



RESEARCH ARTICLE

Prevalence and risk factors of physical violence against husbands: evidence from India

Aparajita Chattopadhyay^{1†}, Santosh Kumar Sharma² , Deepanjali Vishwakarma³  and Suresh Jungari^{4†}

¹Department of Population and Development, International Institute for Population Sciences, Mumbai, India, ²The George Institute for Global Health, New Delhi, India, ³Senior Associate Monitoring & Evaluation, International Institute for Population Sciences, Mumbai, India and ⁴Department of Public Health & Mortality Studies, International Institute for Population Sciences, Mumbai, India

Corresponding author: Santosh Kumar Sharma; Email: santoshiips88@gmail.com

(Received 8 August 2022; revised 25 July 2023; accepted 31 August 2023; first published online 12 October 2023)

Abstract

As the proportion of women being victims of spousal violence in India is higher than men, laws are usually framed to safeguard women. However, men who have experienced physical spousal violence are not unheard of. The study aims to provide the nationwide prevalence of physical violence against husbands and the risk factors for such violence, using large-scale nationally representative ‘National Family Health Survey’ (NFHS 4) data. The study used descriptive, bivariate, logistic, and multilevel regression models with a random intercept clustering within states and households to explain the physical violence against husband. Sample size for the analysis was 62,716 currently married women aged 15–49 years. Findings revealed that in most of the states of India, physical spousal violence has increased over time. Behavioural characteristics like marital control, alcoholism, and childhood experience of parental violence have a consistent and strong role in explaining the experience of physical violence across states. With age, experience of violence against husbands increases. Differences in socio-economic characteristics do not have unidirectional effect on violence experienced by husbands across regions of India. Working women who are earning cash and having access to mobile phones perpetrate more physical violence in selected regions. Education shows a gradient on such violence perpetration, indicating that only after achieving a certain level of education, chances of violence reduce. Regionally contrasting social and economic risk factors in explaining violence strengthen the argument that violence is space and culture-specific, and development alone may not resolve violence unless the system is addressing the behavioural aspects. There is a need for supporting men experiencing domestic violence within the existing system facilities. Revisiting the present domestic violence laws and programmes for inclusivity is the need of the hour.

Keywords: spousal violence; gender; men; behaviour; India

Introduction

Violence against a partner can be physical, sexual, emotional, and financial. Any form of partner violence could result in ill health (Oram *et al.*, 2017; Bacchus *et al.*, 2018). Spousal violence is considered a severe social issue with serious health and economic implications on victims, families, and communities (Garcia-Moreno *et al.*, 2006; Babu and Kar, 2012). Victims of spousal

[†]Centre of Demography of Gender, International Institute for Population Sciences, Mumbai, India

violence, irrespective of their gender identity, can lead to risky behavior, such as increased smoking and drug abuse. Spousal violence victims often have mental illness and suicidal thinking (Simonelli *et al.*, 2014; Cafferky *et al.*, 2018; Radcliffe *et al.*, 2021).

Spousal violence against women has received considerable attention from policymakers, researchers, international organisations, and government and non-governmental sectors (WHO, 2018b). However, spousal violence against men has been less explored for lower prevalence. Available limited evidence shows that men have also been victims of spousal violence perpetrated by wives worldwide (Cheung *et al.*, 2009; Hines and Douglas, 2009; Alsawalqa, 2021). A recent systematic review reveals prevalence rates of 3.4% to 20.3% for domestic violence against men worldwide (Kolbe and Büttner, 2020). National Coalition Against Spousal Violence has reported that one in four men have been physically abused (slapped, pushed, and shoved), and one in seven men have been severely physically abused (Breiding *et al.*, 2014). Around 48.8% of men have experienced at least one psychologically aggressive behaviour by spouse at some point in their lifetime in the US (Breiding *et al.*, 2014). National Intimate Partner and Sexual Violence Survey (NISVS) estimated across the United States that nearly a quarter of men reported some form of contact with sexual violence in their lifetime (Breiding *et al.*, 2014). Several studies in African countries indicated violence against men by spouse (Tsiko, 2016; Thobejane and Luthada, 2019). Studies in South Asian regions reported that under-reporting of spousal violence against men is evident. Owing to gender norms and culture of men's superiority in the communities, men often hide the victimhood of violence (Cheung *et al.*, 2009). National report of Ireland (2005) shows that one man in 25 has experienced severe physical abuse, one in 90 has experienced sexual abuse in a relationship, and one in 37 has experienced severe emotional abuse (Watson and Parsons, 2005).

In India, spousal violence against women has received remarkable attention (Menon and Allen, 2018; Daruwalla, Machchhar, *et al.*, 2019). Substantial studies reveal prevalence, risk factors, and health consequences of spousal violence against women in India in both rural and urban areas (Verma *et al.*, 2016; Kalokhe *et al.*, 2017; Jungari *et al.*, 2020). Social scientists, feminist, and academic researchers have employed robust methodologies to understand various dimensions of spousal violence against women, its varied consequences on victims, families, and communities (Dasra, 2014; Siddhanta and Chattopadhyay, 2017; Sinha and Chattopadhyay, 2017b; Dandona *et al.*, 2022; Sarma, 2022). During the last few decades, researchers extensively applied quantitative (Jeyaseelan *et al.*, 2007), qualitative (Kaur and Garg, 2010; Daruwalla, Jaswal, *et al.*, 2019), mixed methods (Gram *et al.*, 2021), community trials (Daruwalla, Jaswal, *et al.*, 2019), systematic reviews, and meta-analysis (Alhabib *et al.*, 2010; Kalokhe *et al.*, 2017) to provide varying aspects of spousal violence against women. However, in contrast, the scientists did not explore spousal violence against men and its consequences despite a series of health consequences men experience due to such acts. After the Cairo conference 1994 (ICPD, 1994), researchers worldwide have emphasised men's involvement in preventing and ending spousal violence against women. Substantial intervention studies undertaken to engage men in ending spousal violence against women showed that men's involvement is the critical strategy (Lapsansky and Chatterjee, 2013; Chakraborty *et al.*, 2018). Men involvement in maternal care in India was also emphasised in research and programmes (Chattopadhyay, 2012; Chattopadhyay and Govil, 2021). However, in the whole process of engaging men to improve women's condition, spousal violence against men and its aftermath have not received much attention.

Available limited literature in India indicates that the prevalence of spousal violence against men exists and a considerable proportion of men experience spousal violence. The study conducted in rural Haryana found that 52.4% of men experienced spousal violence at least once in their lifetime and 10.5% in the last 12 months. All types of spousal violence (except sexual spousal violence) were significantly more common in rural areas than the urban areas (Nadda *et al.*, 2018). The prevalence of male partner violence in India was found to be higher than USA, Canada, and

the UK (19.3%), based on Partner Abuse State of Knowledge project (PASK) (Deshpande, 2019). Less income, education up to middle class, nuclear family setup, and the influence of alcohol were risk factors for spousal violence against men. Series of newspaper reports based on small-scale studies or NFHS reports and international news (Desai, 2017; AIHFW, 2018) depict that spousal violence against men is not uncommon in India and many developed countries.

Spousal violence against women is more frequent and more severe across the globe (Bacchus *et al.*, 2018; WHO, 2018a; Sanz-Barbero *et al.*, 2019; Sikweyiya *et al.*, 2020). Domestic violence was recognised as a criminal offense in India in 1983. The offence chargeable under section 498-A of the Indian Penal Code that relates to domestic violence is any act of cruelty by a husband (or his family) towards his wife (IIPS & ICF, 2007, 2017). But this law does not provide much space for men experiencing violent at domestic sphere. Any form of spousal violence is condemnable and deserves legal protection, irrespective of gender. A recent petition in India stated that around 33.2% men ended their lives because of family problems and 4.8% due to marriage related issues in the year 2021. In 2022, total 1,18,979 men have committed suicides which are about 72% and for women the same figure is just 27%. However, the Supreme Court of India has rejected the petition stating that it is a one-sided picture. Prevalence of external causes of death due to accidents, violence, homicide, suicide, poisoning is always higher for adult male over female. The prevalence of mental morbidity in men is over 6% higher than that in women. According to the National Mental Health Survey 2015–2016, the overall prevalence of mental morbidity in men is 13.9%, while that in females is 7.5% (NDTV, 2023). The reasons for such high prevalence of external deaths or mental health issues are the complex gender dynamics, especially stereotypes thinking of men being strong, life-related stress and social pressure. A well-known national daily, Times of India survey reveals that 52% people feel that men get most affected by financial matters followed by work and relationship issues, while health occupies just 5% as a cause of mental problems. Though marriage acts as a boost to mental health especially for men, changing social norms, expectations, aspirations are altering fast with modernisation, leading to relationship stress (Sharma, 2021).

In spite of having clear sustainable development goal that focused on promoting well-being and ensuring healthy lives for all, the issue of men in context of violence is less researched. To the best of our knowledge, no research work at national level or qualitative scientific studies have been published till date in India to explore spousal violence against men. In this context, the current study aims to provide the nationwide prevalence of spousal violence against men perpetrated by the wife over time and the risk factors of such violence. The study used National Family Health Survey (NFHS 4) data, the only large-scale well known and scientific survey in India (Demographic Health Survey of India) representing domestic violence and estimating state-level prevalence and determinants. NFHS asked ever-married women whether they had ever hit, slapped, kicked, or done anything else to physically hurt their husband at any time when he was not already beating or physically hurting them. This information allows an estimate of violence initiated by women against their husbands (IIPS & ICF, 2007, 2017).

We hypothesised that spousal violence against men reduces with age (Bellair and McNulty, 2010) because literature reveals clear age gradient of domestic violence against women. It is also conjectured that those women who justifies violence also indulge into such act, as women who do believe in violence as justified, experience more violence (Aboagye *et al.*, 2021). We further hypothesised that the chances of spousal violence against men is more in rural areas and the effects of usual development-related factors like education and wealth in determining spousal violence on men are strong, i.e. with increase in education and wealth, violence reduces. Given no national-level studies available on spousal violence against men in India, this study fulfils the research gap and provides the current situation of spousal violence against men to policymakers to develop evidence-based interventions.

Data and methods

Data

The study used the individual-level data of the National Family Health Survey (NFHS-4) 2015–2016. NFHS-4 is a nationally representative cross-sectional sample survey conducted in India in 2015–2016 that collects data on fertility, child and maternal mortality, child nutrition, HIV, employment and unemployment, domestic violence, and other topics for men (aged 15–54 years), women (aged 15–49 years), and children (below 5 years) using a multistage stratified sampling technique. The national report released by the International Institute of Population Sciences contains detailed information on the NFHS, such as research design, sampling technique, and so on (IIPS/India & ICF, 2017). In NFHS-4, 83,397 women were selected for the domestic violence schedule, among them 79,729 completed the survey schedule. Out of 79,729 women, 62,716 currently married women of reproductive age group formed the representative sample for the analysis. All the estimates in this study are based on the weighted sample. The study used the specific weight variable for the domestic violence schedule. Data were analysed using multilevel logistic regression model in STATA version 16.

Outcome variable

The dependent variable for this study is physical spousal violence against husbands perpetuated by currently married women when he was not already beating or physically hurting them. NFHS-4 asked currently married women aged 15–49 years ‘if they have ever hit, slapped, kicked, or done anything else to physically hurt their (last) husband at times when he was not already beating or physically hurting them’.

Independent variable

Several independent variables were included in this study. The variables were socio-demographic characteristics such as age of women (15–24, 25–34, 35–44, and 45–49), women and their husband’s education (no education, primary, secondary, and higher), place of residence (urban, rural), religion (Hindu, Muslim, and Other than Hindu and Muslim), caste (scheduled caste/scheduled tribe, OBC, Others), household structure (nuclear and non-nuclear), socio-economic characteristics such as wealth quintile (poorest, poorer, middle, richer, and richest), regular exposure to mass media (no exposure, only exposure of TV, and other than TV exposure), mobile phone use (no, yes), husband’s occupation (not working and working), and women working and getting paid in cash (not working, working and getting paid cash, and working and not getting paid cash). The study also included the behavioural characteristics such as husband’s alcohol consumption (no, yes), women afraid of husband (no, yes), childhood exposure to parental violence (no, yes), marital control on wife displayed by their husband (0, 1–2, 3–4, and 5–6), and women’s justification on wife beating (no, yes).

Marital control behaviour of husband was measured by using the following questions: husband is jealous or angry if she talks to other men; frequently accuses her of being unfaithful; does not permit her to meet her female friends; tries to limit her contact with her family; insists on knowing where she is at all times; and does not trust her with any money. The variable marital control has been divided into four categories namely no control, any 1–2 behaviour, any 3–4 behaviour, and any 5–6 behaviour displayed by husband. The NFHS-4 provides seven circumstances for the justification of wife beating (i) if she goes out without telling him, (ii) if she neglects the house or the children, (iii) if she argues with him, (iv) if she refuses to have sex with him, (v) if she does not cook food properly, (vi) if he suspects her of being unfaithful, and (vii) if she shows disrespect for her in-laws. Women who responded yes in at least one specified reason were considered to have

attitude that justify wife beating. The variable wife beating justification has categorised into two categories 'yes' and 'no'.

Methods

The study used bivariate analysis using chi-square of independence between women perpetuating the physical spousal violence against their husband and some selected background characteristics in NFHS-4 (2015–2016). A multilevel logistics regression model with a random intercept was used to understand the respondent clustering within states and households. The application of the multilevel modelling was justified by the hierarchal structure of the survey, where women were nested within household, the household were nested within states. Three models were fitted in the analysis. In multilevel analysis, a systemic model building procedure was adopted, and altogether three models were estimated. Model 1 included the socio-demographic characteristics such as age, women and their husband's education, place of residence, religion, caste, and household structure. Model 2 integrated the economic characteristics such as wealth quintile, regular exposure of mass media, has mobile phone, husband's occupation, women working, and getting paid in cash. In model 3, behavioural characteristics such as husband consuming alcohol, women afraid of husband, childhood exposure of spousal violence of parents, marital control on wife displayed by their husband, and women's justification of wife beating were integrated. Further, likelihood ratio tests were used to compare the goodness-of-fit of the two models. The difference in deviance (-2 log-likelihood) of two nested models has a χ^2 distribution with degrees of freedom equal to the additional number of predictors in the larger model.

We specified a series of three-level random intercept logistic models for the probability of an individual i in HHs j , state k had perpetuated the physical spousal violence against their husbands ($Y_{ijk} = 1$)

$$\text{Logit}(\pi_{ijk}) = \beta_0 + BX_{ijk} + (f_{0k} + v_{0jk} + u_{0ij}) \quad (1)$$

This model estimated the log odds of π_{ijk} adjusted for vector (X_{ijk}) of above-mentioned independent variables measured at the individual level. The parameter β_0 represented the log odds of experience of spousal violence for an individual belonging to the reference category of all the categorical variables. The random effect inside the brackets was interpreted as residual differential for the state k (f_{0k}), HHs j (v_{0jk}), and individual i (u_{0ij}). All three residuals were assumed to be independent and normally distributed with mean 0 and variance $\sigma^2 f_0$, $\sigma^2 v_0$, and $\sigma^2 u_0$, respectively. These variances quantified 'between states' and 'between HHs' variations, respectively, in the log odds of women perpetuating the spousal violence against husbands on all the individual characteristics. For binary outcome, the variance at lowest level cannot be obtained directly from the model and the remaining variance was assumed to simply be a function of the binomial distribution. Based on the variance estimates of random effect, the proportion of variation in the log odds of perpetuating the spousal violence against husbands to each level or variance partitioning coefficient (VPC) was calculated.

$$\text{VPC}_z = \sigma_z^2 / (\sigma_{f_0}^2 + \sigma_{v_0}^2 + \pi^2/3) \quad (2)$$

Here total variation was calculated using latent variable method approach and treated the 'between individual variation' as having a variance of a standard logistic distribution, approximated as $\pi^2/3 = 3.29$ (Goldstein *et al.*, 2002). VPC showed the proportion of total variation in perpetuating the physical spousal violence against husband between the states and between the households rather than the variation between individuals. Further, a region-wise logistic regression analysis was performed to understand the robustness of the findings obtained from the total sample.

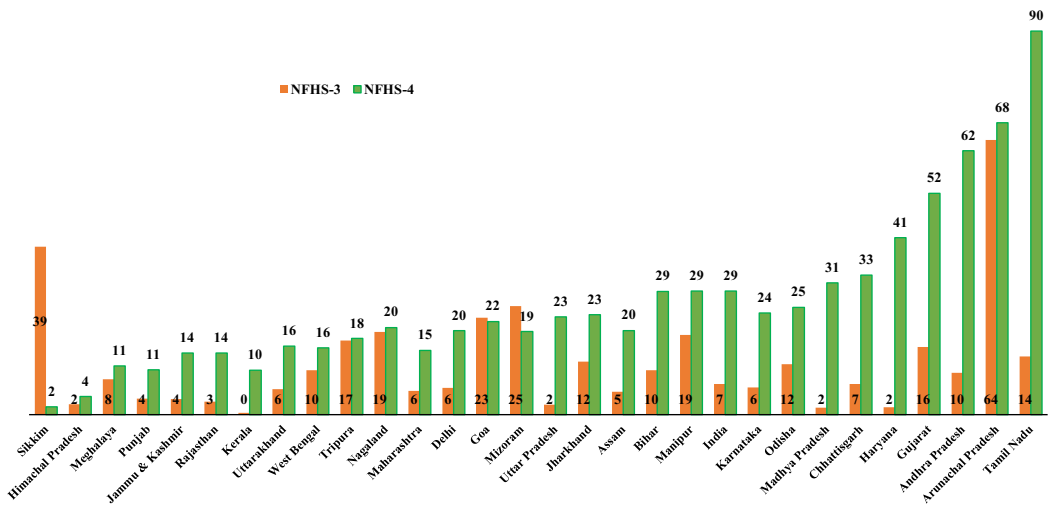


Figure 1. Prevalence of intimate partner violence against their husband when he was not already beating or physically hurting them ever among per 1000 currently married women aged 15–49 years during NFHS-3 and NFHS-4 by states, India. *Note:* NFHS 3 (2005–2006), NFHS 4 (2015–2016).

Results

The result section is divided into two parts. We first describe the prevalence of physical spousal violence against husband by states of India and selected characteristics of the women that were likely to have some association with spousal violence. Then, we applied multilevel analysis to explore effect of different variables and the degree of influence at different levels (i.e., state and household) on spousal violence against men.

a) Prevalence of spousal violence against husband in India and States

Figure 1 shows that about 29 per 1000 currently married women were perpetrating spousal violence in the form of physical assault against their husband when he was not already beating or physically hurting them (NFHS-4 2015–2016). Such spousal violence increased from 7 per 1000 in NFHS-3 (2005–2006) to 29 per 1000 in NFHS-4 (2015–2016). The proportion of currently married women doing spousal violence against their husband varied from 2/1000 in Sikkim to 90/1000 in Tamil Nadu in NFHS-4. It was observed that the prevalence of spousal violence against husband increased rapidly in majority of the states except Sikkim, Goa, and Mizoram, during 2005–2006 to 2015–2016. For instance, in Tamil Nadu, spousal violence against husbands perpetuated by women increased from 14/1000 to 90/1000; in Andhra Pradesh, it increased from 10/1000 to 62/1000. However, in Sikkim, women perpetuating the spousal violence decreased rapidly from 39 to 2 per thousand from NFHS-3 to NFHS-4.

Table 1 presents the bivariate association of violence and selected characteristics. Results revealed that all the predictors at individual level were significantly associated with the prevalence of spousal violence against husband. As the age of women increased, prevalence of perpetuating the spousal violence against husbands significantly increased, from 24/1000 in 15–24 to 32/1000 in 45–49 years. Similarly, as the women’s education and their husband’s education increased, the prevalence of such violence significantly decreased from ‘no education’ to ‘higher education’. It was found that the prevalence of such violence was higher among the SC/ST (37/1000) than the OBC (29/1000) and Other caste (19/1000). Similarly, 31 per 1000 currently married women belonging to ‘Other religion’ (Christian, Buddha, Sikh, etc.) were perpetuating more spousal

Table 1. Prevalence of intimate partner violence against their husband when he was not already beating or physically hurting them ever, among per 1000 currently married women aged 15–49 years, by selected characteristics, India 2015–2016

Characteristics	Per 1000	Number	Pearson χ^2 and P value
Socio-economic characteristics			
Age (Years)			
15–24	23.7	11,223	$\chi^2 = 21.7536$ Pr = 0.000
25–34	29.2	24,196	
35–44	30.2	19,377	
45–49	32.4	7,921	
Wife's education			
No education	37.8	20,163	$\chi^2 = 133.4918$ Pr = 0.000
Primary	36.0	8,817	
Secondary	23.6	27,321	
Higher	14.0	6,414	
Husband's education			
No education	41.7	11,137	$\chi^2 = 145.8874$ Pr = 0.000
Primary	34.9	9,185	
Secondary	26.9	33,398	
Higher	14.8	8,996	
Place of residence			
Urban	26.4	20,501	$\chi^2 = 0.1649$ Pr = 0.685
Rural	30.2	42,215	
Caste			
SC /ST	37.4	20,535	$\chi^2 = 105.4797$ Pr = 0.000
OBC	29.0	24,947	
Others	18.7	17,234	
Religion			
Hindu	30.0	47,595	$\chi^2 = 16.3221$ Pr = 0.000
Muslims	21.8	8,844	
Others	31.1	6,277	
Household's structure			
Nuclear	33.7	9,771	$\chi^2 = 3.7598$ Pr = 0.052
Non-nuclear	28.1	52,945	
Socio-economic characteristics			
Wealth quintile			
Poorest	37.0	10,808	$\chi^2 = 77.5023$ Pr = 0.000
Poorer	32.0	12,327	
Middle	29.8	12,735	
Richer	29.0	13,000	
Richest	19.0	13,846	

(Continued)

Table 1. (Continued)

Characteristics	Per 1000	Number	Pearson χ^2 and P value
Regular exposure of media			
No exposure	33.3	16,305	$\chi^2 = 32.1316$ Pr = 0.000
Only exposure of TV	31.4	23,461	
Other than TV exposure	23.3	22,950	
Has mobile phone that respondent uses			
No	31.4	30,964	$\chi^2 = 12.7760$ Pr = 0.000
Yes	26.5	31,752	
Husband's occupation			
Not working	30.2	2,694	$\chi^2 = 4.4009$ Pr = 0.036
Working	28.9	60,022	
Working and paid in cash			
Not working	24.8	47,527	$\chi^2 = 174.8388$ Pr = 0.036
Working and paid in cash	42.8	14,330	
Working and not paid in cash	25.7	858	
Behavioural characteristics			
Husband's alcohol consumption			
No	17.6	44,268	$\chi^2 = 708.3504$ Pr = 0.000
Yes	56.1	18,448	
Afraid of husband			
No	20.0	13,716	$\chi^2 = 44.5381$ Pr = 0.000
Yes	31.4	49,001	
Childhood exposure of intimate partner violence by father to mother			
No	20.4	51,227	$\chi^2 = 761.6102$ Pr = 0.000
Yes	66.9	11,489	
Marital control on wife			
0	12.5	32,428	$\chi^2 = 1.5e+03$ Pr = 0.000
1–2	30.8	19,504	
3–4	62.5	8,352	
5–6	118.2	2,432	
Wife beating justification reported by wife			
No	17.5	31,459	$\chi^2 = 326.1877$ Pr = 0.000
Yes	40.5	31,257	
Total	28.9	62,716	

violence against their husband than the Hindus and Muslims. The prevalence of violence against husband was higher in nuclear family (34/1000) compared to non-nuclear family (28/1000); higher among those who lived into poorest household; who were exposed to TV (31.4/1000) or working and getting paid in cash (43/1000) than those who were not working (Table 1).

Behavioural characteristics indicate strong association with spousal violence. The prevalence of violence against husband was higher among those women whose husbands consumed alcohol (56.1/1000), when women were afraid of husband (31.4/1000), and who had childhood exposure of parental violence (66.9/1000), increasing marital control behaviour displayed by husband. About 41/1000 currently married women who believed in wife beating justification were perpetuating the domestic violence against their husband than those who did not believe so (18/1000) (Table 1).

b) Determinants of spousal violence on husbands in India: Multilevel logistics regression

Table 2 presents the results of multilevel logistics regression odds ratio of physical domestic violence against husband perpetuated by currently married women with variance component model. Model 1 (included the socio-demographic characteristics) shows a substantial variation between states (σ^2_{State} (SE): 0.445(0.13)) and between households (σ^2_{HHs} (SE): 0.013(0.03)) in perpetuating the physical violence against their husband. The VPC values are 0.119 at state level and 0.122 at household level which indicates that about 12% of the total variance in the prevalence of perpetuating physical violence against their husband were attributable to differences across states and household in model 1. After including the economic characteristics in model 1, the VPC values remain unchanged in model 2. When behavioural characteristics were integrated in model 3, the VPC values decreased to 8% at state level and household level, meaning 8% of total variance in the prevalence of perpetuating the spousal violence against their husband were attributable to differences across states and household.

The results elucidate that behavioural characteristic has a greater effect for the reduction of variation in the spousal violence against their husband by currently married women across states and different households rather than the socio-demographic and economic characteristics (Fig. 2).

The results of multilevel logistic regression odds ratios revealed that currently married women aged 25 years and above were significantly more likely to perpetuate the physical violence against their husband than the other counterparts aged below 24. When economic and household level factors were controlled, women aged 45–49 years did not show higher odds in spousal violence, yet with inclusion of behavioural factors, this age group displayed significant effect [AOR = 1.27; 95% CI = 1.04–1.55] in perpetrating such violence, indicating a strong effect of behaviour characteristics (i.e. alcoholic husband, fear factor, experience of spousal violence in childhood, and justification of wife beating) on violence.

Similarly, women and their husband with secondary and above level of education were significantly less likely to perpetuate physical domestic violence in all the three model as against women with 'no education'. The results of model 3 highlights that the adding of behavioural characteristics had a relatively minor influence on the association between socio-demographic and socio-economic characteristics and the prevalence of physical violence against their husband. The results of model 3 show that the likelihood of perpetuating spousal violence was higher among women belonging to Muslim [AOR = 1.25; 95%CI = 1.05–1.49] and Other religious group [AOR = 1.81; 95%CI = 0.97–1.44], having mobile phone [AOR = 1.11; 95%CI = 1.02–1.24] and working with cash [AOR = 1.27; 95%CI = 1.14–1.41] than their respective counterparts, i.e. Hindu, not having mobile phone, not working or working without cash. The likelihood of perpetuating spousal violence was not significantly different in rural and urban areas.

Results of model 3 that includes behavioural factors revealed that the chances of spousal violence against husband were higher among women whose husband consumed alcohol (AOR:2.29; $p < 0.001$), afraid of husband (AOR:1.26; $p < 0.001$), and who has childhood exposure

Table 2. Multilevel logistic regression odds ratio of physical violence against their husband when he was not already beating or physically hurting them ever among currently married women age 15–49, India 2015–2016

Background Characteristics	Model 1 AOR [95% CI]	Model 2 AOR [95% CI]	Model 3 AOR [95% CI]
Random effects (intercept only)			
σ^2_{State} (SE)	0.445(0.13)	0.439(0.13)	0.287(0.09)
Variance component model (VPC) (State)	0.119	0.117	0.080
σ^2_{HHs} (SE)	0.013(0.03)	0.015(0.03)	0.016(0.03)
VPC (variance partitioning coefficient) (HHs)	0.122	0.121	0.084
Log likelihood	−8163.670	−8118.521	−7335.235
Wald chi2(15)	244.98	335.600	1812.740
Number of observations	62716	62716	62716
Socio-demographic characteristics			
Age (Years)			
15–24 ^o			
25–34	1.273 ^{***} (1.10, 1.47)	1.215 ^{***} (1.05, 1.41)	1.234 ^{***} (1.06, 1.44)
35–44	1.231 ^{***} (1.05, 1.44)	1.167 [*] (1.04, 1.37)	1.236 ^{**} (1.05, 1.45)
45–49	1.160(0.96, 1.40)	1.139(0.94, 1.38)	1.272 ^{**} (1.04, 1.55)
Wife's education			
No education ^o			
Primary	0.958(0.83, 1.10)	0.957(0.83, 1.1)	0.98(0.85, 1.14)
Secondary	0.705 ^{***} (0.62, 0.8)	0.682 ^{***} (0.59, 0.79)	0.751 ^{***} (0.64, 0.88)
Higher	0.506 ^{***} (0.39, 0.66)	0.461 ^{***} (0.35, 0.61)	0.599 ^{***} (0.45, 0.8)
Husband's education			
No education ^o			
Primary	0.939(0.81, 1.09)	0.963(0.83, 1.11)	0.939(0.81, 1.09)
Secondary	0.811 ^{***} (0.71, 0.92)	0.861 ^{**} (0.75, 0.98)	0.906(0.79, 1.04)
Higher	0.557 ^{***} (0.44, 0.7)	0.608 ^{***} (0.48, 0.77)	0.718 ^{***} (0.56, 0.92)
Place of residence			
Urban ^o			
Rural	0.941(0.84, 1.05)	0.889 [*] (0.79, 1.0)	0.941(0.83, 1.06)
Caste			
SC/ST ^o			
OBC	0.725 ^{***} (0.65, 0.81)	0.765 ^{***} (0.68, 0.86)	0.88 ^{**} (0.78, 0.99)
Others	0.733 ^{***} (0.63, 0.85)	0.782 ^{***} (0.67, 0.91)	0.903(0.77, 1.06)
Religion			
Hindu ^o			
Muslims	1.007(0.85, 1.19)	1.039(0.88, 1.23)	1.250 ^{**} (1.05, 1.49)
Others	1.102(0.91, 1.34)	1.109(0.91, 1.35)	1.181 [*] (0.97, 1.44)

(Continued)

Table 2. (Continued)

Background Characteristics	Model 1 AOR [95% CI]	Model 2 AOR [95% CI]	Model 3 AOR [95% CI]
Household's structure			
Nuclear [®]			
Non-nuclear	0.885 [*] (0.77, 1.01)	0.929(0.81, 1.07)	0.910(0.79, 1.05)
Socio-economic characteristics			
Wealth quintile			
Poorest [®]			
Poorer		0.932(0.80, 1.08)	1.016(0.87, 1.18)
Middle		0.817 ^{**} (0.69, 0.97)	0.957(0.80, 1.14)
Richer		0.852(0.70, 1.04)	1.071(0.88, 1.31)
Richest		0.692 ^{***} (0.54, 0.88)	0.980(0.77, 1.26)
Regular exposure of media			
No exposure [®]			
Only exposure of TV		0.925(0.82, 1.05)	0.930(0.82, 1.06)
Other than TV exposure		1.143 [*] (0.98, 1.34)	1.137(0.97, 1.34)
Has mobile phone that respondent uses			
No [®]			
Yes		1.121 ^{**} (1.01, 1.25)	1.113 [*] (1.02, 1.24)
Husband's occupation			
Not working [®]			
Working		0.825 [*] (0.67, 1.02)	0.837(0.67, 1.04)
Working and paid in cash			
Not working [®]			
Working and paid in cash		1.484 ^{***} (1.34, 1.64)	1.267 ^{***} (1.14, 1.41)
Working and not paid in cash		0.88(0.58, 1.34)	0.743(0.48, 1.14)
Behavioural characteristics			
Husband's alcohol consumption			
No [®]			
Yes			2.291 ^{***} (2.06, 2.54)
Afraid of husband			
No [®]			
Yes			1.262 ^{***} (1.10, 1.44)
Childhood exposure of intimate partner violence by father to mother			
No [®]			
Yes			1.992 ^{***} (1.80, 2.21)

(Continued)

Table 2. (Continued)

Background Characteristics	Model 1 AOR [95% CI]	Model 2 AOR [95% CI]	Model 3 AOR [95% CI]
Marital control on wife			
0 ^o			
1–2			1.945 ^{***} (1.71, 2.21)
3–4			3.885 ^{***} (3.38, 4.46)
5–6			7.868 ^{***} (6.68, 9.27)
Wife beating justification reported by wife			
No ^o			
Yes			1.426 ^{***} (1.28, 1.59)
Constant	0.041	0.047	0.007

AOR: Adjusted odds ratio;
 ***p < 0.01;
 **p < 0.05;
 *p < 0.10;
^oReference category.

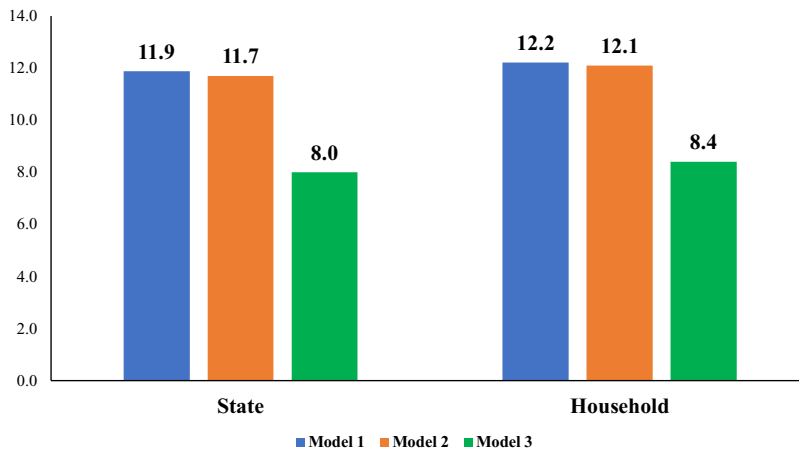


Figure 2. Variance partition coefficient of physical violence against their husband when he was not already beating or physically hurting them ever and in the past 12 months among current married women aged 15–49 years.

of spousal violence by parents (AOR:1.99; $p < 0.001$) than their other counterparts who were not exposed to such behavioural traits. As the number of marital control behaviour on wife exhibited by husband increases, the likelihood of domestic violence against the husband increased significantly (from 1.9 times ($p < 0.001$) to 7.9 times ($p < 0.001$)) than those with no marital control behaviour. Women who agreed with the justification of wife beating were 1.4 times ($p < 0.001$) more likely to perpetuate physical violence against their husband than those who does not believe so.

c) Regional factors determining violence:

A region-wise logistic regression analysis indicates (Supplementary Table S1) that behavioural characteristics in all six regions have a significant and similar effect on spousal violence against men. Women whose husband consumed alcohol, who has childhood exposure of violence by parents, who were currently under marital control, and those who justified wife beating were significantly more likely to perpetuate spousal violence than their counterparts in all the six geographical regions of India.

However, some contrasting results emerge when non-behavioural factors are looked into. The likelihood of domestic violence against husband significantly declined with increasing women's education in the West and South region of India, while no such evidence is observed for the Northern and Northeastern parts of India region. In rural areas, women were significantly more likely to perpetuate spousal violence in West region (AOR:1.43; $p < 0.1$), whereas in contrast, staying in rural parts indicated less likelihood of violence in Southern region (AOR:0.80; $p < 0.05$). Caste differences were found to be important in southern region, where women from OBC and other caste were less likely to perpetuate violence than SC/ST caste. Women residing in non-nuclear family were less likely to perpetuate violence in East (AOR:0.76; $p < 0.1$) and West (AOR:0.67; $p < 0.001$) region, not in other parts of India where no difference is found among these two-family structures. Furthermore, women who were working and paid in cash were more likely to inflict violence than those who were not working in West (AOR:1.40; $p < 0.05$), North (AOR:1.56; $p < 0.001$), and Central (AOR:1.33; $p < 0.05$) region, while rest of the regions did not reveal that association. Women having exposure of mobile phone in the West (AOR:1.51; $p < 0.001$) and South region (AOR:1.27; $p < 0.001$) perpetrate more violence, whereas no such clear picture was observed in rest of regions.

Discussion

The prevalence of spousal physical violence against men is increasing across globe, including India (Thobejane *et al.*, 2018; Malik and Nadda, 2019; Obarisiagbon, 2019). This study, for the first time, used nationally representative sample of India to represent that the issue must not be neglected due to its rising trend and very similar nature of determinants of spousal violence against women and men. The research focuses on the perpetration of physical violence by wives on husbands in India and the states. Researchers dealt deep into the spousal violence on women and framed many laws and programs to protect women. Domestic violence or spousal violence against men is not unheard in our society. Spousal violence can be experienced by any gender, and it is a resultant of unequal power hierarchy or disturbed pathogenesis. Women face more violence as we have observed in NFHS reports (IIPS/India & ICF, 2017). Yet, that does not guarantee 'no violence' on men. NFHS data provide insights on violence against husbands and this research explores the prevalence and determinants of such violence at national and sub national levels. The key findings are discussed below:

First, the study revealed that overall, in India, spousal violence against men stands at 29 per 1000 and violence on husband has increased over time (2005–2006 to 2015–2016) with wide state variation. In some southern states that are more advanced in terms of education or wealth, violence against husbands increased noticeably. Series of news articles cover evidence of such violence. A non-governmental organisation reports that it receives 113 calls every day from battered husbands (Sandhu, 2020). The reasons for higher violence might be for better reporting of violence or normalisation of violence in these cultures. Interestingly, violence on women is also higher in these southern states like Tamil Nadu (IIPS/India & ICF, 2017). Overall prevalence of violence is relatively low in India as compared to other developed and developing countries. In countries like US, 1 in 9 males report having been subjected to some kind of domestic abuse by a

spouse or other intimate partner, and about 14% men have experienced some form of physical domestic violence (NCADV, 2010; Breiding *et al.*, 2014). Two out of every five victims of domestic abuse in the UK are male (Campbell, 2010). This evidence disproves the widespread misconception that domestic violence only affects women. Several factors contributing to relatively lower levels of reported violence against men or men seeking assistance in India could include cultural expectations of male strength and stoicism, societal pressure to prove masculinity and thus remain silent about abuse for the fear of shame, limited awareness or support systems addressing violence against men. Reporting of violence in general in India is less and it is like an iceberg (United Nations, 2014; Bajwa *et al.*, 2019). Reported cases of domestic violence against women represent only a small part of the problem (Gracia, 2004; Deshpande, 2019; Singh *et al.*, 2022). Domestic violence on men is perhaps more underreported when a society values masculinity (Malik and Nadda, 2019). Further, reporting by a wife about violence on husband perpetrated by herself need enough context, rapport, and power support when she is still with that relation. In large-scale surveys, in general, it is difficult to have such perfect situation when sensitive information is given flawlessly. Other members do have an eye on the interview when the answers are documented by an unknown person, though protocol says that nobody should be present at the time of the survey especially when violence related questions are asked. Perhaps if the same question of NFHS is asked to husbands, reporting of spousal violence on men would have been more.

Second, the study discloses that the behavioural characteristics rather than the individual socio-demographic and economic characteristics have a greater role in explaining the variation in prevalence of violence across states and different households. It means that development per se may not be able to curb the issue of spousal violence unless program focuses on behavioural consciousness raising. As observed in the findings, women who justifies violence are more likely to indulge violence too, supporting the claim that those with attitudes justifying violence do indulge in violence more frequently (Gage and Hutchinson, 2006; Alio *et al.*, 2011; Uthman *et al.*, 2011; Cools and Kotsadam, 2017). In many states of India, irrespective of its stage of development, wives defend physical abuse by their husbands. Similar connotation is expected from women too while beating their husbands, as they might feel that beating husband is normal and a couple's personal matter. Such mental sets are the tools of patriarchy and women are as much a part of the patriarchal society as men.

Third, individual behaviour and experience of violence in childhood, alcoholism, fearful and unfriendly relation reflected through marital control, justification of wife beating are markedly responsible for perpetrating spousal violence on husband, supporting social learning theory (Bandura, 1973). Existing literature supports similar findings, i.e. alcohol abuse, jealousy, mental illness, physical impairment, and short duration relationship are all associated with a higher risk of being a victim of spousal violence leading to physical injuries, impaired physical health, mental health problems, and increased consumption of alcohol and/or illegal drugs (Kolbe and Büttner, 2020). Thus, the study reveals that the behavioural factors on perpetuating spousal violence on husband are very similar to that of wife beating by husbands (Rahman *et al.*, 2011; Fry and Elliott, 2017; Sinha and Chattopadhyay, 2017b, 2017a; Abdi *et al.*, 2021; Sinha *et al.*, 2022). Hence, violence at domestic sphere is the reflection of power hierarchy and mental set, rather than a pure gendered construct.

Fourth, our study specifies that household structure (nuclear–joint) or residence (rural–urban) do not show distinct effect on violence on men. Further, household wealth and husband's work status have no effect on spousal violence experienced by husband, rejecting the hypothesis that wealth can reduce the violence prevalence at domestic sphere. However, education of husband after a certain level (higher grade and above) and wife's education above secondary level demonstrate a positive effect in reducing spousal violence in certain regions of India, thus somewhat accepting the hypotheses that education reduces violence. Consistent with our study, existing literature also shows similar trend of reduction of violence with education (Shiraz, 2016;

D. Sinha and Kumar, 2022; Khadhar, 2022). Nevertheless, as the study indicates that education effect is region specific, and mere literacy may not address violence in India.

Fifth, working women who are earning in cash perpetrate more spousal violence on husbands, contrary to the hypothesis, that increase in economic freedom reduces violence. Further, this association is not universal across Indian regions. Working women who are not getting cash do not show such behavior. It is generally observed that women's 'economic empowerment' is pushed as a potential means to reduce violence, yet the evidence is complicated (Abramsky *et al.*, 2019; Quasim and Vemuru, 2019). In most of the developing countries, working women experience more violence (Krishnan *et al.*, 2010; Vyas *et al.*, 2015; Gage and Thomas, 2017), at least in short term, and who contributed more financially than their partners had greater risk of violence (Panda and Agarwal, 2005). As observed in our study, the perpetration of spousal violence by cash-earning women could be for several reasons. For instance, as women gain economic autonomy, men may feel that their masculinities are being challenged and may indulge in controlling wife or indulging in alcoholic behaviour leading to experience of spousal violence by cash earning women. Further, superior power hierarchy may also be enjoyed by women, when earning in cash, leading to a tendency of husband controlling wife resulting into violence on husband. Such experience depends largely on social norms. With evidence from Bangladesh in context of spousal violence on wife suggesting that microcredit programmes are associated with increased spousal violence on women in more conservative settings, but not in more progressive settings (Buller *et al.*, 2018; Gibbs *et al.*, 2018; Abramsky *et al.*, 2019). This very argument of social norms may also be applied for wife who are beating their husband. Interventions to empower women need a progressive social setting and in the process of empowering women the society should not ignore men to broaden access to resources and opportunities. It is essential to understand spousal violence is contextual and highly related to behavioral factors. Behavioural changes come from societal changes in perceptions and attitudes of both men and women. Further research is needed to understand the trajectories of violence on husband by working women in Indian context.

Sixth, our study shows that mobile usage by wife increases the chance of spousal violence on husband in west and southern regions of India. Access to mobile phones helps empower women, and this could be a threat to a husband leading to restricting wife in communication leading to spousal violence. Technological control and stalking a partner, improved social network of a wife who gets support to indulge into violent acts for varying reasons, reporting of husband's behavioural traits to peers or relatives through mobile phones by wife, exposure to violent media content, etc. could be possible reasons for perpetration of violence of women on men. To mention here, India's mobile usage has increased tremendously. Two in every three users are expected to have a mobile phone by 2023, while one in two users will have a smartphone (Jain, 2020). Studies are less in assessing the effect of mobile phones on spousal violence, though limited understanding explains that economic activity is a channel through which mobile phone coverage influences any conflict (Ackermann *et al.*, 2021).

Seventh, an stirring finding of our study is that with increase in wife's age, spousal violence on husband increases, contrary to the popular finding that spousal violence on women declines with age (Johnson *et al.*, 2015; Sanz-Barbero *et al.*, 2019). This is likely to be explained by the progression of empowerment of women by age. As older women's greater capacity to put to use strategies to exit from violent partner relationships reduces their experience of violence, just contrary to this, older women gained authority with age leading to more violence on husbands with increasing age of wife. The qualities that masculine women possess are confidence, assertiveness, independence, etc. These are not scientifically or biologically male attributes. Rather, these qualities are constructed as being masculine even though they are commonly found in women. Women may be seen as more masculine because of the challenges and struggle particular to their behavioural and social reality (Encyclopedia, 2022). This could be the reason for which working women earning in cash or women with age perpetrates more violence as society identifies them powerful. However, the general presumption that have been into our culture since bygone is

that men are supposed to be strong, mighty, and thus their experience of spousal violence is not a concern.

d) Laws on spousal violence

Section 498A of the Indian Penal Code 1860 states that only a man can be held liable for cruelty to his wife. As the laws in our society favours women as victims of spousal violence, assaulted men do not get justice for their disgraceful condition in the family and society. Several theories have been discussed in the areas of gender, masculinity, power relations, and its association with spousal violence. Majority of the theories on such violence favoured women (Lien and Lorentzen, 2019; Jungari *et al.*, 2020). In India, laws on spousal violence favour women due to the higher prevalence of women victims. This leads to increased victimisation of men who experienced spousal violence (Tjaden and Thoennes, 2000; Shakti, 2017). In most countries in the world, the laws against spousal violence provide protection to both genders (Leye *et al.*, 2021). Whereas in India, family spousal violence against men is almost legal as there is no provision in any law to protect a man, as the law itself assumes that Indian men are more powerful as compared to women and thus men only can perpetrate spousal violence. Recently, the Netherlands have ratified the Istanbul convention of protecting only women against spousal violence and stated that although women do suffer more from spousal violence, that does not mean that there are no male victims of spousal violence, and that the state and policy makers should provide for them too (The Irish Times, 2005; Althoff *et al.*, 2021). There is a need for revisiting the existing laws on spousal violence in India in context of increasing evidence of such violence on men.

Conclusion

Spousal violence is culture specific, influenced by behavioural practices and history of childhood experience of parental violence. Hence, the perpetrator can be of either sex. Programmes addressing spousal violence are needed to identify young minds who are experiencing parental violence to prevent their future violence experience in marital life. Further, behavioural learning of gender egalitarianism is essential from childhood through adulthood to address violence and thus school education system can play a key role to address this menace. It is extremely important to make interventions region specific due to the fact that development per say may not guarantee reduction of spousal violence across space. Qualitative inquiry into the empowerment issues in context of interparental violence is important. More research on the issue of violence against men is needed in India to redefine masculinity. Unlike violence on women that reduces with age, men experience more violence with age, contrary to what women experience in India. Thus, programmes must not emphasise only on women to protect them and neglect men who are suffering from violence. Improvement of mindsets is essential in matters like ease of access to resources that addresses spousal violence. If men can be called for being 'sensitive men' and being vocal against women's violence, then the system must be compassionate across gender while dealing with any form of violence at domestic sphere. Based on the empirical evidence, perhaps the time has come to think of the variety of social and health issues that affects men, relook the existing legal provisions on domestic violence in India and make the entitlement of legal protection more inclusive and progressive.

Supplementary material. For supplementary material accompanying this paper visit <https://doi.org/10.1017/S0021932023000196>

Data availability statement. All result-based data is included in the manuscript, and the datasets are available online at www.measuredhs.com for anybody to access.

Acknowledgements. The authors are immensely thankful to the Bill and Melinda Gates Foundation's grant, BMGF INV-047356, for providing Article Processing Charges (APCs) support. This grant helps innovative research under the Centre of Demography of Gender (CDG), International Institute for Population Sciences, Mumbai.

Author's contributions. Aparajita Chattopadhyay (AC) conceptualised the study and guided the analytical plan. Santosh Sharma (SS) and Deepanjali Vishwakarma (DV) did the statistical analysis. AC, SS and DV drafted the manuscript and were supported by Suresh Jungari (SJ). AC finalised the manuscript.

Funding statement. This study is supported by the Bill and Melinda Gates Foundation's grant, (grant no. BMGF INV-047356) which was awarded to the Centre of Demographic and Gender, International Institute for Population Sciences, Mumbai, India.

Competing interests. The authors declare that they have no conflict of interest.

Ethical approval and consent to participate. The study did not require ethical approval or participant participation because it was a secondary data analysis of publicly available survey data from the MEASURE DHS programme. We asked DHS Program for permission to obtain and utilise the data from <http://www.dhsprogram.com> for this study, and they agreed. Procedures for DHS public-use datasets certified by the Institutional Review Board do not enable respondents, households, or sample communities to be identifiable in any way. In the data files, there are no names of persons or addresses of households. The ethical clearance was obtained from the IIPS-IRB Board Mumbai, and the survey agencies that collected the data followed all the protocols as recommended by IIPS-IRB board. The NFHS employed three consent forms in compliance with Human Subjects Protection: Household Informed Consent, Individual Informed Consent and Consent for Blood Samples Collection for Storage and Future Use (DBS). The study procedure was explained to each survey participant, and the stages of each biomarker test were shown by qualified health investigators. The interviews were conducted with the informed permission of the participants. Each participant could provide his or her consent because the survey obtained either signed or oral consent. All methods were performed in accordance with the relevant guidelines and regulations.

Consent for publication. Not applicable.

References

- Abdi F, Mahmoodi Z, Afsahi F, Shaterian N and Rahnamaei FA (2021). Social determinants of domestic violence against suburban women in developing countries: a systematic review. *Obstetrics & Gynecology Science* **64**, 131–142. <https://doi.org/10.5468/ogs.20211>
- Aboagye RG, Seidu A-A, Asare BY-A, Peprah P, Addo IY and Ahinkorah BO (2021). Exposure to interparental violence and justification of intimate partner violence among women in sexual unions in sub-Saharan Africa. *Archives of Public Health* **79**, 162. <https://doi.org/10.1186/s13690-021-00684-3>
- Abramsky T, Lees S, Stöckl H, Harvey S, Kapinga I, Ranganathan M, Mshana G and Kapiga S (2019). Women's income and risk of intimate partner violence: secondary findings from the MAISHA cluster randomised trial in North-Western Tanzania. *BMC Public Health* **19**, 1108. <https://doi.org/10.1186/s12889-019-7454-1>
- Ackermann K, Awaworyi Churchill S and Smyth R (2021). Mobile phone coverage and violent conflict. *Journal of Economic Behavior & Organization* **188**, 269–287. <https://doi.org/10.1016/j.jebo.2021.04.038>
- AIHFW (2018). *Family, Domestic and Sexual Violence in Australia 2018*: Australian Institute of Health and Welfare. <https://www.aihw.gov.au/reports/domestic-violence/family-domestic-sexual-violence-in-australia-2018>
- Alhabib S, Nur U and Jones R (2010). Domestic violence against women: systematic review of prevalence studies. *Journal of Family Violence* **25**, 369–382. <https://doi.org/10.1007/s10896-009-9298-4>
- Alio AP, Clayton HB, Garba M, Mbah AK, Daley E and Salihu HM (2011). Spousal concordance in attitudes toward violence and reported physical abuse in African couples. *Journal of Interpersonal Violence* **26**, 2790–2810. <https://doi.org/10.1177/0886260510390951>
- Alsawalqa RO (2021). A qualitative study to investigate male victims' experiences of female-perpetrated domestic abuse in Jordan. *Current Psychology*, 1–16. <https://doi.org/10.1007/s12144-021-01905-2>
- Althoff M, Slotboom A-M and Janssen J (2021). Gender neutrality and the prevention and treatment of violence – a Dutch perspective. *Women & Criminal Justice* **31**, 40–52. <https://doi.org/10.1080/08974454.2019.1661934>
- Babu BV and Kar SK (2012). Abuse against women in pregnancy: a population-based study from Eastern India. *WHO South-East Asia Journal of Public Health* **1**, 133–143. <https://doi.org/10.4103/2224-3151.206926>
- Bacchus LJ, Ranganathan M, Watts C and Devries K (2018). Recent intimate partner violence against women and health: a systematic review and meta-analysis of cohort studies. *BMJ Open* **8**, e019995. <https://doi.org/10.1136/bmjopen-2017-019995>

- Bajwa P, Foreman K and Sall C** (2019). *Exploring the Low Rates of Reporting Domestic Violence in Bihar, India*: Crown Family School of Social Work, Policy, and Practice. <https://crownschool.uchicago.edu/student-life/advocates-forum/exploring-low-rates-reporting-domestic-violence-bihar-india>
- Bandura A** (1973). *Aggression: A Social Learning Analysis*: Prentice-Hall, pp. ix, 390.
- Bellair PE and McNulty TL** (2010). Cognitive skills, adolescent violence, and the moderating role of neighborhood disadvantage. *Justice Quarterly* 27, 538–559. <https://doi.org/10.1080/07418820903130823>
- Breiding MJ, Chen J and Black MC** (2014). *Intimate Partner Violence In the United States – 2010*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Buller AM, Peterman A, Ranganathan M, Bleile A, Hidrobo M and Heise L** (2018). A mixed-method review of cash transfers and intimate partner violence in low- and middle-income countries. *The World Bank Research Observer* 33, 218–258. <https://doi.org/10.1093/wbro/lky002>
- Cafferky BM, Mendez M, Anderson JR and Stith SM** (2018). Substance use and intimate partner violence: a meta-analytic review. *Psychology of Violence* 8, 110–131. <https://doi.org/10.1037/vio0000074>
- Campbell D** (2010). More than 40% of domestic violence victims are male, report reveals. *The Observer*. <https://www.theguardian.com/society/2010/sep/05/men-victims-domestic-violence>
- Chakraborty P, Osrin D and Daruwalla N** (2018). “We Learn How to Become Good Men”: working with male allies to prevent violence against women and girls in urban informal settlements in Mumbai, India. *Men and Masculinities*. <https://doi.org/10.1177/1097184X18806544>
- Chattopadhyay A** (2012). Men in maternal care: evidence from India. *Journal of Biosocial Science* 44, 129–153. <https://doi.org/10.1017/S0021932011000502>
- Chattopadhyay A and Govil D** (2021). Men and maternal health care utilization in India and in selected less-developed states: evidence from a large-scale survey 2015–16. *Journal of Biosocial Science* 53, 724–744. <https://doi.org/10.1017/S0021932020000498>
- Cheung M, Leung P and Tsui V** (2009). Asian male domestic violence victims: services exclusive for men. *Journal of Family Violence* 24, 447–462. <https://doi.org/10.1007/s10896-009-9240-9>
- Cools S and Kotsadam A** (2017). Resources and intimate partner violence in sub-Saharan Africa. *World Development* 95, 211–230. <https://doi.org/10.1016/j.worlddev.2017.02.027>
- Dandona R, Gupta A, George S, Kishan S and Kumar GA** (2022). Domestic violence in Indian women: lessons from nearly 20 years of surveillance. *BMC Women’s Health* 22, 128. <https://doi.org/10.1186/s12905-022-01703-3>
- Daruwalla N, Jaswal S, Fernandes P, Pinto P, Hate K, Ambavkar G, Kakad B, Gram L and Osrin D** (2019). A theory of change for community interventions to prevent domestic violence against women and girls in Mumbai, India. *Wellcome Open Research* 4, 54. <https://doi.org/10.12688/wellcomeopenres.15128.2>
- Daruwalla N, Machchhar N, Pantvaidya S, D’Souza V, Gram L, Copas A and Osrin D** (2019). Community interventions to prevent violence against women and girls in informal settlements in Mumbai: the SNEHA-TARA pragmatic cluster randomised controlled trial. *Trials* 20, 743. <https://doi.org/10.1186/s13063-019-3817-2>
- Dasra** (2014). *Dasra | No Private Matter: Confronting Domestic Violence*. <https://www.dasra.org/resource/confronting-domestic-violence>
- Desai D** (2017). When husbands are victims of domestic violence. *The Times of India*. <https://timesofindia.indiatimes.com/life-style/relationships/love-sex/when-husbands-are-victims-of-domestic-violence/articleshow/26031858.cms>
- Deshpande S** (2019). Sociocultural and legal aspects of violence against men. *Journal of Psychosexual Health*. <https://doi.org/10.1177/2631831819894176>
- Encyclopedia** (2022). *Manly (Masculine) Woman | Encyclopedia.com*. <https://www.encyclopedia.com/social-sciences/encyclopedias-almanacs-transcripts-and-maps/manly-masculine-woman>
- Fry DA and Elliott SP** (2017). Understanding the linkages between violence against women and violence against children. *The Lancet Global Health* 5, e472–e473. [https://doi.org/10.1016/S2214-109X\(17\)30153-5](https://doi.org/10.1016/S2214-109X(17)30153-5)
- Gage AJ and Hutchinson PL** (2006). Power, control, and intimate partner sexual violence in Haiti. *Archives of Sexual Behavior* 35, 11–24. <https://doi.org/10.1007/s10508-006-8991-0>
- Gage AJ and Thomas NJ** (2017). Women’s work, gender roles, and intimate partner violence in Nigeria. *Archives of Sexual Behavior* 46, 1923–1938. <https://doi.org/10.1007/s10508-017-1023-4>
- Garcia-Moreno C, Jansen HAFM, Ellsberg M, Heise L, Watts CH and WHO Multi-Country Study on Women’s Health and Domestic Violence against Women Study Team** (2006). Prevalence of intimate partner violence: Findings from the WHO multi-country study on women’s health and domestic violence. *Lancet (London, England)* 368, 1260–1269. [https://doi.org/10.1016/S0140-6736\(06\)69523-8](https://doi.org/10.1016/S0140-6736(06)69523-8)
- Gibbs A, Jewkes R, Karim F, Marofi F and Corboz J** (2018). Understanding how Afghan women utilise a gender transformative and economic empowerment intervention: a qualitative study. *Global Public Health* 13, 1702–1712. <https://doi.org/10.1080/17441692.2018.1427276>
- Goldstein H, Browne W and Rasbash J** (2002). Partitioning variation in multilevel models. *Understanding Statistics* 1, 223–231. https://doi.org/10.1207/S15328031US0104_02

- Gracia E** (2004). Unreported cases of domestic violence against women: towards an epidemiology of social silence, tolerance, and inhibition. *Journal of Epidemiology & Community Health* **58**, 536–537. <https://doi.org/10.1136/jech.2003.019604>
- Gram L, Chakraborty P, Daruwalla N and Osrin D** (2021). Social and psychological readiness to take collective action against violence against women: a mixed methods study of informal settlements in Mumbai, India. *Violence against Women* **27**, 3176–3196. <https://doi.org/10.1177/1077801220971360>
- Hines DA and Douglas EM** (2009). Women’s use of intimate partner violence against men: prevalence, implications, and consequences. *Journal of Aggression, Maltreatment & Trauma* **18**, 572–586. <https://doi.org/10.1080/10926770903103099>
- IIPS, & ICF** (2007). *The DHS Program—India: Standard DHS, 2006*. <https://dhsprogram.com/methodology/survey/survey-display-264.cfm>
- IIPS, & ICF** (2017). *National Family Health Survey, 2015–16*. Mumbai: International Institute for Population Sciences. <https://dhsprogram.com/methodology/survey/survey-display-355.cfm>
- IIPS/India, I. I. for P. S., & ICF** (2017). *India National Family Health Survey NFHS-4 2015–16*. <https://dhsprogram.com/publications/publication-fr339-dhs-final-reports.cfm>
- Jain R** (2020). India to have 966 million mobile users by 2023 but less than 5% will have 5G: Report. *Business Insider*. <https://www.businessinsider.in/tech/mobile/news/india-to-have-966-million-mobile-users-by-2023-but-less-than-5-will-have-5g-report/articleshow/74202680.cms>
- Jeyaseelan L, Kumar S, Neelakantan N, Peedicayil A, Pillai R and Duvvury N** (2007). Physical spousal violence against women in india: some risk factors. *Journal of Biosocial Science* **39**, 657–670. <https://doi.org/10.1017/S0021932007001836>
- Johnson WL, Giordano PC, Manning WD and Longmore MA** (2015). The age-IPV curve: changes in intimate partner violence perpetration during adolescence and young adulthood. *Journal of Youth and Adolescence* **44**, 708–726. <https://doi.org/10.1007/s10964-014-0158-z>
- Jungari S, Chauhan B, Bomble P and Pardhi A** (2020). Violence against women in urban slums of India: a review of two decades of research. *Global Public Health* **17**, 1–19. <https://doi.org/10.1080/17441692.2020.1850835>
- Kalokhe A, Del Rio C, Dunkle K, Stephenson R, Metheny N, Paranjape A and Sahay S** (2017). Domestic violence against women in India: a systematic review of a decade of quantitative studies. *Global Public Health* **12**, 498–513. <https://doi.org/10.1080/17441692.2015.1119293>
- Kaur R and Garg S** (2010). Domestic violence against women: a qualitative study in a rural community. *Asia Pacific Journal of Public Health* **22**, 242–251. <https://doi.org/10.1177/1010539509343949>
- Khadhar F** (2022). Exploring motivations for domestic violence by women in Saudi Arabia. *Journal of Family Violence* **37**, 1–11. <https://doi.org/10.1007/s10896-021-00267-4>
- Kolbe V and Büttner A** (2020). Domestic violence against men—prevalence and risk factors. *Deutsches Ärzteblatt International* **117**, 534–541. <https://doi.org/10.3238/arztebl.2020.0534>
- Krishnan S, Rocca CH, Hubbard AE, Subbiah K, Edmeades J and Padian NS** (2010). Do changes in spousal employment status lead to domestic violence? Insights from a prospective study in Bangalore, India. *Social Science & Medicine* (1982) **70**, 136–143. <https://doi.org/10.1016/j.socscimed.2009.09.026>
- Lapsansky C and Chatterjee JS** (2013). Masculinity matters: using entertainment education to engage men in ending violence against women in India. *Critical Arts* **27**, 36–55. <https://doi.org/10.1080/02560046.2013.766972>
- Leye E, D’Souza H and Meurens N** (2021). The added value of and resistance to the Istanbul convention: a comparative study in 27 European Member States and Turkey. *Frontiers in Human Dynamics* **3**. <https://www.frontiersin.org/article/10.3389/fhumd.2021.697331>
- Lien MI and Lorentzen J** (2019). The need to develop the established theory of partner violence further. In MI Lien and J Lorentzen (Eds.), *Men’s Experiences of Violence in Intimate Relationships* (pp. 157–171): Springer International Publishing. https://doi.org/10.1007/978-3-030-03994-3_8
- Malik JS and Nadda A** (2019). A cross-sectional study of gender-based violence against men in the rural area of Haryana, India. *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine* **44**, 35–38. https://doi.org/10.4103/ijcm.IJCM_222_18
- Menon SV and Allen NE** (2018). The formal systems response to violence against women in India: a cultural lens. *American Journal of Community Psychology* **62**, 51–61. <https://doi.org/10.1002/ajcp.12249>
- Nadda A, Malik JS, Rohilla R, Chahal S, Chayal V and Arora V** (2018). Study of domestic violence among currently married females of Haryana, India. *Indian Journal of Psychological Medicine* **40**, 534–539. https://doi.org/10.4103/IJPSYM.IJPSYM_62_18
- NCADV** (2010). NCADV | National Coalition against Domestic Violence. *National Statistics Domestic Violence Fact Sheet*. <https://ncadv.org/STATISTICS>
- NDTV** (2023). “One-Sided Picture”: Supreme Court On Petition On Suicide By Married Men. *NDTV.Com*. <https://www.ndtv.com/india-news/one-sided-picture-supreme-court-on-petition-on-suicide-by-married-men-4173274>
- Obarisiagbon E** (2019). Emerging trend in the culture of domestic violence against men in Southern Nigeria Barr. *International Journal of Humanities and Social Science* **9**. <https://doi.org/10.30845/ijhss.v9n3p7>
- Oram S, Khalifeh H and Howard LM** (2017). Violence against women and mental health. *The Lancet. Psychiatry* **4**, 159–170. [https://doi.org/10.1016/S2215-0366\(16\)30261-9](https://doi.org/10.1016/S2215-0366(16)30261-9)

- Panda P and Agarwal B** (2005). Marital violence, human development and women's property status in India. *World Development* 33, 823–850. <https://doi.org/10.1016/j.worlddev.2005.01.009>
- Quasim F and Vemuru V** (2019). *Examining the Relationship Between Women's Empowerment and Gender-Based Violence: The Case of the Nigeria For Women Project*. <https://blogs.worldbank.org/african/examining-relationship-between-women-empowerment-and-gender-based-violence-nigeria>
- Radcliffe P, Gadd D, Henderson J, Love B, Stephens-Lewis D, Johnson A, Gilchrist E and Gilchrist G** (2021). What role does substance use play in intimate partner violence? A narrative analysis of in-depth interviews with men in substance use treatment and their current or former female partner. *Journal of Interpersonal Violence* 36, 10285–10313. <https://doi.org/10.1177/0886260519879259>
- Rahman M, Hoque MdA and Makinoda S** (2011). Intimate partner violence against women: is women empowerment a reducing factor? A study from a national Bangladeshi sample. *Journal of Family Violence* 26, 411–420. <https://doi.org/10.1007/s10896-011-9375-3>
- Sandhu JS** (2020). Chandigarh: 1,774 men called helpline in April, alleged domestic violence, says NGO. The Indian Express. <https://indianexpress.com/article/cities/chandigarh/chandigarh-1774-men-called-helpline-in-april-alleged-domestic-violence-says-ngo/>
- Sanz-Barbero B, Barón N and Vives-Cases C** (2019). Prevalence, associated factors and health impact of intimate partner violence against women in different life stages. *PloS One* 14, e0221049. <https://doi.org/10.1371/journal.pone.0221049>
- Sarma N** (2022). Domestic violence and workforce: an evaluation of India's MGNREGS. *World Development* 149, 105688. <https://doi.org/10.1016/j.worlddev.2021.105688>
- Shakti BS** (2017). *Tackling Violence against Women: A Study of State Intervention Measures: A comparative study of impact of new laws, crime rate and reporting rate, Change in awareness level*, 357. https://wcd.nic.in/sites/default/files/Final%20Draft%20report%20BSS_1.pdf
- Sharma K** (2021). Men and mental health: why 'man-up' is not the answer. The Times of India. <https://timesofindia.indiatimes.com/life-style/health-fitness/de-stress/men-and-mental-health-why-man-up-is-not-the-answer/articleshow/81229694.cms>
- Shiraz MS** (2016). The impact of education and occupation on domestic violence in Saudi Arabia. *International Journal of Social Welfare* 25, 339–346. <https://doi.org/10.1111/ijsw.12214>
- Siddhanta A and Chattopadhyay A** (2017). Role of women's empowerment in determining child stunting in Eastern India and Bangladesh. *Social Science Spectrum* 3, Article 1. <http://socialspectrum.in/index.php/sp/article/view/93>
- Sikweyiya Y, Addo-Lartey AA, Alangea DO, Dako-Gyeke P, Chirwa ED, Coker-Appiah D, Adanu RMK and Jewkes R** (2020). Patriarchy and gender-inequitable attitudes as drivers of intimate partner violence against women in the central region of Ghana. *BMC Public Health* 20, 682. <https://doi.org/10.1186/s12889-020-08825-z>
- Simonelli A, Pasquali CE and De Palo F** (2014). Intimate partner violence and drug-addicted women: from explicative models to gender-oriented treatments. *European Journal of Psychotraumatology* 5, <https://doi.org/10.3402/ejpt.v5.24496>
- Singh A, Kumar K and Arnold F** (2022). How interviewers affect responses to sensitive questions on the justification for wife beating, the refusal to have conjugal sex, and domestic violence in India. *Studies in Family Planning* 53, 259–279. <https://doi.org/10.1111/sifp.12193>
- Sinha A and Chattopadhyay A** (2017a). Inter-linkages between spousal violence and nutritional status of children: a comparative study of North and South Indian states. *Sociology and Criminology-Open Access* 5. <https://doi.org/10.4172/2375-4435.1000171>
- Sinha A, and Chattopadhyay A** (2017b). Utilization of maternal and child health care services in North and South India: does spousal violence matter? *International Journal of Population Studies* 2, 107–122. <https://doi.org/10.18063/IJPS.2016.02.001>
- Sinha A, Chowdhury B and Heuveline P** (2022). Physical intimate partner violence in India: how much does childhood socialisation matter? *Asian Population Studies* 0, 1–20. <https://doi.org/10.1080/17441730.2022.2035921>
- Sinha D and Kumar P** (2022). Trick or treat: does a microfinance loan induce or reduce the chances of spousal violence against women? Answers from India. *Journal of Interpersonal Violence* 37, NP4030–NP4056. <https://doi.org/10.1177/0886260520957681>
- The Irish Times** (2005). *Two Sides to Domestic Violence*: The Irish Times. <https://www.irishtimes.com/opinion/two-sides-to-domestic-violence-1.469717>
- Thobejane TD, Luthada NV and Mogorosi LD** (2018). Gender-based violence against men: a muted reality. *Southern African Journal for Folklore Studies* 28, 1–15. <https://doi.org/10.25159/1016-8427/4304>
- Thobejane TD and Luthada V** (2019). *An Investigation into the Trend of Domestic Violence on Men: The Case of South Africa (SSRN Scholarly Paper 3435840)*: Social Science Research Network. <https://papers.ssrn.com/abstract=3435840>
- Tjaden P and Thoennes N** (2000). *Full Report of the Prevalence, Incidence, and Consequences of Violence against Women*. <https://stacks.cdc.gov/view/cdc/21948>
- Tsiko RG** (2016). A spatial latent Gaussian model for intimate partner violence against men in Africa. *Journal of Family Violence* 31, 443–459. <https://doi.org/10.1007/s10896-015-9784-9>
- United Nations** (2014). *Guidelines on Producing Statistics on Violence against Women: Statistical Surveys* | Department of Economic and Social Affairs. <https://www.un.org/development/desa/cdpmo/tools/2020/guidelines-producing-statistics-violence-against-women-statistical-surveys>

- Uthman OA, Moradi T and Lawoko S** (2011). Are individual and community acceptance and witnessing of intimate partner violence related to its occurrence? Multilevel structural equation model. *PLOS ONE* **6**, e27738. <https://doi.org/10.1371/journal.pone.0027738>
- Verma A, Qureshi H and Kim J** (2016). Exploring the trend of violence against women in India. *International Journal of Comparative and Applied Criminal Justice* **41**, 1–16. <https://doi.org/10.1080/01924036.2016.1211021>
- Vyas S, Jansen HA, Heise L and Mbwambo J** (2015). Exploring the association between women's access to economic resources and intimate partner violence in Dar es Salaam and Mbeya, Tanzania. *Social Science & Medicine (1982)* **146**, 307–315. <https://doi.org/10.1016/j.socscimed.2015.10.016>
- Watson D, and Parsons S** (2005). *Domestic Abuse of Women and Men in Ireland: Report on the National Study of Domestic Abuse*: Stationery Office. <https://www.esri.ie/publications/domestic-abuse-of-women-and-men-in-ireland-report-on-the-national-study-of-domestic-abuse>
- WHO** (2018a). *Violence against Women Prevalence Estimates*. <https://www.who.int/publications-detail-redirect/9789240022256>
- WHO** (2018b). WHO: Addressing Violence against Women: Key Achievements and Priorities. <https://apo.who.int/publications/i/item/who-addressing-violence-against-women-key-achievements-and-priorities>

Cite this article: Chattopadhyay A, Kumar Sharma S, Vishwakarma D, and Jungari S (2024). Prevalence and risk factors of physical violence against husbands: evidence from India. *Journal of Biosocial Science* **56**, 391–411. <https://doi.org/10.1017/S0021932023000196>