



Condom Use Errors and Associated Factors among Sexually Active Male Students in Dilla University, South Ethiopia

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ABSTRACT

Background: Condoms are the cornerstone of Human Immune deficiency Virus prevention efforts and are widely promoted as the most effective method of preventing the sexual transmission of HIV and other sexually transmitted infections (STIs). The effectiveness of condoms depends on how consistently and correctly they are used as incorrect use of condoms may compromise the effectiveness of condoms and lead to exposure to HIV or STIs. However, only few studies have looked at how often condoms are used correctly.

Objectives: To assess condom use error and associated factors among sexually active male students in Dilla University.

Methods: A cross sectional study was conducted among 316 sexually active male students in Dilla University. Structured self administered questionnaire was used to obtain information from the study participants. The analysis was done using SPSS version 16. Descriptive analysis such as frequencies and proportions were done. Logistic regressions were also performed to identify independent predictors for condom use error. First bivariate analysis was done to select candidate variable for multivariable analysis at $p \leq 0.25$ then the candidate variable were analyzed in multivariable analysis. P -Value ≤ 0.05 was considered as a demarcation point for determining the level of significance.

Result: Of the 316 participants, 244(77.8%) of the total condom users didn't use condom consistently, 198 (62.7%) reported they wanted to use condoms but did not have access to it; 164 (51.9%) put condoms on after starting sex; 100 (31.6%) took off condoms before sex was over; 107(33.9%) reported losing erections

in association with condom use; 151(47.8%) reported breakage during sex, being not comfortable with the size of the condoms and lack of access to condom by the time they need is significantly associated with condom use error.

Conclusion and recommendation: *Being uncomfortable with the smell of the condom and with the size of the condom, having limited knowledge about application of creams on to a condom in relation to condom breakage or lubricant issues in general and lack of access to condom by the time needed were strongly associated factors for condom use error. Increasing the focus on correcting potential user failures may be an important public health strategy and promotion programs should emphasize that condoms must be used both consistently (on every occasion of intercourse) and correctly.*

Keywords: *condom use, sexually active male students, errors and associated factors*

INTRODUCTION

The global pandemic of HIV, sexually transmissible infections (STIs) and unintended pregnancy necessitates an accelerated emphasis on correct and consistent male condom use. According to global health organisations, ‘The male latex condom is the single, most efficient, available technology to reduce the sexual transmission of HIV and other sexually transmitted infections’⁽¹⁾.

However, condom effectiveness is compromised by user errors and lack of use⁽²⁾. For example, the World Health Organisation reported that condoms have a 2% perfect use failure rate for pregnancy, but the typical failure rate is 15%^(3,4). Magnified over the world population, this 4-fold difference has substantial implications for population growth and, in turn, public health. The gap between perfect and typical use has similar relevance for HIV and STI prevention, suggesting that millions of infections could be avoided by improved user effectiveness. The discrepancy between perfect and typical failure rates is attributable to the combination of both inconsistent and incorrect use, but the respective contribution of user errors to typical use failure rates has never been quantified⁽⁵⁾.

Significantly more attention has been given to consistency of condom use, with far fewer investigations on the details of user errors and problems. From a methodology perspective, measuring condom use frequency is a relatively straightforward process⁽⁶⁾. Unfortunately, the same cannot be said about measuring the

numerous errors and problems that individuals may experience when using condoms. Nonetheless, a growing body of literature is documenting the many different condom errors and problems, and their relative prevalence and correlates. We use the term errors to refer to those behaviours that represent incorrect use of condoms (e.g. letting condoms contact sharp objects or other application errors, not using condoms through the entire act of intercourse). Problems refer to those experiences that may be under less direct behavioural control of the condom user, but may compromise condom use or condom protection (e.g. breakage, slippage, erection problems, problems with fit and feel). Failing to account for condom use errors and problems can lead to faulty conclusions regarding condom effectiveness or evaluation of interventions. Additionally, errors and problems may not only compromise condom efficacy, but may also discourage condom use if people become frustrated or have less pleasurable experiences as result of them.

World health organization defines adolescent and youth as people between the age 10-19 and 15-24, respectively. At the beginning of the new millennium, about 1.7 billion people more than a quarter of the world's population were between the ages of 10 and 24, of which 86 percent living in less developing countries^(7, 8). These teenagers are tomorrow's parents. Sexual and reproductive health decisions they make today will affect the health and well-being of their countries and themselves⁽⁹⁾.

Despite their numbers, adolescent and youth have not traditionally been considered a health priority since they have lower morbidity and mortality than older age groups ⁽¹⁰⁾. Globally, 34.0 million [31.4 million–35.9 million] people were living with HIV at the end of 2011. An estimated 0.8% of adults aged 15–49 years worldwide are living with HIV, although the burden of the epidemic continues to vary considerably between countries and regions.

Sub-Saharan Africa remains most severely affected, with nearly 1 in every 20 adults (4.9%) living with HIV and accounting for 69% of the people living with HIV worldwide. Although the regional prevalence of HIV infection is nearly 25 times higher in sub-Saharan Africa than in Asia, almost 5 million people are living with HIV in South, South-East and East Asia combined. After sub-Saharan Africa, the regions most heavily affected are the Caribbean and Eastern Europe and Central Asia, where 1.0% of adults were living with HIV in 201 ⁽¹¹⁾.

Despite the rapidly spreading of HIV/AIDS epidemic many people still practice risky sexual behavior even when they know that using condoms (a barrier method) correctly and consistently, and abstaining from sex except within a monogamous relationship could avoid contracting sexually transmitted infections such as HIV/AIDS. The barrier methods used to prevent HIV infection are the same methods used to prevent other sexual transmitted infections and pregnancy. Latex and plastic condoms are included among the barrier methods. Intact latex condoms provide a continuous mechanical barrier to HIV and other sexually transmitted infections (STIs). A recent laboratory study indicated that latex and the new polyurethane condoms are the most effective mechanical barrier to fluid containing HIV-sized particles (0.1µm in diameter) available ⁽¹²⁾. Therefore, condoms block contact with the HIV and have nearly 100% effectiveness when used correctly and consistently.

People may know little about condoms and those who know about condoms may dislike them, may not afford them or may not even obtain them easily. Others believe, wrongly, that they face little or no risk of pregnancy or STIs. Even if people use condoms, the effectiveness of the condoms depends on the skill level and experience of the users. It is the misuse of the condom, rather than poor condom quality, which accounts for the majority of breakage and slippage ⁽¹³⁾. Breaks or tears can result from incorrect use such as unrolling the condom before putting it on, trying to put on the condom with the rolled rim held toward the body rather than away from it, snagging the condom with fingernails or rings, and reusing condoms ⁽¹⁴⁾.

Heterosexual anal intercourse might be practiced for many reasons, including pleasure, curiosity, preventing pregnancy, preserving virginity or avoiding contact with menstrual blood. Survey data from both developed and developing countries show that between 10% and 50% of sexually active adolescents and adults in the general population have engaged in heterosexual anal intercourse. Most of these individuals do not use condom to protect themselves from disease. Having unprotected receptive anal sex presents more risk of sexual HIV transmission for women than does unprotected vaginal intercourse ⁽¹⁵⁾. Sexual practices such as anal intercourse may put greater stress on condoms. In three of four studies breakage rates for anal intercourse were 2.1% or less. The range in the four studies was 1.6% to 7.3%. Rates of slippage during anal intercourse range from less than 2.9% to 21% ⁽¹⁶⁾.

Prevention, despite numerous programs around the world is in its infancy stages. The use of condoms, the cheapest and most effective form of protection against AIDS during sexual contact, is rare in most regions in the developing world. In nearly all Africa countries condom use rate is less than 5% Only four countries in Asia and four in Latin America and the Caribbean have Condom use rates of 10% or more; the highest rate of condom use is in Japan with 46%, and Singapore

24%. In Europe, Denmark, Finland, Sweden, Spain, and Slovakia all show a rate over 20% The U.S condom usage rate is 13% and Britain in 18%⁽²⁴⁾. Significantly more attention has been given to consistency of condom use, with far fewer investigations on the details of user errors and problems. From a methodology perspective, measuring condom use frequency is a relatively straightforward process⁽⁶⁾. Unfortunately, the same cannot be said about measuring the numerous errors and problems that individuals may experience when using condoms. Nonetheless, a growing body of literature is documenting the many different condom errors and problems, and their relative prevalence and correlates. We use the term errors to refer to those behaviours that represent incorrect use of condoms (e.g. letting condoms contact sharp objects or other application errors, not using condoms through the entire act of intercourse). Problems refer to those experiences that may be under less direct behavioural control of the condom user, but may compromise condom use or condom protection (e.g. breakage, slippage, erection problems, problems with fit and feel).

METHODS AND MATERIAL

The study was conducted in Dilla University which is one of the public higher institutions. The history of Dilla University can be traced back to the year 1996 with its name, Dilla College of teacher's education and Health sciences. The then Dilla College constituted two faculties: Faculty of teachers Education and Faculty of Health Sciences. However, in 2001, the College was included in the then newly emerging University named Debub University. In 2004 Dilla Collage once again went through another phase and sprung in to a full- fledged University. The study was conducted from February 1-30. A cross sectional study design was conducted. All unmarried male students who were sexually active in the past twelve months attending their studies in Dilla University in 2013/4GC academic year

All sampled unmarried male students who were sexually active in the past twelve months attending their studies Dilla University in 2013/4 GC academic year fulfilling the inclusion and exclusion criteria. Male, undergraduate, sexually active in the past twelve months and not married were the eligibility criteria for my study. Those who can't communicate due to illness were excluded. From the same study done on sexual experience and their correlates among Jigjiga university students, 44.6% of the students are considered having ever had sex from this 73.94% are male sexually active in the past twelve months⁽³⁹⁾. In this study to get all the students who are sexually active in the last 12 month by taking the ratio of the students who are sexually active in the university multiplied by the total sample size obtained by the single population proportion formula. Therefore 957 students were included in the first survey.

All the seven colleges and one school in the campus were considered in the sampling process for the selection of the study participants. The total sample size was distributed to all colleges and proportionate to their total student's size. And again it was distributed to years of student using proportional allocation technique. The final respondents in each college in respective of the year of the students were selected by simple random sampling technique using lottery method by using the list of all student obtained from Dilla university registrar alumina office. For students who were not around during the data collection period, other students were selected from the sampling frame.

Due to the sensitive nature of the study and the educational background of the respondents, a privately self-administrated, structured questionnaire in the English language was used to obtain information from the study participants.

After identifying the study participant by using the lottery method from the list of all the students then the data collectors distributed and collected the questionnaire from the selected participants. Therefore the role of the data collectors were

starting from giving and collecting the questionnaire to helping the respondents in answering anything unclear.

The data were entered, cleaned, coded, missing value was checked using Epi data version 3.14 and analyzed using SPSS version 16. Descriptive analysis such as frequencies and proportions were done. First bivariate analysis was done to select candidate variable for multivariable analysis at $p \leq 0.25$. Then the candidate variables were analyzed in multivariable analysis (which employed binary logistic regression) considering $p \leq 0.05$ as a cutoff of point to determine the level of significance. After that output were presented by tables.

RESULTS

Three hundred sixteen students of the total 957 sample size completed the questionnaire making

the response rate 100%, because screening questionnaire was used to select sexually active male students in the past twelve months. Majority 308 (97.5%) of them are in the age group between 18 to 24 years and nearly half, 153 (48.4%) of them were from 3rd year students, and 148(46.8%) of them were orthodox Christianity

Respondent's awareness and knowledge related to HIV/AIDS and condom

314 (99.4%) of the respondents believed that HIV could be transmitted through vaginal sex and 301(95.3% of them believed that condom can prevent HIV transmission. The study also revealed that 39(12.3%) of the respondents believed that condom could not break easily if exposed to sun light (table 2).

Table 1: knowledge related to HIV/AIDS and condom that result in condom use error among sexually active male students of Dilla university, Dilla, 2014 (n=316).

Characteristics	n (%)
HIV could transmit through vaginal sex	
Yes	314 (99.4)
no	2 (0.6)
Condoms can prevent HIV transmit ion	
Yes	301 (95.3)
no	15 (4.7)
Condoms can be source of HIV transmit ion	
Yes	2 (0.6)
no	314 (99.4)
Condoms could expire	
Yes	304 (96.2)
no	12 (3.8)
Sunlight exposed condoms break easily	
Yes	254 (80.4)
No	39 (12.3)
I don't know	23 (7.3)
Condoms on partially erected penis cause breakage	
Yes	204 (64.6)
no	71 (22.5)
I don't know	41 (13.0)
Trying to unroll condom on to a penis cause breakage	
Yes	195 (61.7)
No	85 (26.9)
I don't know	36 (11.4)

One hundred forty three (45.3%) of the respondent believe that application of oil in a condom would not result in condom breakage, and majority 198(62.7%) of them reported that they wanted condom but did not have one at the time

of intercourse, 117 (37%) did not discuss with their partner before sex and from those who had sex after having alcohol 87(27.5%) of them didn't use condom (table 2).

Table 2 Awareness about application of lubricant on to a condom, availability of condoms and communication with sexual partner of sexually active male students of Dilla university, Dilla, 2014 (n =316).

Characteristics	n (%)
Application of oil on condom cause breakage	
Yes	62 (19.6)
No	143 (45.3)
I don't know	111 (35.1)
Application of creams on condom cause breakage	
Yes	76 (24.1)
No	123 (38.9)
I don't know	117 (37.0)
Application of lotions on condom cause breakage	
Yes	74 (23.4)
No	127 (40.2)
I don't know	115 (36.4)
Ever wanted condom but didn't have one	
Yes	198 (62.7)
No	117 (37)
Ever discussed with your sexual partner about condom use before sex	
Yes	199 (63)
No	117 (37)

The study revealed that 189(59.8%) of the respondents had taken a training on how to use condom. As to reasons for condom use 195 (61.7%) respondents used condom to prevent themselves from HIV/AIDS and 66 (20.9%) used to prevent pregnancy. One hundred thirty nine (44%) of the respondents reported that they didn't use condom because they couldn't find it by the time they need it. One hundred thirty five (42.7%) of the respondents reported that they were not comfortable with the size of the condom and majority 199(63%) of them reported not comfortable with the smell, from 128 (40.6%) of the respondents reported that ever face loss of erection 72 (22.8%) said that it's due to the process while wearing the condom (table 3).

Table 3 condom utilization of the respondents during the past twelve months prior to the study, Dilla, 2014 (n = 316).

Characteristics	n (%)
Training on condom use	
Yes	189 (59.8)
No	126 (39.9)
Reasons for condom use	
Want to prevent HIV/AIDS	195 (61.7)
Want to prevent pregnancy	66 (20.9)
I never used condom	29 (9.2)
Others*	12(2.8)
Reasons for not using condom	
I couldn't find condoms	139 (44)
I have trust on my partner	48 (15.2)
Am in love with my partner	26 (8.2)
Dislike condom	19 (6)
Others**	8(2.5)
Comfort with the size	
Yes	152 (48.1)
no	135 (42.7)
I don't know	29 (9.2)
Comfort with the smell	
Yes	90 (28.5)
No	199 (63.0)
I don't know	27 (8.5)
Reasons for loss of erection	
Due to the process while wearing the condom	72 (22.8)
Due to condom smell	35 (11.1)
Due to personal problem	17 (5.4)
Other	4 (1.3)

* didn't discuss before use and don't trust sexual partner.

**condom is expensive and didn't have reason to use.

Condom use error

From the total students who used condom 121(42.1%) of didn't checked the expire date of condom before use, also 47(14.9%) of them reported that they used expired condom knowingly and half 158(50%) of them also did not ever checked for visible damage on the condom before use and 154(51.9%) of the respondents reported that they had the experience of putting condom after already started sex. Seventy four (23.4%) reported that they used lubricant with the condom, 100(31.6%) students reported that they

took off condom before sex was over, 59 (18.7%) reported that their condom contacted sharp objects and 53(16.8%) of the students used the same condom also for another sexual session. One hundred fifty one (47.8%) and 139(44%) reported they had the experience of condom breakage and slippage respectively (table 4).

Table 4: Frequency of condom use error and problem among sexually active male students of Dilla university 2014 (n=316).

Characteristics	n (%)
Sex after alcohol, Was condom used	
Yes	127 (40.2)
No	87 (27.5)
Frequency of condom use in the past twelve months	
Never used	29 (9.2)
Sometimes	106 (33.5)
Most of the time	109 (34.5)
Always	72 (22.8)
Ever face loss of erection	
Yes	128 (40.5)
No	188 (59.5)
Checked for expired date	
Yes	166(57.4)
No	121(42.6)
Checked for visible damage in the condom	
Yes	126(39.8)
No	158(50)
I don't remember	3(0.9)
Ever put condom after already started sex	
Yes	164(51.9)
No	123(38.9)
Hold and leave space at the tip of the condom	
Yes	228(72.1)
No	59(18.7)
Put condom on the wrong side up	
Yes	91(28.8)
No	195(6.7)
I don't remember	1(0.3)
Name of the lubricant used	
Lotion	33(10.4)
Vaseline	27(8.5)
Water based	6(1.9)
Others	8(2.5)
Took condom off before sex was over	
Yes	100(31.6)
No	186(58.9)
Experience of condom slipped off while withdrawing penis	
Yes	101(32.3)
No	186(58.6)
Started sex before condom was unrolled to base of penis	
Yes	112(35.4)
No	174(55.1)
Used condom stored more than 1 month in a wallet	
Yes	76(24.1)
No	210(66.5)
Ever had the experience of oil based lubricant	
Yes	50(15.8)

No	237(75.0)
Ever used condom stored in a cool and dry place	
Yes	150(47.5)
No	136(43.0)
Ever unrolled condom and then tried to put it on the penis	
Yes	63(19.9)
No	223(70.6)
Ever your condom contacted sharp objects	
Yes	59(18.7)
No	228(72.2)
Ever knowingly used damaged condom	
Yes	29(9.2)
No	258(72.2)
Ever knowingly use expired condom	
Yes	47(14.9)
No	239(75.6)
Ever used condom again for another sexual session	
Yes	53(16.8)
No	234(74)
Ever face your condom become broken	
Yes	151(47.8)
No	136(43)
I never used condom	29(9.2)
Ever faced your condom become slipped off during sex	
Yes	139(44)
No	148(46.8)

Variables which were associated with condom use error in the bivariate analysis were entered in to multivariate analysis using back ward likelihood method to control for confounder and to come up with the major predictors for condom use error. The analysis demonstrated that those participants who were not comfortable with the size of the condom were 2.834 times more likely to commit one of the errors when compared to those who were comfortable with the size of the condoms, those who were comfortable with the smell of the condom are 0.346 times more likely to commit one of the errors than those who were not comfortable, those who thought that application of creams could not result in condom breakage were 3.735 times more likely to report one of the errors when compared to those who thought that it would result in condom breakage and respondents who reported that they did not have any problem regarding condom availability were 0.215 times more likely to commit one of the errors as

compared to those respondents who wanted condom but did not have one which is protective (table 5).

Table 5 condom use error and its associated factors among sexually active male students of Dilla university, Dilla (n=316)

Variables	Condom use error		COR (95% CI)	AOR (95%)
	YES	NO		
Ever taken training on how to use condom				
yes(ref)	139(73.5%)	50(26.5%)	1.000	
No	104(82.5%)	22(17.5%)	1.700(0.969, 2.983)	1.766(0.738, 4.226)
Comfortable with the size of the condom				
Yes(ref)	120(78.9%)	32(21.1%)	1.000	
No	121(89.6%)	14(10.4%)	2.305(1.171, 4.535)	2.834(1.168, 6.874)*
I don't know	1(3.6%)	27(96.4%)	0.10(0.0001, 0.075)	0.000
Comfortable with the smell of the condom				
Yes	78(86.7%)	12(13.3%)	0.721(0.355, 1.465)	0.346(0.140, 0.859)*
No(ref)	164(82.4%)	35(17.6%)	1.000	
I don't know	1(3.7%)	26(96.3%)	0.006(0.0001, 0.048)	1.201E8(0.000,
Do you think application of oil on a condom could cause breakage				
Yes	39(62.9%)	23(37.1%)	1.000	
No	114(79.7%)	29(20.3%)	2.318(1.202, 4.472)	0.648(0.169, 2.489)
I don't know	90(81.1%)	21(18.9%)	2.527(1.254, 5.094)	2.047(0.383, 10.939)
Do you think application of creams on a condom could cause breakage				
Yes	46(60.5%)	30(39.5%)	1.000	
No	103(83.7%)	20(16.3%)	3.359(1.729, 6.525)	3.735(1.044, 13.359)*
I don't know	94(81.1%)	23(19.7%)	2.665(1.395, 5.094)	2.102(0.450, 9.811)
Do you think application of lotion on to condom could cause breakage				
Yes	47(63.5%)	27(36.5%)	1.000	
No	106(83.5%)	21(16.5%)	2.900(1.490, 5.642)	2.065(0.575, 7.418)
I don't know	90(78.3%)	25(21.7%)	2.068(1.081, 3.955)	0.811(0.201, 3.274)
Wanted condom but did not have one				
Yes	183(92.4%)	15(7.6%)	1.000	
No	59(50.9%)	49.1%)	0.085(0.045, 0.161)	0.215(0.099, 0.464)*
Discussed with your sexual partner about condom use before sex				
Yes	145(72.9%)	54(27.1%)	1.000	
No	98(83.8%)	19(16.2%)	1.921(1.073, 3.438)	1.261(0.543, 2.927)

Variables entered in the equation were ever taken training on how to use condom, comfortable with the size of the condom, comfortable with the smell of the condom, application of oil, application of creams, application of lotions, availability of condom, and discussion with sexual partner about condom use before sex.

*significant at $P \leq 0.05$

DISCUSSION

A sizable proportion of Dilla university students reported a variety of errors and problems that could contribute to condom failure or decreased condom efficacy for STD prevention. Moreover,

some of the reported errors occurred frequently. For example, the finding about frequency of condom usage is higher than study done on patterns of sexual risk behavior among undergraduate university students in Ethiopia, among students who reported to have ever had sexual intercourse, in which 64.1% had used a condom at least once. Among those who have ever used a condom, (20.4%) used it consistently⁽²⁸⁾. which is almost similar finding with this study and it indicates that the remaining 77.8% of the total users didn't use consistently but practically whether they use it sometimes or most of the time; single event is enough for the transmission of HIV/AIDS or other STIs. Consistency is therefore another problem. Large numbers of condoms can produce minimal benefit if people don't use them consistently. Many studies find inconsistent users at higher risk than never users (17-22), perhaps because they are riskier in other ways. Consistent use requires not only long-term individual commitment but a reliable distribution system to provide condoms to people who often lack other basic needs. And the major factors that contribute for the non use of condom is availability of condom by the time they need which is about 198 (62.7%) reported that they ever wanted condom but did not have one, in the multivariate analysis those who have ever wanted condom but did not have one was significantly associated with condom use error. Therefore availability by the time they need become the major problem even though there is a free access and distribution of condoms in the university and also similar study done at Indiana University, 48% reported that they "wanted a condom but did not have one"⁽²⁶⁾. Therefore it is a common problem all over but it does not only indicate availability of condom around the area or the university it also include non availabilities of condom in their room or they don't used to put in their pocket specially such problems are common in casual sexual intercourse.

Almost one third of the study participants reported condom related loss of erection and it is found that

men who reported erection loss in association with condom use also reported more unprotected intercourse with women and were less likely to use condoms consistently compared with men without condom-associated erection loss⁽³²⁾. The loss of an erection related with condom use during sex is more than disheartening. For the fact, the experience could lead men not to opt to use condom further which could in turn contribute to risky sexual behavior that could potentially harm both partners by exposing them to sexually transmitted infections. Nearly 40 percent of the study participants reported condom-associated erection loss at least once in the previous three months, Men were almost three times more likely to report erection loss if they were less confident about how to use condoms correctly. These findings also show that there is problem of men discussing with the sexual partner about condom use⁽³⁰⁾.

From the total students who used condom 121 (42.1%) of them didn't check the expire date of condom before use, As compared to study done in US among undergraduate male students on condom use error, which indicates that 2% of participants knowingly used expired condom, this is higher, also 47(14.9%) of them reported that they used expired condom knowingly and half 158(50%) of the respondents also have not ever checked for visible damage on the condom before use. This finding is comparable with study done in US among undergraduate male students on condom use error, which indicates that 61.4% of the study participants did not check the expiration date of the condom⁽²⁶⁾. In addition, another similar study done on women indicated that women who put condom on their male partner reported that 71.3% of them did not check for the expiry date and 82.7 percent of women who put condom on their male partner and 74.5 percent of men failed to check condoms for damage before use⁽³³⁾. Most of the time peoples are negligent about such technical errors but their impact is serious.

One error that is obviously problematic in terms of risk of exposure is incomplete use. This error has frequently been investigated, and estimates suggest it is very commonly reported. Regarding early removal of condoms, this could be due to issues related to arousal and pleasure and erectile difficulties can be the impetus for taking off condoms before sex is over. In this study almost half of the respondents reported that they had the experience of putting condom after already started sex and one third of the respondents reported that they took off condom before sex was over. In a systematic review done at Indiana university two studies reported a combined prevalence (either late application or early removal or both), ranging from 20.0% to 60.0% of participants⁽³⁴⁾.

Additional lubricant can help avoid excessive friction that can be uncomfortable and may damage the condom. For latex condoms, only water-based lubricants (e.g. lubricating jellies; spermicidal creams, jellies, foam or suppositories; water; saliva) should be used. Oil-based lubricants such as Vaseline and cold creams can damage latex condoms. For polyurethane Condoms, any type of lubricant can be used but the problem is the condoms that commonly available in Ethiopia are all latex in origin. In this study almost a quarter of the respondents reported that they used lotion and Vaseline as a lubricant with the condom, and such lubricants have a damaging effect on latex condom and majority of them reported that either they don't know or they think that application of oil on a condom will not result in condom breakage and in the multivariate analysis the knowledge of the respondents about the application of creams on to a condom is significantly associated with condom use error. In this study about 151 (47.8%) of the respondents reported that they faced breakage of their condom and a similar study done among college men thirty-five percent of the samples reported condom breakage or slippage during sex. Breakage was the most common problem⁽³⁰⁾.

Approximately 13% reported that condoms had slipped off during sex. Nearly 14% reported that a

condom slipped off during withdrawal. Thirty-two percent also reported losing their erections in association with condom use⁽²⁷⁾. In this study also 107 (33.9%) of the respondents have faced condom related loss of erection which is a bit higher and the major factor that had contributed for their loss of erection was the process while wearing the condom, that may lead them not to use condom again.

Breakage and slippage are two of the primary forms of condom use failure. However, other errors and problems may be similarly important. First, these errors may expose a partner to infection via skin-to-skin contact with a penis or ejaculate. For example, frequency estimates of early removal of condoms followed by unprotected intercourse are often greater than those for breakage and slippage. Thus, this error may represent a more likely threat of exposure than that resulting from breakage or slippage. Second, it is probable that breakage and slippage often occur as a result of other errors made by users. Indeed, incorrect methods of applying condoms such as letting the condom contact sharp objects have been correlated with condom breakage and it has problems with lubrication (e.g. dryness or use of oil-based lubricants). In one study, the more errors a person reported, the greater the odds of breakage, slippage or both. Inadequate condom protection results not only from breakage, slippage and leakage, but also from any condom use error that may lead to these outcomes or to potential exposure to pathogens (risk for STIs) or sperm (risk for unintended pregnancy) in and of itself (e.g. incomplete use). Inadequate condom protection also occurs from inconsistent or non-use of condoms across events.

From all respondents participated in the study regarding the factors associated with condom use error more than one third of the study participants did not take any training on how to use condom. Although, many people wrongly assume that all men know the correct way to use condoms, but the fact is, incorrect usage is common and it is a

major cause of condom failure and majority of these failure are caused by human errors.

One hundred fifty two (48.1%) of the respondents reported that they were not comfortable with the size of the condom and in the multivariate analysis also respondents who were not comfortable with the size of the condom were significantly associated with condom use error. and a study done on “Problems with Condom Use as a Function of Self-reported Poor Fit” reported that those reporting ill-fitting condoms (44.7%) were significantly more likely to report breakage, slippage, and difficulty reaching orgasm, both for their female partners and for themselves. In addition, they were more likely to report irritation of the penis and reduced sexual pleasure, both for their female partner and for themselves. Furthermore, they were more likely to report that condoms interfered with erection, caused erection loss, or became dry during sex. Finally, they were more likely to report removing condoms before penile vaginal sex ended ⁽³⁰⁾. Therefore poor fitting size of the condom has contribution for many other errors.

CONCLUSIONS

The study depicts majority of the students who participated in the study experience of at least one of the errors, considering a single error to be enough for the transmission of STIs including HIV/AIDS.

Being uncomfortable with the smell of the condom and with the size of the condom, having limited knowledge about application of creams on to a condom in relation to condom breakage or lubricant issues in general and lack of access to condom by the time needed were strongly associated factors for condom use error.

Increasing the focus on correcting potential user failures may be an important public health strategy and promotion programs should emphasize that condoms must be used both consistently (on every occasion of intercourse) and correctly. In addition, factors that lead to condom breakage should be point of discussion

when promoting condom use. This is of paramount importance as long as majority of condoms available in Ethiopia are all latex in origin.

RECOMMENDATION

Based on the finding the following recommendations are forwarded:

The Federal HIV/AIDS Prevention and Control Office must focus on the condom use promotion programs to emphasize that condoms must be used both consistently (on every occasion of intercourse) and correctly

Dilla university HIV/AIDS prevention and control office need to address condom use errors and problems by educating individuals on the correct use of condoms because education can help prevent incorrect use and increase the effectiveness of condoms in preventing HIV and STI transmission.

It is recommended that education messages concerning the use of additional lubricant may need to change to take into account the varied nature of lubricant use practices and the differential effects of lubricant with respect to sexual practices.

DKT Ethiopia should have to work on the size and smell of condoms because it's one of the major problems that result in condom use error.

NGOs working on the area of HIV/AIDS prevention program should Strengthen information, education and communication (IEC) activities in continuous and organized manner to minimize the gap between awareness and practice. Therefore, more research is needed on condom use errors and problems in developing countries like ours.

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