Determining sexual and reproductive health issues among adolescents and young persons with disabilities in selected districts of Rwanda: A comparative study between adolescents and young persons with and without disabilities

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Abstract

Background: Access to and utilization of adolescent sexual and reproductive health (ASRH) services among adolescents with disability globaly remains poor. ASRH services in Rwanda are primarily offered in health facilities. Rwanda has made significant progress in improving the sexual and reproductive health (SRH) of its population, especially young persons. However, young and adolescent persons with disabilities still face many barriers and challenges in accessing SRH services and information.

Objective: This study aim to generate evidence-based data and information about the status of knowledge attitude, practices, prevalence of SRH issues and barriers to access and utilization of ASRH adolescents and young persons with disabilities in Rwanda. The generated evidence will inform policy and practice to improve ASRH outcomes for adolescents and young persons with disabilities in Rwanda.

Methods: This study used mixed methods to collect and analyze data on ASRH services. Both quantitative and qualitative data were collected from adolescents and young persons, with and without disabilities. The quantitative analysis included descriptive statistics, chi-square tests, and logistic regression, focusing on risky sexual behavior as the outcome variable. The qualitative data were analyzed using thematic content analysis. Variables with $p<0.05$ were considered significant.

Results: The study involved 1,081 adolescents, with 44.1% having no disability, 40.5% having physical disability, and 15.4% having speech, visual, or hearing disability. Adolescents with no disability scored higher than those with disabilities. Fourty one (41.1%) reported having had sex, with lower percentages among those with disabilities. Adolescents with disabilities were more exposed to risky sexual behavior. Significant factors for risky behavior were gender, occupation, age and parental presence. 9.7% started childbearing, with 72.4% having an unwanted pregnancy. STI prevalence was 11.1% among the non-disabities, 2.4% among those with hearing, visual, or speech disabilities, and 9.6% among those with physical disabilities. Contraception use was reported by 28.3% of adolescents without disabilities, 19.9% of those with hearing, visual, or speech disabilities, and 24.2% of those with physical disabilities. Only 19.9% of adolescents with hearing, visual, or speech disabilities used SRH services, compared to 25.1% of those with physical disabilities and 33.8% of those without disabilities. Adolescents with disabilities reported barriers including distance to health facilities, inappropriate health infrastructures, unfriendly health care providers, self-marginalization, fear of judgment, and lack of appropriate information.

Conclusion: The study shows adolescents with disabilities face more challenges, engage in riskier sexual behavior, and have less access to sexual health services compared to those without disabilities.The findings highlight the need for targeted interventions for adolescents with disabilities.

Contents

List of Acronyms

aOR: adjusted Odds Ratio
ASRH: Adolescent sexual and reproductive health
AYSRH: Adolescent ad young sexual and reproductive health
CBHI: Community Based Health Insurance
CHW: Community Health Workers
CI: Confidence Interval
CRPD: Convention on Rights of Persons with disabilities
CSV: Comma-separated values
DHS: Demographic Heath Survey
FGD: Focus group discussion
FP: Family Planning
GBV: Gender Based Violance
HCP: Health Care Provider
HDI: Health Development Initiative
HF: Health Facility
HIV/AIDs: Human Immunodeficiency virus/ Acquired Immunodeficiency Syndrome
ICPD: International Conference on Population and Development
IDI: In-depth interview
IUD: Intra Uterine Device
KAP: Knowledge, Attitudes, and Practices
KII: Key informant interview
MINIJUST: Ministry of Justice
MOH: Ministry of Health
MTCT: Mother To Child Transmission
NCPD: National Council of Persons with Disability
NGO: Non-Governmental Organization
NISR: National Institute of Statistics Rwanda
NUDOR: National Union of Disability Organizations in Rwanda
PPS: Probability Proportionate to Size
RBC: Rwanda Biomedical Center
RMNCH: Reproductive, Maternal, Newborn and Child health
RNEC: Rwanda National Ethical Committee
SBC: Social Beahivior Change
SRH: Sexual and reproductive health;
SRHR: Sexual and reproductive health and rights
STI: Sexually transmitted infections
UNFPA: United Nation Population Fund
UPHLS: Umbrella of Organizations of Persons with Disabilities in the fight against HIV&AIDS and for Health Promotion
WHO: World Health Organization
YPWDs: Young Persons with disabilities

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1 Background

The sexual and reproductive health of young persons is a critical area of concern and an important aspect of overall well-being (Maqbool et al. 2019; Wilson et al. 2021). It encompasses a range of issues, including sexual education, access to healthcare services, contraception, prevention of sexually transmitted infections (STIs), and the ability to make informed decisions about one's own body and relationships (Roden, Schmidt, and Holland-Hall 2020). While adolescents and young persons face many challenges in accessing youth friendly services(Ninsiima, Chiumia, and Ndejjo 2021; Tirado et al. 2020), young persons with disabilities often face numerous barriers in accessing appropriate sexual and reproductive health care and information (Carter et al. 2021; Ganle et al. 2020). The Convention on Rights of Persons with disabilities affirms that all persons with all types of disabilities must enjoy all human rights and fundamental freedoms (CRPD) (Msipa and Juma 2023). Rwanda ratified the CRPD in 2008, and promulgated a series of laws as government commitment to equitable opportunities for persons with disabilities (MINIJUST 2015; Njelesani, Siegel, and Ullrich 2018).

According to the International Classification of Functioning, Disability, and Health, disability encompasses a range of impairments, including physical, sensory, intellectual, and psychosocial (Deng, Genovese, and Schneider 2023). As per the Rwandan legislation, a disability is characterized as a condition in which an individual experiences a loss of essential abilities or has impairments in comparison to others, resulting in unequal opportunities and chances (MINIJUST 2015). The recent National Population Census reported that there are 391,775 persons with disability in Rwanda, representing a prevalence of 3.4% among persons aged five years and above. The prevalence was reported less than 3% between the age of five and 39 years and was around 2% between 15-24 years (NISR 2023).

Disability can impact an individual's ability to effectively manage their sexual and reproductive health (Matin et al. 2021). Limited access to inclusive education, lack of accessible information, inadequate healthcare services, societal stigma, and discrimination compound the challenges faced by young persons with disabilities in achieving optimal sexual and reproductive health (Adeniyi and Olomola 2021). Despite that person with disabilities have the same sexual and reproductive health needs as other persons, individuals with disabilities often encounter pervasive stereotypes related to their sexuality, including being treated as childlike and assumed to be devoid of sexual desires, incapable of procreation, and unsuitable as partners or parents (Frohmader and Ortoleva 2012; Nampijja 2020; Yimer and Modiba 2019). Unfortunately, their sexual and reproductive health and rights (SRHR) remain subjects of contention and are frequently neglected by healthcare systems. Consequently, persons with disabilities frequently encounter supplementary obstacles when seeking care, services, education, and information pertaining to SRHR, as well as issues regarding gender-based violence and other forms of abuse (Mac-Seing et al. 2020).

Rwanda has made significant progress in improving the sexual and reproductive health (SRH) of its population, especially young persons. However, young and adolescent persons with disabilities still face many barriers and challenges in accessing SRH services and information. Some of these barriers include stigma, discrimination, lack of awareness, inadequate infrastructure, and limited availability of trained health workers.

To address these gaps, Rwanda has ratified several international and regional instruments that protect the rights of persons with disabilities, including the Convention on the Rights of Persons with Disabilities (CRPD) and the African Charter on Human and Personss' Rights on the Rights of Persons with Disabilities in Africa. The country also has a national policy on disability mainstreaming and a national strategic plan for disability inclusion and the government has committed to implementing the International Conference on Population and Development (ICPD) Programme of Action, which recognizes the SRH needs and rights of adolescents and youth, including those with disabilities. These policies provided a framework for promoting the inclusion of persons with disabilities in all sectors, including SRH.

The National Family Planning Guidelines and Standards, along with the National Guidelines and Standards for Provision of Adolescent and Youth Friendly Services in Rwanda, emphasize that individuals of all disability types, regardless of gender, need special attention to access these services appropriately. This is also reiterated in the Disability Inclusion Guidelines in HIV and Sexual Reproductive Health Response in Rwanda.
These guidelines recommends that health facilities should be accessible and allow easily YPWDs to participate in AYSRH activities with appropriate equipment, adequate training of health professionals on the human rights of persons with disabilities, sign language, mobility and orientation including on free and informed consent. Despite all of these, challenges remains, and, there is a need to remove attitudinal, systemic, informational and environmental barriers for persons with disabilities fully access health services in the health sector.

Addressing these barriers requires a comprehensive approach involving inclusive policies, improved accessibility, enhanced provider training, culturally sensitive communication, accessible information, and awareness campaigns to challenge societal stigma and misconceptions. Accurate and comprehensive data regarding SRHR for individuals with disabilities is essential to inform policies, programs, and advocacy efforts that aim to address these gaps and promote their human rights. Therefore, this study wanted to generate evidence-based data and information on SRH issues among adolescents and young persons with disabilities in Rwanda.

2 Objectives

2.1 General objective

Overall, the aim of this research is to generate evidence-based data and information that can inform policy and practice to improve SRH outcomes for adolescents and young persons with disabilities.

2.2 Specific objectives

Specifically, the study was to:

- Identify the prevalence of contraceptive use, unintended pregnancies, and sexually transmitted infections (STIs) among adolescents and young persons with disabilities in Rwanda.
- Identify the factors that influence SRH behaviors and outcomes among adolescents and young persons with disabilities in Rwanda.
- Assess the level of knowledge, attitudes, and practices related to SRH among adolescents and young persons with disabilities in Rwanda.
- Identify the barriers that adolescents and young persons with disabilities face in accessing SRH services in Rwanda.
- Develop recommendations for improving SRH services for adolescents and young persons with disabilities in Rwanda.

3 Methods

3.1 Study setting

Rwanda, a landlocked country in East Africa, has a population of approximately 13.24 million persons (NISR 2023). This study focuses on sexual reproductive health issues among adolescents and young persons with disabilities, who often face challenges and barriers in accessing quality health services and information.

Rwanda is structured in five provinces and 30 districts operating as local governments. The study was conducted in five districts, one from each of Rwanda's five provinces. The districts with the highest prevalence of disability from recent census which are Nyarugenge in Kigali City (2.5%), Ruhango in the Southern Province (4.6%), Nyamasheke in the Western Province (4.3%), Gicumbi in the Northern Province (3.7%), and Kayonza in the Eastern Province (3.6%) (Figure 1) were selected (NISR 2023). The goal is to capture the diverse experiences and needs of the target group across different regions and contexts. According to the latest census, there are 391,775 persons with disabilities in Rwanda, representing a prevalence of 3.4%.

3.2 Study Design

This descriptive cross-sectional survey used mixed methods to gain valuable insights into the status of SRHR for individuals with disabilities. Quantitative data involved administering a questionnaire to a diverse group of adolescents and young individuals with disabilities to gather quantitative information about their experiences, knowledge, attitudes, and challenges related to SRHR. While qualitative data was collected through focus group discussions (FGDs), in-depth interviews (IDIs), and key informant interviews (KIIs). The participants were purposively selected. The FGD participants included groups of adolescents and young adults with disabilities, as well as groups of their parents and caregivers. KIIs were conducted with ASRH healthcare providers, NCPD coordinators at District level, Parents and teachers, stakeholders from organizations implementing SRH interventions, Health care providers, District leaders, all involved in the implementation of ASRH policies and guidelines.

3.3 Study population

The study focused on adolescents and young adults with visual, hearing, and physical disabilities aged 15-24. According to the latest census, approximately 2% of this age group has a disability, which equates to 53,678 individuals. (NISR 2023) . Therefore, 53,678 adolescents and young persons with disabilities were considered as the primary target population. In addition, to these individuals, the study also included their parents or caregivers, healthcare providers who offer ASRH services at health centers in the selected study areas, leaders of the organization of persons with disability, selected stakeholders, and policy makers from relevant government institutions.

3.4 Inclusion and exclusion criteria

3.4.1. Inclusion criteria: The study included adolescent and young persons with visual, hearing and physical disabilities aged 15-24 years, and who provided informed consent or assent if aged below 18 years and their parents/caretakers consented.

3.4.2. Exclusion criteria: The study excluded adolescent and young persons with mental disability. The dangers of including persons with mental disabilities in research have been articulated in numerous ways, and many justifications have been given for their exclusion. First, in view of the many historical abuses of this population, this group has been defined as particularly vulnerable and in need of special attention and protection. Second, because of their cognitive limitations, the danger of adolescent and young persons with mental disabilities being harmed through their participation in research may be more pronounced. Moreover, there can be challenges in determining competence and ensuring that adolescents and young persons with mental disability understand the nature of the research and the attendant risks and benefits (Carlson, 2013). For all of these reasons, the dominant assumption has been that persons with mental disabilities require special consideration in ASRH and that, the dangers of inclusion render them ineligible as research subjects in this current study.

3.5 Sample size determination and sampling techniques

To achieve a 5% margin of error with a 95% confidence interval, with a design effect of 1.5, we determined the sample size using the following formula (Islam Mohammad Rafiqul 2018).

$$n = \frac{DE * Z^2 * p * (1-p)}{E^2}$$

n is the minimum sample size
DE is the design effect,
Z is the z-score for the desired confidence level
p is the estimated proportion of the population with the characteristic of interest
E is the desired margin of error

For a 95% confidence interval, the z-score is 1.96. Assuming a conservative estimate of 0.5 for the population proportion p, and using the design effect of 1.5 and margin of error equal to 0.05, the minimum sample size was the follow:

$$n = \frac{1.5 * 1.96^2 * 0.5 * (1-0.5)}{E^2}$$

Therefore, for a population of 53,678 a minimum sample size of 576 was required. For a comparison purpose, for each selected and interviwed adolescent and young persons with disabilities, other adolescent and young persons living in the same household or next to their household was invited to respond to the same questionnaire. A closer number to this sample was also expected for adolescent and young persons withouth disability.

Probability Proportionate to Size (PPS) sampling technique was adopted to select adequate sample in each selected district. The prevalence of disability was used as proxy for district selection where a district with high prevalence of persons with disability was selected in each province of Rwanda and City of Kigali. Additionally, since the latest census reported a higher number of women with disabilities than men, we used this reported probability to determine the number of girls and boys included in the sample for each district. A simple random sampling technique was used to select respondents in each district.

Conducted in 5 selected disctricts

adolescents and young adults aged 15-24 with and without disabilities

55% of the respondents had hearing, visual, speech or physical disabilitiy

69% of respodents are aged between 18-21 years.

To assess adolescents' barriers, experiences, and preferences around use of ASRH services, two focus group discussions (FGDs) were conducted in each selected district. One was composed by six adolescents and young persons with disability to get their insights about SRH services, the second was composed by 3 adolescents and young persons with disability and 3 adolescents and young persons without disability, this helped to understand the interaction/feeling between the two groups while there are in the same discussion. Therefore, a total of 10 FGDs with 60 participants were conducted in the five selected districts. Gender aspect was considered during the selection of FGDs participants. Key informants' interviews were conducted with purposively selected respondents at national, and district levels including NCPD coordinators, District officials, health care providers, member of disability organisations, and stakeholders implementing ASRH interventions. Additionally, the in depth-interviews wereconducted among teachers, parents, healthcare workers at health and district levels.

3.6 Study instruments

The main questionnaire was adapted from the WHO illustrative questionnaire for interview-surveys with young persons (Cleland, Ingham, and Stone 2001). This illustrative questionnaire is designed to gather information on knowledge, beliefs, behavior, and outcomes in the domain of sexual and reproductive health. It is an effective tool for assessing the needs and problems of young persons prior to an intervention. The questionnaire collects a wide range of information, including adolescents' background characteristics, sexual conduct, sexual ideology, protective or risk behavior, knowledge and use of condoms, knowledge, perception and utilization of sexual and reproductive health information and services, and sexual and reproductive health outcomes. The questionnaire was adapted to the local context using the Demographic Heath Survey (DHS) questionnaire as well as adding specific questions to collect additional information on disability. The questionnaire was co-adapted with a team of experts including members from the National Commission of Persons with Disability (NCPD) and members from the Disability Organizations in Rwanda. The questionnaire was programmed in Kobotoobox to allow data collection and data entry at the same time. The programming was to ensure the inclusion of data validation and skipping patterns to minimize potential data quality issues. Qualitative data was gathered using interview and FGD guides.

3.7 Data collection procedure

Before beginning fieldwork, the study team communicated with community leaders about the study and send out letters introducing the research team and detailing expectations. Once local leaders and authorities have given permission for the study to proceed, the research team commenced the recruitment of individual study participants. Trained study enumerators conducted recruitment of participants. Study participants asked individually to provide consent to participate in the FGDs and interviews. FGDs was conducted at health center where the transport allowance of 5,000RWF was given to each participant and to the family member accompanying those in need of help. The research team is aware that, despite the challenge

in accessing healthcare services, adolescents and young persons with disability seek the services at health center, therefore the existing way they use to reach the health facility was adopted and facilitated to allow them to participate in FGD. Where the usual transportation was rarely available, road network allows reaching the participant household; the study team disposed of a vehicle that could be used to transport the study participant. NCPD disability mainstreaming officer at district level worked closely with the research team to ensure that data collection is well organized. Study enumerators explained the purpose of the study, how they were selected, interview procedures, risks, and benefits. Participants were informed that they could stop the interview at any time. Emancipated minors aged 15-17 provided assent as participants, while their parents/guardians provided consent. Each household was visited no more than three times to locate a selected respondent. The plan was to count the unavailable, as "non-response" and be substituted with the next participant on the list, but all the sampled individuals were available to respond to the interview.

The FGDs and interviews were carried out in Kinyarwanda, the national language, as well as sign language when necessary. Each study team included a person who could translate the questionnaire into sign language and record responses on the data collection tool. During the FGDs, the study team ensured that everyone has an opportunity to express their views freely. The interviews were conducted in venues located identified by the NCPD coordinators near participants' residences where they would feel comfortable. The data collectors insured the interviews are conducted in areas that ensure confidentiality and audio/visual privacy of the study participants. Interviewers also briefed participants about the study objectives and the importance of audio-recording for the conversation before beginning the respective interviews. One researcher with experience in conducting qualitative studies and fluent in Kinyarwanda coordinated the discussion with the help of a moderator/note taker and a sign language translator. The note-taker was responsible for recording and taking notes of the discussions, noting body language and other relevant information observed during the discussion. FGD facilitators used a participatory approach during the discussions to encourage active participation from all group members. To ensure that all participants have equal opportunities to share their views, we created homogenous groups, of adolescents, males and females. Privacy and confidentiality were maintained during interviews and handling of data obtained. Participants were offered refreshments after the interviews as a token of appreciation for their time and for sharing their knowledge and experiences.

3.8 Recruitment and training of data collectors

The study team collaborated with The Umbrella of Organizations of Persons with Disabilities in the fight against HIV&AIDS and for Health Promotion (UPHLS) to recruit data collectors, ensuring disability inclusion. At the national level, a UPHLS member coordinated the study, while NCPD coordinators at the district level coordinated and supervised the data collection process. The data collection team comprised 24 data collectors, including four sign language interpreters and six individuals with disabilities. These data collectors were selected from a group of individuals who had previously participated in other SRH studies. Selection criteria

included possessing at least a bachelor's degree, having experience in data collection for SRH-related studies, conducting and facilitating interviews, and demonstrating skills and motivation for working on SRH and disability issues.

The study team in collaboration with the national study coordinator, NCPD coordinators, conducted the training of data collectors. The objectives of the training was to familiarize data collectors with the overall study, ensure they understand the objectives of the survey and the study population, and become knowledgeable about the constructs in the survey instruments. The training also focused on ensuring that data collectors fully understand the processes of data collection and management and become proficient in administering the survey instruments. Given the vulnerable nature of the study participants, additional topics on the communication with persons with disability, disability inclusiveness were included, with emphasis on research ethics. The training consisted of didactic and interactive plenary sessions, as well as parallel group work sessions. Role-plays were introduced, with data collectors working in parallel groups and alternating roles as interviewers, recorders, and respondents. Trainers who was observing, providing feedback, and making corrections where necessary supervised these role-plays. At the end of the training, a one-day pre-test was administered in one geographic location under real conditions. For the questionnaire, enumerators collected data using tablets or smartphones as they did during data collection. During this pre-test, they administered 3-4 questionnaires; however, the data collected did notincluded in the final database. The wording of questions and response codes was adjusted based on the results to ensure maximum applicability and relevance in real situations. The use of tablets or smartphones was organized to identify any problems or inconsistencies in the tools, estimate the daily workload and duration of questionnaire administration in a household, and test the functioning of input masks.

A pre-test of the FGD/KII/IDI guide was also conducted in a control district to assess understandability, duration, and processes. Changes weremade to the guide and procedures based on the results of the field test. The team reflected on the findings from the pilot phase to address any inconsistencies and discrepancies, ensuring that survey questions are in good chronology and that skip patterns are applied appropriately. Typos and translation errors were corrected to ensure that survey questionnaires and FGD/KII guides are comprehensible and user-friendly.

3.9 Data cleaning and analysis

The investigators inspected, cleaned, pre-processed, and transformed the data as necessary to ensure that a clean, valid data set is ready for analysis. Data was electronically captured using Kobotoolbox tool, which has built-in data quality checks and validation. The tool prompted skips where relevant and provide notifications to data collectors in case of violations of quality checks. The data analyst conducted daily data analysis and sorting to flag potential inconsistencies and irregularities in the data and provide feedback to the concerned data collectors. At the end of data collection, the complete dataset was downloaded in Excel,

screened to identify additional potential outliers, and cleaned where necessary. The datasets was then saved in CSV format and imported into Stata software for analysis.

Data analysis included descriptive statistics, chi-square tests, and logistic regression to identify factors that influence SRH behaviors and outcomes. The outcome variables included involvement in risky sexual behavior, defined as behavior that would expose the participants to unwanted pregnancy and STIs. This include any unprotected sexual intercourse with non marital partner. The explanatory variables included age, education, gender, household wealth, religion, knowledge, attitudes towards SRH, type of disability and other variables that were deemed important. In multivariable regression models, adjusted model coefficients and their 95% confidence intervals (95% CI) were computed. Variables with $p<0.05$ were interpreted as significant

Data from in-depth interviews, FGDs, and key informant interviews was transcribed verbatim in Kinyarwanda, translated, and back into English then entered in qualitative data software (Atlas ti.8). We then developed a coding frame using a grounded theoretical framework. Different analysts conducted independent analysis and subsequent comparison between the developed coding matrices was used to develop a reliability factor for the analysis. Verbatim generated alongside the code matrix was used to support the emerging thematic framework. Relevant verbatim quotes were used to report the findings and guide the interpretation of the results in each theme.

3.10 Ethical considerations

In accordance with the principles governing research involving human participants, this study ensured that respondents' ethical rights are upheld. Ethical approval was obtained from Rwanda National Ethical Committee (RNEC 218/2023). The administrative district leaders and other local leaders were the study was conducted were notified to seek their greenlight to conduct the study with relevant study participants under their responsibility. All adult participants were required to give an informed written consent prior to participating in the study. Consent was indicated by a signature or thumb print on the form. Parental permission for adolescents aged 15–17 years was required first, before the minor's assent is sought. No minor participated in the study until a parent/guardian provided permission and informed assent obtained from the minor. In addition, the data collectors and qualitative researchers were experienced research staff who had a minimum of university education (undergraduate) and who received training on basic research ethics and study procedures, including maintaining confidentiality.

3.11 Confidentiality/Privacy

To ensure the confidentiality of respondent information, we implemented the following processes: The names and addresses of study participants were stored on password-protected computers, were and will not be shared with anyone outside the study team. All data was

treated with confidentiality, and the names of respondents and participants did not appear in study reports. Informed consent forms stated, and participants were reminded, that everything discussed in the interview was to be kept private. During the reporting of findings, all data areanonymized to protect participants' privacy.

3.12 Dissemination

The aim of this research was to generate evidence-based data and information to inform policy and practice for improving SRH outcomes for adolescents and young persons with disabilities. The results will be disseminated to the MoH/RBC and national stakeholders through technical working groups (ASRH/FP and RMNCH), district administration, and the Rwanda Ethics Committee. Results will be shared through dissemination meetings, presentations, and distribution of the final report. The data may also be further analyzed to generate manuscripts for publication in peer-reviewed journals and abstracts for presentation at conferences.

4 Results

4.1 Demographic characteristics of study participants

In total, 1,081 adolescent and young persons participated in the study. The sample included 44.1% with no disability, 40.5% with physical disability and 15.4% with either speech, visual or hearing disability (Table 1). Fifty four percent (53.8%) were female and 46.2% were male. There was more predominance of female in the population without disability (60.8%), while there was a balance in the sex disaggration for the persons with disability, female accounting for 53.6% and 50.9% respectively for the persons with Hearing, visual or speech disability and physical disability.

The median age of participants was 20 years (IQR: 18-23). More than a half were in the age category of 18-21 years, for all the population categories. However, the under age represented 5% in the non disability, 19.9% for those with heaing, visual or speech disability and 18.0% for those with physical disability.

Almost all the study participants were single representing 96.4%, overall. The same percentage was recorded for those with no disability and those with hearing, visual or speech disability, while it was 96.3% for those with physical disability. Married and divorced represented 3.0% and 0.6% respectively.

One in two of the participants self reported in the second lower wealth category of the four-ranked category. However, 24.7% and 23.1% of the persons with hearing, visual or speech disability and physical disability respectively reported themselves in the lowest wealth category compared to 12.4% in the persons with no disability. Overall 19.1% were earning an income, 22.2% in the persons with no disability, 20.5% in those with hearing, visual or speech disability and 15.1% for physical disability. Despite this comparable percent for persons with no disability and hearing, visual or speech disability, these last were more in vocational and causal labor. Only 2.9% of them were in a formal employment, compared to 6.1% for physical disability and 15.1% for those with no disability.

Table 1 Sample description

		No disability		Hearing, visual or speech		Physical		Total	
		n	%	n	%	n	%	N	%
Gender	Female	290	60.8	77	46.4	215	49.1	582	53.8
	Male	187	39.2	89	53.6	223	50.9	499	46.2
	Total	477	100	166	100	438	100	1081	100

Age	15-17 years	24	5	33	19.9	79	18	136	12.6
	18-21 years	287	60.2	89	53.6	184	42	560	51.8
	22-24 years	166	34.8	44	26.5	175	40	385	35.6
	Total	477	100	166	100	438	100	1081	100
	Median: 20 years, IQR (18-23) Min: 15 years, Max: 24 years								
Ever attended school	No	9	1.9	38	22.9	30	6.8	77	7.1
	Yes	468	98.1	128	77.1	408	93.2	1004	92.9
	Total	477	100	166	100	438	100	1081	100
Highest level of schooling you completed	Secondary & above	165	35.3	11	8.6	59	14.5	235	23.4
	Vocational	12	2.6	17	13.3	22	5.4	51	5.1
	O'level	107	22.9	23	18	62	15.2	192	19.1
	Primary	149	31.8	50	39.1	182	44.6	381	37.9
	None	35	7.5	27	21.1	83	20.3	145	14.4
	Total	468	100	128	100	408	100	1004	100
Wealth category (Ubudehe)	Cat 1	59	12.4	41	24.7	101	23.1	201	18.6
	Cat 2	255	53.5	87	52.4	214	48.9	556	51.4
	Cat 3	156	32.7	28	16.9	110	25.1	294	27.2
	Don't know	7	1.5	10	6	13	3	30	2.8
	Total	477	100	166	100	438	100	1081	100
Health insurance	CBHI	437	91.6	158	95.2	422	96.3	1017	94.1
	All other insurances	31	6.5	2	1.2	7	1.6	40	3.7
	Not insured	9	1.9	6	3.6	9	2.1	24	2.2
	Total	477	100	166	100	438	100	1081	100
Marital status	Single	460	96.4	160	96.4	422	96.3	1042	96.4
	Married	15	3.1	3	1.8	14	3.2	32	3
	Divorced	2	0.4	3	1.8	2	0.5	7	0.6
	Total	477	100	166	100	438	100	1081	100
Religion	Catholic	197	41.3	59	35.5	175	40	431	39.9
	Protestant	249	52.2	86	51.8	241	55	576	53.3
	Muslim	13	2.7	7	4.2	12	2.7	32	3
	None	18	3.8	14	8.4	10	2.3	42	3.9
	Total	477	100	166	100	438	100	1081	100
religion	Very important	222	48.4	40	26.3	183	42.8	445	42.8
	Important	217	47.3	78	51.3	211	49.3	506	48.7
	Not important	20	4.4	34	22.4	34	7.9	88	8.5
	Total	459	100	152	100	428	100	1039	100
earning	No	371	77.8	132	79.5	372	84.9	875	80.9
	Yes	106	22.2	34	20.5	66	15.1	206	19.1
	Total	477	100	166	100	438	100	1081	100

Occupation	Agriculture	34	32.1	10	29.4	16	24.2	60	29.1
	Employed	16	15.1	1	2.9	4	6.1	21	10.2
	Casual	14	13.2	9	26.5	15	22.7	38	18.4
	Retailer	21	19.8	2	5.9	19	28.8	42	20.4
	Vocational	21	19.8	12	35.3	12	18.2	45	21.8
	Total	106	100	34	100	66	100	206	100
Income	Less than 60k	93	87.7	33	97.1	57	86.4	183	88.8
	60-100k	11	10.4	1	2.9	7	10.6	19	9.2
	More than 100k	2	1.9	0	0	2	3	4	1.9
	Total	106	100	34	100	66	100	206	100

School attendance was critically low in the population with hearing, visual or speech disability, representing 77.1% compared to 93.2% for physical disability and 98.1% for non-disability population. There was a same gap observed in the high level of school attended for those who ever attended school, where only 8.6% achieved at least secondary level, compared to 35.3% for the persons with no disability. While physical diability seemed to perform well in terms of school attendance, there was huge disparities in the high school level attendance compared to the persons with no disability, where only 14.5% reported to finalizing secondary and above level. Persons with hearing, visual or speech disability seemed to be more enrolled in vocational school than their peers are. They represented more than 10% points higher in attending vocational school than persons without disability and up to 8% points higher than those with physical disability.

More than 90% of participants were Christians, with more than half (53.3%) being protestants. While there was no difference in the religion affiliation between persons with physical disability and those with no disability, persons with hearing, visual or speech disability were less Christians, and 8.4% of them reported not being in any religion, against 3.9% and 3.8% for those with physical disability and those with no disability, respectively. Moreover, among those reported to be in religion, 22.4% did not find it important to them, compared to 7.9% for physical disability and only 4.4% for no disability.

4.2. Adolescent and young persons exposure to ASRH information

4.2.1. Source of information on ASRH

School was reported the main source of information on ASRH accounting for 41.3% followed by Family 25.3% then community and media contributing by 15.6% and 14.5% (Table 2). The family was listed as the second main source of information with 30.6%, followed by the community 24.1%. The health workers were the least to contribute to ASRH information dedicated to young and adolescent with only 3% mainly from the health care provider

(2.2%). Teachers and mothers themselves contributed to nearly 50% as the primary source of information. Persons with hearing, visual or speech disability were the most to primarily receive the information from their mothers (21.7%) compared to persons with physical disability (18.0%) and with no disability (19.3%). In addition, they were higly primarily informed by their peers (21.1%) while these contributed to only 9.6% for persons with no disability and 8.9% for physical disability. Despite the equal percentage for teachers as the primary source of information for each category, persons with hearing, visual or speech disability were less exposed to school courses about ASRH, contributing to 5.4% compared to 13.5% for those with physical disability and 15.9% for no disability.

School was reported as the main source of ASRH information at 41.3%

62.7% reported prefering their mothers to be their main source of ASRH information

persons with hearing, visual or speech disability were less exposed to ASRH courses

68.9% of those living with their fathers reported that they never discussed sex related matters

Table 2: Source of ASRH information

Sources	Primary source of information								Preferred source of information							
	No disability		Hearing, visual or speech		Physical		Total		No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%	n	%	n	%	n	%	N	%
Family	127	26.6	44	26.5	104	23.7	275	25.3	305	63.9	111	67	261	59.5	677	62.7
Mother	92	19.3	36	21.7	79	18	207	19.1	179	37.5	74	44.6	163	37.2	416	38.5
Father	21	4.4	3	1.8	10	2.3	34	3.1	69	14.5	25	15.1	54	12.3	148	13.7
Other family members	14	2.9	5	3	15	3.4	34	3.1	57	11.9	12	7.2	44	10	113	10.5
School	207	43.4	56	33.7	184	42	447	41.3	143	30	57	34.3	113	25.8	313	28.9
Teacher	131	27.5	47	28.3	125	28.5	303	28	106	22.2	49	29.5	81	18.5	236	21.8
School course	76	15.9	9	5.4	59	13.5	144	13.3	37	7.8	8	4.8	32	7.3	77	7.1
Community	70	14.6	41	24.7	57	13.1	168	15.6	206	43.2	43	26	150	34.3	399	36.9
Peers	46	9.6	35	21.1	39	8.9	120	11.1	106	22.2	26	15.7	100	22.8	232	21.5
Youth clubs	20	4.2	4	2.4	9	2.1	33	3.1	72	15.1	9	5.4	34	7.8	115	10.6

Peer educator	4	0.8	2	1.2	9	2.1	15	1.4	28	5.9	8	4.8	16	3.7	52	4.8
Health workers	16	3.3	6	3.6	11	2.5	33	3	176	36.9	48	28.9	166	37.9	390	36.1
HCP	12	2.5	5	3	7	1.6	24	2.2	137	28.7	38	22.9	123	28.1	298	27.6
CHW	4	0.8	1	0.6	4	0.9	9	0.8	39	8.2	10	6	43	9.8	92	8.5
Media	57	11.8	19	11.4	82	18.8	158	14.5	208	43.5	51	30.7	150	34.2	409	37.9
Radio	32	6.7	5	3	50	11.4	87	8	87	18.2	22	13.3	78	17.8	187	17.3
Online platform	11	2.3	0	0	2	0.5	13	1.2	53	11.1	9	5.4	16	3.7	78	7.2
Campaigns	3	0.6	1	0.6	4	0.9	8	0.7	39	8.2	5	3	25	5.7	69	6.4
Books/ magazines	4	0.8	2	1.2	3	0.7	9	0.8	14	2.9	5	3	12	2.7	31	2.9
Film	3	0.6	1	0.6	7	1.6	11	1	12	2.5	5	3	12	2.7	29	2.7
Other	4	0.8	10	6	16	3.7	30	2.8	3	0.6	5	3	7	1.6	15	1.4

Adolescent and young persons masively reported the family (62.7%) as their preferred source of ASRH information, mostly from their mothers (38.5%), a higher percent reported in the persons with hearing, visual or speech disability (44.6%) than other categories. While fathers were less reported as main source of information (3.1%), at least 13.7% of adolescent and young persons wished to get the information from them. Compared to being primary source of information, Persons with visual, hearing or speech disability maintained teachers as their preferred source of information (29.5%), while this decreased to 22.2% for persons with no disability and 18.5% for pople with physical

disability. Inversely, the percent of persons with hearing, visual or speech disability reporting peers as their preferred source of information decreased to 15.7% while it increased to 22.8% for those with physical disability and 22.2% for no disability.

Despite that health care workers were critically low reported as source of information, 36.1% of adolescent and young persons reported them as their preferred source of ASRH information. Health care providers were the second highly preferred (27.6%) following the mothers. This preference was reported by all categories, though slightly higher for persons with no disability (28.7%) and persons with physical disability (28.1%) than those with hearing, visual or speech disability (22.9%).

4.2.2. Parent-adolescent communication

The study assessed the level of discussion between parents and the adolescent and young persons. Seventy two percent (72.6%) had fathers alive, higher in the persons with no disability (75.5%) and persons with physical disability (71.9%) than persons wit hearing, visual or speech disability (65.7%) (Table 3). However, these were the most reported to live with their fathers in the same household (78.9%) than physical disability (72.7%) and no disability (65.7%). Sixty-eight percent (68.9%) of adolescent living with their fathers reported that they never discussed sex related matters, a higher percent in the persons with physical disability (73.4%) than in those with hearing, visual or speech disabity (67.4%) and those with no disability (65.7%). Moreover, 30% of them found it difficult to have these discussions. It was reported harder in the persons with hearing, visual or speech disability (42.2%) than their peers with physical disability (27.6%) and those with no disability (28.2%).

Table 3: Adolescents-parents communication

		No disability		Hearing, visual or speech		Physical		Total	
		n	%	n	%	n	%	N	%
Father alive	No	116	24.3	57	34.3	123	28.1	296	27.4
	Yes	361	75.7	109	65.7	315	71.9	785	72.6
Live in the same household with the father	No	124	34.3	23	21.1	86	27.3	233	29.7
	Yes	237	65.7	86	78.9	229	72.7	552	70.3
Discussed sex-related matters with the father	Never	200	65.6	60	67.4	190	73.4	450	68.9
	Occasionally	105	34.4	29	32.6	69	26.6	203	31.1
Difficult or easy to talk with the father about everything	Easy	139	38.5	28	25.7	127	40.3	294	37.4
	Average	64	17.7	15	13.8	45	14.3	124	15.8
	Hard	102	28.2	46	42.2	87	27.6	235	30
	Don't see him	56	15.5	20	18.3	56	17.8	132	16.8

Mother alive	No	70	14.7	24	14.5	66	15.1	160	14.8
	Yes	407	85.3	142	85.5	372	84.9	921	85.2
Live in the same household with the mother	No	53	13	18	12.7	55	14.8	126	13.7
	Yes	354	87	124	87.3	317	85.2	795	86.3
Discussed sex-related matters with your mother	Never	232	59.9	86	64.7	216	61.4	534	61.2
	Occasionally	155	40.1	47	35.3	136	38.6	338	38.8
Difficult or easy to talk with the mother about everything	Easy	292	71.7	59	41.5	253	68	604	65.6
	Average	46	11.3	30	21.1	46	12.4	122	13.2
	Hard	49	12	44	31	53	14.3	146	15.8
	Don't see her	20	4.9	9	6.3	20	5.4	49	5.3

The percent of adolescent with mothers alive was a bit higher than fathers (85.2%), 86.3% of them lived within the same household and this was nearly the same all the categories. However, 61.2% reported they never discussed sex related matters with their mothers. Persons with disability, were the most to struggle with this communication. Sixty four percent (64%) of persons with hearing, visual or speech disability living with their mothers reported they never had this discussion. This was 61.4% for those with physical disability compared to 59.9% for no disability. While 71.7% of adolescent and young persons with no disability and 68% of those with physical disability found it easy to talk to their mother about everything, adolescent and young persons with hearing, visual or speech disability struggle, with only 41.5% reporting it being easy, more than 30% points lower than the adolescent and young persons with no disability.

4.2.3. Classes courses on adolescent and young sexual reproductive health

The study participants were asked if they ever attended class coursestalking about puberty, sexual and reproductive system as well as relations between boys and girls (Table 4). Sixty two percent reported they attended these classes, very low in the persons with hearing, visual or speech disability (46.9%) than those with physical disability (61.3%) and with no disability that seemed to be more exposed to these classes than their peers with disability (68.2%). Eighty three percent of those who attended these classes reported they were about right. However, 73.7% reported felt they did not have enough information on reproductive health. There was no tangible difference between the categories, accounting for 73.8%, 75.9% and 72.8% respectively for adolescent and young persons with no disability, those with hearing, visual or speech disability and those with physical disability.

Table 4: Attendance to classes on puberty, on sexual and reproductive system

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
Attending school classes on puberty, on sexual and reproductive systems and on relationships between boys and girls								
No	138	29.5	61	47.7	154	37.7	353	35.2
Yes	319	68.2	60	46.9	250	61.3	629	62.6
Not sure	11	2.4	7	5.5	4	1	22	2.2
Do you think that there should be (more) classes on these topics, fewer classes or were the number about right?								
About right	262	82.1	49	81.7	211	84.4	522	83
Less	54	16.9	10	16.7	39	15.6	103	16.4
Don't know	3	0.9	1	1.7	0	0	4	0.6
Do you think that you have enough information on reproductive health?								
No	352	73.8	126	75.9	319	72.8	797	73.7
Yes	125	26.2	40	24.1	119	27.2	284	26.3

4.2.4. Exposure to SRH messages in the last six months

Overall, 52.0% of youth reported exposure to SRH messages over the six months preceding the study. Young with no disability were more exposed to these messages (59.3%) compared to their peers with physical disability (50.2%) and far higher than those with hearing, visual or speech disability (36.7%). The messages were received mostly from radio (56.2%), health care providers (21.2%) and school courses (19.2%). Young with hearing, visual or speech disability had less access to health care provider (18%) compared to those with physical disability (19.7%) and those with no disability (23%).

Table 5: Exposure and source of SRH messages in the past six months

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%

Exposure to messages about FP for youth	No	194	40.7	105	63.3	220	50.2	519	48.0
	Yes	283	59.3	61	36.7	218	49.8	562	52.0
Source of messages	Radio	150	53.0	30	49.2	136	62.4	316	56.2
	Health care provider	65	23.0	11	18.0	43	19.7	119	21.2
	School lessons	59	20.8	13	21.3	36	16.5	108	19.2
	Peers	36	12.7	9	14.8	33	15.1	78	13.9
	CHWs	41	14.5	6	9.8	28	12.8	75	13.3
	Television	38	13.4	7	11.5	28	12.8	73	13.0
	Teacher	33	11.7	13	21.3	26	11.9	72	12.8
	Meeting	43	15.2	6	9.8	21	9.6	70	12.5
	Mother	27	9.5	6	9.8	19	8.7	52	9.3
	Public posters	22	7.8	5	8.2	24	11.0	51	9.1
	Peer educator	36	12.7	5	8.2	9	4.1	50	8.9
	Cooperative	18	6.4	6	9.8	14	6.4	38	6.8
	Other family members	17	6.0	3	4.9	14	6.4	34	6.0
	Movie/Mobile cinema	16	5.7	0	0.0	12	5.5	28	5.0
	Church	14	4.9	2	3.3	9	4.1	25	4.4
	Booklet	12	4.2	2	3.3	11	5.0	25	4.4
	Father	9	3.2	4	6.6	6	2.8	19	3.4
	Other	6	2.1	0	0.0	9	4.1	15	2.7

Messages received included primarily avoiding unwanted pregnancy (66%) use of contraceptions (45.2%) and body changes during adolescent hood (42.3%) (Table 6). Across

Young with no disability were more exposed to ASRH messages at 59.3%

73.7% reported not to have enough knowledge on ASRH

The majority of SRH messages received by respodents was to Avoid unwanted pregnancy

Attitude of respodents with no disability, towards SRH was higher than that of other groups

the categories, avoiding unwanted pregnancies was higly ranked. Youth with hearing, visual or speech disability reported to have received messages about avoinding unwanted pregnancies (68.9%) and body changes (47.5%) slightly higher than those with no disability (65% and 43.1%) and those with physical disability (66.5% and 39.9%).

Table 6: Content of the SRH messages

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
Avoiding unwanted pregnancy	184	65.0	42	68.9	145	66.5	371	66.0
Use of family planning methods	134	47.3	27	44.3	93	42.7	254	45.2
Body changes	122	43.1	29	47.5	87	39.9	238	42.3
STIs	69	24.4	19	31.1	56	25.7	144	25.6
Avoid peer pressure	39	13.8	16	26.2	38	17.4	93	16.5
Monthly reproductive cycle	48	17.0	11	18.0	33	15.1	92	16.4
Hygiene during periods	44	15.5	10	16.4	25	11.5	79	14.1
Circumcision	27	9.5	11	18.0	28	12.8	66	11.7
Other	9	3.2	1	1.6	9	4.1	19	3.4

4.2.5. SRH knowledge of adolescent and young persons

Generaly the median knowledge score for the adolescents was less than 50%. Despite this, adolescent with no disability had statistical significant higher score (51.4, 95% CI: 50.3-52.6) than youth with physical disability (48.3, 95% CI: 46.9-49.8, p-value: 0.002), and than those with hearing, visual or speech disability (40.0, 95% CI: 37.4-42.7, p-value: 0.002) (Table 7)

Table 7: Mean score on SRH knowledge by type of disability

Type of disability	Mean	SD	95% CI	P>t
No disability	51.4	13.2	[50.3 - 52.6]	
Hearing, visual or speech	40.0	17.4	[37.4 - 42.7]	0.000
Physical	48.3	15.4	[46.9 - 49.8]	0.002

4.2.6. General knowledge on SHR matters

Seventy seven percent of study participants reported a woman can get pregnant on the very first time that she has sexual intercourse (Table 8). This percent was higher in youth with no

disability (83.0%) and lower for persons with hearing, visual or speech disability (60.8%). Generally, 66.6% reported to know that a woman is most likely to get pregnant if she has sexual intercourse half way between her reproductive monthly cycle, 71.7% reported by youth with no disability, 67.6% by those with physical disability and only by 49.4% of youth with hearing, visual or speech disability.
While 86.6% of youth with no disability mentioned it was a right of a woman to use methods to avoid unintended pregnancy, this was reported by 75.8% of youth with physical disability and only by the 55.4% of those with hearing, visual or speech disability. This group also was the least to know that a 12 years old male teen who already had ejaculation can impregnant a woman (59.6%) compared to youth with no disability (85.7%) and those with physical disability (78.7%).
Only 42.5% of the youth reported to have a good knowledge about a misconception that a woman grows faster after she has had sexual intercourse for the first time, higher in youth with no disability (47.6%) than those with physical disability (40.9%) and those with hearing, visual or speech disability (31.9%).

Not only the youth with hearing, visual or speech disability had low knowledge about general SRH matters, but also reported to have no information about most SRH misconceptions. At least 26% of them responded they had no information about wether a woman is most likely to get pregnant if she has sexual intercourse during her periods, against 17.4% for youth with physical disability and 9.6% for those with no disability.

While the level of misconception about whether a girl growing faster after she has had sexual intercourse for the first time seemed to be equal among the categories with 51.6% for youth with no disability, 50% for physical disability and 48.8% for hearing, visual or speech disability, 37.3% from this last group responded they don't know. Additionaly youth with no disability reported a good knowledge about sexual intercourse not being a cure for acne (66.2%) nor does not stimulate breast development (66.2%), does not prevent dysmenorrhea (63.7%) nor stimulates the growth of larger buttocks. This knowledge was low for youth with physical disability (57.8%, 58.7%, 62.1% and 58.2% respectively) and was the lowest among youth with hearing, visual or speech disability with 43.4%, 49.4%, 48.2% and 44.0% respectively.

Table 8: Knowledge on SRH matters

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	A woman can get pregnant on the very first time that she has sexual intercourse							
No	47	9.9	24	14.5	34	7.8	105	9.7

Yes	396	83.0	101	60.8	343	78.3	840	77.7
Don't know	34	7.1	41	24.7	61	13.9	136	12.6
	A woman is most likely to get pregnant if she has sexual intercourse half way her reproductive month cycle							
No	71	14.9	29	17.5	60	13.7	160	14.8
Yes	342	71.7	82	49.4	296	67.6	720	66.6
Don't know	64	13.4	55	33.1	82	18.7	201	18.6
	A woman has the right to use methods to avoid unintended pregnancy							
No	41	8.6	26	15.7	42	9.6	109	10.1
Yes	413	86.6	92	55.4	332	75.8	837	77.4
Don't know	23	4.8	48	28.9	64	14.6	135	12.5
	An adolescent shall inform parents when she's preparing to have her first sexual intercourse							
No	241	50.5	68	41.0	188	42.9	497	46.0
Yes	191	40.0	45	27.1	172	39.3	408	37.7
Don't know	45	9.4	53	31.9	78	17.8	176	16.3
	A 12 years old male teen who already had ejaculation can impregnant a woman							
No	38	8.0	28	16.9	42	9.6	108	10.0
Yes	409	85.7	99	59.6	343	78.3	851	78.7
Don't know	30	6.3	39	23.5	53	12.1	122	11.3
	A woman is most likely to get pregnant if she has sexual intercourse durinf her periods							
No	185	38.8	41	24.7	143	32.6	369	34.1
Yes	246	51.6	81	48.8	219	50.0	546	50.5
Don't know	46	9.6	44	26.5	76	17.4	166	15.4
	A woman grows faster after she has had sexual intercourse for the first time							
No	227	47.6	53	31.9	179	40.9	459	42.5
Yes	164	34.4	51	30.7	157	35.8	372	34.4
Don't know	86	18.0	62	37.3	102	23.3	250	23.1
	Having sexual intercourse cure acne							
No	316	66.2	72	43.4	253	57.8	641	59.3
Yes	92	19.3	46	27.7	105	24.0	243	22.5
Don't know	69	14.5	48	28.9	80	18.3	197	18.2
	Having sexual intercourse stimulate breast development							
No	316	66.2	82	49.4	257	58.7	655	60.6
Yes	104	21.8	41	24.7	105	24.0	250	23.1
Don't know	57	11.9	43	25.9	76	17.4	176	16.3
	Having sexual intercourse prevent dysmenorrhea							
No	304	63.7	80	48.2	272	62.1	656	60.7
Yes	85	17.8	29	17.5	78	17.8	192	17.8
Don't know	88	18.4	57	34.3	88	20.1	233	21.6
	Having sexual intercourse stimulates the growth of larger buttocks							

No	302	63.3	73	44.0	255	58.2	630	58.3
Yes	102	21.4	40	24.1	108	24.7	250	23.1
Don't know	73	15.3	53	31.9	75	17.1	201	18.6

4.2.7. Adolescent and young persons knowledge about condom

Overall, adolescents and young persons have shown a high level of awareness about condoms as a method to prevent unwanted pregnancies and sexually transmitted infections (STIs). Seventy four percent of the youth confirmed condoms are trusted methods to avoid unwanted pregnancies, and 78.8% reported these are also trusted to prevent STIs (Table 9). This was more reported by youth with no disability (78.6% and 84.9%) than youth with physical disability (76.9% and 78.3%) while youth with hearing, visual or speech disability had the lowest knowledge about this (57.8% and 62.7%). Additionnaly, 90.4% of youth with no disability reported a boy can suggest his sex partner to use a condom, against 84.9% for youth with physical disability and as low as 72.3% for hearing, visual or speech disability. On the other hand, 88.7% of no disability reported a girl can make that suggestion, compared to 82.0% reported by youth with physical disability and only by 67.5% of youth with hearing, visual or speech disability.

Table 9: Knowledge towards using condom to prevent unwanted pregnancies and STIs

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	In case you are married or don't want to get pregnant, you can use a condom							
Yes	418	87.6	123	74.1	374	85.4	915	84.6
No	46	9.6	8	4.8	20	4.6	74	6.8
Don't know'	13	2.7	35	21.1	44	10.0	92	8.5
	Condoms are trustful method to avoid unwanted pregnancies							
Yes	375	78.6	96	57.8	337	76.9	808	74.7
No	62	13.0	15	9.0	42	9.6	119	11.0
Don't know'	40	8.4	55	33.1	59	13.5	154	14.2
	Condoms are trustful method to prevent STIs							
Yes	405	84.9	104	62.7	343	78.3	852	78.8
No	43	9.0	15	9.0	39	8.9	97	9.0
Don't know'	29	6.1	47	28.3	56	12.8	132	12.2
	A condom can be used more than once							
Yes	106	22.2	32	19.3	88	20.1	226	20.9
No	348	73.0	84	50.6	283	64.6	715	66.1
Don't know'	23	4.8	50	30.1	67	15.3	140	13.0

	Unmarried persons should use condom during sexual intercourse							
Yes	412	86.4	106	63.9	347	79.2	865	80.0
No	40	8.4	17	10.2	40	9.1	97	9.0
Don't know'	25	5.2	43	25.9	51	11.6	119	11.0
	A girl can suggest his sexual partner to use a condom							
Yes	423	88.7	112	67.5	359	82.0	894	82.7
No	24	5.0	9	5.4	26	5.9	59	5.5
Don't know'	30	6.3	45	27.1	53	12.1	128	11.8
	A boy can suggest his sexual partner to use a condom							
Yes	431	90.4	120	72.3	372	84.9	923	85.4
No	22	4.6	6	3.6	23	5.3	51	4.7
Don't know'	24	5.0	40	24.1	43	9.8	107	9.9

4.2.8.Adolescent and young persons knowledge around HIV/AIDS

HIV/AIDS is a serious health issue that affects millions of persons around the world. It is vital for young individuals, including those with disabilities, to have a comprehensive understanding of HIV/AIDS, its transmission, prevention, and treatment. This knowledge can help them protect themselves and others from infection, reduce stigma and discrimination, and access necessary health services. Many adolescents, particularly those with disabilities, may lack this knowledge or have misconceptions about HIV/AIDS due to barriers in accessing information, which can put them at risk or prevent them from seeking help. As part of its succesfull response to HIV/AIDs, Rwanda has made commendable strides in educating its youth about HIV/AIDS. This study shows that at least 94.6% of the respondants heard about HIV, 97.3% by the youth with no disability, 95.0% with physical disability and 86.1% with hearing, visual or speech disability, up to 10% points lower that their peers (Table 10). A good percent of these young persons knows HIV/AIDS is not curable (85.7%). Youth with physical disability seemed to have a same knowdge around this (86.1%) as their peeirs with no disability (87.6%) unlike youth with hearing, visual or speech disability (78.9%). Additionally, 88.1% of youth with no disability, 81.3% with physical disability and 73.5% of hearing, visual or speech disability reported that a healthy appearing person may have HIV and can transmit it. Moreover, 92.0% and 88.9% of youth with no disability knows route of mother to child transmission (MTCT) of HIV, during delivery and breastfeeding. This was reported by 87.9% of youth with physical disability and by 75.3% and 73.5% of youth with hearing, visual or speech disability. In addition, this group had low knowledge about existence of drugs to prevent MTCT (68.1%), and compared to 87.0% for youth with disability and 92.5% for youth with no disability. The same low knowledge around antiretroviral treatment was reported by youth with hearing, visual or speech disability (73.5%) compared to 91.3% by physical disability and 96.0% by youth with no disability.

Table 10: Knowledge about HIV/AIDS

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Ever heard about HIV/AIDS							
No	13	2.7	23	13.9	22	5.0	58	5.4
Yes	464	97.3	143	86.1	416	95.0	1023	94.6
	HIV/AIDS is curable							
No	418	87.6	131	78.9	377	86.1	926	85.7
Yes	55	11.5	15	9.0	38	8.7	108	10.0
Don't know'	4	0.8	20	12.0	23	5.3	47	4.3
	Someone with a good physical appearance may have HIV/AIDS and can transmit it							
No	50	10.5	25	15.1	62	14.2	137	12.7
Yes	420	88.1	122	73.5	356	81.3	898	83.1
Don't know'	7	1.5	19	11.4	20	4.6	46	4.3
	A pregnant woman with HIV/AIDS transmit it to his baby during delivery							
No	31	6.5	14	8.4	33	7.5	78	7.2
Yes	439	92.0	125	75.3	385	87.9	949	87.8
Don't know'	7	1.5	27	16.3	20	4.6	54	5.0
	A woman with HIV/AIDS transmit it to his baby during breastfeeding							
No	37	7.8	15	9.0	35	8.0	87	8.0
Yes	424	88.9	122	73.5	385	87.9	931	86.1
Don't know'	16	3.4	29	17.5	18	4.1	63	5.8
	Do you know that there's medication to decrease the risk of mother to child HIV transmission							
No	21	4.4	23	13.9	25	5.7	69	6.4
Yes	441	92.5	113	68.1	381	87.0	935	86.5
Don't know'	15	3.1	30	18.1	32	7.3	77	7.1
	Do you know that there's medication to take when you have HIV							
No	9	1.9	14	8.4	14	3.2	37	3.4
Yes	458	96.0	122	73.5	400	91.3	980	90.7
Don't know'	10	2.1	30	18.1	24	5.5	64	5.9
	Anti-retroviral therapy is taken for life from the day you are diagnosed with HIV							
No	10	2.1	13	7.8	15	3.4	38	3.5
Yes	456	95.6	118	71.1	391	89.3	965	89.3
Don't know'	11	2.3	35	21.1	32	7.3	78	7.2

4.2.9. Adolescent and young persons knowledge around STIs

Sexually transmitted infections (STIs) pose a significant health risk, particularly to adolescents and young adults. However, many adolescents and young persons lack adequate knowledge and awareness about STIs. This lack of knowledge can result in underutilization of testing and screening services, delayed or insufficient treatment, and ongoing spread of infections. Despite a high percentage of youth reporting having heard about other STIs than HIV, 94.8% by youth with no disability, 91.8% by those with physical disability and 78.9% by youth with hearing, visual or speech disability, the level of knowledge on STIs symptoms was generally low. Only 59.7% reported itchy genitals, 46.4% bloody or purulent discharge, 34.5% pain when peeing and 32.9% smelling discharge (Table 11). There was no tangible differences in knowledge about STIs symptoms from youth with and without disability. Nonetheless, there was disparities in terms of knowledge of where to seek care for STIs. Overall, 68.1% reported they know where to seek care, youth with no disability and those with physical disability had a better knowledge with 70.4% and 71.2% respectively, compared to 53.0% of youth with hearing, visual or speech disability. Almost everyone (97.9%) who reported to know the place for STIs care provision reported health facility as the right place.

Table 11: Knowledge around STIs

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Except HIV/AIDS, are there other STIs you ever heard?							
No	25	5.2	35	21.1	36	8.2	96	8.9
Yes	452	94.8	131	78.9	402	91.8	985	91.1
Total	477	100	166	100	438	100	1081	100
	Knowledge of STIs symptoms							
Itchy genitals	287	60.2	105	63.3	253	57.8	645	59.7
Bloody or purulent discharge	214	44.9	75	45.2	213	48.6	502	46.4
Pain when peeing	169	35.4	62	37.3	142	32.4	373	34.5
Smelling discharge	162	34	57	34.3	137	31.3	356	32.9
Lower abdominal pain	131	27.5	50	30.1	116	26.5	297	27.5
Pain during sexual intercourse	107	22.4	39	23.5	106	24.2	252	23.3
Lumps around genitals,anus, mouth, oesophagus or hips	89	18.7	36	21.7	88	20.1	213	19.7
	Knows where to consult for STIs							
No	141	29.6	78	47	126	28.8	345	31.9
Yes	336	70.4	88	53	312	71.2	736	68.1

	Knowledge of places to consult for STIs							
Health facility	469	98.3	159	95.8	430	98.2	1058	97.9
CHWs	79	16.6	33	19.9	58	13.2	170	15.7
Pharmacy	65	13.6	32	19.3	47	10.7	144	13.3
HCP home	29	6.1	25	15.1	25	5.7	79	7.3
Traditional healers	25	5.2	10	6	16	3.7	51	4.7
Prayers' room	21	4.4	8	4.8	14	3.2	43	4
Medication from a friend	21	4.4	4	2.4	12	2.7	37	3.4
Other place	8	1.7	3	1.8	9	2.1	20	1.9

4.2.10. Adolescent and young persons knowledge about Family planning methods for youth

Family planning is a crucial aspect of reproductive health that is often overlooked in adolescent and young persons's education; ensuring young persons with dusability are not left behind. Results from this study shows that overall only 56.5% of the adolescent and young persons interviewed recall to have heard about FP services for youth. There was a big gap between youth with and without disability, critically low among youth with hearing, visual or speech disability. While 67.7% of youth with no disability declared to have heard about these services, it was 51.1% for those with physical disability and only 38.6% of those with hearing, visual or speech disability.

The most listed FP methods for youth were abstince (68.7%), male condom (46.7%) and pills (33.0%). The highest preferred methods were abstinence (76.7%) and male condom (39.9%). Though the overall knowledge was low for all youths, those with disability had even less knowledge of where they can seek FP services if they need than their peers with no disability. Eighty three percent (83.6%) of youth with no disability responded they know where to seek FP services compared to 73.3% for youth with physical disability, and 50.6% for those with hearing, visual or speech disability. This was close to 10% points and 20% points lower respectively than youth with no disability. Nonetheless there was no big difference in mentioning the right places to seek services from for those who responded to know the places of FP services provision to young persons in need. Health facility was mentioned by 94% of youth with no disability, 95% by those with physical disability and 97.6% of young persons with hearing, visual or speech disability.

Table 12: Knowledge about Family planning methods for youth

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Ever heard about FP services for youth							
No	154	32.3	102	61.4	214	48.9	470	43.5

Yes	323	67.7	64	38.6	224	51.1	611	56.5
	Knows places where to seek FP services							
No	78	16.4	82	49.4	117	26.7	277	25.6
Yes	399	83.6	84	50.6	321	73.3	804	74.4
	Knowledge of places where to seek FP services							
Health facility	375	94.0	82	97.6	305	95.0	762	94.8
CHWs	75	18.8	20	23.8	83	25.9	178	22.1
Pharmacy	47	11.8	17	20.2	48	15.0	112	13.9
Youth institution	65	16.3	11	13.1	35	10.9	111	13.8
Youth corner	45	11.3	4	4.8	22	6.9	71	8.8
Other	7	1.8	0	0.0	4	1.2	11	1.4
	Knowledge of FP method to avoid pregnancy							
Abstinence	311	65.2	129	77.7	303	69.2	743	68.7
Male condom	236	49.5	77	46.4	192	43.8	505	46.7
Pills	183	38.4	42	25.3	132	30.1	357	33
Injectables	146	30.6	25	15.1	122	27.9	293	27.1
Implant	140	29.4	31	18.7	93	21.2	264	24.4
DIU	63	13.2	10	6	53	12.1	126	11.7
Female condom	67	14	12	7.2	52	11.9	131	12.1
Collar	29	6.1	5	3	17	3.9	51	4.7
Natural methods	23	4.8	3	1.8	10	2.3	36	3.3
Other	3	0.6	3	1.8	11	2.5	17	1.6
	Youth preferred FP methods to avoid pregnancy							
Abstinence	348	73	135	81.3	346	79	829	76.7
Male condom	201	42.1	58	34.9	172	39.3	431	39.9
Pills	83	17.4	19	11.4	71	16.2	173	16
Injectables	69	14.5	14	8.4	43	9.8	126	11.7
Female condom	56	11.7	8	4.8	42	9.6	106	9.8
Implant	37	7.8	11	6.6	41	9.4	89	8.2
IUD	29	6.1	4	2.4	26	5.9	59	5.5
Natural methods	16	3.4	4	2.4	10	2.3	30	2.8
Cylcle beads	20	4.2	3	1.8	6	1.4	29	2.7
Other	6	1.3	3	1.8	5	1.1	14	1.3

4.3. Adolescent and young persons attitudes on SRH issues

A knowledge score was calculated from the adolescents' responses to questions related to SRH. Each question was assigned one point if the response indicated a good attitude, and zero if it indicated a bad attitude or if a "don't know" response was given. The points for each question were summed and divided by the total possible points for a good attitude. The mean

score for young persons with no disability was statistically higher (61.4; 95% CI: 60.0-62.8) than that of young persons with physical disabilities (56.5; 95% CI: 54.7-58.3; p-value: 0.000), and also higher than that of those with hearing, visual, or speech disabilities (46.1; 95% CI: 42.6-49.6, p-value: 0.000) (Table 13).

Table 13: Mean of the SRH attitude score by type of disability

Type of disability	Mean	SD	95% CI	P>t
No disability	61.4	15.7	[60.0 - 62.8]	
Hearing, visual or speech	46.1	22.9	[42.6 - 49.6]	0.000
Physical	56.5	19.4	[54.7 - 58.3]	0.000

4.3.1. General attitudes about SRH issues

Overall, 81.5% of study partipants belived a woman need to stay virgin until marriage. This was higher in young persons with no disability (84.9%) followed by those with physical disability (82.6%) and lower in young persons with hearing, visual or speech disability. Seventy sixy percent (76.7%) with no disability responded girls would regret for having sex before marriage, 75.8% for youth with disability and 60.2% for those with hearing, physical or speech disability. Concerning boys, 78.6 of young persons with no disability reported a boy should stay virgin until marriage. This was 75.8% reported by the young persons with physical disability and 69.9% for those with hearing, visual or speech disability. Unlike for women, only about a half of responded (56.6%) reported boys regret for having sexual intercourse before marriage. There was no tangible difference about this between youth with or whith no disability. Even though more respondents believed in staying virgin until marriage, 80.7% of youth with no disability, 79.2% of those with physical disability and 73.5% of hearing, visual or speech disability reported that abstinence is very difficulty for young persons.

There was a generally good attitude about using a condom, despite that young persons with hearing, visual or speech disability had a low attitude compared to their peers with physical disability or with no disability. Eighty three percent (83.6%) of youth wih no disability, 77.9% of physical disability and 66.3% of those with heatring, visual or speech disability affirmed they would refuse an unprotected sex. Additionnaly, 85.5%, 82.2 and 71.1% respectively of youth with no disability, physical disability and hearing, visual or speech disability felt they

Respodents with physical disability engage latest in sexual activity at 19 years

Respodents with disability use condom the least during sexual intercorse

61.1% of the youth said that they their first sexual intercorse was unexpected

72.4% of reported pregnancies by respondents were unwanted

would stand on using condom if they had sexual intercourse. Despite this good attitude, attitude to accessing condom seemed to be generally low and problematic among persons with disability. Sixty two percent (62.7%) of youth with no disability, 58.7% of those with physical disability and 60.2% of hearing, visual or speech disability reported they would be qualified as prostitute if the were seen buying condom. About a half of the respondents (52.1%), 50.3% of young with no disability, 53.0% of physical disability and 54.8% of hearing, visual or speech disability reported they would be bothered to buy a condom. However less than half (45.9%) responded they would feel ashamed to buy or receive a condom, 44.0% for youth with no disability, 46.1% for physical disability and 50.6% for hearing, visual or speech disability. Moreover, only about one in three (35.8%) reported the use of a condom may decrease the sensation of sexual intercourse. This was respectively 34.6%, 36.1% and 38.6% for young persons with no disability, physical disability and those with hearing, visual or speech disability.

Additionaly, the overall attitude for family planning was satisfactory (80.0%). However, less young persons with hearing, visual or speech disability reported being in agreement with persons using contraception to avoid pregnancy (68.1%), compared to those with physical disability (80.8) and those with no disability (83.4%).

Table 14: Attitudes towards SRH

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Sex before marriage							
I believe that a girl may keep virginity until marriage	405	84.9	114	68.7	362	82.6	881	81.5
Many of the girls regret having had sexual intercourse before marriage	366	76.7	100	60.2	332	75.8	798	73.8
I believe that a boy may keep virginity until marriage	375	78.6	116	69.9	344	78.5	835	77.2
Many of the boys regret having had sexual intercourse before marriage	267	56.0	88	53.0	257	58.7	612	56.6
Abstinence from sexual intercourse is difficult when you are young	385	80.7	122	73.5	347	79.2	854	79.0
Man never ever respect a woman he had sexual intercourse with	322	67.5	92	55.4	281	64.2	695	64.3
	Use of condom							
I can refuse unprotected sexual intercourse	399	83.6	110	66.3	341	77.9	850	78.6

I am sure that I can stand on using a condom when I have sexual	408	85.5	118	71.1	360	82.2	886	82.0
Persons may think I am sex worker if they see me buy a condom	299	62.7	100	60.2	257	58.7	656	60.7
It can significantly bother me to buy a condom	240	50.3	91	54.8	232	53.0	563	52.1
It's shameful to someone like me to buy or receive condoms	210	44.0	84	50.6	202	46.1	496	45.9
The use of a condom may decrease the sensation of sexual intercourse	165	34.6	64	38.6	158	36.1	387	35.8
	Family planning							
Do you agree with persons using FP methods to avoid pregnancy	398	83.4	113	68.1	354	80.8	865	80.0

4.3.2. Reasons for keeping virginity and pressure on virgin adolescent and young persons as part of Sexual reproductive health

This study found that 58.9% of the study participants never had sex. Young with no disability were the least to haven't had sex (53.7%) compared to 61.2% of adolescent with physical disability and 68.1% for hearing, visual or speech disability. Among these virgin young persons, 52.4% reported they don't feel ready to have sex. Compared to other categories, only 39.8% of the youth with hearing, visual or speech disability reported they were not ready, against 53.0% of physical disability and 57.4% for those with no disability. Twenty six percent (26.5%) of the youg with hearing, visual or speech disability reported they have not have the opportunity for having sex, 37.9% for those with no disability and 42.2% for physical disability.

Additional reasons for maintaining virginity include the fear of getting pregnant, as reported by 67.6%, 58.4%, and 73.1% of young individuals with no disability, hearing, visual or speech disability, and physical disability, respectively. The fear of contracting HIV/AIDS or other STIs was reported by 73.4% of youth with no disability, 60.2% of those with hearing, visual or speech disability, and 76.9% of those with physical disability. Additionally, 60.9% of those with no disability, 59.7% of those with physical disability and 47.8% believed sex before marriage was wrong. Consequently, 85.2%, 81.4% and 81.0% respectively of youth with no disability, hearing, visual or speech disability and those with physical disability reported they only plan to have sex when they are married.

Pressure from others to engage in sexual intercourse is a significant issue in the field of Sexual and Reproductive Health (SRH). A small percentage from this study (9.3%) reported to be experiencing this pressure, 13.7% by youth with no disability, 7.8% of those with physical disability and as low as 2.7% from youth with hearing, visual or speech disability.

Table 15: Not having sex: Reasons, plan for sex and pressure

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
Never had sex	256	53.7	113	68.1	268	61.2	637	58.9
	I don't feel ready to have sex.							
Not applies	91	35.5	51	45.1	94	35.1	236	37.0
Applies	147	57.4	45	39.8	142	53.0	334	52.4
Don't know	18	7.0	17	15.0	32	11.9	67	10.5
	I have not had the opportunity.							
Not applies	141	55.1	66	58.4	120	44.8	327	51.3
Applies	97	37.9	30	26.5	113	42.2	240	37.7
Don't know	18	7.0	17	15.0	35	13.1	70	11.0
	I think that sex before marriage is wrong							
Not applies	77	30.1	42	37.2	70	26.1	189	29.7
Applies	156	60.9	54	47.8	160	59.7	370	58.1
Don't know	23	9.0	17	15.0	38	14.2	78	12.2
	I am afraid of getting pregnant							
Not applies	56	21.9	30	26.5	46	17.2	132	20.7
Applies	173	67.6	66	58.4	196	73.1	435	68.3
Don't know	27	10.5	17	15.0	26	9.7	70	11.0
	I am afraid of getting HIV/AIDS or another STI							
Not applies	39	15.2	29	25.7	37	13.8	105	16.5
Applies	188	73.4	68	60.2	206	76.9	462	72.5
Don't know	29	11.3	16	14.2	25	9.3	70	11.0
	Future plans about sexual intercourse							
Marriage	218	85.2	92	81.4	217	81.0	527	82.7
Engagement	25	9.8	8	7.1	25	9.3	58	9.1
Love	7	2.7	3	2.7	15	5.6	25	3.9
Opportunity	6	2.3	10	8.8	11	4.1	27	4.2
	Pressure from others to have sexual intercourse							
A great deal	35	13.7	3	2.7	21	7.8	59	9.3
A little	21	8.2	7	6.2	17	6.3	45	7.1
None	200	78.1	103	91.2	230	85.8	533	83.7
	Pressure to have sexual intercourse comes from							
Friends	50	89.3	10	100.0	30	78.9	90	86.5
Family members	5	8.9	0	0.0	5	13.2	10	9.6
Workmates/Classmates	5	8.9	2	20.0	7	18.4	14	13.5
Girl/Boyfriend	4	7.1	0	0.0	5	13.2	9	8.7
Others	3	5.4	1	10.0	1	2.6	5	4.8

4.4. Practices around of the adolescent and young persons around SRH

4.4.1. Dating

Adolescent and young persons with no disability reported more to have had someone whom they were sexually or emotionally attracted and whom they dated (66.7%). This was 53.2% of adolescent and young persons with physical disability and only 31.3% of hearing, visual or speech disability (table 16). At the time of study, 79.6%, 66.5% and 61.5% respectively of adolescent and young persons with no disability, hearing, visual or speech disability and those with physical disability that reported to have had a boy/girlfriend reported they the still had one. Almost everyone (96.5%) reported to have dated a single person. However, 5.8% of adolescent with hearing, visual or speech disability reported to have dated married persons. This was only reported by 2.5% of adolescent with no disability and 2.1% of those with physical disability.

The relationship of these young persons was reported as engagement to marriage (51.4%) and to might lead to marriage (29.4%). The adolescent and young persons with hearing, visual or speech disability were the highest to report their relationship as engaged to be married (71.2%) than their peers with physical disability (55.4%) and those with no disability (45.3%). Forty six percent (46.1%) of the study participants who entered into dating relationship reported to have had some physical contact of sexual nature. This was reported by 45.6% of adolescent and young persons with no disability, 44.2% of those with hearing, visual or speech disability, and 47.2% of physical disability.

Table 16: Practices around dating

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Have you ever had a girl/ boy friend?							
No	159	33.3	114	68.7	205	46.8	478	44.2
Yes	318	66.7	52	31.3	233	53.2	603	55.8
	Do you currently have a girl/boyfriend?							
No	65	20.4	20	38.5	78	33.5	163	27.0
Yes	253	79.6	32	61.5	155	66.5	440	73.0
	When you first fell in love, what was his/her marital status?							
Single	308	96.9	48	92.3	226	97.0	582	96.5
Married	8	2.5	3	5.8	5	2.1	16	2.7
Divorced	1	0.3	1	1.9	2	0.9	4	0.7

Widow	1	0.3	0	0.0	0	0.0	1	0.2
	How would you describe the relationship between you and your girl/ boyfriend							
Engaged to be married	144	45.3	37	71.2	129	55.4	310	51.4
Might lead to marriage	98	30.8	9	17.3	70	30.0	177	29.4
Casual	76	23.9	6	11.5	34	14.6	116	19.2
	Did you and your girl/boyfriend have any physical sexual kind of contact, such as touching, hugging or kissing?							
No	173	54.4	29	55.8	123	52.8	325	53.9
Yes	145	45.6	23	44.2	110	47.2	278	46.1

4.4.2. Sexual activity

Sexual activity among adolescents and young persons is a critical aspect of Sexual and Reproductive Health (SRH) issues. As these individuals navigate the transition from childhood to adulthood, they often encounter new experiences and challenges related to sexual activity. While these experiences can be a normal part of human development, they can also expose young persons to risks such as unwanted pregnancies and sexually transmitted infections (STIs).

4.4.3. First sex experience

At least 41.1% of the study partipants reported they have had sex. The percentage was lower in the adolescent with hearing, visual or speech disability (31.9%) than those with physical disability (38.8%), and higher in those with no disability (46.3%). First partners were mostly qualified as friends by the adolescent and young persons with no disability (51.6%) and physical disability (42.7%) compared to those with hearing, visual or speech disability. In contrast, these last qualified their first sexual partner mostly as neigbours (56.8%) compared to 36.4% for physical disability and 30.9% for those with no disability. About a half of respondents reported they had sex with partners older to them (50.7%) and this was predominant within all categories. Only 28.2% of the adolescent with no disability, 29.5% of those with hearing, visual or speech disability had their first sex swith partners of the same age. This was more reported by adolescent and young persons with physical disability (37.1%). Adolescent with hearing, visual or speech disability seemed to be the more to have had their first sex with partners younger than them (22.7%) compared to their peers with physical disability (16.8%) and with no disability (12.8%).

Adolescent and young persons with hearing, visual or speech disability were the least to have a consented sexual intercourse. While 48.9% of adolescent with no disability and 54.5% of those with physical disability reported both them and their sexual partners were willing to have sex, this was only 38.6% for adolescent with hearing, visual or speech disability. At least 20.5% of

these ones reported they were forced at their first sex, compared to 12.8% for those with no disability and 9.1% for the adolescent and young persons with physical disability.

Most of the adolescent and young persons that had sex reported their first sex experience was unexpected (61.1%), higly reported by the adolescent and young persons with no disability (64.4%) than those with hearing, visual or speech disability (56.8%) and than those of physical disability (58.0%). More than half (58.9%) reported they regret to have had sexual intercourse, mostly reported by adolescent and young persons with physical disability (60.8%) followed by those with no disability (59.0%), lastly by those with hearing, visual or speech disability (52.3%).

Table 17: First sex experience

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Ever had sex							
Never had sex	256	53.7	113	68.1	268	61.2	637	58.9
Had sex	221	46.3	53	31.9	170	38.8	444	41.1
	Describe the relationship with your first sexual partner							
Classmate	12	6.4	1	2.3	9	6.3	22	5.9
Employer	1	0.5	1	2.3	1	0.7	3	0.8
Family friend	1	0.5	0	0.0	1	0.7	2	0.5
Family member	5	2.7	0	0.0	7	4.9	12	3.2
Friend	97	51.6	13	29.5	61	42.7	171	45.6
Neighbour	58	30.9	25	56.8	52	36.4	135	36.0
Other	6	3.2	2	4.5	8	5.6	16	4.3
Service provider	4	2.1	1	2.3	2	1.4	7	1.9
Sex worker	3	1.6	1	2.3	0	0.0	4	1.1
Teacher	1	0.5	0	0.0	2	1.4	3	0.8
	Comparing your both ages, how can you describe your first sexual partner							
Older	107	56.9	19	43.2	64	44.8	190	50.7
Same age	53	28.2	13	29.5	53	37.1	119	31.7
Younger	24	12.8	10	22.7	24	16.8	58	15.5
Don't know	4	2.1	2	4.5	2	1.4	8	2.1
	With your first sexual partner, were you willing?							
Both willing	92	48.9	17	38.6	78	54.5	187	49.9
I forced	13	6.9	3	6.8	10	7.0	26	6.9
I persuaded	11	5.9	3	6.8	13	9.1	27	7.2
I was forced	24	12.8	9	20.5	13	9.1	46	12.3

I was gifted	6	3.2	3	6.8	7	4.9	16	4.3
I was persuaded	42	22.3	9	20.5	22	15.4	73	19.5
	Can you say it was planned or it happened suddenly?							
Planned	67	35.6	19	43.2	60	42.0	146	38.9
Unexpected	121	64.4	25	56.8	83	58.0	229	61.1
	Did you regret it when you had your first sexual intercourse?							
No	77	41.0	21	47.7	56	39.2	154	41.1
Yes	111	59.0	23	52.3	87	60.8	221	58.9

4.4.4.Age at first sex

The median age for first intercourse was 18 years (SD: 2.7 yrs) for adolescent and young persons with no disability, 18 years (SD: 4.2yrs) for those with hearing, visual or speech disability and 19 years (SD: 3.7yrs) for physical disability (table 18).

Adolescents and young persons with disabilities engage in sexual intercourse earlier than their peers without disabilities. By age 15, 7.7% of adolescent with hearing, visual or speech disability, and 3.8 % of those with physical disability reported to have had sexual intercourse (Fig 1). Overall, 23.3% of the study participants who were aged 18 years had experienced sexual intercourse. This was high in adolescent and young persons with hearing, visual or speech disability (39.3%) compared to 23.1% for those with no disability and 13.6% for physical disability.

The proportion of adolescent and young persons who had sexual intercourse was comparable between those with and without disabilities aged 20 years. This was reported by 41.0% overall, 37.5% by adolescent and young persons with hearing, visual or speech disability, 40.3% by those with no disability and 44.2% with physical disability. The proportion of the adolescents and young persons without disability who had sex outweighted those with disabilities in those aged 24 years. This was reported by 72.9% of them compared to 67.2% among those with physical disability and 42.9% among those with hearing, visual or speech disability.

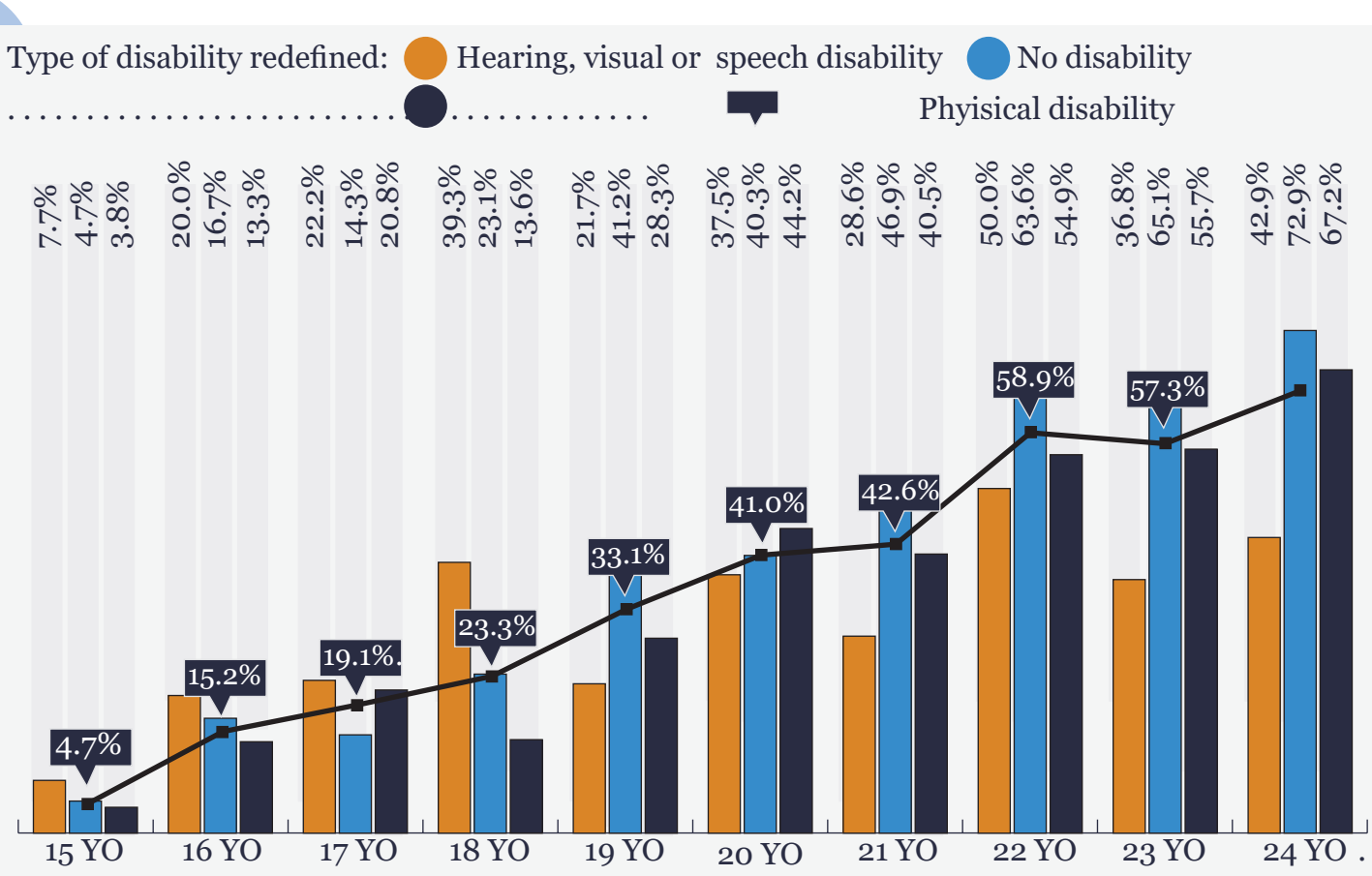

Figure 1: Proportion of adolescent who had sexual intercourse by age and type of disability

Table 18: Median age at first sexual intercourse

	Median	SD
No disability	18	2.7
Hearing, visual or Speech	18	4.2
Physical	19	3.7

4.5. Sexual risky behavior among adolescent and young persons

Sexual risky behavior refers to any sexual activity that increases the likelihood of acquiring or transmitting a sexually transmitted infection (STI) or an unwanted pregnancy. This study assessed the frequency of this behavior among the study participants, and compared adolescent with and without disabilities.

4.5.1. Prevalence of Sexual risky behavior

Even though adolescent and young persons with disability were less exposed to sexual activities compared to those without disabilities, they were more exposed to sexual risky behavior. While 53.2% of adolescent and young persons without disabilities reported to have used protection at their first sex, it was 44.1% of those with physical disability and 40.9% of those with hearing, visual or speech disabilities (Table 19).

Thirty six percent (36.2%) of adolescent and young persons without disabilities, 47.7% of hearing, visual or speech disabilities and 30.8% of physical disabilities reported to have had sex with non marital partner within 12 months preceeding the study (Table 20). Among these, 45.6% of the young persons without disability reported they always used protection, 34.1% by young persons with physical disability and only 28.6% of those with hearing, visual or speech disabilities

The use of protected sex for those who had one night stands after a party or after drinking, was rare among adolescent with hearing, visual or speech disabilities, with only 9.1%, compared to 26.1% among adolescent with physical disabilities and 36.4% among those without disabilities. Adolescent with physical disabilities seemed to be the highest to use protection for transactional sex (48.4%) than those without disabilities (29.3%), but adolescent and young persons with hearing, visual or speech disabilities were still the most at risk (14.3%).

There was no difference recorded however when it was about forced sex. Among the adolescent and young persons who reported to have been forced into sexual intercourse, 23.4%, 21.4% and 23.3% respectively of adolescent without disabilities, with hearing, visual or speech disabilities and those with physical disabilities reported to have used protection when it happened.

Table 19: Sexual risky behavior

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Ever had sex							
Never had sex	256	53.7	113	68.1	268	61.2	637	58.9
Had sex	221	46.3	53	31.9	170	38.8	444	41.1
	Had sex with non-marital partner in the last 12 months							
No	118	62.8	20	45.5	99	69.2	237	63.2
Yes	68	36.2	21	47.7	44	30.8	133	35.5
Didn't respond	2	1.1	3	6.8	0	0	5	1.3
	Forced to have sexual intercourse against their will							
No	413	86.6	152	91.6	395	90.2	960	88.8
Yes	64	13.4	14	8.4	43	9.8	121	11.2
	Ever had one night stands after a party or after drinking							
No	444	93.1	155	93.4	413	94.3	1012	93.6
Yes	33	6.9	11	6.6	25	5.7	69	6.4
	Paid money or gifts in exchange for sexual intercourse							
No	454	95.2	164	98.8	421	96.1	1039	96.1
Yes	23	4.8	2	1.2	17	3.9	42	3.9

	Received money or gifts in exchange for sexual intercourse							
No	443	92.9	160	96.4	414	94.5	1017	94.1
Yes	34	7.1	6	3.6	24	5.5	64	5.9

Table 20: Used protection to avoid unwanted pregnancy and STIs

		No disability		Hearing, visual or speech		Physical		Overall	
		n	%	n	%	n	%	n	%
First sex	Yes	100	53.2	18	40.9	63	44.1	181	48.3
	No	88	46.8	26	59.1	80	55.9	194	51.7
Sex with non marital	Always	31	45.6	6	28.6	15	34.1	52	39.1
	Sometimes	24	35.3	7	33.3	14	31.8	45	33.8
	Never	13	19.1	8	38.1	15	34.1	36	27.1
Forced sex	Always	15	23.4	3	21.4	10	23.3	28	23.1
	Sometimes	14	21.9	3	21.4	9	20.9	26	21.5
	Never	35	54.7	8	57.1	24	55.8	67	55.4
One night stand	Always	12	36.4	1	9.1	5	20	18	26.1
	Sometimes	15	45.5	7	63.6	6	24	28	40.6
	Never	6	18.2	3	27.3	14	56	23	33.3
Transactionnal sex	Always	12	29.3	1	14.3	15	48.4	28	35.4
	Sometimes	15	36.6	4	57.1	8	25.8	27	34.2
	Never	14	34.2	2	28.6	8	25.8	24	30.4

4.5.2. Factors influencing adolescent and young persons's sexual risky behavior

The study analyzed social demographic factors that might be influencing the sexual risky behaviors of adolescents and young persons. The analysis provided these factors when all study participants were considered together. Then, adolescents and young persons, with or without disabilities, were analyzed to assess if these factors were the same for both groups (Table 21).

Overall, the significant factors were gender, occupation, and the presence of parents in the household. Males were about 73% less likely than females to engage in risky behavior. Those in vocational occupations were about 0.177 times less likely to engage in risky behavior than

those in agriculture. Adolescents and young persons who do not live with parents were 3.9 times more likely to engage in risky sexual behavior than those who live with parents, and this was 3.7 times higher for orphans.

While age was not a statistically significant factor in determining engagement in risky behavior overall and for adolescents without disabilities, with each additional birthday, the chances of engaging in risky behavior go up by about 47.7% for adolescent and young persons with disabilities. Additionally, male adolescents and young persons with disabilities were 88% less likely to engage in sexual risky behavior than females. The gender factor was not found to be a determining factor of risky sexual behavior for adolescents and young persons without disabilities. Moreover, while the highest level of schooling was neither a significant factor overall nor for adolescents and young persons without disabilities, those who only completed 'O' level were 9.9 times more likely to engage in risky behavior than those who achieved a level above secondary school for adolescents and young persons with disabilities.

Table 21: Factors associated with sexual risky behavior

	Factors	All			Without disabilities			With disabilities		
		a OR	P>z	95% CI	a OR	P>z	95% CI	a OR	P>z	95% CI
	Age	1.093	0.424	[0.880 - 1.357]	0.790	0.304	[0.504 - 1.239]	1.477	0.045	[1.008 - 2.165]
Gender	Female	Ref.			Ref.			Ref.		
	Male	0.272	0.002	[0.117 - 0.631]	0.325	0.199	[0.058 - 1.804]	0.120	0.006	[0.026 - 0.547]
Highest level of schooling completed	Secondary and above	Ref.			Ref.			Ref.		
	Vocational	1.288	0.768	[0.240 - 6.920]	0.179	0.307	[0.007 - 4.836]	1.000		
	O'level	1.240	0.745	[0.339 - 4.535]	0.028	0.054	[0.001 - 1.060]	9.941	0.051	[0.989 - 99.951]
	Primary	1.107	0.857	[0.366 - 3.350]	0.078	0.078	[0.005 - 1.332]	2.899	0.238	[0.494 - 17.015]
	None	0.816	0.803	[0.165 - 4.046]	0.048	0.103	[0.001 - 1.845]	2.698	0.464	[0.189 - 38.447]

Wealth category (Ubudehe)	Cat 1	Ref.			Ref.			Ref.		
	Cat 2	1.903	0.352	[0.492 - 7.363]	2.671	0.464	[0.192 - 37.065]	2.131	0.515	[0.218 - 20.804]
	Cat 3	1.705	0.495	[0.368 - 7.892]	0.956	0.977	[0.042 - 21.708]	2.647	0.433	[0.232 - 30.178]
Religion	Catholic	Ref.			Ref.			Ref.		
	Protestant	1.448	0.384	[0.629 - 3.333]	1.776	0.521	[0.307 - 10.263]	1.522	0.553	[0.380 - 6.096]
	Muslim	0.208	0.279	[0.012 - 3.562]	0.046	0.188	[0.000 - 4.510]	1.000		
	None	1			1.000					
Ever worked for pay	No	Ref.			Ref.			Ref.		
	Yes	0.932	0.868	[0.405 - 2.142]	0.278	0.176	[0.044 - 1.777]	1.135	0.864	[0.264 - 4.883]
Occupation	Agriculture				Ref.			Ref.		
	Employed	0.498	0.343	[0.118 - 2.105]	0.019	0.083	[0.000 - 1.671]	1.707	0.646	[0.174 - 16.723]
	Casual	0.384	0.156	[0.102 - 1.440]	0.449	0.525	[0.038 - 5.285]	0.984	0.991	[0.068 - 14.304]
	Retailer	0.309	0.059	[0.091 - 1.049]	0.234	0.187	[0.027 - 2.029]	0.507	0.518	[0.064 - 3.989]
	Vocational	0.177	0.006	[0.051 - 0.608]	0.055	0.016	[0.005 - 0.577]	0.476	0.456	[0.0679 - 3.345]
Living with parents	Live with both parent	Ref.			Ref.			Ref.		
	Does not live with parents	3.939	0.032	[1.126 - 13.774]	4.009	0.306	[0.280 - 57.338]	2.528	0.358	[0.350 - 18.277]
	Live with father only	5.333	0.142	[0.571 - 49.852]	1.431	0.856	[0.030 - 67.958]	1.000		
	Live with mother only	1.139	0.827	[0.355 - 3.657]	1.434	0.768	[0.1304 - 15.764]	1.404	0.711	[0.233 - 8.447]
	Orphans	3.704	0.049	[1.005 - 13.645]	7.802	0.095	[0.702 - 86.721]	4.437	0.180	[0.503 - 39.153]
	Knowledge score	1.016	0.346	[0.983 - 1.049]	1.051	0.121	[0.987 - 1.119]	1.006	0.848	[0.951 _ 1.063]
	Attitude score	0.990	0.454	[0.965 - 1.016]	0.991	0.719	[0.940 - 1.043]	0.989	0.657	[0.943 _ 1.038]

4.6. Prevalence of contraceptive use, unintended pregnancies, and sexually transmitted infections (STIs) among adolescents and young persons

Overall, 9.7% of the adolescent and young persons interviewed started child bearing, 10.9% among adolescent and young persons without disabilities, 9.6% among those with physical disabilities and 6.6% among those with hearing, visual or speech disabilities. Seventy two percent (72.4%) had an unwanted pregnancy, 71.2% among adolescent and young persons without disabilities, 72.7% among those with hearing, visual or speech disabilities and 73.8% among those with physical disabilities. The prevalence of STIs within 12 months preceeding the study was 11.1% among the non disabilities, 2.4% among hearing, visual or speech disabilities and 9.6% among physical disabilities. The use of contraception was reported by 28.3% of adolescent and young persons with disabilities, 19.9% of those with hearing, visual or speech disabilities and 24.2% of those with physical disabilities.

Table 22: Prevalence of contraceptive use, unintended pregnancies and STIs

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Ever been pregnant							
Yes	52	10.9	11	6.6	42	9.6	105	9.7
No	425	89.1	155	93.4	396	90.4	976	90.3
Total	477	100	166	100	438	100	1081	100
	Prevalence of pregnancy among those who had sex							
Yes	52	23.5	11	20.8	42	24.7	105	23.6
No	169	76.5	42	79.2	128	75.3	339	76.4
Total	221	100	53	100	170	100	444	100
	Recent pregnancy wanted							
Unwanted	37	71.2	8	72.7	31	73.8	76	72.4
Wanted	15	28.8	3	27.3	11	26.2	29	27.6
Total	52	100	11	100	42	100	105	100
	Contracted an STI in the last 12 months							
No	424	88.9	162	97.6	396	90.4	982	90.8
Yes	53	11.1	4	2.4	42	9.6	99	9.2
Total	477	100	166	100	438	100	1081	100
	Prevalence of STIs among those who had sex							
Yes	53	24	4	7.5	42	24.7	99	22.3
No	168	76	49	92.5	128	75.3	345	77.7
Total	221	100	53	100	170	100	444	100
	Use of contraceptive							

Yes	135	28.3	33	19.9	106	24.2	274	25.3
No	342	71.7	133	80.1	332	75.8	807	74.7
Total	477	100	166	100	438	100	1081	100
	Use of contraceptive among those who had sex							
Yes	135	61.1	33	62.3	106	62.4	274	61.7
No	86	38.9	20	37.7	64	37.6	170	38.3
Total	221	100	53	100	170	100	444	100

Though adolescent and young with disabilities seemed to have been less getting pregnant or attracting STIs, when those who had sex were isolated from the one who never had sex, the difference between adolescent with and without disability was more comparable. Twenty three percent (23.5%) of adolescent and young persons without disabilities who ever had sex, have been pregnant. This was 23.6% among adolescent and young persons with physical disabilities and 20.8% of those with hearing, visual or speech disabilities. The prevalence of STIs was 24.0% among the adolescent and young persons without disabilities, 24.7% among those with physical disabilities and 7.5% among those with hearing, visual or speech disabilities. Additionnaly, 61.1%, 62.3% and 62.4% respectively of adolescent without disabilities, with hearing, visual or speech disabilities and those with physical disabilities that ever had sex, reported to have ever used contraception.

4.7. Utilization of sexual reproductive health services

Sexual and reproductive health (SRH) is an essential aspect of the well-being of adolescents and young persons. However, many barriers prevent them from accessing and utilizing SRH services, such as stigma, discrimination, lack of information, and cost. Overall only 28.1% of the adolescent and young persons involved in the study reported to have ever used SRH services.

Adolescent with disabilities were the least to use the services than those without disabilities. Only one in five (19.9%) of adolescent with hearing, visual or speech disability ever used SRH services, compared to one in four (25.1%) of those with physical disabilities and at least one in three (33.8%) of the adolescent and young of persons without disabilities. Of those who utilized SRH services, 57.8% of adolescent without disabilities received education about reproductive health, against 48.5% of those with hearing, visual or speech disabilities and 44.5% of physical disabilities. Family planning counselling was received by 44.7% of adolescent and young persons without disabilities, 41.8% of those with physical disabilities and 36.4% of those with hearing, visual or speech disabilities. Other services received included circumcision (26.0%), Safe abortion, HIV and STIs prevention (22%), GBV (19.7%), Maternal and newborn care (15.8%) and consultation for reproductive health cancers (9.5%).

Table 23: Utilization of SRH services

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Ever used reproductive health services							
No	316	66.2	133	80.1	328	74.9	777	71.9
Yes	161	33.8	33	19.9	110	25.1	304	28.1
	Utilized reproductive health services							
Education about reproductive health	93	57.8	16	48.5	49	44.5	158	52.0
Counselling about FP	72	44.7	12	36.4	46	41.8	130	42.8
Circumcision	37	23.0	12	36.4	30	27.3	79	26.0
Safe abortion, HIV and STIs prevention	33	20.5	10	30.3	24	21.8	67	22.0
Sexual GBV	33	20.5	8	24.2	19	17.3	60	19.7
Maternal and Newborn care	24	14.9	6	18.2	18	16.4	48	15.8
Prevention and consultation for reproductive system cancers	13	8.1	6	18.2	10	9.1	29	9.5
Other	6	3.7	2	6.1	1	0.9	9	3.0

4.8. Factors limiting the utilization of SRH services

Adolescents and young persons, both with and without disabilities, who participated in the study reported that the cost of services was not a common factor limiting access to SRH services (9.3%). The similar results were reported by adolescents with disability in the focus group discussion and interviewed healthcare providers.

Adolescents with no disability had greater prevalence of STI than those with no disability

Those with Hearing, visual or speech disability used contraceptives the least (19.9%)

35.8% of respodents with disability said distance to HF as main barriers to SRH services utilization

Respodents with disability were more challenged by social norms for SRH services utilization

I am aware that SRH services are accessed for free at health center, for example if I need condom, or emergency contraceptive I can get for fee at any health center, therefore this is not a barrier to us.
(Adolescent with physical disability, Nyarugenge District).

Sexual reproductive health services are free of charge at this health center, we provide condoms, contraceptives, HIV testing to adolescents and young persons without any cost we even not ask them mutual".
(A nurse in charge of youth corner, Ruhango District)

Reproductive health services provided at health center including condoms, reproductive health counseling, family planning/contraceptive pills/condoms, information about body changes.
(Health care provider, Kayonza District)

However, adolescent with disabilities reported to experience a number of barriers compared to those with no disabilities. These included distance to health facilities reported by 41.6% of persons with hearing, visual or speech disabilities, 28.8% of those with physical disabilities and 15.7% of those without disabilities.

Distance to health facility that offer SRH services as identified as a barrier to access the services among adolescents and youth persons with disability.

There is a barrier in reaching health facilities that provide SRH services, the risk sexual behavior, sexual violence, and unplanned pregnancies we are currently facing are mostly due to the lack of SRH information. Additionally, our parents are lacking sexual reproductive health knowledge, and do not have enough time to talk to us about sexual reproductive topics.
(A female adolescent with visual disability, Kayonza District)

Most of SRH related information, services are offered at health facility or during the campaign (... at cell or sector offices) and become difficulty for some adolescent and youth persons with disability to reach there, due to long travel distance and lack of transportation facilities"
(A representative of persons with disability, Gicumbi District).

Adolescent girl with hearing impairment in a focus group discussion said:

> ***I face the challenges of reaching health facility. For example, I live far from the health centre and I feel that I need more trusted information about sexual reproductive health at health facility and I do not have money for transport***
> **(A girl with hearing impairment, Ruhango District)**

> ***...Yes, as you can see our health center is at the top of the hill, with poor roads, I understand that it is very hard for adolescents and young persons with disability to reach here for SRH services. Maybe we need to find a way to reach them from their home or at school, because they need more SRH information"***
> **(A health care provider, Ruhango District).**

Additionally, 42.2% of youth with hearing, visual or speech disabilities reported the health infrastructures are not appropriate for persons with disabilities compared to 24.9% of those with physical disabilities. Dirty and disability unfriendly toilets at most of health centre present a special barrier to adolescents and young persons with disabilities.

This point was reported by a female participant who uses a wheelchair for mobility.

> ***The toilets are a health hazard ... you can die from using those toilets. They are sometimes dirty, not designed for us and that makes life very difficult for persons with disabilities. I didn't see any health center with well designed toilets dedicate to persons with disability***
> **(Adolescent in wheel chair, Gicumbi District).**

> ***I heard from my friends that some youth corners at health centers have screen TV where they display SRH information and videos/images that can teach us more about reproductive health, but due to my disability I cannot benefit from such information.***
> **(Adolescent with hearing and visual impairment, Nyamasheke District)**

Except for the above-mentioned barriers, all the others were not very differently reported by the adolescent and young persons without disabilities compared to those with physical disabilities. Nonetheless, the adolescent and young persons with hearing disabilities experienced more the difficulties compared to others. Thirty three percent (33.7%) of them reported they were not well received by health care providers compared to 16.2% reported by those with physical disabilities and 12.2% of those without disabilities.

Healthcare providers and teachers are not trained in the use of sign language and are claiming for sign language training courses to better communicate with persons with hearing impairment.

> ***It's difficult to discuss/communicate with persons with hearing impairment by using sign language about reproductive health topics because we are not well trained to that language, most of the time they come with an interpreter where sometimes may affect the confidentiality***
> **(Health care provider, Kayonza district).**

Most often healthcare provider communicates to the person with a disability through the third person instead of communicating directly with the person concerned due to not have skills on the use of sign language. This limits the extent to which a girl with disabilities could freely share confidential sexual and reproductive health information with health workers.

A young girl with hearing impairment expressed this sentiment:

> ***The last time I visited the health center for SRH services, I was aware that I might not receive the service I wanted. I went with my friend who knows sign language. Even though I was reluctant to let my friend know about the condition I was seeking treatment for, I had no other choice.***
> **(Adolescent girl with hearing Impairment, Nyarugenge District).**

Self-marginalization was reported by 33.1% of hearing, visual or speech disabilities, 15.1% of physical disabilities and 12.6% of those without disabilities. Discrimination, stigma, and negative cultural beliefs about persons with disabilities were identified as barrier to access SRH services.

> ***Adolescent and young persons with disability don't have information about reproductive health or they have wrong information from their peers and this is because they are not aware about SRH services available at health center. Some of them don't like to come at health centre because of they don't want be with other adolescents without disability.***
> **(A Healthcare provider, Kayonza District).**

> ***Problems persons with disabilities are facing on sexual reproductive health are not knowing their maturity period due to not having enough information about their bodies and all of this are being results of late to attend school.***
> **(Adolescent with visual disability, Ruhango District)**

Marginalization by other persons was reported by 36.1% of the hearing, visual or speech disabilities, 18% of physical disabilities and 12.6% of the youth without disabilities. In addition, fear of being judged by the health care providers was reported by 31.9% of the

adolescent with hearing, visual or speech disabilities, 17.6% of physical disabilities and 17.8% of no disabilities.

A barrier identified by young persons with disabilities in terms of accessing SRH services was the fear of provider attitudes, fear of being stigmatized and fear of not having privacy while seeking the services. Women with deafness highlighted that their biggest challenge was nurses who understood sign language

During the focus group discussion, a deaf adolescent said that

> ***I remember the time I visited health centre to seek for SRH services, I was made to write what I wanted. Then a nurse complained that they could not understand what I had written. The whole thing ended up being a drama because more than 2 nurses were called to help. I felt very embarrassed and I do not wish to visit that health center again***
>
> **(An adolescent with hearing impairement, Nyamasheke District).**

Moreover, 35.5% reported fear of judgement from other persons, 22.4% of physical disability and 20.3% of no disabilities. Finally, 43.4% of the hearing, visual or speech disabilities reported it was difficult for them to seek SRH services compared to 19.9% of physical disabilities and 19.7% of those without disabilities.

Table 24: Factors hindiring the use of SRH services

	No disability		Hearing, visual or speech		Physical		Total	
	n	%	n	%	n	%	N	%
	Factors hindering the use services							
Cost of services	39	8.2	14	8.4	48	11.0	101	9.3
Distance to HF	75	15.7	69	41.6	126	28.8	270	25.0
Health facility infrastructure is not appropriate for persons with disabilties	-	-	70	42.2	109	24.9	179	29.6
I was not well received by HCP	58	12.2	56	33.7	71	16.2	185	17.1
Self marginalisation	60	12.6	55	33.1	66	15.1	181	16.7
Marginalisation by other persons	60	12.6	60	36.1	79	18.0	199	18.4
Fear of HCP judgement on me	85	17.8	53	31.9	77	17.6	215	19.9
Fear of other persons judgement on me	97	20.3	59	35.5	98	22.4	254	23.5
It's difficult for me to seek for those services	94	19.7	72	43.4	87	19.9	253	23.4
Other	26	5.5	15	9.0	39	8.9	80	7.4

Conclusion

The study reveals that adolescents with disabilities face significant challenges compared to their non-disabled counterparts. They scored lower in the study, were less exposed to sexual activities, but more exposed to risky sexual behavior. They also reported lower use of protection at their first sexual encounter. Factors such as gender, occupation, and the presence of parents in the household were significant in determining engagement in risky behavior. Adolescents with disabilities also reported lower rates of childbearing, but a higher percentage had an unwanted pregnancy. The prevalence of STIs was higher among the non-disabled, while the use of contraception was lower among those with disabilities. Access to SRH services was also lower for adolescents with disabilities, who reported numerous barriers including distance to health facilities, inappropriate health infrastructures, unfriendly health care providers, self-marginalization, fear of judgment, and lack of appropriate information. These findings underscore the need for targeted interventions to address the unique challenges faced by adolescents with disabilities.

Recommendations

Accessible Information: Ensure that sexual and reproductive health information is accessible to all. This could involve providing information in braille or large print for those with visual impairments, using sign language or visual aids for those with hearing impairments, and ensuring digital resources are accessible to those with various impairments.

Specific training for Health Providers: Health providers should receive training to effectively communicate with and treat individuals with various impairments. This includes understanding how to use sign language or other communication aids, and being sensitive to the unique needs and experiences of these individuals. The training should also be focusing on the Interpersonal communication and HCPs to improve their behavior and attitudes towards adolescents with disabilities. Additionnaly the training materials should be made available online given credit for HCPs continuous professionl development and encourage them to take the course and refesh on annual basis. To ensure sustainability of the change, the advocacy should be made to include sign language and disability inclusion in pre-service education for medical and health sciences students.

Empower parents and teachers: While mothers and teachers were also reported as preferred source of information, parents and teachers reported lack of confidence when it comes to discussing sexuality with children and especially with young persons who have disabilities. To address this issue, it is crucial to provide comprehensive training programs and accessible resources to equip them with the necessary knowledge and skills to have open and honest conversations about sexuality with young persons with disabilities.

Inclusive Sexual Education: Sexual education programs should be inclusive and take into account the diverse needs of adolescent and young persons with disabilities. This includes

ensuring that content is accessible and relevant to adolescent and young persons with various impairments.

Peer Support and Counseling: Adolescents and young persons with disabilities might benefit from peer support groups or counseling services where they can share experiences, ask questions, and receive advice in a safe and supportive environment.

Policy and Advocacy: While the law, policies and guidelines clearly state the inclusiveness and removal of barriers to access the SRH information and services, the implementation is not enough enforced. Advocate for policies that ensure the rights of individuals with impairments to sexual and reproductive health information and services. This can includes laws that mandate the accessibility of health services and information.

Inclusive implementing partners: Different stakeholders working on SRHR have a blind spot for persons with disabilities. Encourage NGOs working on SRHR to include persons with disabilities in their programming. This could involve partnerships with disability organizations and inclusive policies

Collaboration with Disability Organizations: Collaborate with organizations that specialize in working with individuals with impairments. These organizations can provide valuable insights, resources, and support, especially on addressing the significant lack of training materials as well as contextual and culturally appropriate accessible information, the adaptation of SRH messages, counselling and training materials into appropriate formats, training and support in disability inclusiveness, communication etc.

Change societal prejudices and perceptions: Lack of acceptability and misguided beliefs and social prejudices are prevalent regarding SRHR needs of disabled youth. This may lead to young persons with disabilities are easy targets of sexual violence. There should be SBC interventions to address this societal gap using various SBC channels.

Integrate disability inclusiveness in youth services: advocate and work towards ensuring that when making a health centre youth-friendly, make sure it is also disability-inclusive and gender-sensitive.

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Appendices

Questionnaires

Determining sexual and reproductive health issues among adolescents and young people with disabilities in selected districts of Rwanda

A. Demographics

District

- ◯ Gicumbi
- ◯ Kayonza
- ◯ Nyamasheke
- ◯ Nyarugenge
- ◯ Ruhango

Date of interview

yyyy-mm-dd _____

_____

Name of data collector

Hitamo izina ryawe

Participant number

Igizwe nimpine zamazina yubaza; ingombajwi ebyiri za mbere zitangira izina ryakarere, niya nyuma (hatarimo inyajwi); kongeraho umubare w'abo umaze kubaza muri ako karere.
Urugero. Niba Kayijamahe Jerome ari gukorera muri Nyarugenge, urugo rwa 7 agezemo numero yúrugo ni: KJNYG007

_____

Age

_____

» Consent

Did participant sign consent?

- ◯ Yes
- ◯ No

If the participant is below 18, did both parents and particpant consent?

- ◯ Yes
- ◯ No

If no consent is provided end the interview here

_____

» Continue if consent provided

Gender

- ◯ Male
- ◯ Female

Do participant have disability?

- ◯ Yes
- ◯ No

Type of disability

Ibisubizo byinshi birashoboka

- ☐ Physical disability
- ☐ Blind
- ☐ Deaf
- ☐ Speech impairement
- ☐ Other

Specify others

_____

Have you ever attended school

- ◯ Yes
- ◯ No

What is the highest level of schooling you completed?

- ◯ None
- ◯ Primary
- ◯ Vocational
- ◯ O Level
- ◯ Secondary
- ◯ Tertiary

What is your health insurance scheme

- ◯ CBHI
- ◯ RAMA
- ◯ MMI
- ◯ FARG
- ◯ Other private insurance
- ◯ None

Marital status

- ◯ Single
- ◯ Married
- ◯ Divorced
- ◯ Widdow

Wealth category

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ Don't know

Religion

- ◯ None
- ◯ Catholic
- ◯ Protestant (ADPR, Anglican, Adventist, etc)
- ◯ Muslim
- ◯ Traditional

How is religion important to you?

- ◯ Very Important
- ◯ Important
- ◯ Not important

Have you ever worked for pay?

- ◯ Yes
- ◯ No

How old were you when you started working for pay?

_____

Are you currently working or have an income generating activity?

- ◯ Yes
- ◯ No

What type of work do you do?

- Agriculture
- small retailer
- Trading
- employed
- Casual
- Other

How much do (did) you earn in a month?

Niba ari umuhinzi aragereranya ayo abona yose iyo yagurishije ku gihembwe, hanyuma ugabanye gatatu

- Less than 30,000 Rwf
- 30,000 Rwf to 60,000 Rwf
- 60,000 Rwf to 100,000 Rwf
- 100,000 Rwf to 200,000 Rwf
- Over 200,000 Rwf

Is your father alive?

- Yes
- No

Does he live in the same household as you

- Yes
- No

Do you find it difficult or easy to talk with your father about things that are important to you?

- Very easy
- Easy
- Average
- Hard
- Very Hard
- Don't see him/her

Have you ever discussed sex-related matters with your father? If YES Often or occasionally?

- Often
- Occasionally
- Never

Is your mother alive?

- Yes
- No

Does she live in the same household as you?

- Yes
- No

Do you find it difficult or easy to talk with your mother about things that are important to you?

- Very easy
- Easy
- Average
- Hard
- Very Hard
- Don't see him/her

Have you ever discussed sex-related matters with your mother? If YES Often or occasionally?

- Often
- Occasionally
- Never

Do you ever drink alcohol?

- Yes
- No

IF YES. On how many days in the last month have you drunk alcohol?

_____

Do you ever smoke cigarettes?

- Yes
- No

IF YES. How many have you smoked in the last 7 days?

_____

» » Sources of information on, and knowledge of reproductive health

» » » Young people learn about puberty - I mean the ways in which boys' and girls' bodies change during the teenage years - from many sources. They may learn from teachers at school, parents, brothers and sisters, from friends, from doctors or they may learn from books, films and magazines.

What has been the most important source of information for you on this topic?

- ◯ School teacher
- ◯ Mother
- ◯ Father
- ◯ Other family member
- ◯ Peers
- ◯ Health care provider
- ◯ CHW
- ◯ peer educator
- ◯ Radio
- ◯ Film
- ◯ Books/Magazines
- ◯ Online platfrom
- ◯ Youth clubs
- ◯ Campaigns
- ◯ School course
- ◯ Other

And the second most important?

- ○ School teacher
- ○ Mother
- ○ Father
- ○ Other family member
- ○ Peers
- ○ Health care provider
- ○ CHW
- ○ peer educator
- ○ Radio
- ○ Film
- ○ Books/Magazines
- ○ Online platfrom
- ○ Youth clubs
- ○ Campaigns
- ○ School course
- ○ Other

From whom, or where, would you prefer to have received more information on this topic?

Ibisubizo byinshi birashoboka

- ☐ School teacher
- ☐ Mother
- ☐ Father
- ☐ Other family member
- ☐ Peers
- ☐ Health care provider
- ☐ CHW
- ☐ peer educator
- ☐ Radio
- ☐ Film
- ☐ Books/Magazines
- ☐ Online platfrom
- ☐ Youth clubs
- ☐ Campaigns
- ☐ School course
- ☐ Other

» » » Now I want to ask you a similar question about sources of information on the sexual and reproductive systems of men and women - I mean where eggs and sperm are made and how pregnancy occurs.

What has been the most important source of information for you on this topic?

- ○ School teacher
- ○ Mother
- ○ Father
- ○ Other family member
- ○ Peers
- ○ Health care provider
- ○ CHW
- ○ peer educator
- ○ Radio
- ○ Film
- ○ Books/Magazines
- ○ Online platfrom
- ○ Youth clubs
- ○ Campaigns
- ○ School course
- ○ Other

And the second most important?

- ○ School teacher
- ○ Mother
- ○ Father
- ○ Other family member
- ○ Peers
- ○ Health care provider
- ○ CHW
- ○ peer educator
- ○ Radio
- ○ Film
- ○ Books/Magazines
- ○ Online platfrom
- ○ Youth clubs
- ○ Campaigns
- ○ School course
- ○ Other

From whom, or where, would you prefer to have received more information on this topic?

Ibisubizo byinshi birashoboka

- ☐ School teacher
- ☐ Mother
- ☐ Father
- ☐ Other family member
- ☐ Peers
- ☐ Health care provider
- ☐ CHW
- ☐ peer educator
- ☐ Radio
- ☐ Film
- ☐ Books/Magazines
- ☐ Online platfrom
- ☐ Youth clubs
- ☐ Campaigns
- ☐ School course
- ☐ Other

» » » Now there is a third similar question about sources of information on relationships - I mean how boys should treat girls and vice versa.

What has been the most important source of information for you on this topic?

- ○ School teacher
- ○ Mother
- ○ Father
- ○ Other family member
- ○ Peers
- ○ Health care provider
- ○ CHW
- ○ peer educator
- ○ Radio
- ○ Film
- ○ Books/Magazines
- ○ Online platfrom
- ○ Youth clubs
- ○ Campaigns
- ○ School course
- ○ Other

And the second most important?

- ○ School teacher
- ○ Mother
- ○ Father
- ○ Other family member
- ○ Peers
- ○ Health care provider
- ○ CHW
- ○ peer educator
- ○ Radio
- ○ Film
- ○ Books/Magazines
- ○ Online platfrom
- ○ Youth clubs
- ○ Campaigns
- ○ School course
- ○ Other

From whom, or where, would you prefer to have received more information on this topic?
Ibisubizo byinshi birashoboka

- [ ] School teacher
- [ ] Mother
- [ ] Father
- [ ] Other family member
- [ ] Peers
- [ ] Health care provider
- [ ] CHW
- [ ] peer educator
- [ ] Radio
- [ ] Film
- [ ] Books/Magazines
- [ ] Online platfrom
- [ ] Youth clubs
- [ ] Campaigns
- [ ] School course
- [ ] Other

Some schools have classes on puberty, on sexual and reproductive systems and on relationships between boys and girls. Did you ever attend school classes on any of these topics?

- ( ) Yes
- ( ) No
- ( ) Not sure

Do you think that there should be (more) classes on these topics, fewer classes or were the number about right?

- ( ) More
- ( ) Less
- ( ) About right
- ( ) Don't know

Do you consider yourself to have enough information on sexual reproductive health?

- ( ) Yes
- ( ) No

» » Now I have some other questions on sex and reproduction. I will read you some statements. Please tell me whether you think the statement is true, or false, or whether you don't know

A woman can get pregnant on the very first time that she has sexual intercourse

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

A woman/girl is most likely to get pregnant if she has sexual intercourse during her period

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

A woman stops growing after she has had sexual intercourse for the first time.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

An adolescent have right to use methods preventing unwanted pregancies

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

An adolescent shall inform parents/guardian when she/he is about to have the first sexual intercourse

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

A woman/girl is most likely to get pregnant if she has sexual intercourse half way between her periods.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

A 12-year-old boy who had a wet dream(ejaculation) can impregnant a girl.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

fascial scars get cured when doing sexual intercourse

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

an adolescent girl develop breast when she does intercourse

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

doing sexual intercourse limit the pain during menses

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

doing intercourse helps to have big butts

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Masturbation causes serious damage to health.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Have you ever had a girl/ boy friend? By girl/boy friend, I mean someone to whom you were sexually or emotionally attracted and whom you 'dated'

- ◯ Yes
- ◯ No

How many girl / boy friends have you had?

_____

Do you have a girl/boyfriend now?

- ◯ Yes
- ◯ No

How old is your current or ex boy/girl friend

_____

When you started your relationship, was she/he single, married, divorced or separated?

- ◯ Single
- ◯ Married
- ◯ Divorced
- ◯ Widdow

When you started you relationship, was he/she a full time student, working or neither?

- Full time student
- Agriculture
- small retailer
- Trading
- employed
- Casual
- Other
- None

How would you describe your relationship?

- Casual
- Serious
- Important/might lead to marriage
- Engaged to be married

Did you have any sexual related physical contact, such as holding hands, hugging or kissing?

- Yes
- No

Have you ever had sexual intercourse?

- Yes
- No
- Didn't respond

How old were you when you had your first sexual intercourse

_____

What was your relationship with your first sexual partner?

- ○ Family member
- ○ Neigbhour
- ○ Classmate
- ○ School teacher
- ○ Service provider
- ○ Friend
- ○ Family friend
- ○ Employer
- ○ Prostitute
- ○ Other

Think back to the first time you had sex - I mean the first time that the penis was in the vagina, Would you say

Musomere ibisubizo ahitemo

- ○ I forced
- ○ I persuaded
- ○ I was persuaded
- ○ I was forced
- ○ I was gifted
- ○ Both willing

And would you say it was planned or unexpected?

- ○ Planned
- ○ Unexpected

Compared to you would say your first sexual partner was older, younger or same age as you?

Musomere ibisubizo ahitemo

- ○ Same age
- ○ Older
- ○ Younger
- ○ Don't know

Did you regret having intercourse with NAME on that first time?

- ○ Yes, regretted
- ○ No, not regretted

On that first time did you do anything to avoid a pregnancy and STIs?

- ○ Condom
- ○ Pill
- ○ Injection
- ○ Withdrawal
- ○ Safe period
- ○ None

In the last 12 months, have you had any sexual intercourse with non marital partner?

- ○ Yes
- ○ No
- ○ Didn't respond

If yes, what was your relationship with him/her?

Musomere ibisubizo ahitemo, kandi ibisubizo byinshi birashoboka

- ☐ Family member
- ☐ Neigbhour
- ☐ Classmate
- ☐ School teacher
- ☐ Service provider
- ☐ Friend
- ☐ Family friend
- ☐ Employer
- ☐ Prostitute
- ☐ Other

Every time you had sexual intercourse with non marital partner, have you used condom to avoid pregnancy and STIs?

- ○ Always
- ○ Sometimes
- ○ Never

Did you have any concern about getting HIV/STIs

- ○ Very concerned
- ○ Somewhat concerned
- ○ Not concerned

Did you do any thing to decrease chances of getting infected?

- ○ Yes
- ○ No

What did you do?
(muhitishemo)

- Use condoms
- Take medicines
- Other

» » Sexual contact

Some young people are forced to have sexual intercourse against their will by a stranger, a relative or an older person. Has this ever happened to you?

- Yes
- No

How many different strangers, relatives or older perons have forced you to have sex against your will?

_____

Did you or the sexual partner do anything to avoid a pregnancy or STIs on these occasions? IF YES Always or sometimes?

- Always
- Sometimes
- Never

Some young people/females are touched on the breast or some other part of the body when they do not want to be, by a stranger, a relative or an older person. Has this ever happened to you?

- Yes
- No

Would you say this has happened often, sometimes, or rarely?

- Often
- Sometimes
- Rarely

Some young people have 'one night stands' perhaps after a party or after drinking? Has this ever happened to you?

- Yes
- No

How many 'one night stands' have you had?

_____

Did you or the sexual partner do anything to avoid a pregnancy or STIs on these occasions? IF YES Always or sometimes?

- ◯ Always
- ◯ Sometimes
- ◯ Never

Some young people pay money or gifts in exchange for sexual intercourse. Has this ever happened to you?

- ◯ Yes
- ◯ No

Some you people receive money or gifts in exchange for sexual intercourse. Has this ever happened to you?

- ◯ Yes
- ◯ No

How many women/men have you had sex with for money or gifts?

_____

Did you or the sexual partner de anything to avoid a pregancy on these occasions? IF YES Always or sometimes?

- ◯ Always
- ◯ Sometimes
- ◯ Never

I want to make certain that I have the correct information. Have you ever had sexual intercourse in your whole life?
Niba atarigeze ayikora kanda kuri Oya

- ◯ Yes
- ◯ No

In your whole life how many people have you had sexual intercourse with?

_____

How long ago did you last have intercourse with a woman/man?
Niba ari mu byumweru tangiza 00 ubone gushyiraho ibyumweru bishize

_____

On that last occasion did you or your partner do anything to avoid pregnancy or STIs?

- ◯ Yes
- ◯ No

What methods were used?

- Condom
- Pill
- Injection
- Withdrawal
- Safe period
- None

Boys: Have you ever made someone pregnant?

- Yes
- No

If yes how many girls/women have you made pregnant?

_____

Girls? Have you ever been pregnant?

- Yes
- No

IF YES How many times?

_____

Thinking of the most recent pregnancy, did you want the pregnancy at that time or not want it?

- Unwanted
- Wanted

What happened to the (last) pregnancy?

- Currently pregnant
- Abortion/Miscarriage
- Live-birth
- No sure

» » THIS SECTION ONLY FOR THOSE WHO HAVE NEVER EXPERIENCED SEXUAL INTERCOURSE

» » » People may have mixed reasons for not having intercourse. I will read out some reasons. Please tell me for each reason whether it applies to you or not.

I don't feel ready to have sex.

- ○ Applies
- ○ Not applies
- ○ Don't Know/ Not Sure

I have not had the opportunity.

- ○ Applies
- ○ Not applies
- ○ Don't Know/ Not Sure

I think that sex before marriage is wrong

- ○ Applies
- ○ Not applies
- ○ Don't Know/ Not Sure

I am afraid of getting pregnant

- ○ Applies
- ○ Not applies
- ○ Don't Know/ Not Sure

I am afraid of getting HIV/AIDS or another sexually transmitted infection.

- ○ Applies
- ○ Not applies
- ○ Don't Know/ Not Sure

And now I have a question about your future plans about sexual intercourse. Which of these statement best describes your plans.

SOMA

- ○ Marriage
- ○ Engagement
- ○ Love
- ○ Opportunity

Do you feel any pressure from others to have sexual intercourse? IF YES A great deal or a little?

- ○ A great deal
- ○ A little
- ○ None

From whom do you feel pressure?

SHYIRA AKAZIGA AHO ABONA HOSE ARI BYO

- [ ] Friends
- [ ] Relatives
- [ ] Work colleagues
- [ ] Partner/special friend
- [ ] Other

» » Sexual behavior

» » » Young people have various views about relationships. I will read you out some views. For each one, please tell me whether you agree or disagree?

A boy will no LONGER respect a girl who agrees to have sex with him.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Most girls who have sex before marriage regret it afterwards

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Most boys who have sex before marriage regret it afterwards.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

I believe that girls should remain virgins until they marry

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

I believe that boys should remain virgins until they marry

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Abstinence is difficult for adolescents

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

I am confident that I can insist on condom use every time I have sex

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

I feel that I know how to use a condom properly

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

I would refuse to have sex with someone who does not agree to use a condom.

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

In the last six months, did you receive any sexual reproductive health information or messages?

- ◯ Yes
- ◯ No

What has been the most important source of information on this topic?

- [ ] Radio
- [ ] TV
- [ ] Billboards
- [ ] Fliers/Pumflets
- [ ] Film
- [ ] Cooperative
- [ ] Meeting
- [ ] School class
- [ ] Church
- [ ] School teacher
- [ ] Mother
- [ ] Father
- [ ] Other family members
- [ ] Peers
- [ ] Health care provider
- [ ] CHW
- [ ] Peer Educator
- [ ] Other

What was the content of the message(s)

- [ ] Body changes during adolescency
- [ ] Prevention of unwanted pregnancy
- [ ] Use of family planning methods
- [ ] Avoiding peer pressure
- [ ] Sexual transimitted Diseases
- [ ] Menstrual cycle
- [ ] Hygiene during menstrual cycle
- [ ] circumcision
- [ ] Other(specify)

have you ever heard about RH/FP among youth?

- ◯ Yes
- ◯ No

Do you know where you can get reproductive health services when you need them

- ◯ Yes
- ◯ No

If yes, where? [Do not read responses, record all mentioned]

- [ ] Health Facility
- [ ] CHWs
- [ ] Pharmacy
- [ ] Youth club
- [ ] Youth corner
- [ ] Other

Specify others

_____

What FP method do you know?

- [ ] Abstinence
- [ ] IUD INSERTION
- [ ] IMPLANTS
- [ ] INJECTABLES
- [ ] PILLS
- [ ] MALE CONDOM
- [ ] FEMALE CONDOM
- [ ] Natural method (including withdrawal, checking cervical mucus, checking body temperature, breastfeeding)
- [ ] CYCLE BEADS
- [ ] OTHER METHODS (SPECIFY)

Specify others

_____

What do you is the most suitable method for youth?

- [ ] Abstinence
- [ ] IUD INSERTION
- [ ] IMPLANTS
- [ ] INJECTABLES
- [ ] PILLS
- [ ] MALE CONDOM
- [ ] FEMALE CONDOM
- [ ] Natural method (including withdrawal, checking cervical mucus, checking body temperature, breastfeeding)
- [ ] CYCLE BEADS
- [ ] OTHER METHODS (SPECIFY)

Specify others

_____

Have you ever seen a condom

- ◯ Yes
- ◯ No

» » » Use of FP methods

Have you ever used family planing methods to prevent unwanted pregnancy?

- ◯ Yes
- ◯ No

If Yes, what family planing method have you used?

- ☐ Abstinence
- ☐ IUD INSERTION
- ☐ IMPLANTS
- ☐ INJECTABLES
- ☐ PILLS
- ☐ MALE CONDOM
- ☐ FEMALE CONDOM
- ☐ Natural method (including withdrawal, checking cervical mucus, checking body temperature, breastfeeding)
- ☐ CYCLE BEADS
- ☐ OTHER METHODS (SPECIFY)

Where did you receive this method?

- ☐ Health Facility
- ☐ CHWs
- ☐ Pharmacy
- ☐ Youth club
- ☐ Youth corner
- ☐ Other

How is it easier to get this family planning methods for adolescents?

- ◯ Very easy
- ◯ Less easy
- ◯ Not easy
- ◯ Don't know

» » » People have different opinions about condoms. I will read out some opinions. For each one, I want you to tell me whether you agree or disagree, or whether you don't know

A girl can suggest to her boyfriend that he use a condom

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

A boy can suggest to his girlfriend that he use a condom

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

It would be too embarrassing for someone like me to buy or obtain condoms

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

People would consider me as a prostitute if the see me buying condom

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

If a girl suggested using condoms to her partner, it would mean that she didn't trust him

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Condoms reduce sexual pleasure

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Condoms can slip off the man and disappear inside the woman's body

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Condoms are an effective method of preventing pregnancy

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Many of my friends don't trust the use of condom

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Condoms are an effective way of protecting against sexually transmitted diseases

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Condoms can be used more than once

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

I will be bothered to buy condom

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

If unmarried couples want to have sexual intercourse before marriage, they should use condoms

- ◯ TRUE
- ◯ FALSE
- ◯ Don't know

Are you in agreement with people using contraceptions to avoid pregnancy?

- ◯ Yes
- ◯ No
- ◯ Don't know

If you were married and not want to get pregnant, would you use contraceptions?

- ◯ Yes
- ◯ No
- ◯ Don't know

» » Knowledge of HIV/AIDS and sexually transmitted diseases

Have you heard of HIV or AIDS

- ◯ Yes
- ◯ No

» » » I am now going to read you some statements about HIV/AIDS. Please tell me whether you think the statement is true, or false, or whether you don't know.

It is possible to cure AIDS

- ◯ Yes
- ◯ No
- ◯ Don't know

A person with HIV always looks emaciated or unhealthy in some way

- ◯ Yes
- ◯ No
- ◯ Don't know

I can share food with an infected person

- ◯ Yes
- ◯ No
- ◯ Don't know

I can take care of a member of my family with HIV/AIDs

- ◯ Yes
- ◯ No
- ◯ Don't know

An HIV/AIDs infected student should be allowed to pursue his/her studies

- ◯ Yes
- ◯ No
- ◯ Don't know

I can buy food from an HIV/AIDs infected food seller

- ◯ Yes
- ◯ No
- ◯ Don't know

I would wish to keep secret of an HIV/AIDs infected member of my family

- ◯ Yes
- ◯ No
- ◯ Don't know

An HIV/AIDs infected mother can transmit HIV to their children during delivery

- ◯ Yes
- ◯ No
- ◯ Don't know

An HIV/AIDs infected mother can transmit HIV to their children during breastfeeding

- ◯ Yes
- ◯ No
- ◯ Don't know

Are aware of drugs that can limit maternal to child transmission of HIV/AIDs?

- ◯ Yes
- ◯ No
- ◯ Don't know

Are you away of lifetime drugs to treat HIV/AIDs

- ◯ Yes
- ◯ No
- ◯ Don't know

HIV/AIDs treatment drugs are taken as ealry as identified infected throughouth life

- ◯ Yes
- ◯ No
- ◯ Don't know

Apart from HIV/AIDS, there are other diseases that men and women can catch by having sexual intercourse. Have you heard of any of these diseases?

- ◯ Yes
- ◯ No

What are the signs and symptoms of a sexually transmitted disease in a man?

- ☐ Ulcers/sores in genital area
- ☐ Vaginal discharge
- ☐ Lowe abdomen pain
- ☐ Pus or bloody discharge
- ☐ Pain during sexual intercourse
- ☐ -
- ☐ Pain during urination

» » » Have you ever had any of the symptoms over the last 12 months?

Itchy genitals

- ◯ Yes
- ◯ No

Smelling discharge

- ◯ Yes
- ◯ No

Lower abdominal pain

- ◯ Yes
- ◯ No

Bloody or purulent discharge

- ◯ Yes
- ◯ No

Pain during sexual intercourse

- ◯ Yes
- ◯ No

Lumps around genitals,anus, mouth, oesophagus or hips

- ◯ Yes
- ◯ No

Pain when peeing

- ◯ Yes
- ◯ No

If you or a friend of yours needed treatment for a sexually transmitted disease, where could he or she obtain such treatment?

- ◯ Yes
- ◯ No

Where would you seek treatment services?

Ibisubizo byinshi birashoboka

- ☐ Health facility
- ☐ CHW
- ☐ Health provider's home
- ☐ Traditionnal healers
- ☐ Church
- ☐ Got medecines from friends
- ☐ Pharmacy
- ☐ Other

» » SRH Service utilization

Do you that you can get SRH services at you nearest health facility?

- ◯ Yes
- ◯ No

Which services can you get to your nearest facility?

- ☐ SRH education
- ☐ FP counselling
- ☐ ANC services
- ☐ STIs/HIV education
- ☐ GBV
- ☐ Sexual cancers prevention and treatment
- ☐ Circumcision
- ☐ Other

Have you ever used SRH services

- ◯ Yes
- ◯ No

Which ones did you use?

- ☐ SRH education
- ☐ FP counselling
- ☐ ANC services
- ☐ STIs/HIV education
- ☐ GBV
- ☐ Sexual cancers prevention and treatment
- ☐ Circumcision
- ☐ Other

Approximately, how may times did you seek these services in the last 12 months?

_____

What are the barriers you aor your friends experience when seeking SRH services?

_____

	Yes	No
Cost of services	◯	◯
Distance to health facility	◯	◯
Infrastructures and materials not friendly to disability	◯	◯

I was not well received by HCP	○	○
Self marginalisation	○	○
Marginalisation by other people	○	○
Fear of HCP judgement on me	○	○
Fear of other people judgement on me	○	○
It's difficult for me to seek for those services	○	○
Others	○	○

Appendix II. QUALITATIVE INTERVIEW GUIDES

In-depth Interview Guide with Adolescents with disabilities

1. As a young person with a disability, what are the most common sexual and reproductive health (SRH) issues that you encounter?

Probe:
- Could you share specific instances or experiences of how these issues affect your well-being, relationships, or aspirations?
- How do you cope with these challenges?

2. How do you currently access SRH services?

Probes:
- Are there specific facilities or resources that cater to your unique needs?
- If yes, how did you find out about them?
- what are their advantages?
- If no, what are the barriers or difficulties that prevent you from accessing them?

3. What changes could be implemented to make it easier for you, as a young person with a disability, to access SRH services?
Probes:
- Are there any particular services that would be helpful?
  - ◇ Think of need for more and adapted information, education, counseling, or referrals.
  - ◇ Now think of privacy, accessibility, or affordability

4. What factors encourage or discourage young boys and girls with disabilities from seeking services at local health facilities?
Probes:
- Can you provide examples of both positive and negative influences?
  - ◇ Think about support or stigma from your peers, family, or community
  - ◇ How about the quality and safety of the SRH services?

5. How can schools, healthcare providers, and community organizations better support young persons with disabilities in accessing SRH services?

Probe:
- Are there specific programs or initiatives that you think would be beneficial?
  - ◇ For example, do you need more awareness, advocacy, or empowerment?
  - ◇ Do you need more integration, inclusion, or participation?

6. What role do your parents, caregivers, and guardians play in supporting you in accessing SRH services?

Probes:

- Can you share some ways they have been helpful or could improve?
  - ◇ For instance, do they respect your autonomy and privacy or do they interfere with your decisions and choices?
  - ◇ Do they provide you with information and guidance or do they withhold or censor it?

7. What are some of the challenges that young persons with disabilities face when seeking reproductive health services?

Probe:

- Can you share any personal experiences or observations of how these challenges affect your health outcomes, rights, or opportunities?
- How do you overcome these obstacles?

8. What type of SRH services are available and considered most important to you as a young person with a disability?

Probes:

- Which services do you feel comfortable accessing from the health facility?
  - ◇ Talk about contraception, pregnancy care, abortion, STI testing and treatment, HIV prevention and care, gender-based violence prevention and response?

9. Have you ever visited a health facility for SRH services, where did you get the information about these services?

Probes:

- Was it from a reliable and credible source?
- How was your experience at the facility?
- Were you satisfied with the service delivery and quality?

10. Are there any socio-cultural taboos that hinder adolescents with disabilities from accessing

In-depth Interview Guide with parents/care takers

1. What are the most common sexual and reproductive health (SRH) issues that your adolescent or young person with a disability faces?
   - Probe: Can you provide specific examples or share personal experiences that highlight these issues?

2. What is your understanding of sexual and reproductive health services?
   - Probe: How do adolescents typically find information on SRH?
   - Probe: Where do adolescents usually go for help when they need an SRH service? Can you give examples?

3. What is your perception of some of the information that is conveyed to adolescents on SRH?
   - Probe: Are there any messages or sources of information that you think are particularly useful or problematic?

4. Can you identify socio-cultural factors, taboos, and customs that influence adolescent access to sexual and reproductive health information and services?
   - Probe: How do these factors affect their ability to access these services?

5. What are some of the services available for adolescents in the health facility?
   - Probe: What are some reasons that might prevent access to these services?
   - Probe: Are there any services that you think should not be provided to adolescents?
   - Probe: Do you believe parents should be involved in the SRH needs of adolescents? Can you elaborate on your views?

6. What are the biggest challenges you face in supporting your adolescent or young person with a disability in accessing SRH services?
   - Probe: Can you share specific examples or experiences that highlight these challenges?

7. How do you currently support your adolescent or young person with a disability in accessing SRH services?
   - Probe: Are there specific strategies or resources that have been helpful in this regard?

8. What would make it easier for you to support your adolescent or young person with a disability in accessing SRH services?
   - Probe: Are there any changes or improvements at home, school, health facility, or in the community that could facilitate this?

9. How can schools, healthcare providers, and community organizations better support you in supporting your adolescent or young person with a disability in accessing SRH services?
   - Probe: Are there specific programs, resources, or initiatives that would be beneficial?

In-depth Interview Guide with Healthcare workers

1. What are the most common SRH issues that you encounter when providing services to adolescents or young persons with disabilities?
   - Probe: Can you provide specific examples or share personal experiences?

2. How do you ensure that adolescents with disabilities can access the information they need about SRH?
   - Probe: What strategies or resources have you found to be effective?

3. What services are available for adolescents with disabilities at your health facility?
   - Probe: Are there any services that are particularly important or beneficial for this group?

4. What are the biggest challenges you face in providing SRH services to adolescents and young persons with disabilities?
   - Probe: Can you share specific examples or experiences?

5. How do you support adolescents and young persons with disabilities in accessing SRH services?
   - Probe: Are there specific strategies or resources that have been helpful?

6. What changes could improve your ability to support adolescents and young persons with disabilities in accessing SRH services?
   - Probe: Are there any changes or improvements that could be made at the facility or in the broader health system?

7. How can training for healthcare providers be improved to better support adolescents and young persons with disabilities in accessing SRH services?
   - Probe: Are there specific areas of training that would be beneficial?

8. What are the most common misconceptions about SRH issues among adolescents and young persons with disabilities, and how do these impact your ability to provide services?
   - Probe: Can you provide examples of these misconceptions?

In-depth interview guide for representative of the organizations of persons with disabilities :

1. What are the most common SRH issues faced by adolescents and young persons with disabilities in your community?
   - Probe: Can you provide specific examples or share personal experiences that highlight these issues?

2. How does your association support adolescents and young persons with disabilities in accessing SRH services?
   - Probe: Are there specific strategies or resources that have been helpful in this regard?

3. What are the biggest challenges your association faces in supporting adolescents and young persons with disabilities in accessing SRH services?
   - Probe: Can you share specific examples or experiences that highlight these challenges?

4. How can these challenges be addressed?
   - Probe: Are there any changes or improvements that could be made at home, school, health facility, or in the community that could facilitate this?

5. How can SRH education be made more accessible to adolescents and young persons with disabilities?
   - Probe: Are there specific programs, resources, or initiatives that would be beneficial?

6. What are the most effective ways to involve adolescents and young persons with disabilities in the design of SRH interventions?
   - Probe: Can you provide examples of successful involvement?

7. How can the voices of adolescents and young persons with disabilities be better represented in discussions about SRH issues?
   - Probe: Are there any specific strategies or resources that have been effective in amplifying their voices?

Key informant interview guide for Policy makers and implementers of SRH services:

1. What policies are currently in place to support the rights of adolescents and young persons with disabilities to access SRH services?
   - Probe: Could you provide examples of these policies?
   - Probe: How effective have these policies been in improving access to SRH services for adolescents and young persons with disabilities?

2. What are the policies related to SRH information and services among adolescents and youth?
   - Probe: Are there barriers and enablers to the implementation of these policies? Can you provide examples?

3. What are the Sexual and Reproductive Health (SRH) needs of adolescents and youths?
   - Probe: What are the barriers to the utilization of SRH services by adolescents? Can you share specific instances or experiences?
   - Probe: What are the myths, misconceptions, and perceptions that influence access to sexual and reproductive health information and services among young persons?

4. What are the biggest challenges in implementing policies that support the rights of adolescents and young persons with disabilities to access SRH services?
   - Probe: Can you share specific examples or experiences that highlight these challenges?

5. How can these challenges be addressed?
   - Probe: Are there any changes or improvements that could be made at a policy level or in the broader health system?

6. What are the opportunities and recommendations to improve and strengthen access and use of sexual and reproductive health services by adolescents and youths?
   - Probe: Are there specific programs, resources, or initiatives that would be beneficial?

7. Are young persons with disabilities involved in making decisions about their own sexual and reproductive health needs and services?
   - Probe: If so, how are they involved in this process? If not, why not?

8. What strategies is the country putting in place to overcome the challenges faced by young persons with disabilities related to sexual and reproductive health?
   - Probe: Could you provide examples of specific policies, programs, or initiatives?
   - Probe: How effective have these strategies been in improving access to sexual and reproductive health services for young persons with disabilities?

FGD Guide for adolescents

1. What are some of the prevalent health concerns among boys/girls with disabilities in this community?
   - Probe: Could you share specific instances or experiences that highlight these issues?
   - Probe: Who do the adolescents with disabilities typically discuss their issues on sexuality with? Are there specific individuals or resources they turn to?

2. What is your understanding of sexual and reproductive health services for young persons with disabilities?
   - Probe: Could you describe the range of services that are typically included?
   - Probe: Are there specific services that you believe are most important for adolescents with disabilities?

3. What are some of the services boys and girls with disabilities typically seek from healthcare providers?
   - Probe: Can you provide examples of the types of services they seek?
   - Probe: What are their perceptions about services at the local facilities? Are there any positive or negative perceptions that stand out?
   - Probe: What are some of the factors that influence young persons with disabilities or make it difficult for them in seeking services? Can you share specific examples or experiences?

4. What are some of the myths and beliefs that influence utilization of SRH services by adolescents' boys and girls with disabilities?
   - Probe: Can you provide examples of these myths and beliefs?
   - Probe: How do these myths and beliefs impact their ability to access these services?
   - Probe: How do boys and girls with disabilities make decisions on RH issues? Are there specific influences or considerations that guide their decision-making process?
   - Probe: Do boys and girls with disabilities receive the same treatment when they access services in this community? Can you share any observations or experiences?

5. If you were given an opportunity to design the perfect place for young men and women with disabilities to receive SRH services, what would this place look like?
   - Probe: Can you describe the features or characteristics that would make this place ideal for young men and women with disabilities?
   - Probe: What are your recommendations to strengthen sexual reproductive health services for adolescents with disabilities?