Determinants of Adolescent and Youth Sexual and Reproductive Health Service Utilization in Hard-To-Reach Communities of Amudat District, Uganda

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Summary

INTRODUCTION

Uganda has one of the largest adolescent and youth populations globally and yet access and utilization of sexual and reproductive health services (SRH) among this population remains inadequate, especially in hard-to-reach communities. This study sought to establish the contextual determinants of service utilization in Amudat District, a hard-to-reach community in Karamoja, Uganda.

MATERIALS AND METHODS

A community based descriptive cross-sectional study was conducted using random sampling of 503 respondents recruited after informed consent. Data were collected using interviewer administered questionnaires, entered into epidata 3.1 and analysed using STATA version 12. For quantitative data, logistic regression analysis was used to determine factors associated with services utilization. Qualitative data were analysed by content analysis, for themes.

RESULTS

Older adolescents and youth out-of-school were more likely to utilise services, with religion and socially accepted norms additionally determining utilisation of services.

CONCLUSION

Strengthening social services that keep adolescents in school; supporting community engagement through youth gatekeepers particularly youth champions, religious and cultural leaders; while fostering family values that favour SRH discussions will increase access to and use of SRH services in hard-to-reach communities.

RECOMMENDATIONS

Promote culturally adapted sexuality education; prevent child marriage, and provide youth friendly SRH services aligned to need in Amudat and similar settings.

Key Words: *Adolescents and Youths, Sexual and Reproductive Health, Hard-To-Reach Communities, Youth Friendly Services*

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Introduction

Globally, the population of youth, aged 15 to 24 years is estimated at 1.2 billion[1,2,3], the majority of whom include adolescents. Together with the younger group of between 10-14 years, they compose over a quarter of the world population[2,3]. Adolescence is a period of rapid emotional, physical and psychological changes[4] that require societal support[5]. Adolescents and youths often engage in risky sexual behavior[6] that often results in adverse health, social and economic consequences, especially for girls, and affect future health and opportunities[7,8].

Access to sexual and reproductive health services for this category of population is critical for harnessing the demographic dividend and achieving Sustainable Development Goals (SDG) given that poor implementation of SRH programs and policies has derailed the attainment of the desired SRH outcomes for adolescents and youth in low income countries[9].

Uganda has a predominantly youth population with 6 out 10 Ugandans under 30 years, 34.8% of the 34.6 million population are adolescents, 22% of whom have ever had sexual intercourse[10]. Uganda has a total fertility rate of 5.8 which is among the highest fertility rates globally; however, the modern contraceptive prevalence rate (mCPR) amongst youth is still low at 21.9% for those aged 15 -19 years, and 34% for those aged 20 -24 years[11]. In addition, household poverty is noted to influence parents' inability to afford education costs of children and to facilitate child marriage, teenage Pregnancy and other risky sexual behaviour[12,13]. Amudat district located in hard-to-reach North-Eastern part of Uganda with a high fertility rate of 5.9 children per woman of reproductive age and modern contraceptive prevalence rate of 7.3% and 16.5% of the population of women have had their first child between 15-19 years[11].

Uganda has national adolescent health policies that aim to streamline adolescent health concerns into the national development processes, however the organization of adolescent and youth sexual reproductive health (AYSRH) services have gaps, especially in hard-to-reach areas[14,15]. As a result, youth continue to suffer various AYSRH problems which affect their quality of life and productivity. Ensuring access and utilization of AYSRH is one way to invest in the health of the youth. However, this requires a contextual understanding of those communities with poor reproductive health indicators to better understand the determinants of AYSRH services utilization.

Factors that are associated with underutilization of reproductive health services in hard-to-reach settings and in developing countries like Uganda, have been observed to include social stigma, ignorance, lack of confidentiality and privacy[10,14], misconception about the services quality[15], and prohibitions related to religion and culture[16,17].

The data on the prevalence of sexual reproductive health problems and current utilization of SRH services in underserved regions of Uganda is scanty. Therefore, the aim of the study was to assess the factors associated with the utilization of AYSRH services in Amudat Town Council, Amudat District, Uganda. The objective of this study was to assess the determinants of sexual and reproductive health service utilization among youth in Amudat town council, Amudat District.

Materials and Methods

The study was a community cross-sectional study conducted from May to August 2018. The study utilized the modified social ecological model (SEM) as shown in Figure 1, to explain the factors that influence youth health services utilization behavior.

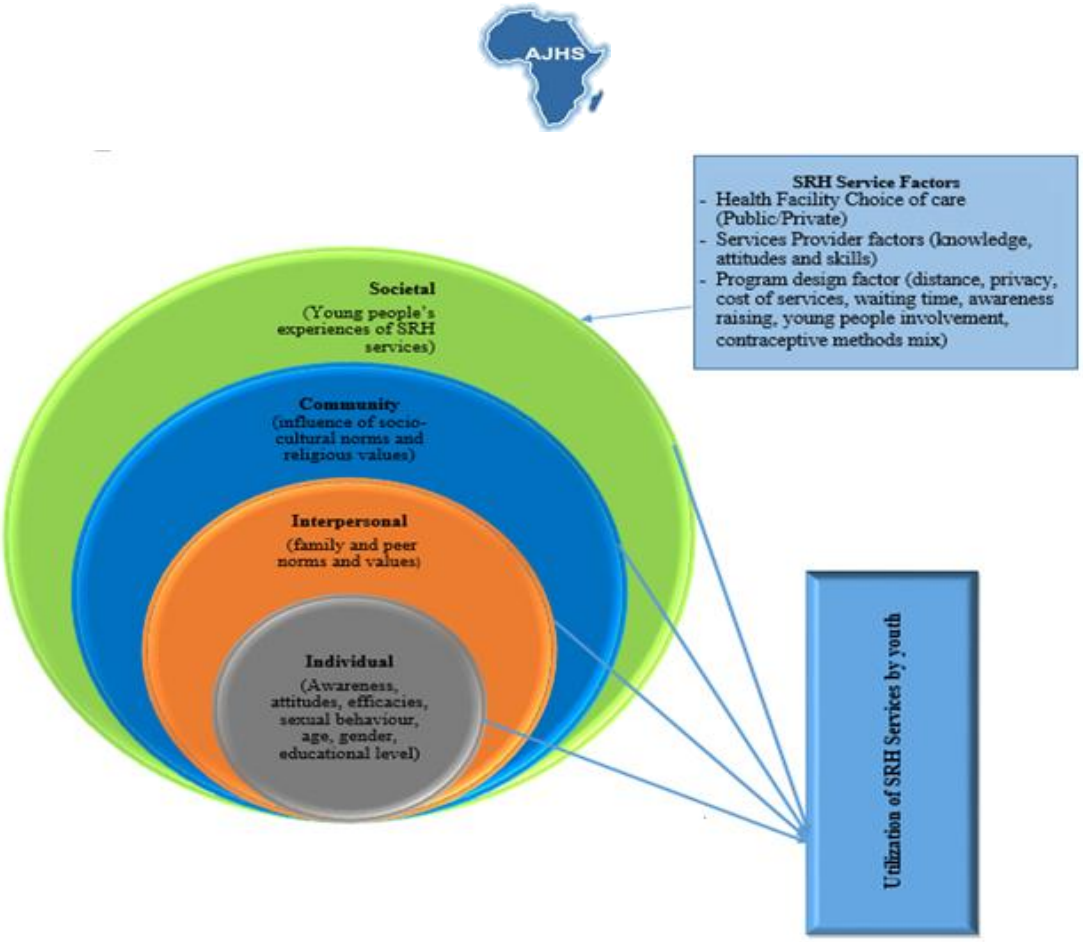

Figure 1: Social Ecological Model and AYSRH Service Utilization

The SEM is underpinned by the belief that behavior does not occur within a vacuum but is dependent on the individuals, their peers, communities and society.

Study site

The study was carried out in Amudat district Karamoja sub-region, in North Eastern Uganda. Amudat was purposively selected since it is one of the underserved and hard-to-reach districts in the region with consistently poor SRH indicators in the country[18]. The population in Amudat practices Type III Female Genital Mutilation (FGM), an aggressive form of FGM that often results in serious morbidities such as vaginal fistula, moreover, 82% of females in Amudat reported knowing a female that was recently circumcised[19]. Amudat District with an estimated population of 120,008 as projected from the 2014 national Census[20] is semiarid and experiences one rainy season which is marked by torrential downpours that flood seasonal rivers making roads impassable and health services delivery difficult. The District has eight functional health facilities including one Private-Not-for-Profit Hospital that serves as a referral for the whole district. The Town Council has one government health facility, at level II (dispensary). There is no government hospital or referral facility in the district. A team of 267 active trained Village Health Team (VHT) members support community health systems, though approximately 90% of the VHTs are illiterate. The District Health staffing level stands at only 28.7%[19], yet all health facilities and VHTs are expected to offer AYSRH services and information[21].

Study population

The inclusion criterion was a male and female youth (15-24 years) resident of Amudat

district at the time of data collection. The potential participants were excluded when they had severe communication disabilities, served as a village health team member or were too ill to answer the questions.

Study design and data collection

We followed a cross-sectional design that involved both quantitative and qualitative methods. Quantitative data were collected using a semi-structured questionnaire form. Qualitative data were collected from key informant interviews at the District Management Team and from focus group discussions (FGD) with parents or guardians of adolescents and youths using key informant interview guides and FGD guides respectively. Prior to data collection, the questionnaire was pretested to ensure clarity and accuracy. The youth were found in their homes during data collection while key informant interviews were conducted at the district health office and focus group discussion were carried out from the town council community hall.

Study population, sampling and recruitment

The study population consisted of youth (15-24 years) residing in the study area during the time of data collection. Using quantitative methods for sample size estimation, taking standard normal deviation (Z) at 95% confidence interval (Z=1.96), the expected proportion (P) of youth (15-24) in the Amudat Town Council as 17.5[20] and sampling error (δ) of 5%, a total of 503 youth was considered for the study. Youth in Amudat Town Council resided in four wards with household population size (N) of 568, 596, 742 and 356, we calculated the study sample sizes (n) of 126, 131, 166 and 80 youths from households' respective wards. The allocation of the sample across the 4 wards was proportional to the ward's population with ni=Ni/N, and Ni was the number of households in the i^{th} ward, N is the total number of households in the 4 wards. Systematic sampling was used to select the households for inclusion in the study seeking youths aged 15–24 years in each household. The participants for 6 key informant interviews (KIIs) and 2 focus group discussions (FGDs) were selected purposively from the study area. The KII respondents, specifically the District Health Officer and the District Health Officer-in-charge of maternal child health were selected because of their pivotal role in planning, and management of AYSRH services in the District. The health service providers were selected as KII respondents given their perceived first-hand experiences in offering AYSRH services in health facilities in Amudat Town Council. Parent or guardians of youth were selected as FGD respondents because they are the gatekeepers of youth who could affect youth SRH care-seeking and were also perceived to be well versed with the socio-cultural aspects affecting AYSRH utilization.

Quality control

Data were collected by the help of Research Assistants that were fluent in both English, Pokot and Swahilli language. These were trained for three days on the study protocol, the data collection tools, methods and the consenting process. The questionnaires were pre-tested on 15 youths in Nakapiripirit District (a nearby district in Karamoja region, outside study area) before adoption for data collection with a purpose of checking suitability of questions, irrelevance, cultural sensitivity and inconsistence. After pretesting, the questionnaire was revised and further refined during training prior to data collection. Data collected was checked for completeness and accuracy by the supervisor.

Data management and analysis

Quantitative data were entered for cleaning using EPI Info™ software version 7.0. Data was then exported to and analysed using STATA version 12 statistical software. The dependent variable in this study was the utilization of sexual reproductive health (SRH) services measured through the dichotomous response of yes or no, while the independent variables were individual factors such as age, level of education and sex; interpersonal factors such as family and peer norms; community factors such as the socio-cultural factors like religion and ethnicity and the societal factors specifically health system-related factors such as health facility organization and service delivery, health provider knowledge, attitudes and skills and availability of AYSRH services within the town council. Logistic regression was used to establish factors significantly associated with SRH services utilisation. The factor with a p-value <0.05 was considered to have statistical significant association with utilization of sexual reproductive services by the odds ratio (OR >1). Qualitatively, the key informant interviews were audio recorded and transcribed verbatim in English and validated by the principal researcher, the district health office and selected village health team members. The transcription was done by the principal researcher under the guidance of the academic supervisor. Using thematic analysis, themes were created based on the data from the key informant responses and focus group discussions. Multivariate analysis was used to compare variables.

Ethical Considerations

Ethical approval to conduct the study was obtained from Uganda Martyrs University. An introductory letter was then taken to the Amudat district who gave permission to conduct the study. Participation in the study was voluntary, and the researchers obtained verbal consent from the participants before they participated with choice for non- participation clearly communicated.

Results

Background characteristics of participants

A total 503 youth were interviewed with response rate of 100%. Their mean age was 20.99 years (S. D=±2.74) and mean age at first marriage was 17.97 (S.D=±2.64). Females constituted the majority 323/503 (64.1%) of the respondents, 401/503 (79.7%) were out-of-school and only 39/503 (7.7%) had attained education above the secondary level.

Sexual reproductive health service utilization

More than half of the respondents, 336/503 (66.7%) had ever had at least one sexual reproductive health problem in 12 months prior to data collection. Of those that had ever had an SRH problem, majority 320/336 (95.2%) had sought AYSRH services from a health facility. Only 1.8% and 1.5% sought AYSRH services from parents and spouses respectively and less than 1% from traditional healers. Majority of youth 233/320 (72.8%) seeking AYSRH services at a health facility was in the 20-24-year category. Also, majority 204/320 (63.7%) of youth seeking health services from a health facility were females. Among the school and non-school going youth, majority 260/320 (81.2%) of respondents seeking AYSRH services from health facilities were non-schooling youth. As Figure 1 shows, the commonest AYSRH services sought at health facilities were Hepatitis B vaccination and cervical cancer screening mentioned by 310/320 (96.8%).

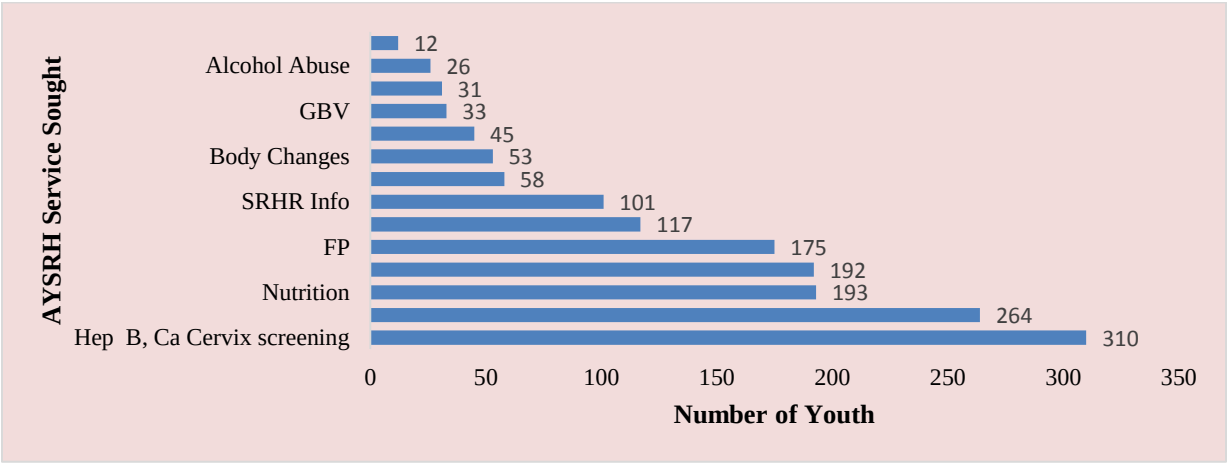

Figure 1: Youth Sexual and Reproductive Health Seeking Patterns by Service Type, Amudat

This was followed by sexually transmitted infections and HIV services mentioned by 264/320 (82.5%) of respondents, nutrition services and ANC/delivery/PNC (perinatal) services utilized by 193/320 (60.3%). The least utilized services included fistula repair and mental health services.

Hepatitis B vaccination, cervical cancer screening and STI/HIV services are offered through sponsored outreach campaigns where intense health promotion and community mobilization precedes the free services delivery. Besides, nutrition supplements are offered during perinatal services which likely motivates many mothers to access services in this semi-arid and often food insecure community. Notably, the number of respondents that reported ever seeking perinatal services was found equal to those that have ever sought nutrition services.

'…When we have resources for cervical screening, HIV testing and Hepatitis B vaccination, the youth come in big numbers because of the mobilization campaigns. These are one-off services. We do not do the same for all other services that are offered on a routine basis. For antenatal, delivery and postnatal services, clients receive nutrition supplementary feeds, so many come for health services…'- Health Manager, Amudat

Figure 2 shows the proportion of youth that reported seeking AYSRH services offered at static health facilities in Amudat Town Council. Only 34.8% (175/503) reported ever use of contraceptive services, 20.1% (101/503) reported utilizing AYSRH information, life skills education 8.9% (45/503) and GBV 6.6% (33/503). This indicates the overall underutilization of static health facility services by youths in the Town Council.

Determinants of utilization of AYSRH: Individual level factors

Respondents who belonged to Pentecostal faith were 3% more likely than protestants to have utilized AYSRH services (CPR=1.03; CI=1.0-1.07; p= .02); and respondents that had attained ordinary level education were less likely to have ever utilized AYSRH services compared to those with tertiary level education (CPR=0.92; CI=0.86-0.98; p<.001).

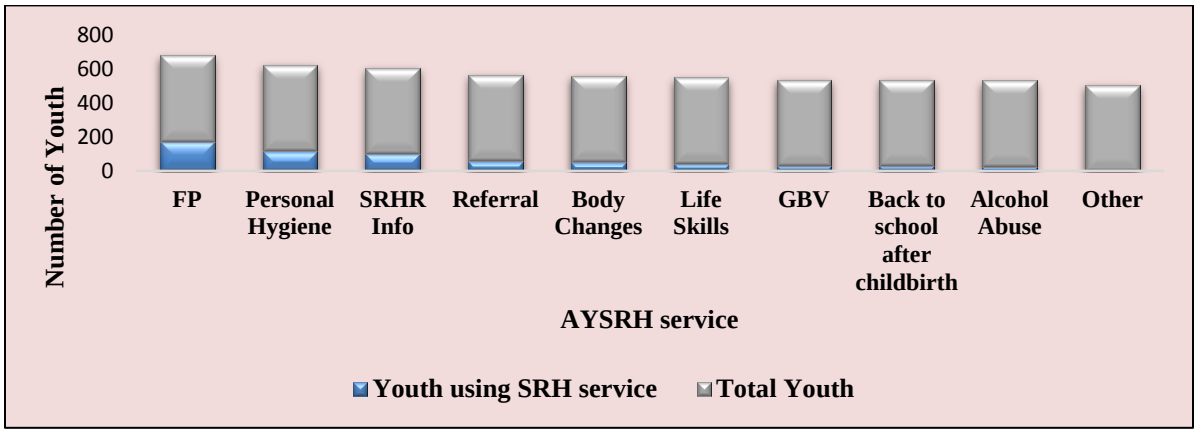

Figure 2: Sexual and Reproductive Health Services sought by Youth in Amudat

Respondents who were involved in casual work were less likely than those with formal employment to have sought AYSRH services at a hospital (CPR=0.91; CI=0.83-0.98; p < .001), Table 1.

Socio-cultural factors

Respondents who said that their religion does not approve youth to seek AYSRH services had 5% fewer chances of having utilized AYSRH services than those whose religions approve (CPR=1.05; CI= 1.02-1.08; p<.001), Table 1.

Table 1: Utilization of ASRHS by Respondents Characteristics, Social and Health System Factors

Variable	Hospital/Clinic Yes	No	CPR [95% CI]	P-value	APR [95% CI]	P-value
Age Category: 20-24	87	08	1.0		1.0	
15-19	233	08	0.94 [0.88-1.01]	0.10	0.90 [0.83-0.97]	0.01*
School Status: In School	60	06	1.0		1.0	
Out of School	260	10	1.06 [0.97-1.14]	0.15	1.12 [0.91-1.37]	0.27
Marital status: Married	192	05	1.0		1.0	1.08
Single	125	11	0.94 [0.89-0.99]	0.03*	1.12[0.91-1.37]	1.39
Separated	01	00	1.02 [1.00-1.04]	0.02*	1.12 [0.91-1.37]	1.39
Widowed	02	00	1.02 [1.00-1.04]	0.02*	1.12 [0.91-1.37]	1.05
Highest Education Level						
Tertiary (Non-University)	03		1.0		1.0	
None	157	03	0.98 [0.96-1.00]	0.08	0.92 [0.79-0.28]	1.06
Primary1-4	16	02	0.88 [0.75-1.04]	0.18	1.02 [0.95-0.46]	1.10
Primary5-7	44	03	0.93 [0.86-1.00]	0.08	0.99 [0.90-0.85]	1.09
Secondary (O' level)	73	06	0.92 [0.86-0.98]	0.01*	0.97 [0.84-0.76]	1.13
Secondary (A' level)	18	01	0.90 [0.85-1.06]	-	0.95 [0.76-0.66]	1.18
Tertiary (University)	09	01	0.90 [0.73-1.10]	0.31	0.93 [0.84-0.22]	1.04
Main Activity for Livelihood						
Formal/Salaried Job	11	00	1.0		1.0	
Crop Production	29	01	0.97 [0.90-1.03]	0.32	0.99 [0.90-1.08]	0.79
Brewing/Business	49	06	0.89 [0.81-0.97]	0.01	0.99 [0.91-1.07]	0.81
Artisan/Technician	02	00	1.0 [1.00-1.00]	1.0	1.11 [0.91-1.34]	0.29
Animal Rearing	143	00	1.0 [1.00-1.00]	1.0	1.06 [0.98-1.15]	0.13
House wife	02	02	0.5 [1.87-1.33]	0.16	0.52 [0.20-1.38]	0.19
Causal Worker	59	06	0.91 [0.83-0.98]	0.01*	1.07 [0.89-1.29]	0.41
Student	25	01	0.96 [0.89-1.03]	0.32	1.12 [1.01-1.26]	0.03*

Table 2: Utilization of Adolescent Sexual Reproductive Health Services by Respondent Characteristics, Social and Health System Factors Continued

Variable	Hospital/Clinic Yes	No	CPR [95% CI]	P-value	APR [95% CI]	P-value
Agreement with social-cultural views:						
My religion approves youth to seek for SRH Services:						
Agree	301	16	1.0		1.0	
Disagree	18	00	1.05 [1.02-1.08]	0.00*	0.95 [0.91-0.99]	0.03*
Contraception encourages promiscuity: Agree	107	02	1.0		1.0	0.03*
Disagree	212	14	0.95 [0.91-0.99]	0.03*	0.96 [0.92-0.99]	
Youth can access contraception:	39		1.0		1.0	0.59
Agree	02		1.00 [0.92-1.07]	0.03*	1.02 [0.94-1.11]	
Disagree	279	14				
Youth learn about reproductive health from peers: Agree	14	02	1.0		1.0	0.41
Disagree	249	69	1.02[0.97-1.07]	0.20	1.01 [0.97-1.05]	
I learned about contraceptive from friends:						
Agree	140	03	1.0		1.0	0.36
Disagree	179	13	1.07[1.02-1.13]	0.00*	1.01 [0.98-1.05]	
My family readily gives information on Contraception: Agree	90	08	1.0		1.0	0.71
Disagree	103	08	1.05 [0.98-1.12]	0.12	0.99 [0.93-1.04]	
My family readily gives information on safe/unsafe se Agree	86	12	1.0		1.0	0.4
Disagree	232	04	1.12[1.04-1.21]	0.003*	1.02 [0.95-1.09]	7
My family readily gives information on Abortion:						
Agree	79	05	1.0		1.0	-
Disagree	212	04	1.04[0.98-1.04]	0.14	1.00 [0.95-1.05]	0.8
My family readily shares information on STIs /HIV/AIDS: Agree	306	16	1.0		1.0	
Disagree	13	00	1.05[1.02-1.08]	0.00*	0.95 [0.90-1.00]	0.0
Health System Related Factors						
Lack of drugs: Agree	288	12	1.0	0.20	1.0	0.52
Disagree	32	04	0.92[0.82-1.04]		0.89 [0.80-1.00]	

When compared to those in agreement, participants who were not in agreement with the idea that youth should go for HIV testing services were less likely to have ever utilized the AYSRH services (CPR=1.05, CI=1.02-1.07, p< .001). Furthermore, individuals who learnt about contraception from other sources, other than friends were more likely to utilize AYSRH services (CPR=1.07, CI=1.02-1.13, p< .001).

Health service delivery factors

Respondents who did not know the availability of AYSRH services had 5% fewer

chances of having utilized AYSRH services (CPR=0.95; CI=1.02-1.07; p< .001). We found no difference in the level of utilization of AYSRH services among respondents who lack transport to seek the services and those who can afford transport (CPR=1.0, CI=0.95-1.06, p= .73). Participants who said that they don't always find the drugs they need were 8% less likely to have ever utilized AYSRH services at a hospital/clinic (CPR=0.92, CI=0.82-1.04, p = 0.2). Participant's preference for traditional medicine utilization was not associated with the use of AYSRH services (CPR=1.0, CI=0.95-1.05, p =0.84).

'The nurses should be sensitized to be friendly.'- Female FGD Respondent, Lochengenge Ward

Determinants of AYSRH Services Utilization

After controlling for other factors using binary logistic model with the outcome variable of ever used at least one adolescent youth sexual reproductive health, teenage respondents (15-19 years old) were found to have 10 percent fewer chances of having utilized AYSRH services compared to those in the 20-24-year category (APR=0.90, CI=0.83-0.97, p=0.01). It was also found that youth who did not agree that religion approves youth to seek AYSRH services had 5% less chances of having utilized AYSRH services (APR=0.95, CI=0.91-0.99, p =0.003).

Results (Ref Table 1) show that participants who according to their religion did agree that contraception use encourages promiscuity were less likely to have visited the hospital/clinic to utilize AYSRH service (APR=0.95, CI=0.91-0.99, p=0.03).

Discussion

This study shows that in Amudat district, utilization of AYSRH services among those youths who had ever faced any AYSRH problems was fairly high (95%). However, AYSRH services utilization was lower for some services that were not offered through integrated outreaches and associated community mobilization campaigns. The high AYSRH service utilization might be because most respondents (79.7%) were not in school and more than half (55.5%) of them were married. Studies show that individuals in marriage and young people out-of-school are more likely to be involved in sexual activities than those who are single and in-school[10,22]. A study conducted in Uganda showed that sexually active individuals have higher likelihoods of seeking AYSRH services compared those who embrace abstinence[10]. This study finding is in line with findings of another study conducted in Karamoja which found that proportion of young people in-school who had sex within three months preceding the survey was lower compared to their counterparts out-of-school, and that many among young people out-of-school were in marital relationships[23].

This study revealed that some of the reasons for youth's failure to utilize the available AYSRH services were health service related factors such distance to health facilities, unfriendly healthcare providers, drug stock-outs at health units, negative attitude by youth towards the use of AYSRH services, fear to be stigmatized and traditional beliefs. These findings are in agreement with other studies in sub-Saharan Africa which reported that services were inaccessible due to lack of privacy, confidentiality, equipment and negative attitudes of service providers[24,25,26].

It was also observed that services that were delivered through outreaches preceded by intense community mobilization campaigns were more utilized than other routinely delivered services at the health facilities. This model of

delivery offers a range of services offered free of charge. Amudat Town Council has only one hospital which is a private not for profit and therefore charges fees for services. This implies that the adolescents and youth would prefer free health care services with other added services such as nutrition supplements, a good incentive in a semiarid area prone to food insecurity. Therefore, utilization of AYSRH services could be improved by conducting integrated outreaches for AYSRH services and innovating means of motivating family planning use. Further, unfriendly health workers could be minimized through training more health workers and youth gatekeepers on AYSRH services.

High levels of knowledge about AYSRH services among youth in Amudat is clear evidence that health facilities and partners are providing AYSRH services or information about AYSRH regardless of the quality. This, therefore, presents an opportunity to improve the health of youth since knowledge is associated with service utilization elsewhere[27,28].

It was also evident from the SRH services use that the appropriate information about AYSRH services and information but required more support because culture and religion play an important role in influencing the health decisions the youth make. This is in line with a study in Pakistan which indicated parents, siblings, friends, teachers, and religious leaders as the main sources of AYSRH information[27,29]. Few youths are getting health services from teachers implying a missed opportunity to reach in-school youths.

This study found that about 40% of the respondents had never attained any formal education. The youth who have not attained any formal education were more likely to rely on incorrect information from peer groups and family, with consequent lack of accurate information and hence increasing the proportion of youth experiencing AYSRH challenges and reducing the youth utilizing AYSRH services. Studies in Uganda and elsewhere in sub-Saharan Africa show that utilization of AYSRH services is higher among people who have attained primary education and beyond than those who have not attained any formal education[10,30,31]. The majority (87.5%) of the respondents agreed to statements that that contraceptive use is against religious teaching and that contraception encourages promiscuity (68.8%). An analysis of family values in this study showed that some AYSRH issues like pregnancy and HIV are discussed within homes. It is likely that the information on AYSRH services received from friends and relatives is either not correct or adequately enabling utilization of AYSRH services, which therefore contributes to the high number of youth that is not using routine AYSRH services like family planning, not seeking AYSRH information from health providers as well as those that reported experiencing challenges in using AYSRH services. Efforts should be put on encouraging adolescents to seek for information advice from qualified providers. Even though most youths are sexually active and at risk of STI/HIV and unintended pregnancies; almost all of respondents reported that discussions on AYSRH to the youth are a taboo. This kind of belief that could shield parents, teachers and local leaders from providing information on safe sex practices. This is evidence that there is a need to empower all possible providers with accurate AYSRH information to reach out to youths.

Despite reports of increasing GBV cases, poor mental health and high rates of alcohol consumption in the district, this study found that the least sought services were; mental health, services to prevent alcohol abuse and clinical care for GBV survivors. The district

confirmed lack of adequate health personnel to offer mental health, GBV and fistula repair services. The underutilization of GBV services indicates a need to improve community capacity to prevent and respond to GBV. Most of the study participants preferred seeking AYSRH services from government health facilities, where services are free of cost. Failure to utilize available AYSRH services was also linked to factors like negative attitude and fear of discrimination among youths, which calls for community health education targeting the negative attitudes that stigmatize youth. The government needs to find alternatives to offer services that are affordable and at a government health facility higher than HC II within the Town Council.

Study Limitations

This being a cross-sectional study, it is possible that there might have been recall bias since the questions required recall of past AYSRH concerns. Those who might have had serious concerns could have easily recalled compared to those who did not have serious concerns. Questions requiring behavioral and practice description by respondents might have attracted the most socially desirable answers which may lead to misclassification as respondents who know the right things to do might have answered questions to fit the norm. This study was carried out during school days and those in boarding schools could have been missed limiting representativeness of the study. The study did not undertake a deep analysis of AYSRH utilization by gender for all determinants and in addition, a more diverse representation of respondents for qualitative component are recommended for future research undertakings.

Conclusions

This study indicates a high utilization of AYSRH services among youth who have ever had AYSRH problems. Some of the reasons for youth's failure to utilize the available AYSRH services were; long distance to service centers; unfriendly and judgmental healthcare providers; drug stock-outs at health units; negative attitude by youth towards the use of AYSRH services; fear to be stigmatized or discriminated against and traditional beliefs. Factors found to be significantly associated with AYSRH utilization include: being a teenager, being out-of-school, agreeing that religion approves youth to seek AYSRH services; and disagreeing that contraception use encourages promiscuity.

Services supported by projects and offered through outreaches such as Hepatitis B vaccination, cervical cancer screening and HIV testing are more utilized by youth, as well as those associated with nutrition supplements in this semi-arid drought-prone district. There is high knowledge regarding AYSRH services available in the community, although youth are not sure of where to access what AYSRH services. High perception of AYSRH problems among youth that have ever faced AYSRH problem is an opportunity in support of quality health education for AYSRH. Also, the community social-cultural beliefs and attitudes are less supportive of family planning services utilization. It is further noted that discussing AYSRH issues is a taboo in the community, however, families find it acceptable to discuss HIV and pregnancy. The only government health facility is at HC II level, which is not adequate to meet the needs for most youth that need AYSRH services which are not available at HC II level, and also, the Town Council and District lack the human resource to offer

psychosocial support and clinical services for gender-based violence, fistula and alcohol abuse.

Study results showed that youth utilization of AYSRH services could be increased by offering integrated AYSRH outreach services, training more health workers in friendly AYSRH services delivery, reaching youth gatekeepers with accurate AYSRH information, fostering family values that favor open discussions on AYSRH, promoting girl child education and preventing child marriage, providing accessible and affordable quality government AYSRH services that address drug stock-outs, offers a variety of services and knowledge on where to access what services.

Recommendations

The Ministry of Health and District Health Management need to: devise AYSRH programs that respond to needs in rural underperforming districts; establish Government HCIV or Hospital in the District to ensure that youth can access a wider choice of free quality AYSRH services; address frequent medicine and AYSRH commodity stock-outs through improved logistics management and training of more Officers in health logistics management; invest in integrated AYSRH outreach services to increase youth access and AYSRH services; train more health workers in youth-friendly AYSRH services; train and deploy health workers that can offer a variety of services; and strengthen community health systems that offer youth AYSRH services through Village Health Teams, Teachers and Peer Educators as appropriate

The District Leadership, including relevant Technical sector heads, Political Leaders, cultural and religious leaders need to strengthen efforts to reach youth gatekeepers with accurate AYSRH information; foster family values that favor open discussions on AYSRH; promote girl child education and preventing child marriage; intensify local social and behavior change communication on AYSRH to address social-cultural barriers to AYSRH service utilization and mobilize multiple stakeholders to implement quality improvement in AYSRH services delivery. District Leaders can also empower and provide social support for youth champions to lead behavior change among fellow youth in AYSRH utilization.

List of abbreviations

AYSRH: Adolescent and Youth Sexual and Reproductive Health
AMICAALL: Alliance of Mayors on Health and HIV and AIDS in Africa
ANC: Antenatal Care
ART: Antiretroviral Therapy
FGD: Focus Group Discussion
HCT: HIV Counselling and Testing
HIV: Human Immunodeficiency Virus
KII: Key Informant Interviews
MOH: Ministry of Health
SEM: Social-Ecological Model
STI: Sexually Transmitted Infections
VCT: Voluntary Counselling and Testing

Availability of data and materials

The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

BS wrote the proposal, participated in the data collection, analyzed the data, and drafted the manuscript. MN approved the proposal and revised the drafts. All authors read and approved the final manuscripts.

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