

Knowledge, Practices, and Factors Affecting use of Condoms among the Youths in Lira District in HIV Prevention

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ABSTRACT

As Uganda continues with the fight to end HIV epidemic by 2030, increasing condom use, especially in high-risk sexual encounters is one of the key strategies for reducing HIV transmission in Uganda. This study aimed to assess the knowledge, practices and factors affecting the utilization of condoms in the prevention of HIV among youths in Lira District. The study adopted a cross-sectional study design employing quantitative methods. A total of 189 respondents aged 15-35 years were recruited using a systematic random sampling technique. Data was obtained using an interviewer administered questionnaire and analysed using SPSS version 2.0. Descriptive analysis was used to generate frequencies and percentages. The measure and significance of association were determined using a Chi-square test and odds ratios with a P-value set at 0.05 corresponding to 95% confidence interval. Linear logistic regression analysis was used to generate Crude and Adjusted odds ratios to determine the factors associated with condom use among youths in HIV prevention. The results showed that 48% had ever used condoms. Majority had knowledge of condom use. Over 120(63.49%) were very knowledgeable, 28(14.82%) moderately knowledgeable while the rest 41(21.69%) were less knowledgeable. Likewise, over three quarters 71(78.02%) reported good condom use practices. Marital status ($p=0.002$), education ($p=0.012$), relationship status ($p=0.019$), number of sexual partners ($p=0.011$) and knowledge about condom use ($p=0.018$) were significant predictors of condom use in HIV prevention. Only marital status was independently associated with condom use after adjusting for possible cofounders. Although the study reveals relatively good knowledge and condom use practices, there is still some level of less knowledge and poor practices which may be driving the high prevalence of not using condoms among youths in HIV prevention. Reproductive health education programs targeting married, less educated, and youths in more than a single relationship should be tightened so as to increase condom use knowledge and eventually utilization in the fight against HIV.

Keywords: Condom, HIV epidemic and sexually transmitted infections (STIs).

INTRODUCTION

In 2013, an estimated 2.1 million people became newly infected with HIV (Joint United Nations Programme on HIV/AIDS [1], [2]). An estimated 500 million people acquired chlamydia, gonorrhoea, syphilis or trichomoniasis.

According to [1] it is estimated that every year more than 200 million women have unmet needs for contraception leading to approximately 80 million unintended pregnancies. These three public health priorities require a decisive response using

all available tools, with condoms playing a central role (World Health Organisation [3]). Condoms are a critical component in a comprehensive and sustainable approach to the prevention of HIV and other sexually transmitted infections (STIs) and are effective for preventing unintended pregnancies [1]. Male condoms offer dual protection against HIV and other sexually transmitted infections (STIs), as well as unplanned pregnancy [4]. Male and female condoms are the only devices that both

reduce the transmission of HIV and other sexually transmitted infections (STIs) and prevent unintended pregnancy [4]. Laboratory studies show that condoms provide an impermeable barrier to particles the size of sperm and STI pathogens, including HIV (UNFPA/Guttmacher Institute) [5]. Condoms, when used consistently and correctly, are highly effective in preventing the sexual transmission of HIV. Today, HIV/AIDS has continued to be a serious international health concern, and sub-Saharan Africa remains the most affected region. Over 25.6 million persons are currently living with HIV in sub-Saharan Africa. This accounts for two-thirds of the recent overall world HIV infections and more than 70 percent of all AIDS related deaths. In 2015, Eastern and Southern Africa had about 7.1% adult HIV prevalence rate (about 19 million HIV patients), while Western and Central Africa accounted for about 2.2% (about 6.5 million HIV patients) [6].

In Uganda an estimated 1.3 million people were living with HIV and an estimated 26000 Ugandans died of AIDS related illnesses. In 2017, an estimated 1.3 million people were living with HIV, and an estimated 26,000 Ugandans died of AIDS-related illnesses [7].

The HIV infection rate in Lira District has dropped by 1.8 per cent between 2014 and 2019, from 8.9 percent to 7.1 per cent, according to new estimates from the district health department, what has been termed as “good progress” in the fight against HIV/AIDS due to the ongoing health education and regular community sensitisation by both development partners and the district. The prevalence rate of HIV has been very high in Lira, which makes part of northern Uganda, mainly because of the Lord's Resistance Army (LRA) insurgency. Areas that are still being considered hot spots in terms of new HIV infections include; bars, bus parks, Juba Road, Kitgum stage, and Amach Cattle Market. In these hot spots, much as been tried to fight the disease through various interventions but HIV is still escalating. One of the reasons for this escalation is

low use of condoms and practice of risky sexual behaviours [8].

For the above highlighted reasons, with all the efforts being made to reduce the incidence and the spread of HIV/AIDs especially among the youths, this study is intended to assess knowledge, practices and socio demographic factors affecting the utilisation of condoms among the youth in Lira as condom plays a central role in the prevention of HIV.

In 2017, there were 19.6 million people living with HIV (53%) in eastern and southern Africa, 6.1 million (16%) in western and central Africa, 5.2 million (14%) in Asia and the Pacific, and 2.2 million (6%) in Western and Central Europe and North America [7].

Despite advances in our scientific understanding of HIV and its prevention and treatment as well as years of significant effort by the global health community and leading government and civil society organizations, too many people living with HIV or at risk for HIV still do not have access to prevention, care, and treatment, and there is still no cure [7]. The HIV epidemic not only affects the health of individuals, it impacts households, communities, and the development and economic growth of nations. Many of the countries hardest hit by HIV also suffer from other infectious diseases, food insecurity, and other serious problems [7]. Progress also has been made in preventing mother-to-child transmission of HIV and keeping mothers alive. In 2017, 80% [61- >95%] of pregnant women living with HIV had access to antiretroviral medicines to prevent transmission of HIV to their babies, up from 47% in 2010. However, despite the availability of this widening array of effective HIV prevention tools and methods and a massive scale-up of HIV treatment in recent years, new infections among adults globally have not decreased sufficiently.

Data from [9] identified existing gaps in HIV programmes and specific populations that need special focus. HIV prevalence triples from those aged 15-19 years (1.1 % total, 1.8% in girls and 0.5% in boys) to those aged 20-24 years (3.3 % total, 5.1% in

young women and 1.3% in young men), and then almost doubles again between 20-24 and 25-29 (6.3% total, 8.5% in women and 3.5% in men) suggesting new infections remain an issue in these age groups. This continuing infection risk necessitates innovative interventions to prevent new infections in young people.

Uganda like many countries in Sub Saharan Africa, has seen an emerging epidemic among the adolescents and the young adults. This brings about a major setback in the achievements made and calls for refocusing in the priority areas [9].

With the Goal of HIV prevention being, reducing the number of new youth and adult infections by 70% and the number of new paediatric HIV infections by 95% by 2020, through implementation of the combination prevention strategies that focus on adoption of safer sexual behaviours, scaling up biomedical interventions and HCT as well as addressing the underlying social-cultural

Study design

This was a facility-based cross-sectional study employing quantitative methods. The cross-sectional method was chosen because it is not costly to perform, captures a specific point in time and does not require a lot of time [10], [11]. This was to enable the researchers to conduct the study in the shortest time possible provided the limited time that was available to conduct the study. In addition, the method is cheap. Quantitative methods were considered as they would enable the researcher to measure the magnitude of condom use, the knowledge and practices of condom use among youths in Lira District [12].

Study Area

This study was conducted in Lira Regional Referral Hospital in Lira District Northern Uganda. Lira District is part of Lango sub-region, which consists of the following districts: Alebtong, Amolatar, Apac, Dokolo, Lira, Kole, Otukey and Oyam. The sub-region is coterminous with the now defunct Lango District. Lango sub-region was home to an estimated 1.5 million Langi in 2002, according to the national census conducted at that time. Lira District is

drivers of the epidemic. The activities carried out to achieve the objectives include Behaviour Change Communication (BCC), HIV Testing and Counselling (HTC), Prevention of Mother to Child HIV Transmission (PMTCT), Safe Male Circumcision (SMC), condom promotion and provision, activities for key population [9].

HIV prevention aims at, reducing the number of new HIV infections, increased coverage and utilization of prevention services and increased adoption of safer sexual behaviour and reduction of risky behaviours [9].

With all the above aims centred on the utilisation of condoms the research will help identify the gaps in condom utilisation and these will help in development of new strategies and strengthening the existing in the fight to prevent new infections mainly among the youth that has of recent been on a great rise.

METHODOLOGY

bordered by Pader District to the north, Otukey District to the northeast, Alebtong District to the east, Dokolo District to the southeast, Apac District to the southwest and Kole District to the west. The main municipal, administrative and commercial centre in the district, Lira, is located 110 kilometres (68 mi), by road, southeast of Gulu, the largest city in Northern Uganda. Lira Regional Referral Hospital, commonly known as Lira Hospital, is a hospital in Lira in the Northern Region of Uganda. Lira Hospital is located along Police Road, in the central business district of Lira Town, approximately 342 kilometres (213 mi), by road, north of Kampala, Uganda's capital and largest city. This is approximately 111 kilometres (69 mi), by road, southeast of Gulu Hospital the nearest other regional referral hospital. It is the referral hospital for the districts of Alebtong, Amolatar, Apac, Dokolo, Lira, Kole, Otukey and Oyam.

Study Population

The study population refers to a subset of the target population from which the sample is actually selected. The study focused on youths aged 15-35 years attending outpatient clinics at Lira Regional Referral Hospital.

Sample Size Determination

The sample was determined using Kish Leslie formula (1965) that was simplified by Yamane (1967) as shown below.

$$\text{From } N = \frac{(PQ)Z^2}{D^2}$$

Where:

N is the sample size required

Z² is the abscissa of the normal curve that cuts off an area at the tails (1- α equals the desired confidence level, e.g., 95%),

P is the estimated proportion of an attribute that is present in the population which is 0.5 [13].

D is the desired level of precision (0.05)

Q is 1-P

N=204 participants. The study successfully recruited a total of 189 study participants.

Sampling Technique

A systematic random sampling method was used to recruit 189 study participants. Participants were picked at random from the queue on a first come, first serve basis using an interval of 3 calculated by (N/n) where N is the total population and n is the desired sample size. This procedure was repeated until the required sample size was obtained.

Inclusion Criteria

The study included youths aged between 15-35 years attending the outpatient clinic at Lira Regional Referral Hospital who had consented to participate in the study.

Exclusion Criteria

Any person not within the age limit of 15-35 years, those that were not in position to give their consent to participate. Those who were not receiving the services at the clinic during the time of the study and those who were not in position to participate in the study for example those who had mental incapacitation or were severely ill.

Study Variables

The study consisted of a dependent and independent variables as shown below;

Dependent Variable

The dependent variable in this study was the utilization of condoms in HIV prevention.

Independent Variables

The independent variables in this study included the knowledge on condom use, practices of condom use among youths

and the factors that affect the use of condoms among youths.

Data Collection Methods

The study involved use of a survey. Surveys are used when one wants to investigate and understand the characteristics of a group of people at once by using statistics to make generalization. It is a quantitative method whereby a researcher poses some set of predetermined questions to an entire group or sample of individuals [14]. The survey was chosen because it collects a large amount of data from a large population in a short period of time [15]. Besides that, a survey questionnaire as an instrument is relatively cheap.

Data Collection Tools

An interviewer administered survey questionnaire was used to collect data from the respondents. The questionnaire was used as a relevant research tool to gather data from the respondents who are receiving care services at the health facility. The study questionnaire was a modified questionnaire adopted from earlier studies related to condom use in HIV prevention.

The items in the questionnaire were closed ended questions basing on the research objectives. The questionnaire was designed in a way that captures information on each of the variables in the conceptual frame work. The questionnaire was divided into three major parts focusing mainly on knowledge of condom use, practices and factors affecting condom use in HIV prevention among youths.

Data Collection Procedure

Before data collection, approval letter was obtained from the faculty of clinical medicine and dentistry and the research and ethics committee of Kampala International University. The letter was used to introduce the researcher to the district administration and then the hospital director to seek permission to conduct the study at the facility. The researcher then reached out to the respondents that met the inclusion criteria, introduced himself, purpose of the study and obtained an informed consent to participate in the study. The

respondents were then enrolled following a systematic random sampling procedure and then asked questions as per the questionnaire as the researcher ticks the responses until completion.

With regards to the prevention and controlling the spread of COVID 19, safety of the researcher and the respondents were ensured by following the standard operating procedures provided by the ministry of health. Participants that met the inclusion criteria were subjected to temperature screening and screening for other symptoms like cough, fever history, and sore throat. For participants identified to be positive for any COVID 19 symptoms, appropriate protection of the researcher and significant others were ensured through use of appropriate personal protective equipment. In addition, all respondents and researchers adhered to strict use of face masks, sanitizing, and ensured social distancing.

Quality Control

The data collection tool was submitted to the research supervisor for further guidance as well as colleagues to critic. These made corresponding recommendations to guide necessary changes. The tool was then given to experts in the study topic to evaluate the questions to see if the answer is relevant to the research question. A Content Validity Index (CVI) was then computed as follows;

$$CVI = \frac{\text{Number of relevant items}}{\text{Total number of items in the questionnaire}}$$

The instrument was to be considered valid if the Content Validity Index is higher than the recommended value of 0.70 according to Kothari (2011). In addition, the questionnaire was subjected to a pilot study on about 10% of the study sample size, this was done in a different facility but on a similar study population. Necessary corrections were made and unnecessary questions removed while questions that required to further capture relevant data were added or retained. The pre-test data was then analysed using SPSS Version 20. An Omega Coefficient was processed through SPSS Version 20. A

coefficient of 0.7 above meant the tool is reliable.

Data Management

After data collection, study questionnaires were subjected to a thorough check for errors immediately to ensure completeness. Data were then entered twice in a data excel sheet and then transferred to SPSS version 20 where coding and data analysis were done. This was to ensure accuracy and consistency of data entered. In addition, data was stored under strict lock and key both in manual forms on paper and in electronic forms as soft copies of data entry sheets.

Data Analysis

For Objective one, knowledge assessment was based on questions related to the role and use of condoms. Each correct score was given one point and the wrong one zero. The overall score was then computed out of a hundred percent. Knowledge outcome of the study participants was then categorized as Very knowledgeable (a score of 75% and above), Moderately knowledgeable (a score between 50% and less than 75%) and Less knowledgeable (a score of less than 50%).

For objective two, practices regarding condom use were determined using questions related to condom use practice. A score of one was given for each response that indicated a good practice and zero for a response that indicated a poor practice. The overall score was then computed out of a hundred percent and a score below 50% was regarded poor practice while a score above or equal to 50% reflected good practice.

For objective three, factors influencing utilization of condoms among youths were evaluated using descriptive statistics, bivariate analysis using a chi square test to measure the associations between condom use and the factors, and then a multivariate and logistic regression analysis using odd ratios to measure the strength of association between the study factors and condom use. Data was presented using frequency tables, graphs and pie charts. The significance of association was set at P-value<0.05 which corresponds to 95% confidence interval.

Ethical Considerations

This proposal was submitted to the faculty of clinical medicine and dentistry and the research and ethics committee of Kampala International University for an approval letter. The letter was used to introduce the researcher to the district administration and then the hospital director to seek permission to conduct the study at the facility. Furthermore, informed written consent was obtained from all participants aged 18 and above. For participants below the age of 18, the consent was first sought

The study enrolled a total of 189 participants of the 204 total sample size thus giving a response rate of 92.6%. According to [17], a response rate of greater than 90% is considered excellent with the lowest rate of sampling biasness thus enabling inferential statistics.

Characteristics of the study participants

The results show that majority 108(57.14%) of the respondents were females. Slightly more than half 104 (55.03%) were youths in the age group of 25 years and above and the least represented were those aged 15-29 years 26(13.76%). Likewise, majority had attained secondary 78(40.21%) followed by primary 58(30.69%) and tertiary 27(14.29%) education with the least being those with no education at all 27(14.29%). Compared to Muslims 48(25.40%), the study was mostly dominated by Christians 141(74.60%) in which the Catholics 36(19.05%), Born again 34(17.99%) and Anglican 32(16.93%) were the majority while the Pentecost 26(13.76%) and

from the responsible care takers and then the corresponding youths were assented before enrolling into the study. Participation in the study was completely out of free will, participants had a right to withdraw from the study at any time and there were no monetary benefits for participating in the study. In addition, identifiable information such as participant's names were not collected and maximum confidentiality of information gathered was ensured for all the participants throughout the study [16].

RESULTS

Seventh day Adventists 13(6.88%) represented the minority in this group. Regards marital status, majority belonged to the never married category 101(53.44%) followed by married 66(34.92%) with the least represented being those in the divorced 18(9.52%) and widowed category 4(2.12%). Further, 9 in 10 reported being in a sexual relationship and more than three quarters had two or more sexual partners. On the other hand, less than one fifths reported a history of a sexually transmitted infection. According to this study, the information regards condom use was mostly obtained from radio 171(90.48%), healthcare providers 162(85.71%), friends 144(76.19%) and relatives 119(62.96%). Only a handful reported getting information about condom use from religious or cultural institutions 22(11.64%), social media 24(12.70%), print media 30(15.87%) and community outreaches 50(26.46%). The details are reflected in tables 1 and 2 below.

Table 1: Socio-demographic characteristics of the study participants

Variable	Frequency (N)	Percentage (%)	Variable	Frequency (N)	Percentage (%)
Gender			Religion		
Male	81	42.86	Muslim	48	25.40
Female	108	57.14	Catholic	36	19.05
Age			Anglican		
15-19	26	13.76	Pentecost	26	13.76
20-24	59	31.22	SDA	13	6.88
25-29	57	30.16	Born Again	34	17.99
30-35	47	24.87			
In a relationship			Education		
Yes	174	92.06	None	27	14.29
No	15	7.94	Primary	58	30.69
History of STI			Secondary		
Yes	27	14.29	Tertiary	28	14.81
No	62	85.71	Number of sexual partners		
Marital Status			None		
Married	66	34.92	One	29	15.34
Never Married	101	53.44	Two	45	23.81
Divorced	18	9.52	Three	57	30.16
Lost partner	4	2.12	Four above	43	22.75

Source: Primary data (2022)

Table 2: Shows the information source on condom use for the study respondents

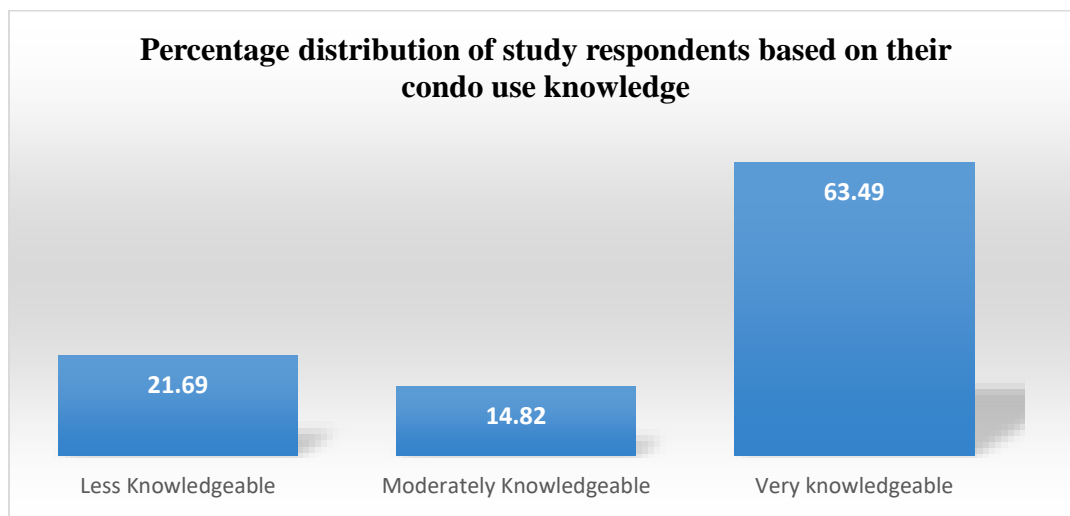
Source	Frequency (N)	Percentage (%)
Radio	171	90.48
Television	99	52.38
Community outreaches	50	26.46
Print media	30	15.87
Health care providers	162	85.71
Friends	144	76.19
Relatives	119	62.96
Social media	24	12.70
Schools	66	34.92
Religious/Cultural institutions	22	11.64

Source: Primary data (2022)

Condom use Knowledge among youths in Lira district

Our study revealed that majority 120(63.49%) of the youths were very knowledgeable about use of condoms,

Otim 28(14.82%) were moderately knowledgeable while the rest 41(21.69%) were less knowledgeable about condom use. The results are reflected in figure 2 below.

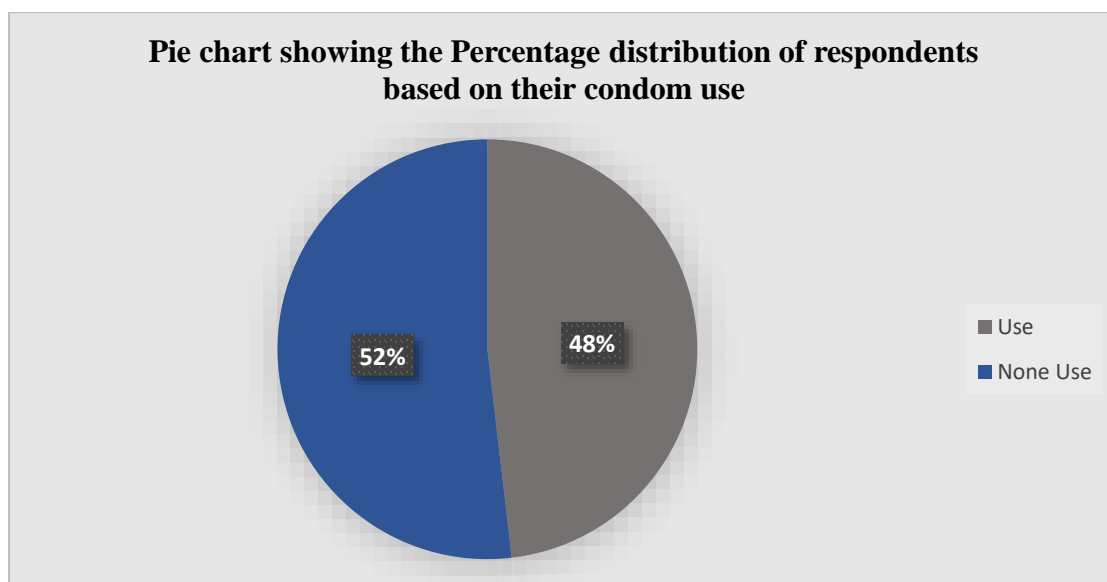


Source: Primary data (2022)

Condom use prevalence

The results of this study indicate that nearly a half 91(48%) of the study

respondents had used condoms while slightly more than half 98(52%) reported non-use.



Source: Primary data (2022)

Condom use practices

Overall, one fifth 20(21.98%) of youths who had ever used condoms reported poor

condom use practices while over three quarters 71(78.02%) reported good condom use practices.

We also found out that 18(19.78%) of the youth at times forget to put on a condom before having sex and among those who forget 12(70.59%) continue without a condom. Also, more than 70% of the youths reported checking condoms for expiry dates, removing defective condoms and did not completely unroll condoms before use. On the other hand, only less than one third checked condoms for tears and holes before use 20(30.77%), reported to abstain from sex if a partner refused to use

Otim condom 30(32.97%), regularly used condoms with every partner 26(28.57%) and reported that they would persuade their partners to use condoms 23(25.27%). Furthermore, consistent condom use was reported among 26(13.76%) of youths. Likewise, 17(18.68%), 43(47.25%), and 31(34.07%) reported that the decision to use a condom was always initiated by man, woman and both partners respectively. The details are shown in table 3 below.

Table 3: Distribution of study respondents based on their condom use practices

Practice	Yes N (%)	No N (%)
Do you at times forget to put on a condom before having sex?	18(19.78)	73(80.22)
If yes above, do you stop and put it on first when you remember?	5(29.41)	12(70.59)
Do you check condom for expiry date before use?	69(75.82)	22(24.18)
Do you check condom for tears, holes or leakages before use?	28(30.77)	63(69.23)
Do you remove defective condom from package?	66(72.53)	25(27.47)
Do you completely unroll a condom before putting on?	13(14.29)	78(85.71)
Do you abstain from sex if your partner refused to use a condom?	30(32.97)	61(67.03)
Can you persuade your partner to use a condom?	23(25.27)	68(74.73)
Do you use a condom with every partner?	26(28.57)	65(71.43)
How often do you use a condom before having sexual intercourse?	Frequency (N)	Percentage (%)
Always	26	13.76
Sometimes	65	34.39
Never	98	51.85
Who chooses or initiates condom use before sexual intercourse?		
Man	17	18.68
Woman	43	47.25
Both	31	34.07
Overall practices		
Good	71	78.02
Poor	20	21.98

Source: Primary data (2022)

Factors affecting utilization of condoms by youths (Overall adjusted model $p=0.0007$)

The results showed that contraceptive use was highest among youths aged 20-24 years (34.07%), followed by youths aged 25-29 years (26.37%) and 30-35 years (23.08%). Youths aged 15-19 years appeared to be the least contraceptive users (16.48%). Contrastingly, it was further observed that compared to the youths aged 15-19 years, youths aged 20-24 years, 25-29 years and 30-35 years were

respectively 0.8, 0.5 and 0.6 times less likely to use condoms. This relationship was however not statistically significant ($p>0.05$) an indication that age was not an influencing factor for condom use in this study.

The study findings also indicated a comparably equal distribution of contraceptive use among female (50.55%) and male respondents (49.45%). The odds of contraceptive use were however 0.6 times lower in females compared to male

respondents. This relation was not statistically significant ($p>0.05$) which is an indication that sex of an individual was not an influencing factor for contraceptive use in this study.

Regards marital status, use of condoms was highest among unmarried (63.74%), followed by those that were married (24.18%) and divorced (9.89%), the least users being those who reported to have lost their partners (2.20%). Compared to married respondents, the odds of using condoms were respectively 2.7, 2 and 2 times more among unmarried, divorced and respondents who reported to have lost their partners. This relationship was statistically significant ($p<0.05$) an indication that marital status was a significant influencing factors for condom use in this study.

The study also revealed that the biggest percentage of youths that used condoms were of the Muslim denomination (25.27%), followed by Born Again (24.18%), Catholics (17.58%), Pentecost (16.48%), Anglican (12.09%). The least users being the Seventh day Adventist youths (4.40%). Contrarily, the odds of condom use were respectively 1.5 and 2 times higher among Pentecost and Born-again youths compared to Muslim youths. On the other hand, Catholics, Anglican and Seventh day Adventist youths were respectively 0.9, 0.6 and 0.5 times less likely to use condoms when compared to Muslim youths. This relationship was however not statistically significant ($p>0.05$), an indication that the religious denomination of an individual was not an influencing factor for condom use in this study.

The results further indicated that a large proportion of condom users in this study had secondary education (40.96%), followed by primary (27.47%), tertiary (19.78%) and the least being those with no education at all (8.79%). Compared to youths that had no formal education, respondents with primary, secondary and tertiary education were respectively 1.8, 2.6 and 4.3 times more likely to use condoms. This relationship was statistically significant ($p<0.05$), an indication that the education level of the

respondents was a significant influencing factor for condom use in this study.

Concerning the relationship status, almost all youths that reported having a sexual relationship were also used condoms (96.70%). Respondents who reported having no current sexual relationship were 0.2 times less likely to use condoms compared to youths who reported being in a sexual relationship. This association was statistically significant ($p<0.05$), an indication that the relationship status of an individual was a significant influencing factor for condom use.

With respect to the number of sexual partners, condom use was highest among youths who reported three sexual partners (37.36%), followed by four or more sexual partners (28.57%), two sexual partners (18.68%) with the least use among youths who reported only one sexual partner (12.09%) and no current sexual partner at all (13.30%). Respondents with two, three and four or more sexual partners were respectively 2.4, 2.4, 5.9 and 6.1 times more likely to use condoms compared to youths who reported no current sexual partner. This relationship was statistically significant ($p<0.05$), an indication that the number of sexual partners was a significant influencing factor for condom use.

Also, the results showed that the big proportion of condom use was among respondents who reported no history of sexually transmitted infection (82.42%). On the contrary, youths who reported no history of sexually transmitted infection were 0.6 times less likely to use condoms compared to youths that reported a history of sexually transmitted infections. This relationship was however not statistically significant ($p>0.05$), an indication that having a history of sexually transmitted infection did not influence condom use in this study.

The findings of our study also revealed that condom use was highest among youths who demonstrated high levels of knowledge about condom use (70.33%), followed by those who had moderate knowledge (15.38%) and the least use among youths who had less knowledge about condom use (14.29%). It was further

noted that youths with moderate and youths with high levels of knowledge were respectively 2.2 and 2.5 times more likely to use condoms when compared to youths that demonstrated less knowledge on condom use. This relationship was found to be statistically significant ($p < 0.05$), an indication that the level of knowledge on condom use was an important influencing factor for condom use in this study.

In the final model, only factors with p -value < 0.05 were considered for multivariate regression analysis. These included the marital status, education status, current sexual relationship status and condom use knowledge of the respondents. This was done to control for the confounding effect and establish which

factors independently influenced condom use. The overall model was found to be statistically significant ($p = 0.000$). According to results from this model, being not married was significantly associated with a 2.9 times likelihood of using condoms when compared to being married. This relationship was statistically significant, an indication that the marital status of the respondents independently influenced condom use. On the other hand, education status, current sexual relationship status, and condom use knowledge revealed no significant relationship with condom use. This implies that there was no independent association between these factors and condom use among youths.

Table 4 Shows the factors affecting utilization of condoms by youths

Variable	Use, N (%)	None-use, N (%)	COR (95% CI)	P value	AOR (95% CI)	P value
Age						
15-19	15(16.48)	11(11.22)	1	1	-	-
20-24	31(34.07)	28(28.57)	0.8(0.3-2.1)	0.661	-	-
25-29	24(26.37)	33(33.67)	0.5(0.2-1.4)	0.190	-	-
30-35	21(23.08)	26(26.33)	0.6(0.2-1.6)	0.289	-	-
Sex						
Male	45(49.45)	36(36.73)	1	1	-	-
Female	46(50.55)	62(63.27)	0.6(0.3-1.1)	0.078	-	-
Marital status						
Married	22(24.18)	44(44.90)	1	1	1	1
Not married	58(63.74)	43(43.88)	2.7(1.4-5.1)	0.003*	2.9(1.5-5.9)	0.002*
Divorced	9(9.89)	9(9.18)	2(0.7-5.8)	0.198	2.8(0.8-9.3)	0.096
Widowed	2(2.20)	2(2.04)	2(0.3-15.2)	0.502	1.9(0.2-15.0)	0.540
Religion						
Muslim	23(25.27)	25(25.51)	1	1	-	-
Catholic	16(17.58)	20(20.41)	0.9(0.4-2.1)	0.752	-	-
Anglican	11(12.09)	21(21.43)	0.6(0.2-1.4)	0.232	-	-
Pentecost	15(16.48)	11(11.22)	1.5(0.6-3.9)	0.423	-	-
SDA	4(4.40)	9(9.18)	0.5(0.1-1.8)	0.275	-	-
Born Again	22(24.18)	12(12.24)	2.0(0.8-4.9)	0.134	-	-
Education						
None	8(8.79)	19(19.39)	1	1	1	1
Primary	25(27.47)	33(33.67)	1.8(0.7-4.8)	0.238	1.3(0.5-3.9)	0.601
Secondary	40(43.96)	36(36.73)	2.6(1.0-6.8)	0.043*	1.4(0.5-4.2)	0.534
Tertiary	18(19.78)	10(10.20)	4.3(1.4-13.3)	0.012*	2.3(0.7-8.4)	0.173
In a relationship						
Yes	88(96.70)	86(87.76)	1	1	1	1
No	3(3.30)	12(12.24)		0.019*	0.3(0.1-1.3)	0.098
Number of sexual partners						
None	3(3.30)	12(12.24)	1	1	-	-
One	11(12.09)	18(18.37)	2.4(0.6-10.6)	0.234	-	-
Two	17(18.68)	28(28.57)	2.4(0.6-9.9)	0.215	-	-
Three	34(37.36)	23(23.47)	5.9(1.5-23.3)	0.011*	-	-
4 above	26(28.57)	17(17.35)	6.1(1.5-24.9)	0.012*	-	-
STI history						
Yes	16(17.58)	11(11.22)	1	1	-	-
No	75(82.42)	87(88.78)	0.6(0.3-1.4)	0.215	-	-
Knowledge						
Less	13(14.29)	28(28.57)	1	1	1	1
Moderate	14(15.38)	14(14.29)	2.2(0.8-5.8)	0.129	1.5(0.5-4.8)	0.486
High	64(70.33)	56(57.14)	2.5(1.2-5.2)	0.018*	1.5(0.6-3.9)	0.397

Source: Primary data (2022)

DISCUSSION

This study aimed to assess the knowledge, practices and factors affecting the utilization of condoms in the prevention of HIV among youths in Lira District and a total of 189 study participants were randomly enrolled into the study.

The study revealed that most of the youths were knowledgeable about use of condoms in HIV prevention as majority 63.49% were very knowledgeable about use of condoms, (14.82%) were moderately knowledgeable while only 21.69% were less knowledgeable about condom use. Our findings compare well with studies by [18], [19] who also found out that over 76% of the study participants had good knowledge on condom use. Contrastingly, [20] reported inadequate knowledge on condom use in Brazil. The higher level of knowledge on condom use in our study could be attributed to the massive mass media campaigns on condom use for prevention of HIV in the last few decades.

We also noted that close to a half of the youths in this study (48%) had ever used condoms. Condom use prevalence in our study is comparable with findings from others studies. In a study among youths in Cameroon, condom use was found to be 51% among females and 66% among male youths [21]. A lower prevalence of 35.1% was noted in an Iranian based study conducted among youths [22]. On the other hand, [18] reported a much higher prevalence of 72.8%, this study unlike ours was conducted among University students who are thought to be more exposed to information about condom use.

Among condom users, the study reveals a mixture of different practices among youths. Overall, over three quarters of youths reported good condom use practices while only about one fifths of youths who had ever used condoms reported poor condom use practices. This is consistent with findings from other studies [23], [19]. Some of the poor practices reported regards condom use in the prevention of HIV in this study included occasional forgetfulness to put on a condom before having sex, proceeding with sexual intercourse even

when one remembers they have not put it on, not checking condoms for expiry dates before use, failure to remove defective condoms from pack, completely unrolling condoms before use, failure to check condoms for tears or holes before use, inability to abstain in case partner refused to use a condom, inconsistent use of condoms among others. Similar to our study, unsafe condom use practices have been reported in many previous studies [18], [19], [24], [25].

Regards the factors influencing condom use among youths, this study noted that the marital status of an individual, education status, relationship status, number of sexual partners and knowledge about condom use were significant factors that were associated with condom use. Controlling for significant variables, only the marital status of an individual was independently associated with condom use. On the other hand, age of an individual, sex, religion, history of having a sexually transmitted infection were not significantly associated with condom use. Regards marital status, it was revealed that compared to married respondents, the odds of using condoms were respectively 2.7, 2 and 2 times more among un married, divorced and respondents who reported to have lost their partners. Marital status was also found to influence condom use in a study by [26] who noted that married individuals are less likely to use condoms. This may be due to the fact that married individuals are less likely to engage with multiple sex partners compared to those that are single [27]. On the contrary, married men were found to have a comparably higher attitude towards condoms use than unmarried participants in a Canadian based study on condom use knowledge, attitude and practice [19].

The results further indicated that compared to youths that had no formal education, respondents with primary, secondary and tertiary education were respectively 1.8, 2.6 and 4.3 times more likely to use condoms. Similar findings have also been reported in previous studies. According to a study by [28],

educated individuals are likely to have information about HIV and condom use.

Concerning the relationship status, respondents who reported having no current sexual relationship were 0.2 times less likely to use condoms compared to youths who reported being in a sexual relationship. This is in line with findings from a study by [29] who found out that youths with no currently sexual relationship had higher odds of condom non-use.

With respect to the number of sexual partners, the odds of using condoms increased with an increase in the number of sexual partners. It was noted that respondents with two, three and four or more sexual partners were respectively 2.4, 2.4, 5.9 and 6.1 times more likely to use condoms compared to youths who reported no current sexual partner. This finding agrees with results from a study by [29] who also reported that a high prevalence of condom use among youths with many sexual relations. This may be

Our study revealed relatively good knowledge and practices regards condom use in majority of the respondents. Poor knowledge and practice were however also consistent with our study. Factors that were found to affect condom use included marital status, education, relationship status, number of sexual partners and knowledge about condom use. Only the marital status of the respondent was independently associated with condom use.

Recommendations

There is need to tighten public health campaigns educating youths about the

due to the fact that youths with many sexual relations may as well be exposed to reproductive sex information that includes use of condoms to prevent sexually transmitted infections [30]. Additionally, youths with several sexual relations maybe afraid of acquiring HIV and other STIs hence using condoms [34], [35], [36], [37]. The findings of our study also revealed that condom use was highest among youths who demonstrated high levels of knowledge about condom use. We found out that youths with moderate and youths with high levels of knowledge were respectively 2.2 and 2.5 times more likely to use condoms when compared to youths that demonstrated less knowledge on condom use. This is consistent with findings from a study by [31] who revealed that the odds of using condoms during the last intercourse increased with increase in knowledge on condom use (AOR=1.57, 95% CI: 1.03, 2.37). Similar findings were also reported by [32], [33], [26].

CONCLUSION

importance of condoms in providing dual protection against pregnancy and HIV. This can be done through reproductive health talks targeting radios, cultural/religious institutions among others. The target groups should include married youths, those that are less educated and youths in more than a single relationship. This will help improve their perceptions of condom use and eventually their practices regard using condoms in HIV prevention.

REFERENCES

1. UNAIDS. 2014. World AIDS Day Report 2014.
2. Isabirye, J. (2011). Philly Lutaaya: Popular music and the fight against HIV/AIDS in Uganda. *Journal of Postcolonial Writing*, 44(1):29-35. <https://doi.org/10.1080/17449850701820632>
3. World Health Organization. (2015). World health statistics 2015. World Health Organization. <https://apps.who.int/iris/handle/10665/170250>
4. Pallin, S., Meekers, D., Longfield, K., Lupu, O., (2013). Uganda: A Total Market Approach. PSI/UNFPA Joint Studies on the Total Market for Male Condoms in 6 African Countries. Retrieved from www.psi.org/total-market-approach
5. Sedgh, G., Singh, S., & Hussain, R. (2014). Intended and unintended pregnancies worldwide in 2012 and

- recent trends. *Studies in family planning*, 45(3), 301-314.
6. Amuche, N. J., Emmanuel, E. I., Innocent, N. E. (2017). HIV/AIDS in sub-Saharan Africa: Current status, challenges and prospects. *Asian Pac. J. Trop. Dis.*, 7, 239-256
 7. UNAIDS 'AIDSinfo' (accessed October 2018)
 8. Okot, F. J. (2019). HIV-infection-rate-Lira-drops. The Daily Monitor. Retrieved from <https://www.monitor.co.ug/News/National/HIV-infection-rate-Lira-drops/688334-5103036-46rhnm/index.html>
 9. Ministry of Health, Uganda (2019). Uganda Population-Based HIV Impact Assessment (UPHIA) 2016-2017: Final Report. Ministry of Health, Kampala.
 10. Setia, M. S. (2016). Methodology Series Module 3: Cross-sectional Studies. *Indian journal of dermatology*, 61(3), 261-264. <https://doi.org/10.4103/0019-5154.182410>
 11. Ugwu, C. N., & Eze, V. H. U. (2023). Qualitative Research. *IDOSR of Computer and Applied Science*, 8(1), 20-35.
 12. Choy, L.T. (2014). The Strengths and Weaknesses of Research Methodology: Comparison and Complimentary between Qualitative and Quantitative Approaches. *Journal of Humanities and Social Science*, 19, 99-104.
 13. Israel, G. D. (1992). Determining Sample Size. University of Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, EDIS, Florida.
 14. Check, J., & Schutt, R. K. (2011). *Research Methods in Education*. Thousand Oaks, CA: SAGE Publications.
 15. Rangarajan, S., Donn, J. C., Giang, T., Bui, D. D., Hung, Nguyen, H., Tou, P. B., Danh, T. T., Tran, N. B., Nguyen, D. A., Hoang, N. B. T., Doan, V. T., Nguyen, N. Q., Pham, V. P., Dao, D. G., Chen, M., Zeng, Y., Tieu, T. T., Tran, M. H., Le, T. H., Hoang, X. C. and West, G. (2016). Factors associated with HIV viral load suppression on antiretroviral therapy in Vietnam. *J Virus Erad.*, 2(2):94-101.
 16. Ugwu Chinyere Nneoma, Eze Val Hyginus Udoka, Ugwu Jovita Nnenna, Ogenyi Fabian Chukwudi and Ugwu Okechukwu Paul-Chima (2023). Ethical Publication Issues in the Collection and Analysis of Research Data. *NEWPORT International Journal Of Scientific and Experimental Sciences (NIJSES)* 3(2): 132-140.
 17. Mundy, D. I. and Strittmatter, W. J. (1985). Requirement for metallo endoprotease in exocytosis: evidence in mast cells and adrenal chromaffin cells. *Cell*. 40(3):645-656.
 18. Nesidai, K. B. A., Z. Ng'ang'a, M. Mwangi and P. Wanzala, (2011). Knowledge, Attitude and practice factors associated with condom use among undergraduate students of a public University in Kenya (A case of Jomo Kenyatta University of Agriculture and Technology. *Afri. J. Health Sci.*, 19: 41-42.
 19. Etowa, J., Ghose, B., Loemba, H., Etowa, E. B., Husbands, W., Omorodion, F., Luginaah, I., & Wong, J. P. (2021). Factors Associated with Condom Knowledge, Attitude, and Use among Black Heterosexual Men in Ontario, Canada. *The Scientific World Journal*. 8862534. <https://doi.org/10.1155/2021/8862534>
 20. Andrade, V. M., Mavian, C., Babic, D., Cordeiro, T., Sharkey, M., Barrios, L., Brander, C., Martinez-Picado, J., Dalmau, J., Llano, A., Li, J. Z., Jacobson, J., Lavine, C. L., Seaman, M. S., Salemi, M., & Stevenson, M. (2020). A minor population of macrophage-tropic HIV-1 variants is identified in recrudescing viremia following analytic treatment interruption. *Proceedings of the National Academy of Sciences of the United States of America*, 117(18), 9981-9990. <https://doi.org/10.1073/pnas.1917034117>
 21. Rwenge, J., Djourdebe, F., & Ekambi, E. (2022). Social and individual factors associated with condom use among single youths: An analysis of the 2018 Cameroon Demographic and Health Survey. *Journal of Biosocial*

- Science*, 54(2), 295-321. doi:10.1017/S0021932021000055
22. Hosseini-Hooshyar, S., Mirzazadeh, A., Karamouzian, M., Sharifi, H., Khajehkazemi, R., Haghdoost, A.-A., & Shokoohi, M. (2022). Prevalence and Correlates of Sexual Violence Experienced by Female Sex Workers in Iran: Results from a National HIV Bio-Behavioral Surveillance Survey. *Violence Against Women*, 28(3-4), 872-889. <https://doi.org/10.1177/10778012211008992>
 23. Cumber, S. N., & Tsoka-Gwegweni, J. M. (2016). Characteristics Of Street Children In Cameroon: A Situational Analysis Of Demographic, Socio-Economic And Behavioural Profiles And Challenges. *African journal of primary health care & family medicine*, 8(1), e1-e9. <https://doi.org/10.4102/phcfm.v8i1.1076>
 24. Noubiap, J. J., Nansseu, J. R., Ndoula, S. T., Bigna, J. J., Jingi, A. M. & Fokom-Domgue, J. (2015). Prevalence, infectivity and correlates of hepatitis B virus infection among pregnant women in a rural district of the Far North Region of Cameroon. *BMC Public Health*, 2;15:454. doi: 10.1186/s12889-015-1806-2.
 25. Dimas Setyadi Putra, Rizka Novia Atmadani & Ika Ratna Hidayati (2021). Relationship between knowledge level of hiv/aids patient with antiretroviral adherence in primary healthcare service in Malang City, *Journal of HIV/AIDS & Social Services*, DOI: 10.1080/15381501.2021.1961651
 26. Biresaw, M. S., Takelle, G. M. and Gebeyehu, E. T. (2020). Perceived stress and associated factors among pregnant women during COVID-19 pandemic period in Northwest Ethiopia. *BMJ Open*, 12: e063041. doi: 10.1136/bmjopen-2022-063041
 27. Wong, V. J., Murray, K. R., Phelps, B. R., Vermund, S. H. and McCarraher, D. R. (2017). Adolescents, young people, and the 90-90-90 goals: a call to improve HIV testing and linkage to treatment. *AIDS*. 3(3): S191-S194. doi: 10.1097/QAD.0000000000001539.
 28. Gibbs, A., Willan, S., Jama-Shai, N., & Washington, L. (2015). 'Eh! I felt I was sabotaged!': facilitators' understandings of success in a participatory HIV and IPV prevention intervention in urban South Africa. *Health Education Research*, 30(6), 985-995. <https://www.jstor.org/stable/48509657>
 29. Ajayi, A. I., Ismail, K. O. & Akpan, W. (2019). Factors associated with consistent condom use: a cross-sectional survey of two Nigerian universities. *BMC Public Health*, 19(1):1207. doi: 10.1186/s12889-019-7543-1.
 30. Xu, Y., Chen, X., & Wang, K. (2017). Global prevalence of hypertension among people living with HIV: a systematic review and meta-analysis. *Journal of the American Society of Hypertension: JASH*, 11(8), 530-540. <https://doi.org/10.1016/j.jash.2017.06.004>
 31. Hosseini-Hooshyar, S., Hajarizadeh, B., Bajis, S., Law, M., Janjua, N. Z., Fierer, D. S., Chromy, D., Rockstroh, J. K., Martin, T. C. S., Ingiliz, P., Hung, C. C., Dore, G. J., Martinello, M., & Matthews, G. V. (2022). Risk of hepatitis C reinfection following successful therapy among people living with HIV: a global systematic review, meta-analysis, and meta-regression. *The lancet. HIV*, 9(6), e414-e427. [https://doi.org/10.1016/S2352-3018\(22\)00077-7](https://doi.org/10.1016/S2352-3018(22)00077-7)
 32. Emmanuel, W., Edward, N., Moses, P., William, R., Geoffrey, O., Monicah, B. & Rosemary, M. (2015). Condom Use Determinants and Practices Among People Living with HIV in Kisii County, Kenya. *Open AIDS J.*, 13;9:104-11. doi: 10.2174/1874613601509010104.
 33. Alex, N. (2023). Evaluation of Factors affecting effective use of Condoms in Adolescents of Mayengo Parish, Kamuganguzi Sub County, Kabale District. *Idosr Journal of Biology, Chemistry and Pharmacy*. 8(2), 31-46.

34. Emmanuel Ifeanyi Obeagu, Getrude Uzoma Obeagu and Ugwu Okechukwu Paul-Chima (2023). Stigma Associated With HIV/AIDS: A Review. NEWPORT INTERNATIONAL JOURNAL OF PUBLIC HEALTH AND PHARMACY (NIJPP) 3(2):64-67.
35. Esther Ugo Alum, Emmanuel Ifeanyi Obeagu, Okechukwu P. C. Ugwu, Patrick Maduabuchi Aja, and Michael Ben Okon (2023). HIV Infection and Cardiovascular Diseases; The Obnoxious Duos. NEWPORT INTERNATIONAL JOURNAL OF RESEARCH IN MEDICAL SCIENCES (NIJRMS) 3 (2):95-99.
36. Esther Ugo Alum, Okechukwu P. C. Ugwu, Emmanuel Ifeanyi Obeagu and Michael Ben Okon (2023). Curtailing HIV/AIDS Spread: Impact of Religious Leaders. NEWPORT INTERNATIONAL JOURNAL OF RESEARCH IN MEDICAL SCIENCES (NIJRMS) 3(2): 28-31.
37. Emmanuel Ifeanyi Obeagu, Stella Malot, Getrude Uzoma Obeagu and Okechukwu Paul-Chima Ugwu (2023). HIV resistance in patients with Sickle Cell Anaemia. NEWPORT INTERNATIONAL JOURNAL OF SCIENTIFIC AND EXPERIMENTAL SCIENCES (NIJSES) 3 (2):56-59.

Otim, Aaron Thomas (2023). Knowledge, Practices, and Factors Affecting use of Condoms among the Youths in Lira District in HIV Prevention. IDOSR JOURNAL OF APPLIED SCIENCES 8(3) 85-100. <https://doi.org/10.59298/IDOSR/2023/10.2.1416>