

Magnitude and Associated Factors of Gender-Based Violence among Female Students at High Schools, Arsi Zone, Oromia, Ethiopia, 2023.

DOI: <https://doi.org/10.20372/2gz8-1977>

Musa Kedir ¹, Solomon Tejineh Mengesha ², Legesse Tadesse Wodajo³

¹ Lemu Bilbilo District Health office, East Arsi zone, Oromia, Ethiopia.

² Departments of Public Health, College of Health Science, Arsi University, Asella, Ethiopia.

³ Department of Public Health, College of Health Science, Arsi University, Asella, Ethiopia.

Corresponding author: Solomon Tejineh Mengesha, E-mail: stejineh@gmail.com

ABSTRACT

Background: Gender-based violence against women is directed at women because it disproportionately affects them. It includes acts that inflict physical, mental, or sexual harm or suffering. Worldwide, 66 million girls are missing an education due to gender-based violence.

Objective: To assess the magnitude and associated factors of gender-based violence among female students of Bokoji town high schools, Arsi zone, Oromia, Ethiopia, 2023.

Methods: An institution-based cross-sectional study was conducted in Bokoji, Oromia, Ethiopia. A total of 362 female students were selected by stratified sampling techniques. A self-administered questionnaire was used to collect data. The data were coded, entered into Epi-Info version 7.1, and exported to SPSS version 25 for further analysis. Descriptive statistics and logistic regression analyses were used to present the findings. Each independent variable fitted with a p-value less than 0.25 in the bivariate model was entered into multivariate logistic regression analysis to evaluate the degree of association with GBV. The significance level was obtained with a 95% CI and a p-value <0.05.

Result: - The overall lifetime prevalence of GBV among female students was 229 (64.3%) (95% CI: 0.64, 0.36). Poor school performance (AOR: 4.3; 95% CI: 1.8, 10.3), respondents who drink alcohol (AOR: 2.3; 95% CI: 1.38, 11.12), and respondents having friends who drink alcohol (AOR: 10.89; 95% CI: 1.76, 67.21) increased significantly the risk of gender-based violence.

Conclusion: This study found that gender-based violence is still a common problem among high school female students. The lifetime prevalence of gender-based violence was high. Thus, interventions aimed at addressing gender-based violence problems by high school

administration should be considered based on the identified determinant factors of GBV in the study area.

Key Words: - Gender Based Violence, Sexual violence, Physical violence, psychological violence, Female student, Ethiopia.

1. Background

The United Nations defines violence against women as any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion, or arbitrary deprivation of liberty, whether occurring in public or in private life ((United Nation, 2006).The prevalence of gender-based violence is high in Sub-Saharan Africa; for instance, Ethiopia is one of the sub-Saharan countries that has the highest prevalence of gender-based violence (67.7%) (Mingude & Dejene, 2020). School-Related Gender-Based Violence (SRGBV) is violence or abuse that is based on gendered stereotypes or that targets students based on their sex, sexuality, or gender identities (Desalegne, 2019). Intimate partner violence (IPV) disproportionately impacts younger demographics globally, data indicating that nearly 1 in 4 nearly 24% young women aged 15-19 experience physical or sexual violence by a partner. For male-identifying victims, global prevalence surveys suggest that up to 25% of men report experiencing some form of IPV in their lifetime (Chipanga, et al 2019). In the world, one in three women has experienced physical and/or sexual violence from intimate partners throughout their lives, and one in three teenage girls reported having their first sexual experience as a result of coercion (Belay, et al 2021). It can occur on the street, at home, and in schools, colleges, prisons, workplaces, and institutions (Tantu et al 2020). Gender- based violence can cause physical injuries, chronic infections such as HIV/AIDS, some bad reproductive and sexual health effects such as unwanted pregnancy and unsafe abortions, and emotional and psychological trauma that can lead to attempted and complete suicide (Abubeker et al 2021). Globally, 66 million girls are missing an education due to GBV as one of the major barriers they face on the way to school and in school, nearly 1.5 billion children worldwide experience violence every year, many of them are within the school (UNICEF, 2021). In developing countries, gender-based violence is a serious problem because it occurs under different circumstances and accounts for a high proportion of violence, accounting for 30 to 76% (Gebresilassie et al 2023). According to the study conducted in South Africa among female students, out of 344 respondents, 57.8% experienced some form of GBV,

such as 56.5% experiencing verbal or emotional violence, 46.7% experiencing sexual violence, and 36.1% experiencing physical violence (Mtinta, 2022).

Ethiopia has established legal and political provisions to promote the rights of women and girls, including the constitution, international and continental agreements, and criminal law relating to acts of violence, but the frequency of GBV is still widespread in the country (12) (Gabrie et al 2020). According to a survey of 1401 randomly selected women in central Ethiopia, in Addis Ababa, there is little evidence of gender-based violence among women in the educational environment in Ethiopia. 74% of participants reported sexual harassment; 5% had completed rape; and 10% had attempted rape; and about 85% of survivors who reported rape were under 18 years of age (Abubeker et al 2021). Elimination of all forms of violence against women and girls is one of the key Sustainable Development Goals (SDG), target 5.2. It is also crucial to achieve most of the SDGs, particularly Goal 3 and Goal 5. Due to this, the prevention of violence against women has long been the focus of attention by several global and national organization (Kefale et al 2021). This study contributes to the elimination of gender-based violence in the study area and in other parts of Ethiopia by identifying the factors that influence gender-based violence, with a specific focus on school-setting adolescents.

2. Methods

2.1 Study area

The study was conducted in Bekoji town, East Arsi Zone, Oromia, Ethiopia. It is located 220 km from Addis Ababa and 56 km from Zonal town, Asella. In the town, four government primary schools, two private primary schools, and two government high schools were found. Related to the number of students, there were 4210 students from grades 9–12, out of which 2139 were female students (Bekoji district education office, 2023)

2.2 Study design and period

A school-based cross-sectional study design was used from March 20- April 20, 2023.

2.3. Source populations

All Female students in Bokoji town high schools register for the academic year 2022/2023.

2.4 Study population

Female students who were learning in the Bekoji town high schools were randomly selected to participate in this study.

2.5. Sample size determination

Single population proportion formula used to calculate the required sample size using the lifetime prevalence of sexual violence among high school female students, as 63.2% reported in a previous study (7).

$$n = \frac{\left(z \frac{\alpha}{2}\right)^2 p(1-p)}{d^2}, \quad \frac{(3.84 * 0.63 * 0.37)}{(0.0025)} = 362$$

Where: -

n= sample size,

Z= 1.96,

p= proportion of GBV from the study at Walaita Sodo High School, 63.2%,

d=margin of error (0.05)

2.6 Sampling procedure

Two government high schools—Bekoji High School (grades 9–12) and Bokoji Special High School (grades 9–11)—were purposively selected, comprising 2,139 female students. A stratified random sampling technique was employed, with classrooms as strata. The calculated sample was proportionally allocated by school size: 345 participants from Bekoji (n=2,044, 95.56%) and 17 from Bokoji special high school (n=95, 4.44%). The allocated sample was further proportionally distributed across grade levels within each school. A sampling frame was constructed from student registration records, and participants were independently selected via the lottery method until the required sample size was achieved.

2.7 Data collection instrument and procedure

A structured questionnaire was used to collect the data. Data collection questionnaires have been adopted from various relevant literature. The questionnaire was first prepared in English and then translated into the local language (Afan Oromo) and subsequently translated into English with other linguistic expertise to verify its reliability.

2.8 Data quality assurance

Training was given for three data collectors and one supervisor by the principal investigator for one day on the purpose of the study and the procedures of data collection. A week before the actual data collection, the questionnaire was pre-tested with Lemu High School female students 18 (5%) of the actual sample size of the female students to ensure the acceptability, comprehensibility, and understandability of the questionnaire by the participants, so modifications were made to the questionnaires accordingly. Regular supervision, spot-checking, and reviewing of the completed questionnaire were carried out by the supervisor and then by the principal investigator daily to sustain data quality.

2.9 Study variables

2.9.1 Dependent variable

Gender Based Violence

2.9.2 Independent variables

The independent variables were categorized into four. First: socio-demographic factors (age, sex, religion, living condition, pocket money), Second: educational factors (Grade, academic performance), Third: behavioral factors (Student) (drinking alcohol, chewing khat), Fourth: family factors (close relationship, free discussion about reproductive issues, income, living with).

2.10 Data processing and analysis

The collected data were coded and entered into Epi-Info version 7.1 and exported to SPSS version 25, then checked and cleaned for completeness before analysis. Texts, numbers, frequency tables, and graphs were used to summarize the summary statistics.

Descriptive statistics and logistic regression analyses were used to identify the association between dependent and independent variables. Variables with a p-value of 0.25 and below by bivariate analysis were taken as candidates for multivariate logistic regression. Hosmer and Lemeshow goodness-of-fit tests were assessed to check the model's fitness. As well as the collinearity test was done to identify the linear relationship between each independent variable. All variables with a p-value ≤ 0.25 in the bivariate analysis were further entered into the multivariate logistic regression model. Variables with a p-value ≤ 0.05 at 95% CI in the multivariate analysis were taken as significantly associated with outcome variables.

2.11 Operational definitions

Gender-based violence: Harmful acts directed at an individual based on their gender. In this study gender-based violence was assessed using yes or no questions and other forms of question related to different forms gender based violence such as Physical violence, sexual violence, and emotional/ psychological violence.

Physical violence: In this study, physical violence is defined as a respondent saying "yes" to one of the following items: slapping, kicking, beating with any object, cutting/biting, shaking, shoving, pushing, throwing, and burning/choking against an individual

Psychological/Emotional violence: In this study, psychological violence is defined as acts of coercion or use of abusive language (e.g., verbal assaults) and arbitrary deprivation of liberty, whether occurring in public or in private

Ethics approvals and consent to participate

Ethical clearance was obtained from the Institutional Review Board (IRB) of Arsi University College of Health Sciences with a letter reference number of A/CHS/C/102/2022. Before data collection, the school administration and female students were informed about the purpose of the study and their right to refuse participation and discontinue the interview. The interviewers obtained written consent from all selected female students before the interview.

3. Result

3.1 Sociodemographic characteristics of respondents

Out of 362 students, 356 completed the questionnaire, yielding a response rate of 98%. The mean age of the respondents was 17.40 (SD = 1.47). The majority of the respondents, 204 (57.3%), were Muslims. One hundred seventy (47.8%) were from grade 9, and 181 (50.8%) were from urban areas. Among the respondents, 158 (44.8%) were living with their families. Additionally, 297 (80.6%) had pocket money, 46 (12.9%) were performing poorly in their education, and 143 (40.2%) had a boyfriend (Table 1).

Table 1 Socio-demographic characteristics of female Bokoji high school students, Arsi, Oromia, and Ethiopia, 2023. N=362

Variables	Category	Frequency (n=356)	Percentage
Age	14-17 Years	161	45.22%
	18-21 Years	195	54.78%
Religion	Muslim	204	57.3%
	Orthodox	93	26.1%

	Protestant	59	16.6%
Grade of students	Grade 9	170	47.8%
	Grade 10	64	18%
	Grade 11	72	20.2%
	Grade 12	50	14%
Resident	Urban	181	50.8%
	Rural	175	49.2%
Currently living with	Family	158	44.4%
	Husband/Friend	41	11.5%
	Female friend	86	24.2%
	Relatives	39	11%
	Others	32	9%
School performance	Good	139	39%
	Average	171	48%
	Poor	46	12.9%
Marital status	Single	277	77.8%
	Married	53	14.9%
	Divorced	5	1.4%
	Cohabited	21	5.9%
Boyfriend	Yes	143	40.2%
	No	213	59.8%

3.2 Family history of female students

Among the participants included in this study, 158 (44%) were living with their families. Regarding parental education, 293 (82.3%) of the female students' fathers were able to read and write, and 250 (70.2%) of their mothers were also literate. A total of 215 respondents (60.4%) reported that their parents did not discuss reproductive health issues with them at home. The annual family income for 200 participants (56.2%) ranged between 5,000 and 10,000 ETB (approximately 88–175 USD). Furthermore, 126 female students (35.4%) had witnessed parental intimate partner violence, specifically observing their mothers being beaten by a husband or male partner (Table 2).

Table2 2: Family histories of female students, Bokoji High School students Arsi, Oromia, Ethiopia, 2023.

Variables	Categories	Frequenc y (n=356)	Percent age
Father and mother are living together	Living together	263	73.9%
	Divorced/separated	41	11.5%
	One of them is not alive	19	5.3%
	Neither is alive	33	9.3%
Educational status of the mother	Cannot read or write	16	4.5%
	Read and write	293	82.3%
	Primary education	16	4.5%
	Secondary education	20	5.6%
	College and above	11	3.1%
Educational status of Father	Cannot read or write	16	4.5%
	Read and write	250	70.2%
	Primary education	16	4.5%
	Secondary education	16	4.5%
	College and above	58	16.3%
Pocket money	Yes	69	19.4%
	No	287	80.6%
Family income	< 5000 ETB per year	127	35.7%
	5000 - 10,000 ETB per year	200	56.2%
	> 10,000 ETB per year	29	8.1%
Free discussion on reproductive issues with the family	Yes	141	39.6%
	No	215	60.4%
Family control	Tight	114	32%
	Average	119	33.4%
	Loose	123	34.6%
Witnessing mother's partner violence	Yes	126	35.4%
	No	230	64.6%

3.3 History of substance abuse among female students

The lifetime prevalence of khat (*Catha edulis*) chewing was 15 (4.2%), cigarette smoking was 9 (2.5%), and alcohol consumption was reported by 61 (17.1%) of the respondents. Regarding substance use among male friends of the respondents, 46 (12.9%) were reported to chew khat, 9 (2.5%) to smoke cigarettes, and 95 (26.7%) to consume alcohol (Table 3).

Table3 3: History of substance use among female Bokoji High School students, Arsi, Oromia, Ethiopia, 2023.

Variables	Categories	Frequency (n=356)	Percentage
Chew Chat (khat, Catha edulis)	Yes	15	4.2%
	No	341	95.8%
Cigarette smoking	Yes	9	2.5%
	No	347	97.5%
Alcohol drinking	Yes	61	17.1%
	No	295	82.9%
Friend chew chat	Yes	46	12.9%
	No	310	87.1%
Friend cigarette smoking	Yes	9	2.5%
	No	347	97.5
Friend alcohol drink	Yes	95	26.7%
	No	261	73.3%

3.4 Sexual experience

Among the study respondents, 217 (61%) reported having had a sexual experience. Of these, 195 (90%) indicated that their first sexual intercourse was forced. The mean age at first sexual intercourse was 15.7 years (SD = 1.3). Furthermore, the majority of sexually experienced respondents, 179 (82.5%), reported not using condoms during sexual activity (see Table 4).

Table4 4: Sexual experiences of female students, Bokoji High School, Arsi, Oromia, Ethiopia. 2023.

Variables	Categories	Frequency (n=356)	Percentage
Sexual intercourse before	Yes	217	61%
	No	139	39%
With whom did you have your first sexual intercourse? (n= 217)	Boyfriend	43	19.8%
	Teacher	46	21.19%
	An unknown person suddenly	128	58.98%
Age at your first intercourse	<15 Years	39	17.97%
	>15 Years	178	82%
Willingness to have first-time sexual intercourse	Yes	22	10%
	No	195	90%
With how many person do you have sexual contacts previously?	One	128	58.98%
	Two	41	18.89%
	Three	38	17.5%
	Four	10	4.6%
Using a condom during intercourse	Yes	38	17.5%
	No	179	82.5%

4. Magnitude of Gender Based Violence

The lifetime prevalence of gender-based violence was 229 (64.3%) (95% CI: 0.64–0.36). The prevalence of lifetime sexual violence, physical violence, and emotional violence was 53.7% (95% CI: 0.49–0.77), 31.9% (95% CI: 0.17–0.17), and 14.4% (95% CI: 0.23–0.45), respectively. Among the female students, 116 (50.6%) had experienced gender-based violence. The perpetrators were not familiar in 40 cases (17.46%), were teachers in 30 cases (13.1%), were friends in 20 cases (8.7%), and were students in 20 cases (8.7%).

The location of the GBV incident was reported by participants as follows: 101 cases (44%) occurred outside the home, 80 (34%) within the home, 25 (11%) in hotels, and 23 (10%) in schools. Regarding disclosure to family members, only a limited number of participants—30 individuals (13.1%)—informed their families about the incidents. Of the 229 reported GBV

cases, merely 15 (7%) were formally reported to legal authorities. Among the 199 participants (86.9%) who did not report their cases to legal bodies, the primary reasons cited included fear of the perpetrators, reported by 159 individuals (69.4%); feelings of shame, reported by 20 participants (9.1%); and lack of knowledge about where to report such cases, also reported by 20 participants (9.1%).

Consequences of GBV

The consequences of GBV raised by the participants were that 52 (22.7%) developed anxiety, 48 (20.9%) acquired sexually transmitted infections, 48 (20.9%) developed depression, 33 (14.4%) had an unwanted pregnancy, and 23 (10%) blamed themselves after having experienced GBV.

5. Factors Associated with Gender Based Violence among female students of Bokoji high schools 2023

Initially, the socio-demographic characteristics of respondents, family history of respondents, history of substance abuse of respondents and their friends, and sexual history of students were analyzed with bivariate logistic regression to determine factors associated with gender-based violence. Next, variables associated with GBV at a p-value <0.25 in the binary logistic regression were fitted into the multivariate logistic regression analysis.

The multivariate strength of the association was measured using adjusted odds ratios (AOR), and its 95% confidence intervals and P-values below 0.05 represented the presence of a statistically significant association. The multivariate analysis results showed that respondents who drink alcohol, respondents whose friends drink alcohol, respondents who chew chat, respondents whose friends chew chat, respondents whose mothers could neither write nor read and respondents who poorly perform at school were found to be determinants of gender-based violence.

Students who had boy friends had likely to increase risk of attack of GVB 2.56. times compared to their counter parts (AOR= 2.56, 95%CI:1.52-4.31) Students who had boy friends who drank alcohol were 7.68 times more likely to experience GBV when compared to their counterparts (AOR = 7.68; 95% CI: 3.54-16.05). Similarly, female students who drank alcohol increased almost 2.48 times the odds of GBV as compared to their counterparts (AOR = 2.48; 95% CI: 1.01–6.05) (See Table 5).

Table 5: Associated Factors of gender-based violence among female Bokoji High School students included in the study, Arsi, Oromia, Ethiopia, 2023.

Variable	Category	Yes Frequency (%)	No Frequency (%)	Crude OR (95% CI)	Adjusted OR (95% CI)	P. V
Educational performance						
	Good	94(67.73)	45(32.37)	1	1	
	Average	108(63.16)	63(36.84)	0.68(0.34,1.35)	0.58(0.27,1.23)	0.153
	Poor	27(58.70)	19(41.30)	0.83(0.43,1.61)	0.59(0.28,1.26)	0.173
Did you have boy fried?						
	Yes	104(72.72)	39(27.27)	1.88(1.19,2.97)	2.56(1.52,4.31)***	0.000
	No	125(58.69)	88(41.31)	1	1	
Did you drink alcohol?						
	Yes	54(88.52)	7(11.48)	5.29(2.33,12.02)	2.48(1.01,6.06)*	0.047
	No	175(59.32)	120(40.68)	1	1	
Did your friend chew Chat?						
	Yes	36(78.26)	10(21.74)	2.18(1.04,4.56)	1.5(0.66,3.45)	0.336
	No	193(62.26)	117(37.74)	1	1	
Did your friend drink Alcohol?						
	Yes	86(90.53)	9(9.47)	7.89(3.81,16.34)	7.68(3.54,16.65)**	0.000
	No	143(54.79)	118(45.21)	1	1	

6. Discussion

This study assessed gender-based violence (GBV) among female students at Bokoji High Schools. The overall lifetime prevalence was 64.3%, with sexual, physical, and emotional violence at 53.7%, 31.9%, and 14.4%, respectively. These rates align with previous Ethiopian studies in Wolaita Sodo (63.2%), Debre Markos (67.7%), and Aleta Wondo (68.2%) (Tantu et al., 2020; Mulu et al., 2015; Shimekaw et al., 2013), but exceed those reported in Bahir Dar (37.3%), Harar (36.7%), and Kofale District (32.5%) (CDC, 2016; Abubeker, 2021; Dibaba, 2006). Further, a recent systematic review and meta-analysis that investigated the prevalence of gender-based violence among female students attending schools in Sub-Saharan Africa also showed much similar report (Beyene et al 2021).

Studies regarding the prevalence of sexual violence lack consistency across Ethiopian regions. This inconsistency may be attributable to differences in social perceptions of gender norms and in the culture of disclosing sexual violence incidents among various ethnic groups and societies across the country. The incidence of sexual violence is high in societies where traditional gender norms prevail, as these norms dictate distinct behaviours and expectations for boys and girls (3, 16; Mingud & Dejene, 2020; CDC, 2016; Dufera, 2021).

In this study, respondents who had poor educational status, had ever drunk alcohol, or had friends who drank alcohol were significantly associated with GBV. Respondents with poor educational status were 4.3 times more at risk of experiencing gender-based violence than their counterparts. This finding is similar to a study conducted among Bahir Dar City High School students, which found that students with poor educational performance had three times the odds of experiencing gender-based violence than those with good school performance (Belay et al., 2021). Students who drank alcohol had a twofold higher risk of GBV than their counterparts. This finding is consistent with a study conducted in the Jarso District, Oromia Region, Ethiopia (Dufera et al., 2021).

The current study identified a significant association between alcohol consumption among peer groups and lifetime experience of gender-based violence (GBV). Specifically, students who had boy friends who drank alcohol were 7.68 times more likely to experience GBV in their lifetime compared to their counterparts. This finding is consistent with previous research conducted in other parts of Oromia, which reported that students with alcohol-drinking friends were three and a half times more likely to perpetrate GBV. However, the magnitude of the association observed in this study is considerably higher than that reported in a study conducted in Wolaita Sodo, Ethiopia (Tantu et al., 2020). A possible explanation for this discrepancy is that, although school environments are typically alcohol-free, perpetrators may take female

students to secluded locations where alcohol is readily accessible, thereby increasing their vulnerability to GBV (Dufera et al., 2021).

This study also assesses the social, physical, and psychological consequences of gender-based violence. Gender-based violence led to several health-related problems, such as unwanted pregnancies, sexually transmitted infections, injuries around the genitalia, and psychological complications including self-blame, anxiety, and depression. Furthermore, according to these findings, family members, strangers, and boyfriends were the primary perpetrators of gender-based violence, which was inconsistent with similar previous studies in Ethiopia (Belay et al., 2021; Cordon et al., 2018) and Zimbabwe (Chipanga et al., 2021) that suggested intimate partners were more prevalent in GBV.

.

Related to survivors' reporting of gender-based violence (GBV) cases, 13.1% of respondents disclosed the incident to family members, while only 7% reported to legal authorities. The low rate of formal reporting may be attributed to fear of the perpetrators or a deliberate choice not to disclose the matter. This finding is consistent with previous research conducted in the Hadiya Zone, Ethiopia (Letta & Feleke, 2014).

7. Strengths and limitations of the study

7.1 Strength of the study

The study used primary data to increase the validity of the study.

7.2 Limitation of the study

This institution-based study might not be generalizable to other places.

8. Conclusion

This study found that gender-based violence (GBV) remains a prevalent issue among female high school students. The lifetime prevalence of GBV was notably high in the study area. Significant associations with GBV were observed among female students who consumed alcohol, had peers who consumed alcohol, and exhibited poor academic performance. To address this problem, school administrators should implement awareness-creation programs targeting GBV specifically for female students.

Acronyms/ Abbreviations

EDHS Ethiopian Demographic Health Survey

GBV	Gender Based Violence
HIV/AIDS	Human Immuno-Deficiency Virus/Acquired Immuno-Deficiency Syndrome
IPV	Intimate Partner Violence
KM	Kilo Meter
NGO	Non-Governmental Organization
SDG	Sustainable Development Goals
STI	Sexually Transmitted Infection
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund
VAW	Violence Against Women

Declarations

Ethics approvals and consent to participate

Ethical clearance was obtained from the Institutional Review Board (IRB) of Arsi University College of Health Sciences with a letter reference number of A/CHS/C/102/2022. Before data collection, the school administration and female students were informed about the purpose of the study and their right to refuse participation and discontinue the interview. The interviewers obtained written consent from all selected female students before the interview.

Consent for publication

Not applicable

Additional data availability

Additional data supporting this study are available upon request from the corresponding author

Computing interest

The authors declare that there are no conflicts of interest

Funding

The research fund was covered by the authors and Arsi University

Authors contributions

ST and LTW contributed to the inception, design of the methods used, led the study, supervised, and was involved in the analysis stage of the project, final approval of the research, and preparation of the manuscript. MK contributed to the inception, proposal writing, designing methods, recruitment and training of supervisors and data collectors, and analysis and write-up of the paper.

Acknowledgement

We wish to express our profound appreciation to Arsi University College of Health Sciences for their sponsorship of this research. Our sincere thanks also go to the Bekoji Town Education Office and the administration of all participating high schools for facilitating the data collection process. Furthermore, we are indebted to the female students who volunteered to participate, and to the data collectors and supervisors for their diligent efforts.

References

- Abubeker F, Dessie Y, Assefa N, Geleto A, Adorjan K, Abdeta T. Prevalence and Associated Factors of Gender-Based Violence Among Female Students Attending Private Colleges in Harar Town, Eastern Ethiopia. *Inq (United States)*. 2021;58:1–10.
- Bekoji District Education Office, 2023.
- Belay HG, Liyeh TM, Tassew HA. Magnitude of Gender-Based Violence and Its Associated Factors among Female Night Students in Bahir Dar City, Amhara Region, Ethiopia. 2021, 1-7 <https://doi.org/10.1155/2021/6694890>
- Beyene AS, Chojenta CL, Loxton DJ. Consequences of gender-based violence on female high school students in eastern Ethiopia. 2021;25(August):22–33. *African Journal of Reproductive Health* 2021; 25 (4): 22. DOI: 10.29063/ajrh2021/v25i4.3
- Centers for Disease Control and Prevention. Preventing Multiple Forms of Violence: A strategic vision for connecting the dots. 2016;1–18. <https://stacks.cdcgov>.
- Chipanga, E., Chikanya, V. and Mundagowa, P.T. (2021) Determinants of Gender-Based Violence among Girls and Young Women Aged 11-24 Years Seeking Care at a Rural Hospital in Zimbabwe: A Case-Control Study. <https://doi.org/10.21203/rs.3.rs-379352/v>

Cordon M, Drame F, Schmidt E, Stepp H. Systematic Literature Review of Gender- Based Violence in Ethiopia; Magnitude, Policies, and Interventions. Biomedcentral [Internet]. 2018;1–91. Available from: <https://www.scibd.com>, document, GBV in Ethiopia.

Desalegne Z. Gender-based violence and its associated effects on female students: The case of Gozamin and Nigus T/Haimanot secondary schools in the east Gojjam administrative zone, Ethiopia. *J Int Womens Stud*. 2019;20(7):237–46.

Dibaba Y. Prevalence of intimate partner physical violence against women and associated factors in Kofale district, Arsi zone, Central Ethiopia. *Ethiop J Health Sci*. 2006;16(2):119–29. <https://www.ajol.info>.

Dufera F, Kebira JY, Gobena T, Assefa N. Lifetime Prevalence of Sexual Violence and Its Associated Factors among High School Female Students in Jarso District, Oromia Region, Eastern Ethiopia. *Int J Reprod Med*. 2021;2021:1 10. DOI: [10.1155/2021/1821579](https://doi.org/10.1155/2021/1821579)

Gebrie, T, Hagos, F, Teklu, G, Fisseha, M, and Abera, M. The Prevalence of gender-based violence and harmful traditional practices against women in the Tigray region, Ethiopia. 2020, 55: (1) 58-75. *Journal of Asian and African Studies*. Doi 10.1177/0021909619867110

. Gebresilassie K, Melesse A, Birhan T, and Taddese A. Gender based violence -Magnitude and type in Northwest, Ethiopia. 2023, 15: 1083-1091, *International Journal of Women's Health* <https://doi.org/10.2147/IJWH.S409172>

Kefale B, Yalew M, Damtie Y, Arefaynie M, Adane B. Predictors of sexual violence among female students in higher education institutions in Ethiopia: A systematic review and meta-analysis. *PLoS One* [Internet]. 2021;16(2 February):1–15. Available from: <http://dx.doi.org/10.1371/journal.pone.0247386>

Letta T, Feleke A, Derseh L. Assessment of Violence and Associated Factors among Rural High School Female Students, in Hadiya Zone, Southern Nation and Nationalities Peoples '. 2014;1–14. *Open Library Journal*. DOI:10.4236/oalib.1100659

Mingude AB, Dejene TM. Prevalence and associated factors of gender based violence among Baso High School female students, 2020. *Reprod Health* [Internet]. 2021;18(1):1–11. Available from: <https://doi.org/10.1186/s12978-021-01302-9>

Mulu G, et al. Prevalence of gender based violence and associated factors among female students of Menkoror High School in Debre Markos town, Northwest Ethiopia. 2015; 3: (1) 67-74. *Journal of Public Health*. Doi: 10.11648/J.SJPH 2015301.22

Mutinta G. Gender-based violence among female students and implications for health intervention programmes in public universities in Eastern Cape, South Africa. *Cogent Soc Sci*

[Internet]. 2022;8(1). Available from: <https://doi.org/10.1080/23311886.2022.2079212>

Shimekaw B, Megabiaw B, Alamrew Z. Prevalence and associated factors of sexual violence among private college female students in Bahir Dar. 2013;5(6):1069–75. Health <http://dx.doi.org/10.4236/health.2013.56143>

Tantu T, Wolka S, Gunta M, Teshome M, Mohammed H, Duko B. Prevalence and determinants of gender-based violence among high school female students in Wolaita Sodo, Ethiopia: An institutionally based cross-sectional study. BMC Public Health. 2020;20(1):1–9.

UNICEF, child protection program division. 2021. Gender dimensions of violence against children and adolescent. <https://www.unicef.org/media/92376/file/child-protection-gender-dimensions-of-vacag-2021.pdf> access on 10/ 2 2024

United Nations U. General Assembly. 2006;41974(accessed July):1–139. <https://www.iom.int>