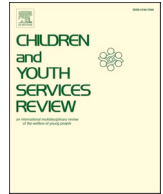




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Reintegration with family and intimate partner violence (IPV) against women among the returnee migrant worker's family during COVID-19 induced lockdown: A Block-level analysis using multinomial logistic regression model

Tanu Das^{a,*}, Tamal Basu Roy^a, Ranjan Roy^b

^a Department of Geography, Raiganj University, Uttar Dinajpur, West Bengal, India

^b Department of Geography and Applied Geography, University of North Bengal, West Bengal, India

ARTICLE INFO

Keywords:

Intimate Partner Violence
COVID-19
Migrant Worker
Economic Condition
Multinomial Logistic
Alcohol Consumption

ABSTRACT

Worldwide the incidents of intimate partner violence (IPV) have increased due to lockdowns related to the COVID-19 pandemic. This paper aims to identify the association between IPV and different socio-economic factors of women & their most recent partner during the COVID-19 pandemic in returnee migrant worker families in Balurghat Block (area 363.9 sq. km), Dakshin Dinajpur district, West Bengal, India. A total of 159 ever-married women were included in this present study, whose husbands were engaged as workers elsewhere at least two years before the lockdown. The result of the multinomial logistic regression model revealed that, after controlling for other variables, the women who had the poorest wealth background were 37% more likely (RRR: 1.37; 95% CI [1.18, 1.47]) to experience IPV almost every day in a week than those who had a middle wealth background. Conversely, the women who had the poorest wealth background were 37% (95% CI [0.57, 0.82]) less likely to experience IPV for three to four days in a week. Furthermore, the women whose partners were currently unemployed were 21% more likely (RRR: 1.21; 95% CI [1.16, 1.36]) to experience IPV almost every day in a week than those whose husbands were currently employed. The women whose husband's had a loan were 26% more likely (RRR: 1.26; 95% CI [1.25, 1.33]) to experience IPV for three to four days in a week than those whose husbands did not have any loans. The likelihood to experience IPV almost every day in a week is higher among those women whose husbands attain weekly (31%) loan instalment pattern and consume alcohol daily (31%). Interventions are needed at the grassroots level and some economic planning is required at an urgent basis.

1. Introduction

Intimate partner violence (IPV) is one of the most usual forms of violence against women in the domestic atmosphere perpetrated by the intimate partner (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002; Krug, Mercy, Dahlberg, & Zwi, 2002). Globally, IPV is a public health pandemic and has been trivialized thousands of years back. It is a significantly complex trauma that takes diverse forms for the survivor as well as for the whole family, and leads to severe behavioural, physical, and psychological trauma. Long-term detrimental impacts of such violence comprise sexual and reproductive health problems, physical problems, psychological and behavioural problems, anxiety, and fatal health outcomes (e.g., homicide, suicide, and maternal mortality)

(Campbell, 2002; Krug et al., 2002; Mapayi et al., 2013; Rogathi et al., 2017). It has also been documented that IPV in the domestic atmosphere threatens the dignity, power of autonomy, and economic opportunities of women (Ahmed, Koenig, & Stephenson, 2006; Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008). Previous studies concluded that IPV is associated with physical injuries of the victims, adverse pregnancy and birth outcomes, sexually transmitted diseases, and maternal mortality and morbidity (Abdollahi, Abhari, Delavar, & Charati, 2015; Kouyoumdjian et al., 2013; Krug, Dahlberg, et al., 2002; Krug, Mercy et al., 2002; Li et al., 2014). This unresolved social issue also impacts intergenerational health outcomes of children such as undernutrition, mortality, and morbidity. (Ahmed et al., 2006). A worldwide cross-sectional health survey determined that between 10% and 50% of

* Corresponding author at: Department of Geography, Raiganj University, Uttar Dinajpur, West Bengal 733134, India.

E-mail address: tanudas.04321@gmail.com (T. Das).

female participants who have ever had an intimate partner will experience violence at some point in their lives (Watts & Zimmerman, 2002). Globally it is estimated that nearly one in every three women experience physical and/or sexual violence perpetrated by a partner in their lifetime (Devries et al., 2013). Despite several efforts initiated in India to protect girls and women, the prevalence of IPV remains unexpectedly high, with 31.1% of ever-married Indian women aged between 15 and 49 experiencing spousal violence from 2015 to 2016 (International Institute for Population Sciences [IIPS], ICF. (2017) (2017), 2017) and around 4% of women experiencing violence during pregnancy. As per the latest National Crime Records Bureau's (NCRB) data, in 2018 around 90,000 registered cases were connected to crime against women in India; out of which, nearly one third was perpetrated by her partner or relatives (Outlook, 2020). Factors like stress, economic instability, uncertainty, and emotional disappointment may cause episodes of violence in the family (Hanif & Siddique, 2020). Previous literature connected to spousal violence in India is well-documented and has acknowledged that spousal violence has a core connection with education, caste affiliation, religious belief, unlawful dowry demands, sex of the first-born child, liquor consumption nature by husband, and unemployment status of women and their husbands (Garg, Singh, Rustagi, Engtipi, & Bala, 2019; Kalokhe et al., 2017; Pallikadavath & Bradley, 2019; Ram et al., 2019; Weitzman, 2020). Husbands domineering role in the family, patriarchal societal norms, and women's justification to wife battering also play a crucial role for IPV in the domestic environment (Dalal & Lindqvist, 2012; Sinha et al., 2012).

Previous literature also exhibits the increasing trend of domestic violence in post-disaster periods. For instance, IPV against women increased around 48% after the 2004 Indian Ocean tsunami (Rao, 2020), and former epidemics such as Ebola or Zika (in which people had to also stay at home for an extended period) have also had a positive association with IPV in the domestic atmosphere (Onyango, Resnick, Davis, & Shah, 2019). A countrywide study based on the routine activity approach concludes that domestic violence is a relevant problem in India and problem was exacerbated by the COVID-19 lockdown (Krishnakumar & Verma, 2021). The study also remarks that partner's unemployment status and alcohol consumption behaviour were the main motivators for performing violence offences. Despite this evidence, there is a dearth of research related to domestic violence during pandemics in India because there is currently no large-scale sample data from which we can examine the prevalence and motivating factor of IPV in the domestic atmosphere during and after the first wave of COVID-19-induced lockdowns. With this backdrop, this block-level study based on field survey data addresses the association between the severity of violence experienced by the women perpetrated by their husbands and the husbands' exposures to IPV in the COVID-19 lockdown. This current study may also give an insight into economic crises of lower-income families and the lockdown's impact on IPV inside the home (e.g., poverty, unemployment, and governmental/non-profit loan history). The main inclusion criterion of this study is the selection of migrant workers, as they were more economically vulnerable and suffer from a variety of socioeconomic conditions, such as poverty and unemployment, during the lockdown. The unexpected nature and suddenness of the lockdown in 2020 sparked an exodus of helpless and hopeless migrant workers as all construction and industrial activities were stopped, leaving many daily wagers jobless. This study can only be deliberated as the doorstep towards a more profound understanding of IPV during COVID-19-induced lockdowns.

2. Background and hypothesis development

The Prime Minister of India initially imposed a countrywide lockdown for only one day on 22nd March 2020 to prevent the rapid spreading of COVID-19 cases across India and further. The lockdown was subsequently widened to a week, thereafter for 21 days and finally up to 3rd May 2020. This lengthy COVID-19-induced lockdown and

other imputed social distancing measures were fixed to restrain the pandemic, but it excruciated women more and made them more vulnerable to domestic violence offences. In this crisis phase of the lockdown, women were also fighting with a silent crime within their homes. The grasp of IPV perpetrators has tightened during the pandemic situation in India. The National Commission for Women (NCW) reported that after the announcement of the COVID-19-induced lockdown, there was a 100% rise in domestic violence complaints within a fortnight. Further, the data from NCW conveyed that complaints pertaining to domestic violence offences doubled after the COVID-19 lockdown were imposed across India (Malathesh, Das, & Chatterjee, 2020). Moreover, various sources, such as the Tamil Nadu police, claimed a rapid increase in domestic violence cases during the COVID-19-induced lockdown, with at least 40 cases registered every day (Kannan, 2020) and received about 25 cases daily. Likewise, the Bangalore police claimed a spike in complaints from 10 to 25 cases daily from the victims of IPV (Peter, 2020). These data indicate that domestic violence offences increased countrywide during the lockdown. Kinds of literature over the years have shown a direct linkage between times of crisis and interpersonal violence. COVID-19 pandemic gives an enabling environment of fear and uncertainty that may exacerbate diverse forms of violence against women. For example, former epidemics such as Ebola or Zika (in which people also had to stay at home for an extended period) have had a positive association with IPV in the domestic atmosphere (Onyango et al., 2019). Moreover, economic insecurity, financial instability, and isolation are also some of the factors that contribute to making domestic violence even more prevalent (Anderberg, Rainer, Wadsworth, & Wilson, 2016; Bamiwuye & Odimegwu, 2014; Das & Basu Roy, 2020; Gerstein, 2000; Reed, Gupta, Biradavolu, Devireddy, & Blankenship, 2010). This kind of violence offence can be attributed to certain vulnerabilities due to some causes such as income inequality in the household, physical over powering by the men, economic pressure, stress, anxiety, and frustration due to quarantine. This has led to women being the worst affected across social strata. Thus, lockdowns present as a challenge for women and many media outlets have reported rises in domestic violence offences, all the while there is a shortfall of research on lockdown and IPV. In this present context, this block-level empirical study takes the role of a micro-level case study among women belonging to returnee migrant worker's families that may enable us to determine how economic pressure, unemployment, poverty, and other social issues affect the housewives through violence in domestic environments. Our study hypothesizes that (a) most of the perpetrators of domestic violence offences belong to the poorest household wealth status, (b) the partner's unemployment status is a leading factor that contributes to IPV experiences by women almost every day in each week, and (c) a husband's alcohol or liquor consumption on daily basis made women more vulnerable as a survivor of IPV.

3. Data and methodology adopted

3.1. Data source

This study used a block-level field survey database that was carried out across Balurghat block, Dakshin Dinajpur District, West Bengal, India between 6th September 2020 and 3rd October 2020 when the Indian government announced the iterative reopening phases following the COVID-19-induced lockdown. The multistage purposive random sampling technique was used to gather information systematically from the study participants. This study area is structured by holding a total of 11-gram panchayat, one municipality, two census towns and one outgrowth area. The survey data that was extracted from the villages were representative of rural participants, while the participants from the municipality, census town and outgrowth areas were representative of urban participants. From the total, at first, we chose 6-gram panchayat from where the maximum young adults go outer region for working purposes and then we pick three villages from each chosen gram

panchayat by keeping in mind the maximum distance from each other to mitigate the socio-cultural bias. Selections of migrant workers' households were made with the statement of local people, regional club authority and sometimes from 'Asha Karmi'. We select participants from those households where at least one family member came back to their own house from their working place due to COVID-19-induced lockdown. The detail of sampling procedure and selection of study population has been given below through a table.

3.2. Study design and Sample size

To assess the association between intimate partner violence and the socioeconomic condition of migrant workers specifically in COVID-19-induced lockdown, a cross-sectional study design was adopted with inferential statistics. To carry forward this study we maintained the following inclusion and exclusion criteria: (a) Data were collected from those ever-married women whose ages ranging between 15 and 49 years old and (b) Whose husband was a migrant worker for at least 2 years and not stay at home normally for a long time but due to COVID-19-induced lockdown he returned to his house and lead life. We excluded those participants whose partner did not live at home normally and do not work too far but due to COVID-19-induced lockdown, he came back to his home. By maintaining all those inclusion and exclusion criteria the women who were agreed to give their statement regarding violence-related issues in their intimate relationship were selected for this present study. Therefore, this study was limited to intimate partner violence only with migrant worker's families. Firstly, a total of 180 ever-married women were selected from 18 different villages, one municipality, one outgrowth, and one census town area of Balurghat block. Thirteen women denied cooperating with the surveyor and eight women did not complete their schedule fully. The final analytical samples were 159 whose information was included in this study. As per various previous literature and National Family Health Survey (NFHS) earlier and recent reports there have mainly three forms of domestic violence: (a) physical violence, (b) emotional violence, and (c) sexual violence. However, in this present study, we mainly focused on physical and emotional violence, and the subsequent frequency of such violence was recorded if it was committed within two months preceding the survey. Identification of the nature or form of violence was made based on the following seven questions.

- (a) Does your husband slap you or either twists your armor pull your hair?
- (b) Does he push you, shake you or throw something at you?
- (c) Does he punch or kick you, drag you or beat you up?
- (d) Does he attack you with a knife, gun, or any other dangerous weapon?
- (e) Does your husband try to humiliate you in front of others?
- (f) Does he verbally abuse you to hurt or harm you?

- (g) Does your husband often insult you or make you feel bad about yourself?

The affirmative responses from question (a) to (d) were recorded as physical violence of the victims and affirmative response from question (e) to (g) were recorded as the emotional violence of the victims. If we got an affirmative answer from any participant, we then asked its frequency per week (see Table 1).

3.3. Ethical consideration

All the study participants were informed about the objectives and purpose of the study before getting involved in this study, and we have received voluntarily informed consent from all the participants.

3.4. Outcome variable

The outcome variable of this current study is women's (aged 15–49 years) surviving nature of intimate partner violence perpetrated by their husband who is a migrant worker and returned to his home due to COVID-19-induced lockdown. At the time of the field, survey women were asked whether "they are the victims of intimate partner violence in this particular COVID-19-induced lockdown phase." If any of them respond affirmatively then she was further asked about the frequency of violence offences perpetrated by her husband per week. To reach the specific goal of this study, women's surviving nature of intimate partner violence was categorized into three groups: (a) weekly not surviving with any kind of IPV, (b) weekly 3–4 days surviving with IPV, and (c) weekly almost every day surviving with IPV. The frequency of violent offences that happened with women was recorded if the violence was occurred within two months preceding the survey and that is why the categorization was done weekly.

3.5. Explanatory variables

Husband's exposure to IPV in two months preceding the survey was the key exposure variable of this present study. A group of questions were asked to the women on the behalf of their husbands for gathering information associated with violent offences perpetrated by their partner. Only physical and emotional violence have been incorporated in this present study. All the factors that have been included as exposure variables in this present study were selected by keeping in mind the two most common domestic violence theories; these are (a) Structural theory and (b) Socio-physiological theory. Both these theories confirmed that economic stress, other stressful situations, deprivation, low resource settings, frustration, unemployment etc. are some basic reasons for intimate partner violence in the domestic sphere. All the explanatory variables mainly express the current economic situation of the perpetrator. All the selected categorical variables and their associated coding have been given in the following Table 2.

Table 1
Selection of study participants from selected Gram Panchyets (GP) and Urban Units [$n = 180$].

Name of the Gram Panchayat	Selected for Surveying	No. of Collected Sample	Name of the Urban Unit	Selected for Surveying	No. of Collected Sample
Amritakhanda	Amritakhanda	17	Balurghat	Balurghat (M)	17
Bhatpara			Parpatiram	Parpatiram (CT)	14
Boalder	Boalder	21	Baidyanath Para	Baidyanath Para (OG)	27
Bolla	Bolla	17		Chakvrigu (CT)	
Chakvrigu					
Chingishpur	Chingishpur	13			
Danga	Danga	23			
Gopalbati					
Jalghar	Jalghar	31			
Nazirpur					
Patiram					

Note: Multistage purposive random sampling technique was employed to extract the sample; CT: Census Town; M: Municipality; OG: Out Growth.

Table 2
Selection of categorical variables and their associated coding [Total Explanatory Variables = 6].

SL No.	Variables	Associated Coding
1.	Household economic condition	Poorest = 1; Poor = 2; Middle = 3
2.	Husband's current employment status	Unemployed = 1; Employed = 2
3.	Husband's current loan having history	Have loan = 1; Not have loan = 2
4.	Husband's loan installments pattern	Weekly = 1; Monthly = 2; Other = 3; Not have installments = 4
5.	Husband's alcohol consumption pattern	All most every day = 1; Occasionally = 2; Not alcoholic = 3
6.	Place of residence	Rural = 1; Urban = 2

The household economic condition of the women was identified from their ration card. A few years ago, the central government and state government jointly introduced 5 types of digital ration card across India based on household economic conditions and other basic amenities they had; these are (a) AAY, (b) SPHH, (c) PHH, (d) RKSJ-1, and (e) RKSJ-2. For the purpose of the study, a household's economic condition was categorized further into three groups based on government priority of food distribution among the households: (a) AAY card holding households come under the poorest category, (b) SPHH card holding households comes under the poor category, and (c) PHH card holding households comes under middle category. Due to the nature of the survey's focus on migrant worker families, we did not include women who had the RKSJ categories of ration cards. All other explanatory variables included in this study were the direct responses of the women.

3.6. Statistical analyses

Descriptive statistics were performed to understand the distributional nature, forms, and violence occurrence characteristics of the study population. A bivariate percentage distribution was then carried out to estimate a woman's surviving nature to intimate partner violence by exposure variables. A chi-square test statistic with *Phi* and *Cramer's V* effect size were adopted later to test the associational differences of violence occurrences characteristics with participants by various exposure variables. Finally, a multinomial logistic regression (both crude and adjusted) model was applied to assess the relationship between husband's exposure to intimate partner violence in particular COVID-19-induced lockdown and women's surviving nature with intimate partner violence. The command 'mlogit' has been used with ending 'rrr base (defined)' to carry out the relative risk ratio. The 'rrr' option instructs 'mlogit' to show relative risk ratio, which resemble the odd ratios given by logistic. The formula off 'rrr' can be written as

$$rrr_{jk} \times \frac{P(y = j|x_k)}{P(y = base|x_k)} = \frac{P(y = j|x_k + 1)}{P(y = base|x_k + 1)}$$

In general, the relative risk ratio for outcome *j* of *y*, and predictor *x_k*, equals the amount by which predicted odds favouring *y = j* (compared with *y = base*) are multiplied, per 1-unit increase in *x_k*, other things being equal.

Only those variables were included in the final regression model which was shown significant differences in Chi-square test statistics. This study only reported the result of the adjusted model where all the husband's exposures to intimate partner violence were controlled for at a time. The multinomial logistic regression results were expressed by Relative Risk Ratio (RRR) with 95% Confidence Intervals (CIs) and the significance levels were presented by *P*-values. All the statistical analyses were performed using STATA version 15.0 (StataCorp LP, college station, TX, USA).

4. Results

4.1. Socio-economic characteristics of the respondents

Table 3 shows out of the total participants (*N* = 159), the majority of whom belonged to poor household economic community (44.03%), more than half of the participant's intimate partner was currently employed (52.83%), though they came back from their earlier working place due to the COVID-19-induced lockdown. Nearly 46% of the participants' intimate partners had any kind of loan and most of them paid the loan instalment on a weekly basis (25.79%). Over half of the participants' partners consumed alcohol occasionally (52.20%), whereas the corresponding figure for those who were consuming alcohol daily basis was 22.64%. An overwhelming majority of the participants lived in rural areas (63.52%).

4.2. Suffering to IPV by the study participants

Of the total participants, 27.67% of women reported that they survive with partner violence all most every day in a week, while 35.22% of women confess about their tolerating nature of partner violence weekly 3 to 4 days. The rest of the women (37.11%) do not have to suffer any kind of intimate partner violence offence from the two months preceding the survey. Approximately 1 in every 4 sample women (24.53%) experienced physical violence from their intimate partner in this contemporary period. In addition to this, about 40% of the women keep patience though they continue suffering from emotional or verbal abuse perpetrated by their partner [Table 4].

4.3. Results for significance test along with effect size

Table 5 estimates the significant differences of IPV tolerate behaviour by the women in selected contemporary socioeconomic circumstances. Not suffered women with any kind of IPV is significantly lower among those who belonged to poorest (22.0%) household economic community but the proportion of suffering IPV all almost every day in a week is significantly higher among those women who pertained to poor (34.3%) household economic community. We also found that the violence suffering behaviour in all most every day in a week is significantly higher among those women whose husband were currently unemployed (33.3%) after coming back from his earlier working place due

Table 3
Contemporary socio-economic characteristics of respondent's partner, [*n* = 159].

Characteristics of Sample	Sample	Percentage
<i>Household economic condition</i>		
Poorest	41	25.78
Poor	70	44.03
Middle	48	30.19
<i>Current employment status</i>		
Currently Unemployed	75	47.17
Currently Employed	84	52.83
<i>Currently having loan history</i>		
Has loan	72	45.28
Does not have loan	87	54.71
<i>Loan installment pattern</i>		
Weekly	41	25.79
Monthly	18	11.33
Other	13	08.17
Does not have installments	87	54.71
<i>Alcohol consumption behavior</i>		
Daily	36	22.64
Occasionally	83	52.20
Not alcoholic	40	25.15
<i>Place of residence</i>		
Rural	101	63.52
Urban	58	36.48

Table 4
Percentage distribution of nature and forms of violence, [n = 159].

Variables	Sample (n)	Percentage (%)
<i>Nature of Violence offence with intimate partner</i>		
Almost every day in a week	44	27.67
Weekly 3 to 4 days	56	35.22
Not surviving with any kind of IPV in a week	59	37.11
<i>Form of Violation</i>		
Physically violated	39	24.53
Emotionally violated	61	38.36
Never violated	59	37.11

Table 5
Cross tabulation showing women’s surviving nature of IPV by various contemporary socio-economic characteristics of respondent’s husband [n = 159].

Variables	Women’s surviving nature with IPV (%)			Chi-square & P-Value	Effect Size
	A	B	C		
<i>Household economic Condition</i>					
Poorest	26.8	51.2	22.0	14.631 [0.006]	0.214 [Grater Effect]
Poor	34.3	32.9	32.9		
Middle	18.8	25.0	56.3		
<i>Current employment status</i>					
Currently unemployed	33.3	44.0	22.7	12.728 [0.002]	0.301 [Grater Effect]
Currently employed	22.6	27.4	50.0		
<i>Currently having loan history</i>					
Has loan	29.2	47.2	23.6	11.947 [0.003]	0.274 [Grater Effect]
Does not have loan	26.4	25.3	48.3		
<i>Loan instalment Pattern</i>					
Weekly	34.1	43.9	22.0	14.395 [0.026]	0.213 [Grater Effect]
Monthly	31.3	50.0	18.8		
Other	07.7	53.8	38.5		
Does not have instalment	26.4	25.3	48.2		
<i>Alcohol consumption behavior</i>					
Daily	33.3	41.7	25.0	13.339 [0.010]	0.305 [Grater Effect]
Occasionally	32.5	36.1	31.3		
Not alcoholic	12.5	27.5	60.0		
<i>Place of residence</i>					
Rural	41.36	47.92	10.72	7.529 [0.097]	0.006 [No Effect]
Urban	33.29	49.23	17.48		

Note: A = Weekly almost every day surviving with IPV; B = Weekly 3 to 4 days surviving with IPV; C = Not surviving with any kind of IPV; P-value is derived from Pearson’s Chi-square test; Effect size of explanatory variables derived from Phi and Cremer’s -V approach; Effect Size: 0.01 = Small effect; 0.06 = Moderate effect; 0.14 = Grater effect.

to COVID-19-induced lockdown. Women whose husbands had a loan were suffering more (47.2%) with any kind of partner violence at least three to four days a week. In addition to this, more than 65% of women survive with IPV all most every day in a week if their partner’s loan instalment pattern was on either a weekly or monthly basis. The IPV surviving nature was nearly the same among those women whose husbands’ alcohol consumption was daily (33.3%) or occasionally (32.5%). Respondents living in rural areas were considerably more likely to suffer from IPV all most every day in a week than those who were living in urban areas, but it is not statistically significant.

4.4. Results for final estimation model

Table 6 represents the output of the multinomial logistic regression model to assess the association between participants’ partner’s exposure to IPV and weekly violence suffering behaviour of women in this contemporary COVID-19-induced lockdown situation. It can be seen from the adjusted logistic model that most of the exposures make a

significant contribution to the model. Considering the results for women surviving almost every day with IPV, the model indicates that after adjusting for other variables in this model, the women who belonged to the poorest (RRR: 1.37; 95% CI [1.18–1.47]; P: 0.016) household economic community were 37% more likely to experience IPV than those who belonged to the middle (ref. Cat) household economic community. On the other hand, women who belonged to the poor household economic community (RRR: 1.19; 95% CI: [1.11–1.27]; P: 0.000) were 19% more likely to experience IPV at least three to four days in a week even after controlling for other variables. This study also revealed that some contemporary economic conditions and behavioural characteristics of the participant’s partner were significantly associated with experience to IPV almost every day in a week or at least three to four days in a week. Compared with not experienced to IPV in a single day of a week, the likelihood to experience IPV in almost every day in a week is significantly more likely among those women whose husbands were unemployed (RRR: 1.21; 95% CI [1.16–1.36]; P: 0.031) and had a loan (RRR: 1.17; 95% CI [1.09–1.26]; P: 0.000) history in the COVID-19 pandemic than those who were employed and did not have any loan history. The probability of experiencing IPV almost every day in a week was higher among those women whose intimate partner paid the loan instalment weekly (RRR: 1.31; 95% CI [1.27–1.44]; P: 0.031) than those whose husbands did not any pay any loan instalment. In addition to this, it is also estimated that the probability of experience IPV for three to four days in a week was significantly higher among those women whose husband paid the loan instalment monthly (RRR: 1.14; 95% CI [1.11–1.23]; P: 0.001). Participant partners’ alcohol consumption behaviour was also positively correlated with women’s weekly violence suffering behaviour. Women, whose husband consumes alcohol almost every day in a week, were at more risk (RRR: 1.31; 95% CI [1.26–1.38]; P: 0.000) to experience IPV almost every day in a week. The study also confirmed that the women whose husbands consume alcohol occasionally were at more risk (RRR: 1.18; 95% CI [1.14–1.27]; P: 0.000) to suffer IPV at least three to four days in a week than those women whose husbands were not alcoholics.

5. Discussion

This study looks at the association between women’s experience of IPV and their husbands’ socioeconomic exposures during the COVID-19-induced lockdown. The findings of this study indicate that women who belonged to the poorest household economic condition are more likely to experience IPV almost daily. Conversely, those women who belonged to the poor household economic condition are less likely to experience IPV daily and more likely to experience IPV for three to four days a week. Some previous pieces of literature from India and elsewhere also concluded similar results, where it has been seen that women’s experience to IPV increases with lowering down the wealth status of the respondent and vice versa (Dalal & Lindqvist, 2012; Das & Basu Roy, 2020; García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005; Kishor & Bradley, 2012; Rivera-Rivera et al., 2004). But this result is indecisive because previous kinds of literature have also shown that experience of IPV varies nonlinearity with household wealth (Bamiwuye & Odimegwu, 2014). At the same time, a study conducted in India has shown an inverse relationship between socioeconomic status and IPV (Das & Basu Roy, 2020; Panda & Agarwal, 2005). The sudden proclamation of nationwide lockdown to contain the spread of COVID-19 disease pushed the migrant workers towards an unfortunate situation marked by hunger, unemployment, unforeseen human miseries. It is evident that the probability of suffering IPV is more among those women whose husbands were currently unemployed after coming back from their working place. Joblessness, economic insecurity, food crises, and the burden of the family made the men mentally agitated; as a result, they express their unexpected anger on their wives. As we know violence perpetrated by the partner is admitted as an expression of power, supremacy, and abusive act against women (Mondal & Paul, 2020; Paul &

Table 6

Multinomial logistic regression model accessing the association between IPV and other contemporary socio-economic characteristics of respondent's husband [Base Outcome: Not surviving with any kind of IPV in a week].

Variables	Weekly almost every day surviving with IPV			Weekly 3 to 4 days surviving with IPV		
	RRR	[95 % CI]	P-Value	RRR	[95 % CI]	P-Value
<i>Adjusted Model</i>						
Household economic condition						
Poorest	1.37	[1.18–1.47]	0.016*	0.63	[0.57–0.82]	0.003*
Poor	0.66	[0.52–0.72]	0.007*	1.19	[1.11–1.27]	0.000*
Middle®						
Husband's current employment status						
Currently Unemployed	1.21	[1.16–1.36]	0.031*	0.89	[0.82–0.99]	0.003*
Currently employed®						
Husband's current loan having history						
Have loan	1.17	[1.09–1.26]	0.000*	1.26	[1.25–1.33]	0.326
Not have any loan®						
Loan instalment pattern						
Weekly	1.31	[1.27–1.44]	0.031*	0.77	[0.68–1.02]	0.043*
Monthly	1.07	[1.01–1.13]	0.064	1.14	[1.11–1.23]	0.001*
Other	0.92	[0.81–1.02]	0.871	1.08	[1.01–1.11]	0.049*
Not have any instalment®						
Husband's alcohol consumption behavior						
Almost every day	1.31	[1.26–1.38]	0.000*	1.02	[0.97–1.13]	0.000*
Occasionally	0.84	[0.76–0.98]	0.000*	1.18	[1.14–1.27]	0.000*
Not alcoholic®						

Note: RRR = Relative Risk Ratio; CI = Confidence Interval; ® = Reference Category; * = statistically significant variables at 95% CI.

Mondal, 2021). The COVID-19-induced lockdown and its restrictions caused unprecedented job losses, as well as the deterioration of both the quality and quantity of employment opportunities and are estimated not to have returned anywhere near to the pre-lockdown numbers yet. Nevertheless, some previous studies estimated that both men and women unemployment states are positively associated with gender-based violence (Cunradi, Todd, Duke, & Ames, 2009; Tur-Prats, 2021). Tension, panic, and pressure to maintain timely loan instalments made the men anxious and they released their pressure through abusive behaviour, as some so-called orthodox men regarded their partner as property rather than priority. Furthermore, partner's loan having history in this COVID-19 crisis with weekly or monthly instalment patterns were also found to be a strong predictor for experiencing IPV inside the home. There has also a growing body of research that establishes the linkage between husband's liquor consumption behaviour and higher risk to experience IPV in the domestic atmosphere and in addition to this our result also consistent with such results (Cubbins & Vannoy, 2005; Gorshkova & Shurygina, 2003; Stickley, Timofeeva, & Sparén, 2008). These study results also found that the likelihood of experiencing IPV almost daily is higher among those women whose partners consume alcohol daily. The imposition of nationwide lockdown was worse for women whose husbands had failed to get any job after coming back from their workplace. As a result of their joblessness, these men were dependent on their wives for money, and if they squandered their wives' wages on alcohol, it would result in the men physically and emotionally abusing their wives.

There were several potential limitations of this study. Women experiencing IPV were recruited in this study from only some returnee migrant worker families. The study estimation is not conclusive for all women in the society, as we cannot consider any individual-level or contextual-level determinants. Apart from this, we had to rely solely on the participants' responses about the frequency of their husband's liquor consumption patterns. Therefore, a more detailed estimation is needed by considering all household-level, individual-level, and contextual-level determinants to apprehend a more nuanced generalization.

6. Conclusion

Violence against women has always been a serious public health concern, but due to the admiration and culture of our society, it is seldom talked about because it hurts the sentiments of our relatives. This

violence offence has seen a new spike in recent COVID-19-induced lockdown restrictions. This study finds that nearly 63% of ever-married women of Balurghat block experienced either physical violence or emotional violence during this lockdown. Furthermore, this study also confirmed that the likelihood of suffering IPV almost every day in a week is significantly higher among those women who belonged to the poorest household economic conditions, whose husbands were currently unemployed, had a loan with a weekly instalment pattern, and consumed alcohol daily. In addition, the violence suffering behaviour at least three to four days in a week is higher among those women who belonged to poor households, whose husbands had a loan with a monthly instalment plan, and consumed alcohol occasionally. In the COVID-19-induced lockdown, most of the government, private, and public services were disrupted; therefore, it would be very challenging for women to confess and seek any relief. It is our appeal to the government to organise virtual, media-based, or community-based programmes such as communication and counselling, to teach young people how to create and maintain healthy relationships. It is an urgent need for women by the government to inform them about their rights and law against violence that may protect them. We also want to avert the national, state, and local governments for helping such unemployed returnee migrant workers by giving some financial assistance and daily needs that may protect the women to some extent.

Funding

This research received no specific grant from any funding agency, commercial entity, or not-for-profit organization.

Availability of Data

The entire study has been done using field survey data, collected from the women whose husbands were migrant workers. Prior permission has been taken before going to the survey. The survey has been done by maintaining all the COVID-19 protocols like social distancing, wearing of mask and use of sanitizer, etc.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

the work reported in this paper.

Acknowledgement

We are greatly thankful to Priya Das (M.Sc in Geography), Nita Das (M.A in Geography), and Jewel Sarkar (M.A in Geography) for helping us a lot to complete the survey timely. We are also thankful to all the study participants who were cooperating with us by sharing their personal information during the first wave of the COVID-19 reopening phase.

References

- Abdollahi, F., Abhari, F. R., Delavar, M. A., & Charati, J. Y. (2015). Physical violence against pregnant women by an intimate partner, and adverse pregnancy outcomes in Mazandaran Province, Iran. *Journal of family & community medicine*, 22(1), 13.
- Ahmed, S., Koenig, M. A., & Stephenson, R. (2006). Effects of domestic violence on perinatal and early-childhood mortality: Evidence from north India. *American Journal of Public Health*, 96(8), 1423–1428.
- Anderberg, D., Rainer, H., Wadsworth, J., & Wilson, T. (2016). Unemployment and domestic violence: Theory and evidence. *The Economic Journal*, 126(597), 1947–1979.
- Bamiwuye, S. O., & Odimegwu, C. (2014). Spousal violence in sub-Saharan Africa: Does household poverty-wealth matter? *Reproductive health*, 11(1), 1–10.
- Campbell, J. C. (2002). Health consequences of intimate partner violence. *The Lancet*, 359(9314), 1331–1336.
- Cubbins, L. A., & Vannoy, D. (2005). Socioeconomic resources, gender traditionalism, and wife abuse in urban Russian couples. *Journal of Marriage and Family*, 67(1), 37–52.
- Cunradi, C. B., Todd, M., Duke, M., & Ames, G. (2009). Problem drinking, unemployment, and intimate partner violence among a sample of construction industry workers and their partners. *Journal of Family Violence*, 24(2), 63–74.
- Dalal, K., & Lindqvist, K. (2012). A national study of the prevalence and correlates of domestic violence among women in India. *Asia Pacific Journal of Public Health*, 24(2), 265–277.
- Das, T., & Basu Roy, D. T. (2020). More than individual factors; is there any contextual effect of unemployment, poverty and literacy on the domestic spousal violence against women? A multilevel analysis on Indian context. *SSM-Population Health*, 12, 100691. <https://doi.org/10.1016/j.ssmph.2020.100691>
- Devries, K. M., Mak, J. Y. T., García-Moreno, C., Petzold, M., Child, J. C., Falder, G., ... Watts, C. H. (2013). The global prevalence of intimate partner violence against women. *Science*, 340(6140), 1527–1528.
- Ellsberg, M., Jansen, H. AFM., Heise, L., Watts, C. H., & Garcia-Moreno, C. (2008). Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: An observational study. *The lancet*, 371(9619), 1165–1172.
- García-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., & Watts, C. (2005). WHO multi-country study on women's health and domestic violence against women. World Health Organization.
- Garg, S., Singh, M. M., Rustagi, R., Engtipi, K., & Bala, I. (2019). Magnitude of domestic violence and its socio-demographic correlates among pregnant women in Delhi. *Journal of Family Medicine and Primary Care*, 8(11), 3634. https://doi.org/10.4103/jfmpc.jfmpc.597_19
- Gerstein, L. (2000). In India, poverty and lack of education are associated with men's physical and sexual abuse of their wives. *International Perspectives on Sexual and Reproductive Health*, 26(1), 44. <https://doi.org/10.2307/2648290>
- Gorshkova, I. D., & Shurygina, I. I. (2003). *Nasilie nad zhenami v sovremennykh rossiiskikh sem'yakh [Violence against wives in contemporary Russian families]*. Moscow: MAKS.
- Hanif, R., & Siddique, M. P. (2020). Domestic Violence during CO A Disguised Trauma within Pa.
- International Institute for Population Sciences [IIPS] & ICF. (2017). National Family Health Survey (NFHS-4), 2015-16. IIPS. Retriever, September 12, 2019, from <http://rchiips.org/nfhs/NFHS-4Reports/India.pdf>.
- Kalokhe, A., Del Rio, C., Dunkle, K., Stephenson, R., Metheny, N., Paranjape, A., & Sahay, S. (2017). Domestic violence against women in India: A systematic review of a decade of quantitative studies. *Global Public Health*, 12(4), 498–513.
- Kannan, S. (2020). Domestic violence cases in Chennai up, cops get 25 calls a day. Retrieved April 18, 2020, from The Times of India.
- Kishor, S., & Bradley, S. E. (2012). *Women's and Men's Experience of Spousal Violence in Two African Countries—does Gender Matter?* Washington, DC: ICF International.
- Kouyoumdjian, F. G., Calzavara, L. M., Bondy, S. J., O'campo, P., Serwadda, D., Nalugoda, F., ... Gray, R. (2013). Intimate partner violence is associated with incident HIV infection in women in Uganda. *Aids*, 27(8), 1331–1338.
- Krishnakumar, A., & Verma, S. (2021). Understanding domestic violence in India during COVID-19: A routine activity approach. *Asian Journal of Criminology*, 16(1), 19–35.
- Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B., & Lozano, R. (Eds.). (2002). *World report on violence and health*. Geneva, Switzerland: World Health Organization.
- Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. *The Lancet*, 360(9339), 1083–1088.
- Li, Y., Marshall, C. M., Rees, H. C., Nunez, A., Ezeanolue, E. E., & Ehiri, J. E. (2014). Intimate partner violence and HIV infection among women: a systematic review and meta-analysis. *Journal of the International AIDS Society*, 17(1), 18845.
- Malathesh, B. C., Das, S., & Chatterjee, S. S. (2020). COVID-19 and domestic violence against women. *Asian Journal of Psychiatry*. <https://doi.org/10.1016/j.ajp.2020.102227>
- Mapayi, B., Makanjuola, R. O. A., Mosaku, S. K., Adewuya, O. A., Afolabi, O., Aloba, O. O., & Akinsulore, A. (2013). Impact of intimate partner violence on anxiety and depression amongst women in Ile-Ife, Nigeria. *Archives of Women's Mental Health*, 16(1), 11–18.
- Mondal, D., & Paul, P. (2020). Association between intimate partner violence and child nutrition in India: Findings from recent National Family Health Survey. *Children and Youth Services Review*, 119, 105493. <https://doi.org/10.1016/j.childyouth.2020.105493>
- Onyango, M. A., Resnick, K., Davis, A., & Shah, R. R. (2019). Gender-based violence among adolescent girls and young women: A neglected consequence of the West African Ebola outbreak. In *Pregnant in the Time of Ebola* (pp. 121–132). Cham: Springer.
- Outlook (2020). Domestic violence tops crime against women in 2018: NCRB. Retrieved April 19, 2020, from Outlook: <https://www.outlookindia.com/newscroll/domestic-violence-tops-crime-against-women-in-2018-ncrb/1704114>.
- Pallikadavath, S., & Bradley, T. (2019). Dowry, 'dowry autonomy', and domestic violence among young married women in India. *Journal of Biosocial Science*, 51(3), 353–373.
- Panda, P., & Agarwal, B. (2005). Marital violence, human development, and women's property status in India. *World Development*, 33(5), 823–850.
- Paul, P., & Mondal, D. (2021). Association Between Intimate Partner Violence and Contraceptive Use in India: Exploring the Moderating Role of Husband's Controlling Behaviors. *Journal of Interpersonal Violence*, 08862605211015212.
- Peter, P. (2020). Domestic violence calls up from 10 to 25 a day during lockdown in Bengaluru. Retrieved April 18, 2020, from The Times of India.
- Ram, A., Victor, C. P., Christy, H., Hembrom, S., Cherian, A. G., & Mohan, V. R. (2019). Domestic violence and its determinants among 15–49-year-old women in a rural block in South India. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 44(4), 362.
- Rao, S. (2020). A natural disaster and intimate partner violence: Evidence over time. *Social Science & Medicine*, 247, 112804. <https://doi.org/10.1016/j.socscimed.2020.112804>
- Reed, E., Gupta, J., Biradavolu, M., Devireddy, V., & Blankenship, K. M. (2010). The context of economic insecurity and its relation to violence and risk factors for HIV among female sex workers in Andhra Pradesh, India. *Public Health Reports*, 125(4 suppl), 81–89.
- Rivera-Rivera, L., Lazcano-Ponce, E., Salmerón-Castro, J., Salazar-Martínez, E., Castro, R., & Hernández-Avila, M. (2004). Prevalence and determinants of male partner violence against Mexican women: A population-based study. *salud pública de México*, 46(2), 113–121.
- Rogathi, J. J., Manongi, R., Mushi, D., Rasch, V., Sigalla, G. N., Gammeltoft, T., & Meyrowitsch, D. W. (2017). Postpartum depression among women who have experienced intimate partner violence: A prospective cohort study at Moshi, Tanzania. *Journal of Affective Disorders*, 218, 238–245.
- Sinha, A., Mallik, S., Sanyal, D., Dasgupta, S., Pal, D., & Mukherjee, A. (2012). Domestic violence among ever married women of reproductive age group in a slum area of Kolkata. *Indian Journal of Public Health*, 56(1), 31.
- Stickley, A., Timofeeva, I., & Sparén, P. (2008). Risk factors for intimate partner violence against women in St. Petersburg, Russia. *Violence Against Women*, 14(4), 483–495.
- Tur-Prats, A. (2021). Unemployment and intimate partner violence: A Cultural approach. *Journal of Economic Behavior & Organization*, 185, 27–49.
- Watts, C., & Zimmerman, C. (2002). Violence against women: Global scope and magnitude. *The lancet*, 359(9313), 1232–1237.
- Weitzman, A. (2020). The sex of firstborn children and intimate partner violence in India. *Violence against women*, 26(6-7), 590–613.