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Research article

Knowledge and utilization of sexual and reproductive health services among young males in a slum area in Nigeria: A cross-sectional study

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ABSTRACT

Background: Globally, young people are faced with sexual and reproductive health challenges such as unintended pregnancies, sexually transmitted infections and unsafe abortions which result from limited knowledge of sexual and reproductive health and poor utilization of the available services. The purpose of this study was to assess the sexual and reproductive health knowledge, pattern of service utilization, and the associated factors among young males in slum communities of Mushin Local Government Area (L.G.A), Lagos State, Nigeria.

Methods: The study was conducted among young males, 15–24 years in Mushin Local Government Area, Lagos State, Nigeria. Data was collected using a pre-tested structured questionnaire that consisted of three domains with 57 questions, and was interviewer-administered. Multi-stage sampling technique was used to select 422 participants. Descriptive statistics, bivariate analysis, and binary logistic regression were carried out using SPSS version 20.

Results: The mean age of the respondents was 21.01 years ± 2.00, and 73.06% of the respondents had good knowledge of sexual and reproductive health. 52.85% of the respondents had poor knowledge regarding the likely occurrence of pregnancy at mid-menstrual cycle. Nearly two-third (64%) of the respondents have ever visited a health facility for sexual and reproductive health service. Ethnicity(AOR = 2.73), access to the internet(AOR = 1.77) and having ever had sex(AOR = 1.96) were significantly associated with the utilization of the services.

Conclusion: Good knowledge of sexual and reproductive health was observed among the respondents, although misconceptions still exist. Service utilization, however, remains low due to some individual and socio-cultural factors. It is therefore important to increase awareness of Sexual and Reproductive Health, and make the services available and affordable to young people for increased uptake.

1. Introduction

A state of complete physical, emotional, mental and social well-being of an individual in relation to sexuality is known as Sexual and Reproductive Health (SRH). It is concerned with the different aspects of the reproductive system, its functions and processes [1].

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The components of Sexual and Reproductive Health Services (SRHS) include safe motherhood and child survival, family planning information and services, prevention and management of infertility and sexual dysfunction in both men and women, prevention and management of the complications of abortion, provision of safe abortion services where the law permits and prevention and management of reproductive tract infections, especially Sexually Transmitted Infections (STIs), including Human Immunodeficiency Virus (HIV)/Acquired immunodeficiency syndrome (AIDS) [1].

According to World Health Organization (WHO), young people are individuals between 10 and 24 years [2], and they experience a series of physiological, psychological and social changes that expose them to unhealthy sexual behaviors such as early sex experimentation, engaging in unsafe sex and having multiple sexual partners, keeping them at risk of facing SRH problems such as teenage pregnancies, unsafe abortion, STIs and HIV/AIDS [3]. Young people often lack basic sexual and reproductive health knowledge, and access to affordable and confidential reproductive health services [4]. Globally, high morbidity and high mortality rates among young people are mainly caused by SRH problems [5].

According to the WHO, approximately 12 million girls between 15 and 19 years and at least 777,000 girls under 15 years give birth each year in developing regions, and the leading cause of death for girls within this age group globally is complications from pregnancy and birth [6]. A study done in Sub-Saharan Africa showed that the prevalence of unintended pregnancies was 10.8% in Nigeria [7]. It was estimated that 3.9 million unsafe abortions among girls aged 15–19 years occur each year, contributing to maternal mortality, morbidity and lasting health problems [8]. In Nigeria, the prevalence of induced abortion was 51% [9]. Globally, AIDS is the second leading cause of death among young people aged 10–24, but in Africa, it is the leading cause of death among this age group [10,11]. It was estimated that about 1.9 million Nigerians were living with HIV in 2018, and the prevalence of HIV among adults (15–49) was 1.4% in Nigeria [12]. Annually, approximately 333 million new cases of curable Sexually Transmitted Diseases occur globally, and the rates are highest among those between the ages of 20–24, followed by those between 15 and 19 years and a minority of adolescents have access to any acceptable and affordable STI services [13].

According to the United Nations Fund for Population Activities (UNFPA), women and young girls face barriers to using contraceptives. Globally, it was estimated that 171 million women wanted to avoid pregnancy, but they were not using any form of contraception [14]. In Sub-Saharan Africa, injectables are the dominant method with a prevalence of 9.6% among women of reproductive age [15]. A study done in Nigeria among adolescents showed that the proportion of adolescents using contraceptives ranged between 3.1 and 4.1%, and the main method in use was injectable contraceptives [16].

Knowledge of SRH is vital in the growth and development of young people, and this reflects immensely on their educational and personal outcomes as they develop into adults [17]. Unfortunately, evidence exists that knowledge of Sexual and Reproductive Health among young people is limited [18–24]. Further, low level of utilization of SRHS have been recorded among young people, largely due to lack of awareness [25–31]. Sadly, evidence shows that young males face more obstacles in accessing and utilizing sexual and reproductive health services due to the influence of social constructions of masculinity which affects how they perceive and use SRHS [20].

Previous studies point to the underutilization of available adolescents' SRHS, especially by young males, because most of the services are tailored for female adolescents making male adolescents mere passive recipients of these services, even though the sexual reproductive challenges that occur like teen pregnancy and high HIV and AIDS infection affect both males and females [32]. Evidence from past studies noted that age, fear, embarrassment, lack of knowledge, misinformation, and myths, stigma and shame, ever had a sexual partner, discussion of reproductive health issues are associated with underutilization of sexual and reproductive health services among young people [33–36].

Determining the SRH knowledge, SRHS utilization, and the associated factors among this young population is very important to improve their sexual and reproductive health service utilization, and thereby reduce the burden of young people's disease and disabilities associated with SRH. The purpose of this study was to assess the sexual and reproductive health knowledge, pattern of service utilization, and the associated factors among young males in slum communities of Mushin Local Government Area (L.G.A), Lagos State, Nigeria.

2. Materials and methods

2.1. Study setting and period

The study was conducted from June 26 to July 17, 2021 in Mushin L.G.A, Lagos state, Nigeria. Lagos is located in the western part of Nigeria with a landmass area of about 3,559 km^2, and an estimated population of 9,113,605 according to the 2016 census [37].

Lagos is made up of 5 administrative divisions, which are further divided into 20 local government areas, of which Mushin is one of them [38,39]. According to the 2016 census, the population of Lagos was projected at 870,100 with young people aged 10–19 at 113, 984 and those between 20 and 29 at 158,971. Mushin has an area of 17.01 km^2 with a population density of 51,161/km^2 [40]. Mushin is made up of 14 wards namely Alakara, Idi-Oro/Odi-Olowu, Itire, Olateju, Babalosa, Ilasamaja, Kayode/Fadeyi, Papa-ajao, Babalosa/Idi-araba, Ilupeju, Mushin/Atewolara, Idi-araba, Ilupeju Industrial Estate and Ojuwoye [41]. The population is rural.

2.2. Study population

The study population was young males between 15 and 24 years in Mushin Local government area, Lagos State. The study included young males in Mushin between the ages of 15–24 years and excluded young males in Mushin below 15 years and above 24 years.

2.3. Study design

A community based cross-sectional study was conducted among young males in Mushin L.G.A, Lagos State, Nigeria.

2.4. Sample size determination and sampling procedure

The sample size was calculated using single population proportion formula considering the following assumptions: 95% confidence interval, and 5% of margin of error and 51.0% prevalence of SRHS utilization among adolescents in Lagos State [24]. Adding 10% of non response rate, the final sample size became 422.

The study participants were selected using a multistage sampling technique. Four wards (the smallest political, administrative unit in Nigeria) were selected using simple random sampling by balloting out of the 14 wards in the L.G.A. Four streets were selected in each of the selected wards using a simple random sampling technique by balloting. In each of the selected streets, a systematic sampling technique was used to select 25 houses following the house numbering, at an interval of two houses. A simple random sampling technique by balloting was used to select one household in each of the selected houses, and every young male (15–24 years) in each selected household was selected for the study. Two visits were made for absences in the first visit.

Ethical approval

Ethical approval for this research was obtained from the Human Research and Ethics Committee (HREC) of the Lagos University Teaching Hospital (Ethical approval ID: ADM/DSCST/HREC/APP/4394). The purpose of the study was explained to the participants, and a written informed consent was obtained from each respondent before administering the questionnaire.

2.5. Data collection procedure and data quality control

A structured face-to-face interviewer-administered questionnaire was used to collect data from the study participants and the questionnaire was adopted from related previous studies [42–45]. The questionnaire consisted of three domains with 57 items as follows: (1) socio-demographic variables (6 questions, such as age, ethnicity and educational level) and sexual behavior/communication about sex (2 questions; ever had sex and discussion of sex matters with friends); (2) knowledge of sexual and reproductive health (27 questions, such as signs of sexual maturity in males, methods of contraception and signs/symptoms of STIs); (3) utilization of sexual and reproductive health services (22 questions, such as ever visited a health facility for SRHS, services used and reasons for not using the services). The questionnaire was pre-tested among 40 young males in a different L.G.A called Alimosho L.G.A. The knowledge evaluation section of the questionnaire contained 27 items, (such as signs of sexual maturity in males, methods of contraception and signs/symptoms of STIs) which were evaluated for internal consistency and suitability for the population under study using the Cronbach's alpha reliability test in SPSS. After scoring the responses to the 27 knowledge questions as 1 for "Yes", and 0 for "No" and "I don't know", the obtained data were used to compute Cronbach's alpha. The Cronbach's alpha value obtained was ($\alpha = 0.87$), which is greater than 0.70, hence validating internal consistency and the suitability of the instrument for the population under study. The data was collected by the lead researcher and three trained male research assistants who have attained a post-secondary level of education. They were trained for two days on the study objectives, questionnaire content, selection of study participants, and data privacy and confidentiality. Written informed consent was obtained from all respondents at the point of data collection.

2.6. Data analysis

Data were entered using Excel 2007 and then exported to SPSS version 20 for analysis. Descriptive statistics were used to analyze the data, representing categorical data with numbers and percentages and continuous data with mean and standard deviation. Bivariate analysis was run to assess any relationship between the independent variables (respondent's characteristics) and outcome variable (SRHS utilization, noted as ever visited a health facility for any sexual and reproductive health service). Independent variables found to be significant with p-value less than 0.05 at the bivariate level were included in binary logistic regression model to adjust for confounders. Crude and adjusted odd ratios were used to ascertain any associations between the dependent and independent variables, while significance was determined using 95% confidence intervals and p-value <0.05.

2.7. Operational definitions

"Good reproductive health knowledge" refers to respondents who answered correctly and their scores are above or equal to the mean score of the total 27 knowledge questions, "poor knowledge refers to respondents who answered correctly and their scores are below the mean score of the total knowledge questions [35]. "Utilization of sexual and reproductive health services" refers to respondents who have ever visited a health facility for any sexual and reproductive health service, including information, STI treatment, family planning services.

3. Results

Out of the 422 questionnaires that were administered, 386 were completely filled yielding a response rate of 91.5%.

3.1. Socio-demographic characteristics of the respondents

The ages of the respondents ranged from 15 to 24 years with a mean of 21.01 years ± 2.00. Majority of the respondents (53.11%) were Yoruba, Christians (61.14%) and have completed secondary education (66.10%). Majority (78.24%) of the respondents have access to the internet, more than half (53.63%) do not have a source of healthcare and 52.33% of the respondents had ever had sex (Table 1).

3.2. Respondents' knowledge of sexual and reproductive health

Most of the respondents (87.31%) knew that the development of pubic hairs is a sign of sexual maturity in males, followed by a change in voice (84.72%). Majority (75.13%) of the respondents knew that a girl can be pregnant after one sexual act. However, 52.85% do not know that pregnancy is most likely to occur at mid-menstrual cycle. The signs/symptoms of STIs known by the majority of the respondents were pain during urination (69.17%) and abnormal discharge from the vagina (62.18%), while 41.71% do not know that ulcers/sores in the genital region are signs of STI. Regarding knowledge of contraception, 89.64% knew about condoms, while 70.47% were aware of tubal ligation. Slightly more than half (58.55%) of the respondents knew about intrauterine contraceptive device while 57.51% knew about vasectomy, and 75.13% were aware of HIV counseling and testing (Table 2).

3.3. Sexual and reproductive health knowledge level

After scoring and grading the 27 knowledge questions, it was observed that most of the respondents (73.06%) had good knowledge of sexual and reproductive health, while more than a quarter (26.94%) had poor knowledge of SRH (Table 3).

3.4. Respondents pattern of utilization of sexual and reproductive health services

Almost two-third (63.70%) of the respondents had ever visited a health facility for SRHS, though 75.70% of them did not visit in the last 12 months. The services sought most are information/counseling (32.50%) and HIV testing (30.10%) while the least sought is family planning services (9.3%). Government hospitals (28.50%) and Pharmacies (28.50%) were the most used health facilities for reproductive health services (Table 4).

3.5. Respondents' reasons for not seeking sexual and reproductive health services in health facilities

Most reasons given by respondents for not seeking SRHS in health facilities are lack of need for the services (62.90%), no knowledge

Table 1
Socio-demographic characteristics of the respondents.

Variables	Frequency(N = 386)	Percent (%)
Age		
15–19	112	29.0
20–24	274	71.0
Mean age±SD	21.01 ± 2.00	
Ethnicity		
Yoruba	205	53.11
Igbo	108	27.98
Hausa	61	15.8
Others	12	3.11
Religion		
Christianity	236	61.14
Islam	141	36.53
Traditional	9	2.33
Educational level		
Below secondary	92	23.8
Secondary	255	66.1
Post-Secondary	39	10.1
Access to the Internet		
No	84	21.76
Yes	302	78.24
Source of healthcare		
No	206	53.63
Yes	179	46.37
Discuss Sex matter with Friends		
No	83	21.5
Yes	303	78.5
Ever had sex		
No	202	52.33
Yes	184	47.67

Table 2
Respondents' knowledge of sexual and reproductive health.

Variables(N = 386)	Yes (%)	No (%)	Don't know (%)
Signs of sexual maturity in males			
Development of beards	304(78.76)	53(13.73)	29(7.51)
Development of pubic hairs	337(87.31)	20(5.18)	29(7.51)
Change in voice	327(84.72)	33(8.55)	26(6.74)
Increase in testes size	241(62.44)	37(9.59)	108(27.98)
About pregnancy and conception			
A girl can be pregnant after one sexual act	290(75.13)	42(10.88)	54(13.99)
Pregnancy most likely to occur at mid-menstrual cycle	132(34.20)	50(12.95)	204(52.85)
Males can be mature to impregnate a girl during puberty	285(73.83)	36(9.33)	65(16.84)
Signs/Symptoms of Sexually Transmitted Infections			
Abnormal discharge from the vagina	240(62.18)	28(7.25)	118(30.57)
Abnormal discharge from the penis	236(61.14)	44(11.40)	106(27.46)
Pain during urination	267(69.17)	51(13.21)	68(17.62)
Pain during sexual intercourse	218(56.48)	53(13.73)	115(29.79)
Ulcers/sores in the genital region	154(39.90)	71(18.39)	161(41.71)
STIs can be asymptomatic	148(38.34)	109(28.24)	129(33.42
Knowledge of methods of contraception			
Use of condom	346(89.64)	18(4.66)	22(5.70)
Vasectomy	131(33.94)	33(8.55)	222(57.51)
Intrauterine contraceptive device	134(34.72)	26(6.74)	226(58.55)
Implants	156(40.41)	31(8.03)	199(51.55)
Oral contraceptive pills	269(69.69)	21(5.44)	96(24.87)
Injectable contraceptives	210(54.40)	37(9.59)	139(36.01)
Withdrawal method	203(52.59)	73(18.91)	110(28.50)
Rhythm method/Periodic abstinence method	129(33.42)	60(15.54)	197(51.04)
Tubal ligation	83(21.50)	31(8.03)	272(70.47)
HCT detects if one has HIV infection or not	290(75.13)	38(9.84)	58(15.03)
About prevention of HIV/STIs			
Consistent and proper use of condom	334(86.53)	14(3.63)	38(9.84)
Sexual Abstinence	315(81.61)	29(7.51)	42(10.88)
Faithfulness to one uninfected partner	282(73.06)	59(15.28)	45(11.66)
Avoid sharing sharp objects with people	336(87.05)	16(4.15)	34(8.81)

SRH=Sexual and reproductive health, STIs = Sexually Transmitted Infections

Table 3
Sexual and reproductive health knowledge level.

Variable(N = 386)	Frequency	Percent%)
SRH Knowledge level		
Good knowledge	282	73.06
Poor knowledge	104	26.94
Total	386	100
Mean ± SD 16.57 ± 5.556		

of where to go (46.40%), the lack of awareness of the availability of the services (29.30%) and Shame/Stigma (25.70%) while the reason listed least by the respondents was culture/Religion against SRHS use (10.70%), (Table 5).

3.6. Factors associated with the utilization of sexual and reproductive health services

Variables like ethnicity, educational level, access to the internet and having ever had sex were statistically significant using bivariate analysis. However, after controlling for the effects of potentially confounding variables using binary logistic regression, ethnicity, access to the internet and having ever had sex were significantly associated with the utilization of sexual and reproductive health services. Respondents of Igbo ethnic group were 2.73 times more likely to use SRH services compared with those of other ethnic group (AOR = 2.73, p-value = 0.006). Respondents who have access to the internet were 1.77 times more likely to use SRH services compared to those without access to the internet (AOR = 1.77, p-value = 0.043). Respondents who have ever had sex were 1.96 times more likely to use SRH services compared to those who have never had sex (AOR = 1.96, p-value = 0.003) (Table 6).

4. Discussion

The study aimed to bridge the gap in young people's SRH knowledge and service utilization in rural Nigeria. This will be critical to the success of future interventions. The response rate of (91.5%), despite the sensitivity of the issue addressed was high probably because of the careful effort that was put in obtaining informed consent.

Table 4
Respondents pattern of utilization of sexual and reproductive health services.

Variables(N = 386)	Yes (%)	No (%)
Ever visited a health facility for any sexual and reproductive health service (N = 386)	246(63.7)	140(36.3)
Visited a health facility for SRH service in the last 12 months (N = 386)		
Yes, once	54(14.0)	
No, not in the last 12 months	292(75.7)	
Yes, two or more times	40(10.4)	
***Reproductive health services sought at health facilities(N = 246)**		
HIV testing	74(30.1)	172(69.9)
Information/Counseling	80(32.5)	166(67.5)
STI Treatment	43(17.5)	203(82.5)
Condom services	62(25.2)	184(74.8)
Family planning services	23(9.3)	223(90.7)
***Health facilities used for reproductive health services (N = 246)**		
Pharmacy	70(28.5)	176(71.5)
Local stores	43(17.5)	203(82.5)
Private hospital	69(28.0)	177(72.0)
Government hospital	70(28.5)	176(71.5)
Non-governmental Organizations	16(6.5)	230(93.5)
* Multiple responses, RH = Reproductive health		

Table 5
Respondents' Reasons for not seeking Sexual and Reproductive Health Services in Health Facilities.

*Reasons for not seeking RH services in health facilities (N = 140)	Frequency	Percent (%)
No knowledge of where to go	65	46.4
Culture/Religion against SRHS use	15	10.7
Unfriendly staff's attitude	17	12.1
Lack of awareness of the availability of the services	41	29.3
Shame/Stigma	36	25.7
Services are not youth-friendly	17	12.1
No need for the services	88	62.9
SRHS are for married people	17	12.1
Lack of money to pay for the services	34	24.3
Most services are tailored for females	19	13.6
* Multiple responses, SRHS=Sexual and reproductive health services		

Most of the respondents are knowledgeable about the signs of sexual maturity in males and also pregnancy, which is similar to the findings of a past study among in-shool rural adolescents in Nigeria [24]. However, similar to a study in Nepal [19], most respondents did not know that pregnancy is most likely to occur at mid-menstrual cycle, which could be because the study was carried out among males only and so they may not be well informed about the menstrual cycle in females. Pain during urination, abnormal discharge from the vagina and abnormal discharge from the penis were correctly identified as signs/symptoms of STIs by most of the respondents as in a previous study conducted in South Africa [21]. Contrary to the findings of a qualitative study among adolescents in Northern Region of Ghana [21], and a study among in-school rural adolescents in western Nigeria [24], most of them did not know that ulcers/sores in the genital region are signs of STIs which could be attributed to the differences in the study participants.

The methods of contraception known by the majority of the respondents are the use of condoms, oral contraceptives, injectable contraceptives and withdrawal methods, which is similar to studies conducted in Iran and Northern Nigeria [20,46]. On the other hand, most of them did not know about tubal ligation, intrauterine contraceptive devices and vasectomy which is in tandem with a past study carried out in Nepal [19]. This may likely be because tubal ligation and vasectomy, which are permanent methods of contraception, and intrauterine contraceptive devices, which are long-lasting contraceptive methods, are practiced mainly by the elderly or married people and may not be common among young people used in this study. As recorded in a paststudy done in Iran among young people [20] and a study among rural adolescents in Ethiopia [35], majorities of the respondents are knowledgeable about HIV counseling and testing, as well as the various ways of preventing HIV/STIs such as avoiding sharing sharp objects with people, consistent and proper use of a condom, sexual abstinence and faithfulness to one uninfected partner. After scoring and grading, good knowledge of SRH (73.06%) was recorded among most of the respondents, which is similar to a study carried out in Ekpoma, Nigeria among undergraduate students [47], but was, however, not consistent with some other studies done among rural adolescent mothers in Cambodia [18], adolescents using maternal health services in South Africa [21], and adolescents in Ghana [22]. where a low level of sexual and reproductive health knowledge was reported. The reason for the good sexual and reproductive health knowledge recorded in this study could be that the majority of the respondents have completed secondary education and so may have had first-hand information about sexual and reproductive health from the educational institutions attended. Also, usage of mobile phones is common among the age bracket of the respondents, and this no doubt exposes them to myriad of sexual and reproductive health information available online, which will most likely be disseminated among their peers during their interactions.

More than half (63.7%) of the respondents have ever visited a health facility for sexual and reproductive health services, which

Table 6
Factors influencing Utilization of Sexual and Reproductive Health Services.

Respondents' characteristics	Ever used any SRHS		X^2(p value)	AOR(95%CI)	p value
	No(%)	Yes(%)			
Age					
15–19	48(42.9)	64(57.1)	2.962(0.085)		
20–24	92(33.6)	182(66.4)			
Ethnicity					0.005*
Hausa	28(45.9)	33(54.1)	11.049(0.011)*	0.667(0.186–2.388)	0.534
Igbo	26(24.1)	82(75.9)		2.73(1.339–5.568)	0.006*
Yoruba	80(39.0)	125(61.0)		1.125(0.603–2.098)	0.712
Others	6(50.0)	6(50.0)		1	
Religion					
Christianity	81(34.3)	155(65.7)	4.296(0.117)		
Islam	58(41.1)	83(58.9)			
Traditional	1(11.1)	8(88.9)			
Educational level					0.134
Below Secondary	38(41.3)	54(58.7)	6.779(0.034)*	1	
Secondary	95(37.3)	160(62.7)		2.113(0.784–5.695)	0.139
Post-Secondary	7(17.9)	32(82.1)		0.865(0.496–1.510)	0.611
Access to the internet					
No	41(48.8)	43(51.2)	7.304(0.007)*	1	
Yes	99(32.8)	203(67.2)		1.769(1.017–3.076)	0.043*
Source of healthcare					
No	83(40.1)	124(59.9)	2.829(0.093)		
Yes	57(31.8)	122(68.2)			
Discuss sex matter with friends					
No	36(43.4)	47(56.6)	2.309(0.129)		
Yes	104(34.3)	199(65.7)			
Ever had sexual intercourse					
No	87(43.1)	115(56.9)	8.477(0.004)*	1	
Yes	53(28.8)	131(71.2)		1.955(1.251–3.054)	0.003*
SRH Knowledge					
Poor Knowledge	41(39.4)	63(60.6)	0.613(0.434)		
Good Knowledge	99(35.1)	183(64.9)			
Constant				0.637	0.173

*statistically significant at $p < 0.05$; X2 = Chi-square; SRHS=Sexual and reproductive health services

contradicts the result of a study done among young people in Ethiopia [27]. However, the majority of the respondents did not use SRHS in the last 12 months, against evidence from a past study done among Nepalese youths living in the Kathmandu valley where most respondents reported to have used sexual and reproductive health services two or more times in the last 12 months of the study [19]. This disparity may be explained by the socio-cultural and religious differences between the respondents in both studies, which may most likely have influenced their use of the services. This poor pattern of use of SRHS among the respondents poses a severe threat to their well-being as they might be involved in other unsafe and harmful sexual and reproductive health practices to meet their sexual and reproductive health needs. The SRHS sought most at the health facilities by the respondents are information/counseling, HIV testing, and condom services. In contrast, the least sought service is other contraceptives/family planning services which corroborates with a past study among secondary school students in Nekemte town, Ethiopia [28]. This could be because they are in their most inquisitive stage of life and, as such, would have a great quest for information about their reproductive health and possible ways of having wholesome sexual and reproductive health. Also, most of the respondents have ever had sex, so seeking condom services by them is not surprising and since most of them are likely not to be married, it is unlikely that they would seek family planning services from health facilities.

As in a past study among young people in Southwest Oromia, Ethiopia [27], the health facilities used mainly for SRHS are government hospitals, pharmacies and private hospitals which could be due to the availability of these facilities in Mushin L.G.A.

As recorded in past studies among young people in Nepal [34], adolescents in Southeast Nigeria [48], rural adolescents in Northwest Nigeria [49], and adolescents in Kenya [50], perceived lack of need for the services, no knowledge of where to go, lack of awareness of the availability of the service, shame/stigma and lack of money to pay for the services were the major reasons preventing the respondents from seeking sexual and reproductive health services in health facilities.

Binary logistic regression was used to control for possible confounders after which ethnicity, access to the internet, and having ever had sex were found to be true predictors of SRHS utilization. The findings of this study revealed that being of Igbo ethnic group is a positive predictor of utilization of sexual and reproductive health services in contrast to the findings of a systematic review among adolescents from low and middle-income countries [26] and a study done in Northern Nigeria among adolescents [46]. Access to the internet is positively associated with the utilization of SRHS. Majority(78.24%) of the respondents have access to the internet, and this may have accounted for the positive association, because of the availability of information about the available SRHS online. As found in a study among high and preparatory school students in Nothwest Ethiopia [36], having ever had sex is a positive predictor of sexual and reproductive health services use. The reason for the positive association could be that the respondents who have ever had sex have

more perceived needs for the services than those who have never had sex. However, the finding is contrary to a study among youths in Amhara region, Ethiopia [51]. The factors that positively influence the uptake of the available SRHS play some roles in reducing the burden of sexual and reproductive health problems among young people.

Surprisingly, no association was found between the knowledge of SRH and the utilization of SRHS, which differs from a previous study among high and preparatory school students in Nothwest Ethiopia [36]. It is expected that knowledge of sexual and reproductive health should be a prelude to the use of the services, so this area needs to be subjected to further studies probably by incorporating other sex and maybe among a wider geographical location.

5. Conclusion

The study found that the SRH knowledge of young males in Mushin was good but some misconceptions still exist, such as pregnancy not likely to occur at the mid-menstrual cycle, and STIs cannot be present without symptoms in an individual. The utilization of SRHS however is poor largely due to perceived lack of need for the services, no knowledge of where to go, lack of awareness of the availability of the services knowledge, shame/stigma and lack of money to pay for the services. Therefore, it is important to design and strengthen existing interventions to increase awareness of SRH, correct misconceptions about sexual and reproductive health and promote the use of SRHS by making them available at health facilities, especially the primary health centers located in the communities at low or no cost for young people. SRHS utilization was predicted by ethnicity, access to the internet and having ever had sex. There is, therefore, the need to build the capacity of parents on SRH matters, encourage the adoption of cultural change that would positively influence the uptake of the available SRHS. Further, the internet may be a valuable tool for the promotion of SRH knowledge and the promotion of the uptake of the available services. Messages specifically designed and targeted to adolescents and young people should be widely disseminated using the internet.

5.1. Strengths and limitations of the experimental methods

Being a community-based study done among rural young people and explored different independent variables made it strong. The study added to the scanty literature in Nigeria about SRH knowledge and service utilization among young males. The uniqueness of the study is that it was drawn from a large sample of young males from a rural and slum setting, providing a recent update on SRH among young people in this setting. The study's sampling procedure enables generalization of the findings to rural settings, allowing it to inform the development of SRH policies and programs targeting this population in such communities. However, due to the cross-sectional nature of the study, it is difficult to establish causal relationship between the dependent and independent variables. In addition, it was not a mixed method study where the qualitative study would have further explored in-depth reasons why young people did not utilize the services. There is also the possibility of recall bias as some respondents may not have been able to remember their past experience utilizing SRHS. Another limitation of the study is the possibility of social desirability bias due to the sensitive nature of the topic. However, the researchers tried to reduce this by explaining the purpose of the research to the respondents, assuring them of the anonymity and confidentiality of their responses.

6. Ethical considerations

Ethical approval for this research was obtained from the Human Research and Ethics Committee (HREC) of the Lagos University Teaching Hospital (Approval ID: ADM/DSCST/HREC/APP/4394). The purpose of the study was explained to the participants, and a written informed consent was obtained from each respondent before administering the questionnaire. Confidentiality of information was maintained by omitting any personal identifier from the questionnaires. Collected data were also kept in a secure password-protected database without identifiers.

Author contribution statement

Edith Nnenna UTAKA, B. MLS, MScPH: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Dr. Adekemi Oluwayemisi SEKONI, MBChB, MPH, MWACP, MScPH, FMCPH, PhD: Conceived and designed the experiments.

Prof. Fatai Adesina BADRU, RN.,RPN., PhD, FWAPCNM: Contributed reagents, materials, analysis tools or data.

Data availability statement

The authors do not have permission to share data.

Declaration of competing interest

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

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