Exploring the Connection Between Poverty and Domestic Violence Against Women in India

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Abstract

Consistently throught the days, Domestic Violence has been linked to degraded health and unpleasent social and psychological results. Past studies have significant emperical evidence on the factors affecting Domestic Violence but not much importance has been given to the effect of household income on the occurence of Domestic Violence. This study attempts to investigate the relationship between Domestic Violence and household income in context of India. We use a sample of 66,013 women from the 4th National Family Health Survey (NFHS-4) for India, conducted between 2014-2015. A standard logistic regression model is used to examine the effect of overall household income level on different forms of Domestic Violence. We find that the economic status of household to be a determining factor for the likelyhood of experiencing Domestic Violence.

Introduction

Domestic Violence is a major problem in the modern society. More than a third of women worldride have experienced some form of physical or sexual violence at least once in their lifetime. Studies show that violence against women has severe mental and physical health consequences. Domestic Violence could lead to a lot of psychological disorders such as depression, sleeping disorders and eating disorders. It also increases the risk of committing homocide or suicide.

Domestic Violence also correlates with an increased rate of infant and child mortality and morbidity.

Though there is substantial emperical evidence on the factors which determine the likelihood of a woman experiencing Domestic Violence, very little attention has been paid to the role of household income as determinant. The objective of this study is to investigate the relationship between economic status of the household of a woman and the risk of being a victim of Domestic Violence.

Research Methodology

Dataset Description

The data used in this study has been taken from the 4th National Family Health Survey (NFHS-4) for India, conducted in 2014-2015. The NFHS, conducted by The Demographic and Health Surveys (DHS) Program is an international survey conducted in over 90 countries. The survey is sponsored by the U.S Agency for international development. The NFHS provides data on a vast variety of health indicators. In this study, a representative sample of 66013 women between age 15 to 49 (reproductive age) was used. The NFHS has a complex design which involves stratification based on the level of urbanization and region. The complex survey design has been accounted for in the regression analysis.

The NFHS dataset contains information of various forms of partner violence experienced by the interviewed women. Due to the sensitivity of the topic and the safety concerns of the interviewed women, NFHS-4 took a few safety precautions. This includes using a varity of questions to to increase the validity of the Domestic Violence data and providing training to the interviewers along with some other measures.

To determine the degree of Domestic Violence, the following questions were used:

"Does/Did your last husband ever do any of the following things: slap you? Twist your arm or pull your hair? Push you, shake you, or throw something at you? Punch you with his fist or with something that could hurt you? Kick you, drag you or beat you up? Try to choke you or burn you on purpose? Threaten or attack you with a knife, gun, or any other weapons? Physically force you to have sexual intercourse with him even when you did not want to? Force you to perform any sexual acts you did not want to?"

Due to safety precautions and privacy, only one woman in each household was selected for the Domestic Violence module to keep information confidential. In this study, we use 4 binary outcome variables to measure Domestic Violence. The first measure is a binary variable which indicates if a woman has experienced any emotional violence. The second measure is a binary variable which indicates if a woman has experienced less severe form of spousal violence. The third outcome variable is an indicator for whether a woman has experienced any

severe form of spousal violence. The third outcome variable is a binary variable of whether a woman has experienced sexual violence.

The NFHS dataset does not contain data on household income or expenditure. The NFHS team developed a measure of economic status of household based on ownership of assets. The wealth index score is generated through principal components analysis, which acts as an indicator for household economic status.

Model Description

To determine the effect of household economic status, we used the following logistic regression model :

$$Y = \frac{1}{1 + e^{-\sum_i \beta_i \, X_i}}$$

Where the dependent variable Y indicates the probability of a woman experiencing a form of domestic violence and X is a vector containing the independent covariates.

We develop four dependent variables, the emotional violence, less severe physical violence, severe physical violence and sexual violence separately.

Analysis

An exploratory analysis showing the sample proportions and odds ratio of the output variables has been given in the tables and figures below.

Table 1 : Sample proportion of Women (% of women) experiencing domestic violence

Income Group	Emotional Violence	Less Severe Physical Violence	Severe Physical Violence	Sexual Violence
poorer	51.4874	35.9817	12.5235	8.9827
poor	49.9817	31.9929	10.2824	7.7939
middle	48.1026	28.0817	7.7164	6.4516
rich	45.8820	24.6922	5.7582	5.5746
richer	41.9851	17.4524	3.8626	3.9288

Figure 1 : Sample proportion of Women (% of women) experiencing emotional violence
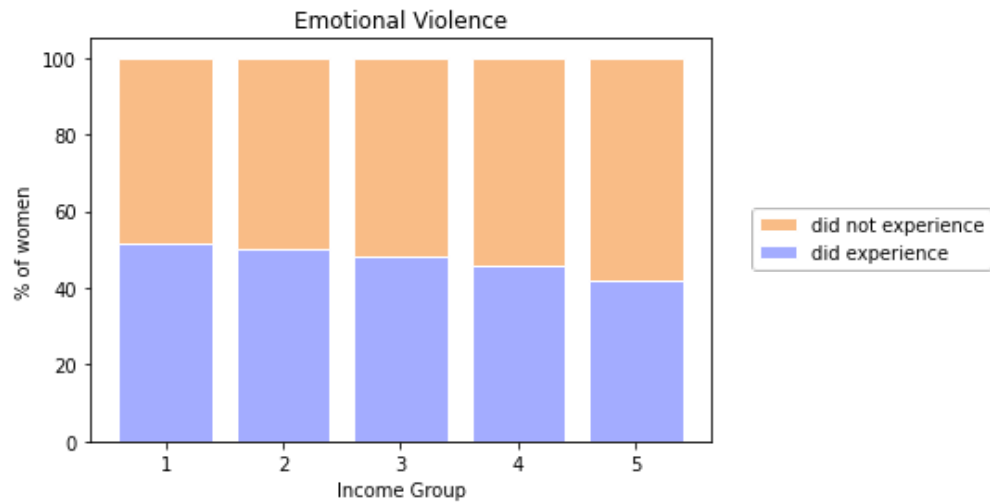

Figure 2 : Sample proportion of Women (% of women) experiencing less severe physical violence
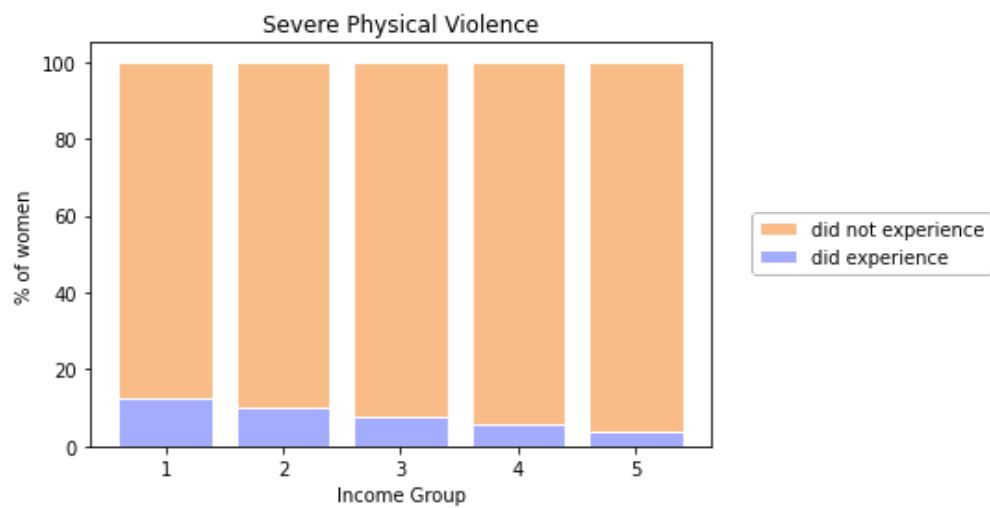
Figure 3 : Sample proportion of Women (% of women) experiencing severe physical violence
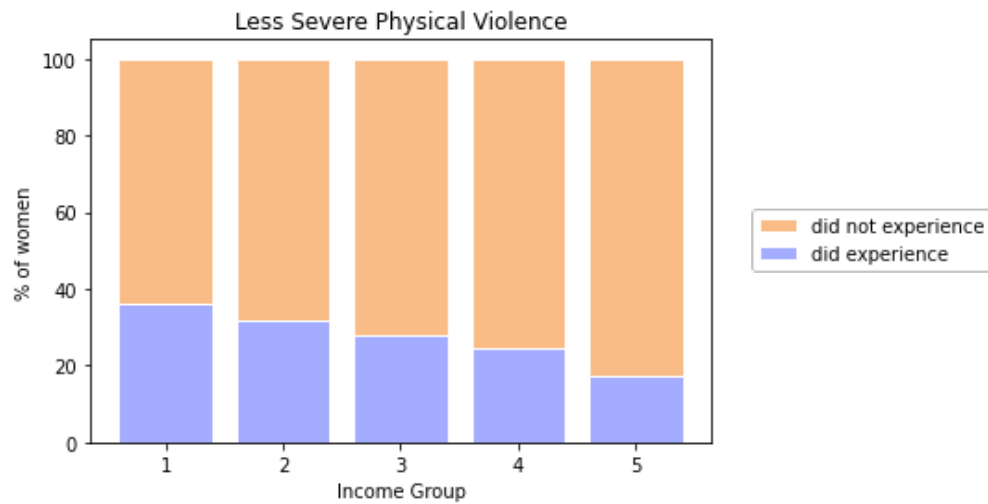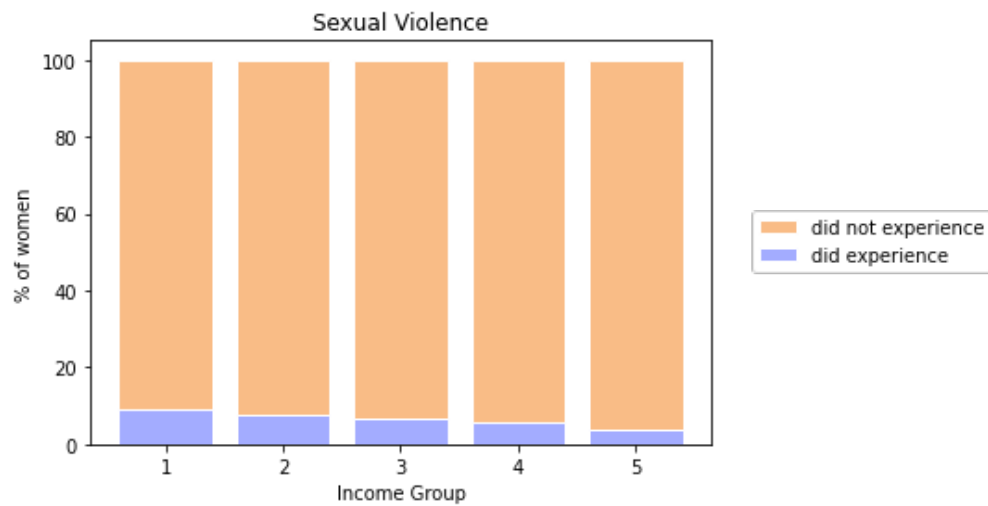

Figure 4 : Sample proportion of Women (% of women) experiencing sexual violence

Results

The table below represents the estimated cofficents of the logistic regression models.

Table 2:

Income Group	Emotional Violence	Less Severe Physical Violence	Severe Physical Violence	Sexual Violence
intercept ------------	0.01600958	-0.73631207	-2.3593667	-2.61832845
poorer	0.20997016	0.3296544	0.6054943	0.39381171
poor	0.10024693	0.1197478	0.3942434	0.29163483
middle	0.02145629	-0.10179977	0.07979413	0.07049222
rich	-0.07635158	-0.30957698	-0.32807604	-0.24908303
richer	-0.23933021	-0.77272104	-0.75080525	-0.5055281

Using the fitted logistic regression model, we get an estimate of the probability a woman experiencing the various forms of domestic violence, given the economic status of the household she belongs to.

Table 3: Probability of experiencing domestic violence given the economic status of the woman's household (from the fitted model)

Income Group	Emotional Violence	Less Severe Physical Violence	Severe Physical Violence	Sexual Violence
poorer	0.5562	0.3997	0.1475	0.0975
poor	0.5290	0.3505	0.1229	0.0889
middle	0.5093	0.3019	0.0928	0.0725
rich	0.4849	0.2600	0.0637	0.0537
richer	0.4444	0.1810	0.0426	0.0421

Conclusion

In summary, this study finds that the prevalance of all forms of domestic violence (emotional, sexual and physical) is more among households with lower economic status than the ones with high income **(table 2)**.

As apparent from **table 1** above, for all forms of domestic violence, the coefficients of the logistic regression models are lesser for households with higher

economic status. This implies that the increase in probability of domestic violence of all forms decreases with increase in household income.

On the downside, this study does not account for a lot of other independent factors for determining Domestic Violence such as education level and occupation of the woman and partner, religion and caste. Future studies would take that into account and control for such aspects.

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