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Determinants of Adolescents' Awareness and Utilization of Sexual and Reproductive Health Services in Health Centers in Kicukiro District, Rwanda, 2025

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Abstract: **Despite ongoing interventions, many adolescents still face challenges in accessing and utilizing SRH services due to various socio-cultural, institutional, and personal constraints. Adolescent fertility rates remain high globally, particularly in Sub-Saharan Africa, necessitating further research to identify effective strategies for improving SRH service uptake. This research aims to investigate the factors influencing adolescents' awareness, perceptions, and use of SRH services in selected health centers within Kicukiro District, Rwanda. This study covered significant gaps in adolescents' knowledge and access to SRH services, with socio-cultural beliefs, stigma, and concerns about confidentiality emerging as key obstacles. Moreover, the availability of youth-friendly SRH services may be found to be inadequate, leading to reduced utilization. A cross-sectional research design was applied, utilizing structured questionnaires to gather quantitative data from adolescents, while key informant interviews with healthcare providers provided qualitative insights. The sample size was computed based on a 95% CI and the margin of error of 5%. SPSS software was used for data analysis like means, and percentages and inferential statistics. Among the respondents, 63.5% (n=244) had ever utilized SRH services, while 36.5% (n=140) had not. Utilization was significantly associated with age, gender, place of residence, and parental discussion on reproductive health (p<0.05). Adolescents aged 16-17 years (OR=2.64, 95% CI: 1.49-4.67) and 18-19 years (OR=2.93, 95% CI: 1.52-5.66) were more likely to use SRH services compared to those aged 13-15 years. Females were more likely to utilize services than males (OR=3.19, 95% CI: 2.00-5.10). Urban residents were more likely to access services compared to rural adolescents (OR=0.40, 95% CI: 0.21-0.78). Parental discussion on reproductive health significantly increased service utilization (OR=0.38, 95% CI: 0.22-0.64). Utilization was also more likely when SRH services were well-known and viewed favorably. According to the study, adolescents in Kicukiro District had a moderate level of awareness of SRH services but a comparatively high consumption rate. Key determinants of utilization included age, gender, urban residence, parental discussion, and positive attitude towards SRH services. Interventions to improve adolescent SRH service utilization should focus on enhancing parental engagement, targeting younger adolescents, promoting positive attitudes, and addressing barriers in rural areas. Health education programs should be strengthened in schools and communities to increase awareness and access to youth-friendly SRH services.**

Keywords: **(MeSH): Reproductive Health Services, Adolescents, Utilization of Sexual.**

1. INTRODUCTION

This chapter introduces the study by providing contextual background, identifying the core research issue, stating the main goals and guiding questions, justifying the study's relevance, recognizing its limitations, and detailing the organization of the report. Around the world, 1.3 billion people, or 16% of the total population, are young people (ages 10 to 19). Approximately 90% of these teenagers live in low- and middle-income nations (National Institutes of Health, 2023). Although overall adolescent death rates have decreased, fostering their health and well-being is still a top priority worldwide

since this age group is essential to a sustainable future. Rapid emotional, physical, and psychological changes occur during adolescence, necessitating social assistance. Teenagers and young adults frequently partake in risky sexual conduct, which can have negative physical, social, and economic repercussions, particularly for girls, as well as impact future chances and health. Between the ages of 10 and 19, the adolescent years are a crucial time that has a big impact on future health outcomes (National Institutes of Health, 2023).

African nations have made a number of joint pledges to remove these obstacles and enhance the health and wellbeing of teenagers. The Addis Ababa Declaration on Population and Development, Agenda 2063, the Africa we want, the African Youth Charter, the African Union Campaign to End Child Marriage, the African Charter on the Rights and Welfare of the Child, and the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (also known as the Maputo Protocol) are a few examples of such frameworks (Kawczynska E., 2024).

Sub-Saharan Africa (SSA) faces some of the highest adolescent pregnancy rates globally. Contributing factors include a lack of comprehensive sexual education, cultural stigmas surrounding sexual health, and insufficient access to youth-friendly health services (UNICEF, 2021). SSA also bears the brunt of the global HIV burden, with young women aged 15–24 accounting for more than 60% of new HIV cases in the region (UNAIDS, 2021). Munyua and Mbugua (2020) have emphasized the limited coverage of adolescent-focused sexual health services in many African countries. Although there have been interventions, including youth-friendly services, a significant gap in both access to and utilization of these services persists, resulting in negative health outcomes.

In East Africa, which includes countries like Rwanda, Kenya, and Uganda, adolescent SRH issues remain a serious concern. While adolescents in the region have a relatively high level of awareness about sexual health issues, this knowledge does not always translate into health-seeking behaviors, such as the use of contraception or engagement with health services. Omondi et al. (2021) found that although adolescents in Kenya are aware of HIV and its prevention, their utilization of health services for prevention, testing, and treatment is still low.

Rwanda has taken significant steps toward improving adolescent health by implementing supportive policies focused on sexual and reproductive health education within the school system and expanding access to youth-oriented services. Initiatives such as the establishment of Isange One Stop Centers and dedicated youth corners in healthcare facilities have played a key role in increasing the availability and accessibility of sexual health services for young people (Rwanda Ministry of Health, 2020). However, barriers remain that prevent optimal utilization of these services. For instance, a study conducted by Gatera et al. (2019) in the Rwamagana District found that over half of adolescents (54.1%) were unaware of the SRH services available at their health centers. Additionally, although many adolescents are aware of sexual health issues, they still face barriers to accessing services, such as stigma, lack of privacy, and inadequate training of healthcare providers.

Adolescents in urban settings like Kicukiro are often more aware of available health services but face different barriers compared to their rural counterparts. Issues like social stigma, cost, and the availability of adolescent-friendly services make it difficult for young people to seek and use SRH services effectively (Rwanda Biomedical Center, 2021). In light of these barriers, this study seeks to examine the determinants of adolescent awareness and utilization of SRH services in health centers in Kicukiro District, Rwanda. Despite the presence of youth-friendly services, the awareness of these services and their actual use remains limited. This study wasexplore factors such as the accessibility of services, the role of healthcare workers, cultural and social barriers, and adolescents' knowledge and attitudes towards SRH services. .

Research in Rwanda shows that 50% of adolescents in rural areas are unaware of SRH services, while only 30% of adolescents actively seek SRH services, despite being aware of their existence (Gatera et al., 2019; Rwanda Ministry of Health, 2020). In Kicukiro District, a more urbanized area in Kigali, adolescents face urban-specific challenges such as long waiting times at health centers, concerns about confidentiality, and societal stigma. Despite the availability of SRH services, only 40% of adolescents utilize them, and many adolescents in the district are reluctant to seek help due to fears of judgment, lack of privacy, and inadequate training of healthcare providers (Dushimimana et al., 2022; Ndayishimiye et al., 2021). It is crucial to gain deeper insights into the factors that affect adolescents' knowledge of and engagement with SRH services in Kicukiro. Identifying the barriers whether socio-cultural, institutional, or individual was help improve the accessibility and effectiveness of these services, ultimately improving adolescent health outcomes in Rwanda.

2. CONCEPTUAL FRAMEWORK

It offers a structured way to depict the key elements and their relationships in a study. It provides the theoretical basis for understanding how various factors affect adolescents' knowledge and use of SRH services.

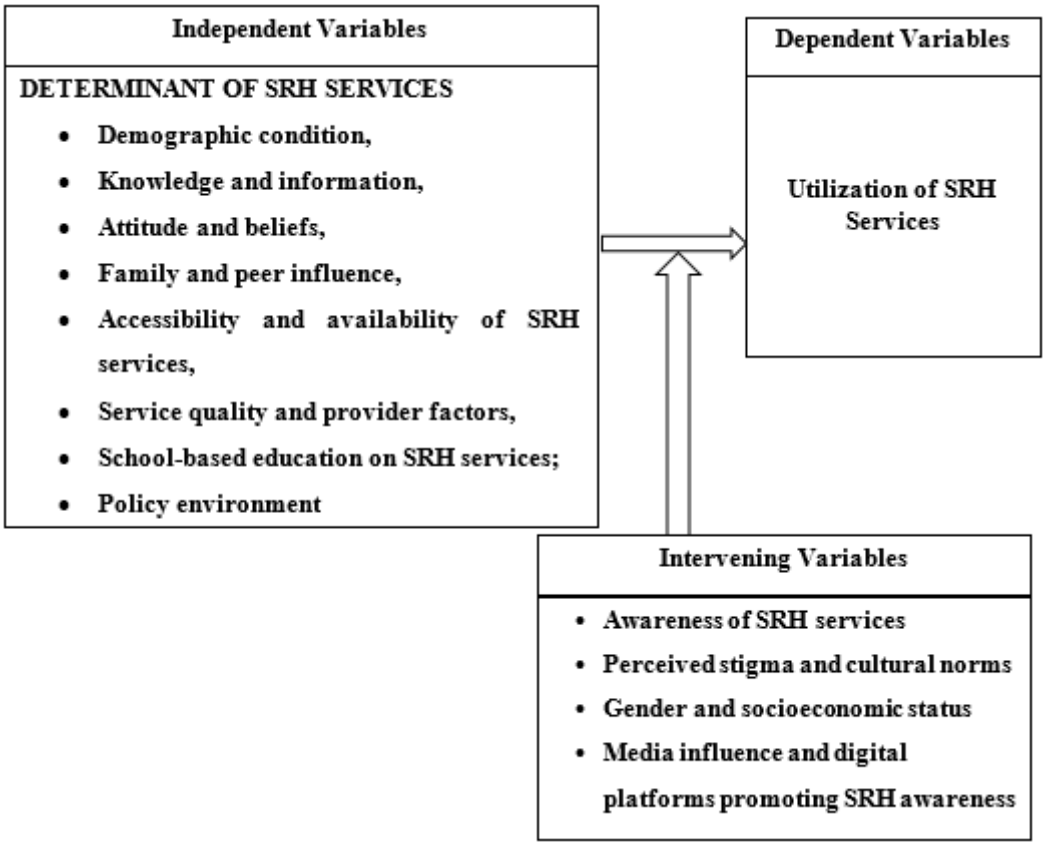

Figure 1: Conceptual Framework

Research Methods

The research approach used in the study was described in this chapter. The main research questions are explained, the chosen research strategy is justified, participant inclusion criteria are specified, the instruments used for data collection are listed, the procedural steps taken during data collection are explained, the analytical approaches used are described, and a rationale for the sample size determination is provided.

Study setting

Kigali, one of Rwanda's five administrative provinces, was restructured in 2006 and includes the Kicukiro District. Formerly responsible for key local administrative functions, Kicukiro saw several of these responsibilities transferred to the Kigali City Council as part of a governance reform in January 2020. The city is home to the national government, including the office of the President and most ministries. While the services industry contributes significantly to the city's economy, a portion of residents continue to engage in small-scale farming. The city has also made deliberate efforts to promote itself as a global destination for tourism, conferences, and trade exhibitions.

Study Design

This investigation utilized a cross-sectional research design, integrating both quantitative and qualitative data collection techniques. The primary objective was to evaluate the prevalence and contributing determinants among adolescents aged 13–19 years' awareness and utilization of sexual and Reproductive Health services in Health centers in Kicukiro District of Kigali City. In this study, deductive reasoning and the quantitative approach were utilized to close the gaps, finish the task, and provide clearer, more complete images of the required results. Quantitative techniques were used to describe information related to various activities related to adolescent sexual reproductive health. Because the quantitative method gives facts and measurable results about the subject understudy with the possible prediction about the future effects. After

the responses were collected, all kinds of question-related data were separated and collected to answer different research goals. The information obtained was categorized into response categories, coded and interpreted verbally. The research methods to be used is qualitative.

Study Population

The study involved adolescents between 13 and 19 years of age who live within Kigali City. Participants were recruited from a variety of settings, including schools, youth organizations, and community-based centers, to ensure a comprehensive representation of different genders, education levels, and socio-economic statuses.

Sampling and Sample Size

The sample size was determined using Cochran's formula for sample size calculation, considering an expected level of precision (5%), a confidence level of 95%, and an estimated adolescent population in the district (Cochran, 1977). The final sample size was determined after considering the expected response rate and adjusting for non-responses.

$$n^0 = \frac{Z^2\, pq}{e^2} = \frac{(1.96)^2 \text{ x } 0.5 \text{ x}(1-0.5)}{(0.05)^2} = 384$$

Where:

- Z= Z-value (1.96 for a 95% confidence level)
- p = estimated proportion of depression (0.15)
- e = margin of error (0.05)

Adjusting for potential non-responses by increasing the sample size by 10%:

adjusted==196+(0.10·196) ≈425

Thus, the target sample size was approximately 425 adolescents, with around 72 participants from each community center to maintain proportional representation.

Inclusion and exclusion Parameters

The consent Requirements were applied to the adolescents aged 18–19 must provide their own written informed consent; adolescents aged 13–17 must provide assent along with signed consent from a parent or legal guardian. While the affiliation was associated with a school, community group, or youth organization within Kigali City, and the cognitive ability was the capability of understanding and responding in the languages used in the study (Kinyarwanda, English, or French).To minimize external influences and logistical complications, the study excluded the severe health conditions, which means the adolescents whose physical or mental condition prevents active participation. Temporary Residency or individuals not permanently residing within Kicukiro District at the time of data collection were exclude.

Data Collection Instruments

Structured Questionnaires

The structured questionnaire consisted of several sections designed to capture key information on adolescents' understanding, perceptions, and behaviors related to SRH services. The questionnaire was composed of sections, whereby **s**ection one was Demographic Information, which gathered basic demographic details such as age, gender, school attendance, and family background (Kamangu et al., 2022); and the **s**ection two was knowledge of SRH Services, which was the part assessed the adolescents' awareness and understanding of SRH services. It featured questions regarding: Contraceptive Methods provided wareness of various forms of contraception (e.g., condoms, birth control pills, IUDs).

Health Provider Interviews

Alongside adolescent surveys, semi-structured interviews were conducted with health service providers. These interviews focused on exploring the availability, quality, and policies related to SRH services. Key areas of inquiry included the service availability**;** youth-friendliness**;** barriers to Service Delivery**,** and adolescents' Needs**.**

Data Collection Procedures

During data collection researcher provided training of data collectors, such as enumerators underwent training to ensure they are equipped to administer the questionnaires and conduct interviews with sensitivity, making sure adolescents feel comfortable discussing SRH topics (Kamangu et al., 2022). She also conducted pilot testing, whereby a small pilot sample of adolescents was used to test the questionnaire's clarity, relevance, and ease of understanding. Adjustments were made based on feedback (Hossain et al., 2021).

Trained research assistants administered questionnaires in a controlled environment to minimize distractions. Informed consent was obtained from both adolescents and their guardians. For qualitative data collection, the interviews and focus groups were conducted in a comfortable setting, ensuring participants feel safe to share their thoughts and experiences.

Study Validity and Reliability

Validity addresses how well the research tools measure the intended concepts (Creswell & Creswell, 2023). Different forms of validity applied include: The questionnaire was formulated through an extensive literature review and refined by experts in adolescent SRH to ensure all relevant dimensions, knowledge, attitudes, and usage, are well represented (Polit & Beck, 2022).

Reliability focuses on the consistency of the measurement tools over time (Bryman, 2022). The following approaches was used: Internal Consistency, Test-Retest ReliabilityInter-Rater Reliability (Nowell et al., 2022).

Ethical Considerations

The study secured ethical approval from the MKU institutional review board, with local clearance from Kigali city authorities. All participants received a clear explanation of the study's aims and processes, including their unrestricted right to discontinue participation at any point. To maintain privacy, personal information was anonymized using coded identifiers, and all data was securely stored to ensure confidentiality.

3. RESULTS

Socio-Demographic Characteristics of Adolescents in Kicukiro District (n = 384)

The study involved 384 adolescents as respondents. Analysis of age distribution showed that the largest share, 179 (46.6%), were within the 16–17 years category. This was followed by 118 participants (30.7%) aged 18–19 years, while the youngest group, those aged 13–15 years, accounted for 87 (22.7%). These results suggest that middle adolescents formed the bulk of the study participants. Looking at gender, females represented 56.5% (217) of the sample compared to 43.5% (167) who were male. This indicates that although both sexes were well represented, female adolescents were slightly more predominant.

When school attendance was considered, 265 respondents (69.0%) reported being enrolled in school, while 119 (31.0%) were out of school at the time of data collection. This demonstrates that the majority of adolescents in the study had access to formal learning opportunities, which could influence their exposure to health-related information. Educational status further showed that primary education was the most common, reported by 243 adolescents (63.3%). In contrast, 97 participants (25.3%) indicated they had never attended formal education, and only 44 (11.5%) had reached secondary level. This points to low transition into higher education levels among the adolescents surveyed. Residence patterns revealed that most participants, 314 (81.8%), lived in urban settings, whereas 70 (18.2%) resided in rural areas. This urban majority may imply better geographical access to health centers compared to their rural counterparts.

On household arrangements, the data indicated that 263 adolescents (68.5%) stayed with their parents, while 81 (21.1%) lived with relatives. A minority, 40 (10.4%), reported living independently without family support. These living conditions potentially shape the social and emotional support available to adolescents in making decisions about their health. Religion was also explored, with Christianity emerging as the dominant affiliation at 289 (75.3%). A smaller proportion, 57 (14.8%), identified as Muslims, while 38 (9.9%) reported having no religious identity. Since religion can influence perceptions about sexuality and reproductive health, these distributions are of particular interest. Finally, parental communication on reproductive health matters was found to be limited. Only 120 adolescents (31.3%) reported having such discussions with their parents or guardians, whereas the majority, 264 (68.8%), stated they had never engaged in such conversations.

Table 1: Socio-Demographic Characteristics of Adolescents in Kicukiro District (n = 384)"

Variable	Category	Frequency	Percent
Age	13–15	87	22.7
	16–17	179	46.6
	18–19	118	30.7
Gender	Male	167	43.5
	Female	217	56.5
School Status	Currently in school	265	69.0
	Not attending school	119	31.0
Education Level	No formal education	97	25.3
	Primary	243	63.3
	Secondary	44	11.5
Place of Residence	Rural	70	18.2
	Urban	314	81.8
Living Arrangements	With parents	263	68.5
	With relatives	81	21.1
	Alone	40	10.4
Religious Affiliation	Christian	289	75.3
	Muslim	57	14.8
	None	38	9.9
Parental Discussion of RH	Yes	120	31.3
	No	264	68.8

Utilization of Sexual and Reproductive Health Services Among Adolescents

Out of the **384 adolescents** who participated in the study, a majority, **253 respondents (65.9%)**, reported that they had **previously accessed sexual and reproductive health (SRH) services**. On the other hand, **131 respondents (34.1%)** indicated that they had **never utilized such services**. This shows that while more than half of the adolescents had experience with SRH services, a considerable proportion had not yet accessed them, highlighting potential barriers or gaps in service utilization among young people.

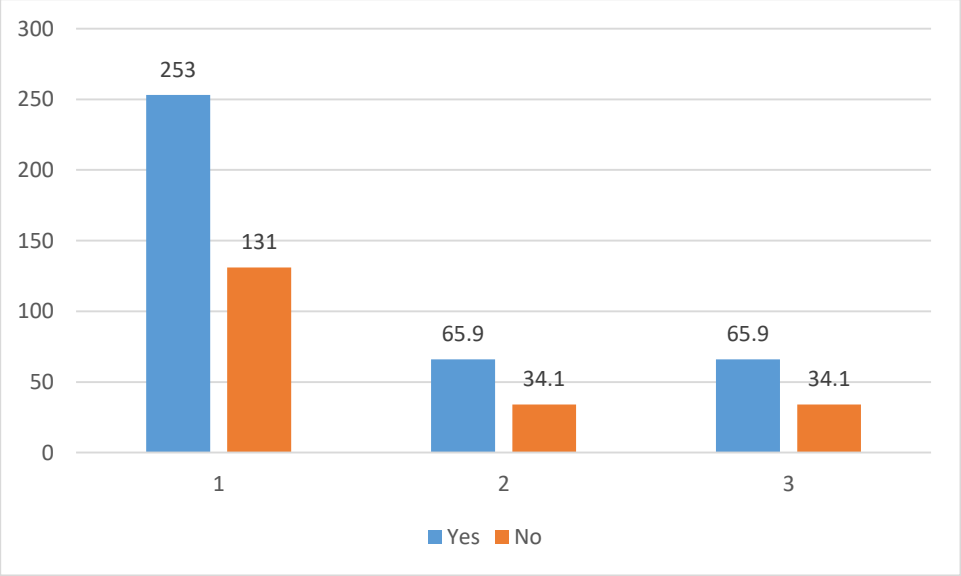

Figure 2: Utilization of Sexual and Reproductive Health Services Among Adolescents

Factors Affecting Adolescents' Access to Sexual and Reproductive Health Services in Kicukiro District

The assessment of obstacles to sexual and reproductive health (SRH) service utilization among adolescents in Kicukiro District revealed multiple limiting factors. A considerable proportion of respondents, 234 (60.9%), pointed out that the high

cost of services prevented them from seeking care, whereas 150 (39.1%) mentioned that cost did not pose a problem. This finding shows that affordability is a critical factor influencing access. Delays at health facilities were another challenge, with 225 adolescents (58.6%) identifying long waiting periods as a hindrance, while 159 (41.4%) stated they were unaffected by it. This highlights concerns about service delivery efficiency.

The nature of interactions with health personnel also emerged as an issue. 231 participants (60.2%) reported that negative attitudes of providers discouraged them from using SRH services, compared to 153 (39.8%) who did not consider it a challenge. This underscores the role of healthcare workers' approach in promoting or discouraging adolescent health-seeking behavior. Geographical accessibility was also cited, as 244 respondents (63.5%) indicated that distance to the nearest facility limited their access, whereas 140 (36.5%) did not experience this barrier. This demonstrates the importance of proximity to health services for young people. In addition, fear of being stigmatized was reported by 209 adolescents (54.4%), while 175 (45.6%) did not share this concern. This reflects the social and cultural pressures that continue to influence adolescent health choices. Finally, other unspecified challenges were mentioned by 192 participants (50.0%), with an equal number stating they faced none. These could include barriers such as lack of information, cultural restrictions, or parental disapproval. Taken together, the data reveal that service costs, facility distance, and unwelcoming healthcare providers were the most commonly mentioned barriers, each affecting over 60% of respondents. Stigma and long waiting times also affected more than half of the adolescents. These findings demonstrate that economic, social, and structural constraints all contribute to limiting adolescents' ability to access SRH services.

Table 2: Factors Affecting Adolescents' Access to Sexual and Reproductive Health Services in Kicukiro District

Limiting Factor	Response	Frequency (n)	Percent (%)
High service costs	Yes	234	60.9
	No	150	39.1
Long waiting times at facilities	Yes	225	58.6
	No	159	41.4
Unfriendly healthcare providers	Yes	231	60.2
	No	153	39.8
Distance to health facility	Yes	244	63.5
	No	140	36.5
Fear of stigma	Yes	209	54.4
	No	175	45.6
Others	Yes	192	50.0
	No	192	50.0

First Sources of Information on Sexual and Reproductive Health Services Among Adolescents in Kicukiro District, Rwanda

The study assessed where adolescents in Kicukiro District first acquired knowledge about sexual and reproductive health (SRH) services. Results showed that health facilities were the leading source, with 107 participants (27.9%) indicating that they initially learned about SRH services there. Schools followed closely, cited by 89 adolescents (23.2%), underscoring the role of educational institutions in promoting reproductive health awareness. Parents or guardians were reported as the first source of information by 64 respondents (16.7%), demonstrating the influence of family in shaping adolescents' understanding of SRH. A smaller proportion, 43 adolescents (11.2%), credited friends as the initial source of information, highlighting peer influence in disseminating knowledge. Media platforms, including radio, television, and social media, were mentioned by 41 participants (10.7%), while 40 adolescents (10.4%) reported learning through other avenues, which may encompass community initiatives, religious groups, or youth-focused programs. These findings indicate that while health centers and schools are pivotal in providing SRH information, family, peers, and media also play significant roles in enhancing adolescents' awareness. The range of sources reflects the need for multiple channels to effectively reach young people with reproductive health information.

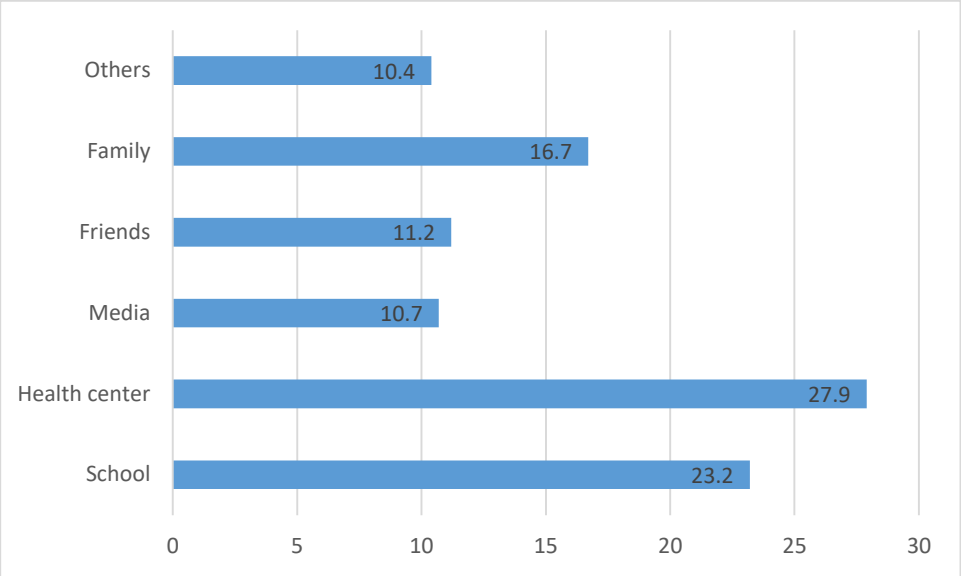

Figure 3: First Sources of Information on Sexual and Reproductive Health Services Among Adolescents in Kicukiro District, Rwanda

Awareness of Sexual and Reproductive Health Services Among Adolescents (N = 384)

The study explored the extent to which adolescents in Kicukiro District were aware of different sexual and reproductive health (SRH) services. Findings indicated that contraceptive services were the most commonly known, with 266 participants (69.3%) reporting familiarity, while 118 adolescents (30.7%) had no knowledge of these services. Awareness of HIV and STI screening and treatment was noted by 225 respondents (58.6%), compared to 159 (41.4%) who were unaware. Similarly, pregnancy counseling services were recognized by 200 adolescents (52.1%), whereas 184 (47.9%) had no awareness of these services, reflecting moderate exposure to reproductive counseling. Knowledge of menstrual health education was comparatively low, with only 132 adolescents (34.4%) reporting awareness, while the majority, 251 participants (65.4%), were uninformed. Awareness of safe abortion services was also limited, reported by 140 adolescents (36.5%), leaving 244 (63.5%) unaware of this option. In addition, other SRH-related services, potentially including youth-friendly clinics, counseling, or health support programs—were known to 181 respondents (47.1%), while 203 adolescents (52.9%) reported no knowledge of such services. Overall, the data suggest that adolescents were most familiar with contraceptives and HIV/STI services, moderately aware of pregnancy counseling and other services, and had the least awareness of menstrual health education and safe abortion services. These findings highlight the importance of comprehensive SRH education programs to ensure young people are fully informed about all available services.

Table 3: Awareness of Sexual and Reproductive Health Services Among Adolescents (N = 384)

SRH Service	Response	Frequency (n)	Percent (%)
Contraceptives	Yes	266	69.3
	No	118	30.7
HIV/STI screening and treatment	Yes	225	58.6
	No	159	41.4
Pregnancy counseling	Yes	200	52.1
	No	184	47.9
Menstrual health education	Yes	132	34.4
	No	251	65.4
Safe abortion services	Yes	140	36.5
	No	244	63.5
Others	Yes	181	47.1
	No	203	52.9

Awareness and Availability of SRH Services among Adolescents (N = 384)

The analysis of adolescents' perceptions and exposure to sexual and reproductive health (SRH) services highlights several key trends. For the question on whether SRH services were available in their communities, no direct responses were captured, as the data fell under system-missing for all 384 participants, suggesting either non-response or limitations in data entry. Despite this, other variables provided meaningful insights. When asked if they knew where SRH services could be obtained, the majority (266 adolescents, 69.3%) confirmed awareness of service delivery points, while 118 respondents (30.7%) reported lacking such knowledge. This indicates that although most adolescents are informed about access points, a considerable share remains uninformed, which could restrict service utilization.

Knowledge of youth-friendly SRH services showed an almost equal split among participants. Roughly half of the adolescents (193, or 50.3%) acknowledged familiarity with such services, whereas 191 (49.7%) had no awareness. This balance underscores a significant communication gap regarding youth-focused health programs. In terms of formal learning, the data revealed that structured SRH education in schools is still limited. About three-quarters of the respondents (277, 72.1%) stated that they had not received any structured instruction on SRH within the school setting, while only 107 (27.9%) reported receiving such lessons. This reflects a weakness in embedding SRH into educational systems.

Self-assessment of SRH knowledge further exposed disparities. A small proportion (86 adolescents, 22.4%) perceived their understanding as excellent, and 100 (26.0%) rated theirs as good. Conversely, a larger share of respondents rated their knowledge negatively, with 127 (33.1%) describing it as poor and 71 (18.5%) as very poor. Overall, this indicates that while a minority of adolescents are confident in their knowledge, a substantial proportion have limited or inadequate understanding of SRH issues.

Table 4: Awareness and Availability of SRH Services among Adolescents (N = 384)

Question	Response Category	Frequency	Percent
Are SRH services available in your area?	System Missing	384	100.0
Do you know where to obtain SRH services?	Yes	266	69.3
Are you familiar with youth-friendly SRH services?	No	118	30.7
	Yes	193	50.3
	No	191	49.7
Have you received any structured education on SRH in school?	Yes	107	27.9
How would you rate your knowledge of SRH services?	No	277	72.1
	Excellent	86	22.4
	Good	100	26.0
	Poor	127	33.1
	Very poor	71	18.5

Awareness Level of SRH Services

The analysis of awareness levels regarding sexual and reproductive health (SRH) services revealed notable variations among respondents. Out of the 384 participants, **67 adolescents (17.4%) demonstrated low awareness**, scoring between 5 and 7 points. This group represents individuals with limited knowledge and understanding of available SRH services, suggesting gaps in information exposure or accessibility to accurate health education. A significant proportion, **253 participants (65.9%)**, fell within the **moderate awareness category**, scoring between 8 and 10 points. This indicates that the majority of adolescents possess a reasonable level of knowledge about SRH services, although their understanding may not be comprehensive enough to ensure informed decision-making. This level of awareness reflects exposure to some form of SRH information, possibly from schools, peers, or community initiatives, but still leaves room for improvement in strengthening depth and accuracy of knowledge. On the other hand, **64 respondents (16.7%)** were classified as having **high awareness**, with scores ranging from 11 to 13 points. These adolescents exhibited a strong understanding of SRH services and likely have better access to reliable sources of information, such as structured school programs, parental discussions, or health professionals. Overall, the results suggest that while a majority of adolescents demonstrate moderate awareness, there is still a considerable portion with either very low or very high knowledge. This highlights the need for targeted interventions, particularly to uplift those with low awareness and to reinforce comprehensive SRH education to move more adolescents into the high awareness category.

Table 5: Awareness Level of SRH Services

Awareness Level	Frequency	Percent
Low (5–7 scores)	67	17.4
Moderate (8–10 scores)	253	65.9
High (11–13 scores)	64	16.7
Total	**384**	**100.0**

Adolescents' Attitudes Toward SRH Services (n = 384)

The study examined adolescents' attitudes toward sexual and reproductive health (SRH) services in Kicukiro District. Regarding the importance of SRH services, 114 participants (29.7%) strongly agreed and 93 (24.2%) agreed, showing that a majority recognize their significance, while 53 (13.8%) strongly disagreed, 52 (13.5%) disagreed, and 72 (18.8%) remained neutral. Comfort in discussing SRH issues with healthcare providers was moderate, with 102 adolescents (26.6%) agreeing and 80 (20.8%) strongly agreeing that they feel comfortable. However, 53 (13.8%) strongly disagreed, 57 (14.8%) disagreed, and 92 (24.0%) were neutral, suggesting that a substantial portion still faces barriers in communication.

When asked if seeking SRH services should be encouraged among adolescents, 114 (29.7%) strongly agreed and 76 (19.8%) agreed, whereas 53 (13.8%) strongly disagreed, 58 (15.1%) disagreed, and 83 (21.6%) were neutral, indicating general support but some resistance. Regarding perceptions of contraceptives, 110 adolescents (28.6%) strongly agreed and 81 (21.1%) agreed that using contraceptives encourages risky sexual behavior, while 54 (14.1%) strongly disagreed, 54 (14.1%) disagreed, and 85 (22.1%) were neutral, highlighting persistent myths about SRH methods.

Personal intention to seek SRH services if needed was generally positive, with 113 (29.4%) strongly agreeing and 95 (24.7%) agreeing, yet 54 (14.1%) strongly disagreed, 51 (13.3%) disagreed, and 71 (18.5%) were neutral. Concerns about stigma and confidentiality were significant. A total of 101 (26.3%) agreed and 87 (22.7%) strongly agreed that stigma is a barrier, while 53 (13.8%) strongly disagreed, 54 (14.1%) disagreed, and 89 (23.2%) were neutral. Similarly, 97 (25.3%) agreed and 98 (25.5%) strongly agreed that confidentiality is a concern, with 43 (11.2%) strongly disagreeing, 58 (15.1%) disagreeing, and 88 (22.9%) neutral. Adolescents' opinions on autonomy and education showed that 92 (24.0%) agreed and 95 (24.7%) strongly agreed that they should access SRH services without parental consent, while 90 (23.4%) were neutral. Support for school-based SRH education was also notable, with 92 (24.0%) agreeing and 94 (24.5%) strongly agreeing, while 96 (25.0%) were neutral.

Cultural and religious influences were reported as barriers by 107 (27.9%) agreeing and 84 (21.9%) strongly agreeing that these beliefs discourage SRH use, while 91 (23.7%) were neutral, and 50 (13.0%) strongly disagreed. Perceptions of healthcare provider behavior indicated that 107 (27.9%) agreed and 86 (22.4%) strongly agreed that adolescents are treated respectfully, and 101 (26.3%) agreed and 66 (17.2%) strongly agreed that services maintain privacy, although 112 (29.2%) were neutral.

Comfort discussing SRH with parents was reported by 116 (30.2%) agreeing and 54 (14.1%) strongly agreeing, while 106 (27.6%) were neutral. Lastly, adolescents emphasized the importance of youth-friendly services, with 120 (31.3%) agreeing and 55 (14.3%) strongly agreeing, highlighting the need for tailored interventions to improve service uptake. Overall, the findings suggest that while many adolescents recognize the importance of SRH services and are willing to use them, concerns about stigma, confidentiality, cultural norms, and limited comfort with providers may still hinder optimal utilization.

Table 6: Adolescents' Attitudes Toward SRH Services (n = 384)

Statement	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
1. SRH services are important for adolescents	53 (13.8)	52 (13.5)	72 (18.8)	93 (24.2)	114 (29.7)
2. I feel comfortable discussing SRH issues with healthcare providers	53 (13.8)	57 (14.8)	92 (24.0)	102 (26.6)	80 (20.8)
3. Seeking SRH services should be encouraged among adolescents	53 (13.8)	58 (15.1)	83 (21.6)	76 (19.8)	114 (29.7)

4. Using contraceptives encourages risky sexual behavior	54 (14.1)	54 (14.1)	85 (22.1)	81 (21.1)	110 (28.6)
5. I would seek SRH services if I needed them	54 (14.1)	51 (13.3)	71 (18.5)	95 (24.7)	113 (29.4)
6. There is too much stigma surrounding adolescent use of SRH services	53 (13.8)	54 (14.1)	89 (23.2)	101 (26.3)	87 (22.7)
7. Confidentiality is a major concern when accessing SRH services	43 (11.2)	58 (15.1)	88 (22.9)	97 (25.3)	98 (25.5)
8. Adolescents should access SRH services without parental consent	55 (14.3)	52 (13.5)	90 (23.4)	92 (24.0)	95 (24.7)
9. I worry about being judged when seeking SRH services	55 (14.3)	51 (13.3)	78 (20.3)	100 (26.0)	99 (25.8)
10. Schools should provide more education about SRH	52 (13.5)	50 (13.0)	96 (25.0)	92 (24.0)	94 (24.5)
11. Religious and cultural beliefs discourage SRH use	50 (13.0)	52 (13.5)	91 (23.7)	107 (27.9)	84 (21.9)
12. Healthcare providers treat adolescents respectfully	49 (12.8)	54 (14.1)	88 (22.9)	107 (27.9)	86 (22.4)
13. I trust SRH services to maintain privacy/confidentiality	53 (13.8)	52 (13.5)	112 (29.2)	101 (26.3)	66 (17.2)
14. I feel comfortable discussing SRH issues with my parents/guardians	53 (13.8)	55 (14.3)	106 (27.6)	116 (30.2)	54 (14.1)
15. SRH services should be more youth-friendly to encourage adolescent use	49 (12.8)	54 (14.1)	106 (27.6)	120 (31.3)	55 (14.3)

Distribution of Adolescents' Attitudes Level Toward Sexual and Reproductive Health Services in Kicukiro District, Rwanda

The study assessed adolescents' attitudes toward sexual and reproductive health (SRH) services and classified them into three levels: negative, neutral, and positive. The results indicated that **177 adolescents (46.1%) exhibited a negative attitude**, scoring between 0 and 49, suggesting that nearly half of the respondents hold unfavorable views toward SRH services.

A substantial proportion, **171 participants (44.5%)**, demonstrated a **neutral attitude**, with scores ranging from 50 to 69. This indicates that many adolescents neither strongly support nor strongly oppose the use of SRH services, reflecting ambivalence or uncertainty in their perceptions. Only **36 adolescents (9.4%)** displayed a **positive attitude**, scoring 70 or above, highlighting that a small minority have a favorable perspective toward SRH services and are likely more receptive to utilizing them. Overall, the findings reveal that while a significant number of adolescents are neutral toward SRH services, nearly half of them maintain negative attitudes, which may impede effective utilization of these services. The relatively small proportion with positive attitudes underscores the need for targeted interventions to improve adolescents' perceptions and encourage service uptake.

Table 7: Distribution of Adolescents' Attitudes Level Toward Sexual and Reproductive Health Services in Kicukiro District, Rwanda

Attitude Levels	Frequency	Percent
Negative (0–49 scores)	177	46.1
Neutral (50–69 scores)	171	44.5
Positive (70 scores and above)	36	9.4
Total	384	100.0

Association Between Socio-Demographic, Awareness, and Attitudinal Factors and Adolescent Utilization of Sexual and Reproductive Health Services (n = 384)

The table presents the relationship between various socio-demographic and psychosocial factors and the utilization of sexual and reproductive health (SRH) services among adolescents (n = 384). Among the respondents, 289 (75.3%) identified as Christian, 57 (14.8%) as Muslim, and 38 (9.9%) reported no religious affiliation. Of the Christians, 185 (64.0%) had accessed SRH services, while 104 (36.0%) had not. Among Muslims, 35 (61.4%) were users, and 22 (38.6%) were non-users. For those without any religion, 24 (63.2%) utilized SRH services, and 14 (36.8%) did not. The chi-square test (χ^2 = 0.143, p = 0.931) indicates no statistically significant association between religious affiliation and SRH service utilization. The age distribution showed that 13–15-year-olds comprised 87 (22.7%) of the sample, 16–17-year-olds 179 (46.6%), and 18–19-year-olds 118 (30.7%). Utilization of SRH services was lowest among the youngest group, with 48 (55.2%) using services and 39 (44.8%) not using them. The 16–17-year-olds had 106 (59.2%) users and 73 (40.8%) non-users, while 18–19-year-olds had the highest usage, with 90 (76.3%) accessing SRH services. This association was statistically significant (χ^2 = 12.329, p = 0.002), indicating that older adolescents are more likely to utilize SRH services.

Among males (n = 167), only 81 (48.5%) reported using SRH services, whereas 163 (75.1%) of females (n = 217) were users. The association between gender and SRH utilization was highly significant (χ^2 = 28.850, p = 0.001), suggesting that female adolescents are more likely to access these services than males. Of the respondents, 265 (69.0%) were currently attending school, while 119 (31.0%) were not. SRH service utilization was similar across school status: 169 (63.8%) of in-school adolescents used services compared to 75 (63.0%) of out-of-school adolescents. This difference was not statistically significant (χ^2 = 0.020, p = 0.888). Regarding education, 97 (25.3%) had no formal education, 243 (63.3%) had primary education, and 44 (11.5%) had secondary education. Service utilization across educational levels was 59 (60.8%), 158 (65.0%), and 27 (61.4%), respectively, with no significant association observed (χ^2 = 0.629, p = 0.730). Adolescents residing in rural areas (n = 70) had 55 (78.6%) users, while those in urban areas (n = 314) had 189 (60.2%) users. This difference was statistically significant (χ^2 = 8.347, p = 0.004), indicating higher SRH service utilization among rural residents. Most adolescents lived with parents (n = 263), followed by relatives (n = 81) and alone (n = 40). Utilization rates were 165 (62.7%), 53 (65.4%), and 26 (65.0%), respectively, with no significant association (χ^2 = 0.235, p = 0.889). Adolescents whose parents or guardians discussed reproductive health topics (n = 120) had higher utilization (93, 77.5%) compared to those whose parents did not (151, 57.2%). This association was statistically significant (χ^2 = 14.680, p = 0.001), highlighting the importance of parental communication. Among adolescents with low awareness (scores 5–7, n = 67), 36 (53.7%) used SRH services. Those with moderate awareness (scores 8–10, n = 253) had 172 (68.0%) users, while those with high awareness (scores 11–13, n = 64) had 36 (56.3%) users. Awareness level was significantly associated with SRH utilization (χ^2 = 6.408, p = 0.041). Adolescents with negative attitudes (scores 0–49, n = 177) had 106 (59.9%) users, those with neutral attitudes (scores 50–69, n = 171) had 107 (62.6%) users, and those with positive attitudes (scores 70+, n = 36) had 31 (86.1%) users. The chi-square test confirmed a significant association between attitude and SRH utilization (χ^2 = 9.005, p = 0.011), showing that positive attitudes strongly correlate with higher service use. In summary, age, gender, place of residence, parental discussion, awareness, and attitude levels were significant determinants of adolescent SRH service utilization, while religious affiliation, school status, education level, and living arrangements were not.

Table 8: Association Between Socio-Demographic, Awareness, and Attitudinal Factors and Adolescent Utilization of Sexual and Reproductive Health Services (n = 384)

Variable	Category	SRH Users	SRH Non-users	Total (n=384)	χ^2 Value	p-value
Religious Affiliation	Christian	185	104	289	0.143	0.931
	Muslim	35	22	57		
	None	24	14	38		
Age group	13–15 years	48	39	87	12.329	0.002*
	16–17 years	106	73	179		
	18–19 years	90	28	118		
Gender	Male	81	86	167	28.850	0.001*
	Female	163	54	217		
School Status	In school	169	96	265	0.020	0.888
	Not in school	75	44	119		

Education Level	No formal education	59	38	97	0.629	0.730
	Primary	158	85	243		
	Secondary	27	17	44		
Place of Residence	Rural	55	15	70	8.347	0.004*
	Urban	189	125	314		
Living Arrangements	With parents	165	98	263	0.235	0.889
	With relatives	53	28	81		
	Alone	26	14	40		
Parental Discussion on RH	Yes	93	27	120	14.680	0.001*
	No	151	113	264		
Awareness Level	Low (5-7 scores)	36	31	67	6.408	0.041*
	Moderate (8-10 scores)	172	81	253		
	High (11-13 scores)	36	28	64		
Attitude Levels	Negative (0-49 scores)	106	71	177	9.005	0.011*
	Neutral (50-69 scores)	107	64	171		
	Positive (70+ scores)	31	5	36		

Logistic Regression Analysis of Factors Influencing Adolescent Utilization of Sexual and Reproductive Health Services in Kicukiro District

The utilization of sexual and reproductive health (SRH) services among adolescents was examined in relation to sociodemographic characteristics, awareness, and attitude levels using descriptive and logistic regression analyses. Age significantly influenced SRH service use ($p = 0.001$). Adolescents aged 13–15 years included 48 users and 39 non-users, and those aged 16–17 years had 106 users and 73 non-users.

Compared to the 18–19-year-olds, adolescents aged 13–15 years were nearly three times more likely (OR = 2.933; 95% CI: 1.520–5.658) to access SRH services, while those aged 16–17 years were 2.639 times more likely (95% CI: 1.490–4.674). Gender also showed a significant relationship with SRH utilization ($p < 0.001$). Among male adolescents, 81 used SRH services and 86 did not, whereas 163 females used the services and 54 did not.

Females had over three times the odds (OR = 3.194; 95% CI: 2.003–5.095) of using SRH services compared to males. Place of residence was significantly associated with utilization ($p = 0.007$). Adolescents from rural areas included 55 users and 15 non-users, while urban adolescents comprised 189 users and 125 non-users. Those in rural areas were more likely to access SRH services, with an odds ratio of 0.402 (95% CI: 0.207–0.780), suggesting better utilization compared to urban counterparts.

Parental communication on reproductive health strongly impacted SRH service use ($p < 0.001$). Adolescents whose parents or guardians discussed reproductive health topics had 93 users and 27 non-users, while those without such discussions had 151 users and 113 non-users. Lack of parental discussion significantly reduced the likelihood of service utilization (OR = 0.375; 95% CI: 0.219–0.644).

Awareness levels had a modest effect ($p = 0.151$). Adolescents with low awareness (5–7 scores) had 36 users and 31 non-users, moderate awareness (8–10 scores) had 172 users and 81 non-users, and high awareness (11–13 scores) had 36 users and 28 non-users. While not statistically significant overall, moderate awareness was associated with slightly lower odds of non-utilization (OR = 0.566; 95% CI: 0.301–1.065).

Attitude towards SRH services significantly influenced usage ($p = 0.033$). Adolescents with negative attitudes (0–49 scores) included 106 users and 71 non-users, those with neutral attitudes (50–69 scores) had 107 users and 64 non-users, and positive attitudes (70+ scores) had 31 users and 5 non-users. Adolescents with negative attitudes were over four times (OR = 4.175; 95% CI: 1.429–12.198) and those with neutral attitudes were 3.616 times (95% CI: 1.244–10.513) more likely to utilize SRH services compared to adolescents with positive attitudes.

The model constant was also significant ($p < 0.001$; OR = 0.103), indicating that the predictors included collectively had a strong effect on adolescents' likelihood of accessing SRH services. Overall, age, gender, place of residence, parental discussion, and attitude were key factors influencing adolescents' engagement with SRH services, emphasizing the need for targeted strategies to improve access and utilization.

Table 9: Logistic Regression Analysis of Factors Influencing Adolescent Utilization of Sexual and Reproductive Health Services in Kicukiro District

Variable	Category	SRH Users (n)	SRH Non-users (n)	P-value	AOR	95% C.I. for AOR
Age group	13–15 years	48	39	.001	2.933	1.520 – 5.658
	16–17 years	106	73	.001	2.639	1.490 – 4.674
	18–19 years	90	28	Reference	-	-
Gender	Male	81	86	.000	3.194	2.003 – 5.095
	Female	163	54	Reference	-	-
Place of Residence	Rural	55	15	.007	0.402	0.207 – 0.780
	Urban	189	125	Reference	-	-
Parental Discussion on RH	Yes	93	27	.000	0.375	0.219 – 0.644
	No	151	113	Reference	-	-
Awareness Level	Low (5–7 scores)	36	31	.151	0.829	0.382 – 1.798
	Moderate (8–10 scores)	172	81	.077	0.566	0.301 – 1.065
	High (11–13 scores)	36	28	Reference	-	-
Attitude Level	Negative (0–49 scores)	106	71	.033	4.175	1.429 – 12.198
	Neutral (50–69 scores)	107	64	.018	3.616	1.244 – 10.513
	Positive (70+ scores)	31	5	Reference	-	-
Constant				.000	0.103	-

Model Summary

The model summary table presents key statistics for the logistic regression analysis conducted to identify factors associated with SRH service utilization among adolescents. In this analysis, the final -2 Log Likelihood value is 426.201, indicating the goodness of fit of the model, with lower values suggesting a better fit. The Cox & Snell R Square value is 0.183, implying that approximately 18.3% of the variation in SRH service utilization is explained by the predictors included in the model. The Nagelkerke R Square value, which adjusts the Cox & Snell value to cover the full range of 0 to 1, is 0.250, suggesting that the model accounts for 25% of the variability in adolescents' utilization of SRH services. The note indicates that the estimation process terminated at the fifth iteration because the parameter estimates stabilized, with changes of less than 0.001, signifying that the model converged successfully. Overall, this summary demonstrates that the model explains a modest but meaningful proportion of the variance in SRH service use among the study population.

Table 10: Model Summary

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	426.201a	0.183	0.250

Qualitative Results

In addition to the quantitative analysis, interviews were conducted with health service providers in Kicukiro District to gain deeper understanding of adolescent sexual and reproductive health (SRH) services. These discussions focused on the types of services available, barriers in service delivery, and potential strategies to enhance adolescent access.

Current SRH Services for Adolescents

Health professionals reported that adolescents have access to a variety of SRH services, such as family planning methods, HIV and STI testing and treatment, pregnancy counseling, menstrual health education, and general reproductive health guidance. Some facilities have dedicated youth-friendly spaces aimed at creating a more welcoming environment for adolescents. However, service provision differs across facilities, with some lacking specialized staff or adequate resources to meet adolescent-specific needs.

Barriers to Effective Service Delivery

Providers identified several challenges affecting adolescent access to SRH services. Cost of services and limited staffing were commonly cited, resulting in long waiting periods and reduced quality of care. Attitudinal issues among some health

workers, including insufficient training in adolescent-centered care, were noted as discouraging adolescents from seeking help. Social and cultural stigma further prevented adolescents from openly discussing sexual and reproductive health. Other obstacles included weak parental engagement, minimal structured SRH education in schools, and difficulties in reaching facilities for adolescents living in more remote areas.

Linking Provider Insights with Adolescent Experiences

The interviews reveal that although adolescents are aware of available SRH services, multiple structural, social, and cultural factors continue to limit their use. Providers' perspectives highlight the importance of adolescent-sensitive healthcare delivery, supportive educational programs, and community engagement. Integrating these insights with adolescents' reported experiences points to the need for comprehensive interventions addressing access, affordability, confidentiality, and societal attitudes to strengthen SRH service uptake in Kicukiro District.

4. DISCUSSION

The present study aimed to examine factors influencing adolescents' utilization of sexual and reproductive health (SRH) services. Overall, 244 (63.5%) adolescents reported using SRH services, while 140 (36.5%) had not. The utilization patterns were shaped by a combination of demographic characteristics, parental engagement, and individual attitudes. Understanding these factors is crucial for developing targeted interventions that enhance adolescent reproductive health outcomes. Age emerged as a significant predictor of SRH service utilization. Adolescents aged 16–17 years (Exp(B)=2.639, p=0.001) and 18–19 years (Exp(B)=2.933, p=0.001) were more than twice as likely to access services compared to the 13–15 years age group.

This finding is consistent with prior research indicating that older adolescents are more autonomous, sexually active, and aware of reproductive health needs (Chandra-Mouli et al., 2019; Temesgen et al., 2022). The chi-square analysis also revealed a significant association between age and SRH service use (χ^2=12.329, p=0.002), reinforcing that service utilization increases with age.

Gender differences were pronounced in both descriptive and multivariate analyses. Female adolescents had a higher likelihood of using SRH services (Exp(B)=3.194, p<0.001) compared to males. The chi-square test supported this difference (χ^2=28.850, p<0.001). These results align with previous studies showing that females often engage more with health services due to menstrual management, contraceptive needs, and reproductive health awareness (Ouma et al., 2021; Kabiru et al., 2020). Conversely, male adolescents may face sociocultural barriers, limited health literacy, or perceived stigma in seeking SRH services. Place of residence significantly influenced service utilization. Adolescents living in rural areas were more likely to access SRH services than those in urban settings (Exp(B)=0.402, p=0.007), a somewhat unexpected finding. This may reflect targeted rural outreach programs and community-based initiatives that increase awareness and accessibility (Bolarinwa et al., 2021). The chi-square test confirmed a significant relationship (χ^2=8.347, p=0.004), highlighting geographic disparities that should guide resource allocation and service planning.

Parental discussion on reproductive health was a significant determinant of service use. Adolescents whose parents discussed SRH topics were less likely to independently access services (Exp(B)=0.375, p<0.001), suggesting that parental guidance may sometimes substitute for formal health-seeking or create fear of judgment. This finding underscores the nuanced role of family communication, emphasizing the need for strategies that complement parental engagement with confidential adolescent services (Magutah & Obare, 2018). Awareness levels showed a moderate association with SRH utilization in descriptive analysis but were not statistically significant in logistic regression. Adolescents with moderate awareness were somewhat more likely to use services than those with low awareness (Exp(B)=0.566, p=0.077). This indicates that knowledge alone may be insufficient to drive service uptake, echoing findings that behavioral intentions and service attitudes often play a stronger role than mere awareness (Mutua et al., 2021).

Attitude levels were a strong predictor of SRH service utilization. Adolescents with neutral attitudes were 3.616 times more likely, and those with positive attitudes were 4.175 times more likely, to utilize services than those with negative attitudes (p=0.018 and p=0.009, respectively). The chi-square analysis also confirmed a significant association (χ^2=9.005, p=0.011). These results suggest that fostering positive perceptions about SRH services—including confidentiality, respect from healthcare providers, and service quality—can substantially enhance adolescent engagement (Ninsiima et al., 2020). School status, religious affiliation, education level, and living arrangements did not show statistically significant associations with SRH utilization in either chi-square or logistic regression analyses. While these factors may influence service use indirectly through social norms, peer influence, or economic status, their direct impact appears limited in this context. This highlights

the need to prioritize modifiable behavioral and attitudinal factors when designing adolescent SRH interventions (Bolarinwa et al., 2021).

In few words, the study demonstrates that adolescent SRH service utilization is multifactorial. Age, gender, place of residence, parental discussion, and attitudes emerged as key predictors. Interventions should therefore combine youth-friendly education, positive attitude reinforcement, confidential service provision, and supportive parental engagement to improve utilization. Tailoring strategies to address these determinants can contribute to better reproductive health outcomes among adolescents (Chandra-Mouli et al., 2019; Temesgen et al., 2022; Ouma et al., 2021).

5. SUMMARY OF FINDINGS

The study included 384 adolescents, with 244 (63.5%) reporting that they had accessed SRH services and 140 (36.5%) indicating non-use. The findings reveal several significant patterns. Demographic factors such as age and gender were significantly associated with SRH service utilization. Adolescents aged 16–17 and 18–19 years were more likely to use SRH services compared to those aged 13–15 years (χ^2=12.329, p=0.002; Exp(B)=2.639–2.933). Female adolescents were more likely than males to access these services (χ^2=28.850, p<0.001; Exp(B)=3.194). Place of residence also influenced utilization, with rural adolescents showing higher engagement than urban peers (χ^2=8.347, p=0.004; Exp(B)=0.402). In contrast, school status, education level, religious affiliation, and living arrangements were not significantly associated with SRH service use. Parental discussion on reproductive health emerged as a critical determinant. Adolescents who reported discussing reproductive health topics with their parents or guardians were significantly more likely to utilize SRH services (χ^2=14.680, p<0.001; Exp(B)=0.375). This underscores the importance of family support in encouraging informed health-seeking behaviors among adolescents.

Awareness and attitudes toward SRH services also influenced utilization. While moderate and high awareness levels were linked with increased SRH service use, logistic regression analysis indicated that awareness was not a statistically significant predictor (p>0.05). In contrast, positive attitudes were strongly associated with service utilization (χ^2=9.005, p=0.011), with adolescents holding favorable attitudes being four times more likely to access services (Exp(B)=4.175). The qualitative aspect of the study highlighted that adolescents valued confidentiality, youth-friendly service delivery, and non-judgmental healthcare providers. However, perceived stigma and fear of being judged were identified as barriers that deter adolescents from seeking care. These findings emphasize that both behavioral and environmental factors are essential to improving adolescent SRH service uptake.

6. CONCLUSION

The study concludes that adolescent utilization of SRH services is influenced by a combination of demographic, attitudinal, and familial factors. Older adolescents and females are more likely to engage with SRH services, indicating the need for targeted interventions for younger and male adolescents. Place of residence also plays a role, suggesting geographic disparities in access that must be addressed. Parental engagement in discussing reproductive health significantly enhances adolescents' likelihood of using SRH services. Moreover, positive attitudes toward SRH services are critical for utilization, whereas knowledge alone is insufficient to drive behavior. These findings indicate that interventions must go beyond raising awareness to include strategies that foster supportive attitudes and environments for adolescents. Overall, the study highlights that improving adolescent SRH service utilization requires a multifaceted approach, integrating family involvement, youth-friendly service provision, and behavioral interventions to foster positive perceptions and reduce barriers.

7. RECOMMENDATIONS

Based on the study findings, the following recommendations are proposed: Expand youth-friendly SRH services in both rural and urban areas, ensuring accessibility, privacy, and confidentiality. Implement targeted programs to increase SRH engagement among male adolescents and younger age groups. Actively engage in open and supportive discussions about reproductive health with adolescents to encourage informed decision-making and service utilization. Integrate structured SRH education into school curricula and organize awareness campaigns that promote positive attitudes toward SRH services. Provide respectful, confidential, and non-judgmental care to adolescents to improve trust and increase service uptake. Conduct longitudinal studies to explore causal relationships between attitudes, awareness, and SRH utilization. Investigate socio-cultural barriers that specifically affect male adolescents and urban populations to design more tailored interventions.

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