Prevalence, pattern and predictors of domestic violence against women in Delhi: a community based study

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ABSTRACT

Background: Domestic violence against women has serious health consequences for women. Prior research indicates its pervasive nature, albeit with wide variations in its prevalence across different settings. We examined the prevalence, pattern and predictors of domestic violence against women.

Methods: Our community based, cross sectional, mixed methods study included 827 ever married women aged up to 60 years, from Delhi (India), selected through cluster sampling followed by systematic random sampling. Data were collected during 2010 to 2011 using structured questionnaires and in-depth interview guide. Statistical analysis was carried out using Stata 11.0 (College Station, Texas, USA) and thematic analysis for qualitative data obtained on in-depth interviews.

Results: The lifetime prevalence of psychological, physical and sexual violence was 43.4%, 27.2 % and 26.4 % respectively; and when measured over past 12 months it was 37.6%, 19.3% and 20.3% respectively. ‘Any form of violence’ emerged as a sizeable category with a lifetime prevalence of 43.4%, and 37.8% in past one year. In most instances, the acts of violence were continuing and were perpetrated by husband. Violence was significantly higher among women having low neighborhood support (OR: 2.71, 95% CI: (1.39, 5.27), negative dowry effect (OR: 19.93, 95% CI: (10.36, 38.35) and alcoholic husband (OR: 2.12, 95% CI: (1.46, 3.09), whereas family support was protective against violence (OR: 0.31, 95% CI: (0.20, 0.49).

Conclusions: The prevalence of domestic violence in Delhi is considerably high. There is need to use multipronged approach including effective and sustainable public health interventions to address the violence.

Keywords: Domestic violence, Women, Prevalence, Pattern, Predictor

INTRODUCTION

World Health Organization (WHO) has declared domestic violence as a “public health epidemic”. Globally more than one third of the women continue to suffer from domestic violence.1,2 In India, the third National Family Health Survey (NFHS-3) shows that at least 37.2% ever-married women have ever experienced spousal violence with 17.2% being reported from Delhi.3 The lifetime prevalence of psychological and physical intimate partner violence against women in the United States is an estimated 47.1% and 31.5% respectively.4 Violence against women is widely recognized as an important public health problem due to its substantial consequences for women’s physical, mental and reproductive health.1,5-7 In addition, it adversely affects the economic progress of a country due to increased economic costs including loss of women’s labor hours and increased health-care costs.6,7
A separate civil law “the Protection of women from domestic violence Act, 2005” addresses the specific complexities associated with domestic violence. However, the enormity of the adverse effects of violence on women’s health, indicates the increased need for appropriate health sector response. Since most women are expected to seek health services at some point in their lifetime, healthcare providers are ideally placed to identify and help the violence victims.

The prevalence of domestic violence against women (DVAW) in India ranges from 6% to 65%, with considerable variation across the states in different settings and communities. Most of the data available on violence against women are conservative; and confined mainly to physical violence and to women of reproductive age group.

Domestic violence is a crime that is under recorded and under-reported. Hence, it is important to study domestic violence burden and its correlates in different geographical and socio cultural communities. Considering the diverse socio-demographic composition of population of Delhi, there exist variations in the prevalence of domestic violence across its different strata. We seek to extend prior work on DVAW, with a wider age range (up to 60 years). This study aims to examine the prevalence, pattern and predictors of various forms of domestic violence against women from Delhi.

The term domestic violence, DV used in this article refers to any act of psychological, physical or sexual violence against the “ever married woman” by her husband or other family members, within or beyond the confines of home. The pattern of violence refers to the frequency, severity, continuance and the perpetrator/s of the violence. The term ‘predictors’ of DV refers to the factors associated with domestic violence against women. Considering a relatively better recall of recent events, we present the pattern and predictors of DV of past one year rather than lifetime.

Methods

Study design

A community based cross-sectional study involving mixed methods (i.e. both quantitative and qualitative).

Participants

This study included ever married urban and rural women up to 60 years of age in Delhi who were regular residents in the household or visitors for more than 4 weeks and understood Hindi or English.

Study setting

Study was conducted in urban and rural areas of Delhi. In the year 2001, the estimated population of Delhi was 1, 38, 50, 507. The entire Municipal Corporation of Delhi (MCD) area constituted of 12 zones. There are 118 Maternal and Child Welfare (M&CW) centers (units) under the MCD.

Sampling

Assuming a design effect of two, with an estimated prevalence of domestic violence against women being 37.2% as per NFHS-33 to be within 5% points with 95% confidence using cluster sampling survey, 800 women were required. Since 93% of Delhi’s population is urban and 7% rural, 700 women from urban setting and 100 from the rural setting were calculated to be sampled.

Cluster sampling followed by systematic random sampling was used for drawing the study subjects. The sampling unit was house-hold. Two zones, one for urban sample (Central zone) and one for rural sample (South zone) were randomly selected from 12 MCD zones in Delhi. Furthermore, one M&CW center was drawn randomly from each of these two zones. The catchment population was obtained from the respective urban and rural M&CW centers before selecting the households. The catchment population in urban area was found to be 67,713 and in rural area it was 49,330. The number of ever married females required for the study was calculated keeping the catchment population as the base. To capture the whole range of issues, care was taken to include women from different socioeconomic strata.

For drawing the target women sample, 770 urban households and 108 rural households selected areas were approached using systematic random sampling. The overall response rate was 96.3% (96.3% urban and 96.1% rural) (Figure 1).

From the women who reported an experience of DV a purposively shortlisted subsample 20 women (15 urban, 5 rural) were interviewed. This number was determined by data saturation (Figure 1).

Study instrument

Data were collected using structured questionnaire and in-depth interview guide. The questionnaire included items on socio-demographic profile i.e. household characteristics, woman and husband characteristics (demographic, marital and behavioural characteristics) and DV experience. This questionnaire was partly adapted from WHO multi-country study on women’s health and life experiences Questionnaire version 10, 2003. The DV experience questionnaire included eleven questions on psychological violence, five questions on physical violence and three questions on sexual violence. The in-depth interview guide had four open ended items on DV with in-built triggers for probing.

To ensure that the data collection tools were culturally and linguistically appropriate, we used a multiphase
process for their development. These were prepared initially in English, then translated to Hindi and finally back translated to English to ensure semantic and content validity. On further review for linguistic reliability and appropriateness by the chief investigator, these tools were piloted in a different setting; and this data was not included in the main study.

**Figure 1: Sampling design for the selection of women.**
**Ethical consideration**

Ethical clearance was obtained from The Institutional Ethics Committee. Informed consent was obtained from all participants including separate consent for audio recording of in-depth interviews. Participation was entirely voluntary and confidentiality, privacy and anonymity of study participants were ensured. Data were collected as per WHO ethical and safety guidelines for DV research.

**Procedure for data collection**

Data for the study were collected from September 2010 to December 2011 using relevant questionnaires and interview guide upon house to house survey from participants. From the selected households, only one woman was chosen randomly and interviewed about her experiences of DV. From those who reported violence experience, 20 women (15 urban, 5 rural) were interviewed in-depth at their own convenience in terms of time and place, maintaining complete confidentiality. On being interrupted by anyone, the topic of discussion was changed to general health and the interview was resumed after the third person had retired.

In-depth interviews were audio recorded if permitted, otherwise the notes were taken. In order to obtain honest responses during interview care was taken to establish rapport with every participant prior to interviews.

**Measurements**

**Outcome variables**

Three principle DV outcome variables considered in our analysis are: psychological, physical and sexual violence. They were determined by response to a set of questions for each outcome variable. If a woman gave a positive response to any of the questions in a set, it is considered as violence of that category. In addition, the fourth variable, i.e. any form of domestic violence was derived. If at least one of the three forms of DV (physical and/or psychological and/or sexual) was present, it was considered as the presence of ‘any form’ of domestic violence. During logistic regression analyses, these outcome variables were dichotomized into presence and absence of violence, for each type of violence.

**Socio-demographic variables**

Data were collected on a number of community-level and individual-level variables that have been linked to DV.

**Data management and statistical analysis**

Collected quantitative data on demographic profile and DV were entered in MS-Excel @2006 Microsoft Corporation. Statistical analysis was carried out using Stata 11.0 (College Station, Texas, USA). The prevalence (95% CI) of various forms of violence was calculated for total, rural and urban areas respectively. Associations of socio-demographic variables with various forms of violence were tested using Chi-square or Fisher’s exact test as appropriate. Univariate and multivariate analysis was done to find the independent risk factors of various form of violence. The results were reported as OR (95% CI). The p-value of less than 0.05 was considered as statistically significant.

Qualitative (ongoing) data obtained on in-depth interview were analyzed using coding and categorization, searching for themes, validation of thematic analysis and integration of themes into phenomenon under study.

**RESULTS**

**Socio demographic characteristics of women**

A sample of 827 women was recruited. The average age of the women and their husbands was 37.1±9.72 (15-60) years and 40.76±10.35 (20-66) years respectively. Most of the women (63.2%) and their husbands (51.86%) were in 21 to 40 years age range. Majority of the women were from urban locality (87.9%), belonged to Hindu (85.5%) religion and had nuclear family (73.3%). The average monthly family income was Indian rupee 46998.4±42674.4 (1000-65000) with 52.2% women having monthly family income over 40,000 rupees. Majority of the women earned less than husband (92.3%) while only 3.2% earned more than husband. Almost three fourth (73.4%) of the women were housewives, 7.4% of husbands were unemployed; and 17% of the women and 7.4% husbands were illiterate. Further, 22.6% women reported having three or more persons per room. Most (64.4%) were married for over 10 years, 64.1% had one to two children; however 8.1% had no child. While 15% of the women reported negative effect of dowry on the way of being treated, 39.3% reported no impact. Only 34.1% women reportedly had dependable family support and 16.6% had high neighborhood support. More than half (51.1%) women had alcoholic husbands.

The women participants for in-depth interview (n=20) were in 20 to 55 years age range while the husband’s age range was 22 to 60 years. Sixteen women were currently married, three were widowed and one had separated from husband. Six women had love marriage, and 16 lived in nuclear families. Monthly family income of the women ranged from rupees 2000 to 25,000. Nine women and three women’s husbands were unemployed.

**Prevalence of domestic violence**

Table 1 illustrates the prevalence of various forms of domestic violence against women. It shows that life time prevalence of psychological violence was 43.4% and it was 37.6% in past 12 months. Physical violence, both moderate and severe, was reported by 27.2% women ever in life and 19.3% in past 12 months. Almost equal was
the prevalence of sexual violence i.e. 26.4% ever in life and 20.3% in past 12 months. Overall, 43.4% women reported ‘any form’ of violence ever in life and 37.8% in past 12 months.

Table 1: Prevalence of various forms of domestic violence against women (n=827).

| Form of violence          | Total (n=827) | Urban (n=727) | Rural (n=100) |
|---------------------------|---------------|--------------|--------------|
|                           | n\(^a\) | Prevalence (95% C.I.)\(^b\) | n\(^a\) | Prevalence (95% C.I.)\(^b\) | n\(^a\) | Prevalence (95% C.I.)\(^b\) |
| Psychological violence    |           |              |              |              |              |              |
| Ever in life              | 359  | 43.4 (40.0, 46.7) | 305  | 41.9 (38.3, 45.5) | 54   | 54.0 (44.0, 63.9) |
| In past 12 months         | 311  | 37.6 (34.2, 40.9) | 259  | 35.6 (32.1, 39.1) | 52   | 52.0 (42.0, 61.9) |
| Physical violence         |           |              |              |              |              |              |
| Ever in life              | 225  | 27.2 (24.1, 30.2) | 186  | 25.6 (22.4, 28.8) | 39   | 39.0 (29.3, 48.7) |
| In past 12 months         | 160  | 19.3 (16.6, 22.0) | 124  | 17.1 (14.3,19.8) | 36   | 36.0 (26.4, 45.6) |
| Severe physical violence  |           |              |              |              |              |              |
| Ever in life              | 221  | 26.7 (23.7, 29.7) | 182  | 25.0 (21.9, 28.2) | 39   | 39.0 (29.3, 48.7) |
| In past 12 months         | 145  | 17.5 (14.9, 20.1) | 109  | 15.0 (12.3, 17.6) | 36   | 36.0 (26.4, 45.6) |
| Sexual violence           |           |              |              |              |              |              |
| Ever in life              | 218  | 26.4 (23.3, 29.4) | 181  | 24.9 (21.7, 28.0) | 37   | 37.0 (27.4, 46.6) |
| In past 12 months         | 168  | 20.3 (17.6, 23.0) | 134  | 18.4 (15.6, 21.2) | 34   | 34.0 (24.5, 43.4) |
| Physical or sexual violence|           |              |              |              |              |              |
| Ever in life              | 233  | 28.2 (25.1, 31.2) | 194  | 26.7 (23.4, 29.9) | 39   | 39.0 (29.3, 48.7) |
| In past 12 months         | 187  | 22.6 (19.7, 25.4) | 149  | 20.5 (17.5, 23.4) | 38   | 38.0 (28.3, 47.6) |
| Domestic violence (any form)\(^c\) |           |              |              |              |              |              |
| Ever in life              | 359  | 43.4 (40.0, 46.7) | 305  | 41.9 (38.3, 45.5) | 54   | 54.0 (44.0, 63.9) |
| In past 12 months         | 313  | 37.8 (34.5, 41.1) | 261  | 35.9 (32.4, 39.3) | 52   | 52.0 (42.0, 61.9) |

\(^a\) = number of women reported violence. \(^b\) The estimated prevalence of psychological, physical and sexual violence was not exclusive of each other. \(^c\) Any form of violence: Psychological violence or Physical violence or Sexual violence.

Table 2: Frequency, severity and perpetrator/s of acts of violence against women in Delhi in past one year (n=827).

| Violent acts                                      | N\(^a\) (%) | Women who reported DV act | Frequency (%) | Perpetrator(s) N\(^a\) (%) |
|--------------------------------------------------|-------------|--------------------------|---------------|---------------------------|
|                                                   |             | At least once a week | At least once a month | At least once a year | Husband | Husband and other family members | Other family members only |
| Psychological violence                             |             |                         |                   |                           |         |                                |                       |
| Belittled or humiliated in front of others         | 286 (34.6) | 57 (19.9)                | 228 (79.7)      | 1 (0.4)                  | 204     | 74 (25.9)                        | 8 (2.8)               |
| Insulted or made to feel bad or scared purposely   | 281 (34.0) | 59 (21.0)                | 220 (78.3)      | 2 (0.7)                  | 209     | 64 (22.8)                        | 8 (2.8)               |
| Taunted for not bearing a child/ or a male child   | 78 (9.4)    | 22 (28.2)                | 55 (70.5)       | 1 (1.3)                  | 51      | 21 (26.9)                        | 6 (7.7)               |
| Taunted for bringing no dowry/ inadequate dowry    | 174 (21.0) | 32 (18.4)                | 141 (81.0)      | 1 (0.6)                  | 115     | 38 (21.8)                        | 21 (12.1)             |
| Threatened (with objects like belt, stone, knife etc) | 140 (16.9) | 28 (19.9)                | 112 (79.4)      | 1 (0.7)                  | 121     | 15 (10.7)                        | 4 (2.9)               |
| Threatened to be sent or were actually sent to parents home | 167 (20.2) | 28 (16.8)                | 136 (81.4)      | 3 (1.8)                  | 137     | 26 (15.6)                        | 4 (2.4)               |
| Ignored or neglected                               | 274 (33.1) | 35 (12.8)                | 239 (87.2)      | 0 (0.0)                  | 204     | 67 (24.5)                        | 3 (1.1)               |
| Denied enough money for housekeeping              | 88 (10.6)  | 9 (10.2)                 | 78 (88.6)       | 1 (1.1)                  | 68      | 18 (20.4)                        | 2 (2.3)               |
| No freedom to use own salary/ earnings             | 64 (7.7)   | 5 (7.8)                  | 59 (92.2)       | 0 (0.0)                  | 51      | 11 (17.2)                        | 2 (3.1)               |
| Denied basic necessities                          | 59 (7.1)   | 3 (5.1)                  | 56 (94.9)       | 0 (0.0)                  | 43      | 15 (25.4)                        | 1 (1.7)               |
| Prevented from taking up/ continuing employment   | 103 (12.4) | 11 (10.7)                | 92 (89.3)       | 0 (0.0)                  | 89      | 12 (11.7)                        | 2 (1.9)               |

Continued.
Pattern of domestic violence

Table 2 reveals the frequency, severity and perpetrator/s of acts of violence against women in past one year. Being belittled or humiliated in front of others, being insulted or made to feel bad or scared purposely and being ignored or neglected were the most common acts of psychological violence. The most common act/s of physical violence was: being slapped, thrown something that could hurt, pushed, shoved or pulled by the hair. Forced sexual intercourse was the most common act of sexual violence. Moreover most of these acts of violence occurred at least once a month followed by once a week, indicating the ongoing nature of violence. Husband was the perpetrator in majority of acts of psychological and physical violence. However, husband was the sole perpetrator of sexual violence.

On in-depth interviews one of the themes that emerged was-pattern of violence. The emergent sub-themes were onset, duration and continuity of violence; severity and perpetrator/s of violence. During the interviews it came to light that violence begins anytime during married life, mostly early; is a continuing process, ranges from moderate to severe and occurred even during pregnancy.

As one woman said, “It started after 2-3 days of marriage only.” Another said, “It has been since 5-6 years. Ever since that woman came in his life he has devastated our lives. Their affair is going on now also.” (A rural woman married for 17 years). There was little respite from this evil. It only worsened except when the victim was removed from the perpetrator/s. To quote an informant, “My problems never ended...In Mumbai he would blame that he is away from his family because of me. Gradually the problems increased only. We had frequent fights, arguments...so I thought let us shift to Delhi (so he can be near his parents). May be the thing will get better.....”

Even the degree of violence either remained the same or worsened as reported, “It only got worse. He beats me up with belts and even the neighbours know this. They can hear everything. He would throw me out of the house and tell me to leave......I keep standing outside the house for hours before he lets me in again....” According to some women violence occurred in a cyclic fashion. Husband would inflict the violence, then feel sorry and later hurt her again, as stated by an informant, “When he (husband) came to his senses after the alcohol effect was over, he would ask for forgiveness...He did this (beating) several times earlier too.....Till 1993 (10-12 years of marriage) Thereafter we separated.”

A little relief was reported on leaving home, “It went on till I finally left their house.” Approaching the formal agencies may not always bring total relief to the women, as can be noticed from the following statement, “This went on till I finally contacted the women cell (crime against women cell). But since then, it has been really tough. They don’t beat me or assault physically but there is always fighting.”

| Violence acts | N (%) Women who reported DV act | Frequency (%) | Perpetrator(s) N (%) |
|--------------|---------------------------------|---------------|----------------------|
| Physical violence |                                | At least once a week | At least once a month | At least once a year | Husband | Husband and other family members | Other family members |
| Slapped, thrown something that could hurt, pushed, shoved or pulled hair | 160 (19.4) | 27 (16.9) | 113 (81.2) | 3 (1.9) | 150 (93.8) | 9 (5.6) | 1 (0.6) |
| Hit with fist or with something else | 142 (17.2) | 16 (11.3) | 123 (86.6) | 3 (2.1) | 132 (93.0) | 8 (5.6) | 2 (1.4) |
| Kicked, dragged or beaten up | 92 (11.1) | 11 (12.0) | 71 (77.2) | 10 (10.9) | 85 (92.4) | 5 (5.4) | 2 (2.2) |
| Choked or burnt on purpose | 16 (1.9) | 2 (12.5) | 10 (62.5) | 4 (25.0) | 16 (100.0) | 0 (0.0) | 0 (0.0) |
| Actual use of a weapon | 77 (9.3) | 3 (3.9) | 66 (85.7) | 8 (10.4) | 72 (93.5) | 2 (2.6) | 3 (3.9) |
| Sexual violence |                                | At least once a week | At least once a month | At least once a year | Husband | Husband and other family members | Other family members |
| Forced sexual intercourse | 148 (17.9) | 21 (14.2) | 126 (85.1) | 1 (0.7) | 148 (100.0) | 0 (0.0) | 0 (0.0) |
| Degradation / humiliating sexual act | 23 (2.8) | 4 (17.4) | 19 (82.6) | 0 (0.0) | 23 (100.0) | 0 (0.0) | 0 (0.0) |
| Willfully denied or avoided sex | 35 (4.2) | 3 (8.8) | 32 (91.2) | 0 (0.0) | 35 (100.0) | 0 (0.0) | 0 (0.0) |

n- number of women reported act of domestic violence i.e. psychological, physical and sexual violence. n(%) - denotes the percentage of women reported perpetrator/s of specific acts of domestic violence behaviour to the total women in that category. *Women who reported severe physical violence may also have reported moderate physical violence. Moderate physical violence. Severe physical violence.
Conventionally people become considerate towards pregnant or nursing mothers. However, pregnancy or child birth too does not provide immunity from violence as is reflected by the following quotes, “I was pregnant then..., He thrashed, beat me up in the street itself. I received injuries also... Here...(shows a scar in the scalp).”

**Predictors of domestic violence in past one year**

**Factors associated with psychological violence**

Women who belonged to other religions (Sikh, Christian, Jain) and who had a dependable family support were less likely to experience psychological violence whereas women whose income was less than their husbands, having low neighborhood support, negative dowry effect on the way of being treated and an alcoholic husband were at significantly higher risk of psychological violence (Table 3).

**Factors associated with physical violence**

Women who were in 51 to 60 year age group, engaged in unskilled jobs compared to unemployed/housewives and had a dependable family support were less likely to experience physical violence. On the other hand women whose income was either less or more than their husbands, who had love marriage, low neighborhood support, having negative dowry effect on the way of being treated and an alcoholic husband were at significantly high risk of physical violence (Table 4).

### Table 3: Factors associated with psychological violence against women in Delhi in past one year by logistic regression analysis (n=827).

| Characteristics               | Psychological violence in past one year | P value | Odds-ratio (95% CI) |
|-------------------------------|----------------------------------------|---------|---------------------|
|                               | Yes (n=311)                             | No (n=516) | Unadjusted | Adjusted |
| **Age (women) (in years)**    |                                        |         |           |          |
| ≤20                           | 12 (3.9)                                | 10 (1.9) | 1.0        | 1.0      |
| 21-40                         | 91 (29.3)                               | 141 (27.3) | 0.01*     | 0.53 (0.22, 1.29) | 0.49 (0.14, 1.70) |
| 31-40                         | 123 (39.6)                              | 167 (32.4) |           | 0.61 (0.25, 1.46) | 0.67 (0.15, 2.82) |
| 41-50                         | 60 (19.3)                               | 133 (25.8) |           | 0.37 (0.15, 0.91) | 0.40 (0.08, 1.98) |
| 51-60                         | 25 (8.0)                                | 65 (12.6)  |           | 0.32 (0.12, 0.83)* | 0.35 (0.06, 2.00) |
| **Residential locality**      |                                        |         |           |          |
| Urban                         | 259 (83.3)                              | 468 (90.7) | <0.01*    | 1.0      | 1.0 |
| Rural                         | 52 (16.7)                               | 48 (9.3)   |           | 1.95 (1.28, 2.98)* | 1.22 (0.61, 2.47) |
| **Religion**                  |                                        |         |           |          |
| Hindu                         | 274 (88.1)                              | 433 (83.9) |           | 1.0      | 1.0 |
| Muslim                        | 23 (7.4)                                | 26 (5.0)   | <0.01*    | 1.39 (0.78, 2.49) | 0.86 (0.38, 1.98) |
| Others                        | 14 (4.5)                                | 57 (11.1)  |           | 0.38 (0.21, 0.70)* | 0.42 (0.19, 0.91)* |
| **Woman education**           |                                        |         |           |          |
| Illiterate                    | 66 (21.3)                               | 75 (14.5)  |           | 1.0      | 1.0 |
| Upto secondary                | 89 (28.7)                               | 132 (25.6) | 0.02*     | 0.76 (0.50, 1.17) | 0.79 (0.41, 1.53) |
| Senior secondary              | 75 (24.2)                               | 148 (28.7) |           | 0.57 (0.37, 0.88)* | 0.65 (0.28, 1.51) |
| Graduation/higher             | 80 (25.8)                               | 161 (31.2) |           | 0.56 (0.36, 0.86)* | 0.64 (0.25, 1.61) |
| **Husband education**         |                                        |         |           |          |
| Illiterate                    | 33 (10.6)                               | 28 (5.4)   | <0.01*    | 1.0      | 1.0 |
| Upto secondary                | 105 (33.8)                              | 139 (27.0) |           | 0.64 (0.36,1.12) | 0.59 (0.26,1.32) |
| Senior secondary              | 95 (30.6)                               | 168 (32.6) |           | 0.47 (0.27, 0.84)* | 0.66 (0.25, 1.74) |
| Graduation/higher             | 78 (25.1)                               | 180 (35.0) |           | 0.36 (0.20, 0.64)* | 0.47 (0.16, 1.32) |
| **Woman occupation**          |                                        |         |           |          |
| Unemployed/Housewife          | 230 (73.9)                              | 377 (73.1) |           | 1.0      | 1.0 |
| Unskilled worker              | 30 (9.7)                                | 47 (9.1)   |           | 1.04 (0.46, 1.70) | 0.61 (0.29, 1.30) |
| Semi-skilled/Skilled/ Clerk etc| 15 (4.8)                                | 31 (6.0)   |           | 0.79 (0.41, 1.50) | 1.01 (0.40, 2.51) |
| Semi-professional & above     | 36 (11.6)                               | 61 (11.8)  |           | 0.96 (0.62, 1.50) | 1.40 (0.72, 2.72) |
| **Husband occupation**        |                                        |         |           |          |
| Unemployed                    | 8 (2.7)                                 | 6 (1.2)    |           | 1.0      | 1.0 |
| Unskilled worker              | 75 (24.7)                               | 111 (23.0) |           | 0.50 (0.16, 1.51) | 0.41 (0.08, 2.01) |
| Semi-skilled/Skilled /Clerk etc| 143 (47.0)                              | 225 (46.6) |           | 0.47 (0.16, 1.40) | 0.60 (0.11, 3.09) |
| Semi-professional & above     | 78 (25.7)                               | 141 (29.2) |           | 0.41 (0.13, 1.23) | 0.53 (0.10, 2.81) |

Continued.
Factors associated with sexual violence

Women who were educated, had living children and had a dependable family support were less likely to experience sexual violence while women whose income was less than their husbands, having low neighborhood support, a negative dowry effect on the way of being treated and an alcoholic husband were at significantly higher risk of sexual violence (Table 5).

| Characteristics                        | Psychological violence in past year | Odds-ratio (95% CI) |
|----------------------------------------|-------------------------------------|---------------------|
|                                        | Yes (n=311)                         | No (n=516)          | P value     | Unadjusted | Adjusted |
| Monthly family income (INR)            |                                     |                     | 0.06        | 1.0        | 1.0      |
| ≤5,000                                 | 39 (12.6)                           | 48 (9.3)            |             | 1.0        | 1.0      |
| 5,001-10,000                           | 38 (12.3)                           | 74 (14.3)           | 0.63 (0.35, 1.12) | 1.31 (0.59, 2.92) |
| 10,001-40,000                          | 85 (27.4)                           | 111 (21.5)          | 0.94 (0.56, 1.56) | 2.23 (0.96, 5.16) |
| >40,000                                | 148 (47.7)                          | 283 (54.8)          | 0.64 (0.40, 1.02) | 2.09 (0.76, 5.70) |
| Income gap                             |                                     |                     |             | 1.0        | 1.0      |
| No gap                                 | 6 (2.0)                             | 30 (6.2)            | <0.01*      | 3.23 (1.33, 7.87)* | 6.10 (1.77, 20.96)* |
| Woman>Husband                          | 288 (93.8)                          | 445 (91.4)          | 5.41 (1.67, 17.56)* | 3.81 (0.76, 18.92) |
| Woman≤Husband                          | 13 (4.2)                            | 12 (2.4)            |             | 1.0        | 1.0      |
| Family type                            |                                     |                     |             | 1.0        | 1.0      |
| Nuclear                                | 237 (76.2)                          | 369 (71.5)          | 0.78 (0.56, 1.08) | 0.84 (0.53, 1.31) |
| Joint/ extended                        | 74 (23.8)                           | 147 (28.5)          | 1.0         | 1.0        | 1.0      |
| Person per room                        |                                     |                     |             | 1.0        | 1.0      |
| ≤2                                     | 233 (75.4)                          | 405 (78.6)          |             | 1.0        | 1.0      |
| 3-5                                    | 36 (11.7)                           | 61 (11.8)           | 1.02 (0.65, 1.59) | 0.78 (0.37, 1.62) |
| >5                                     | 40 (12.9)                           | 49 (9.5)            | 1.41 (0.90, 2.22) | 0.69 (0.32, 1.47) |
| Type of marriage                       |                                     |                     |             | 1.0        | 1.0      |
| Arranged                               | 285 (91.6)                          | 477 (92.5)          |             | 1.0        | 1.0      |
| Love                                   | 20 (6.4)                            | 27 (5.2)            | 1.23 (0.68, 2.25) | 0.97 (0.44, 2.13) |
| Love cum arranged                      | 6 (1.9)                             | 12 (2.3)            | 0.83 (0.31, 2.25) | 0.74 (0.22, 2.48) |
| Years of marriage                      |                                     |                     |             | 1.0        | 1.0      |
| ≤1                                     | 7 (2.3)                             | 20 (3.9)            |             | 1.0        | 1.0      |
| 1.1-5                                  | 58 (18.6)                           | 67 (13.0)           | 2.47 (0.97, 6.26)* | 3.28 (0.98, 10.93) |
| 5.1-10                                 | 54 (17.4)                           | 88 (17.1)           | 1.75 (0.69,4.42) | 1.95 (0.49, 7.67) |
| 10.1-20                                | 111 (35.7)                          | 163 (31.6)          | 1.94 (0.79, 4.75) | 1.72 (0.41, 7.11) |
| >20                                    | 81 (26.0)                           | 178 (34.5)          | 1.30 (0.52, 3.19) | 1.58 (0.32, 7.80) |
| No. of living children                 |                                     |                     |             | 1.0        | 1.0      |
| 0                                      | 32 (10.3)                           | 35 (6.8)            |             | 1.0        | 1.0      |
| 1-2                                    | 186 (59.8)                          | 344 (66.7)          | 0.59 (0.35, 0.98)* | 0.47 (0.20, 1.11) |
| ≥3                                     | 93 (29.9)                           | 137 (26.5)          | 0.74 (0.42, 1.28) | 0.61 (0.22, 1.69) |
| Can depend on family support           |                                     |                     |             | 1.0        | 1.0      |
| Yes                                    | 49 (15.8)                           | 233 (45.2)          | <0.01*      | 0.22 (0.15, 0.32)* | 0.30 (0.19, 0.47)* |
| No                                     | 262 (84.2)                          | 283 (54.8)          |             | 1.0        | 1.0      |
| Neighbourhood support                  |                                     |                     |             | 1.0        | 1.0      |
| High                                   | 33 (10.6)                           | 104 (20.2)          |             | 1.0        | 1.0      |
| Moderate                               | 202 (65.0)                          | 350 (67.8)          | <0.01*      | 1.81 (1.18, 2.79)* | 1.41 (0.82, 2.40) |
| Low                                    | 76 (24.4)                           | 62 (12.0)           | 3.86 (2.30, 6.46)* | 2.73 (1.40, 5.32)* |
| Dowry effect on the way of being treated|                                     |                     |             | 1.0        | 1.0      |
| Positive                               | 68 (21.9)                           | 310 (60.1)          |             | 1.0        | 1.0      |
| Negative                               | 93 (29.9)                           | 31 (6.0)            | 13.67 (8.43, 22.18)* | 17.35 (9.16, 32.86)* |
| No impact                              | 150 (48.2)                          | 175 (33.9)          | 3.90 (2.77, 5.49)* | 3.89 (2.60, 5.83)* |
| Husband alcoholic                      |                                     |                     |             | 1.0        | 1.0      |
| Yes                                    | 195 (62.9)                          | 227 (44.0)          | <0.01*      | 2.15 (1.61, 2.88)* | 2.11 (1.45, 3.07)* |
| No                                     | 115 (37.1)                          | 289 (56.0)          |             | 1.0        | 1.0      |

*P<0.0
Factors associated with ‘any form’ of domestic violence

Table 6 presents the factors associated with ‘any form’ of domestic violence in past one year by logistic regression. A significant association of any form of violence was seen with couple’s income gap, dependable family support, neighborhood support, dowry effect on the way of being treated and alcoholic husband. Those women who reported having a dependable family support were less likely to experience any form of domestic violence [OR: 0.31, 95% CI: (0.20, 0.49)].

Table 4: Factors associated with physical violence against women in Delhi in past one year by logistic regression analysis (n=827).

| Characteristics                  | Physical violence in past one year | Odds-ratio (95% CI) |
|----------------------------------|-----------------------------------|---------------------|
|                                  | Yes (n=160)                       | No (n=667)          | P value          | Unadjusted | Adjusted |
| **Age (women) (Years)**          |                                   |                     |                 |            |          |
| <20                              | 9 (5.6)                           | 13 (2.0)            | 1.0             | 1.0        |          |
| 21-40                            | 55 (34.4)                         | 177 (26.5)          | <0.01*          | 0.44 (0.18, 1.10) | 0.81 (0.22, 2.97) |
| 31-40                            | 64 (40.0)                         | 226 (33.9)          | 0.40 (0.16, 1.00) | 0.95 (0.20, 4.44) |
| 41-50                            | 28 (17.5)                         | 165 (24.7)          | 0.24 (0.09, 0.62) | 0.46 (0.08, 2.66) |
| 51-60                            | 4 (2.5)                           | 86 (12.9)           | 0.06 (0.01, 0.25)* | 0.08 (0.01, 0.69)* |
| **Residential locality**         |                                   |                     |                 |            |          |
| Urban                            | 124 (77.5)                        | 603 (90.4)          | <0.01*          | 2.73 (1.74, 4.29)* | 1.64 (0.74, 3.61) |
| Rural                            | 36 (22.5)                         | 64 (9.6)            | 1.0             | 1.0        |          |
| **Religion**                     |                                   |                     |                 |            |          |
| Hindu                            | 138 (86.3)                        | 569 (85.3)          | 1.0             | 1.0        |          |
| Muslim                           | 17 (10.6)                         | 32 (4.8)            | 2.19 (1.18, 4.05)* | 1.84 (0.74, 4.58) |
| Others                           | 5 (3.1)                           | 66 (9.9)            | 0.31 (0.12, 0.79)* | 0.64 (0.21, 1.92) |
| **Woman education**              |                                   |                     |                 |            |          |
| Illiterate                       | 45 (28.1)                         | 96 (14.4)           | 1.0             | 1.0        |          |
| Upto secondary                   | 53 (33.1)                         | 168 (25.2)          | 0.67 (0.42, 1.07) | 0.93 (0.45, 1.91) |
| Senior secondary                 | 30 (18.8)                         | 193 (29.0)          | 0.33 (0.19, 0.55)* | 0.57 (0.21, 1.53) |
| Graduation /higher               | 32 (20.0)                         | 209 (31.4)          | 0.32 (0.19, 0.54)* | 0.75 (0.24, 2.31) |
| **Husband education**            |                                   |                     |                 |            |          |
| Illiterate                       | 24 (15.0)                         | 37 (5.6)            | 1.0             | 1.0        |          |
| Upto secondary                   | 65 (40.6)                         | 179 (26.9)          | 0.55 (0.31, 1.00) | 0.57 (0.24, 1.32) |
| Senior secondary                 | 42 (26.3)                         | 221 (33.2)          | 0.29 (0.15, 0.53)* | 0.61 (0.21, 1.78) |
| Graduation /higher               | 28 (18.1)                         | 229 (34.4)          | 0.19 (0.10, 0.37)* | 0.36 (0.11, 1.20) |
| **Woman occupation**             |                                   |                     |                 |            |          |
| Unemployed/ Housewife            | 125 (78.1)                        | 482 (72.3)          | 0.35            | 0.93 (0.51, 1.69)* | 0.33 (0.13, 0.79)* |
| Unskilled worker                 | 15 (9.4)                          | 62 (9.3)            | 0.93 (0.51, 1.69) | 0.33 (0.13, 0.79)* |
| Semi-skilled/Skilled/ Clerk etc  | 6 (3.8)                           | 40 (6.0)            | 0.57 (0.23, 1.39) | 0.90 (0.27, 2.96) |
| Semi-professional & above        | 14 (8.7)                          | 83 (12.4)           | 0.65 (0.35, 1.18) | 0.83 (0.33, 2.05) |
| **Husband occupation**           |                                   |                     |                 |            |          |
| Unemployed                       | 4 (2.6)                           | 10 (1.6)            | 1.0             | 1.0        |          |
| Unskilled worker                 | 56 (35.9)                         | 130 (20.6)          | 1.07 (0.32, 3.57) | 1.11 (0.16, 7.77) |
| Semi-skilled/Skilled /Clerk etc  | 68 (43.6)                         | 300 (47.5)          | 0.56 (0.17, 1.86) | 0.87 (0.11, 6.67) |
| Semi-professional & above        | 28 (17.9)                         | 191 (30.3)          | 0.36 (0.10, 1.24) | 0.50 (0.06, 4.09) |
| **Monthly family income (INR)**  |                                   |                     |                 |            |          |
| ≤5,000                           | 29 (18.2)                         | 58 (8.7)            | 1.0             | 1.0        |          |
| 5,001-10,000                     | 28 (17.6)                         | 84 (126)            | 0.66 (0.35, 1.23) | 0.93 (0.39, 2.21) |
| 10,001-40,000                    | 45 (28.3)                         | 151 (22.6)          | 0.59 (0.34, 1.03) | 1.05 (0.42, 2.63) |
| >40,000                          | 57 (35.9)                         | 374 (56.1)          | 0.30 (0.18, 0.51)* | 1.26 (0.40, 3.96) |
| **Income gap**                   |                                   |                     |                 |            |          |
| No gap                           | 2 (1.3)                           | 34 (5.4)            | 1.0             | 1.0        |          |
| Woman> Husband                   | 149 (94.3)                        | 584 (91.8)          | 4.33 (1.03, 18.25)* | 8.83 (1.08, 71.97)* |
| Woman<Husband                    | 7 (4.4)                           | 18 (2.8)            | 6.61 (1.24, 35.19)* | 5.38 (0.51, 56.14) |

Continued.
### Table 5: Factors associated with sexual violence against women in Delhi in past one year by logistic regression analysis (n=827).

| Characteristics | Physical violence in past one year | P value | Odds-ratio (95% CI) |
|-----------------|------------------------------------|---------|---------------------|
| Family type     |                                    |         |                     |
| Nuclear         | Yes (n=160)                        | 0.08    | 1.0                 |
|                 | No (n=667)                         |         | 0.69 (0.45, 1.04)   |
|                 |                                    |         | 0.75 (0.42, 1.34)   |
| Joint/ extended |                                    |         |                     |
| Person per room | ≤2                                  | 0.01*   | 1.0                 |
|                 | 3-5                                 | 0.01*   | 1.81 (1.10, 2.98)   |
|                 | >5                                  | 0.01*   | 2.04 (1.23, 3.38)   |
| Type of marriage| Arranged                            | 0.12    | 1.0                 |
|                 | Love                               |         | 1.82 (0.94, 3.49)   |
|                 | Love cum arranged                   |         | 0.53 (0.12, 2.35)   |
|                 |                                    |         | 0.44 (0.07, 2.80)   |
| Years of marriage | ≤1                                | <0.01*  | 2.98 (0.84, 10.57)  |
|                 | 1.1-5                               | <0.01*  | 2.14 (0.60, 7.60)   |
|                 | 5.1-10                              | <0.01*  | 2.19 (0.63, 7.54)   |
|                 | 10.1-20                             |         | 0.86 (0.38, 1.93)   |
|                 | >20                                 |         | 0.62 (0.26, 1.50)   |
| No. of living children | 0                     | 0.38    | 0.75 (0.40, 1.40)   |
|                 | 1-2                                 |         | 0.74 (0.27, 2.00)   |
|                 | ≥3                                  |         | 0.59 (0.17, 1.98)   |
| Can depend on family support | Yes                               | <0.01*  | 0.19 (0.11, 0.32)   |
|                 | No                                  |         | 0.30 (0.16, 0.58)   |
| Neighbourhood support | High                              | <0.01*  | 2.81 (1.47, 5.40)   |
|                 | Moderate                            | <0.01*  | 2.18 (0.98, 4.82)   |
|                 | Low                                 |         | 2.92 (1.17, 7.28)   |
| Dowry effect on the way of being treated | Positive                        | <0.01*  | 18.41 (10.55, 32.12) |
|                 | Negative                            | <0.01*  | 18.70 (9.40, 37.20) |
| Husband alcoholic | Yes                               | <0.01*  | 2.17 (1.51, 3.12)   |
|                 | No                                  |         | 2.37 (1.46, 3.84)   |
| Ages (women) (Years) | ≤20                               | <0.01*  | 1.0                 |
|                 | 21-40                               |         | 1.0                 |
|                 | 31-40                               |         | 1.0                 |
|                 | 41-50                               |         | 1.0                 |
|                 | 51-60                               |         | 1.0                 |
| Residential locality | Urban                             | <0.01*  | 1.0                 |
|                 | Rural                               | <0.01*  | 1.0                 |

Continued.
| Characteristics                 | Sexual violence in past one year | P value    | Odds-ratio (95% CI)                           |
|---------------------------------|---------------------------------|------------|----------------------------------------------|
|                                 | Yes (n=168)                     | No (n=659) | Unadjusted                                   |
|                                 |                                  |            | Adjusted                                     |
| **Religion**                    |                                 |            |                                              |
| Hindu                           | 143 (85.1)                      | 564 (85.6) | <0.01*                                       |
| Muslim                          | 17 (10.1)                       | 32 (4.9)   | 1.0                                          |
| Others                          | 8 (4.8)                         | 63 (9.6)   | 2.09 (1.13, 3.88)*                           |
| **Woman education**             |                                  |            | 1.62 (0.66, 3.99)                            |
| Illiterate                      | 51 (30.4)                       | 90 (13.7)  | 0.50 (0.23, 1.06)                            |
| Up to secondary                 | 50 (29.8)                       | 171 (26.0) | 0.51 (0.32, 0.82)*                           |
| Senior secondary                | 32 (19.0)                       | 191 (29.0) | 0.29 (0.17, 0.49)*                           |
| Graduation /higher              | 35 (20.8)                       | 206 (31.3) | 0.29 (0.18, 0.49)*                           |
| **Husband education**           |                                  |            |                                              |
| Illiterate                      | 26 (15.5)                       | 35 (5.3)   | <0.01*                                       |
| Up to secondary                 | 62 (36.9)                       | 182 (27.7) | 1.0                                          |
| Senior secondary                | 48 (28.6)                       | 215 (32.7) | 0.51 (0.32, 0.82)*                           |
| Graduation /higher              | 32 (19.0)                       | 226 (34.3) | 0.29 (0.18, 0.49)*                           |
| **Woman occupation**            |                                  |            |                                              |
| Unemployed / Housewife          | 127 (75.6)                      | 480 (72.8) | 0.76 (0.47, 1.27)                            |
| Unskilled worker                | 19 (11.3)                       | 58 (8.8)   | 1.23 (0.71, 2.15)                            |
| Semi-skilled /Skilled / Clerk etc| 7 (4.2)                        | 39 (5.9)   | 0.67 (0.29, 1.55)                            |
| Semi-professional & above       | 15 (9.8)                        | 82 (12.4)  | 0.69 (0.38, 1.23)                            |
| **Husband occupation**          |                                  |            |                                              |
| Unemployed                      | 5 (3.0)                         | 9 (1.4)    | 0.71 (0.22, 2.23)                            |
| Unskilled worker                | 53 (32.1)                       | 133 (21.4) | 0.43 (0.14, 1.34)                            |
| Semi-skilled / Skilled / Clerk etc | 72 (43.6)                 | 296 (47.6) | 0.34 (0.10, 1.08)                            |
| Semi-professional & above       | 35 (21.2)                       | 184 (29.6) | 0.34 (0.10, 1.08)                            |
| **Monthly family income (INR)** |                                  |            |                                              |
| ≤5,000                          | 26 (15.6)                       | 61 (9.3)   | <0.01*                                       |
| 5,001-10,000                    | 25 (15.0)                       | 87 (13.2)  | 1.0                                          |
| 10,001-40,000                   | 51 (30.5)                       | 145 (22.0) | 1.0                                          |
| >40,000                         | 65 (38.9)                       | 366 (55.5) | 0.41 (0.24, 0.70)*                           |
| **Income gap**                  |                                  |            | 1.44 (0.47, 4.37)                            |
| No gap                          | 2 (1.2)                         | 34 (5.4)   | 0.71 (0.22, 2.23)                            |
| Woman<Husband                   | 158 (94.6)                      | 575 (91.7) | 4.67 (1.11, 19.65)*                          |
| Woman>Husband                   | 7 (4.2)                         | 18 (2.9)   | 6.61 (1.24, 35.19)                           |
| **Family type**                 |                                  |            |                                              |
| Nuclear                         | 134 (79.8)                      | 472 (71.6) | 0.03*                                       |
| Joint/ extended                 | 34 (20.2)                       | 187 (28.4) | 0.64 (0.42, 0.96)*                           |
| **Person per room**             |                                  |            | 0.77 (0.44, 1.34)                            |
| ≤2                              | 118 (71.1)                      | 520 (79.0) | 1.0                                          |
| 3-5                             | 24 (14.5)                       | 73 (11.1)  | 1.44 (0.87, 2.39)                            |
| >5                              | 24 (14.5)                       | 65 (9.9)   | 1.62 (0.97, 2.70)                            |
| **Type of marriage**            |                                  |            |                                              |
| Arranged                        | 154 (91.7)                      | 608 (92.3) | 1.0                                          |
| Love                            | 12 (7.1)                        | 35 (7.1)   | 1.35 (0.68, 2.66)                            |
| Love cum arranged               | 2 (1.2)                         | 16 (1.2)   | 0.49 (0.11, 2.16)                            |
| **Years of marriage**           |                                  |            |                                              |
| ≤1                              | 3 (1.8)                         | 24 (3.6)   | 2.86 (0.81, 10.16)                           |
| 1.1-5                           | 33 (19.6)                       | 92 (14.0)  | 2.23 (0.63, 7.91)                            |
| 5.1-10                          | 31 (18.4)                       | 111 (16.8) | 2.10 (0.61, 7.22)                            |
| 10.1-20                         | 57 (33.9)                       | 217 (32.9) | 1.63 (0.47, 5.67)                            |
| >20                             | 44 (26.2)                       | 215 (32.6) | 3.97 (0.56, 2.80)                            |

Continued.
| Characteristics                      | Sexual violence in past one year | P value  | Odds-ratio (95% CI) |         |
|-------------------------------------|----------------------------------|----------|---------------------|---------|
|                                     | Yes (n=168)                      | No (n=659) | Unadjusted | Adjusted |
| No. of living children              |                                  |          |                    |         |
| 0                                   | 18 (10.7)                        | 49 (7.4)  | 0.09               | 1.0     | 1.0     |
| 1-2                                 | 96 (57.1)                        | 434 (65.9)|                    | 0.60 (0.33, 1.07) | 0.36 (0.14, 0.95)* |
| ≥3                                  | 54 (32.2)                        | 176 (26.7)|                    | 0.83 (0.44, 1.55) | 0.27 (0.08, 0.86)* |
| Can depend on family support        |                                  |          |                    |         |
| Yes                                 | 18 (10.7)                        | 264 (40.1)| <0.01*             | 0.17 (0.10, 0.29)* | 0.29 (0.16, 0.55)* |
| No                                  | 150 (89.3)                       | 395 (59.9)|                    | 1.0     | 1.0     |
| Neighbourhood support               |                                  |          |                    |         |
| High                                | 13 (7.7)                         | 124 (18.8)| 1.0                | 1.0     | 1.0     |
| Moderate                            | 111 (66.1)                       | 441 (66.9)| <0.01*             | 2.40 (1.30, 4.41)* | 1.69 (0.81, 3.52) |
| Low                                 | 44 (26.2)                        | 94 (14.3) | 4.46 (2.27, 8.76)* | 2.64 (1.13, 6.15)* |
| Dowry effect on the way of being treated |                                  |          |                    |         |
| Positive                            | 23 (13.7)                        | 355 (53.9)| 1.0                | 1.0     | 1.0     |
| Negative                            | 64 (38.1)                        | 60 (9.1)  | <0.01*             | 16.4 (9.50, 28.52)* | 14.9 (7.73, 28.97)* |
| No impact                           | 81 (48.2)                        | 244 (37.0)| 5.12 (3.13, 8.37)* | 4.64 (2.68, 8.05)* |
| Husband alcoholic                   |                                  |          |                    |         |
| Yes                                 | 109 (64.9)                       | 313 (53.9)| <0.01*             | 2.03 (1.43, 2.89)* | 1.94 (1.24, 3.05)* |
| No                                  | 59 (35.1)                        | 176 (46.1)|                    | 1.0     | 1.0     |

*P<0.05.

**Table 6:** Factors associated with any form of domestic violence against women in past one year by logistic regression analysis (n=827).

| Characteristics                      | Any form of domestic violence in past one year | P value  | Odds-ratio (95% CI) |         |
|-------------------------------------|-----------------------------------------------|----------|---------------------|---------|
|                                     | Yes (n=313)                                   | No (n=514) | Unadjusted | Adjusted |
| Age (women) (in years)              |                                              |          |                    |         |
| <20                                 | 12 (3.8)                                      | 10 (1.9) | 0.01*              | 1.0     | 1.0     |
| 21-40                               | 91 (29.1)                                     | 141 (27.4)|                    | 0.53 (0.22, 1.29) | 0.48 (0.13, 1.66) |
| 31-40                               | 123 (39.3)                                    | 167 (32.5)|                    | 0.61 (0.25, 1.46) | 0.65 (0.15, 2.75) |
| 41-50                               | 62 (19.8)                                     | 131 (25.5)|                    | 0.39 (0.16, 0.96)* | 0.44 (0.09, 2.19) |
| 51-60                               | 25 (8.0)                                      | 65 (12.6) | 0.32 (0.12, 0.83)* | 0.37 (0.06, 2.10) |
| Residential locality                |                                              |          |                    |         |
| Urban                               | 261 (83.4)                                    | 466 (90.7)| <0.01*             | 1.93 (1.27, 2.94)* | 1.19 (0.59, 2.1) |
| Rural                               | 52 (16.6)                                     | 48 (9.3)  |                    |         |
| Religion                            |                                              |          |                    |         |
| Hindu                               | 275 (87.9)                                    | 432 (84.0)| 1.0                | 1.0     | 1.0     |
| Muslim                              | 23 (7.4)                                      | 26 (5.1)  | <0.01*             | 1.38 (0.77, 2.48) | 0.87 (0.38, 2.00) |
| Others                              | 15 (4.8)                                      | 56 (10.9) | 0.42 (0.23, 0.75)* | 0.47 (0.22, 1.01) |
| Woman education                     |                                              |          |                    |         |
| Illiterate                          | 67 (21.5)                                     | 74 (14.4) |                    |         |
| Upto secondary                      | 89 (28.5)                                     | 132 (25.7)| 0.02*              | 0.74 (0.48, 1.14) | 0.75 (0.39, 1.44) |
| Senior secondary                    | 75 (24.0)                                     | 148 (28.8)|                    | 0.55 (0.36, 0.86)* | 0.62 (0.27, 1.45) |
| Graduation /higher                  | 81 (26.0)                                     | 160 (31.1)|                    | 0.55 (0.36, 0.85)* | 0.63 (0.25, 1.60) |
| Husband education                   |                                              |          |                    |         |
| Illiterate                          | 33 (10.5)                                     | 28 (5.5)  | <0.01*             | 0.65 (0.37, 1.14) | 0.63 (0.28, 1.41) |
| Upto secondary                      | 106 (33.9)                                    | 138 (26.9)|                    | 0.47 (0.27, 0.84)* | 0.69 (0.26, 1.82) |
| Senior secondary                    | 95 (30.4)                                     | 168 (32.7)|                    | 0.37 (0.21, 0.66)* | 0.49 (0.17, 1.38) |
| Graduation /higher                  | 79 (25.2)                                     | 179 (34.9)|                    |         |

*Continued.*
| Characteristics                     | Any form of domestic violence in past one year | P value | Odds-ratio (95% CI) | Unadjusted | Adjusted |
|-------------------------------------|-----------------------------------------------|---------|---------------------|------------|----------|
| **Woman occupation**                |                                               |         |                     |            |          |
| Unemployed/ Housewife               | 231 (73.8)                                   | 0.85    | 1.0                 | 1.0        | 1.0      |
| Unskilled                          | 31 (9.9)                                     |         | 1.09 (0.67, 1.77)   | 0.66 (0.31, 1.42) |
| Semi-skilled/Skilled/ Clerk etc     | 15 (4.8)                                     |         | 0.78 (0.41, 1.49)   | 1.01 (0.40, 2.51) |
| Semi-professional & above           | 36 (11.5)                                    |         | 0.96 (0.61, 1.49)   | 1.34 (0.69, 2.60) |
| **Husband occupation**             |                                               |         |                     |            |          |
| Unemployed                          | 8 (2.6)                                      |         | 1.0                 | 1.0        | 1.0      |
| Unskilled                          | 76 (24.8)                                    | 0.39    | 0.51 (1.17, 1.55)   | 0.41 (0.08, 2.03) |
| Semi-skilled/Skilled/ Clerk etc     | 143 (46.7)                                   |         | 0.47 (0.16, 1.40)   | 0.59 (0.11, 3.04) |
| Semi-professional & above           | 79 (25.8)                                    |         | 0.42 (0.14, 1.26)   | 0.53 (0.10, 2.85) |
| **Monthly family income (INR)**     |                                               |         |                     |            |          |
| ≤5,000                              | 39 (12.5)                                    | 0.08    | 0.65 (0.37, 1.16)   | 1.44 (0.64, 3.22) |
| 5,001-10,000                       | 39 (12.5)                                    |         | 0.94 (0.56, 1.56)   | 2.27 (0.97, 5.27) |
| 10,001-40,000                      | 85 (27.2)                                    |         | 0.65 (0.40, 1.03)   | 2.20 (0.80, 6.04) |
| >40,000                            | 149 (47.8)                                   |         | 0.47 (0.16, 1.40)   | 0.59 (0.11, 3.04) |
| **Income gap**                     |                                               |         |                     |            |          |
| No gap                              | 6 (1.9)                                      | <0.01* | 3.27 (1.34, 7.96)   | 6.21 (1.80, 21.35) |
| Woman<Husband                       | 290 (93.8)                                   |         | 5.41 (1.67, 17.56)  | 3.78 (0.76, 18.77) |
| Woman>Husband                       | 13 (4.2)                                     |         | 1.22 (0.67, 2.22)   | 0.94 (0.43, 2.07) |
| **Family type**                    |                                               |         |                     |            |          |
| Nuclear                             | 238 (76.0)                                   | 0.16    | 0.79 (0.57, 1.09)   | 0.85 (0.54, 1.34) |
| Joint/ extended                     | 75 (24.0)                                    |         | 1.0                 | 1.0        | 1.0      |
| **Person per room**                |                                               |         |                     |            |          |
| ≤2                                  | 234 (75.2)                                   | 0.22    | 1.01 (0.65, 1.58)   | 0.76 (0.36, 1.60) |
| 3-5                                 | 36 (11.6)                                    |         | 1.47 (0.94, 2.30)   | 0.73 (0.34, 1.55) |
| >5                                  | 41 (13.2)                                    |         | 1.22 (0.67, 2.22)   | 0.94 (0.43, 2.07) |
| **Type of marriage**               |                                               |         |                     |            |          |
| Arranged                            | 287 (91.7)                                   | 0.73    | 0.82 (0.30, 2.22)   | 0.75 (0.22, 2.49) |
| Love                                | 20 (6.4)                                     |         | 1.22 (0.67, 2.22)   | 0.94 (0.43, 2.07) |
| Love cum arranged                   | 6 (1.9)                                      |         | 1.0                 | 1.0        | 1.0      |
| **Years of marriage**              |                                               |         |                     |            |          |
| ≤1                                  | 7 (2.2)                                      |         | 1.0                 | 1.0        | 1.0      |
| 1.1-5                               | 58 (18.5)                                    | 0.02*   | 2.47 (0.97, 6.26)   | 3.32 (0.99, 11.09) |
| 5.1-10                              | 54 (17.3)                                    |         | 1.75 (0.69,4.42)    | 1.98 (0.50, 7.82) |
| 10.1-20                             | 112 (35.8)                                   |         | 1.97 (0.80, 4.82)   | 1.74 (0.42, 7.25) |
| >20                                 | 82 (26.2)                                    |         | 1.32 (0.53, 3.25)   | 1.51 (0.30, 7.48) |
| **No. of living children**         |                                               |         |                     |            |          |
| 0                                   | 32 (10.3)                                    | 0.07    | 0.59 (0.35, 0.99)   | 0.47 (0.20, 1.12) |
| 1-2                                 | 187 (59.7)                                   |         | 0.75 (0.43, 1.30)   | 0.62 (0.22, 1.72) |
| ≥3                                  | 94 (30.0)                                    |         | 0.59 (0.35, 0.99)   | 0.47 (0.20, 1.12) |
| **Can depend on family support**   |                                               |         |                     |            |          |
| Yes                                 | 50 (16.0)                                    | <0.01*  | 0.23 (0.16, 0.32)   | 0.31 (0.20, 0.49)* |
| No                                  | 263 (84.0)                                   |         | 1.0                 | 1.0        | 1.0      |
| **Neighbourhood support**          |                                               |         |                     |            |          |
| High                                | 33 (10.5)                                    | 1.0     | 1.0                 | 1.0        | 1.0      |
| Moderate                            | 204 (65.2)                                   | <0.01*  | 1.84 (1.20, 2.83)   | 1.42 (0.83, 2.42) |
| Low                                 | 76 (24.3)                                    |         | 3.86 (2.30, 6.46)   | 2.71 (1.39, 5.27)* |
| **Dowry effect on the way of being treated** |               |         |                     |            |          |
| Positive                            | 68 (21.7)                                    | <0.01*  | 1.0                 | 1.0        | 1.0      |
| Negative                            | 95 (29.4)                                    |         | 14.93 (9.13,24.41)* | 19.93(10.36,38.35)* |
| No impact                           | 150 (47.9)                                   |         | 3.90 (2.77, 5.49)   | 3.86 (2.58, 5.77)* |

Continued.
But women who had less income than their husbands (OR: 6.21, 95% CI: (1.80, 21.35), had low neighborhood support (OR: 2.71, 95% CI: (1.39, 5.27), had negative dowry effect on the way of being treated (OR: 19.93, 95% CI: (10.36, 38.35)) and an alcoholic husband (OR: 2.12, 95% CI (1.46, 3.09)) were at significantly higher risk of any form of domestic violence.

**DISCUSSION**

Our study demonstrated a lifetime prevalence of 43.4% (41.9% urban vs. 54.0% rural) of any form of violence (psychological or physical or sexual) against women in Delhi. The prevalence of psychological, physical, sexual and physical or sexual violence against women was also considerably high. These findings are comparable with the earlier reports from Delhi and other regions in the country. These data also confirm the global pervasive character of DV across all societies. However, NFHS-3 reported a much lower prevalence of 17.2% spousal violence (emotional or physical or sexual) in Delhi. This could probably be due to the methodological differences such as including reproductive age group women and difference of sociodemographic characteristics, though the exact reasons are not known. The most common act/s of physical violence in present study were being slapped, thrown something that could hurt, pushed, shoved or pulled hair (19.4%). Snapping is considered as the most commonly reported act of physical violence both in India and abroad. Furthermore, our findings also confirmed the ongoing nature of violence, and the husband being its chief perpetrator.

The in-depth interviews too revealed that violence is frequent and cyclic ranging from moderate to severe. Alcoholic husband is the main abuser. There is little respite for women from this evil. It only worsens except when the victim is removed from the perpetrator/s.

Our study reveals that domestic violence against women is present across all strata in Delhi. However, certain socio-demographic characteristics of women were associated with DV. The risk of any form of domestic violence in past one year was higher, for women whose income was less than their husbands than those with no income gap, for women with low neighborhood support, those having negative effect of dowry on the way of being treated and whose husbands consumed alcohol. Consistent with our study, DV has been reported to be significantly associated with husband addicted to alcohol. But its prevalence even among women whose husbands do not consume alcohol indicates that alcohol consumption is not the only explanation for the high prevalence of DV in Delhi.

Previously there is evidence for a significant association of violence with younger age of women, lower literacy status, shorter duration of marriage and women having no children. We, however, found a significant association of women’s education only with sexual violence. Nationwide data reveals that dowry harassment independently predicts physical violence, which is consistent with the present study. Such findings reflect deep-rooted gender inequalities of Indian society.

This study found that women having dependable family support were less likely to experience DV than their counterparts, which is comparable with few other studies. This suggests the need for programs aimed at strengthening the family cohesion and bonding.

Importantly, not all variables demonstrated consistent relationships with various forms of DV suggesting that policymakers should be cautious about any specific approach to DV prevention. Elder women (age 51-60 years) were significantly less likely to experience physical violence but this was not true for psychological and sexual violence. Crossing the reproductive age does not seem to be protective against all forms of violence. However, Kargar Jahromi et al reported a significant relationship between age and DV (p=0.001) in Iran. No comparable data is available from India.

Interestingly, women belonging to religions other than Hindu and Muslim (Sikh, Jain, Christian) were less likely to experience psychological violence, but similar association of religion was not observed with other forms of violence. Those women who had love marriage were at higher risk of physical violence compared to those with arranged marriage, which is consistent with findings from South India. This appears to be due to lack of support from natal family for having dishonored the family by opting for love marriage, a system not approved of in most societies in India.

In our study women who were senior secondary educated (OR: 0.29, 95% CI: (0.11, 0.75)) and who had living children were significantly less likely to experience sexual violence. Babu et al also reported similar association with lower education. The protective effect

| Characteristics | Any form of domestic violence in past one year | P value | Odds-ratio (95% CI) |
|-----------------|---------------------------------------------|--------|---------------------|
|                 | Yes (n=313) | No (n=514) | Unadjusted | Adjusted |
| Husband alcoholic | 196 (62.8) | 226 (44.0) | <0.01* | 2.15 (1.61, 2.87)* | 2.12 (1.46, 3.09)* |
|                 | 116 (37.2) | 288 (56.0) | 1.0 | 1.0 |

*P<0.05.
of education confirms the importance of an inclusive education and gender equality, as recommended in the Sustainable Development Goals (number 4 and 5).  

Some of the variations in the above findings appear to be due to methodological differences amongst the cited literature such as variation in participant characteristics or data collection methods.

**Strengths and limitations**

It is important to take note of certain limitations in our study. Since the data were collected mainly through self reports, there might be recall bias. Considering the highly sensitive nature of the topic of interview, it is possible women may not express their views openly for the fear of damaging their own as well as their family’s reputation. They may also report the behaviour that is socially desirable and consistent with their culture, rather than the actual behaviour. Lastly, the cross-sectional design does not allow for making causal inferences. On the other hand, the mixed methods approach used in our study provides a comprehensive picture regarding DVAW. The use of standardized pre-tested instruments, inclusion of participants aged up to 60 years from diverse strata of the society, data collection by the same investigator and developing rapport with the study population and participants were the other strengths of the study.

**CONCLUSION**

Our study confirms the pervasive nature of all forms of DV in Delhi, with the findings extended to women beyond reproductive age. However, a dependable family support, neighborhood support, dowry effect and an alcoholic husband are the significant predictors of its occurrence. Domestic violence is an ongoing phenomenon, mainly perpetrated by the husband.

Considering the multi-faceted nature of the factors that influence DV and the health consequences of DV, there is need for a multi-sectoral response including public health interventions such as primary prevention, routine screening and treatment for violence related injuries and trauma. This calls for a gender sensitive approach in health care services by primary healthcare providers. The preventive strategies could be aimed at improving family and community support systems, empowering women and addressing the alcohol and dowry issues effectively. Our results provide vital information to assess the existing situation and develop sustainable and effective strategies.

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