

Contraceptive Use and Associated Factors among Dilla University Female Students, Southern Ethiopia

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Abstract

Background

Decision making to use contraceptives by female university students involves a complex interaction of individual, social, family and peer factors. These elements take steps in combination with environmental and psychosocial factors such as access to facilities and attitudes towards sexual and reproductive behaviors that influence the contraceptive decision that university students make.

Methods

A cross sectional study design was used. The data were collected from 551 randomly selected female students of Dilla University by using pre-tested structured questionnaire. Data were entered using EPI info Version 3.5.1 and analyzed by SPSS version 20. Descriptive statistics was computed and odds ratio along with the 95% confidence interval was estimated to identify factors associated with contraceptive use using multivariate logistic regression. Level of statistical significance was declared at P- value less or equal to 0.05.

Results

In this study the prevalence of contraceptive use was 20.9 % [95% CI 17.9, 23.9%]. Out of the total respondents, 180 (32.8%) were sexually active, from which 96 (53.3%) started their first sex at age 15-17 and 75 (41.7%) started their first sex at age 18-20. From 178 (32.3%) respondents that had sex in the last 12 months, more than half 115 (64.4%) had used contraceptives and 63 (35.6%) did not use contraceptive. Embarrassment to buy, fear of side effects and lack of information where to get the method were the main reasons for not using contraceptives. Attitude towards who should take responsibility was found to be a significantly associated with use contraceptive [AOR =4.2, 95% CI: (2.34 – 12.86)] and not discussing contraceptive issues with friends was found to be a significantly associated with not to use contraceptive [AOR =0.32, 95% CI: (0.15-0.70)].

Conclusion and recommendation

Though the respondents' information about contraceptives and attitude towards contraceptive use is optimum, the magnitude of non use contraceptive was found to be high among sexually active participants. Peer to peer discussions and pursuing mutual responsibility among sexual partners can enhance use of contraceptives among female university students. The university and local health bodies should work together to improve contraceptive use among sexually active students.

Key words: contraceptives, adolescent and youth

1. Introduction

In every setting, sexual activity appears to begin during adolescence among a substantial proportion of youth. Much of this activity is risky; the practice of contraception and condom use is often erratic and unwanted pregnancy and unsafe abortions are observed in many settings. Sexual relations are not always consensual: force and coercion are far from unknown. While young people tend to be generally well informed, they have only patchy in-depth knowledge of issues related to sexuality. Moreover, expressed norms often conflict with behavior. Moreover, there are wide gender-based differences in sexual conduct, and in the ability to negotiate sexual activity and contraceptive use. Contraceptive experience of abortion-seekers suggests that practice tends to be irregular, or incorrect, and the method of choice is largely traditional (1).

Adolescent pregnancy is commonplace in many countries. About 16 million adolescent girls aged 15-19 give birth each year, roughly 11% of all births worldwide. Almost 95% of these births occur in developing countries. Half of all adolescent births occur in just seven countries: Bangladesh, Brazil, the Democratic Republic of Congo, Ethiopia, Nigeria, India and the United States (2).

Young people disproportionately resort to unsafe abortion due to limited availability and high cost of quality medical abortion procedures and because they have more unwanted pregnancies than older women (3). Overall risk of death from unsafe abortion is by far the highest in Africa, where the case fatality rate reaches 7 deaths per 1000 unsafe abortions (4). Pregnancies occurring among unmarried women are often unintended. Unintended pregnancies result from contraceptive non-use, misuse, and method failure. Adolescent women are more likely not to use and to misuse contraceptive than older women (5).

In Ethiopia where approximately 33% of the population falls between the ages of 10-24, a significant proportion of the youth practice unsafe sex and sex at early age (6, 7). A study conducted in five Ethiopian

Universities has revealed that, 30% of students ever had sexual intercourses. The mean age at which students start sexual intercourse was 17.9 year. Of the study participants who ever had sexual intercourses, 59.4% started sex during high school.

Besides, 30.4% of the female students who ever had sex reported to have more than one sexual partner. Majority 60.2% of the students use condom rarely. From the students ever had sex in the past 12 months, 26.6% of them had sex without using condom (8). Though the EDHS 2011 has revealed that the knowledge and attitude on modern contraceptive is optimum, adolescent birth rate is 79 per 1000 among women aged 15-19 (9).

The Ethiopian Ministry of Health has developed of the national adolescent and youth reproductive health (AYRH) strategy, to alleviate the RH problem youth including the contraceptive needs (10). Furthermore, it has developed standards on youth friendly reproductive health services that entailed nine standards on how the service should be provided in different settings.

However, higher learning institutions, where only young people are residing, student clinics are not being utilized for contraceptive services. In spite of this, most of the existing services are non-youth friendly, undertaken in small scale and not well organized to meet the contraceptive service needs of this section of the population (11). Having this in mind this study tried to assess the prevalence of contraceptive use and identify the associated factors among female Dilla University students.

2. Methods

A cross sectional study was conducted from December to March, 2015 among regular female students of Dilla University, which is one of the governmental higher educational institutions in southern Ethiopia.

2.1 Participants and Sampling procedures

A multistage sampling was used to select 627 students for the study. Out of 4 campuses of Dilla University two campuses were randomly selected using the simple random sampling method. In the next step six schools out of thirteen were randomly selected. And then two departments under each school were randomly selected. A total of twelve departments were selected from six schools. The total sample size is proportionately allocated for each department. Further stratification was done based on the academic year of study. Finally, simple random sampling technique was applied to select the study participants. Female students who are severely ill or incapacitated and unwilling to participate were excluded from the study.

2.2 Data collection

This quantitative study employed a self-administered questionnaire prepared in English and translated into Amharic. The questionnaire was also back-translated into English.

The lists of students that are attending their studies in each year of study (section) of the selected departments were taken from the Dilla University's office of registrar. After students have been recruited based on systematic random sampling, the selected students were seated one seat apart from each other. Then the pre tested self-administered questionnaire distributed following complete explanation of the purpose of the study. The completed questionnaires were collected in a separate 'ballot box' made of cartoons in order to ensure confidentiality.

2.3 Data processing and Analyses

Data were entered using EPIinfo Version 3.5.1 statistical software and exported to SPSS software package version 20. Descriptive statistics were done to describe the study population. To identify associated factors, Bivariate and Multivariate analyses were employed on data obtained from participants who have had sex. Variables which were significant in the bivariate analysis at $p\text{-value} \leq 0.2$ were entered to the multivariate analysis. Finally, associations of variables with contraceptives use were declared by multivariate logistic regression analysis at P.value of less than or equal to 0.05.

3. Result

3.1 Socio-demographic characteristics of respondents

The mean age of respondents was 17.63 years. The respondents religious affiliation is dominated by Orthodox Christian 371 (67.3%) followed by Protestant 111 (20.1%). Most of the respondents were single 539 (97.2%) and 11 (2%) were married. The distribution of respondents by year of study indicated that more than half 357 (64.8%) of them were second year, 161 (29.2%) third year and 33 (6%) fourth year.

The result also depicted that 271 (59.1%) of the respondents' fathers were above secondary school, 187 (33.9%) primary level of education and 93 (16.9%) had not formal education. Similarly, reports of respondents' mothers' educational level shows that 227 (41.2%) had not formal education, 140 (25.3%) primary education and 183 (33.5%) above secondary education.

Table 1: Socio-demographic characteristics of respondents among Female students of Dilla university (n= 551) December, 2012.

Characteristic		Frequency	(%)
Current residence	In-campus	537	97.5
	Out of-campus	14	2.5
Previous residence	Dilla	24	4.4
	Out of Dilla	527	95.6
Age category	18-20	263	47.7
	21-23	287	50.5
	24-26	8	1.5
	27-29	1	0.2
	30-32	1	0.2
Religion	Orthodox	371	67.3
	Muslim	58	10.5
	Protestant	111	20.1
	Catholic	4	0.9
	Others	6	1.1
Marital status	Single	539	97.8
	Married	11	2
	Separated	1	0.2
Current year of study	Year 2	357	64.8
	Year 3	161	29.2

3.2 Sexual Experiences of respondents

Of all the respondents, 180 (32.8%) reported that they have ever had sex. Out of those that had sexual experience, 178 (98.3%) said they had sex in the past one year. The mean age at first sex was found to be 17.63. The main reasons for initiating first sex were related to personal desire 125 (69.4%), peer pressure 39 (21.7%) and rape 16 (8.9%).

The result also showed that 38 (21.1%) of the sexually active students in the past one year had more than one sexual partner. Of the total sexually active respondents, 72 (40%) had unplanned sex. From respondents who had sex, 28 (15.6%) of the respondents were drunk when they had sex. out of the total sexually experienced respondents, 22 (12.4%) reported ever experiencing pregnancy. The number of reported pregnancies was ranging from one to three times. Some respondents 20 (11.1%), have reported unwanted pregnancy. From the total respondents ever had pregnancy, 19 (10.6%) of them experienced induced abortion.

Table 2: Sexual Experiences of respondents among Female Students of Dilla university (n= 551), December 2012.

Characteristic		Frequency	(%)
Ever had sex	Yes	180	32.8
	No	371	67.2
Age at first sex (n=180)	15-17	96	53.3
	18-20	75	41.7
	21-24	9	5
Sex in the last 12 months (n=180)	Yes	178	98.3
	No	2	1.7
Number of sexual partners (n=180)	One partner	142	78.9
	Two partner	36	20
	Three partner	2	1.1
Unplanned sex (n=180)	Yes	72	40
	No	108	60
Drunk while having sex (n=180)	Yes	28	15.6
	No	152	84.4
How many pregnancies (n=180)	0	156	87.6
	1	21	11.4
	2	1	0.6
Unwanted pregnancy (n=180)	Yes	20	11.1
	no	160	89.9
Abortion in the past (n=180)	Yes	19	10.6
	no	161	89.4

3.3 Respondents Information on Contraceptives

Among all the respondents 525 (95.3%) have heard about contraceptive methods. Of those respondents who have heard about contraceptives, 481 (87.3%) reported that they have known where to get if they wanted. TV and friends 148 (26.9%), TV only 141 (25.6%) and Radio 85 (15.4%) are the three most sources of information reported by respondents. Schools Government health center 256 (46.5%), non-governmental clinics 66 (12%) and government hospital 52 (9.5%) were the three frequently spontaneously named sources of contraceptives for respondents in their respective orders.

Table 3: Information on Contraceptives of respondents among Female students of Dilla university, (n= 551) December, 2012.

Characteristic		Frequency (n= 551)	(%)
Heard of contraceptives	Yes	525	95.3
	No	26	4.7
Knows where to get information	Yes	481	87.3
	No	70	12.7
Source of information	Radio	85	15.4
	TV	141	25.6
	Newspaper	7	1.3
	Friends	20	3.6
	Family	24	4.4
	School education	75	13.6
	University clinic	1	0.2
	Youth clubs	19	3.4
	TV and friends	148	26.9
	All	31	5.1
Places you know for contraceptive service	Government Health Center	256	46.5
	University Clinic	28	5.1
	Government Hospital	52	9.5
	Private hospital/ Clinic	11	2
	NGO Clinic	66	12
	Any open Market	3	0.4
	Shops	2	0.2
	All	133	24.4

3.4 Attitudes of Respondents towards Contraceptives

From the total respondents 513 (93.1%) would like to know more about contraceptives. Only 301 (54.6%) of the participants reported that they discuss the issue of using contraceptive with their friends. A majority of the respondents 379 (72.1%) have reported that contraceptives are important for couples who are not ready to child birth, 63 (11.4%) the respondents have reported contraceptives as harmful and 57 (10.3%) reported not important for adolescents. From the total participants, 400 (72%) of them reported that they approve use of contraceptives by adolescents and 151 (22.4%) do not approve. Regarding the couple's responsibility to use contraceptives, 436 (79.1%) of the respondents have reported that it is the responsibility of partners, 97 (17.6%) female partner and 18 (3.3%) male partner.

Table 4. Attitudes towards Contraceptive Use among Female students of Dilla university, (n= 551) December, 2012.

Characteristic		Frequency	%
Would you like to know more about contraceptive	Yes	513	93.1
	No	38	6.9
Discuss with friends	Yes	301	54.6
	No	250	45.4
Your feelings about contraceptive	Harmful	63	11.4
	Not very important	57	10.3
	Not as important as some people say	20	3.6
	Important for two couples who are not ready to child birth	397	72.1
	Students do not need contraceptive though sexually active	12	2.2
	Others	2	0.4
Do you approve use of contraceptive use by adolescents	yes	400	72.6
	No	151	22.4
Who should take responsibility to practice contraceptive	Female partner	97	17.6
	Male Partner	18	3.3
	Both partners	436	79.1

3.5. Contraceptive Use among respondents

The prevalence of contraceptive use among the student was 123 (20.9 %). Among 178 respondents who had sex in the past one year 123 (69.1%) used contraceptives at least once and 55 (30.9%) never used. Among respondents who have ever had sex, 105 (59%) have used contraceptive during first time they had sex and 73 (41%) did not. From contraceptive methods used by ever users, 55 (44.4%) of respondents have used condoms, 34 (27.4%) emergency contraceptive pill and 25 (21%) oral contraceptive pills.

From the respondents who had sex in the past one year, 115 (64.6%) of them have used contraceptives and 63 (35.4%) did not use contraceptive during last time they had sex. The findings revealed that from the respondents who have reported that they used contraceptives last time they had sex, 45 (38.8%) of them have used condom, 43 (37.1%) used emergency contraceptive pill and 14 (12.1%) used oral contraceptive pill.

Among the reasons why they chose the contraceptive method they used, 42 (31.2%) of the respondents chose the method because it is easy to get, 25 (21.6%) easy for secret use, 12 (10.3%) it is given free, 34 (29.6%) have better knowledge on the method and 2 (1.7%) cheap to buy. From the respondents who have used the method, 50 (43.5%) of them obtained the method from private hospital/clinic, 38 (32.8%) from government hospital/health centers and 15 (12.9%) from NGO clinics.

The result also showed that among the reasons for using the methods, 91 (78.4%) respondents used the method to prevent unintended pregnancy, 21 (17.9%) used the method to prevent sexually transmitted infections and 2 (1.7%) for medication and 2 (1.7%) for other reasons. Among the respondents, 41 (35.3%) of them have reported that they always use contraceptive, 74 (64.7%) of them use contraceptive sometimes and 5 (4.3%) have never used contraceptives.

From the respondents who did not use contraceptive, 56 (88.1%) have reported to have plan to use contraceptive in the future and 7 (10.9%) reported they do not. Among the respondents who have ever used contraceptives, 45 (39.1%) of them have faced a problem of fear of side effects, 29 (25%) have faced problem embarrassment to buy, 10 (8.6%) have faced lack of information where to get contraceptives and 12 (10.3%) have faced problem of disapproval by partner

Table 5. Contraceptive Use among Sexually Active Female students of Dilla university, (n= 178), Dilla, December 2012.

Characteristic		Frequency	(%)
Ever used Contraceptive	Yes	123	69.1
	No	55	30.9
Used contraceptive first time they had sex	Yes	105	59
	No	73	41
Contraceptive method by ever users (n= 123)	Pills	25	20.3
	Condoms	55	44.4
	IUCD	1	8
	Injectable	5	4
	Emergency Contraceptive	34	27.4
	Calendar method	3	2.4
Have you used Contraceptive last time you had sex (n= 178)	Yes	115	64.4
	No	63	35.6
Contraceptive method used on last sex (n= 115)	Pills	14	12.1
	Condoms	45	38.8
	IUCD	1	0.9
	Implants	5	4.3
	Injectable	6	5.2
	Emergency Contraceptive	43	37.1
Why you choose the method (n= 115)	Calendar method	1	0.9
	Easy for secret use	25	21.6
	Easy to get it	42	31.2
	Cheap to buy	2	1.7
	It is free	12	10.3
	Have better knowledge on it	34	29.6
Place of facility you got (n= 115)	Gov't Hospital/HC	38	32.8
	University clinic	7	6
	Private hospital/ Clinic	50	44
	NGO Clinic	15	12.9
	Any open Market/shop	1	0.9
	Others	4	3.4
Purpose of using contraceptive (n= 115)	Prevent unintended pregnancy	98	85.3
	Prevent STI	15	13.8
	For medication	2	0.9

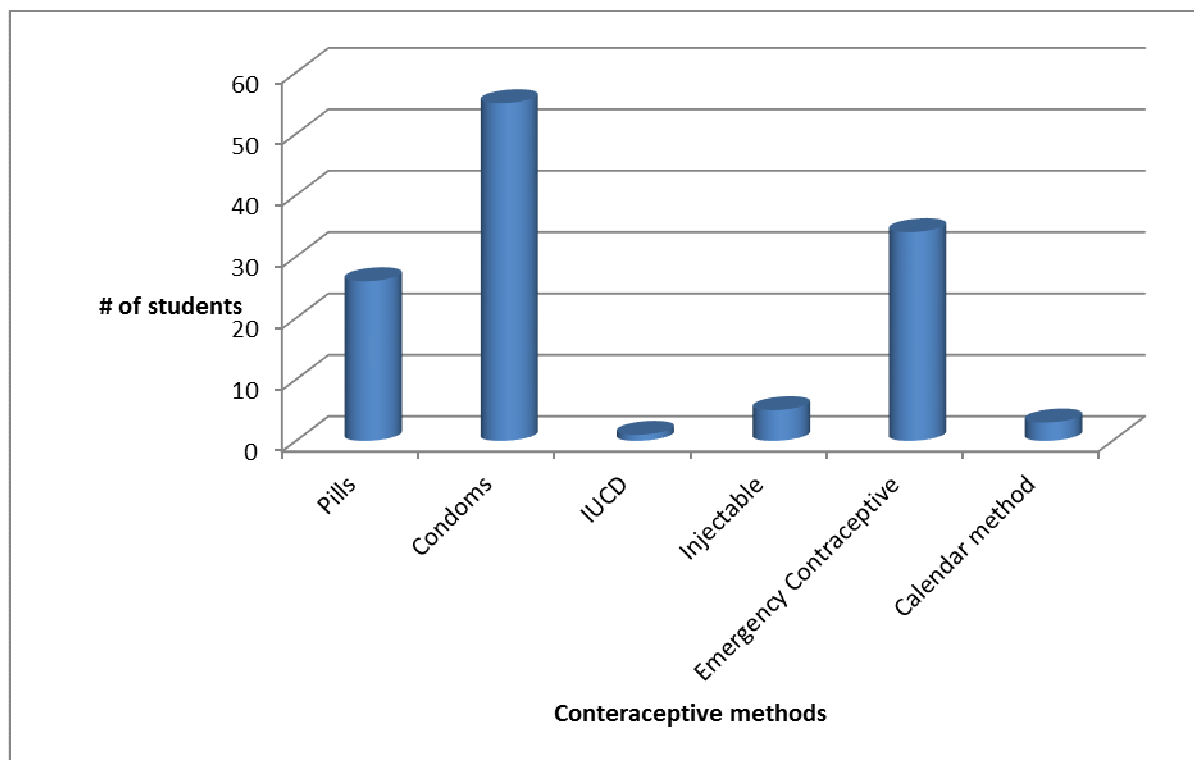


Figure 1 – Contraceptive methods used by Female students of Dilla University, December 2012.

3.6. Factors Associated to Contraceptive Use

As indicated in Table 6, some independent variables have shown significant association with contraceptive use. However, unplanned sex, parent's education level, current residence, previous residence and current year of study did not show association with contraceptive use run in multivariate analysis. As indicated, respondents who discuss contraceptive issues with their friends were 68% more likely to use contraceptive than who do not discuss with friends [AOR =0.32, 95% CI (0.15-0.70)]. This was seen as statistically significant with the logistic regression analysis.

It was also depicted that respondents' attitude towards responsibility in using contraceptives also showed statistically significant association with contraceptive use. Accordingly higher proportion of respondents who believe both partners should take responsibility in deciding whether to take contraceptive are four times likely [AOR =4.2, 95% CI: (2.34 – 12.86)] to use contraceptive than respondents who believed one (female) partner should take responsibility. Likewise, respondents who believed male partner should take responsibility are 99% more likely used contraceptive [AOR =1.99, 95% CI :(1.30, 3.06)] than respondents who believe female partner should take responsibility.

Table 6: The association of socio-demographic and Sexual activity on use of Contraceptives among Female students of Dilla university, (n=178), December 2012

Characteristics	Contraceptive Use among University Students during last time they had sex (n= 178)		Crude OR [95% CI]	Adjusted OR [95% CI]	
	Had Used	Had not Used			
Current year of study	Year 2	71	43	1	1
	Year 3	33	17	0.93(0.21,4.08)	1.37(0.24,8.05)
	Year 4	5	3	0.86(0.18, 4.03)	1.84(0.29,12.01)
Had sex in the last 12 months	Yes	113	62	1	1
	No	2	1	1.09(0.09,12.05)	0.89(0.06,12.9)
Unplanned sex	Yes	41	31	1	1
	No	74	32	1.74(0.94,3.26)	1.47(0.65,3.62)
Approve use of Contraceptive	Yes	100	54	1	1
	No	15	9	0.9(0.37:2.19)	2.56(0.93,7.82)
Discuss with friends	Yes	77	30	1	1
	No	38	33	0.45(0.24, 0.84)*	0.32(0.15, 0.70)**
Who should take responsibility	Female partner	18	18	1	1
	Male partner	4	12	2.8(1.3,6.05)**	1.99(1.30,3.06)**
	Both partner	93	33	8.45(2.45,28.05)**	4.2(2.34,12.86)**

The variables entered in the model are: Current year of study, Sex in last 12 months, unplanned sex, approve use of contraceptives, discuss with friends on contraceptive and responsibility of taking contraceptives.
 *Sig at P < 0.05, **Sig at P < 0.01

4. Discussion

This study has resulted that almost one-third of study subjects reported that they have ever had sex in their lifetime. Similar results were reported by different studies conducted among Ethiopian university students (13, 15, and 30) and students in Ugandan university (28).

Out of sexually active respondents, age at first sex was below 17. This was similar with studies conducted in Ethiopian Universities (6-8) universities in Asia and Africa (20-23). Unintended sex and unwanted pregnancy were notable among sexually active respondents. This reveals the behavior of female students to be reluctant to negotiate sexual relationships (5). In this study, 8.3% of the first sexual intercourse was initiated through rape.

Information about contraceptive methods among female university students is as high as some studies revealed and the figure reported on Ethiopian demographic and health survey 2011 (10). This may be attributed to the information disseminated through different media. However, the proportion of students who ever used contraceptives did not go parallel with their information of methods, which is consistent with other several studies (46-49).

For students to engage in sexual activity and to use contraceptives may be based on their judgments about their personal risk. For female university students, perception of pregnancy risk may serve as deterrent to sexual activity, especially if pregnancy is seen in negative terms (7). As the same time, distorted perceptions of risk, like too young to become pregnant, incorrect information on the fertile period leads to non-decision making about contraceptive (6).

Out of the total respondents, majority of study participants (93.1%) would like to know more on contraceptives. However, only 54.6% of the respondents discuss about contraceptives with their friends. This has also been evidenced indifferent studies that, most university students do not have a trend to discuss openly on reproductive matters with friends. This is an area where most stakeholders should give due attention to bring reproductive matters as an issue among university students. Regarding their feelings on contraceptives for university students, majority (72.1%) of the respondents have reported that contraceptive is important for two couples who are not ready to child birth, and on the contrary, (21.7%) reported that contraceptives are harmful and not important for university students. Negative attitudes and perceptions can lead students to suffer from negative outcomes of reproductive health problems.

In this study, majority (69.1%) of the sexually active respondents reported they had ever used contraceptives. As also indicated, contraceptive use rate among female Dilla university students was found to be

higher unlike other studies conducted in different Universities (8, 13). Among methods used, 38.8% used condom, 37.1% used emergency pills and 12.1% used pills. Condoms and Emergency contraceptive pills to be the two most preferred methods among female university students. However, when compared the method utilization rates with other studies (8), this study showed lower rates in condom utilization among university students. Despite there is an improvement in condom utilization comparing with today's high rate of teenage pregnancy (6-8). it indicates high proportions of the sexually active groups are at risk.

This study revealed that having information on the method, easy for secret use, and easy to get the method are three most reasons for choosing the above methods. Similarly, embarrassment to buy, fear of side effects and lack of information where to get the method are the three most reasons reported by sexually active respondents for not using contraceptives. This is in agreement with the findings of studies conducted in the country (8) and that in Uganda (25-26). This shows that very little attention has been given to educate this segment of population on relations of sexuality, contraceptive use and the risk of pregnancy.

A multivariate analysis depicted that discussion with peers and friends about contraceptives is significantly associated with using contraceptive. The analysis revealed that to discuss with friends is a positive predictor to use contraceptive. This can be reinforced by different studies conducted in different universities in the country and other African universities (8, 25-26). Likewise, attitudes towards responsibility to use contraceptives were also found to be significantly associated with use of contraceptives as positive predicting factors. Literatures from different parts of Africa supported this finding as sexual and reproductive decisions among young people are coerced by male partners (20-23).

Hence, all that concerned should cooperate to provide sexual and reproductive information to young people as early as possible, since program experiences from several countries suggest that tailored information can be most effective when provided earlier particularly before they join Universities (50-51).

5. Limitation of the study

Since this study is done based on response of participants, the sensitive nature of the issue can lead them to social desirability bias; as a result it may underestimate history of sexual intercourse and prevalence of contraceptive use.

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