

## Sexual Violence and Its Associated Factors among Regular Female Students in College of Medical Sciences, Jimma University, Southwest Ethiopia, 2017

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### ABSTRACT

**Background:** Sexual violence is pervasive at every stage of women life cycle. It includes rape, coercion and abuse using physical force, verbal threats, harassment, unwanted touching, forced participation in pornography or other degrading acts. Sexual violence against women continues to be an increased public health problem.

**Methods:** An institution based cross sectional study design was conducted. Stratified random sampling technique was employed to get 268 study participants. The data was entered into Epidata3.1 and then exported to SPSS version 23.0 for analysis. Bivariable and multivariable logistic regression analysis was employed. In the multi variable analysis, with a p-value<0.05 were considered as statistically significant.

**Results:** The prevalence's of lifetime completed rape and attempted rape was 8.6% and 12.7%, respectively among the total respondents. Keeping other variables constant, childhood residence (AOR=12.400, 95% CI: 2.692, 57.120), drinking alcohol (AOR=5.136, 95% CI: 1.253, 21.051) and number of sexual partners (AOR=8.791, 95% CI: 2.005, 38.536) were significantly associated with life time rape in the multivariate logistic regression analysis. Academically; students who had faced completed rape in their lifetime had almost four times (AOR=4.121, 1.403, 12.105) higher chance to have last semester CGPA<3.00.

**Conclusion:** This study showed that completed lifetime rape, attempted rape and sexual harassment had temperate prevalence rates. Factors like; having rural childhood residence, alcohol abusers and having more than one sexual partner were identified as predictors for rape.

**Keywords:** Sexual violence, Rape, Attempted rape, Sexual harassment

### BACKGROUND

Sexual violence is the most common form of violence against women which include rape, coercion, abuse using physical force, verbal threats, harassment, unwanted touching or physical advances, forced participation in pornography or other degrading acts [1].

Sexual violence is defined as any sexual act; attempt to obtain a sexual act, unwanted sexual comments or advances, acts to traffic, directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim [2]. Rape is the most extreme forms of sexual violence, applies to all pressurized and unwanted sexual experiences, whether or not physical force is involved [3].

Sexual violence is pervasive at every stage of women life cycle. However, adolescents have higher rate of victimization as compared to other age groups. Adolescent girls and young women are highly affected because of their

low level of literacy status, traditional gender norms and other factors [4].

Sexual violence against women continues to be an increased public health problem. It takes a devastating toll on women's lives, on their families, and on society as a whole. Worldwide, an estimated one in three women will be

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physically or sexually abused; and one in five will experience rape or attempted rape in their lifetime [5]. The most common type of sexual abuse and violence as experienced by girls involves the use of bad or verbal abuse by members of the school community aimed at undermining their self-esteem. A study done on 1268 students from 11 regions in Ethiopia showed between 4-29% of school girls have been perpetuated by students or teachers [6].

## METHODS

### Study area and period

The study was conducted in College of Public Health and Medical Sciences, which is one of the colleges found in Jimma University main campus, found in Jimma town. It is located 357 km south west of Addis Ababa (the capital city of Ethiopia). In consideration of the general weather condition of the town; it has 1676 m altitude, 7.66 latitude, and 36.83 longitudes. The college is currently enrolling nine regular undergraduate BSc programs namely; Medicine, Dentistry, Anesthesia, Pharmacy, Public Health officer, Environmental science, Midwifery, Nursing and Medical laboratory technology. The study was conducted from March 10 to March 28, 2017.

### Study design

An institution based cross sectional study design was employed.

### Source population

All regular, undergraduate female students of Jimma University, college of medical sciences were registered in the academic year 2017.

### Study population

Sampled female students in college of medical sciences, Jimma University fulfilled the inclusion criteria.

### Sample size determination and sampling procedure

The sample size was determined by using single population proportion formula by using prevalence of sexual violence among female college students 37.3% [7]. Finally by adding 10% non-response rates, the total sample size became 273. Simple random sampling technique was used to select study participants from each BSc programs by proportional allocation. The college consisted of nine regular undergraduate BSc programs. The total sample size was proportionally allocated to the number of female students in each year of study.

### Data collection tool and procedure

An anonymous pretested self-administered questionnaire was used to collect the quantitative data. The questionnaire was designed to measure the associated factors and the possible outcomes of sexual violence. The questionnaire was prepared and administered in English language. The data

collection was facilitated by four BSc nurses. Two BSc nurses were supervising and controlling the overall data collection process. Identification number of the students was used to select the actual study participants through lottery method. The selected students were communicated and the purpose of the study was explained by the data facilitators.

### Study variables

**Dependent variables:** Magnitude of sexual violence.

**Independent variables:** Socio-demographic characteristics, alcohol drinking, chat chewing, cigarette smoking, history of sexual intercourse, perpetrator's relation, number of sexual partners.

### Data analysis

Data was entered into Epidata3.1 and then exported to SPSS version 23.0 for analysis. Binary logistic regression model (Backward: LR method with entry=0.05, removal=0.10, classification cut-off=0.5 and maximum iterations=20) was done to identify factors associated with sexual violence. Then, multivariate logistic regression analysis was employed containing all those variables having significant association in the bivariate analysis in order to account potential confounding and to observe the relative direct effect of the independent variables against the dependent variable. Finally, variables having a p-value<0.05 were considered as statistically significant.

### Data quality management

The quality of data was assured by preparing a pre-tested well-structured questionnaire, by providing adequate training and orientation for the data facilitators and by doing supervision during real data collection time. The data collection was completed within three weeks to avoid information contamination within the study participants. The collected data was checked for its consistency and completeness in daily bases by the principal investigators.

### Ethical clearance

Ethical approval letter for the study before data collection was obtained from Jimma University, college of medical sciences ethical review committee. A written informed consent was obtained from the respondents after explaining the purpose of the study. The participants were also informed that their responses will be kept confidential and analyses of the data will only be held on an aggregate sample level.

## RESULTS

### Socio-demographic characteristics

A total of 268 female students completed the self-administered questionnaire obtaining 98.2% response rate. The minimum and the maximum age of the study participants were 17 and 25 respectively while the median age was 20. Regarding the religion, majority of the

respondents 158 (59.0%) were Orthodox Christians, almost one third 92 (34.3%) were first year followed by 67 (25.0%) second year students (Table 1). followed by 53 (19.8%) Protestants and 47 (17.5%) Muslim. Out of the total respondents who participated in the study,

**Table 1.** Socio-demographic characteristics of regular, undergraduate female students of CPHMS, Jimma University in March 2017.

Characteristics	Options	Frequency(N)	Percent (%)
Marital status (N=268)	Single	243	90.7
	Married	19	7.1
	Separated	3	1.1
	Divorced	2	0.7
	Widowed	1	0.4
Ethnicity (N=268)	Oromo	85	31.7
	Amhara	96	35.8
	SNNPE	54	20.1
	Tigray	20	7.5
	Other <sup>a</sup>	13	4.9
Childhood residence (N=267)	Rural	103	38.6
	Urban	164	61.4
Religion (N=268)	Orthodox	158	59.0
	Muslim	47	17.5
	Protestant	53	19.8
	Catholic	5	1.9
	Other <sup>b</sup>	5	1.9
Any disability (N=268)	Yes	9	3.4
	No	259	96.6
Type of disability (N=9)	Partial hearing loss	3	33.4
	Partial visual impairment	2	22.2
	Physical impairment	4	44.4

Other<sup>a</sup> – Gambela, Benishangul/Gumz, Somalia & Harari

Other<sup>b</sup> – Johvan witnesses, Waquifena & Pagans

**Substance abuse related characteristics**

Among the total respondents, 64 (23.9%) revealed that they had a habit of drinking alcohol sometimes. Even though most participants 93.3% and 94.4% have never had a habit of cigarette smoking and chat chewing, respectively, there were also a significant number of users for those substances. A few participants reported that they have ever used cocaine 6 (2.2%), shisha 7 (2.6%) and marijuana 1 (0.4%).

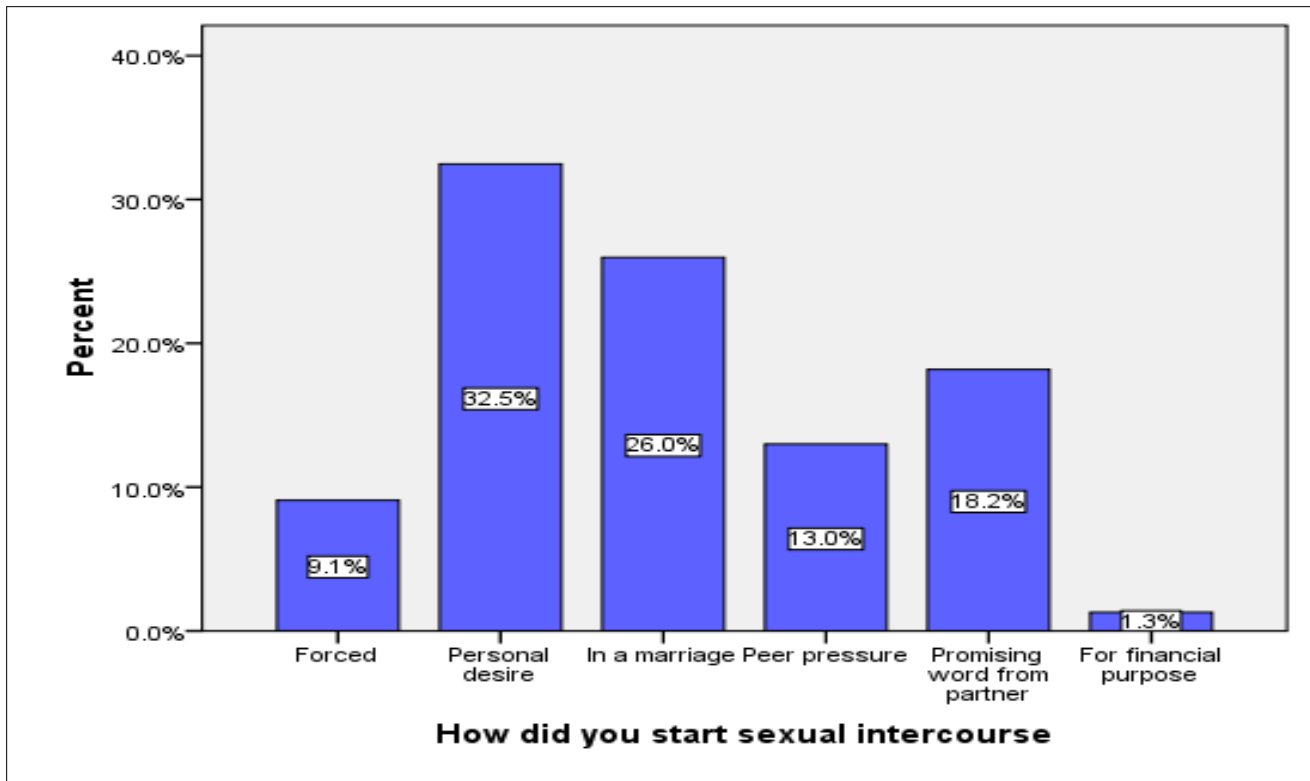
**Sexual history related characteristics**

From the total study participants; more than a quarter 77 (28.7%) reported that they had ever started sexual intercourse. Nearly half 34 (44.2%) of them had experienced more than one sexual partners. The mean age during their first sexual intercourse + (SD) was 17.68 + (2.136) and the median age was 18. The minimum and the maximum age during their first sexual intercourse were 14 and 22, respectively.

**Reasons of the respondents to start sexual intercourse**

Out of the 77 respondents who had started sexual intercourse, the reason reported to initiate sex was personal

desire for 25 (32.5%) of them followed by marriage for 20 (26.0%) of them. But in the other side, 7 (9.1%) of them had been forced in their first sexual intercourse (**Figure 1**).



**Figure 1.** Reasons of the respondents to start sexual intercourse of regular, undergraduate female students of CPHMS, Jimma University in March, 2017.

**Magnitude of sexual violence**

Among the total respondents, 23 (8.6%) of them had ever been encountered forced sexual intercourse (rape) in their lifetime. Out of those rape victims 7 (30.4%) had faced the violence twice in their lifetime. The minimum and the maximum age of the victims during their first forced sex was 14 and 19, respectively while the median age was 15.

More than one third 9 (39.2%) of the cases were committed during secondary school studies followed by 7 (30.4%) after

joining the campus and 7 (30.4%) in primary school age periods.

**Perpetrators’ characteristics**

The frequent perpetrators of those 23 rape cases were 7 (30.4%) unknown persons followed by 6 (26.1%) students. Commonly reported mechanisms which were used to force the victims were threats of harm and made them drunken 8 (34.8%) of each. Majority 17 (73.9%) of the perpetrators were older than the victims (**Table 2**).

**Table 2.** Characteristics of victims’ perpetrators among regular, undergraduate female students in CPHMS, Jimma University March, 2017.

Characteristics	Options	N=23	Percent (%)
Who was the perpetrator	Close relative	4	17.4
	Student	6	26.1
	Boyfriend	3	13.0
	Neighbor	2	8.7
	Unknown person	7	30.4
	By group	1	4.3
The mechanism used to force the victims*	Beating	6	26.1
	Pointed a knife	3	13.0
	Pointed a gun	5	21.7
	Threats of harm	8	34.8
	Made her drunken	8	34.8
	Gave her drug	4	17.4
	Frustrating words	1	4.3
How old was the perpetrator	Same age	6	26.1
	Older than her	11	47.8
	Much older than her (>10 years)	6	26.1

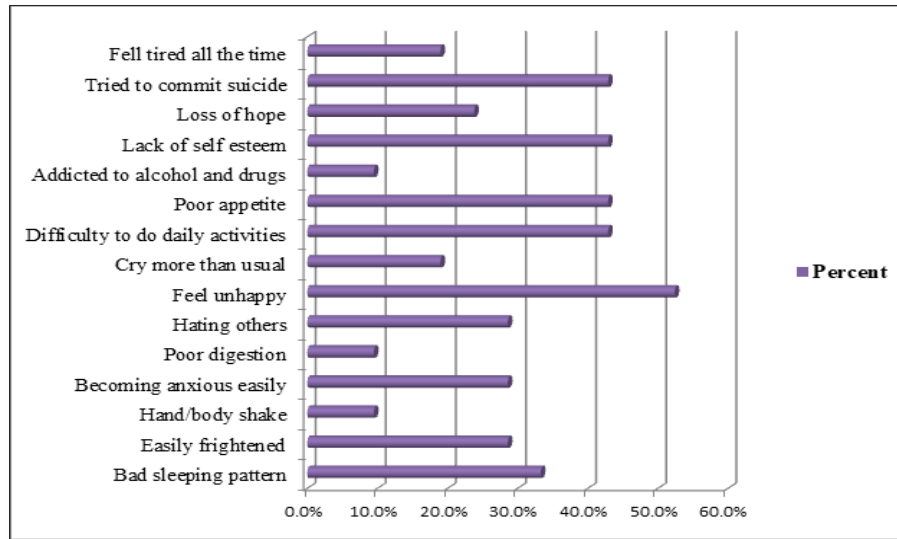
\* Multiple responses were possible, cannot add up to 100%

**Magnitude of sexual harassment and attempted rape**

Concerning on sexual harassment issues; nearly half 121 (45.1%) of the total respondents had faced at least one form of sexual harassment practice. And also 34 (12.7%) of them had faced at least one attempted rape in their lifetime.

**Sexual violence consequences**

Almost all 21 (91.3%) of the completed rape victims were faced to sexual violence consequences. Among the reproductive health related consequences, unwanted pregnancy 14 (66.7%) and abortion 12 (57.1%) were frequently reported problems by the victims. Regarding to psychological consequences of the victims; more than half 11 (52.4%) of them claimed that they felt sadness after the violence (**Figure 2**).



**Figure 2.** Psychological consequences of regular, undergraduate female students of CPHMS, Jimma University in March 2017.

NB: Multiple responses were possible, cannot add up to 100%

**Factors associated with sexual violence**

Childhood residence, having disability, alcohol drinking, chat chewing and number of lifetime sexual partners had shown significant associations with lifetime rape in the bivariate analysis.

After adjusting the other variables; childhood residence (AOR=12.400, 95% CI: 2.692, 57.120), drinking alcohol (AOR=5.136, 95% CI: 1.253, 21.051) and number of lifetime sexual partners (AOR=8.791, 95% CI: 2.005, 38.536) were significantly associated with life time rape in the multivariate logistic regression analysis (**Table 3**).

**Table 3.** Logistic regression results between lifetime rape and selected variables among regular, undergraduate female students of CPHMS, Jimma University in March 2017.

Variables	Lifetime rape (N=77)		OR (95% CI)		P-value
	Yes	No	COR	AOR	
<b>Childhood residence</b>					
Urban	7	34	1.000	1.000	
Rural	16	20	3.886 (1.365, 11.059)	12.400 (2.692, 57.120)	<b>0.001**</b>
<b>Any disability</b>					
No	18	52	1.000	1.000	
Yes	5	2	7.222 (1.287, 40.543)	3.071 (0.381, 24.773)	0.292
<b>Drink alcohol</b>					
No	4	26	1.000	1.000	
Yes	19	28	4.411 (1.324, 14.690)	5.136 (1.253, 21.051)	<b>0.023**</b>
<b>Chat chewing</b>					
No	16	48	1.000	1.000	
Yes	7	6	3.500 (1.025, 11.956)	1.505 (0.303, 7.480)	0.617
<b>Number of sexual partners</b>					
One	8	36	1.000	1.000	
Two or more	15	18	3.750 (1.342, 10.481)	8.791 (2.005, 38.536)	<b>0.004**</b>



Concerning sexual violence consequences; variables like attempted rape and completed rape had shown significant association in the bivariable analysis. But only completed rape had significantly associated with last semester CGPA (AOR=4.121, 95% CI: 1.403, 12.105) in the multivariate logistic regression model. Which implied those students who had faced completed rape in their lifetime had almost four times higher chance to have last semester CGPA < 3.00 than other students who had no history of completed rape.

## DISCUSSION

The prevalence of lifetime completed rape and attempted rape among the total respondents was 8.6% and 12.7%, respectively. This finding is consistent with the study done in Bahir Dar among private college female students which reported 6.3% prevalence rate of forceful sexual intercourse (rape) in their life time [7].

The result is also fairly matched with the finding from Assendabo among school girls which reported 8.0% of the respondents were lifetime sexual assault victims [8]. This result is further consistent with the study done in Debarq among high school students with the prevalence rates of 8.8% for completed rape and 11.5% for attempted rape [9].

The result of this study is relatively lower when compared with the community based study conducted among female youths in Jimma town in which the prevalence of lifetime completed rape was 15.3% and attempted rape was 17.7% [10]. It is also lower when compared with a study done among street females in Bahir Dar where life time prevalence of rape was 24.3% [11]. The major reason for these variations is the difference on study subjects; as university students had lower risk of sexual violence than community youths and street females.

But, the result is lower when compared with the study conducted in Debarq among high school female students which revealed that sexual harassment was reported by 65.3% of the respondents [9]. The reason might be due to differences in level of education and the study subjects' perception about sexual harassment.

According to this study, alcohol abusers had increased vulnerability to sexual violence. Similar findings were reported from other studies done in Hawassa [4], in Addis Ababa [12], in Mekele [13] and in Debarq [9]. A lot more school based studies from Ethiopia also indicated the association of alcohol consumption and sexual violence. Reports from Jimma and Agaro town among female youths found significant associations between sexual violence and alcohol consumption [10,14]. This might be due to the condition that drinking alcohol pushed the female students in settings where their chances of encountering a potential offender became greater.

Research findings on the issue in Nigeria [15], in South Africa [16], in Viet Nam [17] in Chile [18] and in USA [19]

also revealed similar results. These factors might predispose the females because drinking alcohol causes loss of judgment, self-restrain in sexual intercourse and protective power of female from sexual violence.

## CONCLUSION AND RECOMMENDATION

This study showed that completed lifetime rape, attempted rape and sexual harassment had temperate prevalence rates. Factors like; having rural childhood residence, alcohol abusers and having more than one sexual partner were identified as predictors for rape. The violated victims faced significant reproductive, psychological and academic effects. Therefore, timely and integrated actions of the various stakeholders working in this area are essentially recommended to restrain this critical human rights violation.

## DATA AVAILABILITY

The data used for this study is available upon request.

## CONFLICTS OF INTEREST

The author(s) declared that there is no conflict of interest regarding the publication of this paper.

## AUTHORS' CONTRIBUTIONS

Melaku Admas, Asmare Talie and Liknaw Bewket designed the study, analysis and drafted the manuscript for publication. Belsty Temesgen, Mekuanint Taddele and Tensaye Kassa provided scientific advices starting from design of the study to analysis. All authors read and approved the manuscript.

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## REFERENCES

1. Population Council (2008) Sexual and gender based violence in Africa. Nairobi, 1<sup>st</sup> Edn. 2008: 300-363.
2. Etienne G, Krug LLD, Mercy JA, Zwi AB (2002) World report on violence and health. 10<sup>th</sup> Edn, Geneva: WHO.
3. Kandathil SM (2005) Gender-based violence and HIV among women, New York, Amfar. AIDS Res J.

4. Medhanit A (2011) Sexual violence and its consequence among female night school students in Hawassa town, Southern Ethiopia.
5. Schneider EM (2008) Domestic violence law reform in the twenty-first century: Looking back and looking forward. *Fam Law Q* 42: 353-363.
6. Consultants BMD (2008) A study on violence against girls in primary schools and its impacts on girls' education in Ethiopia. Addis Ababa: Save the children, MOE and ministry of women's Affairs.
7. Shimekaw B, Megabiaw B, Alamrew Z (2013) Prevalence and associated factors of sexual violence among private college female students in Bahir Dar. *Health J* 5: 1069-1075.
8. Adey B, Fasil T, Amha H (2004) Assessment of sexual assault among women in Assendabo town, Oromia region, South West Ethiopia, *Ethiopian J Health Sci* 14: 23.
9. Alemayehu W (2002) Sexual violence among female high students in Debarq, North West Ethiopia. *East Afr Med J*; 79: 96-99.
10. Yohannes D (2007) Sexual violence against female youth in Jimma town: Prevalence, risk factors and consequences. *Ethiop J Health Sci* 17.
11. Misganaw AC, Worku YA (2013) Assessment of sexual violence among street females in Bahir-Dar town, North West Ethiopia: A mixed method study. *BMC Public Health* 13: 825.
12. Belay E (2008) Factors contributing to sexual violence against female high school students in Addis Ababa.
13. G/yohannes Y (2007) Prevalence and factors related to gender based violence among female students of higher learning institutions in Mekelle town, Tigray, Northern Ethiopia.
14. Amare D (2007) Magnitude and risk factors of intimate partner violence against women in Agaro town, southwest Ethiopia. *Ethiop J Health Sci* 17.
15. Osawemen O, Okoro F (2005) Sexual harassment: The experience of out-of-school teenagers in Benin City, Nigeria. *Afr J Reprod Health* 9: 118-127.
16. Naemah A (2004) Sexual violence against women in South Africa, sexuality in Africa.
17. Huong TN, Dunne MP, Le AV (2009) Multiple types of child maltreatment and adolescent mental health in Vietnam. *Bull World Health Organ* 87: 22-30.
18. Jocelyn AL, Lehrer VLL, Evelyn LL, Pamela BO (2007) Prevalence and risk factors for sexual victimization in college women in Chile. *Int Fam Planning Perspect J* 33: 168-175.
19. Christine MF, Rachel KM, Marina C, Donald FS (2008) Relationship violence among female and male college undergraduate students, USA. *Arch Pediatr Adolesc Med J* 162: 634-641.