002 (0.026)	0.034 (0.030)	-0.006 (0.019)	-0.009 (0.018)	0.009 (0.017)	-0.027* (0.016)	0.024 (0.016)
Is afraid of her spouse sometimes	-0.185*** (0.019)	-0.202*** (0.020)	-0.197*** (0.024)	-0.216*** (0.030)	-0.229*** (0.034)	-0.218*** (0.017)	-0.250*** (0.016)	-0.221*** (0.017)	-0.178*** (0.016)	-0.168*** (0.016)
gen_violence	0.018*** (0.004)	0.015*** (0.004)	0.011** (0.005)	0.016*** (0.006)	0.042*** (0.007)	0.015*** (0.004)	0.015*** (0.003)	0.015*** (0.003)	0.022*** (0.003)	0.028*** (0.003)
N	3830	3756	3189	2451	1774	4929	5786	6255	6640	6773

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband witnessed violence between his parents

Table C1: Bargaining Power across employment groups and types of violence

	Less physical violence		Severe physical violence		Sexual violence		Emotional violence	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Earns more than husband	0.040*** (0.011)	0.000 (.)	0.029*** (0.007)	0.000 (.)	0.012* (0.007)	0.000 (.)	0.037*** (0.009)	0.000 (.)
Decisions taken only by Husband	0.012*** (0.003)	0.013*** (0.002)	0.008*** (0.002)	0.008*** (0.001)	0.008*** (0.002)	0.007*** (0.001)	0.011*** (0.002)	0.011*** (0.001)
Number of Children	0.035*** (0.003)	0.035*** (0.002)	0.015*** (0.002)	0.013*** (0.001)	0.008*** (0.002)	0.008*** (0.001)	0.013*** (0.002)	0.012*** (0.001)
Is more educated than husband	-0.001** (0.001)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	0.001 (0.000)	-0.000** (0.000)	0.000 (0.000)	-0.001*** (0.000)
Difference in age	0.000 (0.001)	0.004*** (0.001)	-0.001 (0.001)	0.001*** (0.000)	-0.001 (0.001)	0.001 (0.000)	-0.002** (0.001)	0.000 (0.000)
<i>N</i>	15000	30383	15000	30383	15000	30383	15000	30383

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table C2: Exposure Reduction across employment groups and types of violence

	Less physical violence		Severe physical violence		Sexual violence		Emotional violence	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Works for a family member/ Self employed	-0.008 (0.012)	0.000 (.)	-0.000 (0.008)	0.000 (.)	0.002 (0.007)	0.000 (.)	0.007 (0.009)	0.000 (.)
Been away from home for six months or more	0.039*** (0.014)	0.024** (0.010)	0.051*** (0.009)	0.023*** (0.006)	0.063*** (0.008)	0.026*** (0.005)	0.066*** (0.011)	0.046*** (0.007)
Husband been away from home for six months or more	0.040*** (0.010)	0.035*** (0.007)	0.019*** (0.007)	0.008** (0.004)	0.019*** (0.006)	0.001 (0.003)	0.020** (0.008)	0.015*** (0.005)
<i>N</i>	15000	30382	15000	30382	15000	30382	15000	30382

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, education level of husband and wife, belonging to privileged caste, being Hindu, being priority related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table C3: Agency across employment groups and types of violence

	Less physical violence		Severe physical violence		Sexual violence		Emotional violence	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Earns strictly in Cash	0.016** (0.008)	0.000 (.)	0.024*** (0.005)	0.000 (.)	-0.006 (0.005)	0.000 (.)	0.001 (0.006)	0.000 (.)
Owens a Bank A/c	0.007 (0.008)	-0.006 (0.005)	0.011** (0.005)	-0.003 (0.003)	-0.000 (0.005)	-0.015*** (0.003)	0.007 (0.006)	-0.007* (0.004)
Owens a mobile phone	-0.041*** (0.009)	-0.037*** (0.005)	-0.016** (0.006)	-0.014*** (0.003)	0.003 (0.006)	-0.008*** (0.003)	0.002 (0.007)	-0.009*** (0.004)
Has money for herself	-0.000 (0.008)	0.007 (0.005)	-0.005 (0.005)	-0.004 (0.003)	0.006 (0.005)	0.000 (0.003)	-0.005 (0.006)	-0.005 (0.004)
Owens an asset	0.033*** (0.012)	0.017** (0.008)	0.040*** (0.008)	0.018*** (0.004)	0.021*** (0.007)	0.009** (0.004)	0.041*** (0.009)	0.013** (0.006)
Is allowed to leave home by herself	-0.009*** (0.003)	-0.007*** (0.002)	-0.003 (0.002)	-0.003*** (0.001)	-0.009*** (0.002)	-0.004*** (0.001)	-0.009*** (0.002)	-0.006*** (0.001)
<i>N</i>	15000	30383	15000	30383	15000	30383	15000	30383

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, education level of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband or wife witnessed violence between their parents

Table C4: Male Backlash across employment groups and types of violence

	Less physical violence		Severe physical violence		Sexual violence		Emotional violence	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Earns more than Husband	0.031*** (0.011)	0.000 (.)	0.025*** (0.007)	0.000 (.)	0.011 (0.007)	0.000 (.)	0.033*** (0.009)	0.000 (.)
Is more educated than husband	-0.002*** (0.001)	-0.002*** (0.000)	-0.000 (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)
Degree in which husband justifies violence	0.028*** (0.004)	0.020*** (0.002)	0.018*** (0.002)	0.010*** (0.001)	0.008*** (0.002)	0.011*** (0.001)	0.014*** (0.003)	0.008*** (0.002)
Justifies violence if wife is unfaithful	0.011 (0.011)	0.019*** (0.008)	0.012* (0.007)	0.011** (0.004)	-0.003 (0.007)	0.004 (0.004)	0.006 (0.009)	0.011** (0.005)
Justifies violence if wife is disrespectful	0.008 (0.010)	0.006 (0.007)	-0.008 (0.007)	-0.005 (0.004)	0.003 (0.006)	-0.007** (0.004)	0.003 (0.008)	0.004 (0.005)
Husband witnessed violence between parents	0.002 (0.002)	0.002 (0.001)	-0.003* (0.001)	-0.000 (0.001)	-0.002 (0.001)	-0.002** (0.001)	-0.000 (0.002)	-0.001 (0.001)
<i>N</i>	15000	30383	15000	30383	15000	30383	15000	30383

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, belonging to privileged caste, being Hindu, being primarily related to husband, husband drinking alcohol and if respondent witnessed violence between her parents

Table C5: Female Guilt across employment groups and types of violence

	Less physical violence		Severe physical violence		Sexual violence		Emotional violence	
	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Earns more than Husband	0.035*** (0.011)	0.000 (.)	0.027*** (0.007)	0.000 (.)	0.011* (0.007)	0.000 (.)	0.035*** (0.008)	0.000 (.)
Is more educated than husband	-0.002*** (0.001)	-0.001*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	0.000 (0.000)	-0.000** (0.000)	0.001 (0.000)	-0.001** (0.000)
Degree in which she justifies violence	0.020*** (0.003)	0.023*** (0.002)	0.015*** (0.002)	0.012*** (0.001)	0.012*** (0.002)	0.007*** (0.001)	0.016*** (0.002)	0.013*** (0.001)
Justifies violence if she is unfaithful	0.093*** (0.009)	0.068*** (0.006)	0.015** (0.006)	0.014*** (0.004)	0.010* (0.006)	0.007** (0.003)	0.004 (0.007)	0.001 (0.005)
Justifies violence if she is disrespectful	-0.008 (0.010)	-0.000 (0.007)	0.003 (0.007)	-0.004 (0.004)	0.005 (0.006)	0.007* (0.004)	0.013 (0.008)	0.017*** (0.005)
Is afraid of her spouse sometimes	-0.211*** (0.010)	-0.209*** (0.007)	-0.145*** (0.007)	-0.122*** (0.004)	-0.116*** (0.006)	-0.093*** (0.004)	-0.176*** (0.008)	-0.132*** (0.005)
Has witnessed violence between parents	0.018** (0.002)	0.019*** (0.001)	0.006*** (0.001)	0.002*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.007** (0.002)	0.005*** (0.001)
<i>N</i>	15000	30383	15000	30383	15000	30383	15000	30383

¹ Standard errors in parentheses

² * $p < 0.01$, ** $p < 0.05$, *** $p < 0.001$

³ Other controls include age of husband and wife, belonging to privileged caste, being Hindu, being priorly related to husband, husband drinking alcohol and if husband witnessed violence between his parents