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Factors Influencing Uptake of Sexual Reproductive Health Services Among Female Students at Maseno University Kenya

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Abstract:

- ***Introduction:***

Uptake of Sexual Reproductive Health Services (SRHS) is a Public Health challenge especially among female youth mainly within aged 20-24years. In the developing world, SRH services are either lacking or of low quality and are sometimes sub-optimally used by the youth, due to either lack of awareness and knowledge or due to cultural sensitivity and misconceptions regarding this issue. Globally, about 50% of all new HIV infections are due to poor uptake of relevant SRHS are among youth with an estimated 33.1 million people aged 15-24 years living with HIV in 2018. Despite the Kenya Government's commitment of resources to Reproductive Health services and youth friendly policies, the uptake of SRHS remain low nationally.

- ***Objective:***

Therefore, the current study evaluated factors influencing the uptake of SRHS by the female undergraduate students' at Maseno University (MU).

- ***Methodology:***

This cross-sectional study, female students (n=359) aged 20-24 years were recruited using purposive random sampling. Both quantitative and qualitative data was collected using self-administered questionnaire for students' and interview guide for the key informants. Statistical was done using Statistical Package for Social Sciences (SPSS) version 22. Variations in SHRS services uptake, SRHS being utilized and factors influencing SRHS uptake was subjected to descriptive statistics. Chi-square tests while relationships between dependent and independent variables. Analysis of variance (ANOVA) was used to determine specific socio-cultural factors influencing uptake of SRHS. Statistical significance was set at P ≤0.05.

- ***Results:***

Knowledge on VCT services was the most available service at 71.4% followed by knowledge on HIV/AIDS (45.7%). 84.7% of SRHS were available, with a range of service being offered for free (87.4%). with regard to institutional factors, sharing as sharing of SRHS free (P=0.033), prohibition of SRHS by religion (P=0.033) companion in seeking SRHS (P=0.039) being statistically significant.

- ***Conclusion:***

Knowledge, attitude and practice, availability, acceptability, affordability and accessibility of SRHS influence uptake of SRHS. Furthermore, institutional factors influence uptake of SRHS among MU female students. Creation of awareness of the uptake of SRHS is necessary among female students.

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Keywords: *Acceptability, Affordability, Attitude, Female Students and Sexual and Reproductive Health.*

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I. INTRODUCTION

Historically, the concern about sexual Reproductive Health (SRH) has come a long way (1). In Kenya, Adolescent Reproductive Health and Development (ARH&D) policy was developed in 2003. The policy underscores the relationship between the nation's development and the health of its youth and identifies the significant role that can be played by young people in enhancing nation building (2). The Government of Kenya, Ministry of Health (MoH) later developed a policy that paved way for standardization in provision of SRHS (3). Correct use of SRHS through use of contraceptives reduces deaths by avoiding unintended and high-risk pregnancies and can significantly reduce injury, illness and deaths associated with child birth, abortions and sexually transmitted infections (STIs) and HIV (4). In addition, by reducing unplanned pregnancies, youths can avoid the economic burden of taking care of newborns which often lead to stress and depression that push them to drug and substance abuse (5).

Knowledge, Attitude and Practices and perceptions on SRHS among Youths remains unclear in different set ups and requires more explorations. A study in kenya on the perception of the youth on reproductive health services in Kenya found out that most youth do not properly understand the importance of reproductive health care or do not know where to go for reproductive health care services hence do not use the services (6). In our opinion, this still requires more explorations especially in an institutional set up like a university.

The policy environment for the provision of Adolescent and Youth Sexual Reproductive Health (AYSRH) information and services in Kenya is generally favorable. A number of policies and guidelines have been developed that support provision of SRH information and services to youth. These include but are not limited to the National Reproductive Health Strategy (2009 – 2015), Adolescent Reproductive Health and Development Policy ((2) and Guidelines for Provision of Youth Friendly Services (3). Research carried out by Kenya National Commission on Human Rights (KNCHR) in 2012 noted that, the sexual reproductive health challenges facing adolescents and youth in Kenya today are due to inadequate sex education and information, poor guidance and counselling services, unavailability of youth friendly sexual reproductive health services such as contraceptives among others (7). Many university students suffer in silence and ignorance of their rights. The most prominent sources of information on sexual and reproductive health are media (24%), religious institutions and leaders (16%), followed by peers and friends (8%) and health institutions (8%) (8). However, this varied among different age groups. Most young people (an average of 33%) have no source of sexual and reproductive health information (8).

Most universities in Kenya have institutionalized SRH programs to help in mitigating high risk sex behavior (6). These include availability of AIDS Control Units (ACU) which offer support by providing STI Care and treatment, Peer Counseling and mentoring programs. Universities offer common courses/units including HIV and AIDS (6). Health service providers' (HSP) attitudes have been identified as a major barrier that discourages young people from seeking or going back for reproductive health services (6). A study in Ethiopia on health workers' attitude toward sexual and reproductive health services for unmarried youth revealed that some health workers were setting up penal rules and regulations against premarital sex thus restricting youths from visiting the RHS (4). Studies also indicate that HSP influence uptake of reproductive health services as most youth report that they are afraid of HSP because they ask personal and judgmental questions and sometimes give advice that is scary which discourages them from seeking services (6).

Availability, acceptability, affordability and accessibility of SRH Services among Youths may also vary from one place to another and from one institution to another. Thes have been hypothesized as some of the factors influencing the uptake of SRHS. Awareness of available services and programs in University greatly influences student uptake of these programs (6). O the other hand, institutional factors may also influence uptake of SRHS among Youths but this remains largely unknown. AS such, the current study evaluated factors that may influence uptake of sexual reproductive health services among female students at Maseno University, Kenya

II. METHODS

A. Study Site

The study was carried out at the Main Campus of Maseno University which is located at Latitude: -0.0167 Longitude: 34.6000 about 25km from Kisumu City in Kisumu County along Kisumu – Busia Highway on 100 acres of land. Maseno University has a total student population of 13,629 students (Dean of Students, 2019). It has a campus in Kisumu City commonly referred to as the Kisumu City Campus. The University has 15 Schools offering various degree programs with sessions running from September – December, January – March and May –July. Most of the programs designed to promote the uptake of SRHS are based at the Main Campus and hence the justification for the choice of the Main Campus as the study site.

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B. Study Design

The study employed a cross-sectional design. A cross-sectional study design aims to describe the overall picture of a phenomenon, a situational problem, an attitude or an issue, by asking a cross-section of a given population at one specified moment in time. (Kothari, 2003).

C. Study Population

The study targeted 359 female- undergraduate students' population between ages 20-24 years of the total 5,424 females enrolled at the Main Campus of Maseno University. (Dean of Students, 2019).

D. Sampling Techniques

Sampling is the process of selecting a subset of cases which will be used to draw the conclusion on the entire set (Kothari, 2004). The selection of the respondents was employed both purposive and proportionate sampling. Purposive sampling involved handpicking of respondents on the basis of possession of the desired characteristics (Robson, 2011). The 359 respondents were randomly but proportionately drawn from the hostels within the main Campus namely IDP, Tsunami, Institute, Makerere and Guest House in order to have a representative sample. The researcher and 2 trained research assistants visited the selected hostels in the evenings between 5**:**00PM to 8.00PM during weekdays over the study period.

E. Inclusion Criteria

Female students aged 20-24 years registered for an undergraduate degree between their second and sixth year of study at Maseno University studying in main campus were included. Only who gave written informed consent were included in the study.

F. Exclusion Criteria

Female students who were not residing within the main campus were exclude from the study. Second year to sixth year students who have been on suspension for some durations were also excluded.

G. Data Collection Process

The data collection tools were pre-tested on 36 female students at Jaramogi Oginga Odinga University of Science and Technology, in Bondo, Kenya which is approximately 45 km from Maseno University. In pre-test, about 35questionnaires were used. The results of the pre-tested tools were used to improve the study instruments. Primary data was collected using self-administered structured questionnaires to the 359 study respondents. To adequately achieve the study objective, section one of the questionnaire contained both open-ended and closed ended questions and captured information on socio-demographic characteristics of the study participants. Section two of the questionnaire captured information on knowledge, attitudes and practices of female students on SRHS**.** Section three capture information on availability, acceptability, affordability and accessibility of SRHS. Section four contained information on the possible institutional factors influencing uptake of SRHS. Finally, section five contained information on socio-cultural influences on SRHS seeking behaviors at Maseno University.

Key informant interviews (KII) were used in collection of qualitative data. KII indulged in discussions of key thematic areas of the study through question-and-answer interaction with key interviewer (KI). Information on the SRHS uptake levels and the factors influencing it was obtained from 2 KII, Clinical Officer in-charge of the University Health Facility and the Head of Reproductive Health using retrospective investigations from a structured guide.

H. Statistical Analyses

Statistical Packages for Social Science (SPSS) version 22 program was used at Confidence Level 0.05% in the analysis of data from questionnaires. Descriptive statistics was used to determine proportions. The associations between independent and the dependent variables was determined by Chi-Square from the KII. Analysis of variance (ANOVA) was used to determine specific socio-cultural factors influencing uptake of SRHS. Statistical significance was set at a $P \leq 0.05$.

For qualitative data, transcription of recordings in MS Word were undertaken for the qualitative data from KIIs and observation which was later open coded to identify concepts or key ideas or themes that were hidden within the textual data. Data was transcribed verbatim and later transferred to NVivo release 1.7 to form nodes and themes. Coding and thematic analysis of the qualitative were done by the help of qualitative data analysis software (NVivo). Nodes obtained were used to crawl the data and emerging themes grouped and ranked and used to explain the quantitative findings. The outputs generated was used in report writing and presented in form of narratives and tables. The data collected was also triangulated with the quantitative data to build coherent justification for the evidence emerging from the interviews with various respondents.

III. RESULTS

A. Socio-Demographic Information of Female Students in Maseno University

As summarized in Table 1 the study findings show that majority of the study respondents (54.5%; n=217) were aged between 20-22 years. About 27% (n=106) of the respondents were aged 18-19 years while 17.3% (n=69) were aged 23-24 years. On their religion status, majority of the respondents (54.3%; n=216) were protestants while 32.9% (n=131) were Catholics. Most of the respondents (57.7%; n=230) were in their second year of study followed by fourth years who were 26.9% (n=107) of the study population. Third years were the least with 15.3% (n=61) of the respondents. The study findings also show that more than half of the respondents (65.3%; n=260), lived within the University hostels.

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Table 1 Socio-Demographic Information

Characteristic	Category	N	%
Age	18-19 years	106	26.6
	20-22 years	217	54.5
	23-24 years	69	17.3
	25 and Above	6	1.5
Religion	Catholic	131	32.9
	Protestant	216	54.3
	Muslim	14	3.5
	Other	37	9.3
Year of study	Second year	230	57.8
	Third year	61	15.3
	Fourth year	107	26.9
Reside within the University	Yes	260	65.3
	No	138	34.7

Table showing frequencies and percentages of various socio-demographic characteristics of participants.

B. Knowledge, Attitudes and Practices of Female Students on Sexual Reproductive Health Services at Maseno University

The researcher assessed the respondents' knowledge on the existence of peer counseling services, contraceptives, post-abortion care, HIV/AIDS Care, VCT services, STI Care and Management and maternity care in the University's clinic. The researcher sought to know where and when the student's got information about SRH services is being provided by the school. The study findings indicate that almost a half of the study respondents (46.5%; n=185) knew about sexual reproductive health service through their peers and friends. Approximately quarter of the respondents (25.4%; n=101) got the information through the newsletters, brochures or posters with SRH information while others got the information from their lecturers and the internet represented by (20.4%; n=81) and (7.8%; n=31) respectively. Most of the respondents (72.1%; n=287) knew about these services while in their first year of study while 95(23.9%) got the information while in second year. A very small proportion of the respondents (4.0%; n=16%) received the information during their third year of study.

- *Knowledge on Existence of Peer Counseling Services in Maseno University Clinic*

As illustrated in Figure 1 majority of the respondents (70.1%; n=279) knew the existence of peer counselling.

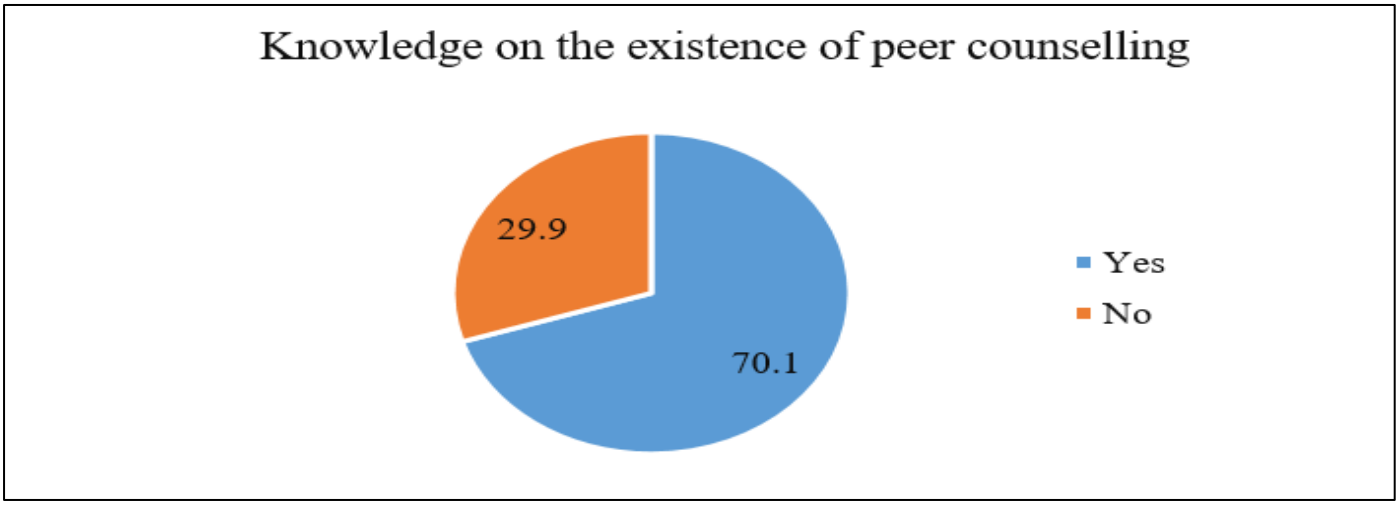

Fig 1 Knowledge on the Existence of Peer Counselling Services

C. Knowledge on Existence of SRH Services in Maseno University Clinic

As summarized in Figure 2 only 44.5% (n=177) indicated they knew the existence of contraceptives within the University Clinic. More than half of the respondents (55.5%; n=221) were not aware of the service. A very small proportion of the respondents (11.1%; n=44) were aware of the existence of post abortion care in Maseno University Clinic. Almost all of the respondents (88.9%; n=354) were not aware of this service. This indicates a very serious knowledge gap among Maseno University female students that needs to be addressed. A proportion of 45.7% (n=182) of the respondents were aware of HIV/AIDs care while 54.3% (n=216) did not know. However, majority of the study respondents (71.4%; n=284) knew the existence of VCT services. The results also showed that majority of the respondents were not aware of the existence of STI care and management and maternity care, these were represented by (73.9%; n=294) and (78.1%; n=311) respectively.

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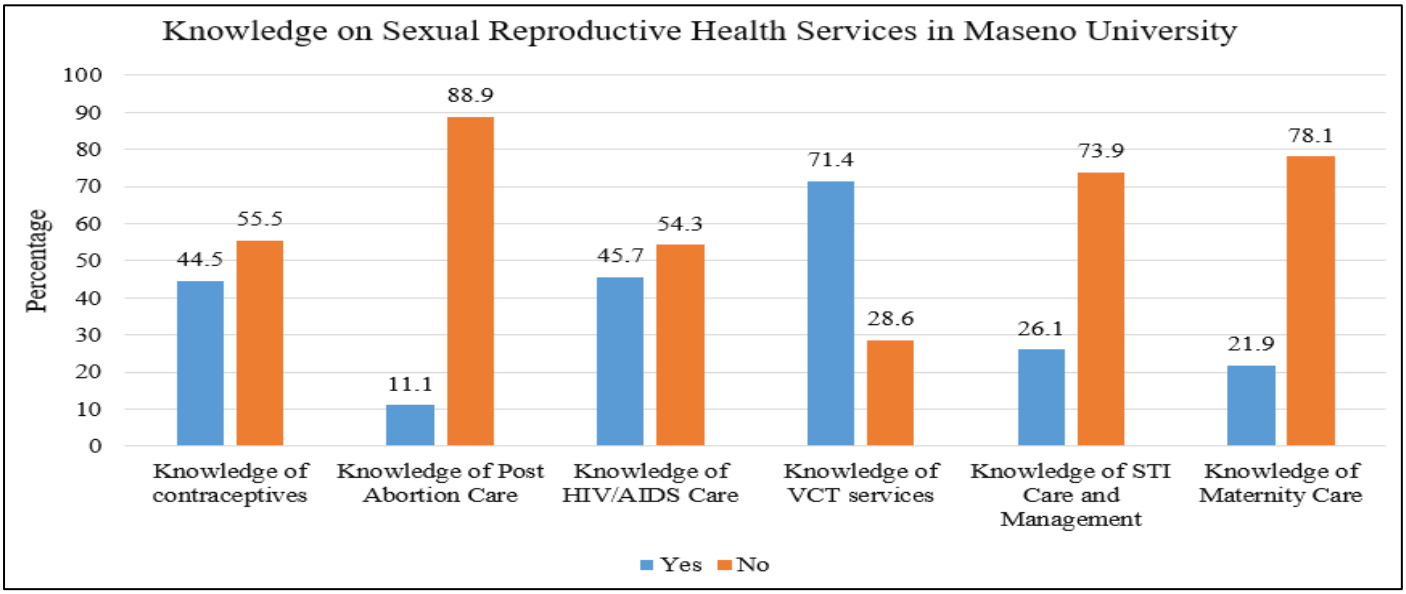

Fig 2 Knowledge on Existence of SRH Services in Maseno University Clinic

D. Attitude of Female Students on Sexual Reproductive Health Services at Maseno University

The attitude of the respondents on SRH services provided by the university was measured by their perception on the necessity of the services. As illustrated in Figure 3 majority of the study respondents (78.6%;n=313), agreed that SRH services are necessary. A proportion of 8.5% (n=34) reported that SRH services are not necessary while 12.8% (n=51) were not sure whether the services are necessary or not.

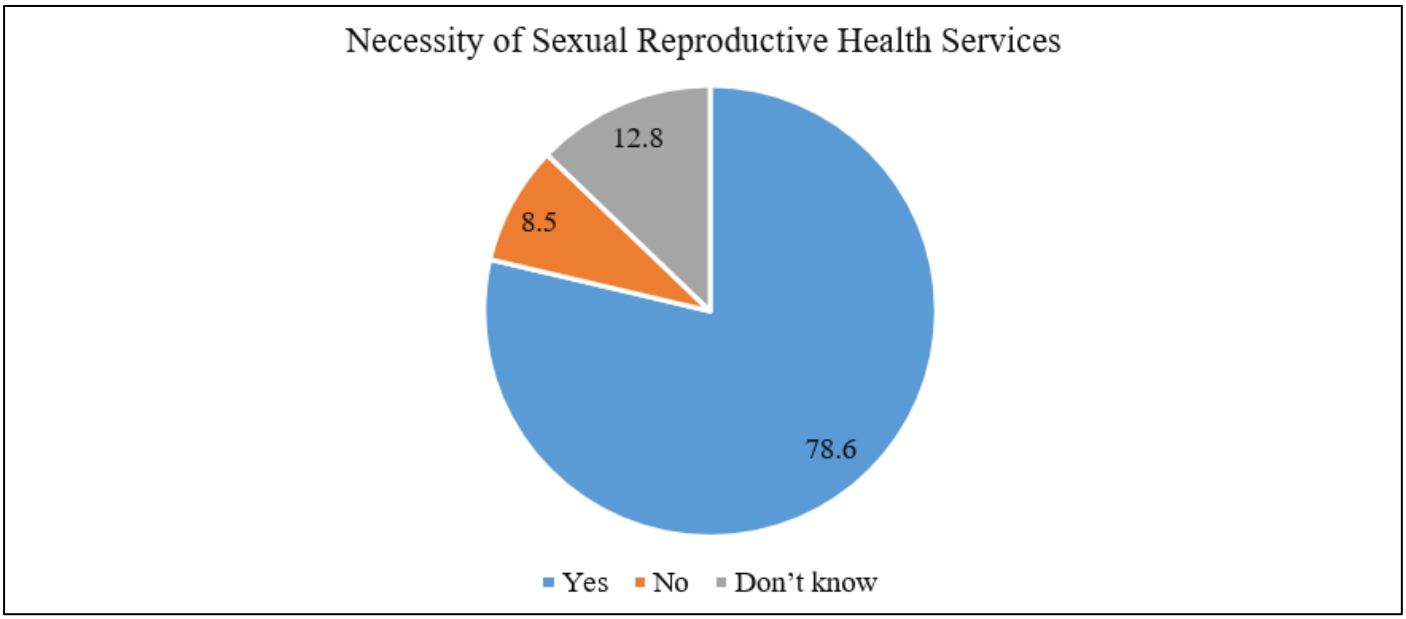

Fig 3 Necessity of Sexual Reproductive Health Services

E. Practice of Sexual Reproductive Health Services at Maseno University

Seeking of SRH services from Maseno University Clinic was used as a measure of SRH practice among female students in the university. Majority of the respondents (69.8%; n=278) have never sought sexual reproductive health services with only 30.2% (n=120) seeking the services from the University clinic.

- *Availability, acceptability, affordability and accessibility of Sexual Reproductive Health Services at Maseno University*

The researcher also assessed the availability, accessibility, affordability and acceptability of SRH services for female students at Maseno University clinic.

F. Availability of Sexual Reproductive Health Service at Maseno University Clinic

As shown in Figure 4 majority of the study respondents (84.7%; n=337) acknowledged that sexual reproductive health services were available at Maseno University Clinic.

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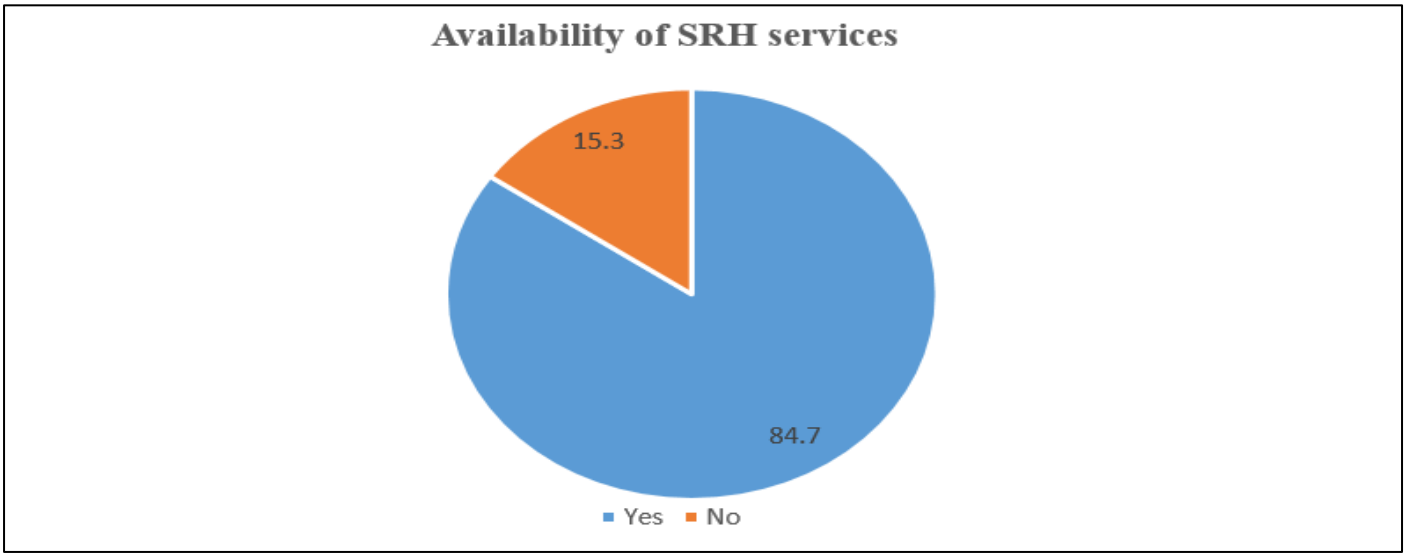

Fig 4 Availability of SRH Services at Maseno University Clinic.

G. SRH Services Available at Maseno University Clinic

As detailed in Figure 5 it is evident that provision of contraceptives is the most common service being offered at Maseno University clinic (25.00%; n=30), followed by peer counselling services and VCT services representing 23.30%(n=28) and 19.20%(n=23) respectively. A proportion of the respondents 11.70% (n=14), 10.8% (n=13) and 10.00% (n=12) also indicated that STI management, post abortion care and HIV/AIDs care services are available at Maseno University clinic.

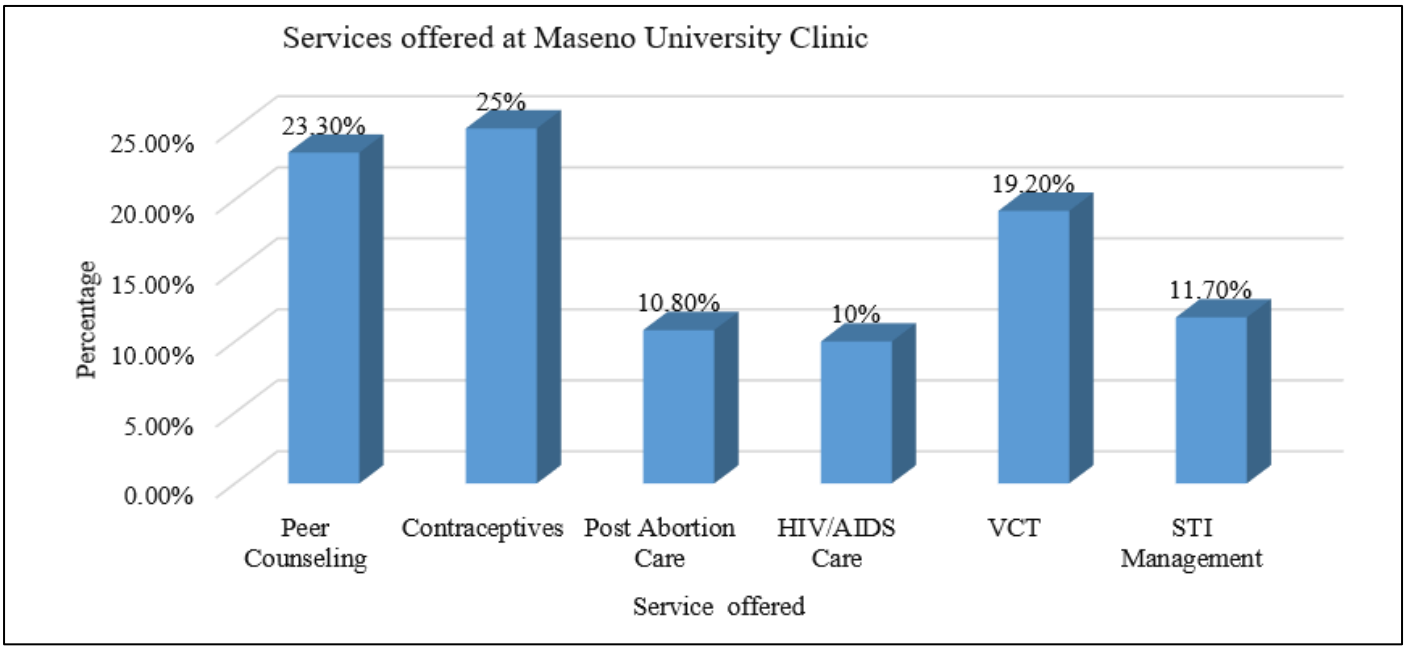

Fig 5 Services offered at Maseno University Clinic

H. Accessibility of SRH Services at Maseno University Clinic

Accessibility of the Maseno university clinic was assessed using various parameters, which included the location or surrounding of the university clinic hindering access of the service, how far is the clinic from the hostel and at what time the respondents go seeking SRH services. As summarized in Table 2 majority of the respondents 64.3% (n=256) pointed out that the location and surrounding of the University clinic did not hinder them from accessing SRH services, while 35.7% (n=142) accepting that they could not access SRH services because of the location and surrounding of the University clinic. More than half of the respondents 52.0% (n=207) agreed that the University clinic was near the hostels while 29.1% (n=116) indicated that it was far. Only a small proportion of the respondents 7.3% (n=29) accepted that the clinic was very near with 11.6% (n=46) indicating that it was very far from the hostels. Almost a half of the respondents 45.0% (n=54) went seek SRH services between 0800hrs to noon, followed by 41.7% (n=50) who went for SRH services from Noon to 1700hrs. Only 13.3% (n=16) went to seek the services at 1700hrs to 2000hrs.

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Table 2 Accessibility of SRH Services at Maseno University Clinic.

Accessibility	Category	N	%
Location hinder accessibility	Yes	142	35.7
	No	256	64.3
Distance from the Hostel	Very Near	29	7.3
	Near	207	52.0
	Far	116	29.1
	very Far	46	11.6
Time of seeking service	0800hrs to Noon	54	45.0
	Noon to 1700hrs	50	41.7
	1700hrs to 2000hrs	16	13.3

Table showing frequencies and percentages of various accessibility factors with their categories among the study participants

- *Affordability of the SRH Services at Maseno University*

Asked if Maseno University clinic offered SRH services at a fee, majority of the respondents reported that SRH services was offered free of charge (87.4%; n=348), while 11.6% (n=46) reported that SRH services were provided at a particular fee.

- *Acceptability of SRH Services by female Students of Maseno University*

The researcher also assessed the acceptability of SRH services by female students of Maseno University. The findings show that almost half of the respondents (43.7%; n= 174) were satisfied with the SRH service offered at the university, (18.8%; n=75) were not satisfied with SRH services while (37.4%; n=149) were not sure. On service denial, most respondents (81.5%; n=325) showed that they have never been denied SRH services, only 17.3% (n=69) have been denied SRH services.

- *Relationship between Time of Seeking the Service and the Service Offered*

A chi-square test was done on the relationship between the time students went seeking for sexual reproductive health service and the service offered at the University health clinic. The results showed a statistically significant association ($p<0.05$) between the time for seeking sexual reproductive health and the sexual reproductive health service offered.

Table 3 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-Sided)
Pearson Chi-Square	499.883[a]	18	.000
Likelihood Ratio	523.493	18	.000
N of Valid Cases	398		
a. 18 cells (64.3%) have expected count less than 5. The minimum expected count is .48.			

- *Institutional factors influencing uptake of sexual and reproductive health services among Maseno University Female students*

The researcher used principal component analysis where sampling adequacy, factor analysis was done to assess the factors influencing uptake of sexual and reproductive health among female students of Maseno University.

- *Sampling Adequacy*

To determine sampling adequacy two tests namely Kaiser-Meyer-Olkin measure pf sampling adequacy and Bartlett's test of sphericity. The data was regarded appropriate for statistical analysis if the value of KMO is greater than 0.5 (Field, 2000). The findings indicated that KMO test was 0.659 which was significant since it is greater than the critical level of significance of the test which was set at 0.5. Besides to the KMO test, the Battler's test of Sphericity was also highly significant with 1408.7 at 36 degree of freedom at P value of 0.000. Thus, the results provided justification for further statistical analyses. The results are as shown in the table below.

Table 4 Sampling Adequacy

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.659
Bartlett's Test Chi-Square	1408.700
Bartlett's Test df	36
Bartlett's Test sig	0

- *Factor Analysis*

The extraction of the factors followed Keiser criterion where an Eigen value of 1 or more indicated a unique factor. The findings shows that the total variance analysis can be factored into three factors because they had Eigen values of >1. The total variance explained by the extracted variables are as follows, 37.038%, 56.970 and 69.162% respectively. The findings are as shown in the table below.

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Table 5 Institutional Factors total Variance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.333	37.038	37.038	3.333	37.038	37.038
2	1.794	19.932	56.970	1.794	19.932	56.970
3	1.097	12.193	69.162	1.097	12.193	69.162
4	.911	10.122	79.285			
5	.636	7.064	86.348			
6	.439	4.873	91.222			
7	.353	3.928	95.150			
8	.240	2.666	97.816			
9	.197	2.184	100.000			
Extraction Method: Principal Component Analysis.						

I. Factor Loading of Institutional Factors Influencing Uptake of Sexual Reproductive Health Services.

Table 6 summarizes factor loading analysis of institutional factors influencing SRH services in Maseno University. Factor loading analyses indicated that all the variables recorded coefficients of more than 0.5, thus they were retained for analysis. Having friendly staff recorded the highest factor loading of 0.792, followed by their concerns being addressed to the students satisfactory with 0.768. Students getting treatment they needed had the least factor loading of 0.574.

Table 6 Factor loading of Institutional factors

	Statement	Loading factors
1	I was attended to as soon as possible	.703
2	I was received by youth friendly staff	.613
3	I was attended to in a private room and felt satisfied on how my confidentiality was handled	.721
4	I did not feel judged	.638
5	I consider the SRHS affordable to Students	.654
6	I got the treatment I needed	.574
7	All my questions were answered Satisfactorily	.768
8	The facility had adequate staff	.761
9	Staff were friendly	.792

Table showing factor loading of institutional factors influencing uptake of SRHS

J. Socio-Cultural Factors Influencing Uptake of Sexual and Reproductive Health Services Among Maseno University Female Students

As presented in Table 7 the socio-cultural factors influencing uptake of SRH services included who the respondents can freely to share their SRH issues with, if their religion prohibits them from seeking SRH, who accompanies the respondents when seeking SRH services and their advice on their fellow female students. More than a quarter of the respondents 31.9% (n=127) agreed to freely to share their SRH issues with their peers and friends, followed by 30.4% (n=121) who freely shared their issues with their partner. Only 24.4% (n=97) shared their issues with their parents and 13.3% (n=54) with health care workers.

On religion prohibiting the students from seeking sexual reproductive health services, majority of the respondents (64.6%; n=257) reported that religion do not prohibit them from seeking certain SRH services. Only a small proportion 13.1% (n=52) reported that their religion prohibited them from accessing SRH services while 22.4% (n=-97) of the respondents didn't know if their religion prohibited certain SRH services or not. Almost half of the respondents 40.2% (n=160) were accompanied by their partners while seeking SRH services, 32.2% (n=128) were accompanied by their peer/friends, only 26.1% (n=104) were accompanied by their parents. Majority of the respondents 94.7% (n=377) indicated that they can urge their fellow female students to seek SRH services.

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Table 7 Socio-Cultural Factors Influencing Uptake of SRH services

Socio-cultural factors		n	(%)
Share SRHS freely with	Partner	121	30.4
	Parent/Guardian	97	24.4
	Peer/Friend	127	31.9
	Health Worker	53	13.3
Religion prohibit SRHS	Yes	52	13.1
	No	257	64.6
	Don't know	89	22.4
Accompany you to seek SRHS	Partner	160	40.2
	Parent/Guardian	104	26.1
	Peer/Friend	128	32.2
Would you advice females to seek SRHS?	Other	6	1.5
	Yes	377	94.7
	No	21	5.3

The table show frequencies and percentages of factors influencing uptake of SRH services

K. One-Way ANOVA of Socio-Cultural Factors Influencing Uptake of SRH Service

One-Way ANOVA was done to compare the means between socio-cultural factors and their significance in relation to the uptake of sexual reproductive health care services by female students of Maseno University. From the findings, all the variables had a significance of $p<0.05$, which means that all the socio-cultural factors had a significant influence on the uptake of sexual reproductive health by female students as summarized in Table 8 This is contrary to the expectations as the University clinic is mandated to provide all contraceptive services to the students.

Table 8 One-Way-ANOVA

		Sum of Squares	Df	Mean Square	F	P value
Share SRHS with freely	Between Groups	7.356	2	3.678	3.450	.033
	Within Groups	421.126	395	1.066		
	Total	428.482	397			
Religion prohibit SRHS	Between Groups	4.068	2	2.034	6.019	.003
	Within Groups	133.492	395	.338		
	Total	137.560	397			
Accompany you to seek SRHS	Between Groups	5.081	2	2.540	3.280	.039
	Within Groups	305.914	395	.774		
	Total	310.995	397			
Would you advice females to seek SRHS?	Between Groups	.693	2	.347	7.134	.001
	Within Groups	19.198	395	.049		
	Total	19.892	397			

Table shows analysis of specific socio-cultural factor influencing uptake of SRH services. All factors were statistically significant at a P value ≤ 0.05.

IV. DISCUSSIONS

The socio-demographic characteristics are among the factors that influence the access and utilization of sexual reproductive health services. The study shows that majority of the participants were aged between 20-22 years (54.5%). This finding is consistent with that of a study in Malaysia which found out that older age group (20-24) were more likely to use SRH services compared to 18-19 year age group (9). Furthermore, it has been shown that utilization of SRH services greatly improved with age (9). As the age of the study participants increased, the level of uptake of SRH services also improved (9). Based on their religious affiliation, Protestants were the most dominant group represented by 54.3%. Catholics were the least represented and this is highly attributed to the vast nature of churches represented within the institution. This finding is consistent with that of a previous qualitative study in Cameroon titled "Doctors' experiences providing sexual and reproductive health care at Catholic Hospitals in the conflict-affected North-West region of Cameroon" (10). Additionally, the catholic doctrines are very strict on matters of sexuality as sexual acts are only allowed between two legally married partners (10). This could influence the female students in Maseno University in uptake of SRH services as it is prohibited in their religious affiliation. The study findings are almost similar to another study done in the United States (US) by Hall et al., (2012) on the lower usage of SRH services among women with frequent religious participation (11). The study found out that Protestants (62%) were the dominant group as compared to Catholicism (28%) which is in keeping with the finding of Kenya National Bureau of Statistics on religion affiliations (12). However in terms of access to SRH services, women who were highly affiliated to their religious beliefs were unlikely to access SRH services as compared to those who did not attend any church ($p<0.001$)(11). The

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results also showed that majority of the study participants were second years. In many Universities, first year students are considered naive and obedient. They are fresh from an environment that they were under strict school rules and regulations to a free life environment. At second year, the journey to self-discovery begins and start trying new things and SRH uptake is among them. In this study, most of the participants lived within the school compound, which makes it easier for them to access SRH services from the university clinic.

We assessed the knowledge on the existence of sexual reproductive health services, which include existence of peer counselling services, post abortion services, contraceptives, HIV/AIDs care, VCT services, STI care and management and maternity care at Maseno University Clinic. The results show majority of the respondents knew the existence of peer counselling services (70.1%) and VCT (71.4%) services within the University clinic, however very few acknowledged the existence of services such as Contraceptives (11.1%), STI Care and management (26.1%) and maternity care (21.9%). This shows that there is a very wide gap in SRH knowledge across the University among students, which needs to be addressed. This study findings are consistent with that of an institutional cross-sectional study carried out in Bangladesh on the knowledge and attitude of older adolescent girls, they found out that majority of these adolescent girls (62.5%) from four colleges in Bangladesh did not have prior knowledge on the sexual reproductive health services being offered within these institutions(13). Furthermore, a study done in University of Nairobi (UON), Kikuyu Campus, majority of the students (90%) revealed did not seek SRH services from the institution, only 10% reported to be using the University Clinic for SRH services. However, they indicated that they seek SRH services from other health centers outside the University premises due to fear, lack of confidentiality in the University clinic and stigma among their peers (14). A similar study also among college students in Kenya reported that, almost two thirds (58%) of respondents reported that they were conversant with only one method of contraception, 60% had knowledge of more than two types of STIs, and 62.4% indicated that they were conversant with only hospitals as facilities providing reproductive health services(15).

High-quality studies from South Africa and Ethiopia addressed primarily provider attitudes and the clinical environment as barriers to adolescents' access to healthcare during a focus group discussion, however, perceptions of provider attitudes towards adolescents appeared to be inconsistent (16). It is believed that every time they go to the clinic they meet mean nurses only, they never get to meet the good nurses(17). Negative attitude of health workers as per the case in one of the studies indicated that 30% had negative attitudes towards the youth in Ethiopia experiencing health care provider's negative attitudes towards providing SRH services affects the utilization aspects among adolescents (16). In our opinion, health worker attitudes can also significantly hinder adolescents' utilization of Reproductive Health Service (RHS). Services need to be provided in a youth-friendly environment with health workers that are welcoming and supportive towards adolescents seeking care(18).

With reference to availability, acceptability, affordability and accessibility of SRHS at Maseno University, this study findings revealed that majority of the students (84.7%) reported that SRH services were available in Maseno University, also it was reported that the main service provided at the Maseno University clinic was the provision of contraceptives (25%) with HIV/AIDs care (10%) being the least. However, the respondents acknowledged that all the SRH services were available at Maseno University Clinic. The services available include; peer counseling services, provision of contraceptives, HIV/AIDs care, VCT, post abortion care and STI management. The findings are in line with a study by Ndayishimiye, in their study done in Rwanda on the availability, accessibility and the quality of SRH services being provided to adolescent youths (19). The results showed that most health facilities in schools and urban areas have SRH services for provision, however they also revealed that most SRH services were designed for the general population without specialized adolescents SRH healthcare providers(19). On contrary, a study carried out in East and Southern Africa on the accessibility and affordability of SRH services in Kenya, Tanzania, Uganda and Zambia,Indicated that that the overall availability of SRH services was low at less than 50% in all sectors, areas and countries, with highest mean availability found in Kenyan public facilities (46.6%) (20). However, they also indicated that most SRH commodities in Kenya were affordable to the patients since they were being provided for free (20).

The geographical location, accessibility and the nature of the surrounding did not influence their quest for seeking SRH services from the University clinic. However, this results differ from a cross-sectional descriptive study done by Leah, which was carried out in Narok County (21). The findings from this study indicated that location and distance greatly influenced access to SRH services by female adolescents (21). On the other hand, another study carried out in Sub-Saharan Africa among 7 countries showed that the most prominent barriers by adolescents was at the individual level emanating from limited knowledge and awareness among adolescent/youth about the services which is a key hindrance to accessing SRH services(22).

This study further looked at the relationship between time and the services offered at the Maseno University Clinic. Our study findings showed that there was a significant association between time and SRH services offered at the Maseno University clinic. Despite the varied researches conducted on the accessibility and affordability if SRH services, none of the studies have looked at the relationship between time and SRH services offered at the health facility. This shows a research gap which need to be looked and how effective are the services provided at that particular time.

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A. Institutional Factors Influencing Uptake of Sexual and Reproductive Health Services Among Maseno University Female Students

In terms of the institutional factors influencing uptake of SRHS, we used Principal Component Analysis (PCA) to assess the institutional factors influencing the uptake of SRH services by female students at Maseno University clinic. through extracting most significant institutional factors that influence the uptake of SRH services from Maseno University clinic. Thus, a factor that had an Eigen value of ≥1 indicated a unique factor which influences the uptake of SRH services. From the analysis three factors had an Eigen value of ≥1, however on doing factor loading in assessing the individual factors, friendly staff, questions being answered satisfactorily, and having adequate staff were the strongest factors that greatly influenced the uptake of SRH services among female students at Maseno University having a factor loading of >0.5. As a result, these factors warrants further explorations on as intuitional factors that could influence uptake of SRHS.

B. The Socio-Cultural Factors Influencing Uptake of Sexual and Reproductive Health Services Among Maseno University Female Students.

The social cultural factors assessed included, religious beliefs, who the students freely share their SRH issues with, who they prefer to accompany them to seek SRH services and advice to their fellow female students. From the results, it was evident that most students share their SRH issues with their fellow peers than their parents. It is believed that peer to peer talks are much easier and they tend to reveal a lot of hidden secrets. In a cross-sectional study carried out in Garissa Municipality by Adan in 2018 among young adolescents aged 18-24 years, showed that majority of the respondents (42.7%) shared SRH information with their fellow peers (age mates and friends). Only a few indicated to share SRH information with their lecturers and parents at 17.2% and 0.8% respectively. The relationship between information sharing by female students and the different groups of people was found to be significant ($\chi 2 = 445.5$; df = 8; P = 0.0001)(23).

Socio-cultural norms and practices make women and girls to be marginalized, and not only vulnerable in different ways to sexual and reproductive health problems, but the disparity also limits their access to sexual and reproductive health services. In research conducted in Bomet County Kenya, showed that there was no single socio-cultural factor that influences the uptake of SRH services by adolescent girls. The study however, revealed that religious beliefs was not a major factor influencing the uptake of SRH services(24). This corroborates with our study findings that showed that religious did not hinder them in any way taking SRH services from the University clinic. The results also showed that majority of the respondents prefer their partners to accompany them when seeking SRH services, similarly the respondents agreed to advice their peers on matters pertaining to SRH services. However, this is contrary to the study by Towett, 2020, which revealed that most peers exhibit negative attitude towards SRH services, thus, this greatly hinders access to SRH services (24).

C. Strengths and Limitations

The major strength of this study is the adequate sample size to detect the true status of SRHS and factors influencing its uptake in Maseno University. The main limitation of this study is the sensitive nature of topics like sex and reproductive health which could have caused difficulties in gaining truthful and accurate responses especially from younger females students at Maseno University. However, confidentiality and anonymity were underscored and the interviewers were of the same gender.

V. CONCLUSION

We conclude that female students' awareness of SRHS provided at Maseno University clinic is low as majority of female students are only aware of students indicate to have only known about two services, that is VCT and peer counseling as the only services being provided by the Maseno University Clinic. It is also evident that the students' attitude towards SRH services was positive, and that they would seek these services given the information about their availability within the University Clinic. SRH services are available at Maseno University Clinic with provision of contraceptives being the main services well known by the students and should be fully utilized. Consequently, the location of the University Clinic did not hinder the students from accessing SRH services.

Selected institutional factors such as friendly staff, confidentiality, being judged by staff, youth friendly services and treatment availability as well as socio-cultural factors influence SRH services uptake.

➢ *Recommendations*

There is need for development of policies to incorporate youth health sessions within the University health facility to motivate the students by adopting the most effective methods to train youths on how to acquire SRH services. Furthermore, there is need for the institution to devote time and resources to ensure that the students acquire the desired information from trained personnel to assist make informed decision on SRH services. Additionally, there is need to implement and enact youth reproductive health policies by organizations concerned with the youth such as I Choose Life (ICL) and Peer Counsellors together with the office of the Dean of students.

➢ *Abbreviations*

AIDS; Acquired Immune Deficiency Syndrome, ACU; AIDS Control Unit, ARH&D; Adolescent Reproductive Health and Development, AMREF; Africa Medical Research Foundation, BCC; Behavior Change Communication, FHI 360; Family Health International 360, HIV; Human Immunodeficiency Virus, HEAIDS; Higher Education AIDS, HSP ;Health Service Providers, ICPD; International Conference on Population Development, IPPFA; The Illinois Public Pension Fund Association, KES; Kenya Shillings, KDHS; Kenya Demographic Health Survey, KNCHR; Kenya National Commission on Human Rights, LSE; Life Skill Education, MOE; Ministry of Education, MOH; Ministry of Health, MOMS; Ministry of Medical Services, MOPS;

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Ministry of Public Health and Sanitation, NASCOP; National AIDS and STIs Control Programme, NCAPD; National Coordinating Agency for Population and Development, RH; Reproductive Health, SDG; Sustainable Development Goals, SRHS; Sexual and Reproductive Health Services, STI; Sexually Transmitted Infection, SSA; Sub-Saharan Africa, UNESCO; United Nations Educational Scientific and Cultural Organization, UNFPA; United Nations Population Fund and WHO; World Health Organization

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➢ *Authors' Contributions*

EYA, DM and DO conceptualized the study and participated in all the areas in manuscript development. EYA, DM DO and PK reviewed the manuscript. All the authors reviewed the final manuscript and approved it for submission.

➢ *Funding*

None

➢ *Availability Of Data And Materials*

The data are available upon reasonable request from the corresponding author.

➢ *Ethics Approval And Consent To Participate*

The study was approved by the Maseno University Scientific and Ethical Review Committee # MSU/MUERC/00855/20. Authorization to conduct this research in Maseno University was obtained from Maseno University Department of Health Services. All study participants provided written informed consent to participate in this study.

➢ *Consent For Publication*

Not applicable.

➢ *Competing Interests*

The authors have declared that no competing interests exist.

REFERENCES

[1]. WHO. WHO Factsheet on Rexual Reproductive Health Services. 1975.
[2]. PRF. Kenya Adolescent Roductive HealtH and Development Policy. 2003.
[3]. MOH. National Guidelines for Provision of Adolescent and Youth Friendly Services in Kenya, Second Edition 2016.
[4]. Tilahun, F.D., Assefa T, Belachew T. Predictors of emergency contraceptive use among regular female students at Adama University, Central Ethiopia. Pan African Medical Journal. 2011;7(6).
[5]. Walker A. Saving Nigerians from risky abortions. Available at http://news.bbc.co.uk/1/hi/world/africa/7328830.stm. Retrieved 2009-05-31. 2008.
[6]. Godia PM. Sexual Reproductive Health Service Provision to Young People in Kenya; what is the best model? Doctoral thesis, University of Liverpool. (Unpublished). 2012.
[7]. KNCHR. Reproductive health challenges facing adolescents and youth in Kenya 2012.
[8]. CIK. Sources of information on sexual and reproductive health. 2017.
[9]. John R, Mohd Salleh NA, Nik Farid ND. Utilization of Sexual Reproductive Health Services Among Youths in Malaysia: A Cross-Sectional Study Applying Andersen's Behavioral Model of Healthcare Utilization. Cureus. 2024;16(5):e60230.
[10]. Awasom-Fru A, Sop Sop MD, Larsson EC, Herzig van Wees S. Doctors' experiences providing sexual and reproductive health care at Catholic Hospitals in the conflict-affected North-West region of Cameroon: a qualitative study. Reprod Health. 2022;19(1):126.
[11]. Hall et al CM, and James Trussell. Lower Use of Sexual and Reproductive Health Services Among Women with Frequent Religious Participation,Regardless of Sexual Experience: JOURNAL OF WOMEN'S HEALTH; 2012.
[12]. KNBS. Religious Affiliations Kenya National Bureau of Statistics. 2013.
[13]. Muhammad et al. FK, Subarna Mazumder, Feng Cheng, and Junfang Xu. Knowledge on, Attitude towards, and Practice of Sexual and Reproductive Health among Older Adolescent Girls in Bangladesh: An Institution-BasedCross-Sectional Study: Int. J. Environ. Res. Public Health; 2020.
[14]. FHI 360 I-A, UON. Providing integrated sexual and reproductive health services at reproductive health services at Kikuyu Campus, University of Nairobi: Assessment of a new reproductive health unit2014.
[15]. Karonjo MJa. Reproductive health knowledge among college students in Kenya: BMC Public Health; 2018.
[16]. Motuma A ST, Egata G, Kenay A. Utilization of youth friendly services and associated factors among youth in Harar town, east Ethiopia: a mixed method study.: BMC Health Serv Res; 2016.
[17]. Mulaudzi et al DB, Coetzee J, Sikkema K, Gray G, Dietrich JJ. Perceptions of counsellors and youth-serving professionals about sexual and reproductive health services for adolescents in Soweto, South Africa. Soweto, South Africa: Reprod Health; 2018.
[18]. AG N. Access and utilization of reproductive health services among adolescent girls: pp. 1–107; 2017.
[19]. Ndayishimiye et al. RU, Isabelle Kubwimana, Jean de la Croix Niyonzima, Roseline Dzekem Dine, Jean Baptiste Nyandwi and Justin Ntokamunda Kadima. Availability, accessibility, and quality of adolescent Sexual and Reproductive Health (SRH) services in urban health facilities of Rwanda: a survey among social and healthcare providers: BMC Health Services Research; 2020.

ISSN No:-2456-2165 https://doi.org/10.5281/zenodo.14909876

[20]. Ooms et al. GIO, Denis Kibira, Tim Reed, Hendrika A. van den Ham, Aukje K. Mantel-Teeuwisse and Gemma Buckland-Merrett. Access to sexual and reproductive health commodities in East and Southern Africa: a cross-country comparison of availability, affordability and stock-outs in Kenya, Tanzania, Uganda and Zambia2020.
[21]. LEAH NM. ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH CARE SERVICES BY ADOLESCENT GIRLS AGED 15-19 YEARS AMONG PASTORAL COMMUNITIES IN NAROK COUNTY, KENYA.2011.
[22]. Ninsiima et al. LRN, Isabel Kazanga Chiumia and Rawlance Ndejjo. Factors influencing access to and utilization of youth-friendly sexual and reproductive health services in sub-Saharan Africa: a systematic review2021.
[23]. Adan IF, Dr. M.N.Githae. Factors Influencing Access to Reproductive Health Information Services among Young Aged 15-24 in Garissa Municipality, Kenya: www.ijcrr.in; 2018.
[24]. Towett G, John Ndungu Kungu. Socio-Cultural Determinants Influencing Adolescent Sexual And Reproductive Health In Bomet East Sub-County, Kenya. Bomet: IJIRAS; 2020.