

# Gender-Based Violence and Associated Factors Among Women with Disabilities in Jimma Town, Ethiopia

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**Background:** Globally, women with disabilities have two times higher chance of suffering from violence compared to their non-disabled peers due to double discrimination. However, there is little evidence that quantifies the situation in this segment of the population by considering disability-related factors which make this group more vulnerable to gender-based violence in Ethiopia.

**Objective:** To assess the prevalence of gender-based violence and its associated factors among women with disabilities in Jimma town, southwest Ethiopia, 2020.

**Methods:** A community based cross-sectional study was conducted among a total of 308 women with disabilities. Bivariate and multivariable logistic regression analyses were carried out to identify factors associated with gender-based violence. The significance of the association was decided by using the 95% confidence interval of AOR at a p-value of <0.05 in the multivariable analysis.

**Results:** The lifetime prevalence of gender-based violence among women with disabilities was found to be 73.1, while 46.1% had experienced it during the last 12 months. Gender-based violence in the past 12 months was significantly associated with non-schooling (AOR=5.10; 95% CI, 1.51, 17.14), being in age group of 20–34 (AOR=3.5; 95% CI, 1.74, 7.30), having visual impairment (AOR=3.1; 95% CI, 1.27, 7.54), having hearing impairment (AOR=3.0; 95% CI, 1.36, 6.89), alcohol use behavior (AOR=4.1; 95% CI, 1.74, 9.55), and perceived stigma and discrimination (AOR=4.2; 95% CI, 2.44, 7.39).

**Conclusion:** Prevalence of gender-based violence among women with disabilities was found to be high in the study area. Educational status, age, type of disability, alcohol use behavior, and perceived stigma and discrimination were independent predictors of gender-based violence. Measures have to be taken to curb the problem by taking integrated interventions like enrolling girls in school and targeted health education towards identified factors by considering the heterogeneity of disabilities.

**Keywords:** gender-based violence, violence against women, disability, southwest Ethiopia

## Background

People with disabilities are estimated to be 15% of the world's population. Of these, the female disability prevalence rate is 19.2%. In Ethiopia, it is estimated that 15 million people live with disabilities, representing 17.6% of the total population.<sup>1</sup>

Persons with disabilities of both genders are predominantly exposed to abuse but women with disabilities have a high risk of experiencing violence due to “double discrimination” as both female gender and disability are viewed as notions of vulnerability and lack of power.<sup>2–5</sup>

When talking about violence against women and girls with disabilities, it is not just only about gender-based violence: it is an intersectional category dealing with both gender-based and disability-based factors.<sup>6</sup> Disability-based factors like dependence on others, reduced personal defenses, social myth, absence of a supportive environment, and socio-economic exclusions make them highly vulnerable to different kinds of abuse than their non-disabled peers.<sup>7–9</sup>

Globally, people with disabilities have a 50% higher chance of suffering from violence when compared with non-disabled people.<sup>10</sup> In low and middle-income countries, women with disabilities are two to four times more likely to

experience intimate partner violence than women without disabilities.<sup>11,12</sup> In Ethiopia, 30.8% and 57.7% of women with disabilities have experienced physical and sexual violence, respectively.<sup>8</sup>

Gender-based violence among women with disabilities results in 475,000 deaths worldwide.<sup>13</sup> It has also been linked with psychological and physical harm like anxiety, depression and lower levels of self-esteem, unwanted pregnancy, abortion, HIV/AIDS, and STIs.<sup>8,14–16</sup> Additionally, it results in adverse socio-economic consequences; the cost of the societal effects of threatened or actual violence against people with disabilities in England was £1.51 billion.<sup>14</sup>

Several international and national instruments, as well as programs, have a strong will for eliminating gender-based violence and protecting the rights of people with disabilities.<sup>17,18</sup> This goal of eliminating gender-based violence among women and girls is unlikely to be achievable without knowing the nature of violence among this segment of the population.<sup>13</sup>

Even though studies are conducted in determining the extent of violence in this group, almost solely the majority of the studies were mainly undertaken in the developed world<sup>4,14,19,20</sup> and there are also contradicting ideas regarding some factors associated with gender-based violence.<sup>7,21–23</sup>

To the best search of the literature, there is little evidence in Ethiopia regarding the extent of GBV among women with disabilities, and some disability-related factors which make them more vulnerable were not taken into account in the previous studies.<sup>8</sup> This study, therefore, fills these gaps by determining the magnitude of the problem and identifying the potential factors including those disability-related factors. Consequently, this research may provide evidence-based information which can be useful for the implementation and maintenance of intersectionality-based violence prevention policies and practices, using a “disability perspective” in violence prevention work.

## Methods

### Study Design

A community-based cross-sectional study design was carried out from March 21 to May 20, 2020.

### Study Setting

The study was conducted in Jimma town which is the capital of the Jimma zone. Jimma town is one of the towns in Oromia regional state located in the Southwest of Ethiopia at 352 km from the capital of Ethiopia, Addis Ababa. A report from Jimma town labor and social affairs; shows that at the time of the study, there were about 1231 persons with disabilities in Jimma town; of which, 326 were women with disabilities aged >15 years.

### Source Population

All women with disabilities aged 15 years and above in Jimma town, Ethiopia.

### Study Population

All women with disabilities aged 15 years and above in Jimma town who fulfill the inclusion criteria and selected and included in the study.

### Eligibility Criteria

#### Inclusion Criteria

All women with disabilities aged 15 years and above who were permanent residents in the study areas for more than 6 months were included.

#### Exclusion Criteria

Those who have both visual and hearing impairment and those having mental impairment were excluded because of the difficulty to interview them as they neither hear nor see to apply sign language.

## Sample Size Determination

The sample size was calculated by using EPI Info version 7 by considering different assumptions. To determine the prevalence of gender-based violence, the sample size was determined by assuming the prevalence of gender-based violence among women with disabilities to be 57.7% ( $P = 0.57$ ),<sup>8</sup> 95% level of confidence, 5% margin of error, and 10% non-response rate. Considering the finite population correction formula, this gave a final sample size of 191.

To identify the factors associated with GBV among women with disabilities, the sample size was determined by considering the following assumptions; 95% Confidence level, 80% power, and taking the probability of outcome among exposed to be 58.6%, with an odds ratio=2.03, and 10% non-response rate. So, the final sample size of the study was 301. Since the source population was too small (326), all of them were taken.

## Sampling Procedure

The specific data concerning the participants (the type of disability and Kebele where they live) were obtained from the registration book which is found at each Kebele. Then, all 326 women with disabilities aged 15 and above were included. This meant that once their living place was obtained from the Kebele registration book, the data collectors visited their home with the help of the guide and the interviews were done at their home/living place.

## Variables

### Disability

Disability is defined as chronic physical, mental, intellectual, or sensory impairments in which interaction with several barriers may impede their full and active involvement in society equally with others.<sup>17</sup> For this study, a disability includes either physical or sensory disabilities (visual impairment, hearing impairment, physical impairment, and leprosy).<sup>22</sup>

### Gender-Based Violence(Lifetime Experience)

Women who had experienced at least one act of physical, sexual, or emotional violence by a current partner, former partner, or non-partner(s) at any point in their lives.<sup>22</sup>

### Gender-Based Violence (in the Past 12 Months)

Women who had experienced at least one act of physical, sexual, or emotional violence by a current partner, former partner, or non-partner(s) at any point in the past 12 months.<sup>22</sup>

## Measurements

### Physical Violence

Six questions were asked about physical violence including being slapped or having something thrown at that could hurt, being pushed or shoved, being hit with a fist or something else that could hurt, being kicked, dragged or beaten up, being choked, or burnt on purpose, and/or being threatened with, or, having a gun, knife or other weapon used on you, A woman is said to have physical violence when she responds “yes” to at least one of the questions or more.<sup>22</sup>

### Sexual Violence

The three questions on sexual violence includes being physically forced to have sexual intercourse when you did not want to, having sexual intercourse because you were afraid of what your partner might do, and/or being forced to do something sexual that you found humiliating or degrading. A woman is said to have sexual violence when she responds “Yes” to at least one question or more.<sup>22</sup>

### Emotional/Psychological Violence

The four questions on psychological violence include being Insulted or making you feel bad about yourself, Belittled or humiliated in front of other people, Doing things to scare or intimidate you on purpose, and Threatening to hurt you or someone you care about. A woman is said to have emotional violence when she responds “Yes” to at least one question or more.<sup>22</sup>

## Substance Use

Taking any of the three commonly used psychoactive substances: alcohol, cigarettes, and/or chat, which are assumed to affect the level of thinking.

## Ever Use

If participants respond yes to any of the questions Have you ever drunk/chewed/smoked alcohol/chat/tobacco in life?<sup>24</sup>

## Perceived Social Stigma and Discrimination

Perceived stigma and discrimination by people with disabilities when having a painful inner struggle about a disability even without any encounter with actual stigmatization. A scale that comprises 12 items with the response of not at all, little, moderately, and a lot was used to construct a composite score.<sup>25,26</sup> A score above the mean is said to have high social stigma and discrimination.

## Decision-Making Power

Twelve questions were used to construct a composite score. Each question has four response options on the degree of women's involvement in decision-making (Another family member, the husband only, joint, and self). Based on the responses each question was scored as follows: Another family member decides only=0, husband only=0, Joint decision-making=1, and self-decide only=2. If the response indicates as the decision is made by others, the score given was similar to the husband's decided score since it is taken by another party, not the woman. After computing altogether, a score above the mean is said to have good decision-making power.

## A Gender Equitable Attitude

is an attitude that a society considers appropriate for both males and females. About 12 items with a response of agree, neutral, and disagree were used to construct a composite score. First, negatively stated questions were reverse coded during data processing. Then, it was summed up and a score above the mean is said to have a favorable gender-equitable attitude.

## Data Collection Tool, Personnel, and Procedure

An interviewer-administered structured questionnaire was prepared based on the standard WHO Multi-country study on women's health and domestic violence against women and reviewed different kinds of literature.<sup>26-28</sup> The questionnaire includes socio-demographic characteristics; types of violence, disability-related factors, behavioral attributes, and gender-related barriers. Five female data collectors who can speak the local language and two supervisors who are qualified with BSc in public health were recruited. To collect data from participants with hearing impairment, one sign language translator was recruited.

## Data Quality Management

To ensure the quality of the data, first, the prepared questionnaire was translated to the local language Afaan Oromo and Amharic by language experts. Then, it was translated back to the English language to check its consistency. Before the actual data collection, a pretest was conducted on 5% of the sample size in the "Asendabo" town and the feedback was incorporated accordingly. The reliability and internal consistency of the scales (perceived stigma and discrimination scale, gender attitude, and decision-making power) were measured for each variable using Cronbach's alpha (value of  $\alpha = 0.872, 0.721, \text{ and } 0.876$ , respectively). The data collectors and supervisors were trained for one day on the objective of the study, the data collection tool, the approach to the interviewees, and the ethical and safety aspects of doing violence research. At the end of each day, questionnaires were reviewed and cross-checked and corrective measures were taken.

## Data Analysis

The data was coded and entered into Epidata version 3.1 and exported to SPSS version 25 for analysis. A descriptive analysis was computed for selected variables. The wealth index was calculated using Principal component analysis. Before further analysis normality curve and the presence of multi-collinearity between variables were checked using the Variance inflation

factor. The prevalence of GBV was determined by running frequencies with their 95% Confidence Interval estimates. A bivariable analysis was executed to examine the association between independent variables and gender-based violence in the last 12 months. Then, variables that had a P-value  $<0.25$  on Bivariable analysis were selected as candidates for multivariable analysis. Odds ratio and 95% CI were used to measure the existence of statistically significant association, and P-value  $<0.05$  was used to determine the statistical significance of the tests. The goodness of fit of the models was checked by Hosmer–Lemeshow goodness of fit test ( $p=0.173$ ). Finally, the result was presented in texts, tables, and graphs.

## Ethical Consideration

Ethical clearance and approval were obtained from the Ethical Review Board of Jimma University, Institute of Health. All of the study participants were informed about the purpose of the study, their right to refuse, and assured confidentiality, and written informed consent was obtained before the interview. For minors ( $<18$  years), written informed consent from their parent/legal guardian and assent from the children was obtained to participate as per Ethiopian National Research Ethics Review Guideline. At the end of each interview, those women who are a victim of violence and who did not seek care were informed about the necessity of medical care and legal protection as well as where it is given.

## Result

### Sociodemographic Characteristics of the Participants

A total of 308 women had completed their interviews making a response rate of (94.5%). The median age of the respondents was 29 years (age range 15–60 years). One hundred thirty-five (43.8%) were Muslims by religion. One hundred twenty-two (39.6%) had a primary level of education and more than one-third 112(36.4%) of the respondent were unemployed (Table 1).

### Gender-Related Characteristics

The respondent's score for attitude ranges from 12 to 36, and the mean score (SD) was 26.06 ( $\pm 5.49$ ). More than half 175 (56.8%) of the women scored below the mean indicating they had an unfavorable gender-equitable attitude. And also, the score range for decision-making power was 0–24 and the mean score for decision-making power was 9.94 ( $\pm 5.58$ ). Almost half 156(50.6%) of the women scored above the mean, ie, they had good decision-making power (Table 2).

### Disability Characteristics of the Participants

Nearly half of the women with disabilities 149 (48.4%) had a physical impairment. A quarter 75(24.4%) of respondents reported that they had the disability since birth, whereas 113 (36.6%) became disabled after birth during childhood. The majority (74%) of the respondents were economically dependent on others, while 13.6% and 19.5% of the respondent were dependent on personal care and movement, respectively. Regarding perceived stigma and discrimination, the respondent's score for perceived stigma and discrimination ranges from 12 to 48 and the mean score (SD) was 17.4 ( $\pm 5.45$ ). One hundred thirty-two (42.9%) of the women scored above the mean, ie, had high perceived stigma and discrimination (Table 3).

### Substance Use Behavior of the Participants

Concerning their substance use, more than one-third 105(34.1%) of the respondents use at least one substance during their lifetime. 76(24.7%), 38(12.3%), and 5(1.6%) of them reported that they had chewed chat, drank alcohol and smoke cigarette at least once in their lifetime, respectively. Similarly, 69(22.4%), 38(12.3), and 4(1.3) of them reported that they had chewed chat, drank alcohol, and smoked a cigarette at least once in the past 12 months (Table 4).

**Table 1** Socio-Demographic Characteristics of Women with Disability Aged 15 and Above in Jimma, Ethiopia, 2020 (n=308)

Characteristics of the Respondent		Number	Percent
Age	<20	46	14.9
	20–34	162	52.6
	≥35	100	32.5
Religion	Muslim	135	43.8
	Orthodox	112	36.4
	Protestant	42	13.6
Catholic		19	6.2
Marital status	Single	142	46.1
	Married	118	38.3
	Divorced	20	6.5
	Separated	18	5.8
	Widowed	10	3.2
Duration of marriage	Median age=7 years		
Number of living children	No child	154	50
	One child	38	12.3
	Two children	37	12
	≥3 children	79	25.6
Level of education	No schooling	102	33.1
	Primary education	122	39.6
	Secondary education	60	19.5
	College and above	24	7.8
The usual place for living	Own home	74	24.0
	Family house	89	28.9
	Relatives home	39	12.7
	Rented house	93	30.2
	Street-based	13	4.2
Occupation	Housewife /not employed	112	36.4
	Student	80	26.0
	Gov't employee	39	12.7
	Beggar	47	15.3
	Merchant	19	6.2
	Other*	11	3.5
Source of income	Disability pension	17	5.5
	Begging	47	15.3
	Employment	39	12.7
	From other family members	181	58.8
	Trade	19	6.2
	Other	5	1.6
HHs wealth quintiles (n=295)	Lowest	49	16.6
	Second	65	22.0
	Middle	63	21.4
	Fourth	56	19.0
	Highest	62	21.0

**Note:** Other\*: Occupation (daily laborers).

## Prevalence and Type of Violence

### Type of Gender-Based Violence

#### Physical Violence

Almost half 50.3% (95% CI: 44.7%, 56.6%) of the women had experienced at least one type of physical violence during their lifetime and 26.6% (95% CI: 21.4, 31.8) of the women had experienced physical violence in the past 12 months.

**Table 2** Gender-Related Characteristics of Women with Disability Aged 15 and Above in Jimma, Ethiopia, 2020 (n=308)

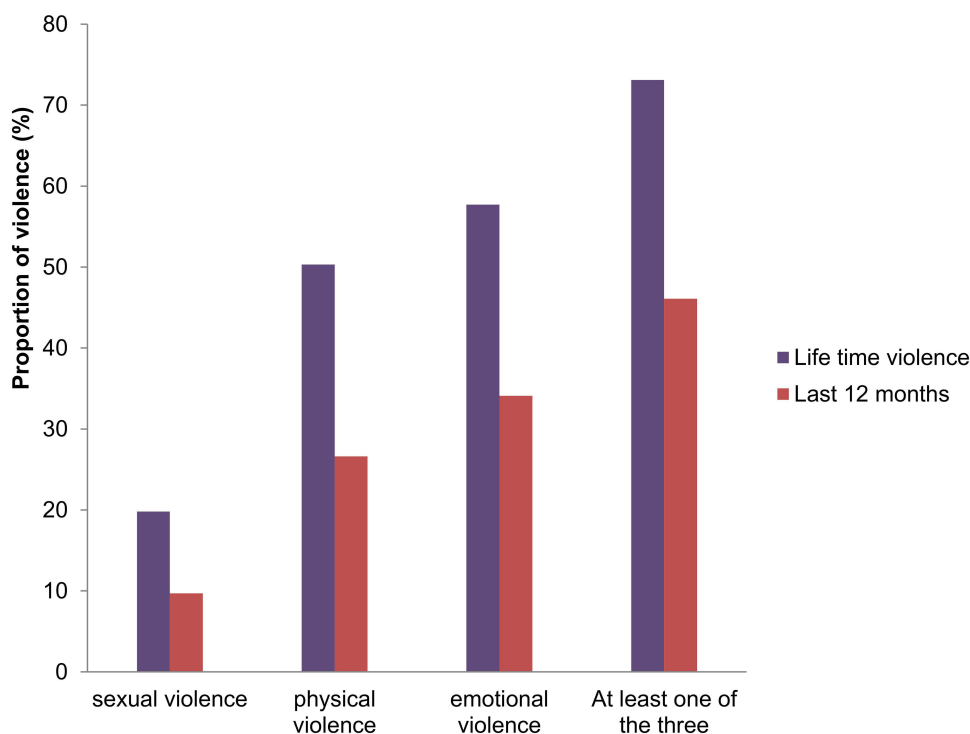
Characteristics	Category	Number	Percent
Gender equitable attitude	Favorable	133	43.2
	Unfavorable	175	56.8
Decision-making power	Good	156	50.6
	Poor	152	49.4

**Table 3** Disability-Related Characteristics of Women with Disability Aged 15 and Above in Jimma, Ethiopia, 2020 (n=308)

Characteristics	Category	Number	Percent
Type of disability	Visual impairment	40	13.0
	Hearing impairment	49	15.9
	Physical impairment	149	48.4
	Leprosy	70	22.7
Age at onset of disability	At birth	75	24.4
	1–4	113	36.6
	>5	120	39.0
Dependency on others for personal care	Yes	42	13.6
	No	266	86.4
Need for the aid of someone for movement	Yes	60	19.5
	No	248	80.5
Economic dependency	Yes	228	74
	No	80	26
Perceived stigma and discrimination	Low	176	57.1
	High	132	42.9

**Table 4** Behavioral Characteristics of Women with Disabilities Aged 15 and Above, in Jimma, Ethiopia, 2020 (n=308)

Characteristics		Use in the Past 12 Months		Ever Use	
		No	%	No	%
Alcohol consumption	Yes	38	12.3	38	12.3
	No	270	87.7	270	87.7
Frequency of using alcohol	Almost every day	8	2.6		
	At least once a week	19	6.2		
	Less than once a week	11	3.5		
Chat chewing	Yes	69	22.4	76	24.7
	No	239	77.6	232	75.3
Frequency of chat chewing	Almost every day	20	6.5		
	At least once a week	40	13		
	Less than once a week	9	2.9		
Cigarette smoking	Yes	4	1.3	5	1.6
	No	304	98.7	303	98.4
Frequency of cigarette smoking	Almost every day	2	0.6		
	At least once a week	2	0.6		
Substance use	Yes	99	32.1	105	34.1
	No	209	67.9	203	65.9



**Figure 1** The past 12 months and lifetime experience of violence among women with disabilities aged in Jimma, 2020.

### Emotional Violence

Of all study participants, more than half 57.5% (95% CI: 52.5, 63.1) of the women had experienced at least one type of emotional violence during their lifetime and 34.1% (95% CI: 29.2, 39.3) of the women had experienced at least one type of emotional violence in past 12 months.

### Sexual Violence

One-fifth of the women 19.8% (95% CI: 15.5, 24.7) had experienced at least one type of sexual violence during their lifetime and 9.7% (95% CI: 6.5, 13) of the women had experienced at least one type of sexual violence in the past 12 months. The mean age that they were forced to have sexual intercourse for the first time was 17.28 years $\pm$ 4.74 (Figure 1).

### Overlap Between Physical, Emotional, and Sexual Violence

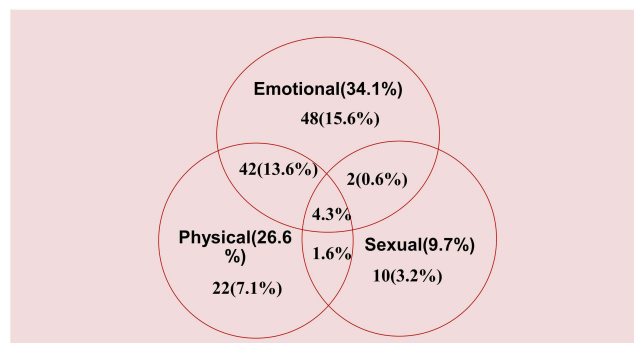
Of all study participants, 7.1% of the women experienced physical violence only, 15.6% experienced emotional only and 3.2% experienced sexual violence only in the past 12 months. While 13.6% of the women experienced both emotional and physical violence, 1.6% and 0.6% of them experienced both physical+sexual and emotional+sexual violence, respectively. Around 4.3% of them reported they experienced physical, emotional and sexual violence at the same time in the past 12 months (Figure 2).

### Gender-Based Violence

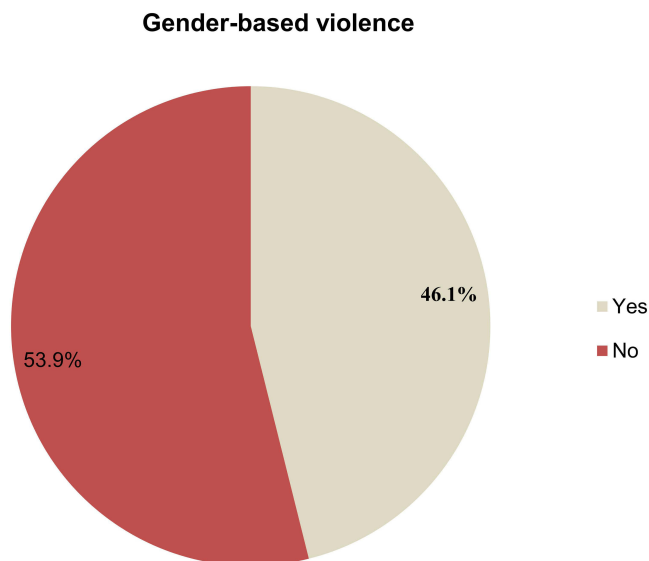
The occurrences of different forms of gender-based violence were assessed. One hundred forty-two (46.1%; 95% CI: 40.9%, 51.9%) women reported that they had experienced gender-based violence during the last 12 months and the majority 225 (73.1%; 95% CI: 68.4%, 78.0%) of the women had experienced gender-based violence during their lifetime (Figure 3).

### Overlap Between Before and Within the Past 12 Months of Gender-Based Violence Experience

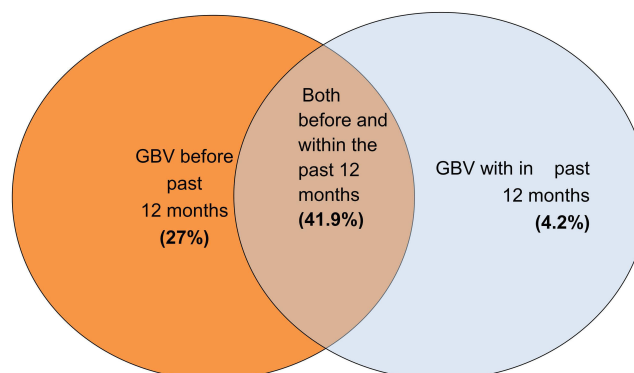
More than one-third 129(41.9%) of the women had experienced at least one type of violence during their lifetime before 12 months as well as during the past 12 months while 83(27.0%) and 13 (4.2%) had experienced at least one type of violence only during their lifetime before 12 months and only in past 12 months respectively (Figure 4).



**Figure 2** Overlap between sexual, physical, and emotional violence among women with disabilities in Jimma, 2020.



**Figure 3** The past 12 month's experience of gender-based violence among women with disabilities aged 15 and above in Jimma town, 2020.



**Figure 4** Overlap between before and within past 12 months GBV experienced by women with disabilities aged 15 and above in Jimma town, 2020.

## Seeking Care and Support

All women reporting any experience of sexual violence were asked whether and from whom they had sought help. The vast majority (90.2%) of the respondents who experienced sexual violence did not try to seek help from others. More than half of the respondents reported that not knowing where to go (52.7%) and being afraid that others may not believe them (50.9%) were the reasons for not seeking help at the time.

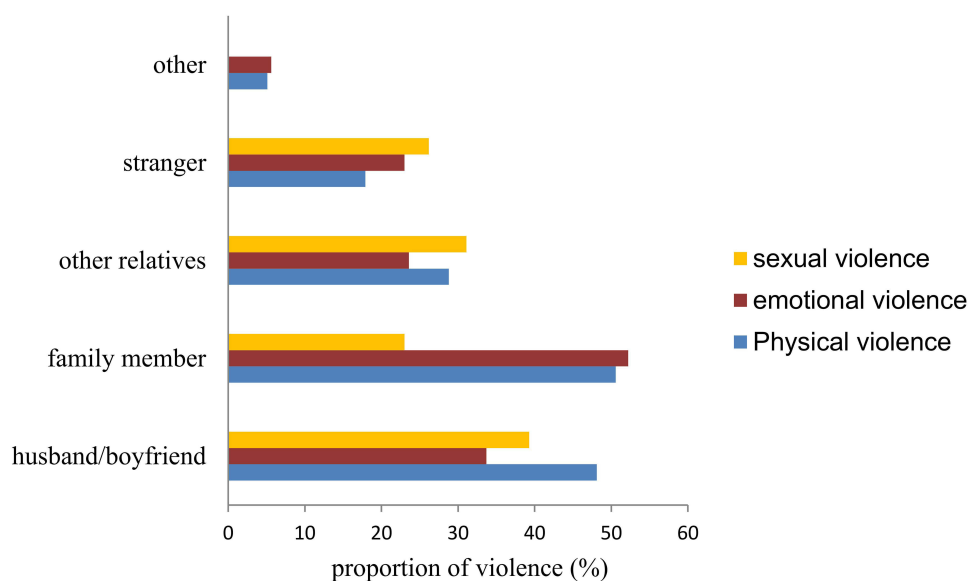
## Perpetrators of Gender-Based Violence

Half (50.6%) of women experienced physical violence from family members followed by boyfriends/husbands (48.1%) and other relatives (28.8%). Sexual violence was mostly perpetrated by husbands/intimate partners (39.3%) and other relatives (31.1) while family members (52.2) and husband/intimate partners (33.7) were the main perpetrators of emotional violence (Figure 5).

## Factors Associated with Gender-Based Violence Against Women with Disabilities

Multivariable logistic regression analysis revealed that the age of the women, educational status, alcohol use behavior, type of disabilities, and perceived social stigma and discrimination were found to be independent predictors of gender-based violence against women with disabilities.

Women in the age group 20–34 were 3.5 times (AOR=3.5; 95% CI, 1.74, 7.30) more likely to experience gender-based violence in the past 12 months compared with women aged 35 and above. Women with no schooling were 5.1 times (AOR=5.1; 95% CI, 1.51, 17.14) more likely to experience gender-based violence in the past 12 months compared with women with the educational level of college and above. Women who have visual impairment and hearing impairments were 3.1 times (AOR=3.1; 95% CI, 1.27, 7.54) and 3.0 times (AOR=3.0; 95% CI, 1.36, 6.89) more likely to be violated compared with those who have a physical impairment, respectively. Women who had alcohol use behavior in the past 12 months were 4 times (AOR=4.1; 95% CI, 1.74, 9.55) more likely to experience gender-based violence than their counterparts. Women with high perceived stigma and discrimination were 4.2 times (AOR=4.2; 95% CI, 2.44, 7.39) more likely to experience gender-based violence in the past 12 months as compared with women who had low perceived stigma and discrimination (Table 5).



**Figure 5** Perpetrators of physical, emotional, and sexual violence among women with disabilities in Jimma town, 2020 (multiple responses were possible, “other” includes neighbors and friends).

**Table 5** Multivariable Analysis Showing Factors Associated with Gender-Based Violence Among Women with Disabilities in the Past 12 Months in Jimma, Ethiopia, 2020

Variable		Gender-Based Violence		COR (95% CI COR)	AOR (95% CI AOR)
		Yes	No		
		N(%)	N(%)		
Age of the respondent	<20	22(47.8)	24(52.2)	1.95(0.95, 3.98)	2.01(0.81, 4.99)
	20–34	88(54.3)	74(45.7)	2.53(1.50, 4.26)	<b>3.57(1.74, 7.30)*</b>
	≥35	32(32.0)	68(68.0)	1	1
Marital status	Single	80(51)	77(49)	1	1
	Married	43(41.7)	60(58.3)	0.69(0.41, 1.14)	0.57(0.20, 1.61)
	Divorced	17(41.5)	25(58.5)	0.68(0.34, 1.36)	0.49(0.15, 1.65)
	Widowed	2(28.6)	5(71.4)	0.38(0.07, 2.04)	0.88(0.09, 8.17)
Number of living children	No child	81(52.6)	73(47.4)	4.72(1.52, 14.66)	2.57(0.53, 12.45)
	1–2 child	36(48.0)	39(52.0)	3.92(1.21, 12.76)	3.13(0.68, 14.41)
	3–4 children	21(36.2)	37(63.8)	2.41(0.72, 8.12)	1.73(0.39, 7.58)
	≥5 children	4(19.0)	17(81.0)	1	1
Level of education	No schooling	68(66.7)	34(33.3)	4.86(1.84, 12.84)	<b>5.08(1.51, 17.14)*</b>
	Primary education	47(38.5)	75(61.5)	1.52(0.58, 3.94)	1.10(0.35, 3.45)
	Secondary education	20(33.3)	40(66.7)	1.2(0.43, 3.4)	1.19(0.35, 3.99)
	College and above	7(29.2)	17(70.8)	1	1
Type of disability	Visual impairment	29(72.5)	11(27.5)	4.64(2.15, 10.01)	<b>3.10(1.27, 7.54)*</b>
	Hearing impairment	34(69.4)	15(30.6)	3.98(1.99, 7.97)	<b>3.07(1.36, 6.89)*</b>
	Leprosy	25(35.7)	45(64.3)	0.97(0.54, 1.76)	0.85(0.41, 1.76)
	Physical impairment	54(36.2)	95(63.8)	1	1
Dependency on personal care	Yes	21(56.8)	16(43.2)	1.62(0.81, 3.25)	1.40(0.59, 3.27)
	No	121(44.6)	150(55.4)	1	1
Alcohol use	Yes	23(55.9)	15(44.1)	1.94(0.97, 3.89)	<b>4.08(1.74, 9.55)*</b>
	No	119(39.5)	151(60.5)	1	1
Gender attitude	Unfavorable	91(52.0)	84(48.0)	1.74(1.10, 2.75)	1.17(0.64, 2.12)
	Favorable	51(38.3)	82(61.7)	1	1
Perceived stigma and discrimination	High	91(68.9)	41(31.1)	5.44(3.32, 8.89)	<b>4.25(2.44, 7.39)*</b>
	Low	51(29.0)	125(71.0)	1	1
Decision-making power	Poor	79(52.0)	73(48.0)	1.59(1.02, 2.51)	1.23(0.68, 2.23)
	Good	63(40.4)	93(59.6)	1	1

**Notes:** Bold = statistically significant, \*P ≤ 0.05.

## Discussion

This study determined the prevalence of gender-based violence and associated factors among women with disabilities. In this study, the lifetime prevalence of gender-based violence was 73.1%. The current finding is consistent with a report from a study on women with disabilities conducted in Colombia which stated the magnitude of gender-based violence during a lifetime as 72%.<sup>3</sup>

The finding of this study is lower than a report from a study conducted in Bangladesh that stated the lifetime prevalence as 84%.<sup>21</sup> The variation may be due to the difference in the study area in which the study in Bangladesh encompasses rural and urban areas while the current study includes the only urban area. This might be due to a lack of employment opportunities and having a low income in a rural part of Bangladesh increases their dependence on others and makes them more vulnerable to violence.

However, it is higher when compared with studies conducted in Germany (25–45%), Australia (62%), Nepal (58%), and Uganda (64%).<sup>20,22,29,30</sup> This variation might be due to differences in cultural characteristics, socioeconomic status, and the study population. Germany and Australia were a country among highly developed countries with better socio-economic development; rank 4<sup>th</sup> and 6<sup>th</sup> on the United Nations 2019 Human Development Index (HDI) while Ethiopia

ranks 173rd out of 189 countries.<sup>31</sup> This implies the prevalence can be higher in the current study as women living in poverty were more likely to experience violence though it occurs in all social and economic classes. Also, the difference might be due to the presence of culture and traditional gender norms in which patriarchal societies create privileges for men giving them power over women; in the current study more than half (56.8%) of women had unfavorable gender-equitable attitudes.

The finding of this study showed that the prevalence of gender-based violence in the past 12 months was 46.1%. This finding is lower than a finding from the study conducted in low and middle-income countries and India found that 61.5% and 73% of women had experienced violence in the past 12 months.<sup>11,23</sup> The variation might be due to differences in the study area and period. In recent years, there are several activities implemented regarding ending gender-based violence in the country which might have a positive impact on reducing violence. But this finding is consistent with a finding of a study conducted in Nepal that stated the prevalence as 42%.<sup>22</sup>

This study revealed that women in the age group 20–34 were three times more likely to experience gender-based violence in the past 12 months compared with women aged 35 and above. This finding is supported by studies conducted in Canada, North Carolina, Nepal, and Addis Ababa.<sup>7,8,22,32</sup> On the contrary; a study conducted in Bangladesh revealed that older women were more likely to experience gender-based violence as compared to women with disabilities who are younger.<sup>21</sup> This variation might be due to the difference in the type of violence. Bangladesh's study was conducted on IPV only among ever-married women and those older women might be lived longer with their partners and faced violence as compared to young married women. However, the current study includes both intimate and non-intimate partner violence in which younger women were more likely to experience violence as they are dependent on others.

Women with no schooling were five times more likely to experience gender-based violence in the past 12 months compared with women with the educational level of college and above. This finding is supported by a study conducted in North Carolina and India.<sup>7,23</sup> This may be since the experience of violence declines sharply with increasing the level of education because as women's educational level increases they may have access to information; their awareness and struggle for their right against the traditional gender norm will increase and also results in improved interpersonal skill and healthier communicative relationship that prevent the risk of violence. Besides, educated women are more likely to be engaged in occupations that make them economically independent.<sup>33</sup> These points toward and confirm the importance of empowering and promoting social and economic inclusion of all, irrespective of sex and disability as recommended by SDGs.

Women who have visual impairment were three times more likely to be violated compared with those who have a physical impairment. This finding is supported by the studies conducted in Denmark and Addis Ababa.<sup>8,34</sup> and also the current study showed women with hearing impairment were three times more likely to be violated compared with those who have a physical impairment. This might be since disabilities that require a dependency on others for support are exploited by perpetrators to exercise power and control which increases vulnerability to GBV and the perpetrator regards them as an easy target. Additionally, they might be incapable of defending themselves or might not use opportunities around to escape abusive states.<sup>9,35</sup>

Those women who had alcohol use behaviour in the past 12 months were four times more likely to experience gender-based violence than their counterparts. This finding is supported by the study conducted in the United States.<sup>24</sup> The reason might be because substance use is assumed to impair judgment and ability to recognize and avoid a violent situation which makes them vulnerable to violence.<sup>36</sup>

Women with high perceived stigma and discrimination were four times more likely to experience gender-based violence in the past 12 months as compared with women who had low perceived stigma and discrimination. This finding is supported by a study conducted in Bangladesh where social stigma against disability makes them vulnerable to intimate partner violence.<sup>21</sup> This might be due to the reason that stigma and discrimination support the marginalization of women with disabilities and make women more vulnerable to violence.<sup>20</sup>

When interpreting the finding of the present study, the following limitations should be considered; the magnitude of violence might be underestimated since the study deals with a sensitive issue under-reporting is inevitable (social desirability bias). However, privacy was maintained by interviewing them alone and the data collectors were females to minimize social desirability bias. On the other hand, there could be a recall bias. However, recall bias ought to be less

in the studies of such serious life-threatening experiences. Additionally, an attempt was made to reduce the bias by asking about their past 12 months' experiences in addition to their life experience. Moreover, it is difficult to show the cause and effect relationship as it is a cross-sectional study.

## Conclusion

This study revealed that the prevalence of gender-based violence among women with disabilities was high. Independent predictors of gender-based violence against women with disabilities were the age of the women, educational status, alcohol use behavior, type of disabilities, and perceived social stigma and discrimination. Addressing such determinants will require multi-sectoral interventions. So, taking integrated interventions like increasing the school enrollment of young girls with disabilities and targeted health education towards identified factors by considering the heterogeneity of disabilities will help to curb the problem.

## Abbreviations

IPV, intimate partner violence; GBV, gender-based violence; SDGs, Sustainable Development Goals; WHO, World Health Organization.

## Data Sharing Statement

The dataset for the current study is available from the corresponding authors on reasonable request.

## Ethics Approval and Consent to Participate

The study was ethically approved by the institutional review board (IRB) of Jimma University. Written informed consent was obtained before the interview. For minors (<18 years), written informed consent from their parent/legal guardian and assent from the children was obtained. Their right not to participate, not to answer any or all questions, and to withdraw from the interview at any time they want was respected and this study was conducted per the Declaration of Helsinki.

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## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis, and interpretation, or in all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors declare no competing interests in this work.

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