

Sexual Coercion and Determinant Factors among Female Students in Wollo University, Ethiopia

Sisay Kassa¹, Asresie Molla², Nigus Cherie^{3*}

¹Kombolcha Health Center, North east Ethiopia

²Wollo University College of Medicine and Health Science Department of Public Health

³Wollo University College of Medicine and Health Science Department of Public Health

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*Corresponding author: Nigus Cherie, Wollo University College of Medicine and Health Science Department of Public Health, Email: nigucheru@gmail.com

Abstract

Background: Evidence shows that sexual coercion is widespread among young women especially in developing country. Women from all age group are vulnerable. It is widely recognized public health problem affecting students from higher educational institution. Identification of prevalence and its significant factors is a core step to design effective intervention program.

Objectives: The aim of this study was to assess Proportion and associated factors of sexual coercion among female students of Wollo University, Ethiopia, 2018.

Methods: Institution Based cross-sectional study was employed from April 13-18, 2018. Among selected 402 female students using systematic random sampling method. Structured and pre tested self-administered questionnaires were used to collect data. Completed data was entered and cleaned using Epi-Data version 3.1 and analyzed using SPSS version 23 Statistical Software. Descriptive and logistic regression analyses were performed. Model fitness was checked using Hosmer and Leme show test.

Result: Out of the total 402 female students lifetime proportion of completed rape was 13.7% (95% CI, 10.2, and 16.9) and 12 months proportion was 1.2% (95% CI, 0.2, and 2.5). The lifetime and 12 months proportion of any form of sexual coercion were 59.7% (95% CI, 54.7, 64.7) and 34.1% (95% CI, 29.4, 38.8) respectively. Have history of sexual intercourse (AOR = 4.16, 95% CI: 2.38, 7.27), watch pornographic image (AOR = 2.46 95% CI 1.24, 4.89), witness of their mother beaten by partner during their child hood (AOR = 2.5, 95% CI 1.17, 5.37), whose family getting separated (AOR = 2.08 95% CI 1.06, 4.08), Have got 500-750 EHB as monthly pocket money (AOR = 0.32 95% CI 0.14, 0.713) were significant predictor variables of lifetime sexual coercion.

Conclusion: The magnitude of lifetime sexual coercion was significant among university female students. Therefore The University should arrange and provide sexual education for both male and female students. The university 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 level.

Key words: Sexual Coercion; Female Students; Wollo University.

Back Ground

Sexual coercion is defined as the act of forcing (attempted to force) individual through violence, threats, verbal insistence, deception, cultural or economic circumstances to engage in sexual behavior against her consent [1].

It could be regarded as an act of compelling a person to involuntarily engage in sexual acts by the use of threats, violence, intimidation, deception, alcohol, drugs or some other forms of pressure or force, which may typically involve the infliction of physical and psychological harm. It may lie on the continuum of sexual aggressiveness and harmful behavior, ranging from unwanted touch, verbal jokes, attempted rape, to forceful sex [2].

Sexual coercion is a widespread problem with considerable impacts and often long-lasting effects. Adolescence and young adulthood are perceived as key stages in development and a time when young people are at greater risk from sexual violence, are at a critical development point and are more easily influenced by interventions.

Most attention has been paid to more violent forms of sexual coercion. Addressing coercion in its more mundane and everyday manifestations may lead to greater insights into the spectrum of sexual coercion and violence. In addition factors that contribute to sexual coercion may also contribute to a wide range of health and social problems such as gender inequity, abusive relationships, unplanned pregnancies, STIs, and low self-esteem and efficacy [3].

Effective sexual coercion prevention programs involves identification of risk factors both those that are direct causes

of coercion. On the other hand studies on sexual coercion in higher learning institutions especially in northern part of Ethiopia were too limited. Also Kombolcha has a lot of manufacturing and construction sites, associated to this there is a rumor that our female students are exposed to sexual coercion by worker in those companies. So this study aims to assess proportion and also significant factors for sexual coercion among female students of Wollo University.

The sensitiveness and stigma associated with sexual coercion and lack of data have hampered full understanding and the development of appropriate interventions. So the finding from this study help for policy makers to design the programs, strengthen existing laws and their implementation like sanctions against perpetrators and improve the quality of care afforded to survivors.

Methods and Materials

Study Period and Area

This study was conducted from April 13-18, 2018 G.C at Wollo University. Wollo University was established at Dessie town in 2007G.C, which has two campuses. Main campus is found in Dessie town south Wollo zone, Amhara region, North east Ethiopia. Dessie town is located 401 km East from Addis Ababa and 480 km from Bahir Dar, capital city of Amhara regional state. Currently the university has 28,219 students 19,237 (68.2%) were males and 8,982 (31.8%) were females. Undergraduate regular students in the university were 14,475 which consists of 9,104 males (62.9 %) and 5,371(37.1%) are females. Undergraduate regular female students in Dessie campus by the year 2017/18 were 3623 and 1748 in Kombolcha campus respectively.

Study Design

Institution based cross sectional study was employed

Sample size determination

Sample size for first objective was determined using a single population proportion formula by taking proportion of life time sexual coercion 41.8%, CL of 95% and 5% of marginal error and 10% non-response rate to increase the power and compensate for possible non response rate [4].

Since sample size calculated using single population proportion (first objective sample size calculation) was greater than the rest (=373.6). With 10% non-response rate 411 female students were included in the study.

Sampling Procedure

Initially proportionate allocation to both campuses was used according to the number of female students in each campus. List of female students were taken from registrar of the university from each college and department respectively. Proportional allocation to the size of the students was done and systematic random sampling technique was used to select study participants.

Operational definitions

Completed rape: Defined as a trial to have sexual intercourse when the victim is incapable of giving consent with actual penetration of the vagina [5].

Attempted Rape: Defined as a trial to have sexual intercourse when the victim is incapable of giving consent but without actual penetration of the vagina [5].

Lifetime sexual coercion: Referred to as female students who had experience one of the acts among listed sexual coercion measurement variables at any time during her life [6].

Twelve months sexual coercion: Referred to as female students who had experience one of the acts among listed coercion measurement variable 12 months prior to this study [6].

Sexual intercourse: Actual penetration of vagina by penis. It didn't include penetration of anus or oath by penis because anal and oral sex is not acceptable in Ethiopia (after pretest).

Good knowledge: If the respondent answer two third (four and above) questions among pre prepared knowledge measurement questions [7].

Poor knowledge: If the respondent answer below two third (three and below) questions among pre prepared knowledge measurement questions [7].

Data Collection Procedure

A structured self-administered questionnaire was prepared in English by adapting the pertinent variables and terminologies from various studies. It then translated into the local language of the study area Amharic. Finally, it was translated back to English by another expert in order to ensure its consistency for meaning and self-administration. Questionnaire was then pretested from 5% of total respondents (21 female students assigned in block 29, 30, 31(those blocks are located distant from the rest female dormitory blocks) and some modifications were done based on the responses of the pre-test. One day orientation about data collection process was given to data collectors prior to data collection period. Pre-tested self-administered questionnaire were distributed after gathering of selected female students in respective TV room near dormitory. Immediately after the distribution of the questionnaire, general orientation was given to female students in order to make clear the questions and to fill their own response on questionnaire. Selected students who weren't found during data collection period were kept up to three chances and still they were absent, taken as non-response rate.

Finally the filled questionnaire was collected back in a sealed boxes found at the gates of TV rooms. The principal investigator checks the filled questionnaire on the spot for completeness. Whenever the questionnaire became incomplete, it counted as non-response. Data was collected by three BSc holders female nursing staffs in collaborate with respective dormitory, block and floor master female students.

Data Quality Control

Pretested self- administered questionnaire was used for data collection. Adequate orientation for data collector and Study participant were provided about the purpose and usefulness of the study. Data collectors were female in order to ensure friendly atmosphere and reduce their stress since the study touches sensitive issue. Also data collection was healed in respective TV rooms which make respondents free of any external disturbance. Data was entered to Epi-Data version 3.1software to clean the data before analysis using SPSS software.

Data Processing and Analysis

After completeness of questionnaire was checked, data was entered into Epi-Data version 3.1software. For further analysis, data was exported to SPSS version 23. Initially Relevant variables were computed and presented using descriptive statistics like text, frequency distribution table, pie chart and graph. Further to identify statistically significant associated factors, first bivariate analysis was made for each independent variable to outcome variable separately. Those variables with P-value < 0.2 in bivariate analysis was imported to final model(multivariate analysis).In multivariate analysis those variables with P-value <0.05 and 95% CI didn't cross one was considered as statistically significant variable and finally data was presented with 95%CI and AOR and P value.

Ethical Consideration

Ethical clearance was obtained from Research Ethical Review committee of Wollo University, College Medicine and Health sciences research office. For any of the eligible study participant the purpose, benefits, confidential nature, discomforts and right of withdrawal or stop filling the questionnaire was described and discussion. For Confidentiality and privacy of participants their name and identification number weren't recorded on the questionnaire.

Result

Socio Demographic Characteristics of Respondents

From a total of 411 participants required, 402 female students were involved in the study with response rate of 97.8%. Of them 256(63.7%) and 146(36.3%) were studied in Dessie and Kombolcha campus respectively. The mean age of respondents were 21 ± 2.13 , and 94.8% were below the age of 25 years. Majority 291 (72.4%) of the respondents were Orthodox Christian followed by Muslim 67(16.7%). More than half of the respondents were Amhara followed by Tigrie in ethnicity which accounts 226(56.2%) and 93(23%) respectively.

Out of the total respondents 107(26.6%), 40 (10%) and 255 (63.4%) were received greater than 750, 500- 750 and less than 500 ETH Birr as monthly pocket money respectively and 330(82.1%) of them think as it is enough. Respondent's levels of knowledge for sexual coercion were assessed. Accordingly 148(36.8%) of respondents were have a poor knowledge and 254(63.3%) of respondent were have a good knowledge.

Substance Use History of Respondents

About thirty three percent of the respondents stated that they have history of alcohol drinking. Among those who have history of alcohol drinking three forth (74%) of them drink occasionally. Only 12(3%) of the respondents have used substances like shisha, hashish.

Family History of Respondents

Most of the respondents' parents haven't got formal education. Among a total of respondents 117(29.1%) of respondent's father, and 171 (42.5%) of respondent's mother haven't got formal education. Before joining university a total of 325 (80.8%) respondents were live with both parents, and 7 (1.7%) of the respondents were live alone.

Sexual History of Respondents

Among a total of respondents 100(25%) of them had watched pornographic videos and 58(58%) of them have taken from internet. One hundred fifty eight 158(39.1%) of the total respondent reported that they had sexual intercourse in their life time and 96 (61.1%) of them had intercourse before the age of 19 years old (average age for entrance to university). The mean age and standard deviation of respondents at their first sexual intercourse was 18.9 ± 1.98 years (Table 1).

Variables		Frequency	Percentage (%)
Ever watch pornographic videos	Never	302	75.1
	Sometimes	75	18.7
	Usually	25	6.2
	Always	0	0
Where did they got those pornographic videos	Video house	1	1
	Share from friend	41	41
	Internet	58	58
Number of sexual partners they had	Haven't sexual partners	210	52.2
	Have Single sexual partner	128	31.8
	Have More than two sexual partners	64	15.9
Ever had sexual intercourses	Yes	158	39.3
	No	244	60.7
Age of respondent during their first sexual intercourse	<19 years	96	61.1
	≥19years	61	38.9
	Mean ± SD	18.9 ± 1.98	
Ever had regular boyfriend currently	Yes	142	35.4
	No	259	64.6
with whom respondents shag	Foreign	3	42.9
	Local	4	57.1
Perceived reason to be shag with foreign	To get much money	2	66.7
	Matter of color	1	33.3
Ever heard about forced sex	Yes	187	46.5
	No	215	53.5
Ever encountered forced sex	Yes	55	13.7

	No	347	86.3
Where respondents victimized	Respondents home	6	10.9
	Perpetrators' home	18	32.7
	Hotel	21	38.2
	Community area	6	10.9
	Their home(for spouses)	4	7.2
Time of encountered forced sex	Day	25	45.5
	Night	30	54.5
Perpetrators who engaged in forced sex	Father	6	10.9
	Other Close relative	4	7.3
	Neighbor	7	12.7
	Husband/boy friend	8	14.5
	Student/teacher	16	29
	Unknown strangers	13	23.7

Table 1: Sexual history of female students in Wollo University, Ethiopia, 2018.

Reason for respondent’s first sexual intercourse

Among a total of 158 sexually active female students 23 (14.6%) of them s started sex by marriage, 75 (47.5%) started

due to internal desire, 15(9.5%) started due to peer pressure, 23 (14.6%) due to promise made by their boyfriend, 13 (8.3%) by force, 7(4.46%) due to promise to get money and 2(1.27%) due to promising of passing examination (figure 1).

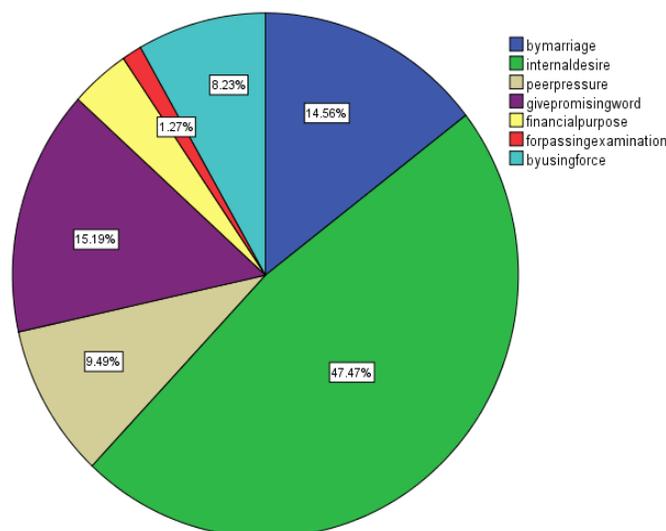


Figure 1: Reason for first sexual intercourse among female students of Wollo University, Ethiopia 2018.

Mechanism taken by Perpetrators to Rape Respondents

The major mechanism used to force females to have sex reported by the victims of completed rape were making them drunk 15(27.3%), hitting them 11(20%), financial reason 7(12.7%), and by defacing their grade then promise to pass the exam by their teachers 4(7.3%).

Legal insurance for Victimized Female Respondents

Among a total of fifty five victimized female students 39 (70.9%) of them didn't share to anybody about their victimization. Only two (3.6%) of the rape was reported to the legal body (police). The victims of completed rape were asked about why they did not report to any body and gave different reasons.

Proportion of Sexual Coercion

Out of the total study subjects, the lifetime prevalence of completed rape was 13.7% (95% CI, 10.2%, and 16.9%) and 12 months prevalence was 1.2% (95% CI, 0.2%, and 2.5%). The lifetime and 12 months prevalence of attempted rape were 21.4% (95% CI, 17.4%, 25.9%) and 7% (95% CI, 4.5%, 9.5%) respectively. The reported lifetime and 12 months prevalence of any form of sexual coercion were 59.7% (95% CI, 54.7%, 64.7%) and 34.1% (95% CI, 29.4%, 38.8% respectively. The reported lifetime and 12 months prevalence of spousal

violence were 9.7% (95% CI, 6.7%, 12.9%) and 2.5% (95% CI, 1%, 4.2%) respectively. Proportion of lifetime sexual coercion among female students in Dessie and Kombolcha campus were 152(59.4%) and 88(60.3%) respectively.

Factors Associated with Sexual Coercion among Respondents

In order to see the association between lifetime sexual coercion and explanatory variable, bivariate and multivariate binary logistic regression was carried out. Those variables found to be statistically significant within the bivariate logistic regression model based on the COR, their CI, and P value ($P \leq 0.2$) were entered into the multivariable logistic regression model to come up with final predictors of lifetime sexual coercion.

By Considering the AOR it was found out that respondents who have sexual intercourse (AOR = 4.16, 95% CI: 2.38, 7.27), respondents who have seen pornographic image (AOR = 2.46 95% CI 1.24, 4.89), respondents who witness history of their mother beaten by partner during their child hood (AOR = 2.5, 95% CI 1.17, 5.37), and respondents whose family getting separated (AOR = 2.08 95% CI 1.06, 4.08) were risky variables were as respondents who have got 500-750 EHB as monthly pocket money (AOR = 0.32 95% CI 0.14, 0.713) and respondents who have good knowledge about sexual coercion (AOR = 0.48 95% CI 0.29, 0.80) were preventive predictors of lifetime sexual coercion (Table 2).

Variables		Sexual coercion		COR(95%CI)	AOR(95%CI)
		yes	No		
Respondent age	<20	101	86	0.124(0.028, 0.546)**	0.734(0.247, 2.181)
	21-24	120	74	0.171(0.39, 0.756)	0.764(0.271, 2.148)
	≥25	19	2	1	1
Class level	1	56	51	1	1
	2	71	49	1.3(0.78, 2.232)	1.04(0.56, 1.95)
	3	71	36	1.8(1.03, 3.32)*	1.23(0.59, 2.59)

	4	19	15	1.15(0.53, 2.5)	0.53(0.2, 1.4)
	5	23	11	1.9(0.85, 4.29)	1.3(0.46, 4.05)
Monthly pocket money	<500	152	103	1	1
	500-750	17	23	0.5(0.26, 0.98)*	0.32(0.14, 0.72)**
	≥750	71	36	1.34(0.8, 2.14)	1(0.57, 1.756)
Ever drink alcohol	Yes	98	37	2.33(1.49, 3.65)**	1.25(0.71, 2.18)
	No	142	125	1	1
Ever chewing chat	Yes	37	6	4.74(1.95, 11.5)**	1.83(0.60, 5.58)
	No	203	156	1	1
Ever smoking cigarette	Yes	12	3	2.80(0.78, 10.1)	0.23(0.05, 1.04)
	No	228	159	1	1
Family living together	Yes	198	140	1	1
	No	45	22	1.97(1.08, 3.58)*	2.08(1.06, 4.08)*
History of mother beaten by partner	Yes	55	12	3.72(1.92, 7.19)**	2.5(1.17, 5.369)*
	No	185	150	1	1
Ever seen pornographic image	Yes	82	12	4.15(2.37, 7.25)**	2.46(1.24, 4.89)**
	No	158	144	1	1
Number of sexual partners	No sexual partner	98	112	1	1
	One	92	36	1.92(1.8, 4.68)**	1.09(0.39,3.05)
	More than two	50	14	4.08(2.13, 7.83)**	0.70(0.24, 2.07)
Ever had sexual intercourse	Yes	129	28	5.56(3.44, 8.99)**	4.16(2.38, 7.27)**
	No	111	134	1	1
Ever had regular boyfriend currently	Yes	101	41	1	1
	No	139	120	0.47(0.30, 0.73)**	1.64(0.82, 3.26)
Ever heard about forced sex	Yes	141	46	3.59(2.34, 5.51)**	3.5(2.11, 5.81)**
	No	99	116	1	1
Level of knowledge about sexual coercion	Poor knowledge	97	51	1	1
	Good knowledge	143	111	0.67(0.45, 1.03)	0.48(0.29, 0.80)**
P value < 0.05 = *, p value < 0.01= **, reference = 1					

Table 2: Bivariate and multivariate logistic analyses of predictor variables and lifetime sexual coercion among female students of Wollo University, Ethiopia, 2018.

Discussion

The finding of this study suggests magnitude and factors associated with sexual coercion among female students of Wollo University. The lifetime prevalence of completed rape was 13.7% (95% CI, 10.2, and 16.9). This result is lower than the study conducted in Nekemte town collage female students [8]. This may be due to difference in socio cultural status and geographic location and consistent to population based cross sectional study conducted in kisumu (Kenya), cross sectional study conducted in Ambo and Addis Ababa university female students [5,6,9]. Among total of fifty five completed rape victims only 2(3.6%) of female students reported to legal body (police) that indicates majority of our students hide themselves with their physical and emotional break and painful problem.

Twelve months prevalence of completed rape was 1.2% (95% CI, 0.2, and 2.5). This result is lower than the study conducted in Nekemte town collage female students [8]. This may due to difference in socio cultural status and geographic location and in line with study conducted in Ambo and Addis Ababa university female students [5,6]. This result clues that majority of completed rape case occurred before students enter into university that tells campus environment is protective area even students were out of the preservation of their family when they come to university.

The lifetime attempted rape were 21.4% (95% CI, 17.4, 25.9) which is lower than studies conducted in Nekemte town collage and Addis Ababa university female students [5,8] and 12 months prevalence of attempted rape were 7% (95% CI, 4.5, 9.5) which is in line proportion with studies conducted in Nekemte, Meda Wollabo and Addis Ababa university female students [5,8,12].

The reported any form of lifetime sexual coercion were 59.7% (95% CI, 54.7, 64.7) which is higher than studies conducted in population based survey of young population in Nyeri (Kenya), Meda Wollabo, Bishoftu Town private university ,

and a study conducted among 980 Ugandan university students [12,13,14,15]. This may be due difference in socio demographic characteristics, cultural and geographic boundary of respondents.

Twelve months prevalence of any form of sexual coercion were 34.1% (95% CI, 29.4, 38.8) which is higher than studies in Meda Wollabo university [12] and lower from studies in Ambo university female students [6]. This difference may be due difference in target population, used sampling method and data collection tools.

The reported lifetime prevalence of spousal violence was 9.7% (95% CI, 6.7, and 12.9) which is higher than Japan. This may due to geo-cultural and developmental difference between the countries, but too much lower than Uganda (41%), Nigeria (18%), and South Africa (49%) of the women reported at least one episode of Intimate partner violence. This may be due to difference age, geo-cultural difference of target population [16].

The other significant finding of this study was there is no significant difference in lifetime proportion of sexual coercion between Dessie and Kombolcha campus. This may due to success of different forum and programs (pajama night) healed in Kombolcha campus and new SRH course given to protect female students from different gender related hazards.

Among significant factors; ever had sexual intercourse was the one which described as the odds of female students to be sexually coerced were four times more likely among respondents who have sexual intercourse as compared to those who haven't sexual intercourse (AOR = 4.16, 95% CI: 2.38, 7.27) consistent with studies conducted in Dilla town [17]. This association may be due to the reason of females who had on sexual relation and persistent exposure to sexual intercourse with different partner had higher risk to be sexually coerced.

This study also revealed that the odds of sexually coerced were two times higher than in the respondents who have been watched pornographic videos as compared to the respondents who hadn't watched pornographic videos (AOR = 2.46 95% CI 1.24, 4.89).

The result was consistent to cross sectional descriptive study conducted in Addis Ababa high school students and Large-scale surveys undertaken with an older group of young people (average age 18) in Norway and Sweden on association of watching pornographic video with sexual coercion [18,19]. This may be due to, watching that video damage and change young's attitude and behavior. Young may prefer violent acts of sexual intercourse and sexual experimentation that ends with sexual coercion.

Respondents who witness their mother beaten by partner during their child hood have higher odds to be sexually coerced than those who hadn't (AOR = 2.5, 95% CI 1.17, 5.37) which was consistent to institution based cross sectional study conducted in ambo university female students on sexual coercion [6]. The possible explanation could be children who had witness their mother beaten by partner during childhood period made depressed and expose them to social adjustment problems and weaker in coping of any reproductive health challenges that end with give a hand to coercion easily.

This study also reveals that the odds of sexually coerced among female students whose family got separated was higher as compared to those female students with parents live together (AOR = 2.08, 95% CI 1.06, 4.08). This result is consistent with study conducted in population based survey of young population in Nyeri (Kenya) and institution based cross sectional study conducted in Addis Ababa University and Butajira technical school [5,9,13].

These associations could be due to lack of confidence and life skills useful to challenge and negotiate sexual relationship including finding of honest and congruent peers.

On the other hand there were some factors which are stated as preventive factors for life time Sexual Coercion. Female students who have got 500-750 EHB as monthly pocket money were 68% lesser odd to be sexually coerced as compared to female students who acquiesce less than 500 ETB monthly (AOR = 0.32, 95% CI 0.14, 0.72) which was consistent with the study conducted in Addis Ababa university [5]. This association could be due to female students who got enough monthly pocket money reduce the contribution to be coerced by financial reason.

Respondents who have good knowledge about sexual coercion were 52% lesser odds to be sexually coerced than that of students with poor knowledge about sexual coercion (AOR = 0.48, 95% CI 0.29, 0.80). This could be due to enough knowledge about sexual coercion prevention method and coping with coercion related stress too.

Conclusion

This study revealed that the magnitude of sexual coercion is significant among university female students. Also there were significant factors which contribute to sexual coercion including have a history of sexual intercourse, ever watched pornographic video, witness mother beaten by partner during their child hood period, family got separated were risky independent variables were as received monthly pocket money (500-750 ETH birr) and level of knowledge (good) about sexual coercion were among a preventive predictor variables of lifetime sexual coercion.

Recommendation

The university should introduce rape crisis centers in health institutions and prepare a standardized treatment for STDs, including antiretroviral Prophylaxis, emergency contraception, and counseling to alleviate psychological problems of students. Regional education bureau should include in the curriculum (education about reproductive health and sexuality,

how to challenge traditional gender norms and create new models of healthy relationship should be included in the curriculum and started from elementary). Zonal women affair in collaborate with regional state should work on Empowering women and girls: - which includes, strengthen women in leadership, decision making and increase women's access to control over economic resources. Legal body should Implementing the existing legal punishment and should raising the awareness of policy-making bodies about the prevalence and consequent of sexual coercion. In collaboration with stockholders (especially with FM stations), awareness about sexual coercion should be created on society through IEC and other Future longitudinal study should recommended to assess health consequences of sexual coercion.

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- Availability of Data and Material: the datasets during and/or analyzed during the current study is available from the corresponding author on reasonable request.
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- Competing interest: The authors declare that they have no competing interest.
- Author's contribution

NC: Consult the research proposal, conducted the research, and analysis and wrote the manuscript.

SK: Involved in the write up of the methodology of proposal, did data entry and research work. All are equally contributed.

AM: Consult the research proposal, conducted the research, and analysis.

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