



Predictors of consistent condom use among young psychoactive substance users in Kampala's informal settlements, Uganda



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ABSTRACT

Introduction: The use of psychoactive substances increases the likelihood of unprotected sexual intercourse with individuals whose health status is not known, and consequently sexually transmitted infections, especially among young people. Despite this risk, there is limited evidence of the predictors of consistent condom use among young psychoactive substance users (YPSUs) in informal settings. This study examined the predictors of condom use among YPSUs in Kampala's informal settlements, Uganda.

Methods: A cross-sectional study was conducted among 768 YPSUs. Respondent-driven sampling was used to recruit respondents. A structured questionnaire was used to collect respondent data on condom use. Data were analysed using Stata version 15.0. Prevalence ratios (PR) were used to determine the predictors of consistent condom use.

Results: Out of the 744 YPSUs, only 37.4% of the respondents reported consistent condom use in the last 30 days. The prevalence of condom use was statistically lower among young people aged 20–24 years (35.4%) compared to those aged 18–19 years (43.7%), and among the married (17.3%) compared to respondents with a “single” marital status (43.0%). Being married (PR 0.42, 95% CI: 0.30–0.59), longer duration between meeting the most recent partner and having initial sexual contact with them (7 months to 1 year: PR 0.56, 95% CI: 0.36–0.88; more than a year: PR 0.36, 95% CI: 0.17–0.75) was negatively associated with consistent condom use. Spending less than 24 h between meeting the most recent partner and having initial sexual contact was positively associated with consistent condom use (PR 1.60, 95% CI: 1.24–2.08).

Conclusion: The prevalence of consistent condom use in the last 30 days among YPSUs was low. Marital status and the duration between meeting the most recent partner and initial sexual contact predicted consistent condom use. There is a need to intensify awareness on the importance of consistent condom use among young people.

1. Introduction

Condoms, once used correctly and consistently, can contribute to ending the global HIV epidemic, and thus attainment of sustainable development goals, and the political declaration target of ending inequalities and getting on track to end AIDS by 2030 [1]. However, condom use during the last high-risk sexual encounter among young people, who form 16% of the global population, remains low in sub-Saharan Africa (14.2% among females and 39.7% among males) [2–4]. In Uganda, only 26.4%

of young women (15–24 years) and 41.4% of young men (15–24 years) who had multiple sexual partners for example, used a condom during their most recent sexual intercourse [4]. This is amidst the high annual incidence (73,000 new cases) and prevalence (6.2%) of HIV in the population [5].

There is evidence of a decline in the use of condoms in both developing and developed countries, not only among young people aged 15–24 years but also among individuals aged 15–49 years [2]. The decline in condom use among young people (individuals aged 10–24 years) is linked to the

Abbreviations: PR, Prevalence Ratio; RDS, Respondent-Driven Sampling; STIs, Sexually Transmitted Infections; UGX, Uganda Shilling; USD, United States Dollar; YPSUs, Young Psychoactive Substance Users.

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limited exposure to intense condom promotion [2], and negotiation skills, especially among females [6]. Nonetheless, consistent and correct condom use has since 1990 averted more than 117 million new HIV infections, close to half (47%) of which have been in SSA [6]. Increasing condom use rates during higher-risk sexual encounters to 95%, and maintaining the current coverage of other prevention interventions can contribute to a 33.3% reduction in HIV infections [6], including among young people who account for 28% of new HIV infections [1]. This can consequently reduce deaths related to AIDS, the leading cause of mortality among young people especially girls and women, due to social, cultural, structural and economic vulnerabilities [1]. The risk of HIV/AIDS has also been reported to be high for young people who use psychoactive substances, especially those who live in informal settlements, which are defined in our earlier publications [7–9].

Available evidence indicates that psychoactive substance users are more likely to take sexual risks than nonusers, including inconsistent condom use, which places them at a high risk of STIs [9–11]. Several theories explain this relationship. For instance, the alcohol myopia theory posits that substances such as alcohol, have the ability to impair perception and decision-making, and as a result focus the intoxicated individual on immediate impelling cues like sexual arousal as opposed to the salient and inhibitory ones like fear of STIs [11,12]. Besides, these psychoactive substances (for example *khat*, *cannabis*, *alcohol*, *heroin*) increase sexual expectancies such as sexual pleasure, performance, and confidence to approach a sexual partner [9]. Psychoactive substance users therefore, are more likely to have multiple sexual partners and sex while intoxicated, and to use condoms inconsistently compared to non-users [13,14]. Besides the influence of psychoactive substances, inconsistent condom use among YPSUs is driven by a lack of knowledge on the transmission and prevention of HIV and sexually transmitted infections (STIs), low perceived sexual satisfaction derived from the use of condoms, low STI risk perception, having a steady sexual partner, perceived low condom self-efficacy and limited access to condoms [15,16].

Despite the low prevalence, few studies have examined the predictors of consistent condom use among YPSUs in informal settlements. Yet, correct and consistent condom use is important for the prevention of STIs, which are also highly prevalent among young people living in informal settlements [17] and particularly among those who use psychoactive substances [18]. This study was premised on the theories of expectancy, planned behavior, alcohol myopia, and cognitive escape to understand the predictors of consistent condom use among YPSUs in Kampala's informal settlements. According to the theory of planned behavior, consistent condom use is reliant on some's intentions and perceived control over the behavior [19]. Based on the cognitive escape theory, psychoactive substances such as *khat*, alcohol, and marijuana act as behavioural restraints to consistent condom use [20]. On the other hand, the use of psychoactive substances such as alcohol impairs someone's ability to evaluate high-risk sexual behaviours such as unsafe sexual intercourse [21,22].

2. Material and methods

2.1. Study design, population and setting

This cross-sectional study utilized quantitative data collection methods. The study was conducted in the informal settlements of Kampala, the Capital city of Uganda, from June to July 2019. Kampala District is administratively divided into 5 divisions, (Kampala Central, Nakawa, Kawempe, Lubaga, and Makindye division). It has a total population of 1.5 million people, which constitutes 25% of the country's total urban population. Generally, the urban population represents 18% (6 million) of Uganda's total population of which 60% live in slums and other informal settlements [23]. Approximately 27.5% of Kampala's population is aged between 15 and 27 years [24].

This study was conducted among YPSUs who were aged 18–24 years and had been residing in the sampled informal settlements for at least 6 months. Psychoactive substances were defined as substances that, when taken in or administered into one's system, affect mental processes, e.g. perception, consciousness, cognition or mood and emotions [25]. These

substances can either be licit or illicit. In this study, the psychoactive substances of interest included alcohol, marijuana (*Cannabis sativa*), *khat* (*Catha edulis*), heroin and oral tobacco. In this study, we excluded all individuals who were mentally incapacitated or under the influence of psychoactive substances at the time of the interviews.

2.2. Sample size and sampling

The current study utilizes data from a bigger study titled “High-risk sexual behaviours of YPSUs” whose detailed methodology is already published [7,26,27]. The sample size was calculated using the Kish Leslie formula for cross-sectional studies while considering an alpha of 0.05 ($Z_{\alpha/2} = 1.96$), a power of 80%, a sampling error of 5%, and a conservative prevalence of condom use of 50%. This yielded a sample size of 384 study respondents. We factored in a design effect of 2.0 to cater for clustering per settlement [28], thus yielding a minimum sample size of 768 respondents. We did not cater for non-response due to low chances since all the seeds recruited were aware of the objectives of the study, as explained by the primary seeds. A total of 12 informal settlements were purposively selected with the aim of geographical representation of the entire city. Respondent-driven sampling (RDS) was used to recruit respondents from the selected informal settlements. This sampling technique is reliable for conducting studies among hard-to-reach groups [28,29]. During the implementation of the RDS, we contacted four peer leaders from an earlier study [8] who we oriented on the objective of the study, risks involved and the recruitment criteria for the initial respondents (primary seeds). Each peer leader was then asked to recruit four seeds per informal settlement (in total 48 seeds were recruited from the 12 study informal settlements) from their peer networks and orient them to the study purpose and objectives. On the day of data collection, the primary seeds recruited by the peer leaders were met in places most convenient to them. These included psychoactive substance use establishments, youth entertainment corners, and places of residence. Before the interview, their eligibility was assessed by the research assistants. Each respondent was first screened to ascertain whether they actually used a psychoactive substance. The research assistants also ensured that the seeds were sober at the time of the interview by looking out for behavioural signs of intoxication such as staggering gait, loss of coordination, drowsiness, paranoia, anxiety, eye-rolling, and pupil dilation/constriction and head movements. To prevent participants from answering the questionnaire multiple times, the researchers cross checked the names on the national identity cards presented by the seeds with the names already captured on the compensation forms. This was done before the researchers proceeded to obtain consent from the study participants.

Written informed consent was then obtained before administering the questionnaire. The interview lasted for about one hour. At the end of the interview, the respondents were briefly trained on peer referral and recruitment criteria for the next respondents. Each primary seed was given three coupons containing information about the study and its aim, coupon identification number, coupon start, and expiry date, survey location, contact details of the principal investigator, and the hours of operation. The research assistants were able to track how many valid and expired coupons were still in circulation using the expiry dates. However, participants with expired coupons were also allowed as long as they met the eligibility criteria. The primary seeds then requested their recruits to report to the indicated location to undertake the interview. The primary seeds constituted the first wave, and their recruits formed the second wave. The recruiting process was continued until the survey achieved the desired sample size. A total of 10 waves was achieved. Interviews with the different seeds were conducted from fixed locations in each informal settlement. Each of the primary seeds was compensated with UGX 10,000 (about 2.8 USD) while the rest of the seeds were compensated with UGX 5000 (about 1.4 USD).

2.3. Data collection process and quality control

Data were collected by trained research assistants using a structured questionnaire preloaded on Kobo Collect mobile application. Data were

uploaded to an online server and checked for errors and inconsistencies daily. The data collection tool was developed after a critical review of literature on condom use. It was tested for both content and face validity by a team of experts in HIV-related research, who are based at the Makerere University College of Health Sciences. Questions contained in the data collection tool were informed by the theories of alcohol myopia, social cognitive, and expectancy. Data were collected on socio-demographic characteristics such as sex and age, history of psychoactive substance use and sexual behaviours of the respondents, including condom use, multiple sexual partnerships, commercial sex and sex under the influence of psychoactive substances. The data collection tool was pretested among 20 psychoactive substance users in a similar setting in the Wakiso district, to identify any issues and refine the tool.

2.4. Measurement of variables

The outcome variable of interest was condom use. Condom use was categorised as consistent and inconsistent. A respondent was considered a consistent user if he/she used condoms each time he/she had sexual intercourse with a non-spousal partner in the last 30 days [26]. The duration between meeting a recent partner and initial sexual contact was assessed by asking the duration a respondent took between initial contact with the partner and when they had sexual intercourse for the first time. The duration of time was categorized as, within 24 h, between 1 and 6 days, between 1 and 4 weeks, between 5 weeks to 6 months, between 7 months to 1 year and more than a year. Psychoactive substance use was assessed by asking respondents whether they had consumed at least one of the substances of interest in the last 30 days. The substances of interest included marijuana, alcohol, khat, oral tobacco and heroin.

2.5. Data management and analysis

Statistical analysis was done using Stata v16. We presented categorical data using frequencies and percentages and continuous data using means and standard deviation. Modified Poisson regression analysis was used to establish an association between consistent condom use and covariate variables. All predictor variables that had a *p*-value of less than 0.2 at the bivariate level were included in the multivariable model. The predictor variables included in the model were also informed by existing literature. The variables included in the model were; age, sex, education level, marital status, living situation of the respondents (i.e. whether they stay with parents/guardians or not), average monthly income, duration of stay in the settlement and use of heroin in the last 30 days. Two-sided *p*-values ≤ 0.05 in the final model were considered statistically significant.

3. Results

3.1. Characteristics of the primary seeds

About 41.7% (20/48) of the seeds were aged between 18 and 19 years of age, 50.0% were females; 25.0% were current users of alcohol, 16.7 (8/48) were current users of either oral tobacco, heroin or marijuana and 25.0% (12/48) were current users of khat.

3.2. Background characteristics of the respondents

Table 1 shows the background characteristics of the respondents. A total of 768 respondents were recruited for this study. The majority of the respondents, 78.5% (603/768) were males while 75.3% (578/768) were aged 20–24 years. The mean age was 21.5 ± 2.1 years. More than half, 58.1% (446/768) had attained an education level of “above primary” and 78.9% (606/768) were single. The majority of the respondents, 91.0% (568/624) had used alcohol in the last 30 days. Almost all, 90.5% (399/441) had used Marijuana and 90.7% (417/460) had used khat in the last 30 days. Likewise, nearly three-quarters, 74.4% (71/95) had used oral tobacco and 51.9% (14/27) had used heroin in the last 30 days (Table 1).

Table 1

Background characteristics of the respondents in Kampala's informal settlements, Uganda.

Variable	Category	Frequency (n = 768)	Percentage (%)
Age	18–19	190	24.7
	20–24	578	75.3
Sex	Male	603	78.5
	Female	165	21.5
Marital status	Single	606	78.9
	Married	162	21.1
	Religion	Catholic	301
	Protestant/ Anglican	128	16.7
	Muslim	231	30.1
	Born again/ Pentecostal	83	10.8
	Other religions	25	3.3
Level of education	Primary	322	41.9
	Above Primary level	446	58.1
Duration of staying in area	0–5 years	279	36.3
	6–10 years	149	19.4
	More than 10 years	340	44.3
Average monthly income (UGX) (1 UGX = 3738 USD)	0–250,000	496	64.6
	250,001–500,000	207	27.0
	Above 500,000	65	8.5
Substance use in the last 30 days*	Alcohol	568	73.9
	Khat	417	54.3
	Marijuana	399	51.9
	Oral tobacco	71	9.2
	Heroin	14	1.8

* Multiple responses.

3.3. Sexual behaviours of young psychoactive substance users

Table 2 shows the sexual behaviours of YPSUs in Kampala's informal settlements, Uganda. A total of 744 respondents (96.9%) had ever had sexual intercourse. About 61.0% (454/744) of the respondents had sex under the influence of psychoactive substances in the last 30 days. Nearly one third, 27.4% (204/744) spent 5 weeks–6 months between meeting the most recent partner and initial sexual contact. More than a third, 40.6% (302/744) of the respondents had more than one sexual partner in the last 30 days. Almost half, 43.9% (327/744) thought about sex sometimes while using psychoactive substances and 49.3% (367/744) had their boyfriend/girlfriend as their most recent sexual partner (Table 2).

3.4. Prevalence and predictors of consistent condom use

Table 3 shows the prevalence of condom use based on psychoactive substance use in the last 30 days and the socio-demographic strata of YPSUs in Kampala's informal settlements, Uganda. Overall, only 37.4% (278/744) of the respondents reported using condoms consistently in the last 30 days, 25.4% (190/744) used condoms sometimes while 37.1% (276/744) never used condoms. A higher proportion of substance users aged 18–19 reported consistent condom use compared to those aged 20–24 (43.7% vs. 35.4%, $p = 0.049$). Relatedly, more single respondents used condoms consistently compared to married ones (43.0% vs. 17.3%, $p < 0.001$) (Table 3). Only 39.3% (292/744) had ever found it difficult to use a condom while intoxicated. Among these, 41.4% (121/292) never found it difficult to use a condom while intoxicated, 21.3% (62/292) occasionally found it difficult, 6.7% (18/292) always found it difficult, 15.1% (44/292) often found it difficult while 16.1% (47/292) only found it difficult once (Table 3).

Table 4 shows the predictors of consistent condom use among YPSUs in Kampala's informal settlements, Uganda. At a multivariable level, married YPSUs had a 58% lower prevalence of consistent condom use compared to those who were single (PR 0.42, 95% CI: 0.29–0.57). YPSUs with a shorter duration between meeting the most recent partner and initial sexual contact (i.e. within 24 h) had a 70% higher prevalence of consistent condom use compared to those with a longer duration between 1 and 7 days

Table 2

Sexual behaviours of young psychoactive substance users in Kampala's informal settlements, Uganda.

Variable	Category	Frequency (n = 744)	Percentage (%)
Use a psychoactive substance establishment to meet sexual partners	Yes	210	28.2
	No	534	71.8
Duration between meeting most recent partner and initial sexual contact	Within 24 h	138	18.6
	Between 1 and 7 days	116	15.6
	Between 1 and 4 weeks	145	19.5
	Between 5 weeks to 6 months	204	27.4
	Between 7 months to 1 year	93	12.5
	More than a year	48	6.4
Frequency of thinking about sex while using psychoactive substances	Always	138	18.6
	Sometimes	327	43.9
	Uncertain	59	7.9
	Never	220	29.6
Had sexual intercourse under the influence of a psychoactive substance in the last 30 days	Yes	454	61.0
	No	290	39.0
Frequency of having sex while under the influence of psychoactive substances in the last 30 days	Always	102	13.7
	Often	159	21.4
	Rarely	193	25.9
	Never	290	39.0
Relationship with the most recent sexual partner	Another friend	75	10.1
	Casual acquaintance	51	6.9
	Sex worker/sex client	96	12.9
	Girl/boy friend	367	49.3
	Spouse	155	20.8
Had more than one sexual partner in the last 12 months	Yes	209	28.1
	No	535	71.9
Had more than one sexual partner in the last 30 days	Yes	302	40.6
	No	442	59.4

(PR 1.70, 95% CI: 1.31–2.20). Respondents with a much longer duration between meeting the most recent partner and initial sexual contact (i.e. between 7 months to 1 year) (PR 0.65, 95% CI: 0.43–0.99), or more than a year (PR 0.38, 95% CI: 0.19–0.77) had a 35% and 62% lower prevalence of consistent condom use, respectively, compared to those with a duration between 1 and 7 days (Table 4).

4. Discussion

This study examined the predictors of consistent condom use among YPSUs in Kampala's informal settlements. Almost all (96.9%) of the respondents had ever had sexual intercourse. Among those who had ever had sexual intercourse, only 37.4% consistently used condoms, which was lower than the prevalence of consistent condom use (42%) reported among the general youth population in Kampala's informal settlements [30]. This may not be surprising because all the respondents in our study had a recent history of psychoactive substance use, which is well known to increase high-risk sexual behaviours, including inconsistent condom use [31,32]. The use of psychoactive substances impairs decision-making and increases vulnerability to coercion into unprotected sexual intercourse [33,34]. Moreover, failure to consistently use condoms could also have resulted from the limited access to sexual and reproductive health services, including HIV testing and a reliable supply of condoms that characterizes informal settlements [35–37].

More than a third of the respondents found it difficult to use condoms while intoxicated. This is because psychoactive substances interfere with cognitive performance, planning, and attention capacity thus making it

Table 3

Univariate analysis of the prevalence of condom use based on psychoactive substance use in the last 30 days and socio-demographic strata of young psychoactive substance users in Kampala's informal settlements, Uganda.

Variables	Categories	Condom use in the last 30 days		p-value
		Consistent (n = 278)	Inconsistent (n = 466)	
Socio-demographics				
Sex	Male	223 (38.4)	357 (61.6)	0.251
	Female	55 (33.5)	109 (66.5)	
Age category	18–19	76 (43.7)	98 (56.3)	0.049
	20–24	202 (35.4)	368 (64.6)	
Highest level of education	Primary and below	115 (37.1)	195 (62.9)	0.898
	Above primary	163 (37.6)	271 (62.4)	
Current marital status	Single	250 (43.0)	332 (53.0)	<0.001
	Married	28 (17.3)	134 (82.7)	
Religion	Catholic	110 (37.8)	181 (62.2)	0.473
	Anglican	43 (34.1)	83 (65.9)	
	Muslim	82 (36.9)	140 (63.1)	
	Pentecostal	36 (45.0)	44 (55.0)	
	Other	7 (28.0)	18 (72.0)	
Still living with parents/guardians	Yes	47 (43.1)	62 (56.9)	0.179
	No	231 (36.4)	404 (63.6)	
Average monthly income	UGX 0–250,000	185 (38.8)	292 (61.2)	0.182
	UGX 250,001–500,000	66 (32.4)	138 (67.6)	
	Above 500,000	27 (42.9)	36 (57.1)	
Duration of stay in informal settlement	0–5 years	100 (37.9)	164 (62.1)	0.965
	6–10 years	53 (36.6)	92 (63.4)	
	More than 10 years	125 (37.3)	210 (62.7)	
Type of psychoactive substance used in the last 30 days				
Alcohol (n = 604)	Yes	203 (36.7)	350 (63.3)	0.448
	No	16 (31.4)	35 (68.6)	
Marijuana (n = 428)	Yes	152 (39.4)	234 (60.6)	0.462
	No	19 (45.2)	23 (54.8)	
Oral tobacco (n = 91)	Yes	24 (35.8)	43 (64.2)	0.611
	No	10 (41.7)	14 (58.3)	
Khat (n = 450)	Yes	152 (37.2)	257 (62.8)	0.814
	No	16 (39.0)	25 (61.0)	
Heroin (n = 27)	Yes	2 (14.3)	12 (85.7)	0.070
	No	6 (46.2)	7 (53.8)	

difficult for the users to evaluate the high-risk sexual encounters that require the use of condoms. As such, some psychoactive substance users may forget to acquire condoms before a sexual encounter or even fail to use them [38–40]. Our finding is consistent with that of Kanda and Mash [41] and Schwitters, Sabatier [40] who indicated that young adults in Botswana and Namibia inconsistently used condoms once intoxicated with psychoactive substances.

More than half of the respondents had had sexual intercourse within a month of meeting their most recent partner, with at least 18.6% having sexual intercourse on the first day. Additionally, 61% of the respondents had had sex under the influence of psychoactive substances in the last 30 days. The high proportion of respondents that had had sex under the influence of psychoactive substances and the relatively short duration between meeting the most recent sexual partner and engagement in sexual intercourse could be attributed to the effects of psychoactive substances. Psychoactive substance use among young people in informal settlements is known to increase sexual expectancies such as courage or confidence to approach a sexual partner, and to reduce inhibitions such as increased likelihood of engaging in sexual intercourse, difficulties in refusing to engage in sexual intercourse, and forgetting to use condoms [26]. Besides, informal settlements are characterized by a high prevalence of sex work [42,43], which provides an opportunity for YPSUs to engage in sexual intercourse at their earliest need.

Our study found that spending more than 7 months between meeting the most recent partner and having initial sexual contact was associated with a lower prevalence of consistent condom use. Consistent condom use

Table 4
Multivariable analysis of the predictors of consistent condom use among young psychoactive substance users in Kampala's informal settlements, Uganda.

Variable	Freq (n)	Consistent condom use in the last 30 days n (%)	Crude PR (95% CI)	Adjusted PR (95% CI)	p value
Sex					
Male	580	223 (38.5)	1		
Female	164	55 (33.5)	0.87 (0.68–1.10)	0.81 (0.65–1.02)	0.082
Age category					
18–19	174	76 (43.7)	1	1	
20–24	570	202 (37.4)	0.81 (0.66–0.99)	0.90 (0.73–1.09)	0.339
Marital status					
Single	514	228 (44.4)	1	1	
Married	162	28 (17.3)	0.38 (0.27–0.55)	0.42 (0.29–0.57)	p < 0.001*
Divorced/ separated	68	22 (32.4)	0.72 (0.51–1.04)	0.74 (0.53–1.04)	0.093
Level of education					
Primary and below	310	115(37.1)	1		
Above primary	434	163(37.6)	1.01 (0.83–1.22)		
Living with parents					
Yes	109	47 (43.1)	1		
No	635	231 (36.4)	0.84 (0.66–1.07)	0.97 (0.77–1.23)	0.839
Average monthly income					
UGX 0–250,000	477	185 (38.8)	1	1	
UGX 250,001–500,000	204	66 (32.4)	0.83 (0.66–1.04)	0.94 (0.76–1.16)	0.591
Above 500,000	63	27 (42.9)	1.10 (0.81–1.50)	1.12 (0.83–1.50)	0.455
Duration of stay in the informal settlement					
0–5 years	264	100 (37.9)	1	1	
6–10 years	145	53 (36.6)	0.96 (0.74–1.25)	1.05 (0.81–1.34)	0.699
More than 10 years	335	125 (37.3)	0.98 (0.80–1.21)	0.97 (0.79–1.18)	0.768
Duration between meeting most recent partner and initial sexual contact					
Between 1 and 7 days	116	46 (39.7)	1	1	
Within 24 h	138	88 (63.8)	1.60 (1.24–2.08)	1.70 (1.31–2.20)	<0.001*
Between 1 and 4 weeks	145	48 (33.1)	0.83 (0.60–1.15)	0.83 (0.60–1.15)	0.278
Between 5 weeks to 6 months	204	68 (33.3)	0.84 (0.62–1.13)	0.82 (0.62–1.10)	0.200
Between 7 months to 1 year	93	21(22.6)	0.56 (0.36–0.88)	0.65 (0.43–0.99)	0.048*
More than a year	48	7 (14.6)	0.36 (0.17–0.75)	0.38 (0.19–0.77)	0.008*
Used alcohol in the last 30 days					
Yes	553	203(36.7)	1		
No	191	75(39.3)	1.06 (0.86–1.31)		
Used marijuana in the last 30 days					
Yes	386	152 (33.7)	1		
No	358	126 (45.2)	0.89 (0.74–1.07)		
Used oral tobacco in the last 30 days					
Yes	67	24 (35.8)	1		
No	677	254 (37.5)	1.04 (0.74–1.46)		
Used khat in the last 30 days					
Yes	409	152 (37.2)	1		
No	335	126(37.6)	1.01 (0.83–1.22)		
Used heroin in the last 30 days					
Yes	14	12 (85.7)	1		
No	730	454 (62.2)	2.64 (0.73–9.58)	3.00 (0.79–22.39)	0.105

CPR: Crude Prevalence Ratios, APR: Adjusted Prevalence Ratio.

is likely to be more frequent at the start of the relationship and declines as the relationship progresses because, in the beginning, most partners are unsure or unaware of each other's HIV or STI risk status. However, as the relationship progresses, perceived STI risk diminishes, and mutual trust is built, hence the inconsistent condom use. Our finding is consistent with those of Manning, Flanigan [44] which indicated the duration of a relationship as a predictor of inconsistent condom use among adolescents.

More than half of the respondents thought about having sexual intercourse while intoxicated. Whereas this proportion is high, it is not surprising, given the known impacts of psychoactive substances on cognition, and disengagement of mental processes [45,46]. Psychoactive substances such as alcohol, khat, and marijuana, as explained by the alcohol myopia theory, can impair someone's judgement thereby making them think about sexual intercourse [46]. Similarly, psychoactive substance use is associated with an increase in sexually related expectancies such as increased sexual desire, arousal and better sexual performance, and a reduction in inhibitions such as lack of confidence to approach a sexual partner [47–49]. The fact that many young people in informal settlements think about sex while intoxicated is however worrying. These settlements are characterized by a high prevalence of multiple sexual partnerships or relationships [42,50], and a low prevalence of consistent condom use. In addition, our

study revealed that more than a third of the YPSUs had sexual intercourse while under the influence of psychoactive substances. A combination of these factors is likely to escalate the transmission of STIs, including HIV/AIDS, and requires innovative risk reduction and prevention strategies.

Our study also revealed that married respondents had a lower prevalence of consistent condom use compared to their single counterparts. The low prevalence of condom use among married respondents could be attributed to the mutual trust they share concerning their fidelity and HIV status. Besides, some married couples may shy from the use of condoms due to fear of being apprehended by their partners for promiscuity and infidelity. Our finding is consistent with that of Pinchoff, Boyer [51] and Cheng, Johnston [52] which indicated that married urban youths in Zambia and Canada were less likely to consistently use condoms compared to their single counterparts.

5. Conclusions and recommendations

Our study revealed a low prevalence of consistent condom use among YPSUs in Kampala's informal settlements. The factors associated with consistent condom use were marital status and the duration between meeting the most recent partner and initial sexual contact. These findings indicate

the need to promote condom use among young psychoactive substance users who live in informal settlements. There is need to create awareness that a long duration between meeting a sexual partner and initial sexual contact should not be used to disregard HIV risk. Thus, young people ought to use condoms consistently irrespective of the duration of the relationship.

Ethics statement

Ethical approval was obtained from the Makerere University School of Public Health Research Ethics Committee. Administrative clearance was also obtained from the local authorities of the study informal settlements.

Informed consent

Informed written consent was obtained from all the respondents. To ensure privacy and confidentiality, interviews were conducted in secluded places most convenient for the respondents.

Consent for publication

All authors consented to submission for publication.

Availability of data and materials

Available and kept confidentially.

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Authors' contributions

TS and SPSK conceptualised the study, participated in data collection and analysis, and participated in drafting the manuscript. RKM, AN, JBI, JKBM, WKK, BEB, PO, AT, STW and RKW participated in the analysis and drafting of the manuscript. All authors reviewed and approved the final manuscript.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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