

# Access to and Utilisation of Adolescent Sexual and Reproductive Health Services among Secondary School Students in Mityana district, Uganda

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## Abstract

### Background

The study of the access to and utilisation of Adolescent Sexual and Reproductive Health (ASRH) services among secondary school adolescents in, Mityana district was carried out in various schools in Ssekanyonyi sub-county. The study aimed to determine the prevalence of the ASRH burden, assess the utilisation of ASRH services in these schools and identify drivers/barriers to the utilisation of ASRH services among adolescents in secondary schools in Mityana district.

### Methods

It was a cross-sectional descriptive study with an analytical component. Probability sampling methods were used to obtain a representative sample of the adolescents. Data was collected using both qualitative and quantitative methods, from a sample of secondary school adolescents aged 14-19 years. Qualitative data was also obtained from key informants and through focus group discussions. Quantitative data was entered in Epidata 3 and analysed using STATA 12 and qualitative data was analysed through interpretation and content analysis.

### Results

The median age of first sexual debut was 14years. 42% of the respondents have ever had sex with odds of an adolescent having had early sexual activity being 69% greater among males than among females (OR 1.69, p-value =0.013) and males being 72% more likely to be sexually active than females (RR 1.72, p-value =0.0002). 11.3% of the respondents have either ever been pregnant or made their sexual partner pregnant. The prevalence of Sexually Transmitted Infections was 22% among the respondents. The most utilised ASRH services at school were abstinence drives 41.2% and counselling services 36.5%. However, senior men and women in schools lacked knowledge, incentives, tools and training in ASRH service provision. Also, ASRH wasn't part of the school curriculum.

### Conclusions

Secondary school adolescents are accessing and utilising ASRH services in their schools though this is complicated by the lack of tools for use in ASRH service provision leading to complications of early sexual activity including teenage pregnancy, abortions and STIs. This calls for schools to be supported to sustain and increase on the scope of ASRH services that they are offering to their adolescents.

**Keywords:** Adolescent Sexual and Reproductive Health; Adolescent Sexual and Reproductive Health in secondary schools; Adolescent Sexual and Reproductive Health Services; Adolescent Sexual and Reproductive Health services in secondary schools; Adolescent Sexual and Reproductive Health Burden

**List of Abbreviations:** AIDS: Acquired Immune Deficiency Syndrome; ASRH: Adolescent Sexual and Reproductive Health; AYA: African Youth Alliance; BCC: Behavioural Change Communication; FAWE: Forum for Women Educationalists; HIV: Human Immunodeficiency Virus; IAWG: Inter Agency Working Group; IEC: Information Education and Communication; OR: Odds ratio; POPSEC: Population Secretariat; RR: Relative Risk; STI: Sexually Transmitted Infections; S.S: Secondary School; UAIS: Uganda AIDS Indicator Survey; UDHS: Uganda; Demographic Health Survey; UNESCO: United Nations Education Scientific and Cultural Organisation; UNFPA: United Nations Fund for Population activities; WHO: World Health Organisation

## Introduction

Adolescence is a period of transition from childhood to adulthood during which decisions made end up shaping one's future and this calls for investing in Adolescent Sexual and Reproductive Health (ASRH) services in schools where adolescents spend most of their time. Research has shown that many adolescents engage in sexual activities with little or no knowledge about how to protect

themselves against the risks of Sexual and Reproductive Health problems including sexually transmitted infections and unplanned pregnancy [1].

Globally, 14% of maternal deaths are among 15 to 19 year-old females translating into sixteen million adolescent girls. Two million girls under age 15 give birth every year which in the poorest regions of the world translates to one in three girls bearing children by the age of 18 [2,3]. Yet adolescent pregnancy is associated with higher risks of adverse pregnancy outcomes including obstructed labour, eclampsia, puerperal sepsis, systemic infections, low birth weight, preterm delivery and severe neonatal conditions [4].

According to UNESCO 2013, adolescence is a key stage in human development and an entry point for education that will make a difference to key health and social outcomes. However, despite the fears that sex education may lead to an increase in sexual activity among young people, no study in a developing country to date has proved such evidence, but on the contrary it can reduce risky sexual behaviour [5]. Successful When introduced, Adolescent Sexual and Reproductive Health interventions often lead to delayed sexual debut, increased correct and consistent use of condoms and contraception, reduced number of sexual partners, reduced incidence of early pregnancy, abortion and child bearing among sexually active adolescents [6,7]. Investing in ASRH may delay first pregnancy, reduce maternal mortality, improve health outcomes, contribute to broad development goals and reduce poverty [3].

### Statement of the Problem

According to Uganda Demographic Health Survey, 9.5% of sexually active female adolescents and 2.1% of sexually active male adolescents reported having had a sexually transmitted infection in the past 12 months before the survey [8].

In Uganda 25% of girls aged 15-19 are already mothers or pregnant with their first child [9]. Yet teenage pregnancy is associated with higher mortality and morbidity for the mother and child. This results in a negative effect on the socio economic status of the mother and also leads to school drop-outs among other consequences<sup>9</sup>. The risk of pregnancy-related death is twice as high for girls aged 15-19 and five times higher for girls aged 10- 14 compared to women in their age of twenties [10].

Pregnant adolescent girls are more likely than adult women to pursue unsafe abortions as an estimated three million unsafe abortions occur every year among girls aged 15-19 [3]. However data on unsafe abortions in Uganda is still lacking but available data on female deaths among adolescents indicates that 17.6% of these deaths are due to maternal mortality of which unsafe abortion is one of the causes [11]. Reproductive health problems in adolescence can have long-lasting consequences into adulthood and into the subsequent generation for example, impaired foetal growth is more common in pregnancies occurring before the age of 18 years, and low birth weight is an important risk factor for adult-onset diabetes [2]. This study identified the barriers to access, provision and utilisation of ASRH services in rural schools in Uganda with a particular focus on secondary schools in Ssekanyonyi Sub-county in Mityana district.

### Aims

1. To describe the ASRH burden among adolescents.
2. To identify the utilisation practices of ASRH services in secondary schools.
3. To establish the drivers/barriers to the utilisation of ASRH services  
Among secondary school adolescents

### Summary of existing literature

Adolescents comprise 23.3 % of Uganda's population and adolescence is the time when puberty takes place and it's when many adolescents initiate their first romantic and sexual relationships hence social and health vulnerabilities including HIV infection, other sexually transmitted infections (STIs), unintended pregnancy, low education attainment or dropping out of education [11,12]. School-based Adolescent Sexual and Reproductive Health programmes should be started early since literature shows the value of starting early, possibly even pre-teen, on issues such as menstrual health, Reproductive Tract Infections and the physical dangers of early pregnancy, followed by behaviour change and life skills information at an age where it is more relevant [13].

### ASRH Burden

Sexual activity itself among adolescents is a major sexual and reproductive health burden which places them at a risk of HIV infection, other sexually transmitted infections, unintended pregnancy and unsafe abortions [14]. According to the UDHS 2011, 12.2% of adolescents aged 15-19 have had sex by 15years and 45.1% of them have already had sexual activity [9].

Sexually Transmitted Infections (STIs), such as gonorrhoea and syphilis affect adolescents; Among sexually active adolescents of 15-19 years 9.5% of females and 2.1% of males reported having had a STI as abnormal discharge and genital sore<sup>9</sup>. As of 2011, HIV prevalence among adolescents aged 10-14 was 1.9% for males, 2.3% for females and for those aged 15-24 it was 3.7% [15].

Pregnancy is a leading cause of death for young women in the developing world as they are four times more likely to die in childbirth or develop complications like obstetric fistula and to undergo unsafe abortion [1]. Most parents chase their daughters away from

home when expelled from school due to pregnancy; others give birth and re-join the same school or a different school altogether [10]. According to UNESCO 2013, in Uganda, adolescent fertility rate (15-19 years) per 1000 births is 134; teenage pregnancy rate (births per 1,000 adolescents) is 149; contraception rate (15- 19-year-olds) are 16.3% of males, 19.3% of females [17].

Unsafe abortions represent about 13% of all pregnancy-related deaths. In Africa, 25% of the unsafe abortions are among teenagers (ages 15 to 19), a higher proportion than in any other world region [11].

### **Sources of Information about ASRH**

According to Kamau 2012, Parents are an important source of ASRH information as adolescents who receive ASRH information from their parents are less likely to engage in risky sexual practices but teachers are the main adults other than family members with whom young people interact on a daily basis and they play a critical role of being a source of trusted accurate information and a person with whom young people can raise sensitive and complicated issues about sexuality [18].

Teenagers also get information about sexual and reproductive health from their peers, whose views are often inaccurate, based on rumours, and riddled by misconceptions, as well as from the mass media which very often present sensationalized and mixed messages resulting in anxieties and confusion among adolescents who fall prey to prevailing myths and misconceptions [19].

### **Utilisation Practices of ASRH Services in Schools**

Many times adolescents feel that there is no one with whom they can privately discuss questions, concerns or crises related to sexual and reproductive health like students with pregnancies, sexually transmitted diseases including HIV infection and other complex health problems often facing severe emotional and physical challenges for which they need specific health counselling [20].

According to Californian Journal of Health Promotion 2013, Schools, peers, mass media, health facilities and community based ASRH programs showed positive impact in adolescents in sub-Saharan Africa regarding knowledge of HIV transmission, perceived personal risk of contracting HIV/ AIDS, self-efficacy to negotiate condom use, discussion with others about HIV/AIDS, abstinence from sexual relations, reduction in high-risk sexual behaviour, testing for sexually transmitted infections (STI) and treatment seeking behaviour [21].

Teachers and school nurses in Uganda have been trained to deliver health curriculums, including education on puberty and menstruation; gender and sexuality, Family Planning, HIV prevention, and life skills such as identifying values and understanding consequences of behaviours (for young adolescents) and negotiating relationships and condom use for older adolescents [3].

Drama or music groups in schools disseminate accurate ASRH information, including information about services available. In Mozambique in a program known as Geracao Biz, peer educators implement the ASRH program in school as activists for ASRH and teachers also as counsellors for Peer educators and this has led to a decline in the number of early pregnancies in secondary schools and a reduction in the number of premature marriages among adolescents [22].

### **Drivers/barriers to Utilization of ASRH Services in School**

Discussions of reproductive health issues must acknowledge that cultural norms, religion, social structures, school environments, and economic factors will affect the way that schools and communities address these issues as rural schools may even have limited resources and access to information [14]. They also do not have the appropriate skills to effectively communicate with pupils on sexual and reproductive health matters particularly the women, fear to discuss sexual issues in public, let alone with their students and this is due to the fact that sex is culturally perceived as a taboo subject which should not be discussed in public [23]. Delivery of sexuality education in schools is also affected by teachers lacking appropriate training in teaching sexuality education as well as teaching aids, such as condoms and dummy penises for demonstration purposes and other supplies like sanitary pads [24].

Condom education for young people is often a controversial issue since in many societies, condom use is usually associated with promiscuity, unfaithfulness, interfering with pleasure, fertility and the purpose of sex, but evidence shows that eliminating information about condoms in favour of abstinence-only messages can lead to a higher incidence of unprotected sex at first intercourse and unfavourable attitudes towards condoms in the future [21]. Still, many sexually active young people adamantly refuse to use condoms, giving excuses, such as condoms reduce sexual enjoyment [25].

### **Critique of Existing Literature**

Most of the available literature on ASRH aspects especially sources of ASRH information, utilisation of ASRH services and barriers to utilisation of ASRH services is old dating from 2009 and before. Therefore this literature review is a mix of both current and old literature showing that unprotected sex can lead to sexually transmitted infections, HIV/AIDS and pregnancy which carry many risks for adolescents. However, it is scanty on the issues to do with utilisation of ASRH services in schools as there are limited data on ASRH services commonly utilised in schools. Most of the literature highlights the increasing proportions of teenage pregnancies looking at the impact and not the cause. Additionally, literature on barriers to access and utilisation of ASRH services, focuses at the ineffectiveness of the senior man and woman teachers like lack of skills, training and tools but it doesn't address the

circumstances or conditions through which they do their ASRH service provision. This study therefore tried to add to the existing body of knowledge on ASRH especially in secondary schools with a particular emphasis of schools in rural areas.

### **Significance of the Study**

The study contributes knowledge in the area of Sexual and Reproductive Health programs for adolescents regarding the provision of ASRH services in rural schools. These services are meant to help adolescents get correct and reliable ASRH information, manage and cope with puberty changes including menstruation, boy-girl relationships, skills necessary to resist negative peer pressure, inappropriate sexual advances and to combat teenage pregnancies and its associated negative consequences including school drop-out, unsafe abortions, STIs/HIV and above all safe sexual practices [7].

This study highlighted the ASRH burden in schools, the utilisation practices of ASRH services and role school administrators, teachers and in particular senior men and women teachers play in the lives of their students during the transition of adolescence, drivers/barriers to the utilisation of ASRH services and how to mitigate ASRH burden including teenage pregnancies, STI/HIV and unsafe abortions; and made recommendations which could help in formulation of policies to be used for improving ASRH programs in rural secondary schools.

It will also benefit the country as it will bring out new findings on ASRH services in schools as these adolescents are the future of this nation and also form a basis for further research.

### **Rationale for the Study**

Challenges to the utilisation of ASRH services exist in schools as evidenced by the SRH burden among adolescents and this called for this study to be done. Individual behaviour becomes a factor of growing importance to health during adolescence in particular, unprotected sex which can lead to sexually transmitted infections, HIV/AIDS and pregnancy which carries many risks for adolescents, including the risk of school dropout [25].

Adolescents are rarely provided with adequate knowledge about their own development, especially in regard to sexuality yet they need to know what is happening to their bodies, for instance, when they experience menstruation or wet dreams and because of their limited knowledge about sexuality, relationships and their implications adolescents become more vulnerable [25,26].

This study was also able to identify gaps in the provision and utilisation of ASRH services in schools so that they can be addressed since adolescents can be a tremendous force of positive change in the society, and serve as the engine which drives a country's development [1].

## **Materials and Methods**

### **Study Design**

This was a cross-sectional descriptive study with an analytical component using both qualitative and quantitative methods. The use of qualitative methods enabled the researcher to get a deeper understanding of the inferences from quantitative findings, and explaining why and how things happen as obtained from participants' perspectives.

### **Setting**

This study was conducted in November 2015 in Ssekanyonyi sub-county-Mityana district. It had five parishes which included; Ssekanyonyi, Magala, Busunju, Bulyankuyege and Kagerekamu. It also had seven secondary schools among which three were government or government aided, and the rest were completely private. These included: Ssekanyonyi S.S (735 students) and Bright light S.S (236 students) in Ssekanyonyi parish; St. Padre Pio S.S (926 students), Real College Busunju (352 students), Kisugu Islamic S.S (408 students) and St. Francis S.S in Busunju parish (966 students) and St. Francis Higher S.S Kanyogoga (354 students) in Kagerekamu parish.

### **Study Population**

For quantitative data, the study population consisted of adolescents aged 14-19 years from four randomly selected secondary schools in the sub-county.

For qualitative data, the study population included school counsellors (senior women and men) and school administrators (Head or Deputy Head teachers and Directors of studies) as Key informants, while Focus group discussions were held for the adolescent students.

### **Selection Criteria**

#### **Inclusion criteria**

The study enrolled adolescents who were found in those schools at the time of the study aged 14-19 years.

Senior men / women teachers and school administrators of the respective schools were also enrolled in the study as key informants.

## Exclusion Criteria

Those who were not found in school at the time of the study even if they were students in those schools, those found to be sitting for their UCE exams at the time of the study and those not willing to participate in the study were excluded from the study.

## Sampling

### Sample Size Determination

The sample size was calculated using the formula adapted by Getu D and Tegbar Y, (2006) as indicated below [25]. Sample size was calculated to yield 80% power of the study at a 95% level of significance ( $\alpha$  at 0.05 and  $\beta$  at 0.20), the following formula was used:

$$n = \frac{Z^2 P(1 - P)}{w^2}$$

According to the UDHS 2011, 43.9% of adolescents aged 15-19yrs were sexually active. Therefore an estimate of 43.9% as prevalence (P or proportion) of outcome (sexual activity) was used in calculating the sample size. With a Z value of 95% confidence interval and a 5% of desired total width (W) of the confidence interval or error, the total sample size became 378 respondents.

$$n = \frac{1.96^2 \times 0.439(1 - 0.439)}{0.05^2}$$

### Sampling Frame and Field Procedures

Students aged 14-19 years from four secondary schools, (two government /government aided and two completely private schools) in Ssekanyonyi sub-county were included in the study.

For quantitative data, the researcher used Multi-stage stratified sampling techniques as follows:

1. The primary sampling unit were the five (5) parishes from Ssekanyonyi Subcountry from which three (3) were randomly selected namely, i) Ssekanyonyi ii) Busunju and iii) Kagerekamu.
2. The secondary sampling unit was the school foundation in Ssekanyonyi sub-country. Secondary schools were stratified into two strata i) government or government aided and ii) Private. From each of these strata, two secondary schools were randomly selected to make a total of four schools selected.
3. The tertiary sampling unit was the class (form) attended by the student (S1, S2, S3, S5 and S6) in each of the selected schools. S4 students didn't participate in the study because they had already started their vacation at the time of the study. Students from classes were selected using systematic random sampling using the existing class registers in the schools as the sampling frame where every 5th student on the class register was selected to participate in the study for Ssekanyonyi S.S and St. Francis S.S Busunju and every 3rd student on the class register for those in Real College Busunju and St. Francis Higher S.S Kanyogoga.
4. In selecting respondents from particular schools, Sampling Proportionate to Size was used. St. Francis Higher S.S Kanyogoga and Real College Busunju had less than 300 students present at school at the time of the study leading to 54 students being selected from St. Francis Higher S.S Kanyogoga and 60 students selected from Real College Busunju. Ssekanyonyi S.S and St. Francis S.S Busunju had more than 600 students in school at the time of the study leading to 126 students being selected from Ssekanyonyi S.S and 138 students from St. Francis S.S Busunju which made the required sample size of 378 students.

For qualitative data, the researcher used purposive sampling to identify six (6) key informants who were interviewed, 2 from Ssekanyonyi S.S, 2 from St. Francis S.S Busunju, 1 from St. Francis Higher S.S Kanyogoga and 1 from Real College Busunju. More priority was given to the senior women or men teachers. Four (4) Focus group discussions of 10 students each 5 males and 5 females were also conducted in each school with the moderation of the researcher.

## Measurements

### Data Collection

Data was collected in November 2015. The researcher collected primary data from adolescents aged 14-19 years attending Sekanyonyi S.S, St. Francis S.S Busunju, Real College Busunju and St. Francis S.S Kanyogoga in Ssekanyonyi sub-county. Quantitative and qualitative research methods were used.

Quantitative data was collected using an interview schedule while qualitative data was collected using key informant interviews and focus group discussions while. Triangulation methods helped to validate data collected using quantitative methods

The interview schedule run for approximately 20minutes; and focus group discussions and key informant interview also ran for approximately 30minutes (Table 1).



School	Key informants	Focus Group Discussions
Ssekanyonyi S.S	2	1
St. Francis S.S	2	1
St. Francis Higher S.S Kanyogoga	1	1
Real College Busunju	1	1
<b>Total</b>	<b>6</b>	<b>4</b>

**Table 1:** Number of Key informants and Focus group discussions

## Data Collection Instruments

**Interview schedule for study Participants:** Data was collected using an interview schedule. The interview schedule was administered to the Adolescents by the research team after clearly explaining to them the purpose of the study and obtaining a verbal consent. The Interview schedule was used to collect socio-demographic characteristics of the study participants, sources of ASRH information, prevalence of ASRH problems, scope of ASRH services, utilisation of ASRH services and barriers/facilitators to access and utilisation of ASRH services in their schools. Simple and unthreatening questions which were brief, specific and respectful to the cultural context were used.

**Focus group discussions:** The researcher engaged study participants in groups of 10 students to further discuss the topic through a carefully planned focus group discussion topic guide in order to generate additional information for the study. During FGDs, participants were able to share deeper knowledge and information about their experiences and. The study participants were able to debate on issues, and reach consensus. The focus group discussions were facilitated by the researcher himself and the participants were given an opportunity to express their opinions about ASRH services in their schools. The researcher also used focus group discussions for triangulation to complement, validate responses from quantitative data, and gain deeper insight into the subject under study.

**Key informant interviews:** The researcher collected information by conducting in-depth interviews using a key informant interview guide for key ASRH service providers in selected schools including: senior woman/ senior man and other relevant school administrators. The researcher was able to get detailed insight into ASRH problems, knowledge sources, practices and services from the perspectives of providers and school administrators.

## Data Management

### Quality Control

To ensure quality of data, the researcher pre-tested the data collection tools.

The researcher also trained a team of 3 research assistants for a day prior to commencement of the study, to enhance their skills in collection, recording and management of data.

The data tools were pretested on a sample of 20 students 10 males and 10 females from Bright light S.S Ssekanyonyi who were not enrolled in the study. Following the training and pre-testing of the tool, the interview schedules were revised and reproduced in preparation for collection of data. Self-checking questions were asked using the Interview schedules, and questions with options from which to choose from were included in the data collection tools to ensure that the relevant information was collected. During data collection, the researcher supervised the research assistants throughout the entire period of data collection to ensure accuracy and completeness of information collection. Data collection tools were reviewed during the field visits where errors and discrepancies were addressed while still in the field. The researcher was responsible for editing the tools after the interview or at the end of the day. The purpose of editing was to detect and eliminate errors in the completed interview schedules before coding

### Coding and Data Editing

Coding was undertaken after editing in an attempt to reduce data from detailed to summary and understandable data. In coding the responses to open-ended questions, categories were made according to similarity of answers as judged by the researcher. The number of responses to each category was then recorded. For questions having multiple responses, the researcher constructed a coding frame for each question and computed the number of responses to each alternative category.

## Data Analysis

### Qualitative Data

The first phase of analysis included making decisions on the content and information gathered during Key informant interviews and Focus group discussions. The process of analysing qualitative data commenced with typing of information documented during Key informant interviews and Focus group discussions.

The notes were read thoroughly and coded manually to classify them into meaningful categories so as to bring out their essential patterns and main themes of the study.

The qualitative data analysis process focused on interpretation and content analysis of full text responses to discover meaningful patterns.

## Quantitative Data

Data was captured and entered into Epidata 3 and analysed using STATA 12. Analysis followed standard statistical guidelines, starting with descriptive statistics followed by inferential statistics. Descriptive statistics examined the distribution of each study variable. Frequencies and proportions were used to examine the distribution of categorical variables, whereas for continuous variables, means and their standard deviations were used.

Contingence tables and Chi tests were used to test the significant associations between categorical variables whereas for continuous variables, student t-test was used to test for significant differences [2]. Relationships between exposure and outcome variables were estimated after computing for the adjusted effect. The Mantel-Haenszel method was used to obtain the adjusted effect.

## Ethical Considerations

Prior to commencement of the study, the researcher obtained approval from the Research Ethics committee and an introductory letter from the faculty of Health Sciences Uganda Christian University which was presented to the respective head teachers of the selected schools to seek for permission to carry out the study in their schools and also for them to ascent on behalf of their students which they did. The researcher also ensured that the respondents' privacy and anonymity were observed by not including the study participants' names on the interview schedules. Furthermore, the researcher obtained a verbal consent from the study participants after clearly explaining to them the purpose of the study.

Study participants were informed that participation in this study was voluntary and should not therefore expect other benefits for participating in the study.

They were also informed that they would benefit from the study's contribution to the ASRH overall service delivery, programming and planning.

The respondents were informed that they will have access to the published report, which will be accessible to the general public through journals and Uganda Christian University Library and their respective schools.

Study respondents were assured of confidentiality and anonymity was observed by not referencing their names to the responses

## Results

### Overview

In this chapter, quantitative and qualitative study findings of the determinants of the utilisation of ASRH services among secondary school adolescents are presented. This chapter is presented in accordance with the four major themes that emerged during the analysis of both the quantitative and qualitative data in response to the research questions, namely:

1. Adolescent Sexual and Reproductive Health (ASRH) burden in secondary schools in Ssekanyonyi sub-county Mityana district,
2. Utilisation practices of ASRH services in these schools, and
3. Drivers/ barriers to utilisation of ASRH services among secondary school adolescents.

### Distribution of Study Respondents by School

A total of 378 respondents were enrolled in the study. Majority of the respondents 37% (138/378) were from St. Francis SS Busunju, 33% (126/378) from Ssekanyonyi S.S, 16% (60/378) from Real College Busunju, and 14% (54/378) from St. Francis Higher SS Kanyogoga.

### Socio-demographic Characteristics of the Respondents

The respondents' socio-demographic background information is summarized in the Table2 below. The table also presents the relationship to the next of kin that the respondents lived with and the mortal status of their parents.

Background characteristics	Frequency			Percentage
Age (years)	N= 378			
	Male	Female	Total	
14	6	37	43	11.38
15	28	47	75	19.84
16	36	68	104	27.51
17	33	38	71	18.78

Background characteristics	Frequency			Percentage
18	32	17	49	12.96
19	27	9	36	9.52
<b>Median Age</b>	<b>16years</b>			<b>(IQR=2)</b>
<b>Sex</b>	N=378			
<b>Male</b>	162			42.86
<b>Female</b>	216			57.14
<b>Religious Affiliation</b>	N=377			
	<b>Male</b>	<b>Female</b>	<b>Total</b>	
<b>Catholic</b>	64	97	161	42.71
<b>Protestant</b>	42	60	102	27.06
<b>Pentecostal</b>	24	38	62	16.45
<b>SDA</b>	15	8	23	6.10
<b>Muslim</b>	12	6	18	4.77
<b>Other</b>	4	7	11	2.92
<b>Parent alive</b>	N=377			
	<b>Male</b>	<b>Female</b>	<b>Total</b>	
<b>Both parents</b>	117	151	268	71.09
<b>Mother</b>	27	49	76	20.16
<b>Father</b>	11	8	19	5.04
<b>Neither of the two</b>	6	8	14	3.71
<b>Living with</b>	N= 376			
	<b>Male</b>	<b>Female</b>	<b>Total</b>	
<b>Mother</b>	46	74	120	31.91
<b>Both parents</b>	77	109	186	49.47
<b>Father</b>	18	10	28	7.45
<b>Grandmother</b>	7	10	17	4.52
<b>Aunt/uncle</b>	4	12	16	4.26
<b>Brother/Sister</b>	3	1	4	1.06
<b>Friend</b>	3	0	3	0.80
<b>Partners</b>	2	0	2	0.53

Table 2: Socio-demographic characteristics of the respondents

### Age distribution of the Respondents

Most of the adolescents 27.5% (104/378) were aged 16 years, followed by those aged 15 years 19.8% (75/378). Those aged 17 years were 18.8% (71/378), 18years 13% (49/378), 14years 11.4% (43/378) and the least were 19 years making 9.5% (36/378). The median age of the respondents was 16 years (IQR=2).

### Sex Distribution of the Respondent

The study showed that majority of the respondents were females 57.1% (216/378) and males were 42.9% (162/378).

### Religious Affiliation

The study showed that 42.7% (161/377) of the respondents were Catholics, 27% (102/377) Protestants, 16.5% (62/377) Pentecostal, 6.1% (23/377) SDA, 4.8% (18/377) Muslim and 2.9% (11/377) were of other religious faiths.

### Who the Respondents Resided with

The study showed that 49.5% (186/376) lived with both parents, 31.9% (120/376) lived with their mothers, 7.5% (28/376) lived with their fathers, 4.5% (17/376) with their grandparents, 4.3% (16/376) with their Aunties/Uncles, 1% (4/376) with their brother/sister, 0.8% (3/376) with their friends, and 0.5% (2/376) lived with their partners since seventy one percent (268/377) of these adolescents had both of their parents alive, 20.2% (76/377) only had their mothers alive, 5% (19/377) with only fathers alive and 3.7% (14/377) neither had a mother nor father alive.



## ASRH Burden

### Knowledge about ASRH Burden among Adolescents

Majority of the adolescents reported that early sexual activity 35.1% (110/313) was the main ASRH burden followed by HIV 26.5% (83/313), pregnancy 18.9% (59/313), abortion 10.5% (33/313), Sexually Transmitted Infections 7.7% (24/313) and 1.3% (4/313) reported other problems (Table 3).

ASRH burden	Sex		Percentage
	Male	Female	
Early sexual activity	52	58	35.1%
Pregnancy	14	45	18.8%
Abortion	16	17	10.5%
Sexually Transmitted Infections	8	16	7.7%
HIV	46	37	26.5%
Others	1	3	1.3%
Total	137	176	100.0%

Table 3: Adolescents Knowledge about ASRH burden (n= 313)

## ASRH burden and Sexual Behavioral Patterns

### Sexual Activity and Relationships

The study indicated that 42.1% (159/378) of the adolescents ever had sex before as compared to 57.9% (219/378) who never had sex. However 32.8% (124/378) of them were still sexually active. Analysis showed that 21.16% (80/162) of males and 20.9% (79/216) of females had ever had sex (Chi2 =6.232; p=0.013). The median number of sexual partners among those who had sexual relationship was (2), IQR=4.

Male adolescents were 69% more likely to engage into early sexual activity males than their females counterparts and this was statistically significant (OR 1.69[95% CI 1.1-2.6]; Chi2 value =6.23; p- value =0.013). Also, males were 72% more likely to be sexually active than females (RR 1.72[95% CI 1.29-2.31]; Chi2 value =13.9; p- value =0.0002). Adolescents older than 16 years were 70% more likely to be sexually active than those below 16years (RR 1.7[95% CI 1.3-2.3]; Chi2 value =13.9; p- value =0.0002). Furthermore, males were 1.45 times more likely to have had more than one sexual partner in their life than females (RR 1.45[95% CI 1.16-1.82] Chi2 value =11.398; p- value = 0.0007). As illustrated in the Table 4 below.

	Ever had sex	Never had sex	Total		Chi <sup>2</sup>	p-value
Male	80	82	162	OR 1.69	6.23	0.013
Female	79	137	216			
Total	159	219	378			
	Sexually active	Not sexually active	Total	RR 1.72	13.9	0.0002
Male	70	92	162			
Female	54	162	216			
Total	124	254	378			
	More than one lifetime sexual partner	Only one lifetime sexual partner	Total	RR 1.45	11.398	0.0007
Male	64	16	80			
Female	44	36	80			
Total	108	52	160			
	Ever had sex	Never had sex	Total	Chi <sup>2</sup>	p-value	
	Sexually active	Not sexually active	Total	RR 1.7	14.02	0.001
>16 years of age	68	88	156			
</= 16 years of age	56	166	222			
Total	124	254	378			

Table 4: Cross tabulations on ASRH burden

The responses from focus group discussions gave an insight into why the adolescents engaged in early sex and the myriad of motivating factors as explained below:

*“Adolescents engage in sexual activity because they want to discover what really sex is about or how it feels; for females to get money like a male cannot spend on you or give money without expecting a pay back in form of sex” . “Also, due to long distances from school, a boda boda rider cannot give you a lift for more than twice without starting to ask for love and demand for sex and when you are weak you give in” ( Focus group A)*

*“Because of poverty at home, when you want money or you want to buy something, and there is a man willing to give you or when you are under pressure, you end up getting the money from them and in the long run, they demand for sex from you”.* (Focus group C)

*“At times you feel like nature is calling for you to have sex and you end up having sex; also your friends may influence you by talking about nice things about sex and then you end up saying why not try it. Then a boy or man may give you gifts, money and nice things and wants sex as proof that you love him”* (St. Focus group B).

Responses from Key informants below further validated these findings as below:

*“Poor career guidance is one of the factors leading to many of adolescents in many schools to engage in early sexual activity as many of them don’t know the purpose why they are in school, they just take it as a routine that they have to wake up in the morning and go to school, they don’t see the future in education and when they see that they have grown, they start to engage in sexual activities, become pregnant and drop out of school and start life as parents or single parents. This can be a weakness of both us teachers and also the parents. Some parents in our community due to poverty, encourage their daughters to marry early. The media including radio, television and the internet accessed by the students many times prompt them to practice what they have seen, read or heard as a result of curiosity or adventure”(Seniorman school A).*

*“Some parents neglect their children by not providing the necessities, not counselling their children on ASRH issues and others go to the extent of encouraging their daughters to get money from men and take it home to help get basic needs at home”* (Seniorwoman School B).

*“The surrounding community has bars, lodges, video centres which pose a risk for these adolescents to engage in sexual activity”* (Director of studies School D).

*“Also peer pressure and the long distances walked to school where they meet Boda boda riders who give them lifts and later turn on them demanding for sex pose a great risk to these adolescents in the absence of or inadequate ASRH support from the teachers and parents”(Seniorman School A).*

### First Sexual Debut

The median age at first sexual debut was 14 years (IQR= 4), with some having it as early as 5 years 1.3% (2/157) and others as late as 19 years 1.9% (3/157). The median age at first sexual debut for males was same as for females. For majority of the adolescents, first sexual debut was prompted by peer pressure 34.9% (53/152), followed by personal desire 1.7% (33/152), wanting to discover or being curious 17.8% (27/152), feeling that they are mature enough 13.8% (21/152), financial inducement 5.3% (8/152), as a result of being raped/defiled or coerced 4% (6/152) and other reasons not mentioned 2.6% (4/152). Regarding condom use at first sexual debut, 54.8 (86/157) of the respondents didn’t use condoms at their first sexual debut while 45.2% (71/157) used condoms. It was also revealed that condom use at first sexual debut was higher among females 26.8% (42/157) than among males 18.5%. (29/157) (Chi2 =5.302; p-value =0.021). illustrates this.

Age at first sexual debut had an association with condom use at first sexual debut, where males were 45% more likely to have used a condom at first sexual debut than females (RR 1.5[95% CI 1.06-2.14]; Chi2 value=5.302; p-value = 0.021) and adolescents 14years and older at first sexual debut were 4.6 times more likely to have used a condom at first sexual debut than those younger than 14 years at first sexual debut (OR 4.59[95% CI 2.27-9.29] Chi2 value =19.08; p- value =0.001). As illustrated in the Table 5 below.

	Used condoms at first sex	Didn't use condoms at first sex	Total		Chi <sup>2</sup>	p-value
Male	42	35	77	RR 1.5	5.302	0.021
Female	29	51	80			
Total	71	86	157			
	Used condoms at first sex	Didn't use condoms at first sex	Total		Chi <sup>2</sup>	p-value
>14 years	54	36	90	OR 4.59	19.08	0.001
</=14 years	16	49	65			
Total	70	85	155			

Table 5: Cross tabulations for condom use at first sex

## Abstinence

For those abstaining from sexual activity only 34.7% (76/219) of them gave reasons for abstinence with majority of them 19.7% (15/76) cited counselling from elders (parents, senior woman/man and other elders) as the motivating reason why they were abstaining. This was followed by the reason of planning for the future and completing studies 17.1% (13/76), fear of Sexually Transmitted Infections/HIV 11.8% (9/76), fear of pregnancy and other infections 10.5% (8/76), being still young for sexual relations 10.5% (8/76), joining the abstinence club 10.5% (8/76), avoiding bad peer groups 7.9% (6/76), following religious teachings 4% (3/76), keeping busy 2.6% (2/76). Other reasons included; preparing to be a priest 1.3% (1/76), saying no to gifts for sex 1.3% (1/76), lack of knowledge about sexual relations 1.3% (1/76) and others t 1.3% (1/76) (Table 6).

Motivating factors for abstinence	Frequency			Percent-age
	Male	Female	Total	
Fear pregnancy and infections	1	7	8	10.53
Fear STIs/HIV	6	3	9	11.84
Being a Christian	3	0	3	3.95
I want to be a priest	1	0	1	1.32
Future planning	4	9	13	17.11
Avoiding bad peer groups	2	4	6	7.89
I am still young	1	7	8	10.53
Counselling from elders	4	11	15	19.74
Joining abstinence club	0	8	8	10.53
Saying no to gifts for sex	0	1	1	1.32
Lack of knowledge about it	1	0	1	1.32
Keeping myself busy	1	1	2	2.63
Girls don't know what they want	1	0	1	1.32
Total	25	51	76	100.00

Table 6: Motivating factors for abstinence (n=76)

## Condom use

Among the sexually active adolescents (n=123), 80.5% (99/123) used condoms at last sexual contact while 19.5% (24/123) did not. Among those who used condoms, 57.6% (57/99) were males and 42.4% (42/99) were females (Chi<sup>2</sup> =0.092; p-value=0.76). Majority, 72.4% (60/83) of these adolescents obtained condoms from the Health centres, followed by from shops 16.9% (14/83), from friends 3.6% (3/83), from their elder brothers 3.6% (3/83), from drug shops 2.4% (2/83) and from workshops 1.2% (1/83). Among the sexually active adolescents who responded, 50.5% (50/99) of them always used condoms, 35.4% (35.4/99) sometimes, 10.1% (10/99) most of the time and 4.0% (4/99) used them rarely in the past two years prior to the study.

Among those who did not use condoms, 43.3% (13/30) thought that their partner was safe, 33.3% (10/30) did not have money to buy condoms, 16.7% (5/30) thought condoms are not necessary, 3.3% (1/30) lacked awareness on condom use and 3.3% (1/30) wanted to enjoy sex without a condom.

## Pregnancy and use of Contraception

The study showed that 11.3% (18/159) of the respondents had either ever been pregnant or made a sexual partner pregnant. The median number of pregnancies was three (3) in the past year prior to this study. Furthermore, those aged above 16years were 2.8 times more likely to have ever been pregnant or made sexual partner pregnant than those 16 years and below (RR 2.8 [95% CI 1.07-7.6]; Chi<sup>2</sup> value =4.796; p-value = 0.29). As illustrated in the Table 7 below.

	Ever been pregnant or made sexual partner pregnant	Never been pregnant or made sexual partner pregnant	Total		Chi <sup>2</sup>	p-value
<= 16years	6	211	217	RR 2.8	4.796	0.029
>16 years	12	144	156			
Total	18	355	373			

Table 7: Cross tabulation on pregnancy

At first sexual debut, 49% (77/157) of adolescents didn't do anything to prevent pregnancy, 1.9% (3/157) say that they used emergency contraceptives/morning after pills and another 1.9% (3/157) say that they used the withdraw method.

Key informants deplored the burden of adolescent pregnancy in their schools and community:

*“Many of the girls who get pregnant in our schools, conceive during holidays signifying that parents have neglected their role of supervising and talking to the adolescents and this is evidenced by the pregnancy tests that we do at the beginning of term” (All key informants).*

*“Those who were found to be pregnant like the 5 cases in the past two years were suspended from school and allowed to come back after delivery. However, some of them dodge pregnancy tests by not coming to school during the times we test them” (Seniorwoman teacher and seniorman teacher/ deputy Headmaster School B).*

*“Those who get pregnant in our school, many times disappear mysteriously, suspend or expel themselves. However if found by the school authorities like the 20 cases in the past two years, they were all expelled immediately and advised to go to another school after delivery because if allowed back in school they would give a bad example to the rest of students which would significantly increase the teenage pregnancy rates in our school” (Senior man teacher and Deputy Headmaster School A).*

*“In our school we found 5 cases of pregnancies in the past 2years, for those who became pregnant, one was allowed to complete her UCE exams, others were suspended and some came back after delivery”(Director of studies School C).*

Regarding the outcome of pregnancies, majority 44.4% (8/18) pregnancies ended into abortions, 27.8% (5/18) were deliveries and 27.8% (5/18) of the respondents didn't give an answer as regards the outcome of their pregnancies. The figure below shows the pregnancy outcomes.

### Abortion

The number of girls who have ever had an abortion was 6. Among those who responded to this question , majority of the respondents said that one could have an abortion by going to a health facility 28.8% (44/153), followed by taking drugs/tablets 20.9% (32/153), using herbs like “ennanda” and “luwoko” 19% (29/153), taking overdose of drugs 15.0% (23/153), drinking a lot of tealeaves 11.1% (17/153), using contraceptives 3.3% (5/153), and others 2% (3/153).

Key informants gave an insight into the motivation for adolescent girls to have abortions:

*“Many girls abort so that they can continue with school and even others abort and continue with school without being recognised that they have ever been pregnant and the rest abort because they either fear their parents or their partners becoming uncooperative”(Senior man School A).*

For those who claimed to have either aborted or had sexual partner abort, 66.7% (4/6) of them reported to have aborted through seeking professional help by going to a health centre or hospital, while 33.3% (2/6) used non- professional help by using crude methods.

### HIV and Sexually Transmitted Infections

The prevalence of Sexually Transmitted Infections was 22% (83/378) among the respondents in the past two years prior to the study. STIs were more common among the females 56.6% (47/83) than among the males 43.4% (36/83), (p- value =0.049). The most commonly reported Sexually Transmitted Infection were urethral/vaginal discharge 60.2% (50/83), followed by growths/swellings on the genitals 24.1% (20/83) and lastly genital ulcers/sores 15.7% (13/83). 60.2% (227/377) of the respondents had ever tested for HIV compared to the 39.8% (150/377) who have never in the past two years prior to the study. Among those who tested for HIV, 88.6% (202/228) reported that they were negative, 7% (16/228) reported that they were positive and 4.4% (10/228) didn't want to disclose their HIV sero-status (Table 8).

Symptom	Sex	Frequency	Percentage
Urethral/Vaginal Discharge(n=50)	Male	20	24.1
	Female	30	36.1
Genital sores/ulcers (n=13)	Male	6	7.2
	Female	7	8.4
Genital growths/swellings (n=20)	Male	10	12
	Female	10	12
Total (n=83)	Female	47	56.6
	Male	36	43.4

**Table 8:** Proportion of Sexually Transmitted Infections among sexually active adolescents in the past 2 years prior to the study (n=83)

The existence of HIV among secondary school adolescents enrolled in the study was highlighted by the Key informant:

*“We have cases of adolescents living with HIV in our school, some of whom were prenatally infected” (Senior man School A).*

### Utilisation practices of ASRH services by adolescents in secondary schools

**Sources of information on ASRH:** The majority of the respondents consulted their mothers for advice when having an ASRH problem 42.7% (161/377), followed by going to their aunts/ uncles 26.3% (99/377), to their fathers 10.9% (41/377), to their Brothers/Sisters 8.8% (33/377) , to their friends 6.9% (26/377), to the senior woman teacher 4.5% (17/377), to the senior man teacher 1.6% (6/377) , to the nurse 1.1% (4/377) and the remaining didn't go to anyone 5.6% (21/377), as illustrated in table 2. More than a half of the females 58.6% (140/239) consulted their mothers as compared to the males 33.7% (57/169) consulting their Aunts/uncles (Chi2 = 140.021; p-value = 0.001) (Table 9).

Person contacted when having an ASRH problem	Frequency			Percent-age
	Male	Female	Total	
Mother	21	140	161	42.7
Father	40	1	41	10.9
Aunt/uncle	57	42	99	26.3
Brother/Sister	19	14	33	8.8
Nurse	0	4	4	1.1
Senior man teacher	5	1	6	1.6
Senior woman teacher	1	16	17	4.5
Friend	16	10	26	6.9
No one	10	11	21	5.6
Total	169	239	408	108.2

**Table 9:** Person consulted for advice when having an ASRH problem (n=377)

Majority of the respondents obtained ASRH information from their relatives 23.3% (87/374) and the media 23.3% (87/374), followed by those from their parents 20.3% (76/374), from the senior woman/man teacher 19.5% (73/374), from their peers 15.5% (58/374), from the nurses 7.2% (27/374) and the remaining don't have any source for ASRH information 5.1% (19/374). However majority of the males 32.6% (61/187) obtain ASRH information from the media as compared to the majority of females 22.5% (52/231) who get it from their parents and another 22.4% (52/232) from the senior woman (Chi2 = 106.241; p-value = 0.001). The table below illustrates these (Table 10).

Source	Frequency			Percent-age
	Male	Female	Total	
Parents	24	52	76	20.3
Relatives	40	47	87	23.3
Nurse	11	16	27	7.2
Peers	30	28	58	15.5
Seniorwoman/ man teacher	21	52	73	19.5
Media	61	26	87	23.3
No source	8	11	19	5.1
Total	195	232	427	114.2

**Table 10:** Sources of ASRH information for adolescents (n =374)

**Content of information received:** Abstinence is the most common ASRH information received by adolescents 46.9% (168/358), followed by STI/HIV prevention information by 21.2% (76/358), information on condom use by 15.6% (56/358), information on menstruation/ puberty by 12% (43/358), information on being faithful by 8.9% (32/358), information on relating with the opposite sex by 3.6% (13/358), information on STI treatment by 1.7% (6/358), information on contraceptives/ family planning by 0.8% (3/358), information on abortion by 0.3% (1/358) and other ASRH information by 0.6% (2/358).

**Peer discussions about ASRH:** Among peers, abstinence is the most discussed ASRH topic 51.5% (190/369), followed by STI/HIV prevention 14.9% (55/369), hygiene 13.8% (51/369), condom use 13% (48/369), Sexual activity 8.4% (31/369), menstruation 3.3% (12/369) , puberty 3.3% (12/369), Family planning 2.2% (8/369),and abortion 0.8% (3/369) (Table 11).



Content of ASRH information	Frequency			Percent-age
	Male	Female	Total	
Menstruation/Puberty	12	31	43	12.0
STI/HIV prevention	37	39	76	21.2
STI treatment	1	5	6	1.7
Abstinence	70	98	168	46.9
Being faithful	13	19	32	8.9
Condom use	32	24	56	15.6
Contraceptive/Family planning	1	2	3	0.8
Abortion	1	0	1	0.3
Relating with opposite sex	11	2	13	3.6
Others	2	0	2	0.6
Total	155	203	358	111.7

Table 11: Content of ASRH information got from their sources (n = 358)

**Utilised ASRH services in schools:** The most accessed and utilized ASRH service at school is abstinence drive 41.2% (114/277), followed by counselling services 36.5% (101/277), STI/HIV prevention drives 17.7% (49/277), menstruation and puberty education and services 8.7% (24/277), pregnancy testing services 3.2% (9/277) and relationship counselling services 1.8%(5/277) (Table 12). This was emphasized through Key informant interviews:

Content	Frequency			Percentage
	Male	Female	Total	
Abstinence	67	123	190	51.5
About sexuality	24	7	31	8.4
Family planning	5	3	8	2.2
Condom use	29	19	48	13.0
Abortion	2	1	3	0.8
STI/HIV prevention	30	25	55	14.9
Puberty	6	6	12	3.3
Menstruation	0	12	12	3.3
Hygiene	15	36	51	13.8
Total	178	232	410	111.1

Table 12: Content of ASRH discussions among peers (n=369)

“The most accessed and utilized ASRH service in school is counselling” (Key informants of all the schools). The overall access and utilisation rate at school was 73.3% (277/378) and at the school linked clinics was 63% (238/378) (Table 13).

ASRH services accessed	Frequency			Percent-age
	Male	Female	Total	
Menstruation/puberty services	6	18	24	8.7
STI/HIV prevention services	27	22	49	17.7
Abstinence services/ drives	50	64	114	41.2
Relationship counselling services	1	4	5	1.8
Pregnancy testing services	0	9	9	3.2
Counselling services	35	66	101	36.5
Total	119	183	302	109.0

Table 13: ASRH services adolescents utilise from school (n=277)

At the school linked clinics, counselling is the most accessed and utilized ASRH service 36.1% (86/238), followed by free sanitary pads 23.5% (56/238), free condoms 11.8% (28/238), relationship counselling 8.4% (20/238), HIV screening and testing 7.1% (17/238), pregnancy testing services 7.1% (17/238), treatment of STIs 6.7% (16/238), tetanus vaccination 5.9% (14/238) and STI screening and testing 2.1% (5/238) (Table 14).

ASRH services	Frequency			Percent- age
	Male	Female	Total	
Free sanitary pads		56	56	23.5
STI screening and testing	1	4	5	2.1
HIV screening and testing	12	5	17	7.1
Free condoms	21	7	28	11.8
Relationship counselling	10	10	20	8.4
Pregnancy testing	0	17	17	7.1
Treatment of STIs	4	12	16	6.7
Counselling services	48	38	86	36.1
Tetanus vaccination	0	14	14	5.9
Total	96	163	259	108.8

**Table 14:** ASRH services adolescents utilise from school linked clinics (n=238)

Key informant interview gave a deeper insight of the utilised services:

*“We provide free sanitary pads to our female students in need, do pregnancy tests at the beginning of the term, counsel them on puberty, abstinence, HIV/STIs prevention and encourage them to finish their studies” (Senior man, School D)*

*“We counsel our student on abstinence, puberty, HIV/STI prevention, do pregnancy tests at the beginning of term and also talk to them about control of emotions, Safe Male Circumcision (SMC) was also done on our students last year” (Senior woman, School B).*

*“We counsel our students on abstinence, puberty and do pregnancy tests at the beginning of each term” (Director of Studies School C).*

*“We do pregnancy tests once at the beginning of each term, counselling on HIV/AIDS/ STI prevention by counsellors from Ssekanyonyi Health Centre IV, abstinence drives and one on one counselling sessions at school” (Senior man School A).*

However, it was noted that some female adolescent students often miss classes when they are in their menstrual periods due to lack of sanitary pads as revealed by one of the key informants:

*“When a girl goes into her menstrual periods while at school, she is given permission to go home since we only have sanitary pads in our office for those students under the Kiyinda program” (Deputy Headmaster/Senior man, School B).*

**Drivers/ barriers to the utilisation of ASRH services among secondary school adolescents:** Some adolescents were not aware that ASRH services are available in their schools as reflected by the 18% (68/378) who didn't know that there are ASRH services in their school.

*“Most of the students are shy and many times fear to approach and talk to their teachers when they have ASRH issues” (all key informants).*

*“Some adolescents are not aware that such services are in their school” (Focus group School A).*

Majority of the respondents 93.3% (42/45) said that they are satisfied with the way the ASRH services are offered to them by nurses at the school linked clinic.

Senior men and women lacked knowledge, correct attitude and skills in ASRH service provision since none of the senior man or woman in these schools was trained in ASRH service provision, but just found themselves doing this work. The number of providers was also inadequate compared to the student numbers they served.

*“One time we were in a counselling session then a student wrote a note and he wanted the counsellor to tell him how to use a condom and since I was the one collecting these cheats, I hid that note and I didn't forward it to the counsellor because it was not morally correct for the counsellor to tell these adolescents how to use a condom” (Director of Studies, School C).*

*“The number of teachers in the school is gender insensitive where we have very few female teachers who are not enough to handle the ASRH issues of the adolescent girls” (Senior man, School D).*

All the service providers reported lack of ASRH services tools like sanitary pads, information regarding ASRH and that they even don't receive the straight talk newspapers.

According to the key informants, schools lacked enough funds to initiate and implement comprehensive ASRH programs including dissemination of ASRH information and messages.

*“The parents are poor, we suggested to them during a Parents Teachers Association (PTA) meeting to have each female student pay 10,000shs per term so that they access sanitary pads at school and they declined to put this in practice which left us with no choice but to send back home those student who get into menstruation periods at school and lack sanitary pads” (Deputy Headmaster School B).*  
*“As a teacher, you can be given the role of senior woman or senior man, but there is no incentive or motivating factor added to this additional role and this leads to loss of morale as it becomes just a sacrifice” (Senior man teacher School A).*

Lack of time coupled with the so many tasks one had at school were barriers to ASRH service provision where the senior men and women were teachers with academic work to deliver to students on top of the added work of ASRH service provision. This was further elaborated through focus group discussions and key informant interviews:

*“Many times when we come at school we are so busy with lessons and we fail to get time to seek ASRH services and we end up keeping our problems or sharing these problems with our friends” (Focus group School A).*

*“Our senior man and woman don’t do any work; they keep themselves busy and don’t give us any time to talk to them on ASRH issues” (Focus group School A).*

*“I am not a fulltime teacher here, and I don’t sleep at school yet am the senior woman and this means that the students can’t access me whenever they need me and this affects my work in ASRH service provision because I don’t have enough time for these adolescents and am not paid for the work/role I play as a senior woman, am only paid for the role of being a teacher” (Senior woman School B).*

On the other hand, it was reported that the existing curriculum in secondary schools gives little priority of ASRH issues as revealed from key informant interviews:

*“Since ASRH is not part of the curriculum, many times it is hard for us to allocate time for ASRH programs because if we are to do so, when students go back home and are asked if they studied, they will say that they didn’t study because the time was put to ASRH programs and if the DEO gets that information, he will take it that we are not teaching students” (Deputy Headmaster School A).*

## Discussion

### ASRH burden

ASRH problems identified by adolescents in order of importance included; early sexual activity, HIV, pregnancy, abortion and sexually transmitted infections (STIs). These findings are similar to previous studies (AYA 2000) which reported early sexual activity, early and forced marriages, abortion, defilement and multiple sexual partners being cited by adolescents as ASRH problems. ASRH programs among adolescents should therefore put more emphasis on delaying sexual debut to mitigate the root cause of all other ASRH problems.

Adolescents in rural areas are engaged in early sexual activity as evidenced by 42.1% of the respondents which is comparable to the UDHS 2016 in which 44.3% of the adolescents aged 15-19 had already had sexual intercourse. Over one third (32.8%) of respondents were still sexually active meaning that sexual activity was highly prevalent, with males at (18.5%) and females at (14.3%) and this is in agreement with the UDHS 2016, where more males (18.4%) between 15-19 years had already had sexual intercourse than females (17.8%).

Adolescents had a median age at first sexual debut of 14 years with males at 13 years and females at 14 years (Minimum age 5 years and Maximum age 19 years). Other studies have reported that, by age 15, 27% of adolescents have already had sexual activity (UDHS 2016) and Renzalo et al 2017 reported 16 years for young people in slums. This study showed that a bigger percentage of rural adolescents were sexually active but there was no association between sex and age at first sexual debut. For the adolescents who had sexual intercourse, 45.2% of them used condoms at their first sexual debut with more females 26.8% than males 18.5% (p value = 0.02). In previous studies (AYA 2000), condom use at first sex was 25.6% for females and 23.6% for males. This study shows a decline in condom use at first sexual debut among males when the two studies are compared.

The motivation for engaging in sex by most adolescents 34.9% was peer pressure, followed by a personal desire 21.7%, wanting to discover or adventure 17.8%, a feeling that one is mature enough 13.8%, economic pressure 5.3%, being raped/defiled 4% and others 2.6%. In the previous study by the Population Council (2007), the main motivating factor was out of love, and this study also showed a decline (20% versus 4%) in the number of adolescents who engaged in sex as a result of being defiled or forced.

Most of the adolescents had never had sex as seen with 57.9%, (21.69% males and 36.24% females) and another 9.3% adolescents were practicing secondary abstinence, that is, have ever had sexual intercourse but are no longer sexually active. According to the UDHS 2011, 68.82% of adolescents aged 15-19 years had never had sex (53.1% females aged and 15.7% males) and UDHS 2016 puts the percentage of adolescents at 55.7%. Regarding the motivating factors for abstinence, many of them 19.7% cited counselling from elders (parents, senior woman/man and other elders) as the main reason to why they are abstaining, followed by need for planning for the future including completing studies, fear of STI/HIV, fear of pregnancy, feeling still young for sexual relations, joining the abstinence club, avoiding bad peer groups, adherence to Christians preaching and others. These values that reinforce abstinence among adolescents need to be studied more and promoted in programming for ASRH.

Condom use among the sexually active adolescents was 80.5% with a big number of them 72.4%, obtaining condoms from the health centres. Others got condoms from shops, friends, their elder brothers, drug shops and from workshops in descending order respectively. This study reported an increase in condom use among secondary school adolescents as compared to previous study by Population Council 2007, where 68% of sexually active adolescents in secondary schools had used condoms at their last sexual intercourse and UDHS 2016, where 78.1% of them used condoms at last sex. Lack of motivation to use condoms was due to a

number of reasons including a perception that their partner was safe 43.3%, followed by lack of money to buy condoms, a feeling that condoms were not necessary, lack of awareness on condom use and wanting to enjoy sex without condom.

Adolescents in sexual relations face many challenges and many of them don't know exactly what they are into or what to expect from these relationships. Many of them experienced problems ranging from being hurt by unfaithful partners, feeling of pain during and after sexual intercourse, challenges with condom use, fear of and getting pregnant, fear of getting STIs/HIV, misunderstandings or conflicts in their sexual relationships, maintaining hygiene especially during menstruation, being preoccupied by and always thinking about their relationship, bleeding during the loss of virginity, being forced to have sex and others.

Teenage pregnancy is a common ASRH problem in Uganda and in this study, 11.3% of the respondents had either been pregnant or made their sexual partner pregnant which is low compared to UDHS 2016 which shows a 25% teenage pregnancy rate. Majority, 44.4% aborted, 27.8% delivered and the rest didn't give a response to the outcome of their pregnancies. The use of contraception is very low among these adolescents as at first sexual debut, although many did not want pregnancy. Majority, 54.8% of adolescents didn't use condoms and among those, 51% did nothing to prevent pregnancy, 1.9% used emergency contraceptives/morning after pills and 1.9% used the withdraw method. However, previous studies (AYA 2000) reported that 46.1% of the females aged 15-19 years didn't desire their first pregnancies. We can conclude from the study findings that knowledge and use of contraception in this population was very low.

In Uganda, abortion is illegal but it takes place using crude methods such as taking drugs/tablets as mentioned by 20.9% of the adolescents, using herbs like "ennanda" and "luwoko", taking overdose of drugs, drinking a lot of tea leaves and using contraceptives. However, safe abortion is practised by health workers and 28.8% of respondents knew that one can abort by going to a health facility. Among adolescents who reported to have either got pregnant or made sexual partner pregnant and aborted, 66.7% did so by seeking professional help from a health centre or hospital, while 33.3% used non-professional methods. There were no abortion related deaths reported from these schools. This finding emphasized the fact that illegal and unsafe abortion was highly prevalent among adolescents and a major SRH problem. Sexually Transmitted Infections were prevalent among these adolescents as 22% (or almost a quarter) reported history of STI and these were more common among the females 56.6% than among the males 43.4%. However, in UDHS 2016, the STI prevalence was at 17.1%. The most commonly reported Sexually Transmitted Infections by more than a half of the respondents was urethral/vaginal discharge, followed by genital growths/swellings and genital ulcers/sores. Among the respondents, 60.2% (33.4% females and 26.8% males) reported to have ever tested for HIV and among those who tested for HIV, 88.6% reported that they tested negative, 7% positive and 4.4% didn't want to disclose their HIV status. Given the high rates of sexual activity, low consistent use of condoms and high rates STIs among those sexually active adolescents which are the surrogates for HIV transmission, there is a need to include routine HIV Testing and Counselling as an additional element of the standard package of ASRH services among secondary school adolescents.

### **Utilisation Practices of ASRH Services by Secondary School Adolescents**

Majority of the respondents trusted their mothers on ASRH issues as evidenced by 42.7% of the adolescents who reported that they consulted first their mothers when having an ASRH problem; followed by 26.3% who consulted their aunts/ uncles with others consulting their fathers, brothers/sisters, peers, senior woman teacher, senior man teacher, nurse and the rest handling their ASRH problems alone. These findings were similar to those from previous studies (AYA 2000) where nearly half of the respondents reported having had some conversation with a parent or guardian on ASRH topics and their main avenue for addressing ASRH problems in schools was through reference to the senior woman teacher and, discussions among peers. It is important to note from this study that majority 85.5% consulted a family member when confronted with an ASRH problem compared to 4.5% who consulted school counselors. There is therefore a need to empower parents, guardians, relatives and siblings with accurate ASRH messages that they can pass on to adolescents as they seem to be the first point contact for adolescents when confronted with an ASRH problem.

Similarly, their sources of ASRH information did not differ much with a majority of them getting this information from either relatives or media. Others got it from parents, senior woman/man teacher, peers, nurses and the remaining didn't have any source for ASRH information. Combined together, parents and relatives provided 43.6% of ASRH information.

Regarding the content of ASRH information received by these adolescents, mostly was on abstinence as reported by 46.9% of them, followed by HIV prevention information, information on condom use, information on menstruation/puberty, information on being faithful, information on STI prevention, information on relating with the opposite sex, information on STI treatment, information on contraceptives/family planning, information on abortion and other topics.

More than a half of the adolescents discussed about abstinence with their friends followed by STI/HIV prevention, hygiene, condom use, sexual activity, family planning, menstruation, puberty and abortion.

The most utilised ASRH service at school was abstinence drives by 41.2%, followed by counselling services by 36.5%. Other services included STI/HIV prevention drives, menstruation and puberty education and services, relationship counselling services and pregnancy testing services. It was noted that free sanitary pads was not one of the services provided even in emergency situations where as it is a critical ASRH need among adolescents girls. These findings were validated by the key informants who

reported that the most accessed and utilised ASRH service in their schools was counselling (mainly on abstinence, menstruation and puberty education, relationship counselling and STI/HIV prevention drives) and pregnancy testing which were done once at the beginning of every term in all the schools.

At the school linked clinics, counselling was the most accessed and utilised ASRH service as reported by 36.1% of the respondents, followed by free sanitary pads 23.1%, free condoms, relationship counselling, HIV screening and testing, pregnancy testing services, treatment of STIs, tetanus vaccination and STI screening and testing. These services were similar in government and privately owned schools.

### **Drivers/ barriers to the utilisation of ASRH services by Secondary school Adolescents**

The range of ASRH services available in a school, the person the adolescent lives with and the age of the adolescent affected the access to and utilisation of ASRH services by adolescents in schools as either a barrier or facilitator. Previous studies have identified the main obstacles to accessing ASRH services by the adolescents which included: ignorance about their availability; geographical and financial barriers; fear and stigma; availability of (cheaper and accessible) traditional options and the quality of services (AYA 2000). More to that, most of the respondents were satisfied with the way ASRH services are offered to them at the school linked clinic.

In this study, 18% of the adolescents were not aware that ASRH services were available in their school and many of the students experienced self-stigma to approach and talk to their teachers when they had ASRH problems. Other students claimed to be so busy with lessons at school and ended up failing to get time to seek ASRH services or shared them with their peers. In similar studies (Neema *et al.* 2008), young peoples' fear of seeking ASRH services was a major barrier to ASRH service provision.

Senior men and women in these schools lacked adequate knowledge, attitude and skills in ASRH service provision since none of them had received formal training in ASRH service provision. As a result, some of them lacked confidence and failed to adequately explain some issues raised by the adolescents. Additionally, schools had few female teachers who were not enough, not easily available, not well knowledgeable, lacked the right attitude and inadequately skilled to help the female adolescents with their ASRH problems. Previous studies have reported similar findings (Neema *et al.* 2008, AYA 2000).

The teachers lacked ASRH tools like sanitary pads, resources and information on ASRH such as the straight talk newspapers to facilitate smooth service delivery. As a result, adolescent girls often missed school during their menstruation periods. Most of the parents were too poor to provide such basic ASRH needs to their adolescents. Schools lacked enough funds to initiate and implement comprehensive ASRH programs. Schools could not produce and distribute ASRH IEC/BCC materials or provide emergency sanitary pads to their adolescent girls. Teachers lacked teaching aids, such as condoms and dummy penises for demonstration purposes and other supplies like sanitary pads. These findings have been reported in similar studies (Neema *et al.* 2008).

Lack of incentives and motivation among those holding the responsibilities of senior man or senior woman teachers despite that added role and lack of enough time allocated to them to provide ASRH services also constrained access and provision of ASRH services. ASRH is not part of the school curriculum and the teachers found it hard to spare time for ASRH programs. The District Education Office did not also give ASRH a priority in the secondary school curriculum.

### **Limitations and strength of the study**

The study information was collected from adolescents aged 14-19 years and willing to be interviewed with more being selected from schools with high populations which could have caused a selection bias. This bias in sample selection was minimised using sampling proportionate to size probability sampling methods.

Since data collection was through self-reporting, honesty of the responses could not be guaranteed since these were matters related to one's sex life and some people have stigma attached to their sexual behaviours.

It is one of the very few studies that have tried to assess the determinants of the utilisation of ASRH services among adolescents in rural secondary schools and therefore making a great contribution to the body of knowledge in the area of Adolescent Sexual and Reproductive Health.

## **Conclusions**

### **ASRH Burden**

Adolescents are engaged in early sexual activity as evidenced by 42.1% of the respondents. The odds of an adolescent having had early sexual activity was 69% greater among males than among females. Male adolescents were 72% more likely to be sexually active than female adolescents and the median age at sexual debut was 14 years.



It is recommended that interventions to address ASRH problems should focus on delaying the age of sex debut. Equal emphasis should be put on addressing the boy child involvement in ASRH as well as the girl child as they are equally vulnerable.

The level of sexual abstinence was above average as evidenced by 57.9% of adolescents who have never had sex, with another 9.3% adolescents practising secondary abstinence. The major contributing factors for this were counselling from elders as cited by 19.7% of them, followed by the issue of planning for the future including completing studies by 17.1%, fear of Sexually Transmitted Infections/HIV 11.8%, fear of pregnancy and other infections 10.5% and other reasons.

It is recommended that interventions should focus at reinforcing these values and supporting community counsellors to execute their role of counselling and guiding the adolescents on matters related to sexuality.

11.3% of the respondents have either ever been pregnant or made their sexual partner pregnant. 44.4% reported to have aborted and 27.8% to have delivered.

There is need to increase knowledge, awareness and access to contraception among adolescents with particular emphasis on the duo protection method (condom use).

The prevalence of Sexually Transmitted Infections was 22% among the respondents, with the most commonly reported Sexually Transmitted Infection being urethral/vaginal discharge 58.5%, followed by growths on the genitals 23.2% and lastly genital ulcers/sores 18.3%. Among the respondents, 60.2% reported to have ever tested for HIV.

Efforts in ASRH programming should be put more on preventing early sexual activity among adolescents through abstinence, preventing Sexually Transmitted Infections, and pregnancy. Access should be increased to Voluntary Counselling and Testing services for HIV, screening and diagnosis of STIs, and HIV/STI treatment and care.

### **Utilisation Practices of ASRH Services by Adolescents in Secondary Schools**

Adolescents commonly discuss ASRH matters with their peers. The most frequently discussed ASRH topics among adolescents were abstinence, sexual hygiene, condom use, STI/HIV prevention, sexual activity, family planning, menstruation, puberty and abortion. The most utilised ASRH service at school were abstinence drive, counselling services, STI/HIV prevention drives, menstruation and puberty education and services, relationship counselling services and pregnancy testing services. Free sanitary pads are not available even in times of emergencies.

There is a need for training of peer educators with teachers trained in ASRH service provision as their supervisors so that they can help their fellow adolescents have meaningful and factual ASRH discussions, support their fellow adolescents in ASRH issues and also link those with ASRH problems to the trained teachers to increase access and utilisation of quality ASRH services and the straight talk foundation and Civil Society Organisations should be put on board to make standardised ASRH I.E.C materials readily available.

### **Drivers/ barriers to the Utilisation of ASRH Services by Secondary School Adolescents**

Some of the adolescents were not aware that ASRH services are available in their school and this is coupled with the problem that many of the students had self-stigma to approach and talk to their teachers when they had ASRH problems and other students claimed to be so busy with lessons at school. Peer educators should be trained in these schools whose main role will be ASRH service provision to their fellow students with the senior men and women as their patrons and counsellors who will help to increase access and utilisation of quality ASRH services in these schools. Schools should establish a talking compound with ASRH information and messages and these schools should endeavour to get in touch with the Straight talk foundation so that they can receive straight talk newspapers and make them accessible to the students.

Senior men and women in schools lacked knowledge, skills, right attitude and confidence in ASRH service provision since none of them had received formal training in ASRH service provision. There were very few female teachers to help the female adolescents with their ASRH issues.

The Ministry of Education in collaboration with Ministry of Health should endeavour to have all senior men and women trained in ASRH service provision so that these teachers have adequate knowledge, skills, right attitude and confidence to ensure efficiency and more access and utilisation of these services by the students.

Schools lacked ASRH tools and resources like sanitary pads, IEC materials regarding ASRH such as the straight talk newspapers. The schools lacked enough funds to initiate and run ASRH programs to full capacity and were not able to produce and distribute ASRH information and messages or provide emergency sanitary pads to their adolescent students.

Schools need to take the lead and make innovation on ASRH issues like making sanitary pads locally with the Ministry of Education, Ministry of Health and Civil Society organisations also working together in conjunction with the schools to avail sanitary pads to the students so that they don't lose school days and provide other resources necessary for effective ASRH service provision in schools.

Lack of incentives and motivation among those holding the responsibilities of senior man or senior woman teachers despite that added role coupled by the fact that there is not always enough time allocated to them to do the ASRH service provision constrained access and provision of ASRH services.

All secondary schools should assign a full time teacher to be a senior woman and man who should be given an incentive for this role so that he or she is motivated.

ASRH is not part of the school curriculum and many times it is hard for the teachers and head teachers to spare time for ASRH programs. The District Education Office doesn't also give ASRH a priority in the school curriculum.

The ministry of Health and the Ministry of education should find ways of making ASRH part of the school curriculum or co-curriculum activity in Uganda and this has to be enforced by both the District Education Officer and the District Health Officers.

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