Spousal violence in India: does risk of spousal violence higher among polygynous unions?

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Abstract: This study aims to understand the risk of spousal violence in the context of polygyny in India. National Family Health Survey (2015–16) data has been used in this study. The study population consisted of women who answered the questions regarding spousal violence and the number of additional wives of their husbands. Chi-square significance test and multi-level logistic regression were used to establish the association between spousal violence and polygyny. Findings of the study suggested that women in polygyny marriages experienced higher spousal violence than women in monogamy unions. In particular, the likelihood of overall spousal violence was higher among polygyny marriages (39.9%; 95% CI = 38.5–41.4) than in monogamy marriages (32.6%; 95% CI = 32.3–33). Simultaneously, the likelihood of spousal violence was significantly high in polygyny marriages among Muslims compared to Hindus. Muslim women in polygyny unions (30.4%; 95% CI = 29.4–31.4) faced significantly higher spousal violence than monogamy unions (43.8%; 95% CI = 39.6–48). The study revealed regional variability in relationship between spousal violence and polygyny in India. In the south region, women in polygyny

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PUBLIC INTEREST STATEMENT

The socio-economic level (SES) of the spouse, the type of the marriage, and variations in the socio-cultural space all play a key role in spousal violence. Because both polygyny and spousal violence are considered violations of Indian law, it would be interesting to understand how these parameters relate to the likelihood of spousal violence in India. Nevertheless, India has a noticeable incidence of domestic violence and polygyny. The results showed that spousal violence against women in polygyny unions is pronounced varied with SES in India. Despite the gender equality movement being active in India and worldwide, a substantial number of women have been living with their spouses without even the most fundamental human rights and dignity.
unions’ experienced higher spousal violence compared to other regions. The risk of spousal violence can be reduced by empowering women and launching a community-wide awareness campaign about legal options for spousal violence victims. Efforts in this direction may support India in meeting its long-term development goal of ending violence against women and girls by 2030.

**Subjects:** Gender Studies - Soc Sci; Violent Crime; Criminology and Law

**Keywords:** spousal violence; polygyny; regional patterns; India

1. Introduction

Modern civilization is the outcome of the joint venture of men and women. However, gender inequality is still challenging in the modern world, especially in patriarchal and traditional societal belts. A patriarchal social norm promotes the subordination of women by establishing gender-based roles, behaviours, and power dynamics. Polygyny is one common practice in patriarchal and traditional settings that oppresses women and upholds male superiority. As a result of limited socio-political rights, the women in polygynous marriages are rendered powerless, suffer gender-based abuse and discrimination, and have low self-esteem and self-confidence.

Intimate partner violence (IPV) is persistent, a multi-faceted societal phenomenon with a wide range of detrimental social and health consequences (Bonomi et al., 2006). Spousal violence is the most common form of gender-based violence (GBV) and is a notable element of human rights violations (Rahaman et al., 2013). Globally, around 30% of women have been exposed to IPV in their lifetime, although there are deviations in the estimates among countries (García-Moreno & Amin, 2016). In comparison to the global average, the prevalence of IPV is highest in South Asia (37.7%), followed by the East Mediterranean (37%) and the African region (36.6%) (World Health Organisation, 2021). Along the same line, spousal violence is much more common in India, Bangladesh, and Pakistan than in South Asian countries (García-Moreno & Amin, 2016).

Due to the high prevalence of spousal violence in India, several studies have attempted to understand spousal violence’s socio-economic differentials and determinants (Ackerson & Subramanian, 2008; Ahmad et al., 2021; Goli et al., 2020). Spatial variation demarked that the hotspot zone of spousal violence is scattered in nature and prevalent in socio-economically backward areas (Ahmad et al., 2021). Major socioeconomic predictors of spousal violence in India were spouse education level, household wealth status, spouse education, employment status, caste, and other socioeconomic characteristics (Rahaman et al., 2021). Some behavioural factors, like the husband’s substance use, abusive behaviour, etc., also increased the risk of IPV (Goli et al., 2020). Spousal violence is positively associated with women’s autonomy in India. The likelihood of spousal violence also significantly varies with the form of marital union. For instance, a recent study found that women in the consanguineous marital union faced a higher likelihood of spousal violence than their counterparts in India (Rahaman et al., 2021). Similarly, many pieces of literature looked at the likelihood of spousal abuse in polygyny unions discovered that women in polygyny unions experience spousal violence more likely than women in non-polygyny unions in African countries (Ahinkorah, 2021; Ebrahim & Atteraya, 2021; Jansen & Agadjanian, 2020; Sayem et al., 2012; Stellar et al., 2016). According to these studies, polygyny is a key attribute that is positively linked to spousal abuse and female power struggles in low- and middle-income countries. Although polygyny marriages are prevalent in India (particularly among tribes and northeastern regions), it is pertinent to investigate the possibility of marital violence against women caused by polygyny in the Indian settings, which is already well-established in other countries (Ahinkorah, 2021; Ebrahim & Atteraya, 2021; Jansen & Agadjanian, 2020). However, no previous studies had attempted to investigate the relationship between polygyny and spousal violence in India. We hypothesized that spousal violence is higher...
in polygyny marriages than in monogamy marriages and can differ considerably by socio-cultural background.

2. Prevalence of polygyny: global, regional, and national context

“Polygamy” is used when a person is simultaneously married to two or more spouses. Polygyny is the practice of one man having numerous wives, and polyandry is the practice of one woman having multiple husbands. Islam only permits polygamy as a form of polygyny under well-defined guidelines (Quraishi, 2021). Most countries ban the practice of polygamy in the current century. Still, almost 2% of the global population practices polygamy marriages. Regionally, polygamy is prevalent in Sub-Saharan Africa (11%), followed by Gulf countries (2%) and South Asian tribal belts. Polygamy is found highest in Burkina Faso (36%), followed by Mali (34%), Nigeria (28%), and Senegal (23%) (Figure 1).

In the South-Asian region, polygyny is the most common form of polygamy, where a man marries multiple women. The prevalence of polygyny is widespread among Muslims compared to Christians in Sub-Saharan African and Gulf countries, but in South Asian countries, polygyny is also prevalent among non-Muslims (Jansen & Agadjanian, 2020). Contrary, the prevalence of polygyny is very less in the Muslim majority South Asian and neighbouring countries like Pakistan (1%), Bangladesh (<1%), and Afghanistan (5%). Moreover, the prevalence of polygyny is widespread among tribal and socio-economically underprivileged groups in the South Asian region (Kramer, 2020).

The latest census to gather data on polygyny by religion and caste was that of 1961, and it showed that the prevalence of polygyny was about identical among Hindus and Muslims (5.8% and 5.7%, respectively), with tribal populations having the highest prevalence (15.3%) in India (Table 1). Following the census of 1961, the third round of the National Family Health Survey (NFHS-3), conducted from 2005–2006, asked women respondents about their husbands’ additional wives. In NFHS-3 survey, 1.7%, 2.5%, and 2.1% of Hindus, Muslims, and Christians women reported that their husbands had one or more additional wives. Polygyny marriages declined almost three times during 1961–2016 in India. However, there was no significant change in polygyny from 2005 to 2016. Moreover, the practice of polygyny varies by different religions in Indian social settings. The NFHS-4 (2015–2016) survey also found that tribal populations are the most likely to follow polygyny, with no discernable difference in prevalence between Hindus and Muslims (Kramer, 2020; Quraishi, 2021). In addition, underprivileged and illiterate women are more prone to experience...
spouse polygamy. Geographically, polygyny is more common in the south and the northeast. However, the prevalence of polygyny significantly declined across all demographics, irrespective of social class or geography in India (Quraishi, 2021).

3. Literature review

The spousal violence among polygyny marriages can emerge from sociological and economic deliberations. Sen’s gender and cooperative conflict theory provide that the spousal violence within polygyny marriages may appear from variation in age, rank, personal resources, and other considerations such as the contest for the husband’s love, affection, and care (Jankowiak et al., 2005). This competition caused friction amongst co-wives, and to resolve the issue, the husband assaulted his wife. Similarly, in collaborative participation in both productive and reproductive matters, the co-wives compete for familial involvement in those matters (Madhavan, 2002). To maintain his authority and control power struggles among the co-wives, the husband deployed violence against the wives in polygyny marriages. According to the Multi-dimensional theory, spouses in polygyny marriages are prone to jealousy (Pfeiffer & Wong, 1989). However, in polygyny marriages, the husband can’t maintain the quality of his relationships with all women. Co-wives face discrimination in love, care, and autonomy in polygyny marriages, which forms jealousy (Buunk et al., 2008). On the same line, the attachment theory asserts reciprocity between persons within a relationship. Attachment is a reciprocal, long-lasting emotional bond between a wife and her husband, in which both parties actively participate in maintaining the relationship’s quality (Pfeiffer & Wong, 1989).

Despite this theoretical linkage, hardly any study has empirically assessed the association between polygyny and spousal violence using the most recent evidence from India. Although, many prior studies have empirically assessed the linkages between polygyny and spousal violence in the African and Muslim world contexts. Most studies found that women in polygyny unions face more intimate partner violence than monogamy unions. For example, women who reported being in polygynous marriages was 1.8 times more likely to report emotional abuse by their husbands in Egypt. Similarly, the women in polygyny unions were 1.5% more likely to experience IPV than their counterparts, and senior wives were more vulnerable in Mozambique. Owoo et al. (2021) also found a clear disadvantage for polygynously married women compared to monogamously married ones; IPV experience is more common among Christians than Muslims. Apart from wives’ rank, the likelihood of spousal violence is significantly shaped by the spousal’s level of education, wealth, and place of living. In this background, this study examines the relationship between polygyny and spousal violence in Indian settings using data from the National Family Health Survey (NFHS) 2015–16. The study’s findings will serve as a standard for researchers and policymakers interested in learning more about the association between polygyny and spousal violence in India.
4. Indian laws on polygyny and spousal violence

In India, polygyny is prohibited in all religions except Islam, according to the Hindu Marriage Act of 1955 and the Muslim Personal Law (Shariat) Application Act of 1937 (Dhawan, 2016). Polygamy is legal among Indian Muslims but not practiced widely. Although, the incidence of polygyny was found to be slightly higher among religious minorities (Muslims, Christians, and others) as compared to the majority of Hindus in 2015–16. In addition, it is more prevalent among scheduled caste and tribal populations (Quraishi, 2021). Similarly, domestic violence against women is also considered a violation of human rights and is punishable by the Protection of Women from Domestic Violence Act (PWDV) of 2005 (Rahaman et al., 2021). But, one-third of women reported that they experienced spousal violence in India. Therefore, the women subjected to polygyny union and spousal violence is highly vulnerable and endures a double burden of human rights violations. As a result, the current study performed a scientific investigation to determine the relationship between polygyny and the likelihood of marital violence in India. Simultaneously, the current study broadened the research aims to include how the relationship between polygyny and spousal violence differs with the socio-demographic backgrounds of the spouse and by geographical region.

5. Methods

5.1. Data sources

This study drew data from the fourth round of the National Family and Health Survey (NFHS-4), conducted during 2015–16. The NFHS is the Indian version of the Demographic and Health Survey (DHS) that provides consistent and reliable estimates of maternal and child health, utilization of maternal and child health care services, and other related indicators along with spousal violence and nuptiality (IIPS & ICF, 2017). The data is available in the public domain and can be accessed through the prescribed registration and approval process on the DHS program website. Although the NFHS-4 covered a nationally representative sample of 601,509 households, comprising 699,686 women, only about 15% of samples were selected for the state module, which asked questions on spousal violence.

5.2. Study population

In the current study, 58,480 married women (15–49 years) who responded to a question on spousal violence and the number of additional spouses of their husbands were included. The rationality behind selecting the study population was to eliminate the missing and under-reporting biases.

6. Description of variables

6.1. Outcome variables

The main outcome variable of the study was overall spousal violence. Three main variables (emotional, physical, and sexual violence) were used to construct outcome variable. Therefore, overall spousal violence includes any of the three types of violence by the husband or partner, including emotional, physical, and sexual violence. Emotional violence is comprised of humiliation, threat, and insult. Physical violence included pushing, slapping, punching, kicking, threatening with a knife, or twisting from the husband or partner. Forcing unwanted sexual intercourse of any type was considered sexual violence (IIPS & ICF, 2017; Rahaman et al., 2021). All outcome variables are dichotomous—yes coded as “1” and no coded as “0”.

6.2. Explanatory variables

The key explanatory variable in this study was the type of marriage (monogamy vs. polygyny). Monogamy refers to a husband who has only one wife. On the other hand, polygyny is used to describe a husband with multiple spouses (Ebrahim & Atteraya, 2021). The key variable was dichotomous (monogamy “0” vs. polygyny “1”). The other explanatory variables of the multivariate analysis were the respondent’s age group (15–19 years, 20–24 years, 25–29 years, 30+ years),
living son children (at least one son child, no son children), respondent’s level of education (no education, primary, secondary and above), wealth quintile of household (poor, poorer, middle, rich, and richer), place of residence (rural and urban), geographical region (north, south, west, east, central, and north-east), religion (Hindu, Muslim, and Others), caste (scheduled caste [SC], scheduled tribe [ST], other backward caste [OBC], and general), husband’s education (no education, primary, secondary and above), and respondent’s working status (yes and no). The division of geographical regions was based on the NFHS-4 report (IIPS & ICF, 2017).

7. Methods of analysis
Univariate, bivariate, and multivariate analyses were carried out to assess the adjusted association between polygyny and spousal violence in India. The descriptive statistics present the sample characteristics. The bivariate analysis shows the percentage distribution of spousal violence by polygyny. The unadjusted and adjusted binary logistic regression models were applied separately for emotional, physical, sexual, and spousal violence. The socio-economic and demographic factors were not included in the unadjusted binary logistic regression analysis. In the adjusted model, the socio-economic variables have been included in the same model. The unadjusted and adjusted percentages (margins) have been estimated for ease of interpretation. A national weight for violence was used in all the analyses using the STATA version 16.

8. Results

8.1. Background characteristics of the study population
Table 2 shows the descriptive statistics of the respondents. About 1.6% of women belonged to polygyny marriages in India. The share of the older-aged women was higher than younger ones. Nearly one-third of women were illiterate, while about 53% of women had a secondary and above level of education. The majority of the respondents (65%) resided in rural areas. The majority of the respondents were Hindus (81%), followed by Muslims (14%) and others (5%). Regarding social groups, the majority of respondents belonged to OBC (38.9%), followed by general category (25.3%) and Scheduled Caste (18.1%). The majority of respondents belonged to the south region (24%), followed by the east (23%), central (21%), west (16%), north (13%), and north-east (3%) regions.

8.2. Prevalence of different types of intimate partner violence by polygyny
Figure 2 display the prevalence of spousal violence against women by type of marriage in India, 2015–16. Spousal violence was higher in polygyny marriages than in monogamy marriages. In particular, the incidence of overall spousal violence was higher among polygyny marriages (55%) than in monogamy marriages (32.3%). The level of emotional violence was 29.3% and 12.9% among women in polygyny and monogamy marriages, respectively. Similarly, the incidence of physical violence was higher (51.5%) among women in polygyny marriages compared to monogamy marriages (28.8%). Women in polygyny marriages had a higher likely hood of facing sexual violence (17.4%) than in monogamy marriages (6.4%).

8.3. Association between spousal violence and polygyny
Table 3 presents the results from the binary logistic regression models, showing the unadjusted and the adjusted percentages of ever-experienced spousal violence. The adjusted percentage of any spousal violence was higher among those in polygyny marriages (39.9%; CI: 38.5–41.4) than in monogamy marriages (32.6%; CI: 32.3–33). In particular, the adjusted percentages of emotional, physical, and sexual violence were 21.8% (CI: 20.6–23.0), 36.6% (CI: 35.2–38.0), and 12.2% (CI: 11.2–13.1) respectively found in polygyny marriages, which was comparatively higher than among monogamy marriages.

Table 4 shows the regional patterns of spousal violence by polygyny in India. Polygyny marriages had much higher adjusted percentages of spousal violence than monogamy marriages, regardless of region. It was found that 34.4% (CI: 31.1–37.7) of polygyny marriages than monogamy
| Table 2. Background characteristics of the study population, 2015–16 (n = 62,716) |
|-------------------------------------------------|
| **Type of marital union**                       |
| Monogamy                                        | 61,671 | 98.4 | 96.7–98.4 |
| Polygyny                                        | 1,045  | 1.6  | 1.3–2.6  |
| **Age (years)**                                 |
| 15–19                                           | 1,606  | 3.5  | 3.3–3.6  |
| 20–24                                           | 8,723  | 15   | 14.7–15.3|
| 25–29                                           | 13,677 | 19.5 | 19.2–19.8|
| 30+                                            | 38,710 | 62.1 | 62.0–62.6|
| **Level of education**                          |
| Illiterate                                      | 20,515 | 32.1 | 31.8–32.6|
| Primary                                         | 9,093  | 14.3 | 14.0–14.5|
| Secondary/higher                                | 33,108 | 53.6 | 42.7–43.5|
| **Household wealth status**                     |
| Poorest                                         | 12,051 | 16.9 | 16.6–17.2|
| Poorer                                          | 13,263 | 19.3 | 19.0–19.6|
| Middle                                          | 13,057 | 20.7 | 20.3–21.0|
| Richer                                          | 12,541 | 21.3 | 21.0–21.6|
| Richest                                         | 11,804 | 21.9 | 21.5–22.2|
| **Place of residence**                          |
| Urban                                           | 18,347 | 34.7 | 34.4–35.1|
| Rural                                           | 44,369 | 65.3 | 64.9–65.6|
| **Region**                                      |
| North                                           | 13,541 | 13.3 | 13.1–13.6|
| Central                                         | 14,314 | 21   | 20.7–21.3|
| East                                            | 11,072 | 22.5 | 22.2–22.8|
| North-East                                      | 8,177  | 3.4  | 3.3–3.6  |
| West                                            | 6,320  | 15.5 | 15.2–15.8|
| South                                           | 9,292  | 24.2 | 23.9–24.6|
| **Religion**                                    |
| Hindu                                           | 50,925 | 81.2 | 80.9–81.5|
| Muslim                                          | 8,529  | 13.6 | 13.3–13.8|
| Others                                          | 3,261  | 5.2  | 5.0–5.4  |
| **Caste**                                       |
| SC                                              | 11,076 | 17.7 | 17.4–18.0|
| ST                                              | 11,351 | 18.1 | 17.8–18.4|
| OBC                                             | 24,399 | 38.9 | 38.5–39.3|
| General                                         | 15,890 | 25.3 | 25.0–25.7|
| **Husband education**                           |
| Illiterate                                      | 12,104 | 19.3 | 19.0–19.6|
| Primary                                         | 9,345  | 14.9 | 14.7–15.2|
| Secondary/higher                                | 41,204 | 65.7 | 51.0–51.8|
| **Respondent’s working status**                 |
| No                                              | 47,100 | 75.1 | 74.7–75.4|
| Yes                                             | 15,616 | 24.9 | 24.6–25.3|

Note: CI denotes confidence interval
Figure 2. Percentages of spousal violence by marital union in India, 2015–16.

Table 3. Unadjusted and adjusted percentage of spousal violence by polygyny marriages in India, 2015–16

| Types of marriages | Emotional Violence | Physical Violence | Sexual Violence | Overall spousal Violence |
|--------------------|--------------------|-------------------|----------------|--------------------------|
| **Unadjusted**     |                    |                   |                |                          |
| Monogamy [Ref.]    | 12.8 [12.5–13.1]   | 28.7 [28.3–29.1]  | 6.4 [6.2–6.6]  | 32.2 [31.9–32.6]         |
| Polygyny           | 26.3*** [25–27.7]  | 42.5*** [41–44]   | 13.7*** [12.6–14.7] | 45.7*** [44.2–47.2]    |
| **Adjusted**       |                    |                   |                |                          |
| Monogamy [Ref.]    | 13.0 [12.7–13.3]   | 29.1 [28.7–29.5]  | 6.4 [6.2–6.6]  | 32.6 [32.3–33]          |
| Polygyny           | 21.8*** [20.6–23.0]| 36.6*** [35.2–38.0]| 12.2*** [11.2–13.1]| 39.9*** [38.5–41.4]   |

Note: All estimates are significant at 95% confidence level; ***p < 0.001; Ref. stands reference category

Table 4. Regional patterns of the adjusted percentage of spousal violence by polygyny in India, 2015–16

| Geographical region | Polygyny marriages | Overall spousal violence |
|---------------------|--------------------|--------------------------|
| North               | No [Ref.]          | 21.4 [19.1–23.7]         |
|                     | Yes                | 35.6 [21.4–49.7]         |
| Central             | No [Ref.]          | 37.1 [36.4–37.9]         |
|                     | Yes                | 40.9 [37.4–44.3]         |
| East                | No [Ref.]          | 39.8 [38.9–40.7]         |
|                     | Yes                | 42.8 [39.3–46.3]         |
| North-East          | No [Ref.]          | 28.8 [27.8–29.7]         |
|                     | Yes                | 34.4*** [31.1–37.7]      |
| West                | No [Ref.]          | 22.4 [21.4–23.4]         |
|                     | Yes                | 32.8*** [28.4–37.3]      |
| South               | No [Ref.]          | 34.8 [33.9–35.8]         |
|                     | Yes                | 43.0*** [39.6–46.3]      |

Note: *** p < 0.001; Ref. refers reference category
Table 5. Religious and caste differentials in the adjusted percentage of spousal violence against women by polygyny in India, 2015–16

| Religion and caste | Overall spousal violence |
|-------------------|--------------------------|
| **Religion**      |                          |
| Hindu             |                          |
| Monogamy [Ref.]   | 32.8 [32.4–33.2]         |
| Polygyny          | 36.3*** [34.7–38]        |
| Muslim            |                          |
| Monogamy [Ref.]   | 30.4 [29.4–31.4]         |
| Polygyny          | 43.8*** [39.6–48]        |
| Others            |                          |
| Monogamy [Ref.]   | 29.4 [28.3–31.4]         |
| Polygyny          | 33.8*** [32.6–34.5]      |
| **Caste**         |                          |
| SC                |                          |
| Monogamy [Ref.]   | 39.7 [38.8–40.5]         |
| Polygyny          | 49.6*** [46.3–52.9]      |
| ST                |                          |
| Monogamy [Ref.]   | 28.3 [27.8–29.4]         |
| Polygyny          | 32.5*** [30.6–34.8]      |
| OBC               |                          |
| Monogamy [Ref.]   | 34.1 [33.5–34.7]         |
| Polygyny          | 40.0*** [37.7–42.3]      |
| **General**       |                          |
| Monogamy [Ref.]   | 24.3 [23.6–24.9]         |
| Polygyny          | 32.3*** [29.6–35]        |

Note: ***p < 0.001; Ref. refers reference category

marriages in the north region (16.0%; CI: 14.0–18.0). In the west region, women in polygyny marriages (32.8%; CI: 28.4–37.3) experienced more spousal violence than women in monogamy marriages (28.8%, CI: 27.8–29.7). A similar pattern was also found in the south region.

Table 5 presents religion and caste differentials in the adjusted percentage of spousal violence by polygyny in India. The women in polygyny marriages faced higher spousal violence than monogamy marriages, irrespective of religious status. However, the percentage of spousal violence was significantly higher among the women in Muslim polygynous unions (43.8%; CI: 39.6–48) than their counterparts. Similarly, the prevalence of spousal violence in women was significantly higher in polygynous union (32.3%; CI: 29.6–35) than in monogamous union (24.3%; CI: 23.6–24.9) in general caste.

8.4. Other socio-economic determinates of spousal violence

Table 6 shows the risk of women experiencing spousal violence based on their social and demographic backgrounds. With increasing age, the adjusted percentages of spousal violence increased. With more education, the risk of experiencing spousal violence decreased. From the poorest (39.4%; CI: 38.2–40.5) to the richest wealth quintiles (25.2%; CI: 24.2–26.2), the likelihood of spousal violence decreased monotonically. When compared to women from other castes (30.1%; CI: 29.3–30.9), spousal violence was highest among women from the SC (36.7%; CI: 35.8–37.5), followed by OBC (33.6%; CI: 33.1–34.1). Working women (38.3%; CI: 37.5–39) were more likely than non-working women (31.4%; CI: 30.9–31.8) to experience spousal violence. The adjusted percentage of spousal violence against women was highest in the south region (38.9%; CI: 38.1–39.8) compared to the north region (26.4%; CI: 25.4–27.4).
### Table 6. Unadjusted and adjusted percentage of any spousal violence by socio-economic backgrounds in India, 2015–16

| Background factors | Adjusted percentage [95% CI] | Unadjusted percentage [95% CI] |
|--------------------|-------------------------------|-------------------------------|
| **Respondent Age (years)** |                               |                               |
| 15–19 [Ref.]        | 24.0 [22.2–25.8]               | 26.2 [24.3–28.1]               |
| 20–24               | 28.9 [28.0–29.9]               | 32.4 [31.4–33.4]               |
| 25–29               | 32.7 [31.8–33.5]               | 34.5 [33.7–35.4]               |
| 30+                 | 34.8 [34.4–35.3]               | 33.3 [32.8–33.8]               |
| **Respondent education level** |                               |                               |
| Illiterate [Ref.]   | 43.4 [42.7–44.1]               | 37.0 [36.2–37.4]               |
| Primary             | 39.9 [38.8–40.9]               | 37.7 [36.5–38.5]               |
| Secondary and above | 21.7 [20.1–25.2]               | 21.6 [20.3–23.2]               |
| **Household wealth status** |                               |                               |
| Poorest [Ref.]      | 45.7 [44.7–46.6]               | 39.4 [38.2–40.5]               |
| Poorer              | 40.7 [39.8–41.6]               | 37.4 [36.5–38.3]               |
| Middle              | 35.1 [34.3–35.9]               | 33.5 [32.7–34.3]               |
| Richer              | 29.1 [28.3–29.9]               | 30.2 [29.4–31]                |
| Richest             | 19.0 [18.3–19.6]               | 25.2 [24.2–26.2]               |
| **Place of Residence** |                               |                               |
| Urban [Ref.]        | 27.5 [26.9–28.1]               | 34.0 [33.2–34.7]               |
| Rural               | 36.2 [35.7–36.6]               | 32.8 [32.3–33.2]               |
| **Region** |                               |                               |
| North [Ref.]        | 23.6 [22.6–24.5]               | 26.4 [25.4–27.4]               |
| Central             | 37.1 [36.3–37.9]               | 34.4 [33.6–35.2]               |
| East                | 39.1 [38.2–39.9]               | 35.7 [34.9–36.5]               |
| North-East          | 27.7 [25.8–29.6]               | 27.6 [25.7–29.5]               |
| West                | 22.4 [21.6–23.3]               | 25.0 [24–25.9]                |
| South               | 37.1 [36.3–37.9]               | 38.9 [38.1–39.8]               |
| **Religion** |                               |                               |
| Hindu [Ref.]        | 33.8 [33.4–34.2]               | 33.4 [33–33.8]                |
| Muslim              | 31.3 [30.3–32.3]               | 32.0 [31.0–33.0]               |
| Others              | 27.6 [26.0–29.2]               | 32.5 [30.8–34.2]               |
| **Caste** |                               |                               |
| SC                  | 40.4 [39.5–41.3]               | 36.7 [35.8–37.5]               |
| ST                  | 31.3 [30.5–33.5]               | 30.7 [30.1–32.9]               |
| OBC                 | 34.5 [33.9–35]                | 33.6 [33.1–34.1]               |
| General             | 24.8 [24.2–25.5]               | 30.1 [29.3–30.9]               |
| **Husband Education** |                               |                               |
| Illiterate [Ref.]   | 45.1 [44.2–46]                | 35.1 [34.2–36]                |
| Primary             | 40.3 [39.3–41.3]               | 35.1 [34.1–36]                |
| Secondary and above | 30.7 [30.2–31.2]               | 32.6 [32–33.1]                |
| **Respondent working status** |                               |                               |
| No [Ref.]           | 30.3 [29.9–30.7]               | 31.4 [30.9–31.8]               |
| Yes                 | 41.7 [40.9–42.5]               | 38.3 [37.5–39]                |

Note: All estimates are significant at 95% confidence level
9. Discussion

Using the most recent large-scale survey data from India, this study intends to evaluate the linkage between spousal violence and polygyny. The major findings of the present study are: First, the present study found a significant positive relationship between spousal violence and polygyny in India. In particular, the women in polygyny marriages experienced more spousal violence than their counterparts, irrespective of religion, caste, and region. Second, the difference in spousal violence against women between polygyny and monogamy marriages was regionally diverse and more significant in the north-east, west, and south regions. Third, the Muslim women in polygynous unions were more vulnerable is subject to spousal violence. Similarly, the gap in the likelihood of spousal violence against women between monogamy and polygyny was significantly high in general caste. Women in polygyny marriages endured spousal violence at a higher rate than their counterparts in the general caste. Finally, women’s education and household wealth status were found as significant predictors of spousal violence in India. At the same time, region and place of residence significantly impacted spousal violence against women. These findings would be advantageous in guiding the policy formulation and programme implementation to protect women from spousal violence.

The positive association between spousal violence and polygyny marriages implies that polygyny is one of the key contributing factors to spousal violence against women in India. In tune with this current study, the previous studies have also found similar findings in Nepal (Oshiro et al., 2011), Bangladesh (Akter & Begum, 2012), and sub-Saharan African countries (Ahinkorah, 2021). Several findings identified to explore the reason behind the high spousal violence against women in polygyny marriages. Firstly, Oshiro et al. (2011) contextualized the reason behind high spousal violence in polygyny marriages. Once the husband establishes a new relationship with his second or third wife, he begins to abuse, ignorance, and rude behaviour toward his first wife. Secondly, the husband used violence against the wives in polygyny marriages to preserve his authority and control power disputes among the co-wives (Madhavan, 2002). Thirdly, jealousy created tension among co-wives in polygyny structures, leading to spousal violence against women (Pfeiffer & Wong, 1989). Nonetheless, in the Indian context, there were very few in-depth studies between polygyny family structure and spousal violence, which hindered the ability to make conclusions on the reasons for excessive spousal violence against women in polygyny marriages. However, there is a need for an in-depth study to understand the causation in Indian perspectives.

Spousal violence against women in polygyny marriages was substantially greater among Muslims than Hindus. The Muslim women in polygyny marriages faced higher spousal violence than their counterparts; a similar result was also found in neighbouring countries like Bangladesh and other Muslim-dominated countries (Ansari, 2009; Das et al., 2016). In India, the Muslim personal law allows Muslim men to marry up to four wives, although polygyny among Muslims has been lower than in Christian and tribal communities in India (Dhawan, 2016). The high percentage of spousal violence against women in the Muslim community may correlate to poverty and illiteracy (Rahaman et al., 2021). In India, the general caste women in polygyny marriages face higher spousal violence due to their vicious cycle of poverty and indigenous practice (Ler et al., 2020). Poverty is associated with economic and mental stresses linked with marital conflicts. Another perception could be that differences in socio-cultural norms and beliefs between social and religious groups influence spousal violence and the acceptance of spousal violence.

In India, education and wealth position have significantly reduced spousal violence. In the current study, highly educated women had a lower risk of marital violence than illiterates. Similar outcomes have been reported in several prior investigations conducted in India and internationally (Antai, 2011; Dalal & Lindqvist, 2012). Similarly, spousal violence was less common among women in the upper wealth quintile than in the lower quintile. According to the family stress model, lack of money or increased expenditure induces frequent emotional outbursts and conflicts among family members, including conflict between spouses (Parke et al., 2004). The low economic position might contribute to stress and conflict in the relationship (Ler et al., 2020). As a result, poverty in the household is a risk factor for women experiencing spousal violence.
Consistent with other studies, this study also revealed that low husband education is associated with a higher likelihood of spousal violence (Rahaman et al., 2021). Higher educated husbands are more aware of criminalized and non-criminalized abusive actions and women’s rights.

Women’s socio-economic position also determines the degree of spousal violence. The working women experience higher spousal violence than their non-working counterparts. A similar finding is also found in other studies of India (Ler et al., 2020; Rahaman et al., 2021; Sabri et al., 2014). Women earning money may be viewed as a threat or embarrassment to the Indian male-dominated patriarchal system. Women’s independence and monetary contribution in the home create uncertainty for Indian men to be intimidated and humiliated (Kimuna et al., 2013). The theoretical view also supports the higher risk of spousal violence as women gain more income than husbands; men think their abilities are challenged. Thus, they turn to violence to reestablish their dominance (Garg et al., 2021). Additionally, the Indian cultural narrative has long depended on patriarchal norms and strict gender beliefs, which aggravate shame, stigma, and the fear of hurting the family’s reputation as deterrents to getting assistance for violence (Hayes & Franklin, 2017).

Regional variability in spousal violence shows the southern region had a higher risk than others. It was evident that southern states have a higher literacy rate and employment than the other regions. Therefore, the high incidence of spousal violence in south India can be discussed in two ways. First, women’s high literacy and autonomy may increase violence reporting in the southern region more than in other regions (Jin et al., 2014). In the other regions of India, perhaps, the women have remained silent on the spousal violence against women because of a couple of reasons such as social acceptability of violence, economic dependency upon the husband, concern for family or children’s safety, and a desire not to disturb their parents (Kamat et al., 2013).

The United Nations Sustainable Development Goals (SDGs) aim to eliminate all forms of violence against women and ensure that all countries are free of IPV by 2030 (United Nations, 2015). In line with these goals, SDG target 5.2 aims to eliminate all kinds of violence against females in any sphere, including all types of exploitation. In addition, SDG target 16.1 aims to reduce all forms of violence associated with death by 2030 (United Nations, 2015). More comprehensive research is required to identify the major aspects linked to GBV and develop multi-dimensional approaches to gender equality in India.

10. Conclusion
The results highlight the numerous gender disparities ingrained in the polygynous marital institution and the detrimental effects on women’s health and happiness. Regardless of their socio-economic status, women in polygyny marriages in India are already at risk of domestic abuse. In India, there was a large regional variance in the relationship between polygyny and domestic violence. These findings imply that addressing the role of polygyny alone will not be sufficient to end violence against women in India. Findings reflect multi-dimensional gender inequalities embedded in the institution of polygynous marriage and their harmful consequences on women’s health and well-being. Polygyny unions put women at risk of spousal violence irrespective of their socio-demographic background in India. A significant regional variation in the association between polygyny and spousal violence was also observed in India. These results suggest that eliminating violence against women in India requires a comprehensive approach rather than addressing the role of polygyny alone. The effort in this direction may help India achieve the sustainable development goals of ending violence against women and girls by 2030.

11. Recommendation
According to the current study, women in polygynous unions are more susceptible to domestic abuse. Therefore, the women in polygynous unions are vulnerable to double burdens of hardship such as spousal abuse and gender power struggles. The current study provides numerous recommendations for policies to safeguard women against spousal abuse and the polygyny trap. The
current study discovered that the practice of polygyny is mainly prevalent among socio-economically deprived groups; therefore, promoting gender equity in social participation, employment, and education is needed to end the game of gender power struggle and to achieve a GBV-free and gender-friendly environment in India. There is also important to organize a community-level awareness campaign to understand the different types of gender-based violence, legal procedures for domestic abuse, and polygyny. A qualitative study is also required to comprehend the true breadth of polygyny and related gender-based violence in India.

12. Limitations of the study
The study’s limitations include the cross-sectional nature of the data, which prevents us from drawing any conclusions about the causal relationship between polygyny and IPV, and the study’s reliance on women’s reports of violence, which may be affected by under or over-reporting depending on the survey’s location, circumstances, and respondent’s socio-cultural setting. The NFHS data did not collect information about the rank of wives among polygynous unions, which makes it difficult to understand the relationship between marital violence and the rank of wives at this time.

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Declaration
Ethics approval and consent to participate: This study is based on secondary data, which is available in the public domain. Therefore, ethical approval is not required for conducting this study.

Disclosure statement
No potential conflict of interest was reported by the author(s).

Data availability
The dataset analysed during the current study are available in the Demographic and Health Surveys (DHS) repository, https://dhsprogram.com/data/available-datasets.cfm.

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