



**PREDICTORS AND SELF REPORTED CONSEQUENCES OF SEXUAL
VIOLENCE AMONG FEMALE STUDENTS OF COLLEGE OF PUBLIC
HEALTH AND MEDICAL SCIENCES, JIMMA UNIVERSITY, SOUTH
WEST ETHIOPIA**

BY;

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Predictors and Self Reported Consequences of Sexual Violence among Female Students of College of Public Health and Medical Sciences, Jimma University, South West Ethiopia

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Abstract

Background: There are many forms of violence against women; from which sexual violence is the most common form of it which include rape, coercion, abuse using physical force, verbal threats, harassment to have sex, unwanted touching or physical advances, forced participation in pornography or other degrading acts that often persist over time and are accompanied by threats on part of the perpetrator. Sexual violence is the world's most prevalent, pervasive, and systemic problem.

Objective: To assess magnitude, associated factors and consequences of sexual violence among regular, undergraduate female students of college of public health and medical sciences, Jimma university, south west Ethiopia in March, 2014.

Methods and Materials: An institution based cross sectional study design was employed to assess sexual violence among regular, undergraduate female students of Jimma University, college of public health and medical sciences. A total of 268 study subjects were obtained by using stratified random sampling technique. Data was collected through pre-tested, self-administered questionnaire and entered by using Epidata3.1 then it was exported to SPSS version 16.0 for analysis. Logistic regression was done to identify those variables predicting the outcome variables. For the qualitative data, purposive sampling technique was employed to select participants for the focus group discussions.

Results: The prevalence's of lifetime completed rape and attempted rape was 8.6% and 12.7% respectively among the total respondents. From those rape victims, 30.4% were occurred after joining campus. Nearly half (45.1%) of the total respondents had faced at least one form of sexual harassment practice. 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. Unwanted pregnancy (66.7%) and abortion (57.1%) from reproductive; feeling unhappy (52.4%) and tried to commit suicide (42.9%) from psychological were frequently reported consequences. 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 \leq 3.00.

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.

Key words: Sexual violence, Rape, Attempted rape and Sexual harassment

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Abbreviations and acronyms

AIDS: Acquired Immune Deficiency Syndrome

CGPA: Cumulative Grade Point

CI: Confidence Interval

CPHMS: College of Public Health and Medical Sciences

ETB: Ethiopian Birr

FGD: Focus Group Discussion

HIV: Human Immunodeficiency Virus

OR: Odds Ratio

SD: Standard Deviation

SPSS: Statistical Package for Social Sciences

STI: Sexually Transmitted Infection

UN: United Nation

UNAIDS: United Nations Program on AIDS

UNICEF: United Nations Children's Fund

WHO: World Health Organization

Chapter One: Introduction

1.1 Background

There are many forms of violence against women; from which sexual violence is the most common form of it which include rape, coercion, abuse using physical force, verbal threats, harassment to have sex, unwanted touching or physical advances, forced participation in pornography or other degrading acts that often persist over time and are accompanied by threats on part of the perpetrator (1).

World health organization (WHO) report on violence and health define violence as an intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal development or deprivation (2).

Sexual violence is defined by WHO as any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including home and work places (2). In schools, this may involve sexual harassment, aggressive or unsolicited sexual advances, assault, forced sex or rape. 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 disproportionately 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. The Secretary-General of the United Nations (UN) claimed it as a particularly unkind human rights violation that must be eradicated. Worldwide, an estimated one in three women will be physically or sexually abused; and one in five will experience rape or attempted rape in their lifetime (5).

1.2 Statement of the problem

Violence against women is the world's most prevalent, pervasive, and systemic problem. It is a problem without borders, a universal scourge on women and their families that knows no geographical boundaries, culture or wealth (2). Data from different countries and local studies indicate that, in some parts of the world at least one woman in every five has suffered an attempted or completed rape (6, 7). At least one in three women worldwide will be beaten, coerced into sex, or otherwise abused in her lifetime with the abuser usually by someone known to her. According to WHO report; between 7 and 8 % of girls and young women aged 10-24 years, their first sexual encounter was coerced. Most victims of sexual violence are aged less than 25 years of age (2).

Studies also indicated that the health impact of sexual violence is more severe, because it is linked to some of the most intractable reproductive health issues of our time including unwanted pregnancy, high risk sexual behaviors, and sexually transmitted infections including HIV/AIDS, unsafe abortions and maternal mortality (8).

Sexual violence and abuse represents one of the different types of gender-based violence committed against school girls. 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 (9).

Different studies provided evidence that sexual violence is common at schools (10, 11). A cross sectional school based survey from 2591 students in Viet Nam, reported 18.5% of female students had experienced sexual abuse (12). Studies done among school girls in different sub-Saharan countries showed the same truth; a study undertaken in South Africa indicated that 2.9% of students had been forced to have sex (13).

The situation in Ethiopia is not different from other African countries where several studies had documented worst scenario. According to the study conducted in Jimma among school girls reported that, 13% and 9.1% of girls faced completed rape and attempted rape respectively in their life time (14). On the other hand, a study conducted among school youth in Jimma showed that 15.3% of the youth had experienced rape and 17.7% had experienced attempted rape (15).

High rates of sexual violence have similarly been reported in Addis Ababa from the study on factors contributing to sexual violence against female high school students, 21.2% and 25.5% of girls experienced rape and attempted rape respectively (16).

Several studies among South African school youths have shown that they are affected by sexual violence and misconception about sexual violence and its consequence is high (13). Especially those students who attend night time classes are highly exposed to sexual violence (17-21).

Data on sexual violence typically come from police, clinical settings, nongovernmental organizations and different research findings. Majority of the problems are hidden and undocumented due to different reasons such as shame, fear of being blamed, not believed or lack of knowledge about sexual violence based on universal definition. Individuals are also even stigmatized and ostracized by their families and others as a consequence (4).

Sexual violence has a significant impact on physical, mental health and associated with an increased risk for sexual and reproductive problems, with both immediate and long-term consequences among woman (2). Most shockingly, the perpetrators of violence in some cases are teachers, who are supposed to be guardians (14).

However, there is still inadequate number of researches done about sexual violence among university or college students in Ethiopia. Therefore, this research thesis was planned to assess predictors and consequences of sexual violence among regular, undergraduate, Jimma University, College of Public Health and Medical Sciences (CPHMS) students.

Chapter Two: Literature review

Sexual violence and abuse represents one of the different types of gender-based violence committed against school girls. 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 (9).

Different studies in Africa have showed that there are a significant percentage of females that have suffered from sexual violence. Study conducted among school pupils on sexual violence and on the risk of HIV infection and AIDS and their experiences of sexual violence in South Africa showed 2.9% female students have been forced to have sex (13).

2.1 The magnitude of sexual violence

Acts of violence against women represent unacceptable behavior according to existing social and gender norms when there is no justification for the act and the act causes severe harm (22). Sexual violence in school situation is the most common problem. Study conducted in chilly on prevalence and risk factors for sexual victimization have revealed; 9% of rape reported among college students (23).

Most of school youths are at high risk for sexual violence. For instance, in a national survey conducted in the United States of America, 81% of students experienced some form of sexual harassment during their school years. 59% were harassed occasionally, and 27% were targeted often. Similarly, study among youth showed, of 520 female participants, 20.2% experienced sexual violence (24).

A cross sectional study from Tanzania revealed among 1004 women who completed their interviews, 20% said they were ever raped. The known perpetrators were responsible for 92% of the most recent events. Whereas 34% of events were disclosed for non-legal purposes, only 10% were disclosed to the police (25). Finding from Out-of-school teenagers in Nigeria indicated that 296 (83%) of females had experienced one form of sexual harassment, (58%) of the females had experienced attempts of forced but unsuccessful sex activity, while 19% of females had experienced actual forced sexual intercourse (rape) and touching of sensitive/private parts was 71% (26).

A study conducted on the prevalence, outcome and awareness of sexual violence among high school female students revealed that sexual violence was reported by 65.3% of the respondents (18). Another study done among college female students found in Mekelle showed 34.4% study subjects have been experienced sexual violence since joining college (17). In addition to this, a study among high school students in Ethiopia found that 78% of students have been sexually harassed. Completed and attempted rape was reported by 5% and 10% of female respectively. Among those who reported being raped, 17% became pregnant and 24% had vaginal discharge after the rape (20).

According to a study done among female youth in Jimma town reported 22% of rape cases were victimized two or more times (15). Other finding from Assendabo reported 8.0% of the respondents were lifetime sexual assault victims and 1.5% of the respondents were victims of sexual assault in the last one year prior to data collection. Of lifetime sexual assault victims, majority 73.1% were victims of rape and 19.2% of the victims had encountered sexual assault more than once (19).

A study done among private college female students in Bahir Dar city revealed that the prevalence of sexual violence among female college students was 37.3%. Almost all rape cases were not reported for their family or police (27).

Different members of society participate in perpetrating sexual harassment against school girls. These include members of the school community with whom they interact frequently (school boys, teachers, administrators, guards, counseling officers). These groups often sexually harass school girls in and around schools, though they also have opportunities to continue their harassment on the way to and from school (14, 28).

Sexual harassment in school by students includes making indecent or provocative remarks or writing letter as an expression of interest. Sexual harassment by teachers also include asking girls for a date, threatening by marks, touching their body parts, giving persistent remarks on physical appearance and body size (4).

2.2 Factors associated with sexual violence

Several studies revealed that, there is no single factor to account for violence perpetrated against women. There are factors increasing the risk of someone being coerced into sex, factors increasing the risk of an individual man forcing sex on another person, and factors within the social environment – including peers and family – influencing the likelihood of rape and the reaction to it. It is the result of the complex interplay of individual, relationship, social, cultural and environmental factors (2, 6 & 29).

According to a study done among street females in Bahir Dar, the life time prevalence of rape was 24.3% and the prevalence of rape in the last year was 11.4%. Factors like females "off" the street, being a prostitute and age 15-29 were significantly associated with rape. Most of the victims, 93.8% of the rapes were not reported to legal bodies (28).

According to WHO report age is the most important risk factor for being a victim of sexual violence. Young women are usually found to be more at risk of rape than older women (2). For example, national survey in nine countries found a consistent association of an increased risk of partner abuse for women with low educational attainment, being under 25 years old, having witnessed her father's violence against her mother, living in an urban area, and having low socioeconomic status. Also in a study in the northern west Ethiopia, the age range of performed rape victims was between 12 and 21 years (18).

Increased vulnerability to sexual violence also stems from the use of alcohol and other drugs. Consuming alcohol or drugs makes it more difficult for women to protect themselves by interpreting and effectively acting on warning signs. Several studies in developing countries have also found a strong association between consumption of alcohol or drugs and the risk of violence. Drinking alcohol may also place women in settings where their chances of encountering a potential offender are greater (2, 30). 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 youth found significant associations between sexual violence and regular alcohol consumption (14, 15 & 31).

Violence against women can occur from the very start of life, through childhood, marriage, and into old age. Adolescents who have experienced sexual abuse are more likely to experience it again later in life. Among women age 25-49, 29 percent first had sexual intercourse before age

15, 62 percent before age 18, and by age 25 the majority of Ethiopian women (88%) had had sexual intercourse (32). Consequences of abuse, such as HIV/AIDS or unplanned pregnancies, may in themselves act as risk factors for further aggression, forming a cycle of abuse. According to research in Sri Lanka, children who witness abuse are more likely to suffer from learning, emotional, and behavioral problems. These children also are at increased risk of becoming abusers and of being abused later in life (33).

The WHO report shows that violence impacts certain groups disproportionately. Poverty increases people's vulnerabilities to sexual exploitation in the workplace, schools, and in prostitution, sex trafficking and the drug trade. People with the lowest socioeconomic status are at greater risk for violence. Poor women and girls may be more at risk of rape in the course of their daily tasks than those who are better off, for example when they walk home on their own from school late at night. Poverty forces many women and girls into occupations that carry a relatively high risk of sexual violence (2).

2.3 Consequences of sexual violence

Sexual violence has profound immediate and long-term consequences on women's physical and mental health. Physical consequences: Sexually transmitted infections including HIV, unintended pregnancy and subsequent unsafe abortion, and injuries including trauma to the reproductive tract. Psychological effects: Post-traumatic stress disorder and depression or other serious effects such as suicide attempts. Social consequences: Women who suffer from sexual violence often experience stigma and face rejection by partners, husbands, families, and communities (2, 8).

Violence may be related to pregnancy indirectly or directly. One of the consequences of sexual violence is unwanted pregnancy. A cross sectional, school based study in Jimma on sexual violence against female youth in Jimma town: prevalence, risk factors and consequences showed that 15.3% of the youth had experienced rape, 17.7% had experienced attempted rape. Among the victims of rape, 21% had experienced unwanted pregnancy (15).

Another study, among women seeking termination of pregnancy showed 18.3% of the total women with unwanted pregnancy were following rape. The prevalence rate was 18.3% and 23.9% for completed rape and attempted rape respectively at one time in their life (34).

Many of the victims of rape and other sexual violence are deeply traumatized and exposed to life threatening health condition like abortion and STIs. Research done on child sexual abuse and its outcomes among high school students in southwest Ethiopia reported 5.9% of STIs among victims of sexual abuse (35). In addition, study from Debarq among female high school students showed the prevalence of vaginal discharge and abortion as 10.5% and 5.3% respectively (18).

Sexual violence may result in numerous psychological consequences like psychiatric disorders such as posttraumatic stress disorder and depression. The shame associated with domestic violence, rape and other forms of abuse may contribute to the fact that women often suffer it in silence, afraid of repercussions and stigma, and never tell anyone. Psychological outcomes like fear and anxiety, self-blame, low self-esteem and suicide attempt were reported by 68%, 53% 41% and 8% of the rape victims; respectively (15). Similarly, a study among college female students in Hawassa revealed that students who had experienced both physical and sexual abuse were 4 times more likely to report either moderately severe or severe depressive symptoms (36).

A study conducted on gender based-violence among high school students in North West Ethiopia revealed about 85.7% of the victims of rape attack suffered from self-hatred, self-blaming, lack of self-esteem and being easily frightened. Moreover, most victims of completed rape may encounter more than one abuse which leads them to severe psychological problems. According to a cross sectional study conducted on sexual violence among female street adolescents in Addis Ababa showed 43% among the population who were sexually active, initiated sexual activities as result of forcible rape (21).

According to a study conducted in Addis Ababa among female street adolescents, the sexual assault was repetitive in 60% of the victims. Of those who faced repeated attacks 40.2% were victimized 2-4 times, while 19.6% reported to have been victimized more than 5 times (37).

As explained above, sexual violence is a major problem in the world particularly in Ethiopia. Its consequences are hurting many victim individuals as a long term effect. Conceptual framework of the study is diagrammatically presented after revising different literatures in Figure 1 below.

2.4 Conceptual framework of the study by revising literatures

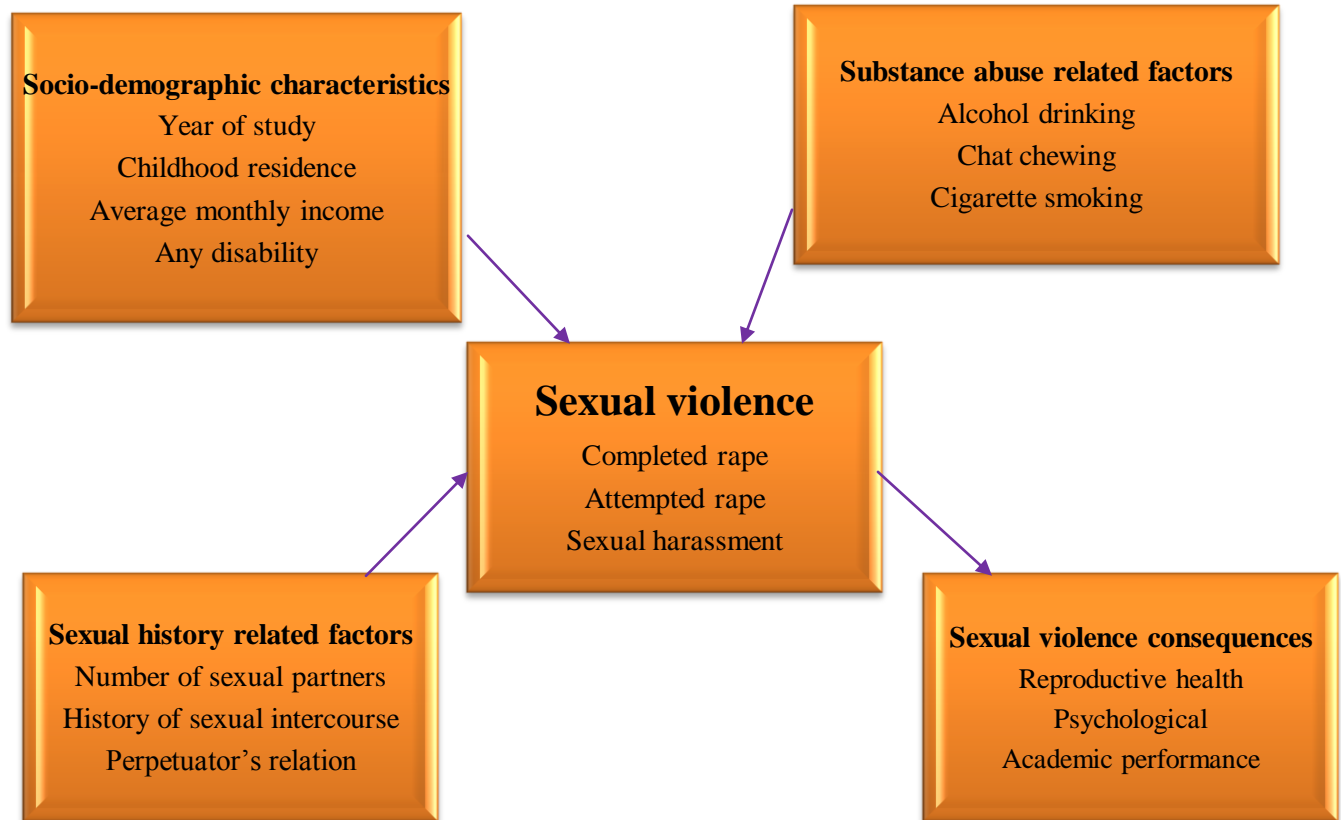


Figure 1: Conceptual framework of the study variables among regular, undergraduate female students of CPHMS, Jimma University in March 2014

Significance of the study

Sexual violence is a major form of violence affecting women worldwide. It often goes unnoticed and undocumented due to its taboo nature. The problem is worse in developing countries like Ethiopia where men are considered to be dominant figures in the family and society; women's right practically recognized only recently and women have little awareness about their right (8).

Even though, many studies were undertaken on sexual violence among schoolgirls in general, there is still a knowledge gap about predictors and consequences of sexual violence among female university students in Ethiopia. Higher learning institutions will become aware of the magnitude of the problem and initiate and take measures to tackle the issue of sexual violence so as to develop institutional policy that protects and promotes female students security to enable them compete in a safe setting. It will also benefit other governmental & non-governmental organizations to formulate nationwide measures to tackle the problem of sexual violence in higher institutions.

The finding of this research is also expected to motivate other researchers to study the situation in other learning institutes that will add to the existing data and initiate nationwide measures to address the issue.

Chapter Three: Objectives of the study

3.1 General objective

- ❖ To assess magnitude, associated factors and consequences of sexual violence among regular, undergraduate female students of CPHMS, Jimma university, south west Ethiopia in March, 2014.

3.2 Specific objectives

- ✚ To determine the magnitude of sexual violence among regular, undergraduate female students of CPHMS, Jimma university, south west Ethiopia in March, 2014
- ✚ To identify factors associated with sexual violence among regular, undergraduate female students of CPHMS, Jimma university, south west Ethiopia in March, 2014
- ✚ To explore the consequences of sexual violence among regular, undergraduate female students of CPHMS, Jimma university, south west Ethiopia in March, 2014

Chapter Four: Methods and Materials

4.1 Study area

The study was conducted in college of public health & medical sciences (CPHMS), which is one of the colleges found in Jimma University main campus, found in Jimma town. Jimma 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 1676m altitude, 7.66 latitude, and 36.83 longitudes.

Jimma University is a public higher educational institution established in December 1999 by the combination of Jimma College of Agriculture (founded in 1952), and Jimma Institute of Health Sciences (established in 1983). Currently the name of Jimma Institute of Health Sciences is changed to college of public health and medical sciences.

The college is running BSc, MSc and PhD programs in different disciplines and professional academies. The college is currently enrolling nine regular undergraduate BSc programs namely; Medicine, Dentistry, Anesthesia, Pharmacy, Health officer (HO), Environmental science, Midwifery, Nursing and Medical laboratory technology.

4.2 Study period

- ✚ The study was conducted from March 10 to 28, 2014.

4.3 Study design

- An institution based cross sectional study design was employed to assess sexual violence among regular undergraduate female students of Jimma University, CPHMS.
- In addition, the study was triangulated by qualitative data using focus group discussions.

4.4 Source population

- ✚ All regular, undergraduate female students of Jimma University, CPHMS who were registered for the academic year 2013/14

4.5 Study population

- ✚ Sampled female students of CPHMS, Jimma University who fulfilled the inclusion criteria

4.6 Eligibility criteria

i. Inclusion criteria

- ✓ Regular, undergraduate female students of Jimma University, CPHMS who were registered for the academic year 2013/14 were eligible for the study.

ii. Exclusion criteria

- ✓ Students who were not available during data collection period

4.7 Sample size determination

The sample size was determined by using single population proportion formula,

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

Where;

n = sample size

P = prevalence of sexual violence among female college students (27) = 37.3%

d = margin of error, 5%

$Z\alpha/2$ = critical value at 95% level of confidence (1.96)

$$n = \frac{(Z\alpha/2)^2 P (1-P)}{d^2} = \frac{(1.96)^2 0.373 (1-0.373)}{(0.05)^2}$$

n= 359

Since the total source population was 803; that is below 10,000, finite population correction formula was needed;

$$Nf = \left(\frac{n}{1 + \frac{n}{N}} \right) = \left(\frac{359}{1 + \frac{359}{803}} \right) = 248$$

Where: Nf = The sample size from a finite population

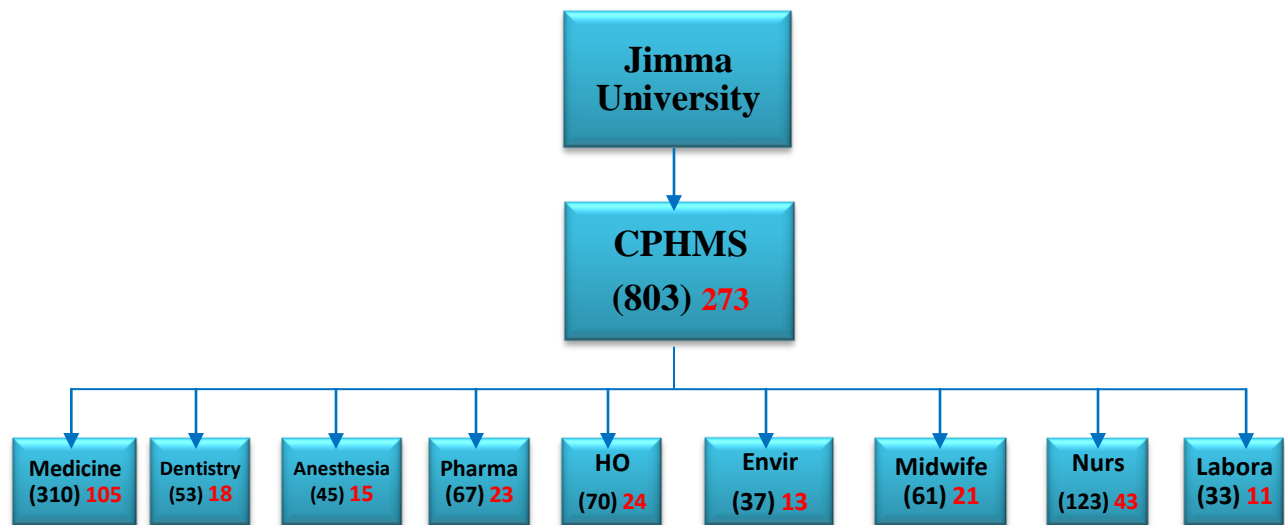
N = Finite population size

n = estimated sample size of single population proportion

Finally by adding 10% non response rate, the total sample size became **273**.

4.8 Sampling techniques and procedures

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. Then, the participants were selected by using simple random sampling technique from each section. Identification number of them was used to select the actual study participants through lottery method. The sampling techniques and procedures by proportionally allocating the source population using their field of study is illustrated by figure 2 below.



Where;

(***) = Subtotal number of female students

*** = Sampled number of female students

Figure 2: Sampling technique by stratifying the source population using field of study among regular, undergraduate female students of CPHMS, Jimma University in March 2014

As explained above, the stratification was going down in the perspective year of study as described in the following table 1 below.

Table 1: Proportional allocation of the sample in the perspective year of study among regular, undergraduate female students of CPHMS, Jimma University in March 2014

Year of study	Field of study																		Total	
	Medicine		Dentistry		Anesthesia		Pharmacy		HO		Enviro		Midwif		Nursing		Labora		N	S
	N	S	N	S	N	S	N	S	N	S	N	S	N	S	N	S				
1 st	115	39	12	4	19	7	21	7	--	--	29	10	24	8	41	14	13	4	274	93
2 nd	66	22	6	2	10	3	20	7	29	10	6	2	24	8	35	12	6	2	202	68
3 rd	44	15	2	1	9	3	5	2	17	6	--	--	9	3	26	9	2	1	114	40
4 th	23	8	19	6	7	2	6	2	24	8	2	1	4	2	25	8	12	4	122	41
5 th	39	13	14	5	--	--	15	5	--	--									68	23
6 th	23	8	--	--															23	8
Total	310	105	53	18	45	15	67	23	70	24	37	13	61	21	127	43	33	11	803	273

Where;

N = Subtotal number of female students

S = Sampled number of female students

For the qualitative data, Voluntary sampling technique was employed. The study participants were selected voluntarily based on their year of study. Four female discussants were selected from each year of study. Three focus group discussions (FGDs) each containing eight students were conducted. Females who didn't fill the self administered questionnaire were included in the FGD to avoid information leak and redundancy of ideas with questions of the self administered questionnaire. The FGD results were used to supplement the quantitative findings.

4.9 Pre-test

A pretest was conducted outside the college on 5% of the sample size specifically in Technology Institute of Jimma University. The pretest was used to check the reliability of the questionnaire. Some of the study variables were rearranged and the overall cronbach's alpha of the questionnaire was 0.76.

4.10 Data collection procedures and techniques

For the quantitative part, an anonymous pretested self administered questionnaire was used to collect the quantitative data. The questionnaire was adapted from a questionnaire prepared for sexual violence and its consequence study in Hawassa (4). Then, some necessary modifications were made to make it fit with the settled objectives. 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 (Annex - I).

The data collection was facilitated by four BSc nurses. Two BSc nurses were supervising and controlling the overall data collection process. One day training was given for both facilitators and supervisors before starting the actual data collection. List of female students with their year of study was obtained from the college registrar. Identification number of them 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.

For the qualitative part, the data from the three FGDs was collected by two BSc nurses with close supervision of the principal investigator. There were semi structured guiding questions to facilitate the discussion (Annex - II). Participatory discussion techniques such as free listing, ranking, and open-ended stories were used. The data collection was conducted with a moderator assisted by a note-taker and it was tape-recorded.

For both quantitative and qualitative parts, the collected data was checked for accuracy, completeness and consistency of information in each day of data collection.

4.11 Study variables

Dependent variables

- ❖ Sexual violence consequences (reproductive health, psychological and academic)

Intermediate variables

- ❖ Sexual violence (completed rape, attempted rape and sexual harassment)

Independent variables

- ❖ Socio-demographic characteristics
 - ✓ Age
 - ✓ Year of study
 - ✓ Marital status
 - ✓ Ethnicity
 - ✓ Childhood residence
 - ✓ Religion
 - ✓ Average monthly income
 - ✓ Any disability
- ❖ Substance abuse related factors
 - ✓ Alcohol drinking
 - ✓ Chat chewing
 - ✓ Cigarette smoking
- ❖ Sexual history related factors
 - ✓ History of sexual intercourse
 - ✓ Perpetuator's relation
 - ✓ Number of sexual partners

4.12 Operational definitions and definition of terms

Sexual violence - any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim

Sexual violence consequences - any reproductive health, psychological or academic effects of sexual violence that happened on the victims

Rape - Physically forced or otherwise coerced penetration of the vulva or anus using a penis

Attempted rape - the attempt to have non-consensual sexual intercourse with a female whereby she was having a chance of escaping the attempt

Sexual harassment - unwanted and repeated sexual advances that range from unwelcome comments, kissing and touching

Perpetuator - the person who committed forced sexual intercourse on the victim

4.13 Data analysis procedures and techniques

For the quantitative part, data was entered into Epidata3.1 and then exported to SPSS version 16.0 for analysis. Descriptive statistics and custom tables were calculated and utilized for appropriate variables to describe the data. Binary logistic regression model (Backward: LR method with entry = 0.05, removal = 0.10, classification cutoff = 0.5 and maximum iterations = 20) was done to identify factors associated with sexual violence. For testing the strength of the associations and their statistical significance, odds ratio (OR) with 95% confidence interval (CI) was calculated for each independent variable against the dependent variable using binary logistic regression. 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. Variables with 95% CI of OR didn't include one and a p-value < 0.05 were considered as statistically significant in the analysis. Finally, the result was displayed using charts, graphs and tables.

For the qualitative part, the data collection from the focus group discussions (FGDs) was conducted with a moderator assisted by a note-taker and it was tape-recorded. For the analysis and data processing, the tape-recorded data were transcribed and arranged with the written notes taken at the time of discussion. The discussion was held through both Amharic and English languages based on the discussants preference and fluency. The whole information was then translated in to English. Thematic or content analysis was employed in order to describe the exploratory ideas obtained from the FGDs. The discussions were generally hot, attractive and somewhat argumentative in which most of the participants were actively involved. The FGD results were thematized into three main thematic areas based on recorded responses obtained from the participants. The three thematic areas were;

Theme I – magnitude of sexual violence

Theme II – associated factors of sexual violence

Theme III – consequences of sexual violence

Finally, it was incorporated with the quantitative findings in order to provide comprehensive and complete ideas about perceptions and outlooks of the students towards sexual violence as to why and how it occurred among the female students.

4.14 Data quality management

The quality of data was ensured 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 investigator.

4.15 Ethical considerations

Ethical approval letter for the study before data collection was obtained from Jimma University, CPHMS ethical review committee. A written informed consent was obtained from the respondents after explaining the purpose of the study. The questionnaire was completed anonymously and names were not written when reporting results from the focus group discussions. 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.

4.16 Dissemination plan

This research thesis will be presented in post graduate students' defense program and the final paper will be submitted to Jimma University. The findings will be disseminated to different organizations that work in similar and related areas. The thesis may also be communicated in different seminars, meetings and workshops. After the completion of the thesis, all necessary efforts will be made to publish on local or international scientific journals.

Chapter Five: Results

5.1 Socio-demographic characteristics

A total of 268 female students completed the self-administered questionnaire obtaining 98.2% response rate. The minimum & the maximum age of the study participants were 17 & 25 respectively while the mean age with standard deviation (SD) was $20.38 \pm (1.724)$ and the median age was 20. Regarding the religion, majority of the respondents 158 (59.0%) were Orthodox Christians, followed by 53 (19.8%) Protestants and 47 (17.5%) Muslims (Table 2).

Out of the total respondents who participated in the study, almost one third 92 (34.3%) were first year followed by 67 (25.0%) second year students. Regarding their field of study; 102 (38.1%) were medicine followed by 43 (16.0%) nursing students. Concerning to their marital status, majority 243 (90.7%) were single followed by 19 (7.1%) married.

Most of the respondents 164 (61.4%) were grown up in urban areas. Regarding ethnicity; 96 (35.8%) of the respondents were Amhara followed by 85 (31.5%) Oromo. Families are their source of income for 249 (92.9%) of the respondents followed by husband for 11 (4.1%) and self support for the rest 8 (3.0%). The minimum & the maximum average monthly income of the study participants were 100 & 3000 ETB respectively while the mean \pm (SD) was $555.20 \pm (411.614)$ and the median income was 500 ETB. The socio-demographic characteristics of the respondents are further explained in the following Table 2.

Table 2: Socio-demographic characteristics of regular, undergraduate female students of CPHMS, Jimma University in March 2014

Characteristics	Options	N	%
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 ^a	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 ^b	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^a – Gambela, Benishangul/Gumuz, Somalia & Harari

Other^b – Johvan witnesses, Waquifena & Pagans

5.2 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% & 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%) & marijuana 1 (0.4%) (Table 3).

Table 3: Substance abuse characteristics of regular, undergraduate female students of CPHMS, Jimma University in March 2014

Characteristics	Options	N= (268)	%
Drink alcohol	Never	198	73.9
	Sometimes	64	23.9
	Frequently	6	2.2
Smoke cigarette	Never	250	93.3
	Sometimes	17	6.3
	Frequently	1	0.4
Chew chat	Never	253	94.4
	Sometimes	15	5.6
Cocaine	Yes	6	2.2
	No	262	97.8
Shisha	Yes	7	2.6
	No	261	97.4
Marijuana	Yes	1	0.4
	No	267	99.6

5.3 Sexual history related characteristics

Among the total study participants; more than a quarter 77 (28.7%) reported that they had ever started sexual intercourse (Figure 3). Nearly half 34 (44.2%) of them had experienced more than one sexual partners. The mean age during their first sexual intercourse \pm (SD) was $17.68 \pm (2.136)$ and the median age was 18. The minimum & the maximum age during their first sexual intercourse were 14 & 22 respectively.

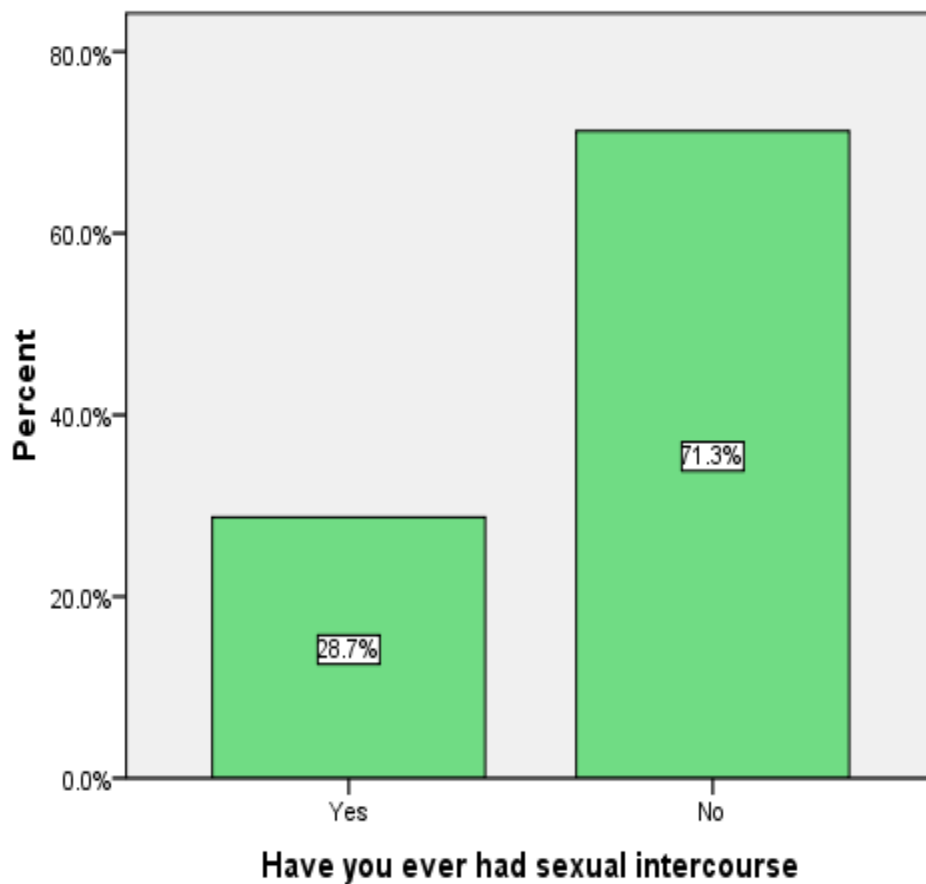


Figure 3: Sexual experience of regular, undergraduate female students of CPHMS, Jimma University in March 2014

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 4).

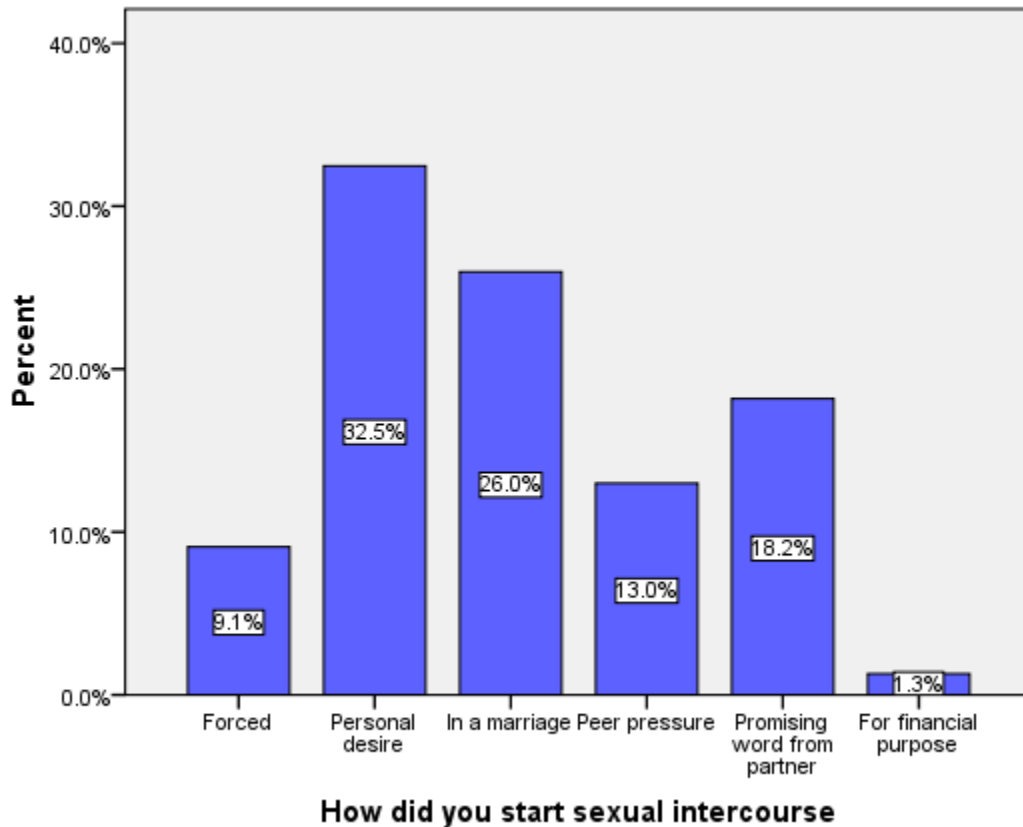


Figure 4: Reasons of the respondents to start sexual intercourse of regular, undergraduate female students of CPHMS, Jimma University in March 2014

5.4 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 & the maximum age of the victims during their first forced sex was 14 & 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 (Table 4).

Table 4: History of forced sex among regular, undergraduate female students of CPHMS, Jimma University in March 2014

Characteristics	Options	N	%
Have you ever had forced sex (N=268)	Yes	23	8.6
	No	245	91.4
How many times (N=23)	Once	16	69.6
	Twice	7	30.4
When did forced sex occur (N=23)	After joining campus	7	30.4
	In secondary school	9	39.2
	In primary school	7	30.4

Perpetuators' characteristics

The frequent perpetrators of those 23 rape cases were 7 (30.4%) unknown persons followed by 6 (26.1%) students and 4 (17.4%) close relatives. 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 5).

Table 5: Characteristics of victims' perpetrators of regular, undergraduate female students of CPHMS, Jimma University in March 2014

Characteristics	Options	N = (23)	%
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 yrs)	6	26.1

* Multiple responses were possible, can not add up to 100%

The above table (Table 5) indicated that close relatives of those victims, who were supposed to be guardians were involved in the rape cases. The table also showed the perpetrators used multiple and various mechanisms to force the victims.

Period of the day for the completed rape events

Even though much variation was not seen on the period of the day, 8 (34.78%) of the rape cases were committed in the afternoon time (Figure 5).

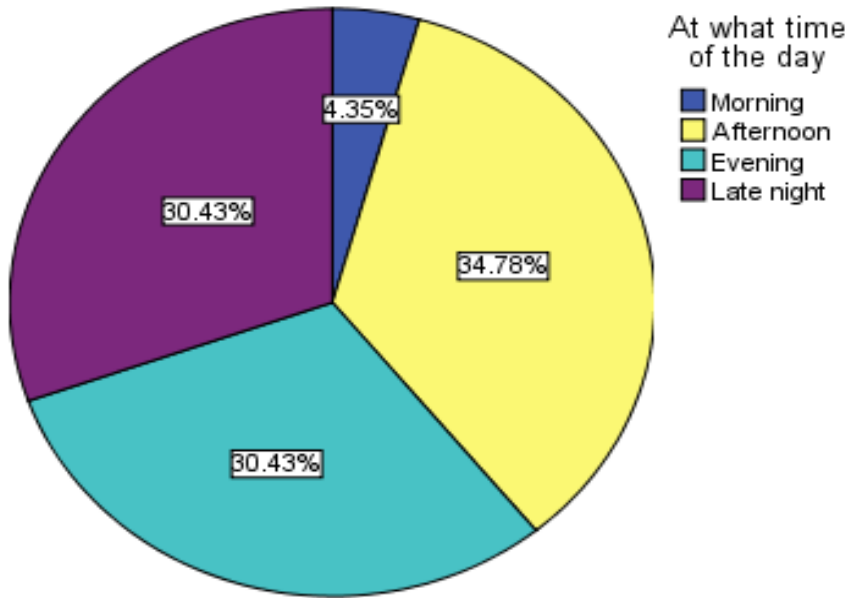


Figure 5: The period of the day that the forced sex happened among regular, undergraduate female students of CPHMS, Jimma University in March 2014

Place of violence and reporting of the rape cases

Concerning on the place where those sexual violence's occurred; more than one third 8 (34.8%) of them were committed in the victims' home while a few 3 (13.0%) of them occurred in forest. Even though 6 (26.1%) of the victims shared the event with their parents, 5 (21.7%) of them didn't share it for anybody. Regarding on reporting of the rape cases, more than half 13 (56.5%) of them were not been reported to the concerned bodies. Even more; 6 (60.0%) of the reported cases were ended up with no legal action taken on the perpetrators (Table 6).

Table 6: Place of violence and reporting of the cases of regular, undergraduate female students of CPHMS, Jimma University in March 2014

Characteristics	Options	N	%
Place of the violence (N=23)	In her home	8	34.8
	Hotel	4	17.4
	In his home	4	17.4
	School compound (campus)	4	17.4
	In forest	3	13.0
With whom did you share the event (N=23)	Nobody	5	21.7
	A friend	4	17.4
	Sister/brother	5	21.7
	Parents	6	26.1
	Health Professionals	3	13.0
Did you report the event (N=23)	Yes	10	43.5
	No	13	56.5
For whom did you report it (N=10)	To police	4	40.0
	To kebele	1	10.0
	To women's affair	4	40.0
	To court	1	10.0
Action taken to the perpetrator (N=10)	Nothing	6	60.0
	Imprisonment	2	20.0
	Financial penalty	2	20.0

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. Unwanted sexual verbal jokes 110 (41.0%) were the most frequently reported sexual harassment practices followed by unwelcome touching on genital areas 93 (34.7%) among the total study participants (Table 7).

Among the whole study participants 34 (12.7%) of them had faced at least one attempted rape in their lifetime. Nearly one third of them 11 (32.4%) escaped from the attempt by giving an

appointment followed by 9 (26.5%) through fighting the perpetrator. A considerable number 107 (39.9%) of the total respondents thought that being university student has an impact to be a victim of forced sex. Seventeen (26.1%) participants knew at least one female student who ever faced rape; of which majority of them were raped by their own close relatives (Table 7).

Table 7: Sexual harassment & attempted rape status of regular, undergraduate female students of CPHMS, Jimma University in March 2014

Characteristics	Options	N	%
Sexual harassment of like; (N=268)*	Unwanted sexual verbal jokes	110	41.0
	Unwelcome touching on genital areas	93	34.7
	Unwelcome kissing	83	31.0
Attempted rape (N=268)	Yes	34	12.7
	No	234	87.3
How do you escape the attempt (N=34)	By giving an appointment	11	32.4
	By fighting	9	26.5
	By shouting	5	14.7
	By getting help from others	5	14.7
	By running	4	11.8
Do you know any female student who ever faced rape (N=268)	Yes	70	26.1
	No	198	73.5
How many students (N=70)	One	49	70.0
	Two or more	21	30.0
Who was the perpetrator (N=70)	Close relative	20	28.6
	Teacher	6	8.6
	Student	14	20.0
	Boyfriend	12	17.1
	Neighbor	5	7.1
	Unknown person	11	15.7
	By group	2	2.9

* Multiple responses were possible, can not add up to 100%

5.5 Sexual violence consequences

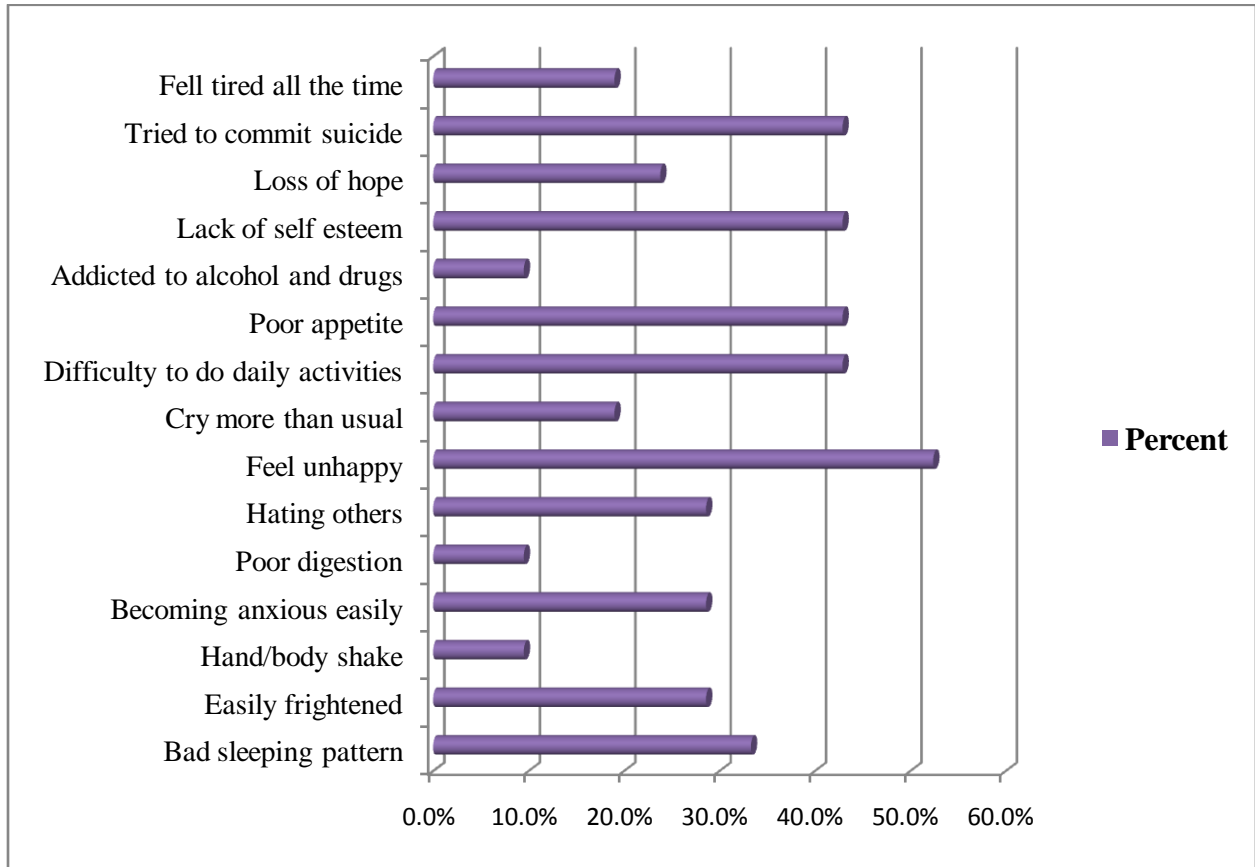
Almost all 21 (91.3%) of the completed rape victims were faced to sexual violence consequences. Among the reproductive health related consequences, unwanted pregnancy 14 (66.7%) and abortion 12 (57.1%) were frequently reported problems by the victims (Table 8).

Table 8: Sexual violence consequences of regular, undergraduate female students of CPHMS, Jimma university, March 2014

Characteristics	Options	N	%
Any problems after the forced sex (N=23)	Yes	21	91.3
	No	2	8.7
Which reproductive health problems did you experience (N=21)*	Unwanted pregnancy	14	66.7
	Abortion	12	57.1
	Injury around the genitalia	5	23.8
	Unusual discharge	4	19.0
	Swelling around the genitalia	4	19.0
	Frequent headache	6	28.6
	Lack of pleasure during coitus	2	9.5

* Multiple responses were possible, can not add up to 100%

Regarding to psychological consequences of the victims; more than half 11 (52.4%) of them claimed that they felt unhappy after the violence. Other frequently reported problems (each 42.9%) were 'tried to commit suicide', 'difficulty to do daily activities' and 'poor appetite' (Figure 6).



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

Figure 6: Psychological consequences of regular, undergraduate female students of CPHMS, Jimma University in March 2014

Regarding to the academic performance of the respondents; majority 162 (60.4%) of them had last semester CGPA > 3.00 while the other 106 (39.6%) of them had last semester CGPA ≤ 3.00. The mean and the median last semester CGPA of the total respondents were 3.17 & 3.20 respectively. The following box plot graph shows the relationship of respondents' last semester CGPA with their sexual violence status (Figure 7).

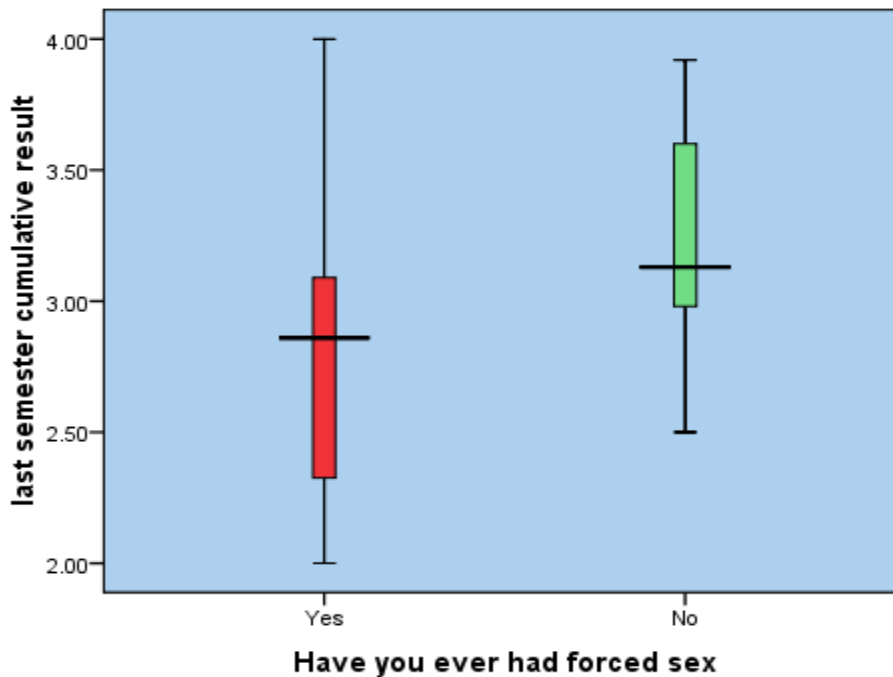


Figure 7: The relationship of respondents' CGPA with forced sex status among regular, undergraduate female students of CPHMS, Jimma University in March 2014

As the graph shows, the mean CGPA of students having history of forced sex is lower than the mean CGPA of students having no history of forced sex.

5.6 Factors associated with sexual violence

In this study, association of different independent variables with sexual violence particularly lifetime rape was assessed by using logistic regression analysis. First, bivariate logistic regression between the independent variables and lifetime rape was done to identify candidate variables for the multivariate logistic regression. Through this technique; 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.

Then, those variables which showed significant association in the bivariate analysis were fitted into multivariate logistic regression model to ensure the strength of association with the dependent variable (lifetime rape).

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. Those independent variables that showed significant association with lifetime rape are tabulated below with their respective crude and adjusted OR with 95% CI in Table 9.

Table 9: Logistic regression results between lifetime rape and selected variables among regular, undergraduate female students of CPHMS, Jimma University in March 2014

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

Based on the above table (Table 9); those participants who had rural childhood residence were more than twelve times more at risk for life time rape than other participants who had urban childhood residence. Similarly, students who had a habit of drinking alcohol had around five times higher risk than other students who didn't drink alcohol for life time rape.

Regarding the number of sexual partners, those students who had two or more lifetime sexual partners had almost nine times higher risk of lifetime rape when compared to students having only one sexual partner.

Concerning sexual violence consequences; variables like attempted rape and completed rape had shown significant association in the bivariate 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 (Table 10).

Table 10: Logistic regression results between the intermediate variables and last semester CGPA among regular, undergraduate female students of CPHMS, Jimma University in March 2014

Variables Categories	Last semester CGPA		COR (95% CI)	AOR (95% CI)	P-value
	≤ 3.00	> 3.00			
Attempted rape					
No	86	148	1.000	1.000	
Yes	20	14	2.458 (1.181, 5.116)	1.171 (0.374, 3.669)	0.786
Completed rape					
No	22	32	1.000	1.000	
Yes	17	6	4.121 (1.403, 12.105)	4.121 (1.403, 12.105)	0.010

This association result is supported by the previous box plot graph (Figure 6) which showed that the mean CGPA of students having history of forced sex was lower than the mean CGPA of students having no history of forced sex.

5.7 Qualitative findings

For the qualitative data, four female discussants were identified from each year of study voluntarily. Three FGDs each containing eight students were conducted. The total individual discussants were 24 in number. The FGDs were conducted in three subsequent days within the study period. Those FGD results were used to supplement the qualitative findings. The discussions were generally hot, attractive and somewhat argumentative in which most of the participants were actively involved. Results of the focus group discussions are thematized into three main thematic areas based on responses and reflection of the discussants. Those results are presented in a summarized form in the following way.

i. Magnitude of sexual violence

The opening question for the female discussants was about their perception of sexual violence. Almost all of the discussants explained that it was a force driven and offensive activity aimed to hurt and flatten the fate of a female. Some discussants described sexual violence in connection with the human right violation. Regarding to a question raised on magnitude of sexual violence on adolescent girls, some discussants spoke that the incidence was fairly decreasing when compared with the previous situations. But other discussants argued that the happening of sexual violence was increased at an alarming rate. The reason settled by those discussants was that most violent cases were remained unreported due to fear of social stigma and discrimination. A fourth year medical student reflected her outlook regarding to the severity of the problem in her speech;

“There are a lot of sexual violence victims in each and every household. I personally know that many young females who became raped & remained in their house. Especially rape & attempted rape are significantly practiced in rural areas where I came from.” she said.

ii. Associated factors of sexual violence

When questions related to associated factors raised, some of the discussants replied that their current age groups were more at risk to sexual violence. Many others responded that the younger age groups of adolescents were the main target age groups of the problem. The discussants added that many children under 13 years of age were in severe trouble of rape and related sexual violence. The other factor mentioned by most discussants was substance abuse particularly alcohol consumption. As they explained, most cases of rape in urban areas were occurred after drinking alcohol. A second year nursing discussant talked that;

“My campus girlfriend had been forced to have sex after drinking alcohol. This happened in one day when her boyfriend called her to have a cup of tea outside the campus. Then she agreed because we were at post exam in that day. After that he took her to hotel and they had been drinking alcohol. Finally, he took her into a bed room and had committed forced sex. She told me that she was unable to protect herself from the violence as she had drunk much alcohol.” she said.

The focus group discussants replied that their own boyfriends are the common perpetrators of the victims. Teachers were also pointed as perpetrators who obligate their students for sexual intercourse. A six year medical intern said that her biology teacher was repeatedly asked and attempted her for sex when she was in secondary school. Another third year health officer discussant complained that one of her teacher had lessened her academic result since she refused his question of sex in the previous year.

Other discussants said that it was the females themselves and their immoral girlfriends that made sexual violence to be a commonly occurred problem. The way the female students' act in the class, in campus and outside the campus could initiate the perpetrator to commit the violence.

iii. Consequences of sexual violence

Sexual violence generally and completed rape particularly had different long and short term consequences as responded by the focus group discussants. They mentioned reproductive and medical problems like unintended pregnancy and its associated outcomes were majorly observed effects on the victims. The discussants explained that sexual transmitted infections including HIV/AIDS were also mostly occurred on those rape victims. A first year midwifery student verbalized that:

“My sister was raped by an unknown person in the evening time when she went to our uncles' home. She was later become pregnant and decided to have abortion. When she went to hospital for having abortion, she was screened for HIV and became reactive. Then, she returned to home and committed suicide. This is a real case through which I lost my lovely sister.” The discussant was dropping pieces of tear during speaking.

Other discussants said that psychological disorders were also significantly occurred on rape victims. Among those problems depression and lack of self esteem were pointed out as commonly observed psychological effects on the victims. A considerable number of discussants said that sexual violence extended its effect on their academic performance. A fifth year dentistry student replied that the rape victims were highly affected in their education. She said that the associated psychological factors challenged them to be competent academically.

Chapter Six: Discussion

Sexual violence is a major reproductive health problem in the world including Ethiopia (8). In this study, the magnitude, associated factors and consequences of sexual violence was assessed among regular, undergraduate female students of CPHMS, Jimma University. This study provides research evidences; which will help in designing appropriate intervention strategies for college and university students.

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 (27).

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 (19). This result is further consistent with the study done in Debarke among high school students with the prevalence rates of 8.8% for completed rape and 11.5% for attempted rape (18).

Similarly, the study conducted among Jimma high school girls also showed comparable result of prevalence rate of completed lifetime rape and attempted rape to be 7.7% and 9.1% respectively (14). This result is also matched with the study done among high school students in Addis Ababa where completed and attempted rape was reported by 5% and 10% respectively (20). Furthermore, this result is also consistent with the study conducted in Chile on prevalence and risk factors for sexual victimization in which 9% of completed rape were reported among college students (23).

The result of this study on prevalence of lifetime rape (8.6%) and attempted rape (12.7%) 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% (15). 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% (28). 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.

The focus group discussants reflected that the incidence of sexual violence was increased at an alarming rate even though most violent cases were remained unreported due to fear of social stigma and discrimination. They also replied that the magnitude of sexual violence was mostly under reported and its prevalence was considerably different in different areas.

Among the total respondents, 28.7% have started sexual intercourse. Out of those, 9.1% of them had been forced in their first sexual intercourse. This result is relatively lower than a study done in Jimma among school girls in which 20.4% were started sexual intercourse forcefully (14). This might be due to differences in the respondents' living condition and peer pressure factors.

Out of the total respondents, nearly half 121 (45.1%) of them had faced at least one form of sexual harassment practice. This finding is slightly higher than the study done in Bahir Dar among private college female students on which sexual harassment was reported by 35.8% (27). This might be due to differences in study areas and educational setups (private versus governmental institutions).

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 (18). The reason might be due to differences in level of education and the study subjects' perception about sexual harassment.

Regarding factors associated with sexual violence, the study finding showed significant association with many independent variables. Concerning childhood residence, those participants who had rural childhood residence were at higher risk than other participants who had urban childhood residence for life time rape. This result is consistent with the study conducted in Mekele among higher institution female students (17). This might be due to the fact that some harmful socio- cultural practices are more common in the rural part of Ethiopia.

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 (16), in Mekele (17) and in Debarq (18). 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 (15, 31). 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.

Several studies in different countries have also found a strong association between consumption of alcohol and the risk of violence. Research findings on the issue in Nigeria (26), in South Africa (11), in Viet Nam (12) in Chile (23), and in USA (24) 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. Consuming alcohol or drugs makes it more difficult for women to protect themselves by interpreting and effectively acting on warning signs. Alcohol might also inhibit judgment and behavior via physiological mechanism and expose to loss of self control and ability to process incoming information, making drinkers more likely to expose to violence.

Regarding the number of sexual partners, those students who had two or more sexual partners were more at increased risk of lifetime rape when compared to students having only one sexual partner. This association was also observed in other studies conducted in Hawassa among high school female students (4) and in Jimma among female youths (15). The possible explanation could be engaging in health risk behaviors might increased student's vulnerability to forced sexual intercourse and the chance getting abusive partner and peers among females with multiple sexual partners is by far higher than the referent groups.

The FGD results showed that the younger age groups of adolescents were the main target age groups of the problem. Substance abuse particularly drinking alcohol was also explained as a predisposing factor by them. The discussants responded that their own boyfriends are the common perpetrators of the victims. Teachers were also pointed as perpetrators who obligate their students for sexual intercourse. Other discussants said that it was the females themselves and their immoral girlfriends that made the rape to be a commonly practiced problem. They indicated that the way the female students' act in class, in the campus and outside the campus could initiate the perpetrator to commit the violence.

This study assured that many rape victim individuals had faced with different short and long term effects. Among the reproductive health consequences; unintended pregnancy (66.7%), abortion (57.1%), and frequent headache (28.6%) were commonly reported problems. According to the study done in Jimma among female youths, 21% of rape victims had experienced unwanted pregnancy (15). This indicates that those consequences are highly magnified in this

study. This might be due to over reporting of those effects as university students had better understanding of those consequences than the community females.

Psychological consequences that were identified by this study include unhappiness (52.4%), lack of self esteem (42.9%) and other serious psychological effects like suicidal attempts (42.9%). This finding is consistent with the study done in Jimma among female youths on which low self-esteem were reported by 41% of the rape victims (15).

Sexual violence had also significantly associated with respondents' academic result which indicated that the rape victims were negatively affected academically as a consequence. The mean CGPA of students having history of forced sex was lower than the mean CGPA of students having no history of forced sex. This academic effect might be due to the associated reproductive health and psychological traumas occurred on the violated victims.

The FGD discussants mentioned unintended pregnancy and its associated outcomes were majorly observed reproductive and medical problems on the victims. The discussants explained that sexual transmitted infections including HIV/AIDS were also mostly occurred on those rape victims. Psychological problems such as depression and lack of self esteem were pointed out as commonly observed effects on the victims. A considerable number of other discussants said that sexual violence extended its effect on their academic performance. They described that the associated psychological factors challenged them to be competent academically.

Strengths and Limitations of the study

Strengths

- ✚ The questionnaire was filled anonymously through self administration which provokes confidentiality
- ✚ The quantitative findings were supplemented by qualitative data using FGDs
- ✚ Logistic regression analysis was done to determine the level of association between the independent and the dependent variables

Limitations

- ✚ As it is a sensitive issue by its nature, some variables of sexual violence might be underestimated due to cultural and social desirability issues
- ✚ The study design nature made unable to determine causal relationship between the associated variables

Chapter Seven: Conclusion and Recommendation

7.1 Conclusion

According to this study, completed lifetime rape and attempted rape were moderately reported by regular, undergraduate female students of CPHMS. Nearly half of the total respondents had faced at least one form of sexual harassment practice. Thus findings reflected that sexual violence is still highly prevalent reproductive health problem among female students.

The study showed that the perpetrators of rape were mostly unknown persons followed by students and close relatives who were trusted and loved by the victims. Significant number of the participants reported that being university student had an impact for sexual violence victimization. Completed lifetime rape was significantly associated with groups having rural childhood residence, alcohol abusers and having more than one lifetime sexual partner according to the multivariate logistic regression model result.

Sexual violence had shown reproductive health consequences like unwanted pregnancy, abortion and frequent headache problems on the rape victims. Completed rape contributed to develop psychological problems like unhappiness, lack of self esteem and suicidal attempt on the victims. The rape victim students had relatively lower academic results than students who didn't face rape. Therefore; those results showed that sexual violence had multi-dimensional effects on the victims which indicated that it shouldn't be tolerated faraway.

7.2 Recommendation

Based on the study findings the following recommendations can be made;

- ✚ Drinking alcohol and having more than one sexual partner were found to be the dominant factors associated with sexual violence. Therefore, instant measures should be taken to aware and help the students to remove such behaviors through peer educational programs by Jimma university and other concerned bodies.
- ✚ Since most of the lifetime rape cases were occurred when the victims were in secondary education studies, university and college officials should build strong collaboration and integration mechanisms with preparatory and high school administrators as well as other stakeholders in order to avoid the predisposing factors.
- ✚ The university officials should establish secondary prevention measures such as victim support programs to take care of students affected by sexual violence from the immediate physical up to academic performance and psychological sufferings that they were facing with and to rehabilitate further.
- ✚ At national level, improvements of law enforcement should include the speed and sensitivity of processing of cases by the courts as well as identifying mechanisms to encourage victims to report incidents of sexual violence to police.
- ✚ Future larger scale longitudinal studies are recommended to deeply assess socio-cultural factors and possible prevention mechanisms of sexual violence.

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ANNEX - I: Questionnaire

A questionnaire prepared to assess predictors and consequences of sexual violence among regular, undergraduate female students of Jimma University, college of public health and medical sciences

This questionnaire is developed by a maternity nursing post graduate student. It is prepared to assess magnitude, associated factors and consequences of sexual violence among regular, undergraduate female students of Jimma University, CPHMS. You have been selected to participate in this study. The finding of the study will be used for better planning & intervention on sexual violence against women in Ethiopia. Therefore, you are requested to fill this questionnaire by yourself.

There is no right or wrong answers for each question. The questionnaire includes very personal questions and which may be difficult to talk about, but many women have found it useful to have the opportunity to talk. Your response is completely confidential. You do not need to write your name and will never be used in connection with any of the information you give us. You are kindly requested to answer every question and you may stop filling the form at any time you want. However, your honest answers to these questions will help us better understand what people think, say and do about sexual violence on female adolescents.

According to the questions, it is allowed to have more than one answer. You can give responses by circling the number of your chosen answer. We would like to appreciate your help by participating in the study. It will take about fifteen (15) minutes to complete the questionnaire.

Are you willing to participate?

1. Yes
2. No

- If Yes, proceed to the questions
- If No, stop here

❖ Data collector name -----

❖ Date ----- Time-----

A questionnaire prepared to assess predictors and consequences of sexual violence among regular, undergraduate female students

Part one: Socio demographic characteristics			
No.	Questions	Coding category	Remark
101	How old are you? (age in years)	-----	
102	Your current field of study	1. Medicine 2. Dentistry 3. Anesthesia 4. Pharmacy 5. Health Officer 6. Environmental Health 7. Midwifery 8. Nursing 9. Medical Laboratory	
103	Your current year of study	1. First year 2. Second year 3. Third year 4. Fourth year 5. Fifth year 6. Six year	
104	Marital status	1. Single 2. Married 3. Separated 4. Divorced 5. Widowed	
105	What is your ethnicity?	1. Oromo 2. Amhara 3. SNNPE 4. Tigray 5. Others (specify) -----	
106	Where did you grow up?	1. Rural area 2. Urban area	
107	What is your religion?	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other (specify) -----	
108	What is your source of income?	1. Family 2. Husband 3. Self support 4. Other (specify) -----	
109	What is your average monthly income in ETB?	-----	

110	Do you have any disability?	1. Yes 2. No	If No, skip to Q201															
111	If yes for Q110, which type of disability?	1. Partial hearing loss 2. Complete Hearing loss 3. Partial visual impairment 4. Complete Visual impairment 5. Physical impairment 6. Other(specify) -----																
Part two: Substance abuse related questions																		
201	How often do you drink alcohol?	1. Never 2. Sometimes 3. Frequently																
202	How often do you smoke cigarette?	1. Never 2. Sometimes 3. Frequently																
203	How often do you chew chat?	1. Never 2. Sometimes 3. Frequently																
204	Do you take the following drugs? 1. Cocaine 2. Shisha 3. Marijuana	<table border="0"> <tr> <td><u>Yes</u></td> <td><u>No</u></td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> </table>	<u>Yes</u>	<u>No</u>	1	2	1	2	1	2								
<u>Yes</u>	<u>No</u>																	
1	2																	
1	2																	
1	2																	
Part three: Sexual history related questions																		
301	Have you ever had sexual intercourse?	1. Yes 2. No	If No, skip to Q318															
302	If yes for Q301, what was your age during your first sexual intercourse?	-----																
303	How did you start sexual intercourse?	1. Forced 2. Personal desire 3. In a marriage 4. Peer pressure 5. Promising word from partner 6. For financial purpose 7. Others (specify) -----																
304	Have you ever had forced sex without your consent?	1. Yes 2. No	If No, skip to Q318															
305	If yes for Q304, how many times in your life did you encounter such forced sex?	1. Once 2. Twice 3. Three times and more																
306	When did the forced sex occur?	<table border="0"> <tr> <td></td> <td><u>Yes</u></td> <td><u>No</u></td> </tr> <tr> <td>1. After joining campus</td> <td>1</td> <td>2</td> </tr> <tr> <td>2. In secondary school</td> <td>1</td> <td>2</td> </tr> <tr> <td>3. In primary school</td> <td>1</td> <td>2</td> </tr> <tr> <td>4. In pre-school life</td> <td>1</td> <td>2</td> </tr> </table>		<u>Yes</u>	<u>No</u>	1. After joining campus	1	2	2. In secondary school	1	2	3. In primary school	1	2	4. In pre-school life	1	2	Answer the coming questions based on the latest event
	<u>Yes</u>	<u>No</u>																
1. After joining campus	1	2																
2. In secondary school	1	2																
3. In primary school	1	2																
4. In pre-school life	1	2																

307	What was your age during the first forced sex?	-----																									
308	At what time of the day was the forced sex happened?	1. Morning 2. Afternoon 3. Evening 4. Late night																									
309	Who was the perpetrator?	1. Close relative 2. Teacher 3. Student 4. Boyfriend 5. Neighbor 6. Unknown person 7. By group 8. Other (specify) -----																									
310	What was (were) the mechanism(s) used to force you?	<table border="0"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Yes</u></th> <th style="text-align: center;"><u>No</u></th> </tr> </thead> <tbody> <tr> <td>1. Beating</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>2. Pointed a knife</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>3. Pointed a gun</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>4. Threats of harm</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>5. Made me drunk</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>6. Gave me drug</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> </tr> <tr> <td>7. Others (specify) -----</td> <td></td> <td></td> </tr> </tbody> </table>		<u>Yes</u>	<u>No</u>	1. Beating	1	2	2. Pointed a knife	1	2	3. Pointed a gun	1	2	4. Threats of harm	1	2	5. Made me drunk	1	2	6. Gave me drug	1	2	7. Others (specify) -----			
	<u>Yes</u>	<u>No</u>																									
1. Beating	1	2																									
2. Pointed a knife	1	2																									
3. Pointed a gun	1	2																									
4. Threats of harm	1	2																									
5. Made me drunk	1	2																									
6. Gave me drug	1	2																									
7. Others (specify) -----																											
311	How old was the perpetrator?	1. Same age 2. Older than me 3. Much older than me (>10 yrs) 4. Other (specify) -----																									
312	Where was the place?	1. In my home 2. Hotel 3. In his home 4. School compound (campus) 5. In the forest 6. Others (specify) -----																									
313	With whom did you share the event after you had unwanted sexual intercourse?	1. Nobody 2. A friend 3. Sister/brother 4. Parents 5. Health Professionals 6. Other (Specify) -----																									
314	Did you report the event?	1. Yes 2. No	If No, skip to Q317																								
315	If yes for Q314, for whom did you report it?	1. To police 2. To kebele 3. To women's affair 4. To court 5. Other (specify) -----																									

316	Is there any action taken to the perpetrator?	1. Nothing 2. Imprisonment 3. Financial penalty 4. Forced to marry 5. Other (Specify) -----	
317	If No for Q313, why? 1. Did not know what to do 2. Afraid of parents 3. Afraid of disclosure 4. Afraid of the perpetrator 5. The legal body is not helpful 6. Others / Specify	<u>Yes</u> <u>No</u> 1 2 1 2 1 2 1 2 1 2 -----	
318	Do you think that being university student has an impact to be a victim of forced sex?	1. Yes 2. No	
319	How many sexual partners have you ever experienced until now?	1. Nothing 2. One 3. Two 4. Three 5. Four or more	
320	Of the following acts, did someone ever made to you? 1. Unwanted sexual verbal jokes/asked to have sex 2. Unwelcome touching on your buttock, genital or breast areas 3. Unwelcome kissing	<u>Yes</u> <u>No</u> 1 2 1 2 1 2	
321	Have you ever faced an attempted rape?	1. Yes 2. No	If No, skip to Q323
322	If yes for Q321, how do you manage to escape the attempt?	1. By giving an appointment 2. By fighting 3. By shouting 4. By getting help from others 5. By running 6. Other (specify) -----	
323	Do you know any female student(s) who ever faced rape?	1. Yes 2. No	If No, skip to Q401
324	If yes to Q323, how many?	-----	
325	Who was the perpetrator?	1. Close relative 2. Teacher 3. Student 4. Boyfriend 5. Neighbor 6. Unknown person 7. By group 8. Other (specify) -----	

Part four: Sexual violence consequence questions			
401	Did you have any problems after unwanted forced sex?	1. Yes 2. No	If No, skip to Q404
402	If yes for Q401, which reproductive health problems did you experience after the event? 1. Unwanted pregnancy 2. Abortion 3. Injury around the genitalia 4. Unusual discharge from the genitalia 5. Swelling around the genitalia 6. Frequent head aches 7. Lack of pleasure in sexual intercourse 8. Other (specify)	<u>Yes</u> <u>No</u> 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 -----	
403	If yes for Q401, which psychological problems did you experience after the forced sex? 1. Bad sleeping pattern 2. Easily frightened 3. Hand/body shake 4. Becoming anxious easily 5. Poor digestion 6. Hating others 7. Feel unhappy 8. Cry more than usual 9. Difficulty to do daily activities 10. Poor appetite 11. Become addicted to alcohol and drugs 12. Lack of self esteem 13. Loss of hope 14. Tried to commit suicide 15. Fell tired all the time 16. Other (specify)	<u>Yes</u> <u>No</u> 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 -----	
404	What was your last semester cumulative result (CGPA)?	-----	

Thank You Very Much for Your Participation!

ANNEX - II: Guiding questions for the focus group discussions

1. What is your perception of sexual violence?
2. How much is the magnitude of sexual violence?
3. Who are the most vulnerable groups to sexual violence?
4. Where and when do the victims get violated?
5. Who are the most common perpetrators?
6. What are the reactions of the victims?
7. What are the reproductive health and psychological effects on the victims?
8. How does sexual violence affect their academic performance?

DECLARATION

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or any other university and that all sources of materials used for the thesis have been fully acknowledged.

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Date: June, 2014 Signature _____

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