

SEXUAL VIOLENCE AND ASSOCIATED FACTORS AMONG HIGH SCHOOL FEMALE STUDENTS IN DEBRE MARKOS TOWN, EAST GOJJAM ZONE, NORTHWEST ETHIOPIA, 2021

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ABSTRACT

BACKGROUND: Sexual violence against women takes many forms, including rape, sexual harassment such as asking for unwanted sex as a joke, kissing, touching sensitive parts such as the breasts, and threats. The studies related to the sexual violence in our study setting are limited and the goal of this study was to find out how common sexual violence against women is among Debre Markos high school students, as well as the factors that influence it.

METHODOLOGY: Institutional-based cross-sectional study was conducted among high-school female students in Debre Markos Town. A self-administered questionnaire was used to collect data from 372 respondents. Descriptive, binary, and multivariable logistic regression analyses were carried out.

RESULT: The lifetime prevalence of sexual assault, as well as the lifetime and current year rates of attempted and completed rape, were 110 (29.6%), 18 (4.8%), and 11 (3%) respectively. The mean age of the respondents was 15.75 (SD±1.375) years. Of the respondents who encountered sexual violence, the majority of the respondents were victimized by their boyfriend/husband 9(50%) and much older than their age minimum age 20 and maximum age 26 with a mean age of 23.75 years. Factors associated with sexual violence were family control (AOR = 22.14, 95% CI 10.58-46.30), habit of drinking alcohol (AOR = 0.386, 95% CI 0.189-0.788), academic performance (AOR = 0.246, 95% CI 0.064-0.943), age of respondents (AOR = 0.246, 95% CI 0.064-0.943) and permanent residence (AOR = 2.922, 95% CI 1.175-7.265).

CONCLUSION: The current study showed that sexual violence, in general, is high among female students. Family control, the habit of alcohol intake, academic performance, permanent residence, and age of the respondents were identified as the main associated factors for sexual violence of female students in the study area. This needs further intervention like awareness creation in school and community settings, empowering girls in different activities at school, and at a higher institutional level.

KEYWORDS: Sexual Violence, Prevalence, Factors, Female Students, Ethiopia

(The Ethiopian Journal of Reproductive Health; 2022; 14;32-40)

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INTRODUCTION

Sexual violence is violating the rights entitled to and critically endangering women's mental and physical well-being, and sexual and monetary security¹. Sexual violence has a significant detrimental effect on population health, and it can take many different forms, such as rape, sexual harassment such as asking for uninvited sex in jest, kissing, touching sensitive organs like the breast, and threats. Other possible effects include unintended pregnancy, STDs, depression, and thoughts of or attempts at suicide^{2, 3}.

The World Health Organization (WHO) has made statements in recent years about the public health significance of violence against women as a result of growing awareness that violence is a serious violation of women's human rights, a major cause of injury, and a risk factor for many physical and psychological health issues³.

Because the problem is hidden, it is challenging to get data on sexual assault in women, and sometimes the problem is underreported. However, studies conducted in various parts of the world show that sexual violence against women and girls is widespread; in rural Tanzania, 47%⁴, in Botswana schools, 67%³, in Germany, 5%⁵, and in Canada and the United States, it was discovered that between 27 and 34% of women interviewed had experienced sexual abuse at some point in their lives.^{5, 6}

In rural Ethiopia, 49% of women in partnership have ever experienced physical violence by an intimate partner, including rape, and sexual harassment^{2, 3}. Another study conducted in Addis Ababa and Western Shoa among 1401 female high school students shows that the prevalence of completed rape and attempted rape among female students was 5% and 10%, respectively⁹.

The studies in Ethiopia on sexual violence are few irrespective of the different lifestyles, customs, and cultures of the society¹⁰. Furthermore, the frequency of sexual violence and the factors that contribute to it among high school female students in DM town remained unknown. As a result, the purpose of this

study was to determine the prevalence of sexual violence among high school female students in the DM town, as well as the factors that contribute to it, and to offer interventional techniques to address the problem when appropriate. As a result, the goal of this study is to generate new data on the prevalence of sexual violence and the factors that contribute to it for residents of DM town and its surrounding areas, to provide useful information to policymakers, health care providers, stakeholders, religious and public leaders, and civil society organizations.

METHOD AND MATERIALS

An institution-based cross-sectional study design was conducted from May 1 to July 10, 2021, in DM town, East Gojjam Zone, North West Ethiopia. The sample size was calculated using a single population proportion

$$n = \frac{(Z \alpha/2)^2 P (1-P)}{D^2},$$

and considering the 95% confidence interval, 5% margin error, and the prevalence of sexual violence 32.8%¹¹ and a non-response rate of 10%; the final sample size was 372. Those who systematically selected regular high school female students of grades from 9 - 12 who lived in the DM town for at least 6 months and above were included in the study; among them, those students who were disabled were excluded from the study.

Data collection procedure and quality assurance
A total of four government-owned secondary schools are found in the town and all would be included in the study. The total sample size was allocated to the selected schools based on the probability proportional to the size of the number of students in the school. To draw the respective students from each class, the proportional allocation method was used. Finally, a systematic random sampling method would be used to select the desired number of students from each school. In case the student selected was absent or not eligible, the next female student will be selected. Individual schools' lists are used as a sampling frame. Samples to each selected school were assigned proportionally.

To assure the quality of data, the collected data were reviewed and checked for completeness and relevance each day. After checking its completeness, the collected data were first coded, entered, and cleaned using EpiData version 4.6 and then exported into the SPSS version 26 software for analysis. Appropriate descriptive analysis and bivariate, and multivariate logistic regression was employed. Those variables having a p-value less than 0.25 in the bivariate logistic regression were reanalyzed using the multivariate logistic regression. During multiple logistic regression analyses, the variables with $P < 0.05$ at a 95% confidence interval were considered statistically significant factors associated with the presence of sexual violence.

Ethical Consideration

A letter of ethics clearance was obtained from the DMU School of Medicine after approval of the proposal. The study was conducted under the Declaration of Helsinki. The official permission was taken from the school director then, informed consent was obtained from each participant. The privacy and confidentiality of the information was kept secret. The rights of individuals must be protected.

Measurements and Definitions

Rape: to commit sex using force when a female doesn't want to.

Attempted rape: an attempt/trial to have non-consensual intercourse with a female student where she was having a chance of escaping the attempt.

Sexual harassment: refers to an intended, strong verbal expression and threat against female students when somebody (perpetrator) failed his plan to gratify one's sexual interest which is unwelcome by the recipient.

Sexual violence: is defined in this study defined as asking for unwanted sexual intercourse through joking, touching sensitive body parts like breasts, and or unwelcome kiss on a female student.

the study with a 100% response rate. Based on the sample size among the total respondents 50 (13.4%) in the ninth grade, 79 (21.2%) in the 10th grade, 198 (53.2%) in the 11th grade, and 45 (12.1%) in the 12th grade. The mean age of the respondents was 15.75 (SD ± 1.375) years. Among the total of respondents, the predominant religion was orthodox 369 (99.2%) and the ethnic group of all respondents was Amhara. The majority 358 (96.2%) of respondents were never married, and 286 (76.9%) of respondents' usual place of residence was a rural area. Regarding current living conditions, 258 (69.4%) were reported to live together with both parents and 95 (25.5%) of the respondents lived alone.

Among 372 respondents, 300 (80.6) sources of income were their parents and 31 (8.1%) were their husbands/boyfriends, 324 (87.1%) respondents were having average academic performance and only 19 (5.1%) were having good and above academic performance.

RESULTS

Sociodemographic characteristics

A total of 372 female students participated in

Table 1: Sociodemographic characteristics of high school female students in Debre Markos town, northwest Ethiopia, 2021.

Variables and Category	Number	Frequency %
Age group		
12-16 years	160	43
17-20 years	212	57
Marital status of respondents		
Married	14	3.8
Single	358	96.2
Grade level of respondents		
Grade 9	46	12.4
Grade 10	80	21.5
Grade 11	192	51.6
Grade 12	54	14.5
Ethnicity		
Amhara	372	100
Religion		
Orthodox	369	99.2
Muslim	2	0.5
Protestant	1	0.3
Permanent residence		
Urban	109	29.3
Rural	263	70.7
Source of income		
Parents	300	80.6
Relatives	35	9.4
Boyfriend/husband	30	8.1
Self-support	7	1.9
Academic performance of the respondents		
Good and above	40	10.8
Average	325	81.1
Low	30	8.1
Total	372	100
Duration of living in Debre Markos		
<one year	36	9.7
>one year	336	90.3
Currently, live with		
Both parents	249	66.9
Alone	108	29
Relatives	8	2.2
Boyfriend /husband	7	1.9
Family control		
Tight	84	22.6
Medium	224	60.2
Free	64	17.2

The sociodemographic character of the family

Of the total of 372 respondent's majority of 273 (73.4%) of their family income were average and 59 (15.9%) were low, 244 (65.6%) of respondent's fathers were unable to read and write, 111 (29.8%) were up to 8th-grade level, 13 (3.5%) were up to secondary school level and 4 (1.1%) were diploma and the majority of respondents mother educational level 265 (71.2%) were unable to read and write, 93 (25%) 8th grade complete, 7 (1.9%) were 10th grade complete and 7 (1.9%) were diploma and above.

Table 2: Frequency distribution of parent or family history of female high school students in De-bre Markos town, East Gojjam, Zone, Amhara Region, Ethiopia 2021 G.C.

Variables and Category	Number	Frequency %
Level of income		
Good and above	39	10.5
Average	274	73.7
Poor	59	15.9
Educational status of the father		
No education	244	65.6
Primary school	111	29.8
Secondary school	13	3.5
Diploma and above	4	1.1
Educational status of a mother		
No education	265	71.2
Primary school	93	25.0
Secondary school	7	1.9
Diploma and above	7	1.9
Do father and mother live together		
Yes	348	93.5
No	24	6.5

Behavioral-related factors of respondents

In this study of the total of 372 respondents, 79 (21.2%) have a history of drinking alcohol in their lifetime, 293 (78.8%) had no history of drinking alcohol, 1.5 (1.3%) had experienced in chewing chat, 1 (0.3%) have experienced smoking cigarettes and 5 (1.3%) of respondents' friends use a substance such as chat, alcohol, and the like in their lifetime.

Table 3: Frequency distribution of factors associated with sexual violence among female high school students in Debre Markos town, Ethiopia, 2021GC.

Variable	Frequency	Frequency in %
Alcohol drinking		
Drinking alcohol	79	21.2
Didn't drink alcohol	293	78.8
Chewing chat		
Chewing chat	51.3	
Didn't	367	98.7
Cigarette smoking		
Smoking cigarette	10.3	
Didn't smoke a cigarette	371	99.7
Substance use		
Substance use of friends	51.3	
Didn't use a substance	367	98.7

The sexual history of the respondents

In this study, of a total of 372 participants, 17 (4.6%) of them had boyfriends or husbands and 16 (4.3%) of them engaged in sexual activity. The mean age at first sexual intercourse was 15.75 years, with the minimum age being 14 and the highest being 17 years. Nine (56.3%) of those who began having sex did so because they were married, four (25%) because forced by love affairs, and three (18.8%) because of forced by their boyfriends and teachers. 12 (80%) of those who engaged in sexual activity did so under duress, and 3 (20%) did so out of love. Almost all of those involved in sexual activity had sex with considerably older offenders. In terms of sexual harassment, out of the total respondents, 113 (30.4%) had experienced unwanted sex, such as asking for sex in jest or touching delicate body parts like the breasts.

Table 4: frequency distribution of sexual history by respondents, Debre Markos town, Ethiopia, July 2021.

Variables	Number	Frequency %
Having a boyfriend/husband		
Yes	25	6.7
No	347	93.3
Having sexual intercourse		
Yes	16	4.3
No	356	95.7
Age at 1st sexual intercourse		
12-16	12	75
17-20	4	25
Sexual violence		
Yes	110	29.6
No	264	70.4
History rape		
Yes	18	4.8
No	354	95.2
A consequence of the raped girl		
Depressed	15	4.0
STI	1	.3
Being pregnant	2	.5
Age of raper		
17-20	1	.3
≥20	17	4.6
Place of rape		
School	5	1.3
Road	12	3.2
Home	1	.3

Factors associated with sexual violence against female high school students at Debre Markos town. Binary and multiple logistic regression analyzes were done using the backward logistic regression method to analyze factors associated with lifetime and current year sexual violence. As shown in Table 5 after controlling for the effect of confounders, age, academic performance, family control, having a boyfriend/husband, permanent residence, a habit of drinking alcohol, and whether parents living together were associated with lifetime sexual violence.

Multivariate regression analysis revealed that as the age of female students increases, the risk of having sexual violence is decreasing which means 51.2% of female students above the age of 17 years protected from sexual violence (AOR = 0.512 95% CI 0.264-0.996). The academic performance of female students had a significant association with lifetime sexual violence. Students with good and above grades on the exam were protected by 24.6% from sexual violence (AOR = 0.246, 95% CI 0.064-0.943). Family control was shown to have a significant association with lifetime sexual violence. The odds of having sexual violence were 22 times more among female students who didn't have

family control than those having tight family control (AOR = 22.14, 95% CI 10.587-46,303). The lifetime experience of drinking alcohol had a significant association with lifetime sexual violence. Of those female students who didn't drink alcohol 38.6% were protected from sexual violence (AOR = 0.386, 95% CI 0.189-0.788). Permanent residence of female students has a significant association with lifetime sexual violence. The odds of having sexual violence were 3 times greater among female students whose permanent residence is urban as compared to those who live in rural areas (AOR = 2.922, 95% CI 1.175 - 7.265).

Table 5 Multivariate analysis showing the association of factors with lifetime sexual violence among female students in Debre Markos Town, Northwest, Ethiopia, July 2013EC.

Variable	Sexual violence		COR (95% CI)	AOR (95% CI)	p value
	Yes	No			
Age of respondents					
12-16	30 (18.7)	130 (81.3)	1	1	
17-20	83 (39.2)	129 (60.8)	2.778 (1.719,4.521)	0.512 (0.264,0.996)	0.049
Academic performance of respondents					
Good and above	27 (67.5%)	13 (32.5)	7.321 (3.268,16.403)	0.244 (0.064,0.936)	0.040
Average	70 (23%)	232 (77)	0.297 (0.117,0.758)	2.347 (0.803,6.861)	0.119
Low	16 (53.3)	14 (46.7)	1	1	≤0.01
Permanent residence					
Urban	9 (10.5)	77 (89.5)	0.205 (0.098,0.0425)	2.922 (1.175,7.265)	0.021
Rural	104 (36.3)	182 (63.7)	1	1	≤0.01
Family control					
Tight	16 (22.2)	56 (77.8)	3.469 (1.593,7.555)	9.586 (4.082,22.513)	
Medium	14 (7.6)	170 (92.4)	0.114 (0.057,0.226)	22.205 (10.606,46.486)	≤0.01
Loose	83 (71.5)	33 (28.5)	1	1	≤0.01
Are father and mother live together					
Yes	101 (29)	247 (71)	10.848 (5.40,21.78)		
No	12 (50)	12 (50)	1		
Lifetime prevalence of drinking alcohol.					
Yes	46 (58.2)	33 (41.8)	4.702 (2.785,7.938)	0.386 (0.189,0.788)	0.009
No	67 (22.8)	226 (77.2)	1	1	
Having boyfriend /husband					
Yes	29 (67.4)	14 (32.6)	0.166 (0.083,0.328)		
No	84 (25.5)	245 (74.5)	1		

DISCUSSION

This study shows that sexual violence is a public health problem among female high school students in Debre Markos town. We found that the prevalence of sexual violence, associated factors, and effects of sexual violence were assessed and the lifetime prevalence of sexual violence among high school female students in the study area was 110 (29.6%). This finding is lower than the studies conducted in Dabat (33.3%)¹¹, Butajira (32.8%)¹², and Bahir Dar 37.3%¹³; this could be due to differences in living conditions, as well as lifestyle. However, this finding was higher as compared with finding from DILLA town (13.5%)¹⁴. This variation might be due to various factors like culture, ethnicity, lifestyle, socioeconomic status, and living environment.

Regarding factors associated with sexual violence in this study, family control, the habit of alcohol intake, academic performance, permanent residence, and age of the respondents were the important contributing factors to the presence of sexual violence in female students. More specifically the finding of this study showed that those respondents who have tight family control have 22 times more likely to experience sexual violence. This is because those females cannot tackle the challenges. Females who have used alcohol have a higher probability of experiencing sexual violence. When we compare with other past studies on sexual violence, a study conducted in Dilla town showed that the habit of alcohol intake had been identified as the most significant factor for sexual violence¹⁴.

The findings of this study revealed that academic performance was one of the most important associated factors of sexual violence among female high school students in Debre Markos town (AOR = 0.244, 95% CI, 0.064, 0.936). Those students who had good and above grades were protected from sexual violence as compared to those who scored low grades in exams. Permanent residence and age of female students were also other contributing factors of sexual violence among female students in the study area with ($p = 0.021$) and ($p = 0.049$),

respectively. Findings of this study showed that female students who come from urban were at risk of sexual violence as compared to those who come from a rural areas with (AOR = 2.922, 95% CI, 1.175, 7.265), and female students whose ages were between 12-16 were protected from sexual violence with (AOR = 0.512, 95% CI, 0.064, 0.996) as compared to those whose age 17 and above.

The current and lifetime prevalence of both attempted and completed rape in the study area was 11 (3%) and 18 (4.8%) respectively. This finding was lower than a similar study conducted in Addis Abeba (8.8%)¹⁵, and Debarq (10%)⁴. This might be due to variations in living conditions, and lifestyle and increase awareness about rape and its consequence.

Of the total attempted and completed rape 5 (27.5%) occurred at school, 12 (66.7%) happened on roads, and one at victims' homes, this finding is almost comparable with similar studies done in Dabat¹¹, Debarq⁴, and Dilla town¹⁴. Most of the rapists were boyfriends/husbands (50%), whereas relatives were 3 (16.7%) and neighbors 6 (33.3%). In this study, almost all perpetrators were known by the victim but only 4 (22.2%) victims have applied the case to the police or legal system. However, a similar study conducted in ADDIS ABABA in two hospitals revealed that there is a significant delay in reporting cases to health institutions and the police¹⁶. In the study done in Adigrat hospital, 42% of rapists were arrested by the police, even though 90% rapists were known by the victim. Most of the perpetrators used force 16 (88.8%) to rape the victims. In this study unwanted pregnancy, sexually transmitted infection, depression, and psychological trauma were identified as the main consequences that a raped high school student experienced. A similar study conducted in Jimma town showed that Unwanted pregnancy, trauma to the genital area, and psychological trauma were shown to be the consequences of sexual violence¹⁷.

CONCLUSION

This study revealed that sexual violence is a problem with all its negative effects among female students in the study area. The lifetime prevalence of sexual violence was 29.6% and the lifetime and current prevalence of rape in the study area was also 4.8% and 4%, respectively. The lifetime prevalence of sexual violence was highly associated with family control, alcohol intake habits, academic performance, permanent residence, and age. Unwanted pregnancy, depression, sexually transmitted infections, and psychological trauma were identified as the main consequences of rape. This needs further intervention like awareness creation in school and community settings, empowering girls in different activities at school, and at a higher institutional level.

DECLARATION

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
DMU	Debre Markos University
DM	Debre Markos
DEVT	Development
HIV	Human Immunodeficiency Virus
EDHS	Ethiopian Demographic Health Survey
MSC	Master of Science
PTSD	Post Traumatic Stress Disorder
STDs	Sexually Transmitted Diseases

Consent to publish

Not applicable

Availability of data and materials

The data used to support the finding of this study are available from the corresponding author upon request.

Competing of interests

The authors declare that they have no competing interests regarding the publication of the paper.

Funding and sponsorship

The authors have no support or funding to report.

Authors Contribution

All authors made substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; took part in drafting the article or critically reviewing it for important intellectual content; agreed to submit it to the current journal; gave final approval of the version to be published, and agreed to be responsible for all aspects of the work

Acknowledgment

We would like to thank Debre Markos University school of medicine for giving us ethics approval to start the study. Our deep appreciation goes to the hospital managers for their permission. We also thank the study participants for their time and the data collectors and supervisors for their commitment.

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