

Condom Use Determinants and Practices Among People Living with HIV in Kisii County, Kenya

Wamalwa Emmanuel^{*1}, Neyole Edward², Poipoi Moses³, Ringera William⁴, Otomu Geoffrey⁵, Bitok Monicah⁶ and Mbaluka Rosemary¹

¹Health Department, CARE International, Nairobi, Kenya

²Department of Disaster Preparedness and Engineering Management, Masinde Muliro University of Science and Technology, Kakamega, Kenya

³Department of Educational Psychology, Masinde Muliro University of Science and Technology, Kakamega, Kenya

⁴Health Department, CARE International, Kisii Kenya

⁵County Health Directorate, Kisii County Government, Kisii Kenya

⁶Ministry of Health, The National Government, Nairobi, Kenya

Abstract: The male condom remains the single, most efficient and available technology to reduce sexual transmission of HIV as well as sexually transmitted infections. This study sought to establish condom use determinants and practices among people living with HIV (PLHIVs) in Kisii County, Kenya. We interviewed 340 PLHIVs and 6 health workers. Although most PLHIVs had correct knowledge and approved condoms as effective for HIV prevention, consistent use and condom use at last sex were notably low especially among PLHIVs aged 18 – 24, those who depended on remittances from kin as main source of income, as well as during sex with secondary and casual partners. This study notes that knowledge on various benefits of using condoms is associated with enhanced condom use practices. Non-disclosure of HIV status to secondary and casual partners remains a key barrier to condom use among PLHIVs. Our observations highlight the need to further promote condom use among specific PLHIVs socio-demographic groups who continue to exhibit low condom use rates.

Keywords: Condom use determinants, Kenya, knowledge, PLHIV, safer sex.

INTRODUCTION

Despite recent advances in HIV prevention technologies and methodologies, the male condom remains the single most efficient and available technology to reduce sexual transmission of HIV as well as sexually transmitted infections [1]. Condoms have been found efficacious, with 80–95% reduction in transmission rates reported when used correctly and consistently [2, 3]. Current positive health dignity and prevention strategies encourage People living with HIV (PLHIVs) to consistently use condoms, both to avert HIV transmission to sexual partners as well as prevent acquisition of sexually transmitted infections (STIs) [4]. Over the years, HIV prevention programmers have invested significant resources and efforts in condom promotion programs across Sub Saharan Africa. Despite this investment, population-based surveys continue to show persistent low levels of condom use, including low condom uptake levels, inconsistent condom use as well as incorrect use [5]. Marginal increases in condom use have only been

realized over long periods of time [6]. As such, the effectiveness of condoms among PLHIV populations in countries with generalized HIV epidemics remains unclear [7].

The 2012 Kenya AIDS Indicator Survey [8] noted a 5.6% national HIV prevalence, and low condom use rates especially with sexual partners of unknown HIV status (7.1% among women and 27.1% among men). This study also noted that rates of condom use with partners of unknown HIV status varied by type of partnership, with highest rates among casual partners (35.1% among women and 48.5% among men) and lowest rates among married and cohabiting partners (2.5% among women and 3.4% among men). In Kenya, as in much of Sub-Saharan Africa, the potential of condoms as a public health tool for the prevention of HIV and other STIs remains far from being achieved. Many demand and supply side barriers can limit condom use among PLHIVs, including structural, socio-cultural, interpersonal as well as individual-level factors [9]. Through providing condoms and condom education in comprehensive care clinics, Kenyan HIV programs have gone a long way in mitigating supply side barriers especially among PLHIVs enrolled on care and treatment clinics. However, apart from traditional barriers, there are emerging barriers. For instance, enhanced access to ART has been

*Address correspondence to this author at the Health Department, CARE International, P.O Box 27578, (00100) Nairobi, Kenya; Tel: (+254) 721291260; E-mails: wamalwa@care.or.ke, emmanuelwamalwa@yahoo.com

noted to affect consistent condom use [10]. Overall, although individuals who learn that they are HIV-infected generally decrease their sexual risk behavior, it is acknowledged that some subsets of this population will still be engaged in unprotected sex thus increased transmission risk to sexual partners [11].

In Kenya, sexual HIV transmission account for most new infections with heterosexual transmission within primary partnerships accounting for 44% and casual heterosexual sex accounting for 25% of all new infections [8]. Sexually transmitted infections, preventable by condom use, play an important role in HIV transmission and acquisition. The Kenyan HIV prevention strategy thus underpins the need for correct and consistent condom use by PLHIVs [4]. However, despite widespread advocacy and scale-up, risky sexual behaviors continue to present among PLWHAs, with incorrect and inconsistent condom use, early sexual debut and multiple sexual partnerships remaining major challenges [8]. There is thus urgent need to better understand determinants of condom use among PLHIVs in order to foster use among this population. The objective of this study was to establish determinants of condom use among PLHIVs enrolled on care and treatment programs in Kisii County, Kenya.

METHODS

Design of the Study

This study used cross-sectional descriptive survey and evaluation designs, allowing the researcher to collect both qualitative and quantitative data. Study tools were administered to respondents in order to capture both exposures and outcomes simultaneously. Participant's exposure to various HIV interventions, their level of knowledge, perceptions and attitudes, their HIV related behaviors as well as socio demographic factors were all assessed at the same time over a short period of time. This design was appropriate for this study since the researcher intended to find out the status and draw associations at a point in time.

Study Context

Kisii County is located in the former Nyanza province in the Western parts of Kenya with an estimated population of 1,152,282 with 52% females [12], with HIV considered one of the most important public health concerns [13]. This study was carried out among clients enrolled on HIV care and treatment programs in Kisii County. There were 14,615 clients active on antiretroviral treatment [14]. Kisii County, where this study was undertaken, is one of the top 5 Counties with the highest HIV burden in Kenya, as well as one of the 5 Counties that make up 50% of all new HIV infections [4].

Sampling

A total 340 PLHIVs and 6 health workers were interviewed. In sample size calculation, standard error was set at 5% and a 10% margin was added to the sample. Study respondents were mapped and interviewed at health facilities. Multistage sampling was used to determine study questionnaire respondents as follows. First, Health Facilities

that offer HIV treatment care and support services were stratified based on their Ministry of health facility clustering. Kisii County health facilities fall between tier 2 and tier 4. Secondly, 10% of facilities in each tier were randomly selected. The sample was then proportionately allocated to the selected health facilities based on the number of HIV clients enrolled. Once at the facility, interviews were systematically administered, with the sampling interval being determined by dividing the facility's monthly number of HIV clients seen with the apportioned sample size. Ineligible clients were replaced by the next clients on scheduled to be seen as per the clinics appointment schedule. Six Key Informants were interviewed, being three county level HIV managers and another three Sub County level HIV managers. Key informants were purposefully selected based on their work stations as well as their areas of specialization.

Data Collection

Data was collected using two different instruments, an interviewer administered PLHIV semi-structured questionnaire and a key informant interview schedule. The PLHIV questionnaire was developed by the researcher through an analysis of study objectives and research questions to ensure these were adequately covered in both scope and depth, guided by literature review of HIV intervention and behavior change studies. The questionnaire was administered to individual PLHIVs by research assistants. Information collected by the questionnaires included demographics, as well as information on knowledge, perceptions and attitudes and the uptake of various HIV related behaviors. The Key Informant Interview guide was developed by the researcher through analyzing aspects that need in-depth professional understanding. This tool has open ended questions and was administered to HIV services managers and coordinators within the study area. The guide focused on gathering information on strengths, weaknesses, opportunities and threats for HIV related behavior change, and offered insights on improvement points for HIV programs. The guide also captured information on various factors affecting communities' level of HIV knowledge, perceptions and behavior change. The guide collected professional information on best methodologies to enhance knowledge, attitudes and behavior change among PLHIVs in Kisii County.

Data Instruments Validity and Reliability

Training of the research team was done by the researcher on the overall purpose and procedures of the study, as well as on the study questionnaire and the Key Informant Interview guide in order to ensure standardized understanding and administration of data collection tools. Study tools were pre-tested, piloted and reviewed before actual use to establish their accuracy in generation of required information. The test – retest method was used to determine the tools reliability.

Data Analysis

For the PLHIV questionnaire, data was coded, entered and analyzed using the Statistical Package for the Social Sciences (SPSS) version 17, with the level of significance set

at 0.05. First, descriptive statistics were drawn where frequencies, percentages and means were analyzed. Secondly, the Chi-square test was used to measure the association between demographics and Knowledge, attitudes, practices and behaviors. For categorical data where specific cell count was less than 10, the Fischer's exact test was used. The Kruskal Wallis test was used for data where normality in distribution could not be assumed. In the overall, comparison was made among and between individuals who exhibited safer sex practices and those who did not. Key informant's recorded sessions were transcribed and rechecked after which coding and harmonization was done on the transcripts. Summaries were drawn based on the major themes. A matrix showing each participants contribution against major themes was then generated. Major themes measure knowledge, attitudes and HIV related behaviors. Participant's contributions against each theme were then manually analyzed by combining views and determining the overall points of concurrence as well as discord between participants. All points of concurrence and discords noted were further critiqued through literature review in order to draw conclusions and recommendations.

Ethics

Research Ethics approval was sought and obtained from the Institutional Ethics and Research Committee of Moi University [FAN IREC 1195] and a research clearance permit issued by the National Commission for Science, Technology and innovation. The study was conducted during a period of 6 months from August 2014 to February 2015.

RESULTS

Demographic Characteristics

Study respondents had a median age of 37 years, range of 50 years (between 18 and 68 years old) and mean age of 37.2 years. Most respondents (72.6%) were aged between 20 and 40 years old, with 7.9% aged 18 – 24 years, 31.2% aged 25 – 34 years, 38.5% aged 35 – 44 years, 18.2% aged 45 – 54 year and 4.1% aged above 55 years old. Most respondents (65.9%) were female. The majority of respondents had primary level of education and above, with 42.1% having primary level education, 40.0% having secondary level education and 13.7% having tertiary level of education. Of all respondents, 78.9% were either married or cohabiting while 8.0% were single. Thirteen percent were either widowed (6.8%), divorced (2.1%) or separated (4.2%). For religion, 92.2% of the respondents were Christians, with 59.1% being Protestants and 33.1% Catholics. Most respondents had more than one child, with only 8% having no child. The main sources of income were farming (38.6%), business (28.0%) and formal employment (15.2%) whilst 3.2% depended on remittances. Six percent of the respondents lived below 1 USD a day (conversion KES 87), with the median income at KES 12,000 monthly

Condom Related Knowledge

Majority of PLHIVs (97%, n=314) have knowledge that condom use reduces HIV transmission risk to sexual partners. This study found no association between PLHIVs

knowledge that condom use reduces HIV transmission risk to sexual partners and age, sex, education, marital status, religion, parity and sources of income. This study shows that most PLHIVs used media (79%, n=338), health workers (47%, n=338) and HIV campaigns (24%, n=338) to get condom related information. Other key information sources include peers (6%, n=338) and posters (5%, n=338). Most PLHIVs indicated either media (70%, n=338), HIV campaigns (16%, n=338) or health workers (12%, n=338) as MAIN information source. This study found association between sources of information and sex ($\chi^2(1, N = 340) = 4.37, p = 0.037$) with males more likely to have peers as sources of information, and females more likely to use media as a source of condom information ($\chi^2(1, N = 340) = 4.49, p = 0.034$). This study did not find any other association between PLHIVs sources of information and age, education, marital status, religion, parity and sources of income. Although most PLHIVs did not consider their partners as a source of condom related information, we noted that a large proportion of PLHIVs (82%, n=325) discussed HIV related issues with their partners, including condom use.

Condom Use Approval and Self-Efficacy

In order to assess approval of condoms as an effective strategy for PLHIVs, this study used a series of 5 point Likert type questions, with PLHIVs asked to indicate whether they strongly agreed, agreed, neither agreed nor disagreed, disagreed or strongly disagreed with various statements posed to them. Most PLHIVs approved condoms as an effective way to prevent HIV transmission, with 32% agreeing and 54% strongly agreeing to this as shown in Table 1. The study found association between discussing HIV prevention with sexual partners and PLHIVs approval of condoms as an effective way to prevent HIV transmission ($\chi^2(2, N = 323) = 11.65, p = 0.003$). Those who disagreed or strongly disagreed that condoms were an effective HIV prevention strategy were less likely to have discussed HIV prevention with partner.

PLHIVs Sexual Behaviors

Sexual behaviors have been associated with both transmission and acquisition of HIV. In assessing respondent's sexual behavior, the study looked at duration from last sexual intercourse, type of partner and condom use. This study also looked at alcohol use, which can be associated with high-risk sexual behavior. Most PLHIVs (69%, n=302) had sexual intercourse within 1 month preceding the study, with 41% (n=302) having sexual intercourse within the 7 days that preceded the study. Most PLHIVs (78%, n=257) had sex with stable partners at last sex, with 18% (n=257) having last sex with casual partners. Females were more likely to have reported a casual partner at last sex ($\chi^2(2, N = 326) = 9.59, p = 0.008$). The study found that 23% (n=326) of PLHIVs had last sex with drunken partners. Again, females were more likely to have drunken partners at last sex ($\chi^2(2, N = 326) = 9.59, p = 0.008$).

Table 1. Condom use approval as a feasible preventive strategy for PLHIVs.

		Strongly Agree	Agree	Neither Agrees Nor Disagrees	Disagree	Strongly Disagree	Total
Condoms are an effective way to prevent HIV transmission	No.	184	107	28	12	7	338
	%	54.4	31.6	8.3	3.6	2.1	100
Couples can correctly and consistently use Condoms	No.	87	105	69	20	48	329
	%	26.4	31.9	21	6.1	14.6	100
It's a Man's Decision to use Condoms	No.	25	27	23	145	115	335
	%	7.5	8.1	6.9	43.2	34.3	100
PLHIVs should stop sexual encounters with partners who will not use condoms	No.	52	148	24	37	64	325
	%	16	45.5	7.4	11.4	19.7	100

Variation of Condom Use Practices by Demographics and Knowledge

Although only 65% (n=316) of PLHIVs interviewed self-reported consistent condom use in the 12 months that preceded the study, most PLHIVs (77%, n=322) reported condom at last sex. Chi square tests found association between age and condom use at last sex ($\chi^2(4, N = 322) = 23.02, p = 0.001$) with PLHIVs aged 18 – 24 less likely to have used a condom at last sex; and main income source ($\chi^2(4, N = 321) = 18.39, p = 0.001$) where those who depend on remittances from kin as main income source were least likely to have used a condom at last sex. We found no association between condom use at last sex and PLHIVs sex, education, marital status, religion and parity. This study also found association between condom use at last sex and knowledge that HIV can be transmitted from mother to child ($\chi^2(2, N = 320) = 13.16, p = 0.001$) with those who knew this more likely to have used a condom at last sex; Knowledge that MTCT can occur in pregnancy ($\chi^2(1, N = 285) = 4.42, p = 0.036$) with those who knew this more likely to have used a condom at last sex; and knowledge that ARVs can prolong PLHIVs life ($\chi^2(1, N = 309) = 9.79, p = 0.002$) where those who knew this were more likely to have used condoms at last sex.

Most PLHIVs who did not use condoms at last sex indicated main reasons for not using condoms as condoms capacity to reduce pleasure (34%, n=64), partner being cautious (23%, n=64) and wanting to get pregnant (6%, n=64).

Condom Use by Various Partner Types

This study measured the likelihood of condom use by primary sexual partners and secondary partners as well as by stable partners and casual partners. PLHIVs that had multiple secondary partners were further asked to rank these secondary partners depending on their own social and sexual considerations. This study found that PLHIVs were more likely to use condoms with primary sexual partners at last sex compared to secondary partners. Most PLHIVs (79%, n=324) used a condom the last time they had sex with their primary sexual partners. This proportion of condom use at last sex reduced with the ranking of secondary partners, with

66% (n=35) of secondary partners ranked as first secondary partner, 56% of those ranked second, and 43% of those ranked third reporting condom use at last sex. Similarly, this study found that PLHIVs were more likely to consistently use condoms with primary sexual partners at last sex (65%) compared to secondary partners, with 20% of secondary partners ranked as first secondary partner, 36% of those ranked second, and 22% of those ranked third reporting consistent condom in past 12 months preceding the study.

DISCUSSION

There is little data regarding condom related knowledge among PLHIV in Kenya. This study observed higher knowledge levels (97%) on condoms as a tool to reduce HIV transmission risk to sexual partners compared to other studies done in Kenya. For instance, the 2008/9 Kenya Demographic and Health Survey done among Kenyans aged 15 – 64 years indicated knowledge levels for condom as a HIV preventive strategy of 73% among adult women and 79% among adult men, albeit this was a study in the general population. Low knowledge levels and other demand-side barriers like levels of felt need are the main factors accounting for low levels of condom use in various Kenyan populations [15], thus a higher level of knowledge on condom use is pivotal in enhancing condom use. Key informants noted that HIV programs were using varying methodologies targeted at a wide range of socio-demographic groups, including PLHIVs, with condom related and other HIV prevention information. The use of varying methodologies by HIV programs targeted at a wide range of population groups with knowledge on condom use could have resulted in high levels of condom related knowledge among a wide range of demographic groups; thus explaining the no statistical difference finding among demographic groups as regards knowledge that the condom is a tool to reduce HIV transmission risk to sexual partners. Although sexual partners were not indicated as a major condom related information source, this study found higher knowledge levels and approval levels for condom use among couples who discussed HIV prevention. There is general agreement among researchers that enhanced couple communication would improve knowledge, attitudes as well as various HIV risk behaviors. It is however still largely debatable if this effect results in reduced incidence rates among better communicating couples [16]. HIV

Table 2. Variation between condom use at last sexual intercourse by age, income and knowledge.

		Condom Use During Last Sexual Intercourse			
		Yes (%)	No (%)	Total (%)	p Value
Age (n = 322)	18 – 24	3.1	4.4	7.5	0.001 Chi square
	25 – 34	23.0	8.4	31.4	
	35 – 44	32.9	5.6	38.5	
	45 – 54	14.6	3.7	18.3	
	55 and above	3.4	0.9	4.3	
Total		77.0	23.0	100.0	
Main source of income (n = 321)	Formal Employment	11.2	3.1	14.3	0.001 Chi square
	Business	18.7	8.7	27.4	
	Remittances from kin	1.2	2.2	3.4	
	Farming	32.4	6.2	38.6	
	Others	13.4	2.9	16.3	
Total		76.9	23.1	100.0	
Knowledge that MTCT can happen during	Yes	37.5	13.0	50.5	0.036 Chi square
	No	41.8	7.7	49.5	
Pregnancy (n = 285) Total		79.3	20.7	100.0	
Knowledge that HIV can be transmitted from Mother to Child	Yes	70.6	18.4	89.0	0.001 Chi square
	No	3.2	0.9	4.1	
	Don't Know	3.1	3.8	6.9	
(n = 320) Total		76.9	23.1	100.0	
Knowledge of some ARVs	Yes	66.0	14.3	80.3	0.002 Chi square
	No	12.6	7.1	19.7	
(n = 309) Total		78.6	21.4	100.0	

programmers aiming at fostering knowledge and attitudes could therefore consider fostering couple communication. Successful couple-oriented post-test HIV counselling methodologies that foster couple communication among PLHIVs do exist, and have been tested and validated both in Asian and African contexts [17-19].

Most respondents (87%) approved of condoms as an effective way to prevent HIV transmission, with 32% agreeing and 55% strongly agreeing to this. PLHIVs approval of condoms as an effective HIV prevention tool is a key step in fostering consistent and correct use among this population. It is however key to note that a much lesser population (59%) approved of the fact that couples could consistently and correctly use condoms as a HIV prevention method. Since this study was done among PLHIVs, it is possible that this low approval levels signify challenges realized by the couples in their personal attempt to consistently use condoms with partners, thus the need to strengthen condom use interventions among PLHIVs. In addition to this, more behavioral and biomedical HIV prevention methods are now available. This finding points to the need to both enhance behavior change methodologies targeted at enhancing PLHIVs self-efficacy of condom use, as well as fostering other new HIV prevention methods

among this population, including voluntary male circumcision and treatment for prevention.

It is key to understand condom related information sources for PLHIVs when designing prevention, as well as care and treatment programs. This study noted that media, health workers and HIV campaigns remain key information sources. It is however key to note that different sub populations utilize different media channels for information, thus necessary to critically review specific channels or models before considering specific media options for any population group [20]. For example, our study noted that males were more likely to have peers as source of information while females were more likely to use media as a source of HIV information. This finding thus suggests that HIV prevention programmers have an opportunity of exploiting peer education models in enhancing knowledge and changing behaviors of male PLHIVs for better health outcomes. High levels of peers as a source of information for males provides opportunity for HIV programs to custom make and deliver appropriate messages to males through peer education. HIV programs in Kisii County have had challenges over the years as regards targeting and involving males in prevention, care and treatment activities [14]. HIV programs could therefore utilize more of the Peer education strategy for behavior change especially among males. It

remains key to note that this study found media, health workers and HIV campaigns as key information sources, thus these should be exploited for wider information spread among PLHIVs

Most PLHIVs had sex with stable partners (78%) at last sex, but there was a high level of casual partners (18%) noted. Females were more likely to have reported a casual during the last sexual intercourse. The fact that it is more culturally acceptable in Kenya for men to have multiple sexual partners as compared to females, as noted by Key Informants, could explain the reason why more females had casual partners. Casual partners are least likely to know respondents HIV status and also report low condom use [21]. Men and women who engage in casual sex contribute 20% of new infections in Kenya [8]. This study found primary sexual partners more likely to know respondents HIV status and practice safer sex with PLHIVs as compared to secondary partners. Most PLHIVs used a condom (79%) the last time they had sex with their primary sexual partner, but this percentage reduced with secondary partners. Similarly, PLHIVs indicated the highest condom use levels with primary sexual partners (65%) during the last sex, with this proportion reducing with subsequent partners. The study also noted high disclosure rates (84%) with primary sexual partners. This finding indicates that the risk of HIV transmission to secondary partners could be higher than that of primary sexual partners. Although the study did not measure and compare the frequency of sexual acts by primary partners and secondary partners, a factor that could modify the transmission risk to primary partners, this finding indicates the need for continued advocacy for condom use among PLHIVs with multiple partners, with specific focus to secondary partnerships.

The link between alcohol use and HIV is complex. Scientists are gaining a better understanding of the complex relationship between alcohol consumption and HIV infection. Alcohol abuse impairs judgment, leading a person to engage in risky sexual behaviors [22]. People who drink also tend to delay getting tested for HIV and, if they test positive, tend to postpone seeking treatment. When receiving treatment, they may have difficulty following the complex medications regimen. All of these factors increase the likelihood that an alcoholic will get infected, infect others or will go on to develop AIDS [22]. In this study, 23% of all respondents had their last sexual encounters with drunken partners, with females having a higher probability of having had sex with a drunken partner during the last intercourse compared to males. This could be attributed to the fact that there are higher alcohol abuse rates among males than females [23, 24]. Heavy alcohol use is significantly associated with inconsistent condom use, especially among men [25]. Key informants noted that alcohol abuse remains a major challenge to safer sex practices, inclusive of condom use. HIV programmers need to address alcohol abuse levels among PLHIVs and their partners in the broader strife of fostering safer sex in this population.

Condom use is a critical element of combination prevention and one of the most efficient technologies available to reduce the sexual transmission of HIV and STIs. This study found 65% of respondents self-reporting condom use every time they had sexual intercourse in the past 12

months. This was lower than that observed in North West Ethiopia of 79% and Uganda at 82%, but was higher than what was observed in Addis Ababa public hospitals at 63.1% [26-28]. This study however observed much higher condom use consistency rates compared to observations among the general Kenyan population aged 15 – 64 years, where 20% of males and 9% of females in partnerships reported consistent condom use [8]. This variation could be because of the study setting influence, knowledge of HIV status among our respondents and respondent socio demographic conditions. Key informants noted that there continues to be advocacy and education sessions targeted at PLHIVs in to increase the uptake and consistency of condom use. They also noted that lack of disclosure remains a major challenge to condom use.

Overall, this study found that most participants (77%) used a condom the last time they had sex. Condom use at last sex is a widely used indicator in sexual behavior research. This result was much higher than the 10% observed in Kenya and Malawi five years ago among PLHIVs, probably due to increased investment in couple risk reduction among PLHIVs in recent years [29]. Although levels of condom use have increased significantly in high HIV burden countries over the past few years, it should be noted that this varies largely among various demographic groups, with young women recording low use levels [30]. A recent study in Kenya noted that low condom use could be attributed to demand side factors, highlighting the importance of building demand for condoms in the context of HIV prevention [15]. Demand-side barriers for condoms as a HIV preventive strategy are many. Much as the traditional barriers to condom use still exist, there are emerging barriers such as perceptions due to the knowledge that transmission risks lower with various biomedical interventions – voluntary medical male circumcision, post-exposure prophylaxis and antiretroviral therapy. Similarly, risk perceptions for the HIV infection are continuously modified in the era of effective therapy, as people vary their perceptions of potential consequences of an infection. These potential risk compensation effects are being closely scrutinized, but the dynamics are complex to track [30]. There is thus need to clearly communicate to HIV positive clients scientific facts not only on condom use, but also on other prevention methodologies.

This study found association between condom use during last sexual intercourse and age, with PLHIVs aged 18 – 24 years and those who depended on remittances from kin being less likely to have used a condom during their last sexual intercourse. Various studies have also noted low condom use levels among this age group, especially among females [30, 8]. There is need to further study, focus and eliminate both demand and supply side barriers to condom use among this age group, especially PLHIVs. This study also found association between condom use at last sexual intercourse and knowledge of various HIV preventive services, including PMTCT. It is possible that since PMTCT service advocates for safe sex especially during pregnancy, those who had knowledge of PMTCT were better aware of the need for condom use. This finding also suggests that knowledge of various benefits associated to condom use, like preventing mother to child transmission could enhance condom use practices. The study noted various barriers to

condom use, key of these being the perception by PLHIVs that condoms reduce pleasure during sex and the fear by PLHIVs that partners would be cautious of them is they suggested the use of condoms during intercourse. These depict the need for HIV programs to promote disclosure among sexual partners, and enhance both condom specific as well as transmission prevention education among PLHIVs. There are various known methods of increasing awareness and behavior change among youth 18-24 including through youth friendly services, peer-to-peer models both in and out of school, youth relevant evidence-based interventions like sister to sister and healthy choices for better future, scaling up integrated services as well as utilizing technology including social media to educate, recruit and retain PLHIVs in care [4].

CONCLUSION

Our observations highlight the need to further promote condom use among PLHIVs, especially among those aged 18 – 24, PLHIVs who depended on remittances from kin as main source of income, as well as during sex with secondary and casual partners. Although most PLHIVs had high level of condom related knowledge, consistent use and condom use at last sex were notably low among these groups. This study also notes that knowledge of various benefits associated to condom use, like preventing mother to child transmission, could enhance condom use practices.

Non-disclosure of HIV status to secondary and casual partners was noted as a key barrier to condom use.

AUTHOR CONTRIBUTIONS

Wamalwa Emmanuel was responsible for overall study design, development of protocols and tools, implementation, analysis and writing; Neyole Edward and Poipoi Moses contributed to review of the protocol, tools, findings and the paper; Ringera William and Bitok, Monicah contributed to review and implementation of the protocol and review of the paper. Otomu Geoffrey and Mbaluka Rosemary contributed to review of results, conclusions and the paper. All authors read and reviewed the paper and take responsibility for the findings.

CONFLICT OF INTEREST

The authors confirm that this article content has no conflict of interest.

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