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Intimate partner violence against women with disability and associated mental health concerns: a cross-sectional survey in Mumbai, India

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ABSTRACT

Objectives The risk of intimate partner violence (IPV) against women with disability is believed to be high. We aimed to compare the prevalence of past-year IPV against women with and without functional difficulties in urban informal settlements, to review its social determinants and to explore its association with mental health.

Design Cross-sectional survey.

Setting Fifty clusters within four informal settlements.

Participants 5122 women aged 18–49 years.

Primary and secondary outcome measures We used the Washington Group Short Set of Questions to assess functional difficulties. IPV in the past year was described by binary composites of questions about physical, sexual and emotional violence. We screened for symptoms of depression using the Patient Health Questionnaire-9 and of anxiety using the Generalised Anxiety Disorder-7. Multivariable logistic regression models examined associations between functional difficulties, IPV and mental health.

Results 10% of participants who screened positive for functional disability had greater odds of experiencing physical or sexual IPV (adjusted OR (AOR) 1.68, 95% CI 1.23 to 2.29) and emotional IPV (1.52, 95% CI 1.16 to 2.00) than women who screened negative. Women who screened positive for functional disability had greater odds than women who screened negative of symptoms suggesting moderate or severe anxiety (AOR 2.50, 95% CI 1.78 to 3.49), depression (2.91, 95% CI 2.13 to 3.99) and suicidal thinking (AOR 1.94, 95% CI 1.50 to 2.50).

Conclusions The burden of IPV fell disproportionately on women with functional difficulties, who were also more likely to screen positive for common mental disorder. Public health initiatives need to respond at local and national levels to address the overlapping and mutually reinforcing determinants of violence, while existing policy needs to be better utilised to ensure protection for the most vulnerable.

Strengths and limitations of this study

- Data came from a large cross-sectional survey of women in informal settlements.
- Data were collected by an organisation providing support for survivors of intimate partner violence.
- Functional difficulties were self-reported and not the primary focus of the survey.
- The cross-sectional nature of the study limits the possibility of causal inference.

BACKGROUND

Approximately 15% of the world's population, around one billion people, live with a physical, intellectual, sensory or mental health impairment that affects their daily lives and long-term health and well-being.[1] Disability is the product of attitudinal and environmental barriers that limit persons with functional difficulties from fully participating in society.[2] (In this paper, our approach to disability is in line with the social model which identifies disability as a social creation, 'a relationship between people with impairment and a disabling society'[3], distinct from medical and individual models of disability. We, therefore, use the term 'disabled women', which denotes this position, interchangeably with 'women with disabilities'). These barriers mean that, compared with non-disabled people, people with disability are less likely to be educated,[4] financially secure,[5] employed,[6] have access to health services,[1] have their health needs met[1 7] and have their social needs met.[8–10]

The double burden on women and girls with disability means that they are among the more marginalised and vulnerable in society, particularly when this burden intersects with multidimensional poverty.[1] Lacking physical and financial independence or access to socially inclusive services, disabled women who depend on partners and families for support are vulnerable to further social marginalisation and isolation and are at higher risk of physical violence and sexual abuse,[11 12] as well as other forms of abuse such as neglect, exploitation and coercive control.[13] Irrespective of disability, violence

against women occurs most commonly in the home, in the form of intimate partner violence (IPV) or non-partner domestic violence.[14 15] Women with disability are believed to be at greater risk of these and other forms of violence. However, a dearth of population-level research,[16] and the typically hidden nature of violence,[17] mean that little is known of how disability status may lead to additional risks of IPV. Such research is important for informing IPV prevention programmes,[18 19] and for meeting the objectives of the United Nations Sustainable Development Goals.

In India, the 2011 national census[20] and the 2018 National Sample Survey[21] both estimated disability prevalence at 2.2% (26.8 million people), although these are considered underestimates due to proxy reporting and insufficient consideration of disability.[22 23] Other national estimates range from 8% by the World Bank,[23] to 25% by the World Health Survey.[1 24] More local estimates reflect different approaches to classification and include 1.6% in Tamil Nadu State,[25] 1.9% in a Delhi slum community[26] and 12.2% in Telangana State.[27] Disability is most common among older, rural women and members of scheduled tribes and scheduled castes,[21 28] while prevalence increases with age, among lower-socioeconomic groups and those without employment/the unemployed.[25 27] Disabled women often report lower rates of marriage,[21 27] and higher rates of widowhood, separation and divorce.[21 25]

The ubiquity of violence against women in India has been well reported in both popular media and population-level research. The fourth National Family Health Survey (NFHS-4) reported that 30% of married women had experienced physical, sexual or emotional violence in their lifetime and 26% in the past year.[29] Similar rates were reported in a nationally representative systematic review[30] and in urban and slum settings.[31–35] Violence against women with disabilities in India is less documented: to date, only three major studies to date have reported on it at population level. A survey in Mumbai involving women aged 15–49 years with functional impairments (visual, locomotor, hearing) found that 20% of 123 ever-married disabled women had experienced past-year physical IPV, 23% emotional IPV (being insulted, humiliated or threatened) and 10% sexual IPV. Violence perpetrated by people other than intimate partners was experienced by 18% of ever-married and 23% of unmarried women, most commonly by mothers-in-law in the marital family and brothers in the natal.[12]

In Karnataka, of 70 female interviewees with disability, 73% reported 'significant' violence (vs 'rare' or 'occasional') and 23% sexual violence in the previous 12 months, while 59% reported generalised violence and 10% sexual violence in their childhood. Around half of this violence was perpetrated by family members (46%) or by people outside the family (54%).[36] In a study involving 729 women in Odisha state, 48% of those with learning difficulties and 23% with physical impairments reported experiencing domestic violence.[37] There are a number of limitations to these studies, notably their small sample sizes and, in the latter two, their imprecision in defining violence and the use of convenience sampling[36 37]; however, their findings are consistent with other reports from the wider South Asia region.[38–40]

For all women, violence increases the risk of serious injury and mortality,[41 42] HIV and sexually transmitted infections,[43 44] unintended pregnancy,[45] reproductive health morbidity[46 47] and a range of mental health concerns.[48–50] Among women with disabilities in India who have experienced violence, high levels of severe mental distress, depression, suicidal ideation and attempted suicide have been documented.[12]

Given its impact on physical and mental health, as well as being a matter of individual and social justice, violence against disabled women is largely absent from the literature. This absence limits the capacity of health planners and policymakers to act, while also contributing to the ongoing marginalisation of disabled communities, experiences and concerns.

Objectives

This study sought to address the gap in understanding of the sociodemographic circumstances of women with disabilities in urban India and their experience of IPV. We aimed to identify associations between individual socioeconomic determinants and disability in women aged 18–49 years living in informal settlements in Mumbai and to test the hypothesis that women with functional difficulty/disability are more likely to have experienced recent IPV and have higher rates of common mental disorders.

METHODS

Setting

Maharashtra ranks fourth among Indian states in the human development index,[51] and women tend to have higher than the national averages on indicators of literacy, marriage age and workforce participation. Mumbai, Maharashtra's capital, has approximately 12.7 million residents, 41% of whom live in informal settlements.[52 53] These are characterised by overcrowding, lack of tenure and insufficient living space, housing durability and water and sanitation facilities.[54 55] Women in these disadvantaged communities typically depend on relatives for housing, making them vulnerable to homelessness, poverty and violence.[55]

Design

We used data collected by (Society for Nutrition, Education and Health Action, a non-government organisation working in Mumbai's disadvantaged communities to improve the health of women and children and address the burden of violence. The dataset came from a survey conducted before the implementation of a community-based intervention to prevent violence against women and girls through individual volunteers and groups.[56]

The survey included 50 clusters of equal size, each of 500 dwellings, covering a population of 77 000 in four areas within major informal settlements.

Participants and data collection

Data collection has been described in detail elsewhere.[57] Clusters were mapped and homes visited to identify potential participants. Criteria for inclusion were women aged 18–49 years resident in a study cluster, who consented to interview. One woman per household was sampled (around 100 participants per cluster). Data collectors visited participants to explain the survey, discuss the process, answer questions and provide a participant information sheet. Signed consent to interview was obtained and participants were assured of data confidentiality.

Sixteen women interviewers collected data. They were graduates who had not worked in the mental health field and were selected after application and interview through open recruitment. They received 3 months of training, which included 3 days of training facilitated by an expert on disability awareness and the Washington Group Short Set of Questions (WG-SS). For participants with visual impairment, the interviews were oral, as they were for all participants. For participants with hearing impairment, a communications specialist accompanied the interviewer. For participants with learning difficulties, we developed an alternative interview in a simple visual format that was used 14 times during the survey.

Participants were asked about demographic characteristics, socioeconomic indicators, their health, well-being, functional difficulty and disability status, common mental disorders, their experience of emotional, physical and sexual domestic violence, injuries, help-seeking, support and disclosure, and spousal drug and alcohol use. All participant information was confidential and no names or identifiable details appear in outputs or analyses. Sources of questions included the NFHS-4,[29] the Indian Family Violence and Control Scale,[58] the International Violence Against Women Survey[59] and the WHO multicountry study.[60] Questions were translated where necessary, back-translated, piloted and refined (see online supplemental file 1).

Ethical considerations

The survey involved disclosing personal and sensitive information, which raises issues of interviewer behaviour, consent, data sharing, and privacy and confidentiality. All interviewers underwent appropriate training and WHO ethical and safety recommendations were followed.[61] Interview processes were checked through random visits and systematic monitoring by project officers and supervisors.

During the interview, participants were made aware of the potentially sensitive nature of the questions about violence and consent was obtained before they began. Efforts were made to ensure privacy by prearranging visits at a preferred time and location. Participants were able to attend a local community office, but most were interviewed at home. If household members were unwilling to leave, researchers encouraged them to listen to some of the routine questions to be reassured of the survey's nature. Most were amenable to leaving, but when they were not, the interview was terminated and completed over up to three repeat visits

Safeguarding was paramount during the survey. All participants were given information on local counselling and crisis support services for themselves or other women, whether they reported violence or not. Service providers were made aware of the study and the potential for increased service use. Researchers were able to arrange referrals if requested. For those who disclosed experience of violence, duty of care was of particular concern. Details of safeguarding measures and counselling services made available to survivors are described elsewhere.[57]

Sample size

An estimate of prevalence from a cross-sectional sample of 5000 in a population of 125 000 would have a precision of around 1%. Within this, a comparison of two categories of determinant for 100 participants in each of 50 clusters would provide 80% power at 5% significance level to detect a difference of 6% in prevalence estimates of 10%–20%.

Variables

Disability was assessed using the WG-SS, based on the International Classification of Functioning, Disability and Health model of disability.[62] The questions cover six functional domains (seeing, hearing, walking, memory, self-care and speaking), with four categories of response (no difficulty, some difficulty, a lot of difficulty and cannot do at all).[62] For this analysis, a participant was classified as having disability if they reported 'some difficulty' in at least one domain. This cut-off is one of several possible approaches and has been used in a similar setting.[38]

Definitions of violence follow the WHO Multi-Country Study[60] and are discussed in detail elsewhere.[57] We screened for anxiety, depression and suicidal thinking as common mental disorders. Anxiety was screened for using the Generalised Anxiety Disorder 7-item scale.[63] Depression was screened for using the Patient Health Questionnaire-9.[64] For both instruments, a cut-off score of ≥10 has been used as suggestive of clinically relevant conditions requiring further assessment.[65] In this study, variables were coded 'yes' for depression and anxiety if responses were recorded as moderate or severe. Suicidal thinking was coded 'yes' for lifetime positive responses.

Covariates corresponded to determinants of risk for IPV identified from the wider body of Indian IPV research undertaken in comparable settings with women whose disability status was not identified. Covariates were classified by level of occurrence, following Heise's ecological framework for violence against women.[66 67] This approach conceptualises risk of violence as a function of mutually interacting personal, situational and sociocultural factors

across individual, relationship, household, community, and society levels.

We hypothesised that a woman's odds of experiencing IPV would increase with age,[68–70] number of children[41 68] and employment outside the home,[71–73] and would decrease with years of education.[33 41 74] Partner use of alcohol or drugs was hypothesised to increase the odds,[31 69 75–77] while no clear relationship between IPV and partner level of education was predicted.[34 68 78 79] Lower socioeconomic status was considered as potentially increasing the odds of IPV,[12 34 35 41 76 80] as were faith[69 80] and caste,[69 81] due to the association of some groups with lower socioeconomic status.

Associations between common mental disorders and sociodemographic characteristics were hypothesised to conform to a similar pattern due to their close association with IPV. Hypothetical determinants were modelled as independent variables in both univariable and multivariable analyses.[82] At the level of individual women, age group, marital status, parity, education and employment were entered as categorical variables. Categories of age and schooling were based on those used in other studies.[38 41 43 46] Individual employment categories were recoded as either home-based or outside the home as IPV has been associated with women working outside the home in general rather than individual employment categories.[71–73] At 'partner' level, husband's schooling and employment were entered as categorical indicators and alcohol or drug use as binary. At 'household' level, faith, caste and socioeconomic quintile were entered as categorical indicators. Socioeconomic quintile was entered as a categorical rather than continuous variable to retain categorical consistency and because it was hypothesised that a reduction in odds would be observed in the wealthier quintiles. Quintiles were based on analysis of 22 individual household assets, with scores derived from standardised weights from the first component of a principal components analysis.[83 84]

Statistical analysis

The survey had a single-stage design with clustering and stratification. Data analyses were unweighted because the clusters were of similar size and each was sampled for about 100 questionnaires. Sociodemographic factors were summarised and cross-tabulated using frequencies and percentages, and univariable logistic regression models used to test associations between each exposure variable and the outcome. A total of 204 values were missing in the socioeconomic quintile variable and 317 in variables relating to husbands, which were accounted for in the regression analysis through listwise deletion. Variables with associations at $p<0.1$ were included in multivariable analysis. Multivariable logistic regression was used to examine associations between outcome variables (disability, IPV, depression, anxiety) and primary exposure variables, adjusting for confounders (individual demographic and socioeconomic characteristics). Post hoc Wald tests were performed to check models. All analyses used survey commands in Stata V.15.1. The data are available online at Open Science Framework,[85] available from https://osf.io/zhtpw/.

Patient and public involvement

Our research responds to the urgency of preventing violence and improving services for survivors, primarily through community-based programming in informal settlements. It is driven by survivors' needs, one of which is inclusion. We followed a protocol co-developed with community members to achieve maximal inclusion of women with functional difficulties. We discussed the survey questions with participants in a pilot phase and adapted them for subsequent use. Our findings will be shared through community women's groups, three of which meet monthly in each of the 50 informal settlement clusters.

RESULTS

Interviewers approached 5277 households between 5 December 2017 and 28 March 2019. In 967 (5%) households, there was no eligible female resident; in 592 households (11%) the interviewers could not achieve privacy across repeat visits; and in 155 (3%) households a potential participant declined interview. In total, 5122 interviews were conducted.

Disability prevalence

Table 1 summarises the type and frequency of functional difficulties reported by women. Ten per cent had 'some difficulty' in at least one domain, of which the most common were visual (4%) and locomotor (5%). Across all domains, the number of participants reporting a lot of difficulty or no ability at all was low, each less than 1%.

Women's sociodemographic profiles and disability

Most women were in their 20s or 30s (80%), currently married (92%) and with one or two children (51%). One-fifth of women (19%) reported having no schooling, while 44% had had 6–10 years. Having no remunerated work was common (76%), while those who had an income tended to work from home (15%). In unadjusted analyses, greater odds of disability were observed in women over 40 (OR 2.7; 95% CI 1.3 to 5.5), women who were separated or divorced (3.3; 95% CI 1.9 to 5.6), or widowed (3.6; 95% CI 2.2 to 5.9) and women who had three or more children (1.9; 95% CI 1.4 to 2.4). Attending school for at least 6 years was associated with lesser odds of disability than no schooling at all (0.8; 95% CI 0.6 to 0.9). Women who earned in the home had greater odds of disability than women who did not (1.5; 95% CI 1.1 to 2.0), as did women from Muslim rather than Hindu families (1.4; 95% CI 1.1 to 1.8).

Associations between disability and past-year IPV

Table 2 presents associations between women's functional difficulty and past-year physical, sexual and emotional IPV. Of 5122 women, 628 reported suffering physical or

Table 1 Frequencies of domains of functional difficulty among 5122 women aged 18–49 years living in informal settlements in Mumbai

	None	Some difficulty	A lot of difficulty	Cannot do at all
Functional difficulty	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Seeing	4896 (96)	212 (4)	12 (<1)	2 (<1)
Hearing	5078 (99)	40 (<1)	3 (<1)	1 (<1)
Walking	4860 (95)	234 (5)	25 (<1)	3 (<1)
Memory	4988 (97)	123 (2)	11 (<1)	0 (0)
Self-care	5108 (>99)	10 (<1)	4 (<1)	0 (0)
Speaking	5109 (>99)	4 (<1)	9 (<1)	0 (0)
Washington group disability prevalence assessment				**n (%)**
At least *one domain some difficulty*				505 (10)
At least one domain a lot of difficulty				63 (1)
At least one domain cannot at all				6 (<1)
At least one domain a lot of difficulty or cannot at all or at least some difficulty in two domains				178 (3)

sexual IPV in the last year (12%) and 607 had suffered emotional IPV (12%). These proportions were greater for women with disability: 84 of 505 who reported at least some functional difficulty had suffered physical or sexual IPV (17%) and 83 emotional IPV (16%). We had information on socioeconomic asset scores for 4918 women who had ever been married, and on the husbands of 4805 women whose husbands were alive. After adjustment for age, marital status, parity, woman's and husband's schooling, woman's and husband's employment, religion and husband's use of alcohol or drugs, these differences were manifest in adjusted ORs (AOR) of 1.68 (95% CI 1.23 to 2.29) for physical or sexual and 1.52 (95% CI 1.16 to 2.00) for emotional IPV.

Associations between disability and symptoms of anxiety and depression

Table 3 compares the profiles of women screened as having symptoms of at least moderate anxiety or depression with those who did not. 10% of women fell into this category and disabled women had nearly three times greater odds of doing so than non-disabled women (AOR 2.88, 95% CI 2.17 to 3.82). Women who reported physical or sexual IPV (AOR 2.50, 95% CI 1.77 to 3.53) or emotional IPV (AOR 2.34, 95% CI 1.59 to 3.43) also had greater odds of anxiety or depression. Associations with anxiety or depression were also seen for separated, divorced or widowed women, who were engaged in remunerated work, and whose husbands used alcohol or drugs. Associations were not seen in unadjusted models for parity or caste.

Table 4 examines associations in more detail, presenting ORs for positive screens for moderate or severe anxiety, depression and suicidal thinking in the presence of disability and physical, sexual or emotional IPV. Overall, 6% of women screened positive for anxiety symptoms and 9% for symptoms of depression, while 13% had experienced suicidal thinking. In unadjusted models, disability increased the odds of each of these by two to four times. Adjusting for potential confounders reduced the ORs, but they remained substantial. IPV may also be a confounding factor, as it is associated with both mental health concerns and disability. Adjusting for IPV and sociodemographic characteristics further reduced the ORs, but women with disability continued to have elevated odds of having a mental health concern. In this second adjusted model, women with functional difficulty had more than twice the odds of reporting anxiety symptoms as non-disabled women (AOR 2 2.50, 95% CI 1.78 to 3.49) and nearly three times the odds of depression (AOR 2 2.91, 95% CI 2.13 to 3.99). They had almost twice the odds of reporting suicidal thinking (AOR 2 1.94, 95% CI 1.50 to 2.50). Independent of functional status, physical, sexual and emotional IPV were all associated with greater odds of having a mental health concern.

DISCUSSION

In a cross-sectional survey of women living in informal settlements in Mumbai, disability was more common in women over 30 years of age and with children, who were separated, divorced or widowed, and from poorer households. Women with disability had over 50% greater odds of reporting physical, sexual or emotional IPV than non-disabled women, and disabled women and those who had experienced IPV had greater odds of anxiety, depression and suicidal thinking. Overall, the increased odds of disabled women experiencing IPV are consistent with studies from high-income[13 86] and low-income settings.[38 87] These findings contribute to our understanding of a serious but insufficiently investigated public health issue.[16]

The reported prevalence of IPV among all women (12% for physical or sexual and emotional IPV) was lower than at national level[29 30] and in slums.[33 34] It was

Table 2 Associations between experience of intimate partner violence (physical or sexual IPV, emotional IPV) in the preceding year, disability and sociodemographic characteristics, for 5122 women aged 18–49 years living in informal settlements in Mumbai

	Physical or sexual IPV in last year							Emotional IPV in last year						
Characteristic (n)	No n (%)	Yes n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)	No n (%)	Yes, n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)
Disability														
None	4073 (88)	544 (12)	1			1		4093 (89)	524 (11)	1			1	
At least some difficulty	421 (83)	84 (17)	1.49	1.24 to 1.99	0.007	1.68	1.23 to 2.29	422 (84)	83 (16)	1.54	1.20 to 1.97	0.001	1.52	1.16 to 2.00
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Woman's age (years)														
<20	104 (90)	11 (10)	1			1		108 (94)	7 (6)	1			–	–
20–29	1747 (86)	291 (14)	1.57	0.54 to 4.64		0.82	0.26 to 2.56	1782 (87)	256 (13)	2.22	0.80 to 6.16		–	–
30–39	1808 (88)	248 (12)	1.3	0.43 to 3.88		0.57	0.18 to 1.86	1812 (88)	243 (12)	2.07	0.74 to 5.81		–	–
>40	835 (91)	78 (9)	0.88	0.28 to 2.75	<0.001	0.39	0.11 to 1.36	812 (89)	101 (11)	1.92	0.69 to 5.34	0.329	–	–
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Marital status														
Married	4112 (87)	593 (13)	1			1		4131 (88)	574 (12)	1			1	
Unmarried	203 (99)	2 (1)	0.07	0.02 to 0.27		0.07	0.02 to 0.23	204 (99)	1 (<1)	0.04	0.01 to 0.26		0.03	0.01 to 0.24
Separated or divorced	78 (78)	22 (22)	1.96	1.20 to 3.18		1.44	0.88 to 2.33	71 (71)	29 (29)	2.94	1.90 to 4.54		2.14	1.37 to 3.35
Widowed	101 (90)	11 (10)	0.76	0.44 to 1.29	0.001	0.79	0.45 to 1.41	109 (97)	3 (3)	0.2	0.07 to 0.59	<0.001	0.14	0.04 to 0.44
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Parity														
No children	692 (92)	63 (8)	1			1		692 (92)	63 (8)	1			1	
1 or 2	2263 (86)	358 (14)	1.74	1.29 to 2.34		1.41	1.04 to 1.91	2279 (87)	342 (13)	1.65	1.28 to 2.13		1.16	0.89 to 1.51
3 or more	1539 (88)	207 (12)	1.48	1.09 to 2.00	0.002	1.29	0.92 to 1.80	1544 (88)	202 (12)	1.44	1.09 to 1.90	0.002	0.96	0.70 to 1.31
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Woman's schooling														
None	848 (89)	100 (11)	1			1		854 (90)	94 (10)	1			1	
1–5 years	734 (85)	125 (15)	1.44	1.03 to 2.02		1.39	0.99 to 1.96	737 (86)	122 (14)	1.5	1.13 to 2.00		1.45	1.09 to 1.94
6–10 years	1976 (87)	304 (13)	1.3	1.00 to 1.70		1.24	0.93 to 1.66	1983 (87)	297 (13)	1.36	1.07 to 1.73		1.29	1.00 to 1.67
11 years or more	936 (90)	99 (10)	0.9	0.66 to 1.21	0.027	0.93	0.67 to 1.29	941 (91)	94 (9)	0.91	0.72 to 1.15	0.002	0.95	0.72 to 1.24
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Woman's employment														

Continued

Table 2 Continued

Characteristic (n)	Physical or sexual IPV in last year							Emotional IPV in last year						
	No n (%)	Yes n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)	No n (%)	Yes, n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)
None	3437 (89)	433 (11)	1			1		3446 (89)	424 (11)	1			1	
Home-based	665 (86)	108 (14)	1.29	1.07 to 1.56		1.22	1.01 to 1.49	677 (88)	96 (12)	1.15	0.92 to 1.44		1.08	0.85 to 1.37
Outside the home	392 (82)	87 (18)	1.76	1.33 to 2.32	<0.001	2.11	1.60 to 2.80	392 (82)	87 (18)	1.8	1.31 to 2.49	0.003	2	1.43 to 2.80
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Religion														
Hindu	2685 (89)	317 (11)	1			1		2677 (89)	325 (11)	1			1	
Muslim	1629 (86)	273 (14)	1.42	1.15 to 1.76		1.38	1.11 to 1.72	1655 (87)	247 (13)	1.23	1.00 to 1.52		1.23	1.00 to 1.54
Buddhist	163 (83)	34 (17)	1.77	1.25 to 2.50		1.68	1.16 to 2.43	167 (85)	30 (15)	1.48	1.11 to 1.97		1.33	1.00 to 1.79
Other	17 (81)	4 (19)	1.99	0.64 to 6.23	0.003	1.9	0.63 to 5.74	16 (76)	5 (24)	2.57	0.90 to 7.36	0.013	2.94	0.93 to 9.27
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Caste														
General	2637 (88)	350 (12)	1			–	–	2651 (89)	336 (11)	1			–	–
Other Backward Caste	1064 (87)	157 (13)	1.11	0.92 to 1.35		–	–	1063 (87)	158 (13)	1.17	0.95 to 1.45		–	–
Scheduled Caste/ Tribe	621 (86)	103 (14)	1.25	1.01 to 1.54		–	–	629 (87)	95 (13)	1.19	0.93 to 1.53		–	–
None stated	172 (91)	18 (9)	0.79	0.45 to 1.37	0.202	–	–	172 (91)	18 (9)	0.83	0.47 to 1.45	0.375	–	–
All	4494 (88)	628 (12)						4515 (88)	607 (12)					
Socioeconomic quintile (n=4918 ever-married women)														
1 poorest	829 (84)	161 (16)	1			1		849 (86)	141 (14)	1			–	–
2	861 (88)	117 (12)	0.7	0.55 to 0.88		0.7	0.54 to 0.90	865 (88)	113 (12)	0.79	0.58 to 1.07		–	–
3	865 (88)	118 (12)	0.7	0.52 to 0.95		0.72	0.53 to 0.99	871 (89)	112 (11)	0.77	0.53 to 1.13		–	–
4	876 (89)	108 (11)	0.63	0.49 to 0.83		0.66	0.50 to 0.88	876 (89)	108 (11)	0.74	0.53 to 1.04		–	–
5 least poor	884 (90)	99 (10)	0.58	0.41 to 0.81	0.007	0.63	0.45 to 0.89	875 (89)	108 (11)	0.74	0.53 to 1.04	0.325	–	–
All	4315 (88)	603 (12)						4336 (88)	582 (12)					
Husband's schooling (n=4805 women with living husbands)														
None	391 (81)	90 (19)	1			1		396 (82)	85 (18)	1			1	
1–5 years	507 (86)	83 (14)	0.71	0.51 to 1.00		0.73	0.51 to 1.04	509 (86)	81 (14)	0.74	0.50 to 1.10		0.76	0.51 to 1.11
6–10 years	2206 (87)	318 (13)	0.63	0.48 to 0.82		0.66	0.50 to 0.87	2214 (88)	310 (12)	0.65	0.48 to 0.89		0.68	0.50 to 0.92
11 years or more	1069 (89)	123 (11)	0.54	0.39 to 0.75		0.63	0.41 to 0.97	1066 (89)	126 (11)	0.59	0.43 to 0.83		0.68	0.49 to 0.95
Unknown	17 (91)	1 (9)	0.44	0.29 to 0.66	<0.001	0.55	0.37 to 0.84	17 (91)	1 (9)	0.48	0.33 to 0.70	0.005	0.6	0.40 to 0.92

Continued

Table 2 Continued

Characteristic (n)	Physical or sexual IPV in last year: No n (%)	Yes n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)	Emotional IPV in last year: No n (%)	Yes, n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)
All	4190 (87)	615 (13)						4202 (87)	603 (13)					
Husband employed in previous 12 months (n=4805 women with living husbands)														
No	73 (74)	26 (26)	1			1		76 (77)	23 (23)	1			1	
Yes	4111 (88)	586 (12)	0.4	0.25 to 0.64		0.5	0.29 to 0.84	4120 (88)	577 (12)	0.46	0.28 to 0.76		0.75	0.45 to 1.27
Unknown	6 (67)	3 (33)	1.4	0.35 to 5.60	0.001	1.2	0.21 to 6.91	6 (67)	3 (33)	1.65	0.32 to 8.42	0.001	1.34	0.34 to 5.27
All	4190 (87)	615 (13)						4202 (87)	603 (13)					
Husband uses alcohol/drugs (n=4805 women with living husbands)														
No	3198 (89)	377 (11)	1			1		3216 (90)	359 (10)	1			1	
Yes	992 (81)	238 (19)	2.04	1.59 to 2.61	<0.001	1.81	1.36 to 2.40	986 (80)	244 (20)	2.22	1.79 to 2.75	<0.001	2	1.59 to 2.53
All	4190 (87)	615 (13)						4202 (87)	603 (13)					

Multivariable models (adjusted OR) include all variables for which adjusted ORs are presented. Of 5122 women, we had data on socioeconomic status for the 4918 who had ever been married and data on their husbands for 4805 who had not been widowed.
ORs and 95% CIs from univariable and multivariable logistic regression models.
CI, confidence interval; IPV, intimate partner violence; OR, odds ratio.

Table 3 Associations of positive screens for moderate or severe anxiety (GAD-7) or depression (PHQ-9) with disability and intimate partner violence (IPV) in the preceding year, for 5122 women aged 18–49 years living in informal settlements in Mumbai

Characteristic (n)	No, minimal or mild anxiety or depression n (%)	Moderate or severe anxiety or depression n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)
Disability							
None	4217 (91)	400 (9)	1			1	
At least some impairment	372 (74)	133 (26)	3.77	2.99 to 4.75	<0.001	2.88	2.17 to 3.82
All	4589 (90)	533 (10)					
Physical or sexual IPV							
No	4132 (92)	362 (8)	1			1	
Yes	457 (73)	171 (27)	4.27	3.35 to 5.45	<0.001	2.50	1.77 to 3.53
All	4589 (90)	533 (10)					
Emotional IPV							
No	4150 (92)	365 (8)	1			1	
Yes	439 (72)	168 (28)	4.35	3.37 to 5.62	<0.001	2.34	1.59 to 3.43
All	4589 (90)	533 (10)					
Woman's age (years)							
<20	102 (89)	13 (11)	1			1	
20–29	1854 (91)	184 (9)	0.78	0.44 to 1.38		0.69	0.38 to 1.24
30–39	1857 (90)	199 (10)	0.84	0.47 to 1.51		0.70	0.38 to 1.28
>40	776 (85)	137 (15)	1.39	0.75 to 2.56	<0.001	0.95	0.50 to 1.82
All	4589 (90)	533 (10)					
Marital status							
Married	4267 (91)	438 (9)	1			1	
Unmarried	189 (92)	16 (8)	0.82	0.46 to 1.48		1.21	0.64 to 2.25
Separated or divorced	57 (57)	43 (43)	7.35	4.72 to 11.45		4.73	2.68 to 9.34
Widowed	76 (68)	36 (32)	4.61	2.91 to 7.33	<0.001	3.25	1.72 to 6.12
All	4589 (90)	533 (10)					
Woman's schooling							
None	819 (86)	129 (14)	1			1	
1–5 years	758 (88)	101 (12)	0.85	0.61 to 1.17		0.72	0.50 to 1.06
6–10 years	2046 (90)	234 (10)	0.73	0.56 to 0.94		0.70	0.50 to 0.96
11 years or more	966 (93)	69 (7)	0.45	0.32 to 0.65	<0.001	0.59	0.39 to 0.90
All	4589 (90)	533 (10)					
Woman's employment							
None	3535 (91)	335 (9)	1			1	
Home based	662 (86)	111 (14)	1.77	1.39 to 2.25		1.48	1.12 to 1.96
Outside the home	392 (82)	87 (18)	2.34	1.73 to 3.18	<0.001	1.70	1.19 to 2.44
All	4589 (90)	533 (10)					
Religion							
Hindu	2737 (91)	265 (9)	1			1	
Muslim	1669 (88)	233 (12)	1.44	1.15 to 1.81		1.28	0.98 to 1.67
Buddhist	165 (84)	32 (16)	2.00	1.27 to 3.17		1.63	0.98 to 2.70
Other	18 (86)	3 (14)	1.72	0.45 to 6.61	0.003	1.13	0.40 to 3.22
All	4589 (90)	533 (10)					
Socioeconomic quintile (n=4918 ever-married women)							

Continued

Table 3 Continued

Characteristic (n)	No, minimal or mild anxiety or depression n (%)	Moderate or severe anxiety or depression n (%)	OR	(95% CI)	P value	Adjusted OR	(95% CI)
1 poorest	857 (87)	133 (13)	1			1	
2	877 (90)	101 (10)	0.74	0.56 to 0.98		0.73	0.53 to 1.02
3	879 (89)	104 (11)	0.76	0.56 to 1.04		0.77	0.54 to 1.11
4	891 (91)	93 (9)	0.67	0.50 to 0.90		0.68	0.48 to 0.96
5 least poor	903 (92)	80 (8)	0.57	0.41 to 0.80	0.014	0.64	0.43 to 0.96
All	4407 (90)	511 (10)					
Husband's schooling (n=4805 women with living husbands)							
None	410 (85)	71 (15)	1			1	
1–5 years	517 (88)	73 (12)	0.82	0.59 to 1.13		1.04	0.76 to 1.44
6–10 years	2282 (90)	242 (10)	0.61	0.44 to 0.84		1.01	0.73 to 1.38
11 years or more	1103 (91)	89 (9)	0.58	0.38 to 0.91		1.19	0.72 to 1.95
Unknown	12 (94)	6 (6)	0.37	0.24 to 0.58	<0.001	0.84	0.47 to 1.50
All	4324 (90)	481 (10)					
Husband employed in previous 12 months (n=4805 women with living husbands)							
No	72 (73)	27 (27)	1			1	
Yes	4247 (90)	450 (10)	0.28	0.19 to 0.42		0.81	0.45 to 1.48
Unknown	5 (56)	4 (44)	2.13	0.49 to 9.23	<0.001	1.70	0.29 to 9.94
All	4324 (90)	481 (10)					
Husband uses alcohol or drugs (n=4805 women with living husbands)							
No	3317 (93)	258 (7)	1			1	
Yes	1007 (82)	223 (18)	2.85	2.19 to 3.70	<0.001	1.98	1.48 to 2.64
All	4324 (90)	481 (10)					

Multivariable models (adjusted OR) include all variables for which adjusted ORs are presented. Of 5122 women, we had data on socioeconomic status for the 4918 who had ever been married, and data on their husbands for 4805 who had not been widowed. ORs and 95% CIs from univariable and multivariable logistic regression models.
CI, confidence interval; OR, odds ratio.

also lower among disabled women (17% for physical or sexual IPV, 16% for emotional IPV) compared with other studies.[12 36 37] The cause of this disparity is unclear. Strong efforts were made to help participants feel able to respond openly to questions, and the study used definitions of violence and survey instruments comparable with other studies: the lower rates may therefore be a fair reflection of levels of violence in this community. Indeed, the rate accords closely with a study of physical (12%), sexual (2%) and emotional IPV (8%) experienced 6 weeks post partum also undertaken in Mumbai informal settlements.[76] It is possible, nevertheless, that lower rates of violence may reflect under-reporting. Multiple factors play a role in the reporting of violence, such as a community's redressal structures, the extent of local welfare activities and social norms. It may be that some communities are particularly close and not forthcoming enough to report violence. The context of each community is different and efforts must be made to understand local norms and behaviours in order to contextualise research outcomes.

The mental health burden in India is high and greater treatment provision is needed.[88 89] One-in-seven Indian people are believed to be affected by some mental disorder and the burden of depressive and anxiety disorders is believed to be greatest among women.[90] For women with disabilities, the burden may be higher.[91] Two studies from South India found that disabled women were more likely to experience comorbid depression and diabetes than non-disabled women.[92 93] One of these found that disabled women were nearly ten times more likely to have depression than non-disabled women (AOR 9.5, 95% CI 2.2 to 40.8).[92] Our study supports these findings: disabled women had more mental health concerns even when controlling for socioeconomic conditions and experience of violence. Whether poor mental health and disability precede violence or vice-versa cannot be determined here. Comorbid mental health disorders may also result from pre-existing health conditions and be exacerbated by exposure to violence. These issues should be the subject of future research. Moreover, as with the elevated vulnerability to violence, this burden of mental disorder

Table 4 Unadjusted and adjusted logistic regression models for associations between disability status, symptoms of anxiety and depression, and suicidal thinking, for 5122 women aged 18–49 years living in informal settlements in Mumbai

	Moderate or severe anxiety n (%)							
	No	Yes	OR	(95% CI)	Adjusted OR 1	(95% CI)	Adjusted OR 2	(95% CI)
Disability status								
None	4389 (95)	228 (5)	1		1		1	
At least some difficulty	425 (84)	80 (16)	3.62	2.77 to 4.73	2.75	2.01 to 3.76	2.50	1.78 to 3.49
All	4814 (94)	308 (6)						
Physical or sexual IPV								
No	4293 (95)	201 (4)	1		1			
Yes	521 (83)	107 (17)	4.39	3.41 to 5.65	4.05	2.98 to 5.50	–	–
All	4814 (94)	308 (6)						
Emotional IPV								
No	4315 (96)	200 (4)	1		1			
Yes	499 (82)	108 (18)	4.67	3.59 to 6.07	4.11	3.08 to 5.49	–	–
All	4814 (94)	308 (6)						
	Moderate or severe depression n (%)							
	No	**Yes**	**OR**	**(95% CI)**	**Adjusted OR 1**	**(95% CI)**	**Adjusted OR 2**	**(95% CI)**
Disability status								
None	4280 (93)	337 (7)	1		1		1	
At least some difficulty	383 (76)	122 (24)	4.05	3.16 to 5.18	3.12	2.36 to 4.14	2.91	2.13 to 3.99
All	4663 (91)	459 (9)						
Physical or sexual IPV								
No	4186 (93)	308 (7)	1		1			
Yes	477 (76)	151 (24)	4.30	3.40 to 5.44	3.97	3.10 to 5.09	–	–
All	4663 (91)	459 (9)						
Emotional IPV								
No	4204 (92)	311 (7)	1		1			
Yes	459 (76)	148 (24)	4.36	3.40 to 5.58	4.01	3.04 to 5.29	–	–
All	4663 (91)	459 (9)						
	Suicidal ideation n (%)							
	No	**Yes**	**OR**	**(95% CI)**	**Adjusted OR 1**	**(95% CI)**	**Adjusted OR 2**	**(95% CI)**
Disability status								
None	4089 (89)	528 (11)	1		1		1	
At least some difficulty	384 (76)	121 (24)	2.44	1.98 to 3.01	2.13	1.66 to 2.75	1.94	1.50 to 2.50
All	4473 (87)	649 (13)						
Physical or sexual IPV								
No	4087 (91)	407 (9)	1		1			
Yes	386 (61)	242 (39)	6.30	5.01 to 7.92	6.04	4.80 to 7.62	–	–
All	4473 (87)	649 (13)						
Emotional IPV								
No	4112 (91)	403 (9)	1		1			
Yes	361 (59)	246 (41)	6.95	5.81 to 8.33	6.55	5.36 to 8.00	–	–
All	4473 (87)	649 (13)						

Adjusted OR 1: adjusted for sociodemographic covariates: woman's age, marital status, schooling, employment, religion, socioeconomic quintile and husband's schooling, employment and alcohol or drug use.
Adjusted OR 2: adjusted for sociodemographic covariates and preceding year physical or sexual IPV and emotional IPV.
ORs and 95% CIs from univariable and multivariable logistic regression models.
CI, confidence interval; IPV, intimate partner violence; OR, odds ratio.

needs to be communicated to relevant stakeholders and methods to address it developed.

The intersection of poverty, inequality and discriminatory social norms is central to both violence and mental health disorders.[94 95] In visualising and categorising interconnected determinants, the ecological framework used in our analysis has utility. Determining the source of violence, whether at individual micro or broader macro levels, is less clear-cut. The effects of multidimensional poverty and gender in ecologies of violence have received attention in recent years,[10 96] but more research is needed, both quantitative and qualitative, to understand the place of disability and mental health in this matrix, particularly in the context of India. A potential data source is India's National Family Health Survey (NFHS), which has been expanded to include measures of disability.[97] The NFHS has already been used widely in IPV studies involving non-disabled women.[41 98] It is hoped that this change will bring greater visibility to women with disabilities in investigations of violence.

Alongside improved visibility, regressive social and cultural norms must be challenged. These include the conception of disability as a personal failing or a sign of ill fate, and of disabled people as deserving of pity,[99 100] as well as patriarchal and stigmatising attitudes towards women and mental disorder,[101 102] and tolerance of violence among both women and men.[103] This can be achieved, in part, through integrated interventions that incorporate antiviolence messages into health and educational activities, and through targeted interventions that seek to change violence-related norms directly.[56 104] These efforts work best when addressing both men and women across all social classes and levels of the social ecology.[67] A recent targeted pilot study in Jharkhand, India that mobilised community resources through participatory learning and action groups facilitated by Accredited Social Health Activists (ASHAs) reported reductions in experience and tolerance of violence and greater levels of help-seeking.[105] The study contributes to a growing body of evidence demonstrating that norms and practices that perpetuate inequities and violence can be challenged by community mobilisation and education.[106] Such interventions should work with disabled communities and activists, incorporating disability-positive messaging, to challenge discrimination at the community level and provide a more nuanced and inclusive approach to antiviolence efforts.

In healthcare settings, efforts should be made to identify and support disabled women unknown to healthcare and violence support services. Routine healthcare and IPV education and screening programmes need to be disability-inclusive, and service providers mindful of the vulnerability of disabled women. At screenings, disabled women should have access to safe and private spaces, away from accompanying family members who may be party to violence. Those delivering screening may need training to consider different kinds of functional difficulty and access needs such as adapted communication. Training should also incorporate issues of trust and respect in order to challenge the stereotyping that can cause women with disabilities to be disbelieved when reporting episodes of violence.[100 107] The need to challenge stereotypes and promote respect extends to intersecting issues such as widowhood, separation and divorce. Women can be stigmatised in India after the loss of a husband or the ending of a marriage, with a burden of fault placed on them.[108] In our study and elsewhere,[11] women with disabilities were more likely to be separated or divorced, which is likely to further compound any stigma they already experience. Healthcare workers are well placed to challenge these kinds of stereotypes, but may themselves be party to sustaining them and require support to break reductive patterns of behaviour and thinking.

At a policy level, three major instruments in Indian law pertain directly to the evidence presented herein: the Protection of Women from Domestic Violence Act, 2005 (PWDVA),[109] the Rights of Persons with Disability Act, 2016[110] and the Mental Healthcare Act, 2017.[111] The greater scope for understanding and protection that these most recent instruments afford is a step in the right direction. The Rights of Persons with Disability Act brought India's disability policy in line with the United Nations Convention on the Rights of Persons with Disabilities and introduced a rights-based approach towards disability,[112] while the Mental Healthcare Act shifted the approach to mental health away from criminalisation towards provision of healthcare.[113] However, there were limitations in the development of both,[112 114] including the Mental Healthcare Act's failure to sufficiently address stigma.[115] As for the PWDVA, India's persistently high rates of domestic violence, which have grown during the COVID-19 pandemic,[116] are testament to the act's failure to effect any real change in society.[117 118] This further demonstrates that, while policy can be an important tool for addressing attitudinal and environmental barriers, change will remain elusive without commitment to implementation supported by adequate funding and monitoring-accountability mechanisms.

Limitations

Limitations include the cross-sectional study design, which precludes determination of whether disability was an outcome of or risk factor for IPV. Use of self-report for exposure items is a further limitation, although the recall period was short, participants being asked about their experiences in the last year. Responses to questions about IPV and mental health may have been self-censored due to the sensitive nature of the questions and therefore underestimated, despite researchers being familiar figures in the community and their efforts to develop trust. Use of self-report for disability is also a limitation and may be reflected in the low rates. The WG-SS determines a person's limitations based on self-perception in relation to their environment. Given the disadvantaged setting in which the participants lived, this may have also impacted the disability rates.

Conclusion

Violence against women in India is a major and ongoing public health problem. Women with disabilities are perhaps the most marginalised of all and experience violence to a greater degree than others. This violence derives from a culture that tolerates and perpetuates the marginalisation of both women in general and women with disabilities in particular and contributes to an unacceptable physical and mental health burden. The issue requires greater attention from national and community leaders to address its causes, especially poverty and gender inequality, and to meet India's commitments to its disabled population.

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Text (English)	Type	Text (Hindi)
****What is your religion?****		**आपका धर्म क्या है?**
Hindu	Choice	हिंदू
Muslim	Choice	मुस्लिम
Christian	Choice	ईसाई
Sikh	Choice	सिख
Buddhist/Neo-Buddhist	Choice	बौद्ध / नव-बौद्ध
Jain	Choice	जैन
Parsi/Zoroastrian	Choice	पारसी / पारसी
No religion/did not say	Choice	कोई धर्म नहीं/जानकारी नहीं
****What is your caste?****		**आपकी जाति क्या हैं?**
Open/General	Choice	सामान्य
OBC	Choice	ओबीसी
Scheduled caste (SC)	Choice	अनुसूचित जाति
Scheduled tribe (ST)	Choice	अनुसूचित जनजाति
None of these	Choice	इनमें से कोई भी नहीं
What kind of house do you live in?		**आप किस तरह के घर में रहतें हैं?**
Kachha (non-concrete)	Choice	कच्चा
Pucca (concrete)	Choice	पक्का
Mixed concrete and non-concrete	Choice	कच्चा एवं पक्का, दोनों
Other	Choice	अन्य
own?		आपका अपना घर है?**
Own	Choice	स्वयं का
Rented	Choice	किराये का
Other	Choice	अन्य
What type of toilet facility do you use?		**आप किस प्रकार के शौचालय सुविधा का प्रयोग करते हैं?**
Private or individual	Choice	निजी
Public	Choice	सार्वजानिक
Paid toilet	Choice	निजी लेकिन भुगतान शौचालय
Charity toilet	Choice	सार्वजानिक लेकिन भुगतान सौचालय

Open defecation	Choice	खुले में
Other	Choice	अन्य
*****Now I would like to ask you about some important aspects of a woman's life. You may find some of the questions personal. However, your answers are crucial for helping us understand the condition of women in the community. Let me assure you that your answers will be completely confidential and no one else in your household will know that you were asked. If I ask you any question you don't want to answer, just let me know and I will go on to the next question.*****		***अब मैं आपसे महिलाओं के जीवन के कुछ महत्वपूर्ण पहलुओं के बारे में सवाल पूछना चाहती हूँ. इनमें से कुछ प्रश्न व्यक्तिगत हो सकते हैं. इन जानकारी से बस्ती में महिलाओं की स्थिति को और अच्छे से समझने में के लिए आपके उत्तर महत्वपूर्ण हैं. मैं आपको भरोसा देती हूँ कि आपके उत्तर पूरी तरह से गोपनीय रखे जायेंगे और उन्हें किसी को भी बताया नहीं जाएगा, और आपके परिवार में से भी कोई भी नहीं जान पायेगा कि आपसे ये सरे सवाल पूछे गए हैं. यदि आप मेरे द्वारा पूछे गये किसी भी सवाल का जवाब नहीं चाहतीं हैं कृपया मुझे बताये, मै आगे के सवालों पर बढ़ जाउंगी.***
****What is your age?****	Integer	**आपकी (उत्तरदाता) की उम्र कितनी उम्र है?**
****What is your current marital status?****		**वर्तमान में आपकी (उत्तरदाता) वैवाहिक स्थिति क्या है?**
Unmarried	Choice	अविवाहित
Married, Gauna not performed	Choice	शादी की पर गौना नहीं हुआ
Currently married	Choice	शादीशुदा
Living with partner	Choice	साथी के साथ रहना
Separated	Choice	पति से अलग
Divorced	Choice	तलाकशुदा
Widowed/Widower	Choice	विधवा/ विधुर
Answer refused	Choice	उत्तर से इनकार कर दिया
completed?**		**आपकी उच्चतम शिक्षा क्या है?**
No formal education	Choice	कोई औपचारिक शिक्षा नहीं
Primary (1-5th standard)	Choice	प्राइमरी (1-5th standard)
Middle (6-8th standard)	Choice	मिडिल (6-8th standard)
High school (9-10th standard)	Choice	हाई स्कूल (9-10th standard)
Senior school (11-12th standard)	Choice	सीनियर स्कूल (11-12th standard)
Undergraduate	Choice	ग्रेजुएशन पूरा नहीं
Graduate	Choice	ग्रेजुएशन

Incomplete postgraduate	Choice	पोस्ट ग्रेजुएशन पूरा नहीं
Postgraduate or higher	Choice	पोस्ट ग्रेजुएशन और आगे
Other	Choice	अन्य
****WG-SS****		**विकलांगता**
difficulty. Please reply which describes your condition appropriately.***		प्रकार की कठिनाई है तो, कृपया उत्तर दें जो कि आपकी स्थिति का उचित रूप से वर्णन करता हो.***
****Do you have difficulty seeing, even if wearing glasses?****		*(कृपया पूंछे कि क्या वे चश्मा पहनने पहनते है? यदि हाँ तो क्या चश्मा पहनने के बाद भी उन्हें देखने में परेशानी होती है क्या?)*
No - no difficulty	Choice	नहीं देखने में कोई कठिनाई नहीं
Yes – some difficulty	Choice	हां - देखने में कुछ कठिनाई
Yes – a lot of difficulty	Choice	हां - देखने में बहुत मुश्किल
Cannot do at all	Choice	बिल्कुल नहीं देख सकते
hearing aid?**		उपयोग करते है)?**
****Do you have difficulty walking or climbing steps?****		**क्या आपको चलने या चढ़ने में कठिनाई होती है?**
concentrating?**		**क्या आपको चीजे याद रखने में या ध्यान केंद्रित करने में कठिनाई होती है?**
washing all over or dressing?**		है?**
difficulty communicating, for example, understanding or being understood?**		कठिनाई होती है, उदाहरण के लिए, दूसरों की बातों को समझ पाने में या खुद की बातों को दूसरों को समझाने में?**
****Respondent's livelihood****		**आजीविका**
they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last 12 months, have you done any of these things or any other work?***		नगद या किसी चीज के रूप में भुगतान दिया जाता है, अन्य महिलायें सामान बेचती हैं, छोटा व्यापार करती हैं, अथवा घर की खेती या घर के व्यापार में हाथ बंटाती हैं. पिछले 12 महीनों में, क्या आपने इनमें से कोई काम या कोई और काम किया है?***
No	Choice	नहीं
Yes	Choice	हाँ
****What kind of work do you mainly do?****		**मुख्यतः आप किस प्रकार का काम करती हों?**
Home-based earnings *[stitching, pani-puri making, embroidery, snacks, gota/sitara]*	Choice	**घर पर आधारित काम (आय)** *[सहायता [सिलाई, पानी-पुरी बनाने, कढ़ाई, नाश्ते बनाने, गोटा / सीतारा टकिंग]*
Vendor job *[fish selling, vegetable selling, flower/garland selling, snacks selling]*	Choice	**विक्रेता नौकरी*** [मछली बेचने, सब्जी की बिक्री, फूल / माला बेचने, नाश्ते की बिक्री]*

Shop, parlor, saloon owner	Choice	दुकान, पार्लर, सैलून आदि के मालिक
Driver-Taxi/Auto/Cab/Bus	Choice	**ड्राइवर** *[टैक्सी / ऑटो / टैक्सी / बस]*
labour etc.	Choice	घर नौकरानी, सफाई कर्मचारी, निर्माण या कृषि श्रमिक आदि
executive, private job etc.]	Choice	निजी नौकरी आदि]*
Salaried job, consultant, executive, doctor, nurse	Choice	वेतनभोगी नौकरी, परामर्शदाता, अधिकारी, डॉक्टर, नर्स
Other	Choice	अन्य
****Husband/ Partner's information****		**पति/साथी**
****How old is (was) your husband/parner?****	Integer	**आपके पति/साथी की उम्र कितनी है (थी)?**
****What is the highest level of education your husband/partner has (had) completed?****		**आपके पति /साथी की उच्चतम शिक्षा क्या है (थी) ?**
No formal education	Choice	कोई औपचारिक शिक्षा नहीं
Primary (1-5th standard)	Choice	प्राइमरी (1-5th standard)
Middle (6-8th standard)	Choice	मिडिल (6-8th standard)
High school (9-10th standard)	Choice	हाई स्कूल (9-10th standard)
Senior school (11-12th standard)	Choice	सीनियर स्कूल (11-12th standard)
Undergraduate	Choice	ग्रेजुएशन पूरा नहीं
Graduate	Choice	ग्रेजुएशन
Incomplete postgraduate	Choice	पोस्ट ग्रेजुएशन पूरा नहीं
Postgraduate or higher	Choice	पोस्ट ग्रेजुएशन और आगे
Other	Choice	अन्य
Don't know	Choice	नहीं पता
****Is (was) your husband/partner working?****		**क्या आपके पति/ साथी कोई रोजगार या काम करते हैं (थे)?**
No	Choice	नहीं
Yes	Choice	हाँ
Don't Know	Choice	पता नहीं
****What kind of work does he (did he) mainly do?****		**मुख्यतः आपके पति/साथी किस प्रकार का काम/व्यवसाय करते हैं (थे)?**
Home-based earnings *[stitching, pani-puri making, embroidery, snacks, gota/sitara]*	Choice	**घर पर आधारित काम (आय)** [सहायता [सिलाई, पानी-पुरी बनाने, कढ़ाई, नाश्ते बनाने, गोटा / सीतारा टकिंग]
flower/garland selling, snacks selling]	Choice	बिक्री]
etc.]	Choice	**दुकान मालिक** [पार्लर, सैलून, पान, किराना, मांस इत्यादि]

Driver-Taxi/Auto/Cab/Bus etc.]	Choice	**ड्राइवर** [टैक्सी / ऑटो / टैक्सी / बस इत्यादि]
labour etc.	Choice	घर नौकरानी, सफाई कर्मचारी, निर्माण या कृषि श्रमिक इत्यादि|
executive, private job etc.]	Choice	निजी नौकरी आदि]
teacher	Choice	वेतनभोगी नौकरी, परामर्शदाता, अधिकारी, डॉक्टर, नर्स, शिक्षक
Don't Know	Choice	पता नहीं
Other	Choice	अन्य
take drugs?		**क्या आपके पति/साथी किसी भी तरह के मादक पदार्थ या शराब पीते है (थे)?**
No	Choice	नहीं
Yes	Choice	हाँ
Don't Know	Choice	पता नहीं
How often in a month does (did) he take it?		**आपके पति/साथी एक महीने में कितनी बार नशा करते है (थे)?**
Sometimes	Choice	कभी कभी
Regularly	Choice	नियमित रूप से
Don't Know	Choice	पता नहीं
had during your life.	Label	जीवनकाल में जन्म दिया हैं.***
Have you ever been pregnant?		**क्या आप कभी गर्भवती हुई है?**
No	Choice	नहीं
Yes	Choice	हाँ
Have you ever given birth to a child?		**क्या आपने कभी किसी बच्चे को जन्म दिया है?**
No	Choice	नहीं
Yes	Choice	हाँ
Do you have any (live) children?		**क्या आपको कोई (जीवित) बच्चे है?**
No	Choice	नहीं
Yes	Choice	हाँ
Number of living son(s)	Integer	**जीवित बेटों की संख्या**
Number of living daughter(s)	Integer	**जीवित बेटियों की संख्या**
Household assets		**हाउसहोल्ड की संपत्ति**
Which of these things do you have in your home?		**आपके घर में इनमें से कौन से समान हैं?**
Mattress	Choice	गद्दे

Chair	Choice	कुर्सी
Sofa-set	Choice	सोफा सेट
Cot/bed (Sofa bed)	Choice	बेड (पलंग)/सोफा बेड
Table	Choice	टेबल /मेज
Almirah	Choice	अलमारी
Pressure cooker	Choice	प्रेशर कुकर
Clock/watch	Choice	घड़ी
Metered Electricity	Choice	मीटर बिजली
Radio/transistor	Choice	रेडिओ / ट्रांजिस्टर
Electric fan	Choice	बिजली का पंखा
Cooler	Choice	कूलर
AC	Choice	ए. सी.
Normal TV	Choice	सामान्य टीवी
LED or LCD TV	Choice	एल.इ.डी या एल.सी.डी टी. वी.
Basic mobile phone	Choice	साधारण मोबाइल फ़ोन
Smart phone	Choice	स्मार्ट फ़ोन
Computer (desktop)	Choice	कम्प्यूटर
Laptop	Choice	लैपटॉप
Induction cooker	Choice	इंडक्शन कुकर
Refrigerator/fridge	Choice	फ्रिज
Mixer-grinder	Choice	मिक्सर
Water purifier	Choice	वाटर प्यूरीफायर
Washing machine	Choice	वॉशिंग मशीन
Sewing machine	Choice	सिलाई मशीन
Water-pump/motor	Choice	पानी का पंप / मोटर
Cycle	Choice	साइकल
Bike/scooter/scooty (two-wheeler)	Choice	बाइक /स्कूटर/स्कूटी/(अन्य दुपहिया)
Car	Choice	कार
Auto or taxi	Choice	रिक्शा/ टैक्सी
Geyser	Choice	ग्रीज़र

Tap drinking water	Choice	नल का पानी
****Do you drink alcohol or take any drug?****		**क्या आप किसी भी तरह के मादक पदार्थ या शराब पीते हैं?**
No	Choice	नहीं
Yes	Choice	हाँ
****How often in a month do you take it?****		**आप इसे महीने में कितनी बार लेते हैं ?**
Sometimes	Choice	कभी कभी
Regularly	Choice	नियमित रूप से
****PHQ9****		**अवसाद (PHQ9)**
bothered		***पिछले 2 हफ्तों (15 दिनों) में, आपको कितनी बार निम्नलिखित समस्याओं से
by any of the following problems?***		परेशान किया गया है?***
****Little interest or pleasure in doing things****		है.**
Not at all sure	Choice	एक भी दिन नहीं
Several days	Choice	कई दिन
Over half the days	Choice	ज्यादातर दिनों में
Nearly every day	Choice	लगभग हर रोज
****Feeling down, depressed, or hopeless****	As 171	**उदास रहना या हर वक्त निराशा में रहना.**
much**		रहना.**
****Feeling tired or having little energy****		**थकावट सी रहना या कमजोरी महसूस करना.**
****Poor appetite or overeating****		**खाने को दिल नहीं करना या जरूरत से ज्यादा खाना.**
****Feeling bad about yourself or that you are a failure or have let yourself or your family down.****		**खुद के बारे में बुरा महसूस करना या खुद को असफल समझना. या खुद को नीचा समझना क्योकि आपने परिवार वालों की उम्मीदों पर खरे नहीं उतर पाए.**
****Trouble concentrating on things, such as reading the newspaper or watching television****		**किसी भी काम में मन नहीं लगना जैसे कि कुछ पढना, लिखना या टी.वी. देखना इत्यादि.**
could have noticed. Or the opposite being so figety or restless that you have been moving around a lot more than usual**		**इतने धीरे (अहिस्ता) चलना या इतने धीरे बातें करना कि लोग इस बात को ध्यान (नोटिस) देने लगे या फिर इस का उलट की आप हर समय बहुत जल्दी में और बेचैनी में रहते हों.**
hurting yourself.**		नुकसान पहूचने के बारे में सोचा.**
****GAD7****		**चिंता (GAD7)**
bothered		***पिछले 2 हफ्तों (15 दिनों) में, आपको कितनी बार निम्नलिखित समस्याओं से
by any of the following problems?***		परेशान किया गया है?***

****Feeling nervous, anxious, or on edge****		**घबराहट या परेशनी महसूस करना.**
Not at all sure	Choice	एक भी दिन नहीं
Several days	Choice	कई दिन
Over half the days	Choice	ज्यादातर दिनों में
Nearly every day	Choice	लगभग हर रोज
****Not being able to stop or control worrying****	As 186	**चिंता को रोक न पाना**
****Worrying too much about different things****	As 186	**हर बात के लिए ज्यादा चिंतित रहना.**
****Trouble relaxing****	As 186	**आराम न कर पाना या मुश्किल होना.**
****Being so restless that it's hard to sit still****	As 186	हों**
****Becoming easily annoyed or irritable****	As 186	**मामूली सी बात पर बेचैन या गुस्सा या नाराज हो जाना.**
****Feeling afraid as if something awful might happen****	As 186	**कोई भयकर घटना घटने का डर या भय महसूस होता हो.**
****Suicidal ideation****		**आत्महत्या करने की प्रवत्ति**
****Apart from in the last two weeks, have you ever thought about ending your life?****		**क्या आपने अपने जीवन में कभी भी आत्महत्या करने के बारे में सोचा है?**
Never	Choice	कभी नहीं
Yes, in the last 6 months	Choice	हाँ, पिछले 6 महीने में
Yes, in the last year	Choice	हाँ, पिछले एक साल में
Yes more than a year ago,	Choice	हाँ, पिछले एक साल से पहले
****Have you ever tried to take your life?****		है?**
****Emotional violence****		**भावनात्मक हिंसा**
which happen to some women. Please tell me if these apply to your relationship with your husband/partner or other family members?*		***अब मैं आपको कुछ परिस्थितियों के बारे में पूछने जा रही हूं जो कुछ महिलाओं के साथ होती हैं. कृपया मुझे बताएं कि क्या ये आपके रिश्ते पर लागू होते हैं?***
you feel bad about yourself?		आपको आपके बारे में बुरा महसूस करवाया?**
Yes	Choice	हाँ
No	Choice	नहीं
****How often has this happened to you?****		**आपके साथ ऐसा कितनी बार हुआ है?**
Once in the last 12 months	Choice	पिछले 12 महीनों मे एक बार
Sometimes in the last 12 months	Choice	पिछले 12 महीनों मे कई बार
Many times in the last 12 months	Choice	पिछले 12 महीनों मे बहुत बार

In the last 15 days	Choice	पिछले 15 दिनों में
None of the above	Choice	इनमें से कोई नहीं
****Who mainly did this to you?****		**आपके साथ यह करने वाला मुख्य व्यक्ति कौन था?**
Husband (Partner)	Choice	पति (साथी)
Natal family members	Choice	मायके (के लोग) वाले
Husband's family members	Choice	ससुराल (के लोग) वाले
Other (stranger, neighbour, teacher, leader, police etc)	Choice	अन्य (अजनबी, पड़ोसी, शिक्षक, नेता, पुलिस आदि)
treated you indifferently?**	As 209	आपके साथ बत्तमीजी से बर्ताव किया?**
something to belittle or humiliate you in front of other people?**	As 209	सामने नीचा दिखाया या आपके साथ ऐसा कुछ व्यवहार किया जिससे लोगो के सामने आपको अपमानित लगे?**
you or intimidate you on purpose (e.g. By the way they looked at you, by yelling and smashing things)? **	As 209	जानबूज कर कुछ किया है (जैसे आपकी तरफ गुस्से से देखा या चिल्लाया या चीजो को तोडा इत्यादि)?
you or someone you care about or take away your children?**	As 209	अपने/ नजदीकी व्यक्ति को चोट या नुकसान पहुचाने या बच्चो को आपसे दूर करने की धमकी दी?**
****Physical violence****		**शारीरिक हिंसा**
happen to some women. Please tell me if anyone has ever done any of the following things to you***		होती हैं. कृपया मुझे बताओ कि क्या आपने कभी भी इनमें से कुछ भी आपके साथ हुआ है.***
****Has anyone in your family ever pushed you, shoved you, shaken you or done something to hurt you?****		**क्या आपके परिवार के किसी भी सदस्य नें कभी भी आपको धक्का दिया, झिंझोडा या आपकी तरफ कोई चीज़ उठाकर फेंकी ताकि आपको चोट पहूचे?**
Yes	Choice	हाँ
No	Choice	नहीं
****How often has this happened to you?****		**आपके साथ ऐसा कितनी बार हुआ है?**
Once in the last 12 months	Choice	पिछले 12 महीनों मे एक बार
Sometimes in the last 12 months	Choice	पिछले 12 महीनों मे कई बार
Many times in the last 12 months	Choice	पिछले 12 महीनों मे बहुत बार
In the last 15 days	Choice	पिछले 15 दिनों में
None of the above	Choice	इनमें से कोई नहीं
****Who mainly did this to you?****		**आपके साथ यह करने वाला मुख्य व्यक्ति कौन था?**
Husband (Partner)	Choice	पति (साथी)
Natal family members	Choice	मायके (के लोग) वाले

Husband's family members	Choice	ससुराल (के लोग) वाले
Other (stranger, neighbour, teacher, leader, police etc)	Choice	अन्य (अजनबी, पड़ोसी, शिक्षक, नेता, पुलिस आदि)
****Has anyone in your family ever twisted your arm, banged your head or pulled your hair?****	As 226	**क्या आपके परिवार के किसी भी सदस्य नें कभी भी आपकी बांह मरोड़ी या आपका सिर पटका या आपके बाल खींचे?**
bitten you?**	As 226	चिमटी काटा या दांतों से काटा?**
****Has anyone in your family ever hit or punched you with their fist or something else that could hurt you?****	As 226	**क्या आपके परिवार के किसी भी सदस्य नें कभी भी, आपको मुक्के मारे या किसी चीज़ से मारा ज़िससे आपको चोट लग सके?**
you or beaten you up?**	As 226	घसीटा या आपको पीटा है?**
or burned you with a cigarette/Bidi, kerosene, chemicals, acid?**	As 226	या आप पर सिगरेट / बीड़ी, मिट्टी का तेल, रसायन, एसिड का उपयोग कर जलाया?**
sharp object such as broken glass, a razor blade, axe, or knife or used any instruments or weapons to threaten or harm you?**	As 226	**क्या आपके परिवार के किसी भी सदस्य नें कभी भी, आप पर किसी तेज़ धार वाले साधन या हथियार जैसे टूटे कांच, रेजर, ब्लेड, कुल्हाड़ी, चाकू इत्यादि से हमला किया या करने की धमकी दी?**
threatened you with a blunt object such as a belt, stone, broomstick, or rolling pin?**	As 226	**क्या आपके परिवार के किसी भी सदस्य नें कभी भी, आपको बेल्ट, पत्थर, झाड़ू या बेलन जैसी या किसी भारी वस्तु से मारा है, या मारने की धमकी दी?**
suffocate, choke, hang you, or poison you on purpose?**	As 226	**क्या आपके परिवार के किसी भी सदस्य नें कभी भी, आपका दम या गला घोंटने या आपको फांसी लगाने या जहर देने की कोशिश की?**
****Sexual violence****		**लैंगिक हिंसा**
happen to some women. Please tell me if anyone has ever done any of the following things to you.***		साथ होती है. आप मुझे बताये की इनमे ने कोई भी बात आप के साथ किसी ने की है?***
you to have sexual intercourse with him *even when you did not want to*?**		शारीरिक बल के प्रयोग से आपके साथ सोने (सेक्स/ यौन-संबंध) के लिए आपको मजबूर किया?**
Yes	Choice	हाँ
No	Choice	नहीं
****How often has this happened to you?****		**आपके साथ ऐसा कितनी बार हुआ है?**
Once in the last 12 months	Choice	पिछले 12 महीनों मे एक बार
Sometimes in the last 12 months	Choice	पिछले 12 महीनों मे कई बार
Many times in the last 12 months	Choice	पिछले 12 महीनों मे बहुत बार
In the last 15 days	Choice	पिछले 15 दिनों में
None of the above	Choice	इनमें से कोई नहीं

****Who mainly did this to you?****		**आपके साथ यह करने वाला मुख्य व्यक्ति कौन था?**
Husband (Partner)	Choice	पति (साथी)
Natal family members	Choice	मायके (के लोग) वाले
Husband's family members	Choice	ससुराल (के लोग) वाले
Other (stranger, neighbour, teacher, leader, police etc)	Choice	अन्य (अजनबी, पड़ोसी, शिक्षक, नेता, पुलिस आदि)
****Has anyone ever physically forced you to perform any other sexual acts *even you did not want to*?****	As 250	शारीरिक बल से आपको सेक्स/यौन से सम्बंधित कोई भी हरकत (क्रिया) करने को मजबूर किया?**
other way to perform sexual acts *when you did not want to*?**	As 250	डरा-धमका कर या कोई और तरीके से सेक्स/यौन सम्बन्धी क्रिया (हरकत) करने के को मजबूर किया?**
replicate a sexual behaviour from pornography or other sexual material *against your will*?**	As 250	अश्लील साहित्य या अन्य यौन सामग्री दिखाकर आपको वैसे ही यौन व्यवहार (हरकत) को दोहराने के लिए मजबूर किया?**