

Sexual Coercion and Associated Factors among College Female Students

Tsegaye Benti and Elias Teferi*

Department of Public Health, Ambo University, Ambo Town, West Showa, Central Ethiopia

Abstract

Background: Sexual coercion lies on the continuum of sexually aggressive behavior. This continuum includes many harmful and aggressive acts we hear frequently, such as rape and sexual harassment. Rape is the most severe form of non-consensual sex. Reproductive health and HIV prevention programs for youth rarely address the reality of coercive sex that many youth face. Therefore, the study was proposed to assess the prevalence and associated factors of sexual coercion among college female students in Nekemte town.

Methods: A cross-sectional study was conducted from February to April 2013 among college female students. A self-administered questionnaire was used for data collection. Descriptive and logistic regression analyses were performed using SPSS software.

Results: This study showed that the lifetime prevalence of completed rape, attempted rape and sexual harassment was 20.8%, 23.1% and 41.3% respectively. The independent predictors of sexual coercion were the presence of two or more sexual partners in lifetime (AOR=7.24, 95% CI, 3.10, 13.12), sexual intercourse at early age (AOR=9.51, 95% CI, 2.29, 39.56), receiving low monthly pocket money (AOR=6.95, 95% CI, 3.01, 16.05), consuming alcohol sometimes (AOR=2.31, 95% CI, 1.13, 4.71) by the victims and presence of divorced guardian (AOR=3.04, 95% CI, 1.16, 7.95).

Conclusion: The magnitude of completed rape was significant (20.8%) among college female students. Therefore, the colleges should arrange and provide sexual education for both male and female students. The colleges and broad community should be aware of reproductive health as a human right and this issue should be addressed in community meetings by administrators at all levels.

Keywords: Sexual coercion; Rape; Sexual harassment

Background

Sexual coercion lies on the continuum of sexually aggressive behavior. This continuum includes many harmful and aggressive acts we hear frequently, such as rape and sexual harassment. Rape is the most severe form of non-consensual sex. Sexual coercion among young people encompasses a range of experiences, ranging from noncontact forms such as verbal sexual abuse, kissing, caressing, petting, genital touching, attempted rape, forced penetrative sex (vaginal, oral, or anal), and any other sexually laden behavior that makes the victim feel uncomfortable. It also includes sex obtained as a result of intimidation, pressure, blackmail, deception, forced alcohol and drug use, and threats of abandonment or of withholding economic support. Transactional sex through money, gifts, or other economic incentives (especially in the context of extreme poverty) often has a coercive aspect as well [1,2].

Violence against women is a serious human rights abuse and public health issue [3]. It has been increasing at an alarming rate. According to United Nations Development Fund for Women, up to six out of every ten women experience physical and/or sexual violence in their lifetime around the world. It further maintains that violence against women and girls has far-reaching consequences, harming families and communities [4].

There is increasing evidence of risky consensual sex among young people in developing countries, but non-consensual sexual experiences among them have rarely been studied and few interventions have been designed to protect young people from the risks of such experiences [1,2]. World Health Organization study of 24,000 women in ten African and Asian countries including Ethiopia showed that the reported lifetime prevalence of physical or sexual partner violence, or both, varied from 15% in urban Japan to 71% in rural Ethiopia with most areas being in the 30%–60% range [3]. In sub-Saharan Africa, 157 million people, 20% of the total population, are between ages 15 and 24. This is when most people become sexually active, which makes it a critical time for learning about sexual and reproductive health risks [5].

A study among students at Washington State University found that most acts of sexual coercion occurred between “non-strangers” which took place at similar locations on campus. This study found that acts of sexual coercion committed against females were associated with the perpetrator's residence. It also found that between 46-54% of all acts of sexual coercion were associated with alcohol use by either the victim or perpetrator [6]. Another study among young people in Kenya showed that for young women intimate partners, boyfriends and husbands were the most common perpetrators of sexual coercion followed by acquaintances [7].

The consequences of sexual coercion are alarming: they are short and long-term; and have physical, psychological and social effects. School performance can also be affected. It has negative association with social and health outcomes, and it therefore, is an important public health issue. Significant number of young people experience sexual coercion (nonconsensual sex), such coercion is a violation of a person's rights and can have severe physical, mental and reproductive health consequences including the risk of unintended pregnancy and HIV and other sexually transmitted infections [1,2,8,9].

The Safe Schools Program Ethiopia Assessment Report showed that for girls, psychological abuse takes place in the home, community and school and is carried out by parents, elders, classmates and teachers.

*Corresponding author: Elias Teferi, Department of Public Health, Ambo University, Ambo Town, West Showa, Central Ethiopia, Tel: 251 9 17-81-65-14 ; E-mail: eliasteferi2015@gmail.com

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This inspires fear and demoralizes the girls and they live in fear of rape and abduction. Since virgins are targeted for abuse, most schoolgirls live in fear of abuse since they are virgins. The range of sexual abuse experienced by girls in Ethiopia is wide and the impact deep [8]. This study was therefore aimed to know the prevalence and associated factors of sexual coercion among college female students of Nekemte, Ethiopia.

Methods

Study setting

A cross-sectional quantitative study was conducted among college female students in Nekemte, Ethiopia from February to April 2013. A study conducted among young females in Nekemte town in 2007 showed that the prevalence of sexual coercion at sexual debut was 14% [10]. There were three public and six private, totally nine Technical, Vocational and Educational Training colleges, containing 2693 male and 2408 female students in Nekemte town.

Participants

The study participants were all female students in the selected colleges who were registered for level I-IV for the academic year 2012/13. Study subjects whose ages below 18 years were excluded. Five colleges were included in the study. These were New Generation University College, Nekemte Health Science College, Keamed University College, Rift Valley University College and Nekemte Technique School. The sample size was calculated using the single population formula by assuming prevalence of sexual coercion (p) to be 14%, the marginal error (d) to be 3%, 95% confidence interval (CI) and 10% of the calculated sample for non-response giving a sample size of 564. The sample from each college was allocated proportionally to the number of students in each department of the selected colleges.

Data collection

A structured self-administered questionnaire, which was prepared in English by adapting the pertinent variables and terminologies of the different forms of sexual coercion from various studies, was used. It then translated into the local language of the study area, Afaan Oromoo. Finally, it was translated back to English by another expert in order to ensure its consistency for meaning and self-administration. The questionnaire was pre-tested with 28 female students in the colleges which were not included in the study and some modifications were done based on the responses of the pre-test. Data was collected from the study population by trained diploma nurses whom were trained before data collection.

Measurements

The dependent variable of this study was sexual coercion (lifetime and 12 months). The independent variables of the study were socio-demographic characteristics including age, residence (live with parent or separated), parent marital status, student's marital status, students' monthly pocket money, presence of parents in the household, presence of boyfriend, number of partner in lifetime and use of common substances-alcohol and chat.

Data Analysis

Quantitative data were entered into Epi Info version 3.5.3 and cleaned and then transferred to SPSS version 16.0. Prevalence of sexual coercion was estimated by running frequencies with their 95% CI estimates. For testing the strengths of the associations and

their statistical significance, odds ratio and 95% CI were calculated for each independent variable against the dependent variable using binary logistics. Multiple logistic regression analysis was performed for factors that had p-value of less than 0.2 in the bivariate analysis to investigate independent predictors by controlling for possible confounding factors.

Ethical Considerations

Ethical clearance was obtained from the ethical review committee of Haramaya University/Addis Continental Institute of Public Health. A letter introducing the need for and benefits of conducting the study, the method of questioning and confidentiality was attached to the cover page of the questionnaire; the content of the letter was discussed by the facilitators. All study participants were consented through brief explanation about the purpose of the study and the right to refuse filling the questionnaire at any stage when they wanted to do so and requested for their consent prior to the distribution of the questionnaire.

Results

Socio-demographic characteristics of study subjects

A total of 562 Nekemte town Technical, Vocational and Educational Training college female students were involved in the study making a response rate of 99.6%. Out of the total study subjects, 206 (36.7%) were first year, 208 (37%) were second year and 148 (26.3%) were third year students. The mean age of the respondents was 21.71 ± 2.380 and more than 94% were below age of 25 years. During the study period, 267 (47.5%) of the study subjects were living with their parents and the rest 295 (52.5%) were living separate from their parents. Out of the total respondents, 126 (22.4%) of them were married. Four hundred ninety seven (88.4%) of the respondents were Oromo ethnic group followed by Amhara 29 (5.2%). The dominant religion was protestant 352 (62.6%) followed by orthodox 150 (26.7%). Out of the total study subjects, 72 (12.8%), 274 (48.8%) and 216 (38.4%) received greater than 300, 100-300 and less than 100 ETH Birr as monthly pocket money respectively (Table 1).

Socio-demographic characteristics of parents of study subjects

Most of the respondents' parents had completed elementary school, 255 (45.4%) of the fathers, and 273 (48.6%) of the mothers. One hundred eighty eight (33.5%) of the fathers and 123 (21.9%) of the mothers were high school and higher education complete and 119 (21.2%) of fathers and 166 (29.5%) of mothers were illiterate. Four hundred fifty five (81%) of the parents were married, 38 (6.8%) were divorced, 58 (10.3%) either father or mother alive and 11 (2%) both were not alive. Before joining college 365 (64.8%) were living with both parents, 60 (10.7%) with single parents, 103 (18.3%) with husband and the remaining students 35 (6.2%) were living either alone or with relatives.

Reported sexual history and reasons for sexual intercourse

Out of the total respondents, 243 (43.2%) of them had boyfriends. Three hundred and six (54.4%) of them reported that they were sexually active and 78 (25.5%) of the sexually active respondents started intercourse below the age of 18 years. Among the study subjects, 171 (30.4%) of them had experienced two or more partners in their lifetime. The mean age at first intercourse was 18.80 ± 2.295 years. Ninety one (29.7%) of the sexually active respondents started sex due to self-initiation, 29 (9.5%) started due to peer pressure, 34 (11.1%) due to

| Characteristics | Number | Percentage |
|--------------------------------------|---------------|------------|
| Residence during study period | | |
| With parents | 267 | 47.5 |
| Separate from parents | 295 | 52.5 |
| Educational status | | |
| 1 st year | 206 | 36.7 |
| 2 nd year | 208 | 37 |
| 3 rd year | 148 | 26.3 |
| Age | | |
| <20 | 104 | 18.5 |
| 20-24 | 385 | 68.6 |
| ±25 | 73 | 13.1 |
| Mean ± SD | 21.71 ± 2.380 | |
| Marital status | | |
| Married | 126 | 22.4 |
| Unmarried | 436 | 77.6 |
| Religion | | |
| Protestant | 352 | 62.6 |
| Orthodox | 150 | 26.7 |
| Muslim | 33 | 5.9 |
| Catholic | 20 | 3.6 |
| Others | 7 | 1.2 |
| Ethnicity | | |
| Oromo | 497 | 88.4 |
| Amhara | 29 | 5.2 |
| Tigre | 18 | 3.2 |
| Others | 18 | 3.2 |
| Pocket money | | |
| >300 | 74 | 13.2 |
| 100-300 | 267 | 47.5 |
| <100 | 221 | 39.3 |

Table 1: Socio-demographic characteristics of study subjects, Nekemte, April 2013 (n=562).

promise made by boyfriend, 20 (6.5%) due to promise made by their teacher to pass exam, 24 (7.8%) by force 98 (32%) in marriage, and 10(3.3%) due to promise to get money. Out of the total respondents, 95 (16.9%) and 34 (6.1%) of them reported using alcohol and chat respectively (Table 2).

Prevalence of sexual coercion and reported reasons of rape

Out of the total study subjects, the lifetime prevalence of completed rape was 20.8% (95% CI, 17.45%, and 24.19%) and 12 months prevalence was 6.9% (95% CI, 4.83%, and 9.05%). The lifetime and 12 months prevalence of attempted rape were 23.1% (95% CI, 19.63%, 26.63%) and 6% (95% CI, 4.07%, 8.03%) respectively. The reported lifetime and 12 months prevalence of any form of harassment were 41.3% (95% CI, 37.20%, 45.36%) and 31.9% (95% CI, 27.99%, 35.71) respectively. The major reasons reported by the victims of completed rape were 38 (32.5%) fear of being hit (after being battered), 26 (22.2%) due to promise given to give money, 11 (9.4%) due to promise given to pass exam by their teachers, 16 (13.7%) after they were drunk, 9 (7.7%) after taking substances like chat and shisha and 17 (14.5%) mentioned other reasons. The victims were asked about their perpetrator and 109 (96.5%) of them reported that they were raped by person known to them, and out of that 50 (43.8%) of the perpetrators were their boyfriends. Forty eight (41%) of the rapes were during day time, 55 (47%) in the evening and 14 (12%) was at late night. Out of the total rape victims, 29 (24.8%) of them faced the rape in their

home, 60 (51.3%) in the perpetrators' home, 25 (21.4%) of them in hotels and 3(2.6%) mentioned other places.

Sixty one (52.1%) of the raped study subjects reported that they had told no one about their victimization. Only six (5.26%) of the rape were reported to the legal body. The victims of completed rape were asked about why they did not report to any body and gave different reasons. Fifty one (44.7%) reported that they afraid of their parents, 49 (42.9%) afraid of public reaction, 32 (28.1%) afraid of the perpetrator, 17 (14.9%) did not know that legal body is useful in such issues (Table 3).

Immediate reported outcome of completed rape

From the total 117 completed rapes, 12 (10.25%) had faced unwanted pregnancy out of which 7 (58.3%) reported unsafe abortion. Twenty nine (24.8%) of the rape victims reported unusual vaginal discharge, genital swelling and genital ulcer. Other reported outcomes were headache in 16 (13.7%), poor appetite in 4 (3.42%), bad sleep in 17 (14.53%), self-blame in 25 (21.4%), feeling unhappy in 15 (12.82%), feeling worthless in 7 (6%), and suicidal ideation after being raped in 5 (4.3%).

Factors associated with completed rape in lifetime

Those living separate from their parents during the study period

| Character | Number | Percentage |
|--|---------------|------------|
| Presence of boyfriend (n=562) | 242 | 43.1 |
| Sexually active (n=562) | | |
| Yes | 306 | 54.4 |
| No | 256 | 45.6 |
| <15 | 17 | 5.6 |
| 15-17 | 61 | 19.9 |
| ±18 | 228 | 74.5 |
| Mean age ± SD | 18.80 ± 2.295 | |
| Number of partner | | |
| One | 391 | 69.6 |
| Two or more | 171 | 30.4 |
| Reasons for sexual initiation (n=306) | | |
| Self-initiation | 91 | 29.7 |
| Peer pressure | 29 | 9.5 |
| Promise made by boyfriend | 34 | 11.1 |
| Promise made to pass exam | 20 | 6.5 |
| By force | 24 | 7.8 |
| In marriage | 98 | 32 |
| Promise to get money | 10 | 3.3 |
| Alcohol consumption (n=562) | | |
| Yes | 95 | 16.9 |
| No | 467 | 83.1 |
| Chat chewing (n=562) | | |
| Yes | 34 | 6.1 |
| No | 528 | 93.9 |

Table 2: Reported sexual history and substance use, study subjects, Nekemte, April 2013.

| Sexual coercion | Lifetime prevalence | 12 months prevalence |
|-----------------|--------------------------------|--------------------------------|
| Completed rape | 20.8% (95% CI, 17.45%, 24.19%) | 6.9% (95% CI, 4.83%, 9.05%) |
| Attempted rape | 23.1% (95% CI, 19.63%, 26.63%) | 6% (95% CI, 4.07%, 8.03%) |
| Harassment | 41.3% (95% CI, 37.20%, 45.36%) | 31.9% (95% CI, 27.99%, 35.71%) |

Table 3: Lifetime and 12 months prevalence of sexual coercion among study subjects, Nekemte, April 2013 (n=562).

were more likely to experience completed rape in their lifetime than those living with their parents (OR=1.59, 95% CI, 1.02, 2.42). Presence of boyfriend increases risk of completed rape in female students (OR=1.98, 95% CI, 1.26, 2.86). Experiencing completed rape in their lifetime was higher among female students who used alcohol sometimes (OR=3.89, 95% CI, 2.32, 6.51) and usually (OR=2.96, 95% CI, 1.13, 7.75) than who did not use it. The likelihood of experiencing completed rape in their lifetime was higher among female students having divorced parents (OR=2.17, 95% CI, 1.07, 4.41) than those having married parents. Those who ever experienced two or more partners in their lifetime had higher likelihood of experiencing completed rape in their lifetime (OR=5.39, 95% CI, 3.49, 8.32) than those who ever experienced only one partner. The likelihood of getting raped in the lifetime (OR=8.09, 95% CI, 2.57,

25.54) was higher among female students who started intercourse below the age of fifteen years compared to those started at or above eighteen years of age. Those study subjects who received less than 100 ETH Birr as monthly pocket money had higher chance of getting raped (OR=7.38, 95% CI, 4.05, 13.45) than those who received greater than 300 ETH Birr. No significant association was found between completed rape and marital status of the study subjects (OR=1.15, 95% CI, 0.70, 1.90), class year of the study subjects (second and third years) taking being first year as reference group (OR=1.083, 95% CI, 0.666, 1.761 and OR=1.376, 95% CI, 0.0825, 2.297) respectively and chat chewing sometimes (OR=1.517, 95% CI, 0.654, 3.519) and usually (OR=5.972, 95% CI, 0.985, 36.193) (Table 4).

Independent predictors of lifetime completed rape

To identify the lifetime completed rape predictors and to control the confounding effect multivariate logistic regression was done. Among the variables entered to the multivariate analysis, having two or more partners in lifetime, age at first intercourse, monthly pocket money, alcohol consumption and the presence of divorced guardian were found to be the independent predictors of lifetime completed rape. The likelihood of experiencing lifetime completed rape was higher among students who had two or more partners than who had one partner in their lifetime (AOR=7.24, 95% CI, 3.10, 13.12). Those study subjects who started sexual intercourse below the age of fifteen years were at higher risk of lifetime completed rape (AOR=9.51, 95% CI, 2.29, 39.56) compared to those who started at or above eighteen years of age. The study subjects who received below 100 ETH Birr as monthly pocket money were more exposed to completed rape in their lifetime (AOR=6.95, 95% CI, 3.01, 16.05) compared to those who received greater than 300 ETH Birr as monthly pocket money. Compared to those who do not use alcohol, those who used it sometimes were at higher risk of lifetime completed rape (AOR=2.31, 95% CI, 1.13, 4.71). The presence of divorced guardian increases the risk of lifetime completed rape (AOR=3.04, 95% CI, 1.16, 7.95) when compared to those who have married guardian (Table 5).

Factors associated with 12 months completed rape among unmarried study subjects

Those unmarried study subjects who consumed alcohol sometimes were more likely to experience completed rape in the last twelve months prior to the study compared to those who did not consume (COR=9.2, 95% CI, 3.05, 27.76). Compared to the study subjects who received greater than 300 ETH Birr as pocket money on monthly basis, those who received 100-300 ETH birr (COR=3.3, 95% CI, 1.56, 6.99) and 100 ETH Birr (COR=2.53, 95% CI, 1.27, 5.05) were more likely to be raped during the last twelve months before this study. The presence of boyfriends was associated with twelve months completed rape among unmarried study subjects compared to those who did not have boyfriends (COR=2.15, 95% CI, 1.23, 3.76) (Table 6).

Independent predictors of 12 months completed rape among unmarried study

Subjects: The variables which showed p-value of less than 0.2 in bivivariate analysis were entered to multivariate analysis and alcohol consumption sometimes (AOR=8.57, 95% CI, 2.45, 29.98) and usually (AOR=10.88, 95% CI, 2.42, 48.87) was found to be associated with twelve months completed rape (Table 7).

Discussion

The findings of this study suggest various magnitude and factors

| Characteristics | Total (n=562) | Raped % | Crude odds ratio(95% CI) |
|--------------------------------------|---------------|---------|-----------------------------|
| Residence during study period | | | |
| With parents | 267 | 8 | 1.00 |
| Separate from parents | 295 | 12.8 | 1.59(1.02, 2.42)* |
| Students' educational status | | | |
| 1 st year | 206 | 7.1 | 1.00 |
| 2 nd year | 208 | 7.3 | 1.08(0.67, 1.76) |
| 3 rd year | 148 | 6.4 | 1.736 (0.825, 2.297) |
| Age | | | |
| <20 | 104 | 6.2 | 1.00 |
| 20-24 | 385 | 11.4 | 1.36(0.86, 2.14) |
| ±25 | 73 | 3.2 | 1.55(0.81, 2.60) |
| Student' marital status | | | |
| Married | 126 | 4.3 | 1.00 |
| Unmarried | 436 | 16.5 | 1.15(0.70, 1.90) |
| Substance use | | | |
| Alcohol | | | |
| No | 467 | 13.7 | 1.00 |
| Sometimes | 76 | 5.9 | 3.89(2.32, 6.51)*** |
| Usually | 19 | 1.2 | 2.96(1.13, 7.75)* |
| Chat | | | |
| No | 528 | 18.9 | 1.00 |
| Sometimes | 29 | 1.4 | 1.52(0.65, 3.52) |
| Usually | 5 | 0.5 | 5.97(0.99, 36.13) |
| Monthly pocket money | | | |
| >300 | 221 | 5.2 | 1.00 |
| 100-300 | 267 | 8.7 | 1.49(0.90, 2.45) |
| <100 | 74 | 6.9 | 7.38(4.05, 13.45)*** |
| Presence of boyfriend | | | |
| No | 320 | 9.2 | 1.00 |
| Yes | 242 | 11.6 | 1.98(1.26, 2.86)** |
| Number of partner | | | |
| One | 391 | 8.2 | 1.00 |
| Two or more | 171 | 12.6 | 5.39(3.50, 8.32)*** |
| Age at first intercourse | | | |
| ±18 | 228 | 13.5 | 1.00 |
| 15-17 | 61 | 5.0 | 1.70(0.96, 3.01) |
| <15 | 17 | 2.3 | 6.50(2.05, 20.61)** |

ρ<0.05* ρ<0.01**; ρ<0.001***; OR=1.00 is reference

Table 4: Comparison of lifetime completed rape by socio-economic characteristics, substance use and presence of boyfriend among study subjects, Nekemte, April 2013.

| Characteristics | Rape | | COR | AOR | p-value |
|--------------------------------------|------|-----|--------------------------|---------------------------|--------------|
| | Yes | No | | | |
| Residence during study period | | | | | |
| With parents | 45 | 222 | 1.00 | 1.00 | |
| Separate from parents | 72 | 223 | 1.59(1.02, 2.42) | 1.09(0.58, 2.02) | 0.799 |
| Parent marital status | | | | | |
| Married | 88 | 367 | 1.00 | 1.00 | |
| Divorced | 13 | 25 | 2.17(1.07, 4.41) | 3.04(1.16, 7.95) | 0.023 |
| Father alive | 2 | 17 | 0.49(0.11, 2.16) | 0.39(0.07, 2.35) | 0.306 |
| Mother alive | 11 | 28 | 1.64(0.79, 3.42) | 1.58(0.61, 4.12) | 0.350 |
| Both not alive | 3 | 8 | 1.56(0.41, 6.02) | 3.25(0.32, 33.36) | 0.322 |
| Alcohol consumption | | | | | |
| No | 77 | 390 | 1.00 | 1.00 | |
| Sometimes | 33 | 43 | 3.89(2.32, 6.51) | 2.31(1.13, 4.71) | 0.022 |
| Usually | 7 | 12 | 2.96(1.13, 7.75) | 0.39(0.12, 1.24) | 0.111 |
| Monthly pocket money | | | | | |
| >300 | 29 | 192 | 1.00 | 1.00 | |
| 100-300 | 49 | 218 | 1.45(0.90, 2.45) | 1.70(0.89, 3.26) | 0.108 |
| <100 | 39 | 35 | 7.38(4.05,13.45) | 6.95(3.01, 16.05) | 0.000 |
| Presence of boyfriend | | | | | |
| No | 52 | 268 | 1.00 | 1.00 | |
| Yes | 65 | 177 | 1.98(1.26, 2.86) | 1.36(0.77, 2.39) | 0.290 |
| Age | | | | | |
| ±18 | 64 | 148 | 1.00 | 1.00 | |
| 15-17 | 39 | 37 | 2.44(1.43, 4.17) | 1.84(0.91, 3.72) | 0.090 |
| <15 | 14 | 4 | 8.09(2.57, 25.54) | 9.51 (2.29, 39.56) | 0.002 |
| Lifetime partner | | | | | |
| One | 46 | 345 | 1.00 | 1.00 | |
| Two or more | 71 | 100 | 5.39(3.49, 8.32) | 7.24 (3.10, 13.12) | 0.000 |

OR=1.00 is reference.

Table 5: Independent predictors of lifetime completed rape, study subjects, Nekemte, April 2013.

associated with sexual coercion. The lifetime prevalence of completed rape among the study subjects was 20.8%. This finding is comparable with a study conducted in United States [11]. However, it is higher than other findings [12-14]. This might be due to that the study subjects in this study were mostly from rural areas and most of them live separate from their parents and also not in campus. In addition, they are dependent on their families for the payment of their education and other expenditures which may contribute to rape committed due to financial problems. The other reason might be that there could be age difference between high school and college students. As age increases, the chance of exposure to rape might increase. The 12 months completed rape (6.9%) lifetime attempted rape (23.1%) and lifetime harassment (41.3%) prevalence is analogous with other studies [3,12-17]. Among the sexually active respondents, 38.2% started sexual intercourse against their will. This is similar to a study among female students of higher learning institutions in Mekelle town [14]. Conversely, it is lower than a study among young people in Kenya [7]. Community situations and difference in sexuality of the generations over years might define this difference. Greater than 30% of the study participants had experienced two or more sexual partners in their lifetime which may put them at risk of rape because as the number of partners increase, the chance of being raped might be increased. A study in Kenya also showed that those who have three or more partners have greater chance of being coerced [7].

The present study showed that 96.5% of the perpetrators were known to the victims. This is similar with other studies [11,13]. In this study, most of the rapes (43.8%) were committed by the boyfriends of the victims showing that rape is common among those who are closely related. Other studies showed similar finding [12]. This study showed that 14% of rapes were committed by teachers. It is lower than finding in Nigeria [18]. The difference could be due to difference in community situations, social laws and norms.

The study indicated that presence of boyfriend increases risk of completed rape in female students (OR=1.98, 95% CI, 1.26, 2.86). This is similar with a study conducted among Addis Ababa University female students (OR=2.65, 95%CI, 1.69, 4.29). The likelihood of experiencing completed rape in their lifetime was higher among female students having divorced parents (OR=2.17, 95% CI, 1.07, 4.41) than those having married parents. This finding is consistent with similar study conducted among Addis Ababa University students (OR=2.31, 95% CI: 1.10, 4.83) [16].

Cross-sectional nature of the present study could cause difficulty of determining the direction of the association between the study variables and the associations observed could only be discussed in terms of plausibility which could be limitations to be indicated.

As far as the strengths of this study are concerned, firstly, the

| Characteristics | Total (n=436) | Rape % | COR |
|--------------------------------------|---------------|--------|-----------------------------|
| Residence during study period | | | |
| With parents | 242 | 3.9 | 1.00 |
| Separate from parents | 194 | 3.2 | 1.02(0.59, 1.77) |
| Parent marital status | | | |
| Married | 357 | 4.8 | 1.00 |
| Divorced | 28 | 0.7 | 1.20(0.14, 10.48) |
| Father alive | 18 | 0.5 | 1.20(0.11, 13.15) |
| Mother alive | 27 | 0.5 | 3.40(0.17, 64.68) |
| | 12 | | |
| Both not alive | 6 | 0.7 | 1.60(0.14, 18.72) |
| Alcohol consumption | | | |
| No | 357 | 4.6 | 1.00 |
| Sometimes | 65 | 0.9 | 9.20(3.05, 27.76)*** |
| Usually | 14 | 1.6 | 2.61(0.80, 8.50) |
| Monthly pocket money | | | |
| >300 | 169 | 3.4 | 1.00 |
| 100-300 | 204 | 2.3 | 3.30(1.56, 6.99)** |
| <100 | 63 | 1.4 | 2.53(1.27, 5.05)** |
| Presence of boyfriend | | | |
| No | 238 | 3.2 | 1.00 |
| Yes | 198 | 3.9 | 2.15(1.23, 3.76)** |
| | | | |
| ±18 | 116 | 3.0 | 1.00 |
| 15-17 | 52 | 2.3 | 0.53(0.24, 1.17) |
| <15 | 13 | 1.8 | 1.08(0.22, 5.26) |
| Lifetime partner | | | |
| One | 304 | 4.6 | 1.00 |
| Two or more | 132 | 2.5 | 0.90(0.49, 1.66) |

p<0.01 ** p<0.001 ***OR=1.00 is reference

Table 6: Comparison of 12 months completed rape by socio-economic characteristics, substance use and presence of boyfriend among unmarried study subjects, Nekemte, April 2013.

respondents were selected by random sampling technique with relatively large sample size. Secondly, the investigators have already adopted standard and validated instruments for data collection. In addition, the team used interviewers and supervisors who have past experiences of data collection from their respective community. Because of all these measures, it was found an extremely high response and prevalence rate of study [19-23].

Conclusions

This study showed that the lifetime prevalence of completed rape, attempted rape and harassment was 20.8%, 23.1% and 41.3% respectively. The 12 months prevalence of completed rape, attempted rape and harassment was 6.9%, 6% and 31.9% respectively. This study revealed that the magnitude of sexual coercion is significant among college female students. Therefore, the colleges should provide sexual education for both male and female students. Colleges and broad community should be aware of reproductive health as a human right and this issue should be raised in community meetings by administrators at all levels. It has to be expected that there were limitations with this study including: under reporting of rape and social desirability bias since the study deals with sensitive issues; and recall bias was to be expected since the study deals with past experience of sexual history.

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Authors' Contribution

The two authors were responsible for designing, collecting, and analysis of data for the study. They also read the contents of the manuscript.

Competing Interests

The authors have no competing interests.

| Characteristics | Rape | | COR | AOR | p-value |
|------------------------------|------|-----|-------------------------|---------------------|---------|
| | Yes | No | | | |
| Alcohol consumption | | | | | |
| No | 20 | 337 | 1.00 | 1.00 | |
| Sometimes | 4 | 61 | 9.20(3.05,27.76) | 8.57(2.45, 29.98) | 0.001 |
| Usually | 7 | 7 | 2.61(0.80, 8.50) | 10.88 (2.42, 48.87) | 0.003 |
| Monthly pocket money | | | | | |
| >300 | 17 | 152 | 1.00 | 1.00 | |
| 100-300 | 26 | 178 | 3.30(1.56, 6.99) | 1.55(0.44, 5.46) | 0.498 |
| <100 | 17 | 46 | 2.53(1.27, 5.05) | 1.79(0.56, 5.74) | 0.327 |
| Presence of boyfriend | | | | | |
| No | 23 | 215 | 1.00 | 1.00 | |
| Yes | 37 | 161 | 2.15(1.23, 3.76) | 1.21(0.46, 3.21) | 0.701 |
| | | | | | |
| ±18 | 19 | 97 | 1.00 | 1.00 | |
| 15-17 | 14 | 38 | 0.53(0.24, 1.17) | 0.82(0.28, 2.38) | 0.715 |
| <15 | 2 | 11 | 1.08(0.22, 5.26) | 0.74(0.13, 4.05) | 0.723 |
| Lifetime partner | | | | | |
| One | 43 | 261 | 1.00 | 1.00 | |
| Two or more | 17 | 115 | 0.90(0.49, 1.66) | 1.05(0.39, 2.82) | 0.931 |

OR=1.00 is reference

Table 7: Independent predictors of 12 months completed rape, unmarried study subjects, Nekemte, April 2013.

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