

# Gender-based Violence and its Predictors: A Cross-sectional Study Among the Adolescents of Madhya Pradesh, Central India

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## Abstract

**Background:** Gender-based violence (GBV) is a global public health concern. India's socio-cultural and regional diversity poses challenges for obtaining accurate and comprehensive indicators of gender-based violence. This study aimed to explore the prevalence and predictors of GBV among adolescents. This was a community-based cross-sectional study conducted among adolescents aged 10 to 19 years in six districts of Madhya Pradesh, the central part of India, from December 2017 to 2019. **Methods and Material:** GBV was assessed using a validated questionnaire adapted from a nationwide survey. Data were analyzed using SPSS (version 16.0). Logistic regression analysis was performed to identify factors associated with GBV. **Results:** The study revealed that 10.4% of adolescents were victims of GBV. The multi-variable logistic regression showed that girls were at higher risk (odds ratio = 5.7) of facing GBV. Other significant factors associated with GBV included older adolescents (15–19 years old), those belonging to scheduled caste/tribal areas, those whose mothers were literate, those who had a boyfriend/girlfriend, and those who justified wife beating. **Conclusion:** GBV is a serious public health problem among adolescents, with one in every 10 adolescents experiencing GBV. It is essential to instil awareness of gender-equal norms from early childhood and within households. Implementing violence prevention policies and strategies in educational and work institutions, as well as at the community level, is crucial.

**Keywords:** Adolescence, gender, violence

## INTRODUCTION

Adolescence (10–19 years old) is a vital phase of life as it encompasses growth spurts and puberty changes, leading individuals to explore and experiment, often putting them at higher risk.<sup>[1]</sup> During this period, adolescents can be vulnerable to deprivation (such as lack of access to food, education, health, and parental care), exploitation, neglect, and violence.<sup>[2]</sup> Gender-based violence (GBV) is a human rights violation and a profound health problem that hinders their full participation in society and their countries' social and economic development.<sup>[3]</sup> Gender norms play a significant role in defining societal expectations for girls, boys, women, and men, and they are significantly shaped during adolescence.<sup>[4]</sup> In countries like India, from an early age, girls are socialized to accept patriarchal norms, growing up with a perception of themselves as inferior to boys.

GBV is often disregarded as an issue as it remains deeply ingrained in traditional practices. Even today, the birth of a

girl child is unwelcomed in many parts of India. Exposure to violence has various short- and long-term consequences, such as lower self-esteem and perceived health status, alcohol or drug abuse, injuries, sexual and reproductive health issues, and higher levels of psychological disturbances (such as depression, somatization, and anxiety), and even suicide attempts.<sup>[5]</sup> Furthermore, it also impacts the health and well-being of their children and families; children growing up with violence are more likely to become perpetrators of violence in the future.<sup>[3]</sup> GBV significantly restricts daily activities, like walking in certain areas, due to fear of violence. Many female adolescents cease attending school and public

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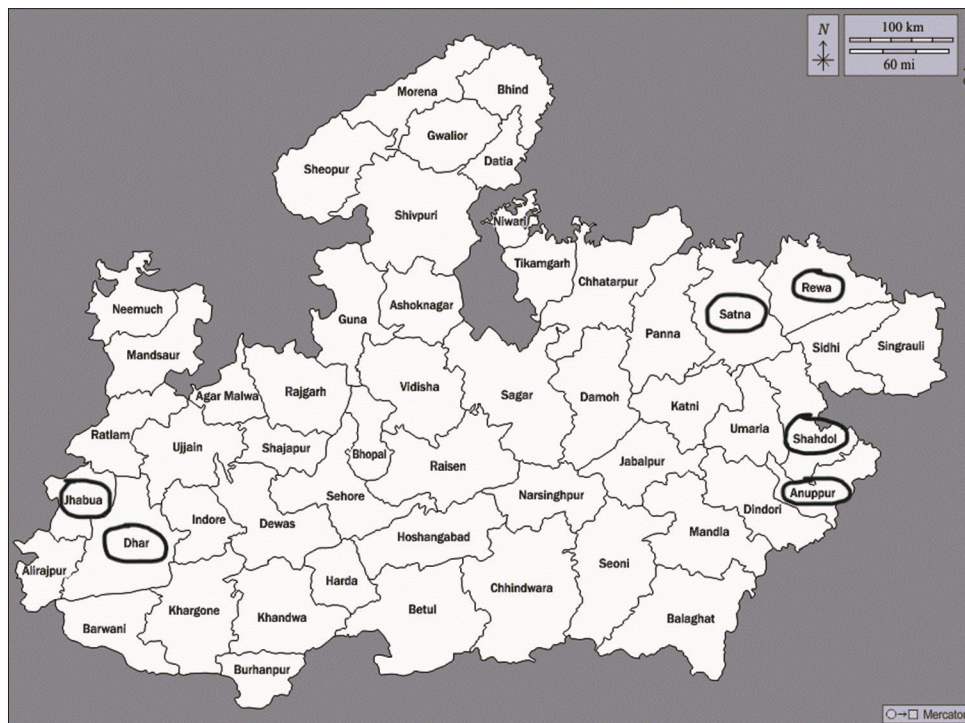
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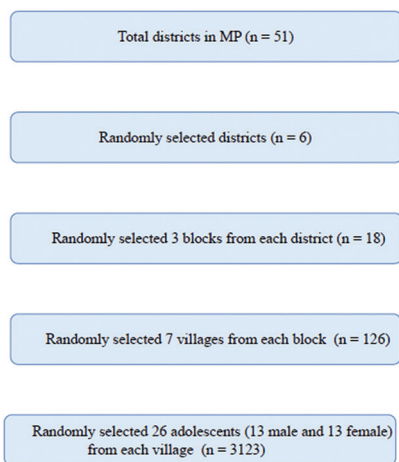


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**Figure 1:** Study area diagram. \*Sampled districts were marked with blue circles



**Figure 2:** Sampling of participants

places due to their fear of GBV. GBV’s costs amount up to 3.7% of the country’s GDP, more than double the amount some governments spend on education in certain countries.<sup>[6]</sup>

Every fifth person in India is an adolescent, and one-fifth of India’s adolescent population resides in Madhya Pradesh.<sup>[7]</sup> Madhya Pradesh faces challenges with development indicators, including having the second highest neonatal mortality rate (NMR), the highest infant mortality rate (IMR), the fifth highest maternal mortality ratio (MMR), and the highest under-nutrition rates in the country.<sup>[8]</sup> Additionally, Madhya Pradesh has the highest tribal population and a lower literacy rate than the national average.<sup>[7]</sup> All these factors put this large adolescent population at risk of poor health and life

outcomes. A recent study found that gender bias contributes to about 22% of the overall mortality burden of under-five females.<sup>[9]</sup>

GBV is influenced by a combination of different factors, including social, economic, cultural, political, and religious factors.<sup>[10]</sup> In India, gender bias has recently garnered more attention from policymakers due to its implications on achieving sustainable development goals.<sup>[9]</sup> The Government of India has implemented various programs to promote gender-based equality and empower women. However, there remains a lack of evidence that can assist policymakers in preventing and responding to GBV effectively. Moreover, India’s socio-cultural and regional diversity hinders the use of local and national indicators for accurate and comprehensive portrayals of GBV. The main objective of this study was to determine the prevalence and associated factors of GBV among adolescents in Madhya Pradesh.

## MATERIALS AND METHODS

This study is part of a survey titled ‘Adolescent Health Baseline Survey’ in Madhya Pradesh (2017–18). It was initiated by the Government of Madhya Pradesh, in collaboration with UNFPA and UNICEF. The study was a community-based cross-sectional observational study conducted among adolescents aged 10–19 years in selected districts from December 2017 to 2019. Six out of 52 districts in Madhya Pradesh were randomly selected for the study [Figures 1 and 2]. Considering a prevalence of hypertension (8%)<sup>[11]</sup> with a 15% relative error and a design effect of 1.5 at a 95% confidence interval, the minimum required sample size was calculated

to be 2862. Factoring in a 15% non-response rate, the final sample size was determined to be 3213. The study participants were recruited using a multi-stage random sampling approach.

The primary outcome assessed was GBV, which refers to the experience of violence caused by being a particular gender within the past 12 months. The GBV variable summarizes whether the participant has experienced physical violence (such as being pushed, slapped, hit, beaten, or otherwise physically hurt by a parent or other adult or being touched inappropriately) or psychological violence (such as being yelled at, called names, or treated poorly by withholding food when others in the family were fed) in the context of gender.<sup>[12]</sup>

The primary independent variable was gender, and the confounders included socio-demographic factors, media exposure, awareness of adolescent government programs, and gender norms. Gender norms were assessed in two main domains: a) male authority over female behavior (men's role in decision making) – women reporting threats that their partner exhibits one or more controlling behaviours. b) Justification of wife-beating (acceptance of wife abuse) – whether men have the right to hit their wife in any of the following situations: getting out of the house without informing the husband, neglecting the children, arguing with the husband, refusing physical relations, not cooking properly, being unfaithful, and disrespecting in-laws. The acceptance of even any one of these conditions for wife-beating was considered a negative effect.<sup>[12,13]</sup>

The data were collected using a pre-tested and semi-structured questionnaire through face-to-face interviews. The questionnaire was checked for face and content validity. A pilot study was conducted in a nearby village with 30 households that were not included in the main study, and the schedule was modified based on the feedback received. The final questionnaire was designed to be unambiguous, simple to understand, and in line with the study objectives, ensuring semantic equivalence. The internal consistency of the measure was assessed with Cronbach's alpha (0.71). The study objectives were thoroughly explained to the participants, and confidentiality and anonymity were assured. Incomplete responses were excluded from the analysis.

### Data analysis

All analyses were conducted using SPSS software version 16.0. Descriptive statistics were used appropriately. Univariate and multi-variable logistic regression was employed to examine the associations between various factors and GBV. The strength of the association was assessed by odds ratio (OR) with a 95% confidence interval. Hosmer Lemeshow test was used to find whether the model is fit or not. Naeglerke's R2 is the proportion of the variance in the dependent variable that is predictable from the independent variable (s).

### Ethics approval

Ethical approval was obtained from the Institutional Human Ethics Committee (IHEC) vide Letter No. IHEC-LOP/2017/

EF0069 dated 06.11.2017. Written consent was obtained from each adolescent before including them in the survey. For those below 14 years, consent from the adolescents and written consent from their parents were also obtained. Privacy and confidentiality of data and adolescents' information were strictly maintained.

## RESULTS

The study consisted of a nearly equal proportion of male (49.8%) and female (50.2%) participants. Around 60% of the adolescents were in the age group of 15–18, with 80% of them residing in rural areas and 40% belonging to scheduled tribes. Two-thirds (68%) of the participants belonged to the

**Table 1: Socio-demographic characteristics of the study participants: (n=3213)**

Characteristics	No. (%)
Age (in years)	
10-14	1343 (41.8)
15-19	1870 (58.2)
Gender	
Male	1600 (49.8)
Female	1613 (50.2)
Marital Status	
Married	41 (1.2)
Unmarried	3172 (98.7)
Education status	
Illiterate	23 (0.7)
Primary	243 (7.6)
Middle School	1167 (36.3)
High School	1663 (41.8)
Graduate	117 (3.6)
Religion	
Hindu	2982 (92.8)
Muslim, Christian, Gondi	231 (7.2)
Type of family	
Joint	988 (30.8)
Nuclear	2225 (69.2)
Caste	
General	364 (11.3)
OBC	1046 (32.6)
SC	486 (15.1)
ST	1317 (41)
Socio-Economic	
Above Poverty Line	1037 (32.3)
Below Poverty Line	2176 (67.7)
Working	
No	2752 (85.7)
Yes	461 (14.3)
Mother's education	
Illiterate	1538 (47.8)
Primary	831 (25.9)
Middle School	416 (12.9)
High School	370 (11.5)
Graduate	58 (1.7)

below-poverty line category [Table 1]. Despite half of the population (52%) being aware of governmental adolescent programs, only a few (5%) knew about the Protection of Children from Sexual Offences (POCSO) Act. About 30% of the participants had intimate friends of the opposite sex, and nearly one-fourth (23%) had mobile phones in their possession [Table 2]. Approximately 40% consented to the proposition, “Men should take the important decisions,” while three-fourths of the participants did not justify wife-beating [Table 3].

About 10.4% (95% confidence interval: 9.37 to 11.43) of the adolescents were victims of GBV, with 78% (n = 268) being girls and the remaining 21% (n = 66) being boys. About 13% and 17% of older adolescents (15–19 years of age) and females faced violence. Nearly one-fourth (22%) of scheduled castes/tribe category participants faced GBV. Most of the violence against girls from the scheduled tribes and BPL groups occurred in public places, while for boys, most incidents took place in their homes [Tables 4 and 5]. The univariate logistic regression found that older adolescents (15–19 years of age), females, participants of scheduled caste and tribe category, those whose mothers were educated, those who were intimate with friends of the opposite sex, and those who justified intimate partner violence were more prone to GBV. In multi-variable logistic regression, all the factors except age remained significant. With the Hosmer–Lemeshow test being non-significant and the Naglerke R2 value, the model is considered fit and is able to explain about 19% variability in the occurrence of GBV [Table 5].

## DISCUSSION

While there is ample evidence of violence against married women, there is a lack of data regarding GBV in adolescence. In the present study, around 11% of the adolescents experienced GBV, similar to surveys from UP and Bihar (9% physical and 2% sexual) and Kolkata.<sup>[14,15]</sup> Currently, there is no national estimate on violence among adolescents; the available data only provide information on spousal violence against married women, with national estimates at 29.3% and Madhya Pradesh at 28% as per NFHS-5 data.<sup>[13]</sup> Overall, GBV still remains high and has increased in some states like Karnataka, Manipur, and Telangana as per NFHS-5 data. The reasons for the disparity in awareness regarding GBV in Uttar Pradesh, Bihar, and Kolkata are linked to factors such as women empowerment and literacy.<sup>[14,15]</sup> A systematic review of African countries and a multi-center WHO survey found that the overall prevalence of GBV among adolescents ranged from 19.0% to 67.0%.<sup>[16,17]</sup> These variations are mainly attributed to socio-economic and cultural reasons as well as the varying degree of patriarchal society, leading to the acceptance of GBV.<sup>[18]</sup> Gender inequality in India has many aspects that affect both women and men. A multi-country survey in Europe found that a considerable proportion of men suffer from gender-based discrimination at the workplace, particularly in areas where females outnumber male workers.<sup>[19]</sup>

The main reason for the violence is to assert power and control over the victim. In a developing country like India, non-working adolescents who are economically dependent on others are at a higher risk for GBV.<sup>[13]</sup> Adolescents of

**Table 2: Awareness regarding adolescent government programs and their tools (n=3213)**

	No. (%)
Aware about Adolescent Government program	
No	1535 (47.8)
Yes	1678 (52.2)
Aware POSCO	
No	3068 (95.5)
Yes	145 (4.5)
Having a boyfriend or girlfriend	
No	2267 (70/6)
Yes	946 (29.4)
Own mobile	
No	2474 (77)
Yes	739 (23)

**Table 3: Distribution of study participants according to their attitude regarding gender norms and violence (n=3213)**

Characteristics	Agree No (%)	Disagree No (%)
Gender norms		
Men as the decision makers	1184 (36.9)	2029 (63.1)
Girls (not to go out alone)	2465 (76.7)	748 (23.3)
Girls should not wear revealing clothes	2403 (74.8)	810 (25.2)
Boys are not to be involved in kitchen work	2425 (75.5)	788 (24.5)
Acceptance of wife beating		
Going out without informing	667 (20.8)	2546 (79.2)
Neglect children	1055 (32.8)	2158 (67.2)
Argues	1100 (34.2)	2113 (65.8)
Bad cooking	803 (25)	2410 (75)
Disrespecting in-laws	1147 (35.7)	2066 (64.3)

**Table 4: Distribution of study participants according to their GBV pattern (n=3213)**

	No. (%)
Faced GBV	
No	2879 (89.6)
Yes	334 (10.4)
Type of violence (n=334)	
Physical	49 (14.7)
Emotional	163 (48.8)
Physical and emotional	132 (39.5)
Predominantly faced at n=334	
At Home	104 (31.1)
At public place	95 (28.3)
At School	127 (38)
At Work Place	9 (2.6)

**Table 5: Univariate and multi-variable logistic regression showing factors associated with GBV (faced GBV=334)**

Variables	Faced GBV; No (%)#	OR (95%CI); P	AOR (95%CI); P
<b>Socio-demographic</b>			
Age of adolescents (15-19)	244 (13)	2 (1.6-2.6); 0.001	1.2 (0.9-1.6); 0.171
Gender (Female)	261 (16.2)	4 (3-5.2); 0.001	5.7 (4.3-7.7); <0.001
Marital status (Married)	5 (10.3)	1.2 (0.4-3.1); 0.795	
Educational status (below middle class)	168 (11.3)	1.2 (0.4-3.4); 0.681	
Category (SC/ST)	186 (21.5)	1.9 (1.4-2.3); 0.003	1.3 (1.1-2.2); 0.001
Type of family (Nuclear)	239 (10.7)	1 (0.8-1.4); 0.335	
<b>Socio-economic</b>			
SES (BPL)	237 (10.9)	1.1 (0.9-4.4); 0.194	
Working (Yes)	40 (8.7)	1 (0.7-1.3); 0.898	
<b>Tools of awareness</b>			
Mother's education (literate)	224 (65.5)	1.7 (1.4-2.2); 0.001	1.9 (1.4-2.4); <0.001
Own mobile (No)	72 (9.7)	1.1 (0.9-1.4); 0.239	
Having a girlfriend/boyfriend	184 (19.5)	3.4 (2.7-4.2); 0.001	3.8 (2.9-5); <0.001
<b>Gender norms</b>			
Male as the decision maker	107 (9)	1.2 (0.9-1.6); 0.054	
Justification of wife-beating	158 (14.4)	1.9 (1.4-2.4); 0.001	2.1 (1.6-2.8); <0.001
Aware of adolescent government programs (No)	169 (10.1)	1.1 (0.9-1.3); 0.53	
Hosmer–Lemeshow test			0.5
Naeglerke's R <sup>2</sup>			0.195

OR=Odds ratio, AOR=Adjusted Odds Ratio, 95% CI=95% Confidence interval, #row percentages

low-income or ethnic, linguistic, and cultural origins are at more risk of violence than those considered “standard” in a region, similar to the present study.<sup>[20-22]</sup>

Observing patriarchal scenarios at home, children also tend to perpetuate unequal gender roles.<sup>[10]</sup> People might not even recognize that they are facing GBV as it becomes a normalized way of living. The present study found that attitudes justifying wife-beating and having intimate partners were consistently shown across various studies and settings.<sup>[5,16,17,20]</sup> A randomized-controlled trial also showed that interventions addressing gender inequities alongside economic empowerment programming have the potential to reduce violence against women.<sup>[22]</sup> The present study and the multi-center WHO study found that schools and universities were highly vulnerable to GBV.<sup>[23]</sup> Evidence shows that school-based interventions fostering attitudes of gender equality and respect can decrease GBV.<sup>[24]</sup> There is a dire need for data regarding prevalence and risk factors with context-specific information, such as perpetrators and types of violence, the acceptance of violence, and strategies to tackle it.<sup>[17]</sup>

Limitations: All the data were self-reported, which introduces the possibility of social desirability bias. The intensity of violence was not measured, which could have provided a clearer picture.

## CONCLUSION

The study findings reveal that 10.4% of adolescents in India experience GBV, with females being more vulnerable. Adolescents belonging to scheduled castes/tribal areas and those justifying wife beating were significant predictors of

GBV. Notably, GBV among tribal adolescents was more prevalent in workplaces or institutions than in their homes. To address this issue, targeted interventions must be implemented for empowering vulnerable groups and promoting gender equality. School and workplace environments should be strengthened to ensure safety, while increasing awareness about GBV and establishing support mechanisms for victims. Improved data collection and stakeholder engagement will aid evidence-based policymaking, creating a safer and more equitable environment for adolescents.

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## Conflicts of interest

There are no conflicts of interest.

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