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Impact of Covid on the Trend of Domestic Violence in Indian Households

Suparna Das

Assistant Professor of Economics, Asian University for Women, Chittagong, Bangladesh

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ABSTRACT

Since the onset of COVID-19 pandemic, a rising trend of domestic violence in India is reported by literature using either call/complaints data or newspaper reports. However, the complaints data could not provide an adequate measure of the effect of the pandemic on the occurrence of domestic violence, if a substantial number of cases remain unreported. Till now, national level data to capture the changes in household dynamics during pandemic time is rare. The novelty of this study comes from the use of a national level survey, National Family Health Survey data of the Fifth round (2019-21) on India, which was not specifically designed for identifying the impact of COVID, but includes many attributes of women's life regarding demographic characteristics, health and childbirth, subjective and objective information on domestic violence among many others. The data has been collected from 2019 to 2021, with a halt due to COVID restrictions from April to September 2020. Using this break in the data this study examines whether and how the pattern of domestic violence has changed during the pandemic time. The impacts of COVID-19 pandemic on the trend and nature of domestic violence and also on the patterns of the influence of the predictors of domestic violence are measured using probit regression analysis. The findings imply that violence may decrease if women provide financial security to the family amid uncertainties during pandemic, but violence can increase if women increase the burden of the family.

1. Introduction

Violence against women is a heinous form of human rights violation that takes place around the world almost every single day. Globally, one in three women experiences physical or sexual violence, mostly by an intimate partner (WHO, 2021). The increasing trends of intimate partner violence (IPV) hinder the target to achieve the fifth goal of the Sustainable Development Goals (SDG5) – 'gender equality by ending all forms of discrimination, violence and any harmful practices against women and girls in the public and private spheres'. It is not possible to achieve women empowerment and gender equality when

*Corresponding author E-mail address: suparna.das@auw.edu.bd

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women continue to face domestic violence (DV) within their households, which is prevalent irrespective of culture, caste, age, education and working status.

Since the beginning of the year 2020, the whole world faced a high-level mortality and morbidity due to the spread of Coronavirus Disease 2019 (COVID-19). Countries in the world announced lockdowns of varying lengths to contain the spread of the virus, which eventually caused recessionary shocks to the world. Many people worldwide lost jobs and many businesses shut down due to the pandemic-caused recession. The lockdown measures compelled people to remain inside their homes for months. India had four back-to-back lockdowns from 24 March 2020 to 31 May 2020. Even after the unlock actions started, many offices remained closed and work-from-home practices continued except the essential industries for many months. This confinement inside home could be a source of boredom and frustration accompanied by uncertainties regarding livelihood and could cause increasing stress among families. On the other hand, there is probably no one in this world who didn't lose a person, either a close one - a family member, a friend or a colleague to this virus. Thus, the experience or the fear of losing the near ones to the virus and spending time with family members can make us value quality family-time and become more compassionate towards family members and others. Saying these, it makes me wonder whether the pandemic and lockdowns increase or decrease the suffering of the Indian women in their marital life, especially in terms of DV by intimate partner.

Table 1.
Domestic Violence related National data

National Crime Records Bureau Data		
Year	**Cruelty by Husband or his relatives (Sec. 498 A IPC)**	
	Number of Incidences	**Crime Rate per lakh population**
2018	103272	16.1
2019	125298	19.3
2020	111549	17.0
2021	136234	20.5
National Commission for Women		
Year	**Number of Complaints received**	
	Dowry harassment including deaths	**Protection of Women against DV**
2018	3245	2001
2019	4256	2960
2020	4118	5297
2021	4954	6684

Source: National Crime Records Bureau, India and National Commission for Women, India.

As per the Indian National Crime Records Bureau (NCRB) data, the incidences and crime rate per lakh population with regard to *Cruelty by Husband or his relatives (Sec. 498A IPC)* increased from 2018 to 2019 and then declined in 2020. On the other hand, from the National Commission for Women (NCW), the complaint data under the category of *Protection of Women against Domestic Violence* show a rising trend from 2019 to 2020 and further increased in 2021. Another category of complaints regarding dowry harassment cases increased till 2019 and then increased again in 2021 after a brief decline in 2020.

These two sources of National data shown in Table 1 provide contrasting evidences for DV in the pre- to post- COVID-19 period and it is not sure which one to believe unless I examine it myself. Therefore, from this contradiction I ask the following question:

- Does the pandemic have any effect on violence against women by intimate partner within the household? If yes, what is the size and direction of the effect?

The paper analyses different types of violence in details and examines changes in the trend and patterns of the predictors of DV on women by husband/partner during the COVID-19 period.

2. Literature Review

DV by partner or other family members can be a crucial constraint in the way of having a happy and fulfilling life for any woman. While the marital households have already been an unsafe and abusive place for women in Indian society, does the recent COVID-19 pandemic along with the lockdowns add another reason for DV on women? I raise this question as the data and reports provide contradictory evidence, with inclinations towards increasing DV during or post lockdown period. Many literatures have examined the trend of DV during and post lockdown period compared to the period before pandemic. In this paper, as part of literature review, I only consider published literatures on India and exclude literatures on any other countries that also have linked DV with COVID pandemic and/or examined the determinants of DV, as otherwise it would exceed the required length of the paper.

Using newspaper reports on DV incidences over the last five years including the lockdown periods, Maji et al. (2022) found that compared to the years before, a significant increase in the number of domestic abuse cases was seen during the early stages of the pandemic period, and then, steadily declining over time. Mittal and Singh (2020) and Das et al. (2020) both using newspaper reports and/or other literature found a rising trend of DV in India as a whole, and/or in different states of India. Using complaints data, a paper by Singh and Bhattacharyya (2020) could not find adequate evidence to link DV with the lockdowns. Using the variation in lockdown intensities (prescribed by government as per the spread of the virus) across districts of India and the complaint data from NCW, Ravindran and Shah (2020) found that DV complaints had surged by 0.47 standard deviation in the districts with the strictest lockdowns.

Saji et al. (2020) conducted a cross-sectional study on 700 families to investigate the social impact of Kerala's COVID-19 shutdown from a local viewpoint and found a rise of 13.7 per cent in the frequency of DV during the period. A study by Pal et al. (2021) used an online survey data collected from 271 sample people, including both males and females, found an increase in intimate partner violence during COVID-19 lockdown. Another scholarly evidence on the trend of DV during/post crisis other than COVID-19 pandemic also found in the literature, such as: increased intimate partner violence on Indian women after the Indian Ocean tsunami in 2004 (Rao 2020).

While the NCW's data showed that DV complaints doubled during the COVID-19 lockdown in India, in contrary, the organizations that are working on DV issues and/or help such victims, such as Jagori, Dhwani, Shayam, AKS foundation, Shakti Shalini have reported declines in the number of calls/complaints, all these organizations highlighted the lack of scope to call for help when living with the perpetrators under the same roof (Ghoshal 2020; Bose 2020). Another article by Mulla (2020) mentioned that Karnataka's women and child development department registered around 57 per cent fall in the calls on DV issues in the first month of lockdown in India.

Majority of the existing literature either used the call/complaints data from different organizations working on DV or used newspaper reports as source of data to analyse the trend of DV during/post lockdown period, compared to the pre-pandemic period. There is abundant evidence in literature that number of complaints have increased during the COVID-19 lockdown period, but can we solely depend on the complaints to analyse the trend? Will it be adequate to understand the extent and significance of the problem when we only consider

the reported cases if a substantial number of cases may remain unreported? The increasing trend of DV can be a result of many biasedness, such as, compared to earlier, during lockdown women have no choice other than call for help, when help can't be found from friends, relatives or neighbours, or reporting can be low or not possible at all when the victim is locked down with the perpetrator(s) for long period of time with no certain route of escape. The analysis of trend of DV incidences using complaints data would be incomplete as it includes only the treatment group people who reported any types of abuse/violence at home by partner, while the counterfactual groups, such as who didn't face violence and/or who faced but didn't or couldn't report to authority, remain missing from the analysis. Thus, this could not provide an adequate basis for comparison and measure the size and significance of the effect of the COVID-19 crisis on the occurrence of abuse on women within household. Considering this limitation, the true extent and significance of the problem can be comprehended only when we have data on DV from the whole population, which is not feasible, or use a nationally representative sample data. The novelty of this paper comes from the use of such a survey data including a nationally representative sample of women of India. Recently published National Family and Health Survey (2022) data provides the opportunity to analyse the trend of DV during/post lockdown period compared to the pre-COVID-19 period. More details on the data are given in the next section to justify its appropriateness for the analysis of this paper.

3. Data

For this research, I use data from India's National Family and Health Survey - fifth round (NFHS-5) published in 2022. The survey was conducted during June 2019 - April 2021, with a halt during the lockdown period, covering people from 707 districts, 28 states, and 8 union territories of India. In the households, interviews were completed with 724,115 eligible women (response rate of 97 per cent) of age 15-49 years. NFHS-5 included only one eligible married woman per household of age 18-49 years by random selection from the individual women sample to interview under the DV module. The subsample size for the DV module is 72,056 women. In the survey data, due to the selection of only one woman per household, and particularly, for making the DV subsample nationally representative special weights were used. To address the under-reporting issue, the module was specially designed to allow the interviewer to continue the interview if and only if privacy was obtained and additional precaution was taken so that during the interview nobody from the family and outside the family interfere and/or interrupt the responses. If privacy could not be ensured, the interviewers were instructed to skip the module. Around 4 per cent of women were not interviewed as privacy could not be obtained or for other reasons. Extra concern about privacy has ensured the accuracy of the responses at greater extent. The survey on women provides information on individual characteristics, husband's background, reproductive behaviour and child-bearing, marriage and cohabitation, use of contraception, general health and nutrition, antenatal, delivery, postnatal care, child health and child-rearing practices.

4. Empirical Strategy

To examine the impact of COVID-19 pandemic/lockdown on the likelihood of domestic violence, I use probability model where the binary dependent variable is different types of violence on women and the primary explanatory variable is the COVID-19 period. The survey asks the women respondents separate questions for different types of violence in detail under primarily four categories of violence such as less severe violence (22.5 per cent), severe violence (7 per cent), sexual violence (5 per cent) and emotional violence (12 per

cent). In parentheses the percentages of women who responded that they faced a type of violence are given. The details are as follows:

- *Less severe violence*: This violence category includes whether a respondent has been pushed, shook or had something thrown; slapped; punched with fist or hit by something harmful and/or arm twisted or hair pulled by husband/partner.
- *Severe violence*: This category includes whether a respondent has been kicked or dragged; strangled or burnt and/or threatened with knife/gun or other weapon by husband/partner.
- *Sexual violence*: This category includes whether a respondent has been physically forced into unwanted sex; physically forced to perform sexual acts respondent didn't want to and/or forced into other unwanted sexual acts by husband/partner.
- *Emotional violence*: This category includes whether a respondent has been humiliated, threatened to hurt, insulted or made feel bad by husband/partner.

All these violence related questions are used to construct the binary dependent variables for violence. The respondents were asked that whether she has ever been faced a violent act/behaviour by husband/partner and the response categories are 'never'; 'often'; 'sometimes' and 'yes, but not in the last 12 months'. Based on these, binary dependent variables are constructed on the condition that if a woman said often or sometimes gets value '1' and if responded never gets value '0'. I ignored the responses 'yes, but not in the last 12 months' as the purpose of the paper is to see impact of COVID-19 crisis on recent violence that is to compare the likelihood of violence between pre-COVID-19 and during/post COVID-19 lockdown.

The main explanatory variable '*Covid*' is constructed based on the data collection periods of NFHS-5. From the data collection dates and years for individuals, I can divide the whole dataset into two parts: (i) pre-COVID-19 time that is June 2019 to March 2020 and (ii) the pandemic time after lockdown i.e., October 2020 to April 2021. It was observed that no data has been collected during April-September 2020. Using this divide, '*Covid*' as a binary variable takes '0' for pre-COVID-19 time (before April 2020) and gets '1' for post lockdown time (since October 2020). In the survey 68.4 per cent women were interviewed in the pre-COVID-19 time and remaining 31.6 per cent were interviewed after the lockdown.

Using violence as binary dependent variable and covid as main explanatory variable, to measure the impact of COVID/lockdown on the likelihood of DV, as estimation method, I use probit regression model using the following equation:

$$\Pr(Y_i = 1|X_i, C_i) = \Phi(\beta.X_i + \gamma.C_i + \epsilon_i) \quad (1)$$

The probit estimation equation (1) expresses the probability (Pr) of facing violence over not-facing violence conditional on different explanatory variables, where Φ is the cumulative distribution function of a standard normal variable which ensures $0 \leq \Pr \leq 1$ and i represents individual respondents. The binary dependent variable Y refers to different indicators for IPV towards women, X represents the main explanatory variable covid, C represents different control variables, β and γ are parameters or coefficients that reflect the effect of changes in X and Cs on the probability of violence respectively and ϵ is the error term. The relationship between an explanatory variable and the outcome of the probability is interpreted by the means of the marginal effect, which shows the partial change in the probability of the dependent variable due to a change in the explanatory variable.

The 'covid' variable can be considered as an exogenous variable, as the pandemic/lockdown is a random phenomenon to DV and the time chosen for conducting the survey interviews can

be considered exogenous to DV and its predictors. In this case, we can assume that it is unlikely that COVID-19 period is correlated with the unobservable factors of DV within households. Therefore, estimating the effect of COVID-19 using 'covid' as the main explanatory variable and DV as the dependent variable does not need any further treatment. Other control variables used in the analysis are rural (67.5 per cent) or urban (32.5 per cent) location, female headed household (16.9 per cent), wealth index (poorest 18.4 per cent, poorer 20.7 per cent, middle 21.3 per cent, richer 21.2 per cent and richest 18.4 per cent), age and education difference of the woman with husband, working status of woman (29 per cent working) and husband (78.6 per cent worked last week), drinking habits of husband (23.9 per cent), whether woman owns any property and/or land (44 per cent), owns a mobile (57.7 per cent), sex-ratio within household (average adult sex ratio: 0.73 female per male), having a firstborn son (52.6 per cent), religion (78.3 per cent Hindu, 16.4 per cent Muslim), if currently pregnant (3.9 per cent), any beating justified (47.8 per cent) and whether anyone from family or someone else interrupted the interview (16 per cent). Around 2.3 per cent women are older than husband, 3.75 per cent women share same age with husband, and around 40 per cent women have 6 years or more age difference with husband. Around 26 per cent women are more educated than their husband, 29 per cent are equally educated as husband, and rest are less educated than husband. The multicollinearity between the covariates is tested by variance inflation factor and is not found. Further, the probit regressions are also conducted using interaction terms between covid variable and each of the above-mentioned control variables to examine whether the pandemic/lockdown has changed the pattern of the effects of these determinants on DV.

One concern of this analysis could be the data regarding DV as this data can be under reported in the survey. There can be cases where women do not respond to the DV related question or other questions regarding their marital life truthfully. Some misreporting will be always there. It could be difficult for a woman to respond to the questions regarding DV in presence of husband, mother-in-law or anyone else in the family. There could be fear of increase in likelihood of violence, humiliation or worsening their position in the household further if they report against their husband. To this concern, the surveyors took precautions regarding presence of anyone and interference from anyone during the survey interview. Further, the data also provide information on any minor interference/interruption happened during the interview, and this is used as a control variable in the estimations to separate out the possibility of biasedness due to this. The '*interview interrupted*' variable is constructed as a binary variable, such as presence of any kind of interference/interruption due to anything gets value 1 and no such interference gets 0.

Even after these precautions, the responses can be biased if the respondents themselves are with patriarchal views, and therefore believe that on occasions women deserve beating for disobedience, negligence or whatsoever. The survey collects information from the women respondents whether they think beating by husband is justified under the following circumstances: she goes out without telling him, she neglects the house or the children, she argues with him, she refuses to have sex with him, she doesn't cook food properly, he suspects her of being unfaithful, and she shows disrespect for her in-laws. The respondents were given three categories to choose from: yes, no and don't know. I construct a variable 'any beating justified' as a binary variable as if a woman answered yes in any of the seven beating justified questions gets 1 or if no in all the seven questions gets value 0. This is an important variable in the analysis of likelihood of violence, as if women themselves justify wife beating by husband in any circumstances, it seems logical to expect that these women are less likely to resist violence, and thus, are expected to face more violence. To control for state level unobserved characteristics, such as social norms, patriarchal values and customs,

people's relation and dynamics, which can also influence probability of violence within household, I use state fixed effects in the estimation. Appropriate survey weights are used for all the estimations to consider survey related biases and to make the sample a nationally representative one.

5. Results and Discussions

5.1. Impact of COVID-19 Pandemic on the Likelihood of Different Types of DV in Detail

The marginal effects of Covid on different types of DV are presented in Table 2.

Less severe violence: The results in Table 2 indicate that in the covid period the likelihood of different types of less severe violence has reduced significantly compared to the pre-covid time, keeping all other things same. The probability of getting pushed by husband reduces by 2 per cent; getting slapped reduces by 4.9 per cent; punched by 2 per cent; arm twisted or hair pulled by 1.2 per cent, and facing any less severe violence reduces by 5 per cent in covid time compared to the pre-pandemic time, *ceteris paribus*.

Severe violence: Compared to the pre-covid time, the probability of severe violence reduces significantly in the covid time: the likelihood of getting kicked by husband reduces by 2.6 per cent; strangled or burnt reduces by around 1 per cent and likelihood of overall severe violence reduces by 2.6 per cent in covid time than pre-covid time (Table 2), *ceteris paribus*.

Sexual violence: Compared to the pre-covid time, the probability of being physically forced into unwanted sex has reduced significantly by 2.1 per cent; the chances of being physically forced to perform sexual acts has reduced by around 1 per cent; the likelihood of being forced into other unwanted sexual acts by husband/partner has declined by 1.2 per cent; and likelihood of any sexual violence has reduced by 2.4 per cent in the covid period, keeping all other things same.

Emotional Violence: In Table 2, it is found that in the covid period women have significantly 3.3 per cent lower chances to be humiliated by husband; 1.8 per cent significantly lower likelihood to be threatened to hurt and significantly 2.7 per cent lower probability to be insulted or made feel bad by husband/partner, compared to the pre-covid time, keeping all other things constant. Overall, women have significantly 4.3 per cent less chance to face any emotional violence in the covid time compared to the time before the onset of the pandemic.

Table 2.
Probit Regression - Marginal Effects of Covid on DV

Violence types by husband/partner	Explanatory Variable: Covid		Controls	Observations
	Marginal Effects	Standard Errors		
Pushed, Shook or had something thrown	-0.0203***	(0.0057)	Yes	53388
Slapped	-0.0492***	(0.0080)	Yes	51570
Punched with fist or hit by something harmful	-0.0199***	(0.0045)	Yes	53820
Arm twisted or hair pulled	-0.0123**	(0.0050)	Yes	53613
Less Severe Violence	-0.0505***	(0.0082)	Yes	50784
Kicked or dragged	-0.0263***	(0.0046)	Yes	53653
Strangled or burnt	-0.0086***	(0.0023)	Yes	53901
Threatened with knife/ gun/ other weapon	-0.0013	(0.0017)	Yes	53464
Severe Violence	-0.0263***	(0.0047)	Yes	53565
Physically forced into unwanted sex	-0.0215***	(0.0035)	Yes	53892
Physically forced to perform sexual acts	-0.0089***	(0.0024)	Yes	53320
Forced into other unwanted sexual acts	-0.0122***	(0.0030)	Yes	53960
Sexual Violence	-0.0243***	(0.0040)	Yes	53711
Humiliated	-0.0333***	(0.0051)	Yes	53909
Threatened to hurt	-0.0179***	(0.0038)	Yes	54036
Insulted or made feel bad	-0.0268***	(0.0051)	Yes	54033
Emotional Violence	-0.0427***	(0.0061)	Yes	53473

Note: Control Variables used in regressions are: rural/urban location, female-headed household, wealth, age difference with husband, education Difference with husband, if women working, husband worked last week, women own property/land, women own mobile, sexratio in household, women have a firstborn son, Hindu, Muslim, currently pregnant, if women believe any beating justified, and interview interrupted by someone. Standard errors are shown in parentheses. *: p<0.1, **: p<0.05, ***: p<0.01.

The numbers of observations in the estimations of different types of violence are different as the women facing different types of abuse are different.

5.2. Important Determinants of DV and Their Influence on DV During Pandemic

The influence of the different control variables on the likelihood of DV is presented in Table 3 and discussed in this section. Further, it is also examined whether the patterns of the predictors of DV have changed due to the pandemic, using the interactions between covid and these covariates, these results are shown in Table 4.

Wealth: Using NFHS 2005-06 data, Kimuna et al. (2013) found that wealth index has a significant negative influence of DV. The results in Table 3 on wealth index (normalized at mean 0 and std deviation 1) are also similar, i.e., compared to women in poor households, women in a wealthy household have (highly) significantly lower probability to face violence, such as by 4.3 per cent for less severe; 2.4 per cent for severe; 1.1 per cent for sexual; 1.9 per cent for emotional violence and 4.8 per cent for any type of DV, *ceteris paribus*. Using the interaction term between covid and wealth index, interestingly this pattern changes during covid period (Table 4). During covid time women in wealthy households have increased probability of facing DV, such as 1.5 per cent significantly higher probability for less severe violence; 1.7 per cent significantly more chances to face emotional violence and 2 per cent significantly higher chances for any type of DV compared to women in the poor households, given all other things remain same.

Table 3.
Important determinants of DV

Explanatory Variables	Less Severe Violence	Severe Violence	Sexual Violence	Emotional Violence	Any Violence
Covid	-0.0505***	-0.0263***	-0.0242***	-0.0427***	-0.0610***
	(0.0082)	(0.0047)	(0.0040)	(0.0061)	(0.0086)
Rural Location	-0.0130	-0.0118*	0.0013	-0.0001	-0.0151
	(0.0111)	(0.0062)	(0.0046)	(0.0073)	(0.0115)
Head is a female	-0.0064	0.0016	-0.0010	0.0104	0.0023
	(0.0101)	(0.0057)	(0.0049)	(0.0077)	(0.0104)
Wealth	-0.0435***	-0.0245***	-0.0106***	-0.0194***	-0.0477***
	(0.0051)	(0.0027)	(0.0022)	(0.0032)	(0.0051)
Age difference	-0.0017**	-0.0008*	-0.0004	0.0006	-0.0012
with Husband	(0.0007)	(0.0004)	(0.0004)	(0.0005)	(0.0007)
Education difference	-0.0010	-0.0007*	-0.0003	-0.0013**	-0.0017**
with Husband	(0.0007)	(0.0004)	(0.0004)	(0.0006)	(0.0008)
Woman working	0.0353***	0.0196***	0.0166***	0.0332***	0.0414***
	(0.0075)	(0.0046)	(0.0039)	(0.0054)	(0.0078)
Husband worked	0.0157**	-0.0090*	0.0012	0.0086	0.0187
last week	(0.0076)	(0.0053)	(0.0039)	(0.0054)	(0.0084)
Husband drinks	0.1797***	0.0811***	0.0572***	0.1021***	0.1842***
alcohol	(0.0073)	(0.0048)	(0.0039)	(0.0059)	(0.0078
Own Property/Land	0.0226***	0.0194***	0.0058*	0.0286***	0.0326***
	(0.0071)	(0.0046)	(0.0034)	(0.0053)	(0.0075)
Own Mobile	-0.0091	-0.0015	-0.0056*	-0.0021	-0.0047
	(0.0070)	(0.0039)	(0.0033)	(0.0053)	(0.0074)
Sexratio in HH	-0.0024	-0.0059	-0.0026	0.0019	-0.0016
	(0.0076)	(0.0043)	(0.0038)	(0.0058)	(0.0078)
First Born Son	0.0065	-0.0027	-0.0021	0.0042	0.0092
	(0.0059)	(0.0038)	(0.0031)	(0.0046)	(0.0062)
Hindu	0.0254	0.0279***	-0.0008	0.0002	0.0175
	(0.0189)	(0.0089)	(0.0072)	(0.0148)	(0.0193)
Muslim	0.0568**	0.0390***	0.0118	0.0192	0.0467**
	(0.0222)	(0.0105)	(0.0085)	(0.0166)	(0.0226)
Currently Pregnant	-0.0419***	-0.0213**	0.0030	-0.0107	-0.0243
	(0.0151)	(0.0088)	(0.0077)	(0.0121)	(0.0162)
Beating Justified	0.1163***	0.0348***	0.0295***	0.0617***	0.1303***
	(0.0078)	(0.0044)	(0.0035)	(0.0054)	(0.0082)
Interview Interrupted	0.0068	0.0078	0.0120***	0.0257***	0.0196**
	(0.0088)	(0.0048)	(0.0041)	(0.0061)	(0.0092)
N	50784	53565	53711	53473	49976

Note: Standard errors are shown in parentheses. *: p<0.1, **: p<0.05, ***: p<0.01.

Table 4.
Determinants of Domestic Violence and Interaction with Covid

Explanatory Variables	Less Severe Violence	Severe Violence	Sexual Violence	Emotional Violence	Any Violence
Covid	-0.0194	0.0338	0.0107	-0.0222	-0.0376
	(0.0370)	(0.0208)	(0.0165)	(0.0286)	(0.0388)
Wealth	-0.0462***	-0.0248***	-0.0115***	-0.0218***	-0.0513***
	(0.0058)	(0.0030)	(0.0024)	(0.0036)	(0.0058)
Covid X Wealth	0.0149*	0.0023	0.0061	0.0168***	0.0201**
	(0.0080)	(0.0044)	(0.0039)	(0.0057)	(0.0083)
Woman working	0.0369***	0.0219***	0.0185***	0.0367***	0.0439***
	(0.0084)	(0.0050)	(0.0043)	(0.0059)	(0.0087)
Covid X Womwork	-0.0135	-0.0207**	-0.0205***	-0.0359***	-0.0211
	(0.0144)	(0.0082)	(0.0070)	(0.0103)	(0.0153)

Explanatory Variables	Less Severe Violence	Severe Violence	Sexual Violence	Emotional Violence	Any Violence
Husband worked last week	0.0172**	-0.0082	0.0018	0.0095	0.0202**
	(0.0086)	(0.0059)	(0.0043)	(0.0060)	(0.0096)
Covid X Huswork	-0.0135	-0.0056	-0.0053	-0.0081	-0.0132
	(0.0137)	(0.0091)	(0.0071)	(0.0103)	(0.0145)
Husband drinks alcohol	0.1809***	0.0812***	0.0562***	0.1017***	0.1853***
	(0.0083)	(0.0052)	(0.0042)	(0.0065)	(0.0088)
Covid X Husdrink	-0.0086	-0.0012	0.0094	0.0029	-0.0071
	(0.0137)	(0.0077)	(0.0068)	(0.0100)	(0.0143)
Own Property/Land	0.0251***	0.0209***	0.0066*	0.0320***	0.0360***
	(0.0080)	(0.0051)	(0.0038)	(0.0058)	(0.0085)
Covid X OwnProperty	-0.0190	-0.0131*	-0.0072	-0.0320***	-0.0256*
	(0.0127)	(0.0079)	(0.0063)	(0.0095)	(0.0134)
Currently Pregnant	-0.0515***	-0.0232**	-0.0004	-0.0158	-0.0338*
	(0.0173)	(0.0099)	(0.0089)	(0.0137)	(0.0185)
Covid X Pregnancy	0.0641**	0.0141	0.0256*	0.0394*	0.0671**
	(0.0275)	(0.0176)	(0.0138)	(0.0217)	(0.0286)
Beating Justified	0.1133***	0.0355***	0.0288***	0.0591***	0.1272***
	(0.0088)	(0.0049)	(0.0038)	(0.0060)	(0.0092)
Covid X Beatjust	0.0227*	-0.0045	0.0074	0.0231**	0.0239*
	(0.0129)	(0.0071)	(0.0060)	(0.0092)	(0.0135)
N	50784	53565	53711	53473	49976

Note: Full set of control variables are used in the five regressions along with their interaction terms with Covid. However, only the important and significant results are shown in the table, and the complete table will be available from the author upon request. Standard errors are shown in parentheses. *: p<0.1, **: p<0.05, ***: p<0.01.

Women's working status: In literature working status of women has found to be an important contributor to violence on women within household (Sahoo and Raju 2007; Krishnan et al. 2010; Dalal and Lindqvist 2012; Kimuna et al. 2013). On the similar line, results in Table 3 indicate that working women (working status as a binary variable) have significantly higher chances to face all types of DV (3.5 per cent more likely to face less severe violence; 2 per cent more likely to face severe violence; 1.7 per cent more likely to face sexual violence; 3.3 per cent more chances of emotional violence and 4.1 per cent higher chances for any violence) compared to a woman who doesn't work in the labour market, *ceteris paribus*. Using interaction term with covid, in Table 4 we observe another interesting pattern reversal that compared to non-working women, during covid period, the probability of facing violence has significantly declined for employed women, 2.1 percent less likelihood to face severe violence, 2 percent less chances to face sexual violence and 3.6 percent less chances for emotional violence, *ceteris paribus*.

Husband's working status: Husband's working status could be an important predictor of DV in crisis time. However, NFHS-5 data doesn't include information on job loss during covid time, as the survey purpose was not COVID-19 pandemic particularly. Due to this limitation, *husband's working status in last week* is considered as a proxy for working status and used as control variable to identify whether the not-working status of husband can cause stress and result in taking out the frustration on wife. A paper by Krishnan et al. (2010) provides evidence in support of this. However, *husband worked in the last week* is a weak proxy for working status as there can be many reasons for temporary absence from work other than the COVID-19 crisis and doesn't specifically indicate unemployment. As husband's working status, I used information on whether the husband of a woman respondent worked in the last seven days. There were also categories such as whether the husband worked in the last 12 months, but this is not considered as our main explanatory variable is pandemic time,

information on last 12 months may not serve the purpose of tracking current employment. Table 3 indicate significant and positive results i.e. women with employed husband have more chances to face less severe violence (1.6 per cent) and any violence (1.9 per cent), compared to women whose husband didn't work in the last seven days, *ceteris paribus*. But using interaction term between husband worked and covid variable (Table 4), the probabilities of facing violence become insignificant in all cases. Therefore, the results using NFHS-5 do not support the claim of husband's not working status during pandemic increases the chances of violence.

Property ownership: As per Table 3, women's property/land ownership (binary variable) is found to be a significant indicator for likelihood of DV, such as compared to women without any property ownership, women who have any property/land ownership (either single or jointly with husband) are significantly more likely to face DV, by 2.3 per cent for less severe; 1.9 per cent for severe, 0.6 per cent for sexual, 2.9 per cent for emotional and 3.3 per cent for any type of violence, *ceteris paribus*. Using interaction term with covid (Table 4), it is found that the probability of violence changes sign, becomes negative in all cases, but significant only in case of severe and emotional violence. During and post COVID-19 lockdown period, the women with property ownership are less likely to face DV in all cases, significantly less chances by 1.3 per cent for severe violence and highly significantly less likelihood by 3.2 per cent to face emotional violence, compared to women without any property ownership, keeping all other things same.

Pregnancy: In Table 3 it is found that pregnant women (pregnancy as a binary variable) are less likely to face DV (4.2 per cent lower chances to face less severe and 2.1 per cent less likely for severe violence) compared to non-pregnant women, *ceteris paribus*. In Table 4, using interaction term between pregnancy and covid variable, it is found that pregnant women are significantly more likely to face DV, such as 6.4 per cent more likely to face less severe violence, 1.4 per cent more likely (insignificant) to face severe violence, 2.6 per cent higher chances to face sexual violence, 3.9 per cent higher chances to face emotional violence and 6.7 per cent higher probability to face any types of violence during the COVID-19 period, compared to non-pregnant women, *ceteris paribus*.

Husband's Alcoholism: A very large number of literatures (Krishnan 2005; Prasad 2009; Babu and Kar 2010; Kamat et al. 2010; Graham et al. 2011; Chibber 2012; Mahapatro et al. 2012; Sinha et al. 2012; Stanley 2012; Das et al. 2013; Kimuna et al. 2013; Madhivanan et al. 2014; Begum et al. 2015; Krishnakumar and Verma 2021, among others) found husband's alcoholism as one of the important predictors of DV on women. On the similar line, this paper (Table 3) also finds that husband's alcoholism (dichotomous variable) has a large, positive and highly significant effect on DV, such as, a woman whose husband drinks alcohol has 18 per cent more probability to face less severe violence; 8 per cent more chances to face severe violence; 5.7 per cent higher likelihood to face sexual violence; 10 per cent greater probability to face emotional violence; and finally, 18 per cent higher probability to face any violence, compared to a woman whose husband doesn't have a drinking habit, *ceteris paribus*. However, the interaction term results (Table 4) between covid and alcoholism variables indicate that COVID-19 period does not significantly change the pattern of the impacts of alcoholism on DV.

Woman justifies wife beating: Women, who themselves justify wife beating, can have an aggravating effect on DV as these women would not resist violence (Begum et al. 2015). In the analysis (Table 3) using women's beating justification as a binary control variable it is found that women who believe beating is justified in at least one of the circumstances have a 13 per cent higher likelihood for facing any violence; 11.6 per cent higher likelihood for less

severe violence; 3.5 per cent more chances to face severe violence, 2.9 per cent higher chances for sexual violence and 6.2 per cent greater probability to face emotional violence, compared to women who don't justify wife beating in any circumstances, *ceteris paribus*. In Table 4, the interaction term analysis between covid and beating justification by women found that during COVID-19 period women who themselves justify wife beating are around 2.3 per cent significantly more likely to face any DV, and particularly, less severe violence and emotional violence, compared to women who don't justify wife beating for any reasons, *ceteris paribus*.

Apart from these above-mentioned predictors, female-headed household and ratio of female to male members in the household are found to have small insignificant effects on the likelihood of DV. Gender of the first-born child is included as a control variable in the analysis as a research by Das (2020) found first born sons have significant impact on women's intra-household status. However, in this paper the effect of the first-born son is found small and insignificant on DV, both in general time and during pandemic time. Compared to urban locations, women in rural areas have less likelihood to face DV (significant only in case of severe violence), *ceteris paribus*. Woman's age and education years difference with her husband have significant and negative but small effects on the likelihood of DV, this means compared to women much younger and less educated than husband, women who are of similarly aged or educated as their husband are more likely to question the dominance and authority of husband, and thus, result in conflicts and have higher chances of violence. Women who have a mobile phone are less likely to face DV both in general (significant only for sexual violence) and in pandemic time (significant only for severe violence), compared to women without a mobile, *ceteris paribus*. Compared to any other religion, it is found that Hindu women are 2.8 per cent (highly) significantly more likely to face severe violence, or Muslim women are 5.7 per cent more likely to face less severe violence; 3.9 per cent more likely for severe violence, and overall, 4.7 per cent higher probability to face any DV, *ceteris paribus*. Using interaction terms between religion (either Hindu or Muslim) and covid variable, negative and significant effects are found for both Hindu and Muslim women in case of severe violence and sexual violence. Further, it is found that women whose interviews were interrupted are significantly more likely to face higher DV (1.2 per cent for sexual violence, 2.6 per cent for emotional and 2 per cent for any type of DV) compared to women who continued their interview without such interference, *ceteris paribus*.

Attempts for robustness examination are conducted using different subgroups, different sets of control variables and/or different estimation models including logistic regressions, and the results remain robust. Further, to test the placebo effect, the pre-COVID-19 interview period (before April 2020) of the survey is divided into two parts: if the interview of the respondents was conducted in any time in 2019 gets '0' and interview conducted during 2020 till March gets '1', and this variable is named '*prepandemic*'. This can be an evidence of placebo effect and as expected there is no significant change in the trend of DV in the pre-pandemic period.

5.3. Policy Discussion and Conclusions

Using NFHS-5 data collected on nationally representative sample of Indian women during 2019-2021, this paper provides an evidence for the trend of DV in the COVID-19 pandemic period compared to the pre-pandemic period. In contrast to the evidence available in the existing literature, this paper finds a strong and highly significant evidence towards the decline of likelihood of all types of DV during/post COVID-19 lockdown period compared to the pre-COVID-19 period. Not only that, the results also found interesting patterns in some of

the important parameters of violence during COVID-19. On the one hand, the control variable analysis finds that women in wealthy households are less likely to face DV in general, but during the COVID-19 crisis, the women in wealthy households are significantly more likely to face DV. The reverse pattern of DV during the crisis time compared to general times can be explained as that wealthy families may face more stress to maintain their living standards and can be a cause for increasing DV, compared to poor households which were already struggling for survivals and already women in poor household were facing more DV, thus no significant change is found in DV on poor women due to pandemic. On the other hand, working women are found to have more chances to face violence by partner compared to a non-working woman, in general, whereas during/post COVID-19 period working women's probability to face DV becomes significantly negative. Similar results regarding the influence of women's ownership of property/land on DV are found, such as, in general women with property ownership are found to have more likelihood of facing DV compared to women without any property, whereas during/post COVID-19 the patterns reverse for women who own property. In patriarchal society, women are still considered to be homemakers and dependent on husband, whereas men are considered as primary earners for the household. In this patriarchal setup, women's economic empowerment (either by being employed or by owning property) goes against that social gender stereotyped role of women as dependent, and thus, may seem as a threat towards male authority and control in the family. Research by Hornung and McCullough (1981) and Atkinson and Boles (1984) discuss that deviation from the dependency norm by a self-dependent wife risks a couple's social accountability, and thus, both husband and wife often encounter negative judgements from relatives, friends and colleagues. In such cases, such couples are likely to compensate by adopting gender-traditional behaviour elsewhere in the marriage for reclaiming gender accountability in the eyes of self, partner and others. Thus, working wife can be a cause of threat to man's authority and capability to earn enough for the household, may cause frustration and higher chances of DV, and this claim is found to be true in the results of this paper. However, when the COVID-19 pandemic appeared, the increasing uncertainty in the labour market may cause more acceptance towards working women (similarly for women who own any property) as it provides additional financial security to the family to fall upon, thus can reduce the chances of violence for the working wives, compared to any other time than crisis.

Another interesting result is found for pregnancy status of women. Compared to any women, a pregnant woman is found to face significantly less violence in general time, but more likely to face violence during/post COVID-19 lockdown. So, in general time, pregnancy can be good news for the family and family members can be more caring and careful towards the pregnant women, but during crisis time, pregnancy can be seen as an additional burden to the family, can increase stress and can cause more violence.

The previous results showing a trend reversal from general to post-COVID-19 period reveal that indicators that imply additional financial support (such as women working or owning property) to fall upon during uncertain times can be reasons for declining DV, whereas anything that may increase the burden of the household (such as pregnancy) can be a cause for higher violence. In conclusion, the results imply that domestic violence in general may have decreased if women can be a source of support to the family in the middle of uncertainty, but domestic violence can increase if women could not be a source of solace and on the contrary increase burden in the family, such as by being pregnant. As using NFHS-5 data this paper finds a declining trend of domestic violence during the COVID-19 pandemic time, it would be interesting to examine whether this trend continues or again bounces back when we get the next round data of NFHS-6 which will be conducted during 2023-24.

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