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# Final Paper

***Trends In Spousal Violence and Female Labour Force Participation***

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## **INTRODUCTION**

Female labour force participation is considered an affirmative sign of holistic socioeconomic progress for a nation. This is reflexive of progressive cultural, religious and ethnic attitudes towards women, especially in developing countries. An increased female presence in a country's labour force encourages increased participation of women in household decision-making processes, education for their own daughters, and further establishes their financial independence (Appiah 2). However, pessimistic trends prevalent in developing countries such as domestic violence - specifically spousal violence - may falter this expansion of female employment. Violence inflicted by an intimate partner is said to be one of the most common forms of gender-based violence (Vyas 577). Spousal violence may stem from an array of social, cultural and psychological foundations in a patriarchal society - pathological traits linked to masculine identities, excessive alcoholism, power dynamics in the household, institutional practices, the experience of abuse or violence witnessed within the husband's and wife's familial background in their childhoods (Dalal). Based on a 2018 report released by the Ministry of Health and Family Welfare, India, it has been found that one out of every three women in India, since the age of 15, has faced domestic violence of various forms in the country - physical, emotional, verbal, sexual, and economic violence (NFHS-4, 564-567).

This paper is motivated to explore the dynamics between female labour force participation and spousal violence against women in India mainly focusing on three types of violence - physical, sexual and emotional. The primary hypothesis forming the pivot of this work is: "***What trends does female labour force participation induce in spousal violence against women in India?***".

Apart from physical violence, this paper endeavours to investigate sexual and emotional avenues within domestic violence since most often, due to the social stigma attached to these experiences, the related cases go

unreported - which leads to underreporting of the severity of these particular streams of atrocities against women. Thereby it is felt that further contribution is required to supplement discourse on the subject at hand.

Against this background, our results from all three models depict a negative correlation between labour force participation and spousal violence. These results, although (statistically) insignificant due to limitations addressed in the paper, attest to our theoretical assumption that women's empowerment through their participation in the labour force translates into lesser experiences of spousal violence. The dataset employed is the NFHS 4 Data (2015-16) through the DHS program which includes women as the key observation from the age group of 15-49. It is observed that only 12% of respondents of the entire sample of ~ 7 lakhs are part of the female labour force.

## **CONCEPTUAL FRAMEWORK**

The paper aims to explore the trends in the relationship between three kinds of spousal violence as the outcome variable - emotional, physical and sexual violence - and the primary explanatory variable being female labour force participation in three separate regression models. Apart from analyzing spousal violence from three lenses, this paper aims to inspect, amongst other key control factors, pertinent behavioural aspects of the husband in terms of their alcoholic tendencies and control issues ranging from jealousy, not trusting the wife with money, limiting her engagement with friends and family, insisting on knowing her whereabouts and suspicion about infidelity. In all three models gauging the primary correlation between emotional, physical and sexual violence against female labour force participation, we observe that with greater female employment, the likelihood (or incidence) with which spousal violence is inflicted on them actually *decreases*.

A number of other socio-cultural and economic factors play out simultaneously to maintain the symbolism of increased female labour force participation lowering the incidence or likelihood of spousal violence against

women. Both the husband's and wife's employment status decide the dynamics of cultural, psychological and economic powers of both partners within the household, whilst accounting for the complex role of class and gender relations. In a patriarchal establishment, the essence of the masculine identity associated with being the sole breadwinner of the household is intertwined with their self-esteem and mental health. Thereby, female employment status crucially determines the paradigm in which spousal violence is perpetrated circumstantially and whether this status would threaten the power dynamics and the masculine identity in the household (Macmillan and Gartner 948-949).

To put things into perspective, from all three models dealing with emotional physical and sexual violence, a working woman experiences (or is less likely to experience) said intimate violence, when their partner is employed. This observation associated with economic empowerment is bolstered by higher education indicating more awareness against wife abuse along with economic and psychological resources to voice their protest via platforms against forced acts of sex (Dala). Reversely, the woman's endurance to spousal violence may be higher if their childhood household was such where their fathers would inflict abuse onto their mothers. This eventually gives way to a sociocultural gender norm which is associated with the *fate* of being a woman - "surrender attitude,". Thereby, the discourse around protesting using platforms collapses, since it is highly likely that the woman, having lost ground of self-esteem, does not exhibit resistance to spousal violence (Paul).

## DATA

This study uses the NFHS-2015 women's individual recode, cross-sectional dataset which contains extensive data on every woman between the ages 15 and 49. NFHS extracted through the DHS program is nationally representative and follows a systematic, multi-stage stratified sampling design, covering all states and union

territories in India. The 2016 survey is representative at both the state and district levels. This data set was chosen for the study as it entails all socio-economic controls and descriptive statistics on emotional, sexual and physical violence inflicted by the spouse on the woman. These variables will help us determine the association of violence being experienced by women in any form with their status in the labour force.

### **Measures:**

**Main Explanatory Variable:** The main explanatory variable employed for this study is the '*female labour force participation*'. The NFHS question categorized the working status of females as "1" for if the woman was participating in the work/labour force and "0" if otherwise. Finally, the dummy variable refers to the then status of their work (2015-16). Of about 501,610 married women, about 86,251 of them were then working. The following table gives a description of the kinds of occupation these women were then involved in.

woman's occupation	Freq.	Percent	Cum.
not currently working	60,307	69.92	69.92
professional, technical, or managerial	2,151	2.49	72.41
clerical worker	280	0.32	72.74
sales worker	1,286	1.49	74.23
agricultural	14,407	16.70	90.93
household, domestic, and services	2,762	3.20	94.14
skilled and unskilled manual	5,058	5.86	100.00
Total	86,251	100.00	

**Outcome Variables For All Three Models:** The outcome variables for all the three models represent forms of violence inflicted on the women by their spouse. The NFHS employs various survey questions to record sexual, physical and emotional violence, answers to which are given as a "yes" or a "no".

For our study we have curated separate variables from all three categories of violence as per the availability of the data. For instance, data collected on physical violence is well categorized and expansive. However, variables and data on sexual/emotional violence is limited.

Following tables summarize the different outcome variables for all 3 models.

**Table 2:** Model 1-emoviol is a dummy, indicating whether or not the woman faced any emotional violence (spousal) in the last 12 months from the actual date of survey.

ever any emotional violence	Freq.	Percent	Cum.
No	494,014	98.49	98.49
Yes	7,596	1.51	100.00
Total	501,610	100.00	

**Table 3:** Model- 2-physiol is a category variable which indicates whether or not the woman faced any physical violence (spousal) in the last 12 months from the actual date of survey. The assault here has been categorized into various intensities/actions of violence.

ever faced physical abuse	Freq.	Percent	Cum.
no physical assault	494,561	98.59	98.59
pushed/shook/hit	3,315	0.66	99.26
kicked/dragged	2,892	0.58	99.83
attempt to strangle/burn	486	0.10	99.93
attacks with knife/gun	356	0.07	100.00
Total	501,610	100.00	

**Table 4:** Model 3-sexviol is a dummy, indicating whether or not the woman faced any sexual violence (spousal) in the last 12 months from the actual date of survey.

ever face sexual abuse	Freq.	Percent	Cum.
no sexual abuse	58,711	93.61	93.61
faced sexual abuse/assault	4,005	6.39	100.00
Total	62,716	100.00	

**Key Controls:** This study uses socio-economic control variables such as the wealth index of the household, location of the household - urban/rural, employment status of the mother, caste category and religion of the family, number of years of education received by the mother, woman's age, sex of the head of the household, household district, access to media-internet, phone, total children born to her if any, drinking habits of the spouse, spouse's employment status and control issues ever displayed by the spouse on the woman- jealousy, stopping the woman from going out etc.

Further, Invalid or inconsistent answers in the data were removed from the sample. Refer to the following table for a detailed description of each variable used in the three models.

**Table 5 : The Descriptive Statistics of Each Variable used in the model.**

Variable	Description	Code
flfp (Predictor)	Female labour force participation	=0 for No, =1 for Yes
urban	Urbanization level of where the household is located	=1, if Urban =2, if Rural
age	Women's age in years	Ranges from 15 to 49
religion	Variable for religion of the household	= 1 to 8 for Different religions = 0 if No religion
caste	Caste category of the household where the woman currently lives	=1 "SC", =2 "ST", =3 "OBC" =0 "General"

hheadsex	Sex of the head of the household	=1 if Male =2 if Female
control_issues	number of control issues exhibited by the husband	Range from 0 to 5 and includes issues like jealousy, envy, distrust with money, insistence on knowing the woman's location, accusation of cheating, limitation on contact with friends and family.
partner_job	Spouse's status of employment	=0 for Unemployed, =1 for Employed
internet	Household has access to internet	=0 for No, =1 for Yes
wkcurrjob	Category of woman's current occupation	= 0 if not working, =1 to 6 for type of work (skilled/unskilled, managerial, etc.)
wkearnrtype	type of earnings for   woman's work	=0 if not paid, =1 if paid in cash =2 if paid in kind and cash =3 if paid in kind only
Wealth_Index	Wealth quintile that the household lies in	=1 for Poorest, upto =5 for Richest
WomenEdu_in_years	Women's education in single years	Ranges from 0 to 20
say_on_earnings	final say on spending of woman's earnings	=1 if the woman alone has a say, =2 if both woman and husband/partner =3 if only husband/partner =4 someone else

mobphone	Women's access to a cell phone in the household	=0 for No, =1 for Yes
districts	Indian districts, 2015	Range from 1 to upto 640
freq_alcohol	frequency- partner gets drunk	=0 never =1 sometimes =2 often

## EMPIRICAL STRATEGY

This study primarily investigates the correlation between women's participation in the labour force and to what extent that affects their probability of facing violence (emotional, physical or sexual) in any forms from their spouse. We curated three different Dependent variables categorizing different forms of violence based on various survey questions asked to women who are married or are living with a partner.

Further, to control for recall bias, the respondents were only asked to recall information based on violence from the last 12 months from the actual date of the survey.

The paper also aspires to capture trends of female labour force participation and violence faced across different age groups pan India, for which the study controls for women's age and districts of their household. Time variants like the economic status, health, and wealth index, that can have a significant impact on the woman's probability of facing spousal violence have also been controlled for. Further, there is a strong association between physical and sexual violence and the man's alcohol consumption (Paul, 2014) . For which, the frequency of alcohol consumption of the partner has also been accounted for.

Macro-system factors are a diverse set of cultural values and beliefs that infuse the other three layers of social ecology. These factors influence aspects and structures lower down in the system. Male supremacy as explained by Heise (1998) is one of the most prominent macro-level factors that may influence or control the

organisation of power in community institutions; at the same time, they exercise control over the distribution of decision-making authority in intimate relationships. Against this background, we have included variables that take into account women's or partners' say on final decisions of the household, spending of income earned by women, etc.

Finally, the inclusion of urbanization level is important as a control variable as it often reflects the poverty level and social status of the Indian population. Around 362,116 women in the data set live in rural areas which are about 72% of the sample set.

Finally, the hypotheses for three models are:

*H1: Labour force participation of women is associated with reduction(increase) in the probability of emotional violence at home against the backdrop of the ecological framework of violence.*

*H2: Labour force participation of women is associated with reduction (increase) in the incidence of physical violence at home against the backdrop of the ecological framework of violence.*

*H3: Labour force participation of women is associated with reduction(increase) in the probability of sexual violence at home against the backdrop of the ecological framework of violence.*

The existing literature, discussed above supports these hypotheses.

## **ANALYTICAL STRATEGY**

The analytical method used in this study is a multiple linear regression framework. The Regression models have been laid down below. Model 1 and Model 3 are linear probability models on account of binary explanatory variables. As for our study, we have considered only those respondents who answered questions related to domestic violence for analysis and are married. Therefore, the working sample size becomes ~ 501,610. The results shown might be skewed owing to a mere 17% participation rate amongst married women. Further, 70% of these working women belong to rural strata of residence. This must be because most

of the women recorded (72.19%) belong to a rural place of residence. Finally, the study includes the usage of vce(robust) command to ensure robustness of the results and commands a significance level of 0.05.

*for household h in district d , year t, we estimated:*

### Model 1

$$\text{emoviol}_{\text{hdt}} = \beta_0 + \beta_1 \text{flfp}_{\text{hdt}} + \beta_2 \text{urban}_{\text{hdt}} + \beta_3 \text{age}_{\text{hdt}} + \beta_4 \text{married}_{\text{hdt}} + \beta_5 \text{hheadsex}_{\text{hdt}} + \beta_6 \text{mobphone}_{\text{hdt}} + \beta_7 \text{internet}_{\text{hdt}} + \beta_8 \text{wkcurrenjob}_{\text{hdt}} + \beta_9 \text{wkearntype}_{\text{hdt}} + \beta_{10} \text{husjob} + \beta_{11} \text{Wealth\_Index}_{\text{hdt}} + \beta_{12} \text{WomenEdu\_in\_years}_{\text{hdt}} + \beta_{13} \text{tvbrig}_{\text{hdt}} + \beta_{14} \text{say\_on\_earnings}_{\text{hdt}} + \beta_{15} \text{control\_issues}_{\text{hdt}} + \beta_{16} \text{districts}_{\text{ht}} + \beta_{17} \text{freq\_alcohol}_{\text{hdt}} + \varepsilon_{\text{hdt}}$$

### Model 2

$$\text{phyviol}_{\text{hdt}} = \gamma_0 + \gamma_1 \text{flfp}_{\text{hdt}} + \gamma_2 \text{urban}_{\text{hdt}} + \gamma_3 \text{age}_{\text{hdt}} + \gamma_4 \text{married}_{\text{hdt}} + \gamma_5 \text{hheadsex}_{\text{hdt}} + \gamma_6 \text{mobphone}_{\text{hdt}} + \gamma_7 \text{internet}_{\text{hdt}} + \gamma_8 \text{wkcurrenjob}_{\text{hdt}} + \gamma_9 \text{wkearntype}_{\text{hdt}} + \gamma_{10} \text{husjob} + \gamma_{11} \text{Wealth\_Index} + \gamma_{12} \text{WomenEdu\_in\_years} + \gamma_{13} \text{tvbrig}_{\text{hdt}} + \gamma_{14} \text{say\_on\_earnings}_{\text{hdt}} + \gamma_{15} \text{control\_issues}_{\text{hdt}} + \gamma_{16} \text{districts}_{\text{ht}} + \gamma_{17} \text{freq\_alcohol}_{\text{hdt}} + \varepsilon_{\text{hdt}}$$

### Model 3

$$\text{sexviol}_{\text{hdt}} = \alpha_0 + \alpha_1 \text{flfp}_{\text{hdt}} + \alpha_2 \text{urban}_{\text{hdt}} + \alpha_3 \text{age}_{\text{hdt}} + \alpha_4 \text{married}_{\text{hdt}} + \alpha_5 \text{hheadsex}_{\text{hdt}} + \alpha_6 \text{mobphone}_{\text{hdt}} + \alpha_7 \text{internet}_{\text{hdt}} + \alpha_8 \text{wkcurrenjob}_{\text{hdt}} + \alpha_9 \text{wkearntype}_{\text{hdt}} + \alpha_{10} \text{husjob}_{\text{hdt}} + \alpha_{11} \text{Wealth\_Index}_{\text{hdt}} + \alpha_{12} \text{WomenEdu\_in\_years}_{\text{hdt}} + \alpha_{13} \text{tvbrig}_{\text{hdt}} + \alpha_{14} \text{say\_on\_earnings}_{\text{hdt}} + \alpha_{15} \text{control\_issues}_{\text{hdt}} + \alpha_{16} \text{districts}_{\text{ht}} + \alpha_{17} \text{freq\_alcohol}_{\text{hdt}} + \varepsilon_{\text{hdt}}$$

## RESULTS

### ***Spousal Violence and Economic Empowerment***

We analyze a negative correlation between all three outcome variables *emotional violence*, *physical violence* and *sexual violence* and primary explanatory variable *female labour force participation*. We observe the statistically significant result of increased female presence in labourforce reducing the likelihood of spousal violence inflicted on working women by **~1.69% points (pp), 2.2% and 1.3pp** for emotional, physical and sexual violence respectively. Although these figures are statistically insignificant, it is important to note that these results are derived only from current records of experiences which are from the *past 12 months from the date of survey*.

Looking at this from an economical perspective, the spousal behaviour is then very likely to continue and for

**overall violence measures**, these percentages will translate into high *economic costs* including absence from labour force participation which eventually can have multiple negative spillover effects on both the economy and general well being of women.

Analyzing different types of jobs, women engaged in skilled and unskilled manual labour experience higher likelihood of spousal (emotional, physical and sexual) violence as opposed to women engaged in professional or managerial positions.

## ***Demographics***

Working women within households in rural locations are **~1.13pp, 1.9%** and **~0.5pp** points *less* likely to have experienced emotional, physical and sexual violence respectively in the past 12 months, relative to urban women. Amongst the religions, Jain women are more likely to face higher incidence of spousal emotional violence by 0.75% points whereas Jewish women are least likely to experience emotional and physical violence by -4.14% points. As for sexual violence, Hindu women are the most likely to face the same by a statistically significant value of **9.4pp** relative to other women of various sects. Women belonging to the caste strata of “Scheduled Castes,” were found to experience a statistically significant result of highest likelihood of spousal (emotional and physical) violence by **~ 1.5% points**. A statistically significant reduction in the likelihood of violence by **0.26 pp** and **0.1 pp** is witnessed with every additional year of education that a woman pursues in model 1, and 3 respectively.

## ***Household Socioeconomic Factors***

Working women from higher economic strata have statistically significantly reduced likelihood of suffering from spousal emotional violence by **1.2% points**. As for trends in sexual violence, the likelihood of experiencing the same reduces by **~0.6 pp** as opposed to when women are from economically poorer sections.

Interestingly and statistically significantly, in female-headed households, the women are more likely to endure spousal violence.

### ***Partner/ Spouse Specific Factors***

Spousal emotional violence is inflicted on working women with **0.68% points** lesser likelihood when the partner is employed, though this is statistically insignificant. With the increase in the number of control issues of the spouse (jealousy, suspicion, distrust with money, etc.), the likelihood of women enduring emotional, physical and sexual violence increases significantly by **8.8 pp, 15.2% and 5.2 pp** respectively. Whereas, the more frequent is the drinking habit of the partner, greater is the likelihood of the working woman suffering emotional, sexual violence by **~11.1pp and 7.5pp resp.**

## **CONCLUSION**

This study accounts for trends observed in spousal violence experienced by working women in India. We follow the ecological framework based on Heise (1998) as a heuristic tool to explore these trends by using district-wise data from the NFHS. By including factors like the wealth index, caste, urban-rural status of the household and district fixed effects we have achieved to control for the average variation of the predictors in terms of quality, population, economic status etc across the states of the country.

A statistically and economically insignificant and small magnitude of percentages for correlation between spousal violence and female labour force participation (*flfp*) is observed for each of our models. However, this may be due to possible **endogeneity** and **omitted variables bias** on the downside, owing to a lot of unobservable variables like societal pressure, patriarchal norms, dowry, etc that have not been accounted for in this study due to informational limitations in the dataset. As for magnitudes of the coefficients in terms of percentage points, it is important to account for the fact that these results only stem from the current records

of 12 months from the date of the survey in order to control for recall bias and hence are much likely to increase if records from past years are also considered.

We also argue that the marginal utility that a husband derives from violence tends to increase when he is disempowered by his wife's employment. Husbands turn to violence presumably for emotional reasons. This is clearly observed from a statistically significant relation between that of control issues and violence inflicted on working women.

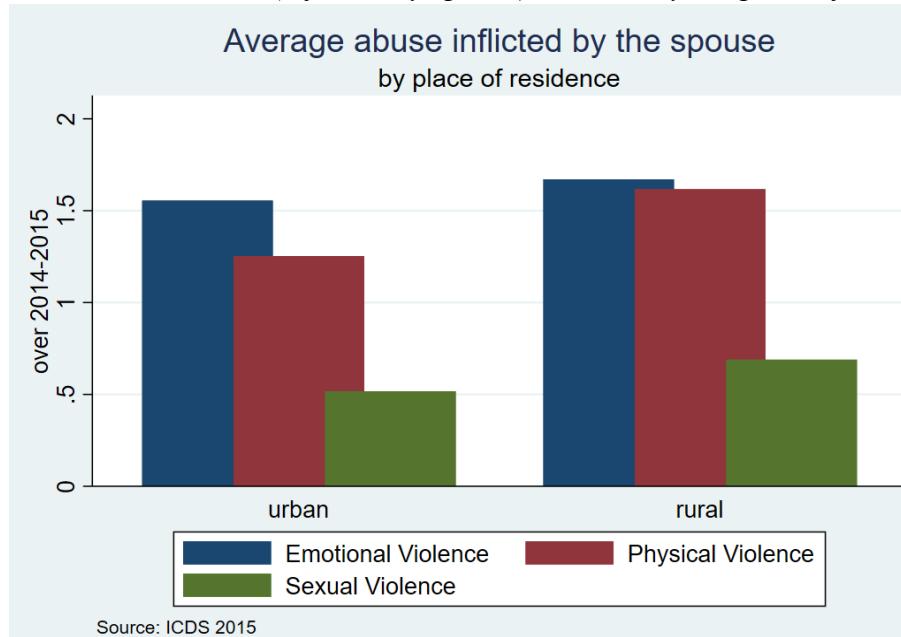
It is also important to note, that records and variables for emotional and sexual violence are limited and significantly low for both. Only **12.50%** of women in the sample set have responded to the questionnaire for experiences related to sexual violence which attests to a gross underreporting of the same and is most likely to have contributed to 'selection bias.' Further, an RCT experiment can be used to control for the same. Nonetheless, the relationship in each case is negative which satisfies the assumption that the participation in the labour force by a woman may act as a protective shield against spousal violence against the backdrop of a cultural construct of a sociocultural tradition revering and developing society such as India.

Domestic violence is a tragedy that affects not only the individual but also the country's overall development goals. The country's growth objectives will not be met unless the situation for women improves(Paul, 2014). The Anti-Domestic Violence Law (The Domestic Violence Act, 2005), which was implemented in 2006 as a preventive measure in India, is not fully operational. Women in distress/emergency do not often have access to information about available help. Furthermore, even though they are aware of the possibility, they may be unable to approach authorities or groups due to social stigma. To deal with a bleak situation such as this one, vigorous measures are incumbent to implement.

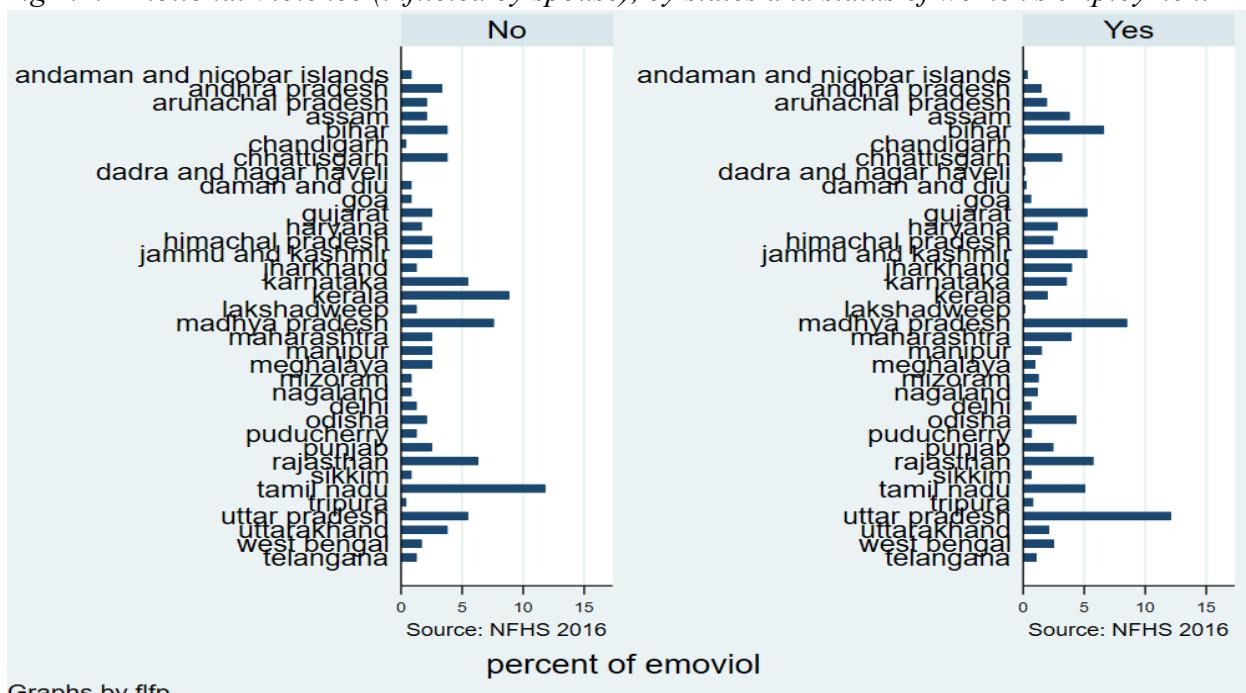
## APPENDIX

### Preliminary Analysis and Trends

*Fig 1: Domestic Violence (inflicted by spouse) in India, by the place of residence*



*Fig 2.1: Emotional Violence (inflicted by spouse), by states and status of women's employment*



Graphs by flfp

Fig 2.2: Sexual Violence (inflicted by spouse), by states and status of women's employment

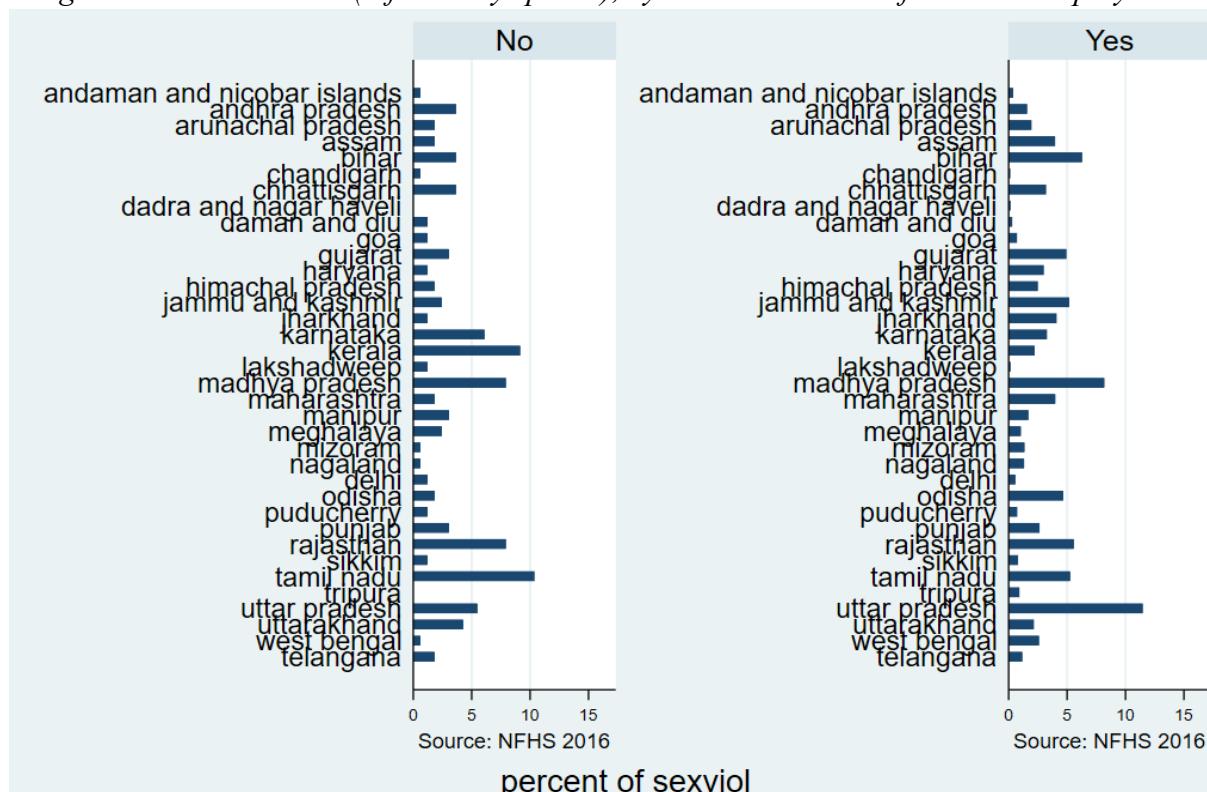
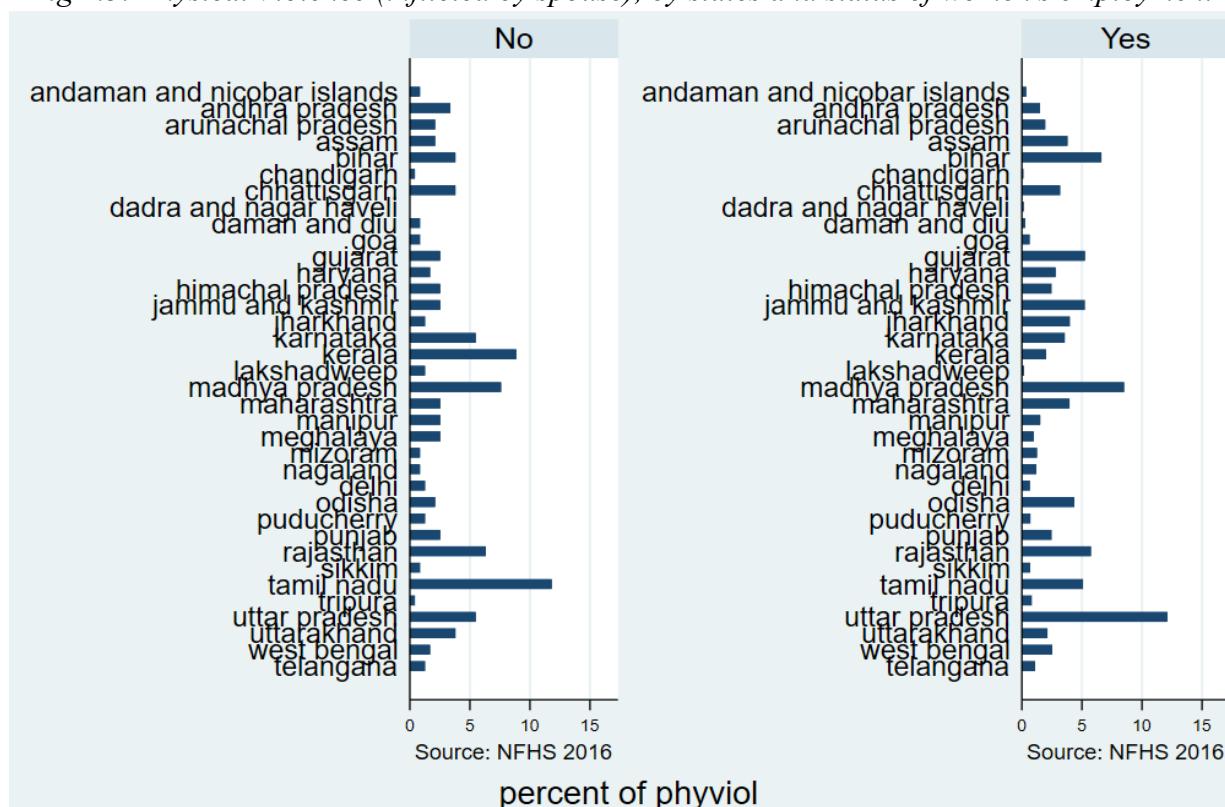


Fig 2.3: Physical Violence (inflicted by spouse), by states and status of women's employment



*Regression Table*

<i>Explanatory Variable</i>	<i>Model 1 Emotional Violence</i> <i>(b/se)</i>	<i>Model 2 Physical Violence</i> <i>(b/se)</i>	<i>Model 3 Sexual Violence</i> <i>(b/se)</i>
<i>Flfp (Yes)</i>	-0.0168 (0.02)	-0.020 (0.03)	-0.013 (0.02)
<i>Urban (Rural)</i>	-0.013*** (0.00)	-0.019*** (0.00)	-0.005* (0.00)
<i>Age</i>	0.0001 (0.00)	-0.000 (0.00)	-0.000 (0.00)
<i>Religion</i>	-2.21e-06* (0.00)	-0.000* (0.00)	-0.000 (0.00)
<i>Caste</i>			
SC	0.014*** (0.00)	0.033*** (0.01)	0.013*** (0.00)
ST	0.005 (0.00)	0.018* (0.01)	0.007 (0.00)
OBC	-0.001 (0.00)	-0.011* (0.00)	-0.001 (0.00)
<i>Sex of Household Head (Female)</i>	0.010** (0.00)	0.013* (0.01)	0.002 (0.00)
<i>Access to mobile Phone (Yes)</i>	-0.019*** (0.01)	-0.047*** (0.01)	-0.011* (0.00)

<i>Partner's employment status</i> <i>Employed</i>	-0.006 (0.00)	-0.000 (0.01)	0.000 (0.01)
<i>Access to Internet</i> <i>(Yes)</i>	-0.002 (0.00)	-0.000 (0.01)	-0.002 (0.00)
<i>Category of woman's job</i>			
<i>professional, technical, or managerial</i>	0.074** (0.03)	0.054 (0.05)	0.026 (0.03)
<i>clerical worker</i>	0.109*** (0.03)	0.124* (0.06)	0.040 (0.03)
<i>sales worker</i>	0.093** (0.03)	0.059 (0.05)	0.022 (0.03)
<i>agricultural</i>	0.096*** (0.03)	0.086 (0.05)	0.035 (0.03)
<i>household, domestic, and services</i>	0.097*** (0.03)	0.073 (0.05)	0.042 (0.03)
<i>skilled and unskilled manual</i>	0.109*** (0.03)	0.086 (0.05)	0.044 (0.03)
<i>Type of Earnings</i>	0.009** (0.00)	0.008 (0.01)	0.002 (0.00)
<i>Wealth Index</i>	-0.012*** (0.00)	-0.028*** (0.00)	-0.006*** (0.00)

<i>WomenEdu_in_years</i>	-0.003*** (0.00)	-0.006*** (0.00)	-0.001*** (0.00)
<i>Say_on_earnings</i>			
woman alone has a say	-0.063*** (0.01)	-0.112*** (0.01)	-0.028*** (0.01)
both woman and husband/partner	-0.007 (0.01)	0.020 (0.02)	0.024** (0.01)
only husband/partner	-0.010 (0.02)	-0.066 (0.04)	0.031 (0.03)
someone else	-0.049*** (0.01)	-0.112*** (0.02)	-0.016* (0.01)
<i>control_issues</i>	0.086*** (0.00)	0.148*** (0.00)	0.052*** (0.00)
<i>Alcohol consumption</i>			
<i>Sometimes</i>	0.035*** (0.01)	0.141*** (0.02)	0.036*** (0.01)
<i>Often</i>	0.177*** (0.01)	0.502*** (0.02)	0.127*** (0.01)
<i>_const</i>	0.072 (0.12)	0.361*** (0.08)	-0.056 (0.09)

\*= $p<0.05$ , \*\*= $p<0.01$ , \*\*\*= $p<0.001$  (coeff rounded off to third decimal place)

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