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FACTORS INFLUENCING UTILISATION OF WELLNESS CENTRE SERVICES AMONG MEN WHO HAVE SEX WITH MEN IN TUMAINI WELLNESS CENTRES, KISUMU AND AWENDO TOWNS, KENYA

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ABSTRACT

Background: Men who have sex with men (MSM) are a crucial and marginalised at risk population for HIV in Africa but have not in the past been given a lot of attention. Like other areas of Africa, homosexuality is illegal in Kenya and hence most gay and other same-sex practicing Kenyans live in highly stigmatising and discriminatory settings, which put them at risk of emotional and/or physical harm.

Objective: To determine factors influencing utilisation of Wellness Centre services by Men who have Sex with Men in Tumaini Wellness Centres in Kisumu and Awendo towns.

Design: A retrospective Cohort Study.

Setting: Tumaini Wellness centre in Kisumu and Awendo towns between 2012 and 2015.

Subjects: Three hundred and fifty three Men who have sex with men who had been enrolled in the Wellness Centre in Kisumu City and Awendo town between 2012 and 2015.

Results: The study used consecutive sampling to select a sample size of 198 MSM. However, the study obtained 353 responses, which gives a response rate of more than 100%. The association between current utilization of Wellness Center services and independent variables (uptake of STI screening service, condom uptake, uptake of Alcohol and Drug use and uptake of Risk reduction counselling) were assessed by use of chi-square. The results show that the factors influencing Screening for STIs in wellness centres include marital status ($p=0.0398$), Town of residence ($p=0.002$), knowledge on the correct use of the condom ($p=0.016$), HTC counselling ($p=0.013$) and receiving of results ($p=0.013$). In addition, factor influencing condom distribution in the wellness centres include knowledge on the correct use of condoms ($p=0.0001$), consistent use of condoms ($p=0.001$), negotiating of condom use with regular partner and casual partner ($p=0.001$) and alcohol influence ($p=0.016$). The study also established that factors that significantly influence uptake of alcohol and drug use screening services were drug use in the past 30 days ($p=0.017$) and HTC counselling ($p=0.039$). It was also established that HTC counselling ($p=0.001$), receiving of HIV results ($p=0.0013$) and negotiation for condom use with regular partner and casual partners ($p=0.008$) influence the uptake of risk reduction counselling were age of the MSM.

Conclusion: Age of MSM, knowledge on condom use, Alcohol use and HTC results are some of the factors that influence uptake of Wellness Centre Services. This study recommends that governmental organisations such as NASCOP should setup wellness centres that cater for high risk groups like men who have sex with men to offer treatment and specialised counselling as part of HTS and STI services that is confidential and sensitive to the needs of men who have sex with men. In addition, both governmental and non-governmental organizations should increase the coverage of HTC by establishing more MSM friendly centres. In addition, the governmental and non-governmental organisations should seek to integrate HTC services and STIs screening in wellness centres.

INTRODUCTION

Throughout the world, grassroots community-based organizations and wellness centers are leading efforts to provide urgently needed HIV and AIDS services to men who have sex with men (MSM) and transgender people (1). Many of these groups and centers have been working for years to deliver HIV prevention, education, care, support and advocacy services, often in the face of great adversity. Operating on the front lines of the global effort to end the AIDS pandemic, they have led the way in developing innovative and effective programmes targeting MSM and transgender populations (2).

In the United States, the Boriquen family health centre in Miami serves a large clientele of HIV-positive Latino MSM. About 60% of the men who enrolled in centre were from Cuba and Puerto Rico. Stigma resulting from HIV status, homosexuality and substance abuse and lack of trust of mainstream medical providers were key factors influencing the utilisation of the wellness centre. The wellness centre seek to make all clients feel comfortable to receive the care they need, regardless of their status, orientation and background (3). In New York City, Betances Health Centre provides services like non invasive testing, counselling, primary medical care, support groups, nutritional counselling primary medical care and access to alternative treatments. By the year 2003, 56% of the centre 380 HIV-positive clients were men and of those 40% were MSM. To enhance utilisation by MSM, the centre was using one-on-one interventions and community based HIV counselling and testing activities to bring MSM into care (4). In Toronto, Canada, Makoroka and Beyene (5) found that 65.7% of MSM were making use of wellness centre to seek healthcare services. However, the utilisation of healthcare services was significantly affected by factors such as income, age and HIV status. In the United Kingdom, Hunter *et al.* (6) found that MSM were using sexual health clinics more than non-MSM.

In South Africa, Rebe (7) established that the utilisation of wellness centre by men who have sex with men had increased after the introduction of Anova Health Institute, which in partnership with the provincial Departments of Health (DoHs) and with support and funding from the President's Emergency Plan for AIDS Relief (PEPFAR) launched Health4Men. Health4Me is the first state sector programme aimed at addressing MSM sexual health and wellness. The programme includes limited 'centre of excellence' in Cape Town and Johannesburg where large cohorts of MSM can receive direct health services. In addition, Laetitia *et al.* (8) found that although the utilisation of wellness centers had increased, 57% of the men who have sex with men were still seeking health services in mainstream healthcare facilities. In addition, 29% were not seeking any healthcare services. In Nigeria,

Eluwa *et al.* (9) found that 53% of men who have sex with men in Nigeria were using wellness clinics in the country.

In Kenya, Geibel (10) established that despite the fact that MSM were having multiple sexual partners, which increases the risk of HIV/AIDS, they had no access appropriate prevention counselling and care in Kenya mainstream clinics. In addition, Okall *et al.* (11) found that over 60% of Men Who Have Sex with Men (MSM) in Kisumu were not very comfortable seeking health services from a public hospital and hence efforts to provide facilities that offer safe and confidential health services and health education for MSM is required.

Until recently, healthcare interventions for HIV Programmes have been designed to reach the 'normative' hetero-sexual adult population and have failed to adjust to the diverging needs of sexual and gender minorities (12). At the same time socio-cultural and legal norms have produced negative attitudes among healthcare personnel, resulting in stigmatisation and discrimination against MSM who seek medical services (13). This has led to low uptake among persons belonging to this population group, with severe consequences for their physical and mental well-being and that of their partners. In a study on barriers to utilisation of wellness centre among men who have sex with men, Katerina *et al.* (14) found that individual factors include demographics, health beliefs, social structure, mental illness, substance abuse. Other factors include homophobia, racism, stigma and discrimination.

MATERIALS AND METHODS

Study Area: Kisumu is a port city of Kisumu County, Kenya at 1,131 m (3,711 ft), with a population of 409,928 (2009 census). It is the third largest city in Kenya and second most important city after Kampala in the greater Lake Victoria basin. According to the Geographic Mapping of Most at Risk Populations for HIV in Kenya, NACC/NASCOP, 2012, there were 4,041 female sex workers, 1,630 men who have sex with men, and 424 injecting drug users in the county. The city has several programmes from Men who have sex with men.

Awendo Town: Awendo is a town located in Migori County with a population of 90,153. According to the Migori county HIV&AIDS Profile, by the end of 2011, there were 68,616 people living with HIV in Migori County. Modes of transmission study, 2009 indicated that 15% of new infections in the county was accounted for by Men who have sex with men. The study focused on one Wellness Centre in the town supported by CDC.

Study Design: A retrospective cohort study design

used where all the factors such as demographic characteristics, sexual behaviour and behavioural factors and HCT services as well as the outcome screening in the wellness centre have already occurred. Data were therefore collected to estimate the probability of an outcome if exposed to a particular risk factor.

Independent Variable: The independent variable was wellness centre services and was measured by use of STI screening, drug use screening, risk reduction and counselling and condom uptake.

Dependent Variable: The independent variables were demographic variables, sexual behaviour, behavioural factors and HTC services.

Target Population: The target population was all the 2000 Men who have sex with men who had been enrolled in the Wellness Centre in Kisumu City and Awendo town between 2012 and 2015.

Inclusion Criteria: Age >16 years, Self-identify as a man, or male at birth and Data for MSM who have received services for one or more years at the Wellness Centre.

Exclusion Criteria: Data for MSM who enrolled and received services for less than one year were not included.

Sampling Technique and Sample Size Determination

Sampling Technique: The study used consecutive sampling to select 198 MSM in both Tumaini wellness clinics in Kisumu and Awendo. Consecutive sampling is a sampling technique in which every subject meeting the criteria of inclusion is selected till the required sample size is achieved.

Sample size Determination

Sample size: The target population was 2000 Men who have sex with men, who had been enrolled in the Wellness Centre in Kisumu City and Awendo town between 2012 and 2015. The study used Fisher (2003) formula to determine the sample size.

$$n = Z^2 pq / d^2$$

Where,

- n = the desired sample size (if the target population is > 10,000).
- Z = is the standard normal deviate at the required confidence level.
- p = is the proportion in the target population estimated to have characteristics being studied. The prevalence rate of MSM in Nyanza is 17.3%.
- $q = 1 - 0.173 = 0.827$.
- d = the level of statistical significance set = 0.05
- Z = Assuming 95% confidence interval $Z = 1.96$

$$n = 1.96^2 (0.173) (0.827) / 0.05^2 = 220$$

According to Fisher, for a population that is less than 10000 an adjustment must be done using the formula; $nf = n / 1 + (n/N)$

- nf = the final sample size, when population is less than 10,000
- n = the sample for populations of 10,000 or more
- N = the size of the total population from which the sample is drawn
- $nf = 220 / 1 + (220 / 2000)$
- 198 MSM

However, the study obtained 353 responses, which is more than 100% response rate. A response rate of 70% and above is excellent, 60% - 69% is good, while 50% and above is adequate for analysis and reporting.

A data abstraction form was developed; each variable had a simple and unambiguous response section, where the abstractors can capture the required information to ensure standardization of the data hence internal validity and reproducibility of this study. This data abstraction instrument was an electronic document which allowed for easier centralisation and access to data.

Microsoft Access was used to translate the data abstraction instrument into an electronic form that can be used for data input, quality control and the management of the data. Focused group discussion and key informant interview guides was used to collect further information on the study topic

A pilot study was carried out on 10% of the total sample. This enabled assessment of the feasibility of investigation, determined the adequacy of the instrumentation, and evaluated any potential methodological pitfalls, such as data collection strategies. Moreover, it gave us an opportunity to evaluate the reliability of data abstraction sheet, clarify the data abstraction protocols, determine the frequency with which items are missing from the chart, provide information on the institution's chart retrieval rates and the process of pulling charts, and evaluate any potential sampling concerns or impact resulting from inclusion and exclusion criteria.

Validity is the ability of a research instrument to measure what it ought to measure so that the difference in individual scores can be taken as representing true difference in the characteristics under study.

The content validity of the instrument was determined by discussing the items in the instrument. Advice provided was effected into correcting the questionnaire so as to measure what was under study. Internal validity and reproducibility of this study was enhanced in the standardisation of the data.

Reliability concerns with the consistency in the production of results by a research instrument if used by another researcher in another location.

Data abstractors were carefully selected and trained. Those who have an experience in HIV

infection and MSM were selected. To ensure inter-rater reliability a minimum of two abstractors across the sites were chosen. The abstractors remained blinded to study hypothesis to minimise subjectivity in classification in relation to personal theories about the study's aims, decrease reviewer bias, specifically the possibility of their assessment being swayed by knowledge of others (for example investigators), concern over adversely affecting the study's outcome, or interpreting their abstraction as too lenient or harsh. Since these abstractors were working in these centre, they were familiar and aware with health records and where the information is located. Abstractors were monitored and carefully trained with the data abstraction instrument and the accompanying protocols and guidelines. Pilot study and random checks were done to determine the inter-rater reliability of both the data abstraction instrument and the individual data abstractors.

Data Collection Technique: The researcher studied the design of existing health records and how the data is recorded at the wellness centre. First, the flow of information was examined, from the client to health record in order to identify established charting protocols, accepted processes of documentation, and the nature of standard documentation. Second, I carefully inspected three to five charts to provide critical information on how the patient chart/health record is constructed and documented. Third, the site-specific clinicians were consulted to ascertain how patient information is recorded and documented in these two sites. Based on the study variables and understanding of health record, a standardised retrospective chart review data abstraction instrument were developed which was used to collect the data.

Data Analysis: Participant characteristics were presented by use of frequencies and percentages for categorical variables. Chi-square test was used to determine if there was significant association between the two study sites of Kisumu and Awendo centres. Utilisation of wellness centre service uptake was measured using STI screening, Drug use screening, risk reduction screening and condom distribution.

These were treated as the dependent variables for the study's objective. Since the data were in categorical form, chi-square (X^2) test was used to determine the association between independent and dependent variables. Associations were also reported by use of Odds Ratios (OR) with 95% confidence interval (CI). Statistical significance was determined if $p < 0.05$. Data were analyzed using STATA version 13 for Windows®.

Ethical Considerations: Approval of the study was sought from School of Graduate Studies of the Jaramogi Oginga Odinga University of Science and Technology, (JOOUST). Ethical Clearance was given by University of East Africa Baraton Ethical Review Board as well as by Centre for Disease Control (CDC). Permission to conduct the study was sought from, Kisumu County Health Management Team, Awendo Sub County Health Management Team and the head of programmes in participating Wellness Centres. Confidentiality and anonymity of the information given by the respondents was maintained throughout the study and all interviews were conducted in privacy.

RESULTS

The sample size of this study was 198 MSM. However, the study obtained 353 responses, which is more than 100% response rate. A response rate of 70% and above is excellent, 60% - 69% is good, while 50% and above is adequate for analysis and reporting.

From the findings, most of the participants, 78 from Kisumu town and 76 from Awendo town, were aged between 19 and 25 years. In relation to their education level, most of the participants, 90 from Kisumu and 96 from Awendo, had secondary education. This was followed by primary education and tertiary education. Regarding their marital status, most of the participants, 168 from Kisumu Awendo and 135 from Awendo, were single. The study found statistical significant association between the demographic variables and town of residence. The results are as shown in table 1.

Table 1
Participants Characteristics

Variable	Townn (%)		p value
	Kisumu	Awendo	
Age in years			0.001
16-18	78(62.40)	47(37.60)	
19-25	78(50.65)	76(49.35)	
> 25	26(34.67)	49(65.33)	
Education Level			0.002
Primary	48(44.86)	59(55.14)	
Secondary	90(48.39)	96(51.61)	
Tertiary	43(71.67)	17(28.33)	
Marital Status			0.001
Single	168(55.45)	135(44.55)	
Married	12(31.58)	26(68.42)	
Divorced/Separated/Widowed	2(15.38)	11(84.62)	

Screened for STIs: The study assessed determinants that affect the uptake of STI screening services at wellness centre's. It was found that participants aged 19-25 years (uOR = 1.36, 95%CI [0.67-2.76], p = 0.401) and 25 years and above (uOR = 1.09, 95%CI [0.48-2.52], p = 0.833), were more likely to uptake STI screening services than those who were 16-18 years of age. In addition, the study findings showed statistical significance at single (uOR = 4.49[95% CI 1.40 – 14.46], p = 0.017) and married (uOR = 7.29, 95%CI [1.44-37.01, p = 0.012) participants who were more likely to uptake STI screening services compared to divorced/separated/widowed participants. Participants in Awendo town (uOR = 2.95[95% CI 1.47 – 5.93], p = 0.002) were more likely to uptake STI screening services than those in Kisumu town. The study found that participants with two sex acts per week were (uOR = 2.79, 95%CI [0.53-14.63], p=0.226) were more likely to uptake STI screening services than those who had less than one sex act per week. However,

participants who had three or more sexual partners were less likely to uptake STI screening services than those who had one sexual act (uOR = 0.88, 95%CI [0.35-2.22], p = 0.787). Participants who had anal sex were less likely to uptake STI screening services than who did not (uOR=0.52, 95%CI [0.21-1.30], p=0.161). Participants who were HTC tested were more likely to uptake STI screening services than those who did not (uOR = 1.39, 95%CI [0.69-2.79], p=0.366). Marital status and anal sex were fit on the final multivariate model. Single and married participants were found to be associated with uptake of STI services, (aOR= 12.65, 95%CI [1.96-81.25], p=0.007) and (aOR = 14.58, 95%CI [3.39-62.77], p<0.0001) respectively. Moreover, it was also found that (aOR = 6.72, 95%CI [2.12-21.24], p= 0.001) participants in Awendo town were more likely to uptake STI screening services compared to those in Kisumu town. Lastly, those who had anal sex were less likely to uptake STI screening services (aOR = 0.34, 95%CI [0.13-0.89], p = 0.027).

Table 2
Influence of Participants' characteristics on Screening for STIs

Variable	Screened for STI n(%)	uOR(95%CI)	p value	aOR(95%CI)	p value
Age in years			0.6909		
16-18	107(85.60)	ref.			
19-25	137(88.96)	1.36(0.67-2.76)	0.401		
> 25	65(86.67)	1.09(0.48-2.51)	0.833		
Education Level			0.2684		
Primary	89(83.18)	ref.		ref.	
Secondary	167(89.78)	1.78(0.89-3.56)	0.104		
Tertiary	52(86.67)	1.31(0.53-3.23)	0.552		
Marital Status			0.0398		
Single	266(87.79)	4.49(1.40-14.46)	0.017	12.65(1.96-81.25)	0.007
Married	35(92.11)	7.29(1.44-37.01)	0.012	14.58(3.39-62.77)	0.0001
Divorced/Separated/Widowed		8(61.54)	ref.		ref.
Town			0.002		
Kisumu	149(81.87)	ref.		ref.	

Awendo	160(93.02)	2.95(1.47-5.93)		6.72(2.12-21.24)	0.001
Sexual Behavior					
Sex Acts per Week			0.1981		
1	42(87.50)	ref.		ref.	
2	39(95.12)	2.79(0.53-14.63)	0.226	1.62(0.22-11.84)	0.632
≥ 3	228(86.04)	0.88(0.35-2.22)	0.787	0.87(0.18-4.25)	0.868
Anal Sex			0.161		
No	69(92.00)	ref.		ref.	
Yes	204(85.71)	0.52(0.21-1.30)		0.34(0.13-0.89)	0.027
HTC Tested			0.366		
No	70(84.34)	ref.			
Yes	239(88.19)	1.39(0.69-2.79)			

Variables that did not converge in the regression model were subjected to Fishers exact. The study found no statistical significance difference in uptake of STI services among those who used drugs in the past 30 days to those who did not ($p = 0.709$). There was also no statistical significance difference among alcohol influence categories to uptake of STI services ($p = 0.716$). The study found no statistical significant difference among those who were trained on harm reduction to those who were not ($p = 0.71$). The study found statistical significant difference in uptake of STI screening services between those who used condoms to those who did not ($p = 0.016$). Moreover, statistical significance in uptake of STI screening services were observed between those who were HTC counselled and those who received HTC results to those who did not ($p = 0.013$). Table 3.

Table 3
Factors Influencing screening for STIs

Variable	n(%)	p-value
Alcohol and Drug Use		
Drug Use past 30 days		0.709
No	42(91.30)	
Yes	69(94.52)	
Alcohol Influence		0.716
Always	1(100.00)	
Most times	1(100.00)	
Never	21(91.30)	
Sometimes	13(81.25)	
Trained Harm Reduction		0.71
No	70(92.11)	
Yes	40(95.24)	
Condom Usage		
Supplier		0.152
Health provider	3(100.00)	
None	296(87.06)	
Other	0(0.00)	
Peer educator	10(100.00)	
Correct Use		
No	198(84.26)	0.016
Yes	111(93.28)	
Consistent Use		0.087
No	216(85.38)	
Yes	93(92.08)	
Negotiate Condom use with Regular Partner		0.111
Always	106(92.80)	
N/A	1(100.00)	
No	198(84.26)	
Sometimes	4(100.00)	
Negotiate Condom use with Casual Partner		0.107

Always	104(92.86)	
N/A	5(100.00)	
No	198(84.26)	
Sometimes	2(100.00)	
Sexual Clients		
Casual		0.495
0	305(87.39)	
1	2(100.00)	
2	1(50.00)	
4	1(100.00)	
Regular		0.273
0	304(87.36)	
1	1(100.00)	
2	3(100.00)	
3	0(0.00)	
HTC		
Self-reported HIV results		0.051
Positive	35(100.00)	
Negative	2(100.00)	
Unknown	1(100.00)	
No	271(85.76)	
HTC Counselling		0.013
No	271(85.76)	
Yes	38(100.00)	
Received results		0.013
No	276(85.98)	
Yes	33(100.00)	
Testing Results		0.148
Declined	24(96.00)	
< 3 months	15(75.00)	
Negative	223(91.77)	
On Care	5(100.00)	
Positive	4(100.00)	

Condom distribution: The findings indicate that categories under condom use in last sexual encounter, anal sex and harm reduction training had no statistical significant association with condom distribution as shown by p-values of 0.168, 0.222 and 0.159 respectively. However, the findings show that categories under correct use of condoms, consistent use, negotiate condom use with regular partner, negotiate condom use with casual partner and alcohol influence had a statistical significant association with condom distribution among MSMs as shown by p-values of <0.0001, <0.0001, <0.0001, <0.0001 and 0.016 respectively. Table 4.

Table4
Factors affecting condom Distribution

Variable	Condom Distribution n(%)				p value
	Health Provider	None	Other	Peer Educator	
Condom Demonstration					0.405
No	0(0.00)	59(100.00)	0(0.00)	0(0.00)	
Yes	3(1.02)	281(95.25)	1(0.34)	10(3.39)	
Correct use					<0.0001
No	0(0.00)	234(99.57)	1(0.43)	0(0.00)	
Yes	3(2.52)	106(89.08)	0(0.00)	10(8.40)	
Consistent use					<0.0001
No	0(0.00)	249(98.42)	1(0.40)	3(1.19)	
Yes	3(2.97)	91(90.10)	0(0.00)	7(6.93)	
Negotiate Condom use with Regular Partner			<0.0001		
Always	3(2.63)	105(92.11)	0(0.00)	6(5.26)	
N/A	0(0.00)	0(0.00)	0(0.00)	1(100.00)	
No	0(0.00)	234(99.57)	1(0.43)	0(0.00)	
Sometimes	0(0.00)	1(25.00)	0(0.00)	3(75.00)	
Negotiate Condom use with Casual Partner			<0.0001		
Always	3(2.68)	106(94.64)	0(0.00)	3(2.68)	
N/A	0(0.00)	0(0.00)	0(0.00)	5(100.00)	
No	0(0.00)	234(99.57)	1(0.43)	0(0.00)	
Sometimes	0(0.00)	0(0.00)	0(0.00)	2(100.00)	
Condom Use in Last Sexual encounter					0.168
No	1(6.67)	12(80.00)	-	2(13.33)	
Yes	2(1.65)	111(91.74)	-	8(6.61)	
Bottom Anal Sex					0.222
No	2(2.67)	72(96.00)	0(0.00)	1(1.33)	
Yes	1(0.42)	227(95.38)	1(0.42)	9(3.78)	
Alcohol Influence					0.016
Always	1(100.00)	0(0.00)	-	0(0.00)	
Most times	0(0.00)	1(100.00)	-	0(0.00)	
Never	0(0.00)	17(73.91)	-	6(26.09)	
Sometimes	2(12.50)	10(62.50)	-	4(25.00)	
Harm Reduction training					0.159
No	1(1.32)	67(88.16)	-	8(10.53)	
Yes	2(4.76)	39(92.86)	-	1(2.38)	

Alcohol and Drug Use Screening: The study also assessed the determinants of uptake alcohol and drug use services at the wellness centre. It was found that participants aged between 19-25 years were 1.23 times more likely to uptake alcohol and drug use services than those aged between 16-8 years (uOR = 1.23, 95%CI [0.77-2.27], p = 0.518). However, those aged 25 years and above, (uOR = 0.25, 95%CI [0.58-2.676], p=0.569), were less likely to uptake alcohol and drug

use services. Under education, those in secondary and tertiary were more likely to uptake alcohol and drug use than those with primary education, (uOR = 1.27, 95%CI [0.69-2.35], p = 0.448) and (uOR = 1.22, 95%CI [0.53-2.80], p = 0.637) respectively. Participants who were single (uOR = 2.14, 95%CI [0.64-7.23], p = 0.162) and married (uOR = 2.93, 95%CI [0.65-13.24], p = 0.218) were more likely to uptake alcohol and drug use than those who were divorced / separated / widowed.

Participants in Awendo town were more likely to uptake alcohol and drug use screening services than those in Kisumu town (uOR = 1.71, 95%CI [0.97-3.01], p = 0.063). The study also assessed sexual practices by uptake of alcohol and drug use screening services. It was found that those who had two sexual acts (uOR = 0.97, 95%CI [0.32–2.96], p = 0.959) and three sexual acts per week, (uOR = 0.95, 95%CI [0.42-2.17], p = 0.907), were less likely to uptake alcohol and drug use screening services. Moreover, those who had anal sex were less likely to uptake alcohol and drug use screening services (uOR = 0.49, 95%CI [0.22-1.08],

p = 0.0596). Those who were HTC counselled were more likely to uptake such services compared to those who were not (uOR = 4.13, 95%CI [0.97-17.65], p = 0.055). Furthermore, those who were tested (uOR = 1.46, 95%CI [0.79-2.72], p = 0.221). On the final model, town, anal sex, HTC counselled, tested and received results were added. Participants in Awendo town were more likely to uptake alcohol and drug use screening services compared to those who were in Kisumu town (uOR = 2.01, 95%CI [1.11-3.64], p = 0.02) Table 4.5.

Table 5
Influence of Participants' characteristics on Alcohol and Drug Use Screening

Variable	Screened for STI n(%)	uOR(95%CI)	p-value	aOR(95%CI)	p-value
Age in years			0.7709		
16-18	101(80.80)	ref.			
19-25	129(83.77)	1.23(0.77-2.27)	0.518		
> 25	63(84.00)	.25(0.58-2.67)	0.569		
Education Level			0.7446		
Primary	86(80.37)	ref.			
Secondary	156(83.87)	1.27(0.69-2.35)	0.448		
Tertiary	50(83.33)	1.22(0.53-2.80)	0.637		
Marital Status			0.3871		
Single	251(82.84)	2.14(0.64-7.23)	0.162		
Married	33(86.84)	2.93(0.65-13.24)	0.218		
Divorced/Separated/Widowed	9(69.23)	ref.			
Town			0.063		
Kisumu	144(79.12)	ref.		ref.	
Awendo	149(86.63)	1.71(0.97-3.01)		2.01(1.11-3.64)	
Sexual Behavior					
Sex Acts per Week			0.9928		
1	40(83.33)	ref.			
2	34(82.93)	0.97(0.32-2.96)	0.959		
≥ 3	219(82.64)	0.95(0.42-2.17)	0.907		
Bottom Anal Sex			0.0596		
No	67(89.33)	ref.			
Yes	191(80.25)	0.49(0.22-1.08)			
HTC					
Counselled			0.055		
No	257(81.33)	ref.			
Yes	36(94.74)	4.13(0.97-17.65)			
Tested			0.221		
No	65(78.31)	ref.		ref.	
Yes	228(84.13)	1.46(0.79-2.72)		1.72(0.90-3.29)	0.103
Received Results			0.093		
No	262(81.62)	ref.			
Yes	31(93.94)	3.49(0.81-14.99)			

Variables that did not converge in the logistic regression model, Fishers exact test was used. There was statistical significance difference between participants who used drugs in the past 30 days and who did not, $p= 0.017$. The study found no statistical significant association amongst the alcohol influence categories ($p=0.944$) and condom usage supplier categories ($p=0.139$). There was no statistical

significant association between those who were trained on harm reduction and those who did not ($p=0.095$). The study found no statistical significant difference among those who used condoms correctly to those who did not ($p = 0.179$), those who used condom consistently to those who did not ($p=0.662$) and there was no difference between those negotiated for condom use with regular partner ($p = 0.668$).

Table 6
Factors affecting uptake of alcohol and drug use screening services

Variable	n(%)	p value
Alcohol & Drug Use		
Drug Use past 30 days		0.017
No	35(76.09)	
Yes	67(91.78)	
Alcohol Influence		0.944
Always	1(100.00)	
Most times	1(100.00)	
Never	21(91.30)	
Sometimes	14(87.50)	
Trained Harm Reduction		0.095
No	62(81.58)	
Yes	39(92.86)	
Condom Usage		
Supplier		0.139
Health provider	3(100.00)	
None	282(82.94)	
Other	0(0.00)	
Peer educator	8(80.00)	
Correct Use		0.179
No	190(80.85)	
Yes	103(86.55)	
Consistent Use		0.662
No	208(82.21)	
Yes	85(84.16)	
Negotiate Condom use with Regular Partner		0.668
Always	98(85.96)	
N/A	1(100.00)	
No	191(81.28)	
Sometimes	3(75.00)	
Negotiate Condom use with Casual Partner		
Always	96(85.71)	
N/A	5(100.00)	
No	191(81.28)	
Sometimes	1(50.00)	
Sexual Clients		
Casual		0.788

0	288(82.52)	
1	2(100.00)	
2	2(100.00)	
4	1(100.00)	
Regular		
0	287(82.47)	
1	1(100.00)	
2	3(100.00)	
3	1(100.00)	
HTC		
Self-reported HIV results		0.207
Positive	33(94.29)	
Negative	257(81.33)	
Unknown	2(100.00)	
No	1(100.00)	
HTC Counselling		0.039
No	257(81.33)	
Yes	36(94.74)	
Testing Results		0.115
Declined	25(100.00)	
< 3 months	15(75.00)	
Negative	213(87.65)	
On Care	4(80.00)	
Positive	4(100.00)	

Risk Reduction Counselling: The study also assessed the determinants of uptake of risk reduction counselling services. It was found that participants aged 19-25 (uOR = 0.13, 95%CI [0.016-1.04]), and above 25 years of age (uOR = 0.60, 95%CI [0.04-9.68]) were less likely to uptake risk reduction than those aged between 16-18 years. Participants who had secondary and tertiary education were less likely to uptake risk reduction counselling (uOR = 0.57, 95%CI [0.11 - 2.88], p = 0.498) and (uOR = 0.36, 95%CI [0.06-2.23], p = 0.273) respectively. Moreover participants who were single (uOR = 3.07, 95%CI [0.36-26.58], p = 0.308) and married (uOR = 1.50, 95%CI [0.12-18.05], p = 0.749) were more likely to uptake risk reduction counselling services. Participants who were from Awendo town were less likely to uptake risk reduction counselling service than those who were from Kisumu town (uOR = 0.78, 95%CI [0.23-2.61], p = 0.689). Under sexual behaviors, participants who had 2 sex acts per week were less

likely to uptake risk reduction counselling services than those who had 1 sex act. However, those who had 3 or more sex acts per week, (uOR = 1.60, 95%CI [0.32-7.95], p = 0.564), were more likely to uptake risk reduction counselling services than those who had 1 sex act per week. Participants who had bottom anal sex were less likely to uptake such services compared to those who did not (uOR = 0.34, 95%CI [0.43-2.76], p = 0.2503). The study found that those who were HTC counselled (uOR = 0.13, 95%CI [0.04-0.44], p = 0.001) were less likely to uptake risk reduction counselling services to those who did not. In addition, those who were tested (uOR = 0.32, 95%CI [0.04-2.52], p = 0.2084) and those who received results, (uOR = 0.11, 95%CI [0.03 - 0.37], p = 0.0013), were less likely to uptake risk reduction counselling services to those who did not. Age, HTC counselled and HTC tested, and HTC received were fit the in the final model. More results are as shown in Table 7.

Table 7
Influence of Participants' characteristics on Risk Reduction Counselling

Variable	Screened for STI n(%)	uOR(95%CI)	p value	aOR(95%CI)	p value
Age in years			0.0276		
16-18	124(99.20)	ref.		ref.	
19-25	145(94.16)	0.13(0.016-1.04)		0.13(0.02-1.06)	0.057
> 25	74(98.7)	0.60(0.04-9.68)		0.68(0.04-11.29)	0.79
Education Level			0.536		
Primary	105(98.13)	ref.			
Secondary	180(96.77)	0.57(0.11-2.88)	0.498		
Tertiary	57(95.00)	0.36(0.06-2.23)	0.273		
Marital Status			0.5045		
Single	295(97.36)	3.07(0.36-26.58)	0.308		
Married	36(94.74)	1.50(0.12-18.05)	0.749		
Divorced/Separated/Widowed		12(92.31)	ref.		
Sub-county			0.689		
Kisumu East	177(97.25)	ref.			
Awendo	166(96.51)	0.78(0.23-2.61)			
Sexual Behavior					
Sex Acts per Week			0.6948		
1	46(95.83)	ref.			
2	39(95.12)	0.85(0.11-6.30)	0.872		
≥ 3	258(97.36)	1.60(0.32-7.95)	0.564		
Anal Sex			0.2503		
No	74(98.67)	ref.			
Yes	229(96.22)	0.34(0.43-2.76)			
HTC					
Counselled			0.001		
No	310(98.10)	ref.			
Yes	33(86.84)	0.13(0.04-0.44)			
Tested			0.2084		
No	82(98.80)	ref.			
Yes	261(96.31)	0.32(0.04-2.52)			
Received Results					
No	315(98.13)	ref.			
Yes	28(84.85)	0.11(0.03-0.37)			

For variables that did not converge in the regression model, Fishers exact test was used. The study found no statistical significant difference between those who used drugs in the past 30 days to those who did not, $p = 0.784$. Moreover, there was no statistical significant difference between the categories under those influenced by alcohol, $p = 0.981$. In addition, there was no statistical significant difference between the number of casual sexual clients ($p = 0.147$) and regular sexual clients compared to uptake of risk reduction counselling. There was no statistical difference between those who were trained in harm

reduction to those who were not, $p = 0.449$. There was no statistical significant association between the categories under condom usage supplier. However, there was statistical significance difference between those who negotiate condom use with regular partner ($p = 0.008$) and those who negotiate condom use with casual partners ($p = 0.049$). In addition, those who self-reported HIV results were significantly associated with uptake of risk reduction counselling services. However, there was no significant association between the testing results ($p = 0.838$). More results are as shown in Table 8.

Table 8
Factors influencing Risk Reduction Counselling

Variable		
Alcohol and Drug Use		
Drug Use past 30 days		0.784
No	44(95.65)	
Yes	69(94.52)	
Alcohol Influence		0.981
Always	1(100.00)	
Most times	1(100.00)	
Never	22(95.65)	
Sometimes	15(93.75)	
Trained Harm Reduction		0.449
No	73(96.05)	
Yes	39(92.86)	
Condom Usage		
Supplier		0.086
Health provider	3(100.00)	
None	331(97.35)	
Other	1(100.00)	
Peer educator	8(80.00)	
Correct Use		0.192
No	230(97.87)	
Yes	113(94.96)	
Consistent Use		0.517
No	246(97.23)	
Yes	97(96.04)	
Negotiate Condom use with Regular Partner	0.008	
Always	110(96.49)	
N/A	1(100.00)	
No	230(97.87)	
Sometimes	2(50.00)	
Negotiate Condom use with Casual Partner	0.049	
Always	107(95.54)	
N/A	5(100.00)	
No	230(97.87)	

Sometimes	1(50.00)	
Sexual Clients		
Casual		0.147
0	339(97.13)	
1	1(50.00)	
2	2(100.00)	
4	1(100.00)	
Regular		
0	338(97.13)	
1	0(0.00)	
2	3(100.00)	
3	1(100.00)	
HTC		
Self reported HIV results		0.007
Positive	30(85.71)	
Negative	310(98.10)	
Unknown	2(100.00)	
No	1(100.00)	
Testing Results		0.838
Declined	25(100.00)	
< 3 months	19(95.00)	
Negative	234(96.30)	
On Care	5(100.00)	
Positive	4(100.00)	

DISCUSSION

The study found that participant' characteristics such as age and education level had no significant influence on the uptake of screening for STIs in the wellness centres. However, participants aged 19-25 years and 25 years and above, were more likely to uptake STI screening services than those who were 16-18 years of age. Carey *et al.* (15) argue that as the age and education level of individuals increase their decision making changes and most of them would tend to seek screening for STIs in healthcare facilities. In this study, most of the participants had below secondary education and hence this may not influence decision making in relation to screening for STIs.

The study found that marital status of the MSM had a significant influence on the uptake of screening for STIs in the wellness centres. Single and married participants were more likely to uptake STI screening services compared to divorced / separated / widowed participants. Married men would tend to be more careful as compared to the unmarried and hence would seek screening for STIs.

The study also found that sexual behaviour in terms of sex acts per week, anal sex and HTC Tested had no significant influence on the uptake of screening for STIs. However, participants with two sex acts per week were more likely to uptake STI screening services

than those who had less than one sex act per week. In addition, participants who had anal sex were less likely to uptake STI screening services than who did not and participants who were HTC tested were more likely to uptake STI screening services than those who did not. These findings agree with Burchell *et al* (16) finding that HIV testing and counselling significantly influences uptake of screening for STIs.

It is expected that MSM who have many sex acts per week and those who involve themselves in anal sex would seek screening for STIs. However, this can be influenced by awareness on the importance of STIs screening and knowledge on high risk behaviors. From this finding, it is imperative for more health education to be carried out on the target population to underscore need for regular STI screening as an entry point to STI treatment. Assessment of the source documents for the data on STI revealed Clinic Visit forms and STI Screening forms as mandatory tools to be filled at every visit by the MSMs in the wellness centres. The provision of tools is a step forward in supporting of this service provision. It will be important for partners as well as NASCOP Supervisors to support the clinicians and other service providers to utilise these tools at each client visit.

The study established that drug use in the past 30 days, alcohol influence and trained harm reduction had no influence on screening for STIs.

These findings disagree with Jun-Jie *et al.* (17) findings that alcohol and drug abuse significantly influence decision making of MSM and hence screening for STIs. The coverage of the harm reduction training may influence the screening for STIs. If the training covers the risk of specific methods of reducing harm like avoidance of drugs and alcohol, MSM would be more active in seeking STIs screening services after having sex under drug influence.

In relation to the condom use, the study found that consistent use, negotiating for condom use with regular partner and negotiating for condom use with casual partner had no significant influence on screening for STIs. This can be explained by the fact that MSM who consistently use condoms may not see the need for screening for STIs as they would consider themselves to be safe (18). However, there was a significant association between correct use of the condom and screening for STIs. These findings are consistent with Jin *et al.* (19) findings that consistent and correct condom use reduce the risk of being infected with an STI. The study found that both casual clients and regular clients had no influence on the screening for STIs. The study also revealed that Self-reported HIV results and test results had no significant influence on screening for STIs but HTC counselling and receiving of results had a significant influence on screening for STIs. After receiving HTC counselling and after getting negative HIV results most MSM will more likely STI screening services. However, MSM who get HIV positive results may not be motivated to seek STI screening services.

The study found that condom use in last sexual encounter, anal sex and harm reduction training had no significant influence on condom uptake. This is inconsistent with Sagaon-Teyssier *et al.* (20) findings that harm reduction training had a significant influence on condom usage and uptake. The content, trainers and coverage of harm reduction training can influence the decisions of the MSM on whether to use or not use condoms in sexual activities. If the training covers aspects such as high risk sexual behaviours and importance of condom use in HIV and STIs prevention, MSM will be more motivated to use condoms.

However, correct use of condoms, consistent use, negotiation condom use with regular partner, negotiation condom use with casual partner and alcohol influence had a significant influence on condom distribution among MSMs. This agrees with Huang *et al.* (21) findings that negotiation condom use with regular of casual partner had a significant influence on condom uptake. Consistent use of condoms and negotiations of condoms use with partners will lead to the need of more condoms and hence an increase in distribution.

The study found that participant' characteristics such as age in years, education level, marital status

and town of origin have no significant influence on uptake of alcohol and drug use screening services.

The study found that participants aged between 19-25 years were 1.23 times more likely to uptake alcohol and drug use services than those aged between 16-8 years. The study established that participants who had secondary and tertiary education were more likely to uptake alcohol and drug use than those with primary education. Just like in screening for STIs, changes in age and level of education influence MSM decision making. More educated MSM should have more uptake of alcohol and drug use screening services.

In relation to HIV Testing and Counselling, the study found that HTC counselling, testing of HIV and receiving of results had no significant influence on uptake of alcohol and drug use screening services. If the counsellors of healthcare workers do not discuss the importance of alcohol and drug use screening, MSM may not know whether it is important as their level of education is low.

The study found that drug use in the past 30 days had a significant influence on uptake of alcohol and drug use screening services. MSM who have used drugs or alcohol in the recent past may feel more obliged to take up the alcohol and drug use screening as compared to MSM who have not used drugs in the recent past.

The study revealed that participants who had two sexual acts and three sexual acts per week, were less likely to uptake alcohol and drug use screening services. Moreover, those who had anal sex were less likely to uptake alcohol and drug use screening services. The study further established that alcohol influence and trained harm reduction had no significant influence on uptake of alcohol and drug use screening services. These findings are inconsistent with Detels and Tang (22) findings that alcohol use trained harm reduction influences the decision of an MSM to seek alcohol and drug use screening services. However, uptake of alcohol and drug use screening services may significantly depend on the content of harm reduction training. If they focus on the importance of alcohol and drug use screening more MSM will most probably seek the services.

The study established that correct use of the condoms, consistent use and negotiating condom use with regular partner had no significant influence on the uptake of alcohol and drug use screening services. This is inconsistent with Ludford *et al.* (23) findings that MSM who were correctly and consistent using condoms and negotiating condom use with regular partner were more likely to seek alcohol and drug use screening services. MSM who correctly and consistent use and those who negotiate for condom use with their partners may not know that alcohol and drug use may influence their decisions in relation to condom use when under the influence of drugs or

alcohol.

The study established that HIV Testing and Counseling in terms of self-reported HIV results, HTC counselling and testing results had no influence on the uptake of alcohol and drug use screening services. The study also established that HTC counselled participants were more likely to uptake such services compared to those who were not. MSM who have been tested for HIV and have undergone HTC counselling and testing may not be aware that they need to undergo alcohol and drug use screening.

The study found that education level had no significant influence on the uptake of risk reduction counselling. The study found that participants who had secondary and tertiary education were less likely to uptake risk reduction counselling as compared to those who had primary education. However, age had a significant influence on uptake of risk reduction counselling. Participants aged 19-25, and above 25 years of age were less likely to uptake risk reduction than those aged between 16 -18 years. As the age of MSM increase; they are more likely to make decisions to seek risk reduction counselling. However, this may also be influenced by the duration of time they have been practicing homosexuality. The study also revealed that that participant who were single and married were more likely to uptake risk reduction counselling services. Further, participants who were from Awendo town were less likely to uptake risk reduction counselling service than those who were from Kisumu town.

Under sexual behaviours, participants who had two sex acts per week were less likely to uptake risk reduction counselling services than those who had one sex act. However, those who had three or more sex acts per week were more likely to uptake risk reduction counselling services than those who had one sex act per week. Participants who had anal sex were less likely to uptake such services compared to those who did not. These findings are contrary to Huan *et al.* (24) argument that sexual behaviors significantly influence seeking of risk reduction screening. This may be influenced by the MSM knowledge on the importance of risk reduction counselling and the risk of various sexual behaviours.

The study also found that both HTC counselling and receiving results had a significant influence on the uptake of risk reduction counselling. HTC counselled participants were less likely to uptake risk reduction counselling services to those who did not. MSM who seek HTC counselling and those who get HIV negative results are more likely to seek risk reduction counselling as compared to those who have not sought to HTC counselling and those who get HIV positive results.

The study revealed that alcohol and drug abuse in terms of drug use past 30 days, alcohol influence and trained harm reduction had no significant influence

on uptake of risk reduction counselling. This may significantly depend on the content and the coverage of the harm reduction training. These findings are contrary to Pragna *et al.* (25) argument that alcohol and drug abuse negatively affects MSM decision to seek risk reduction counselling.

The study also found that condom usage in terms of condom suppliers, correct use and consistent use had no significant influence on uptake of risk reduction counselling. However, negotiation of condom use with regular partner and negotiate condom use with casual partner had a significant influence on uptake of risk reduction counselling. This is in agreement with Rietmeijer (26) findings that MSM who were negotiating condom use with regular and casual partners were more likely to seek risk reduction counselling.

In conclusion, the marital status and residence of participants influence uptake of screening for STIs in the wellness centres. Other factors found to influence screening for STIs include knowledge on the correct use of the condom, HTC counselling and receiving of results. Factors affecting condom distribution in the wellness centers include knowledge on the correct use of condoms, consistent use of condoms, negotiating of condom use with regular partner and casual partner and alcohol influence.

The study further concludes that the main factor significantly influencing uptake of alcohol and drug use screening services were drug use in the past 30 days and HTC counselling. Factors influencing the uptake of risk reduction counselling were age of the MSM, HTC counselling, receiving of HIV results and negotiation for condom use with regular partner and casual partners. We recommend that the government of Kenya through the Ministry of Health should setup wellness centers to cater for high risk groups like men who have sex with men to offer treatment and specialized counseling as part of HTS and STI services that is confidential and sensitive to the needs of men who have sex with men.

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