

Utilization of Sexual Reproductive Health Services Among Adolescents Aged 10-19 Years at Youth Friendly Spaces in Muhanga District of Rwanda

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Abstract: The study assessed the utilization of Sexual and Reproductive Health (SRH) services among adolescents aged 10–19 years in Youth Friendly Spaces (YFS) in Muhanga District, Rwanda. Recognizing that adolescents constitute a significant portion of Rwanda’s population (22%), the research addressed the low uptake of SRHR services due to barriers such as stigma, misinformation, and limited access. A cross-sectional design was employed from June to November 2024, involving 385 adolescents selected across 16 youth friendly spaces using Yamene’s formula. Data were collected through semi-structured questionnaires and analyzed using descriptive statistics, bivariate, and multivariate logistic regression in SPSS version 26. Findings revealed that 55.8% of participants utilized SRHR services, with most seeking information and counseling. Gender differences were evident, as 46.0% of males and 31.8% of females reported usage ($P=0.004$). Age also influenced utilization—50.7% of those aged 18–19 used services compared to 22.8% aged 10–14 ($P=0.971$). Multivariate analysis showed that being female significantly increased the likelihood of SRHR service use [AOR=1.79, 95% CI: 1.139–2.814, $P=0.012$]. Similarly, adolescents whose mothers had secondary education or higher were more likely to use services [AOR=1.28, 95% CI: 1.109–2.606, $P=0.049$]. Participation in community events discussing SRHR topics doubled the likelihood of service utilization [AOR=2.07, 95% CI: 1.983–4.383, $P=0.046$], while discussing SRHR issues with sexual partners increased utilization by 29% [AOR=1.29, 95% CI: 1.101–2.013, $P=0.026$]. The study concluded that female adolescents, those with educated mothers, and those actively engaging in SRHR discussions with parents, peers, and during community events were more likely to access SRHR services at YFS. It emphasized the need to integrate SRHR education into community platforms such as Umuganda, Umugoroba w’Ababyeyi, and Inteko z’Abaturage to foster open dialogue and enhance adolescents’ awareness and utilization of SRHR services. Overall, the findings highlight the critical role of family and community involvement in promoting adolescent sexual and reproductive health and rights in Rwanda.

Key words: Sexual Reproductive Health, Adolescents, 10-19 Years, Youth, Muhanga District, Rwanda.

1. INTRODUCTION

According to WHO (2018), adolescents make up 16% of the world's population, or 1.3 billion people. According to The Fifth Rwanda Population and Housing Census, Main Indicators Report (2022), n.d., adolescents make up 22% of the country's population, with 5% of girls and 10% of boys having sex before the age of 15 and 2.6% of females having already given birth. Adolescents between the ages of 10 and 19 must use Sexual Reproductive Health and Rights (SRHR) services in youth-friendly settings in order to support their general empowerment and well-being (Mukeshimana et al., 2025). A considerable percentage of the 1.2 billion adolescents who require SRHR services worldwide live in Low and Middle-Income Countries (LMICs), such as Rwanda.

The ability to seek necessary care may be hampered by obstacles like stigma, ignorance, a lack of safe spaces, and insufficient service provision (Ravindran & Govender, 2020). Improving health outcomes and enabling youth to make knowledgeable decisions on their sexual and reproductive rights depend on removing these obstacles. Teenagers' access to Sexual Reproductive Health and Rights (SRHR) services is greatly aided by youth-friendly environments. These areas are intended to be friendly and encouraging, offering a secure setting where youth can look for resources and information without worrying about being judged (Dine and others, 2023). Through the adoption of numerous policies and strategies to guarantee access to reasonably priced and equitable services, the Rwandan government has worked to improve the Adolescent Sexual Reproductive Health and Rights (ASRHR) for adolescents and youths (Rwanda Adolescent Strategic Plan_Final.Pdf, n.d.). (Bomfim et al., 2020) (Pahari et al., 2025) (Study: Quality of Youth Corners and Youth-Friendly Services and Expectations in Rwanda, 2022) (Habtu et al., 2025) (Bomfim et al., 2020) (Pahari et al., 2025) (Habtu et al., 2025) (Bomfim et al., 2020) (Pahari et al., 2025) (Pahari et al., 2025) (Study: Quality of Youth Corners and Youth-Friendly Services and Expectations in Rwanda, 2022).

In spite of the advancements in SRHR services, a number of reproductive health issues among adolescents and young adults between the ages of 10 and 24—particularly those between the ages of 10 and 19—are linked to a lack of understanding regarding bodily functions, reproductive processes, pregnancy, marriage, and family planning (Jean Simon et al., 2023) (Ayehu et al., 2016). Additionally, there are few opportunities for young people to engage in open dialogue about Sexual Reproductive Health and Rights (SRHR) issues, such as puberty, sexuality, and family planning. This has had detrimental effects, such as social stigma and barriers based on culture and religion (Mukeshimana et al., 2025; Melesse et al., 2020; Dine et al., 2023).

In response, the World Health Organization worked with the Rwandan government to enhance the well-being of adolescents by offering financial and technical support for initiatives related to sexual reproductive health (WHO-SRH-21.165-Eng.Pdf, n.d.) (Ndayishimiye et al., 2020).

In order to address the challenges of adolescent sexual and reproductive health services, programs included Comprehensive Sexuality Education (CSE) in schools and the expansion of Youth Friendly spaces; however, the quality and availability of services remain low (Geary et al., 2014; Habtu et al., 2025; Obiezu-Umeh et al., 2021). Therefore, this study sought to explore the utilization of Youth Friendly Spaces in Muhanga district, Rwanda. Focusing more on the level of SRHR utilization and associated factors influencing Sexual Reproductive Health and Rights services access, utilization patterns and reasons hinder their utilization. Also, research findings will inform policies and improved program interventions to enhance ASRHR utilization at Youth Friendly Spaces (YFS) among adolescents and youth aged 10-19 age.

2. METHODOLOGY

Research Design

This study used cross sectional design to examine the utilization of Sexual Reproductive Health (SRH) youth Friendly Spaces (YFS) among adolescents in Muhanga district.

Study Setting

This study was carried out in 16 Youth friendly spaces located in Muhanga district

Study Population

This research study targeted adolescents aged between 10 -19 years.

Sample Size

For this study, the representative sample was determined using YAMEN's formula (1963), assuming the real population is not known:

$$n = \frac{(z)^2 * p * (1 - p)}{(e)^2}$$

Where:

n= sample size

Z= Z-score

P = estimated proportion of the population with a particular characteristic e= desired margin of error

$$n = \frac{(1.96)^2 * 0.5 * (1-0.5)}{(0.05)^2} = 385$$

Sampling Technique

A random sampling technique was applied to choose study participants.

Data Collection Methods

During data collection a semi-structured questionnaire was used to conduct data for our participants. Questionnaire was adapted by the researcher for appropriate use in local contexts of the country (Kinyarwanda Version).

3. RESEARCH FINDINGS

1. Demographic Characteristics

Table 1 : Social Demographic Characteristics

Variable	Frequency (N)	Percentage (%)
Gender		
Male	153	39.7
Female	232	60.3
Age group		
10-14	86	22.3
15-17	103	26.8
18-19	196	50.9
Religion		
ADEPR	15	3.9
Seventh day Adventist	35	9.1
Anglican (EAR)	109	28.3
Catholic	224	58.2
Muslim	2	0.5
Marital status		
Single	381	99.0
Living with partner	4	1.0
School Status		
In school	225	58.4
Out of school	160	41.6
Level of Education attained		
Primary level	156	40.5
Secondary Level	229	59.5
Mother's level of education completed (N=380)		
No Formal Education	91	23.9
Primary Level	195	51.3
Secondary Level	94	24.7
Father's level of education completed (N=362)		
No Formal Education	143	39.5
Primary Level	124	34.3
Secondary Level	95	26.2
Have health insurance		
Yes	330	85.7
No	55	14.3
Type of insurance		
Mutuel de sante (Health insurance)	269	81.5
MMI	12	3.6
RSSB	46	13.9
Others	3	0.9

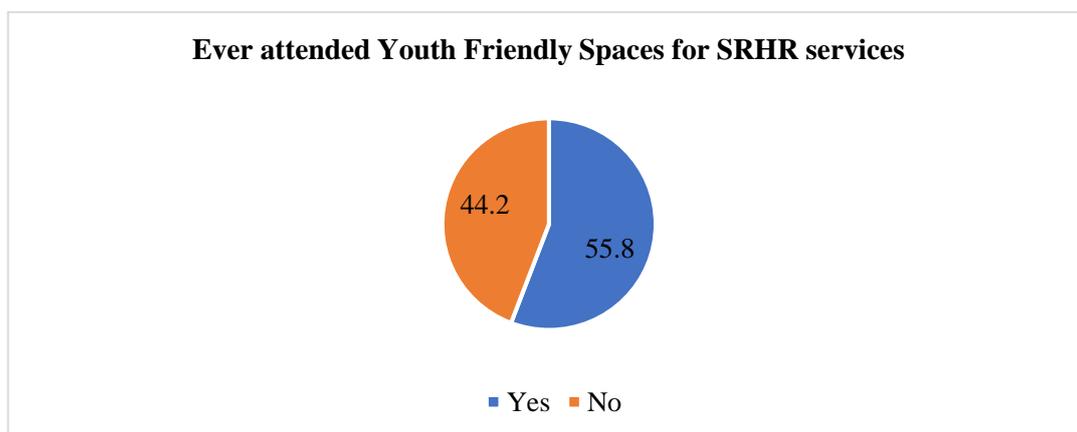
This table present demographic characteristics of study participants. Majority of participants were females with (60.3%) of total while males were (39.7%). Age distribution majority of respondents were aged between 18 -19 years with (50.9%)

while other age groups like 10 -14 and 15 -17 were (22.3%) and (26.8%). In terms of religious affiliations, most of our respondents were from catholic church with (58.2%) followed by Anglican (EAR) with (28.3%). The marital status overwhelming majority were single with (99.0%) of the respondents.

Most of respondents were in school (58.4%). Of them (59.5%) attained secondary level while (40.5%) attained primary level. In contrast to the majority of fathers (39.5%) who reported no formal education, mothers of respondents (51.3%) stated that they had completed primary school. Eighty-seven percent of those surveyed said they had health insurance. Eighty-five percent of them stated that they use Community Based Health Insurance (CBHI), also known as Mutuel de Santo.

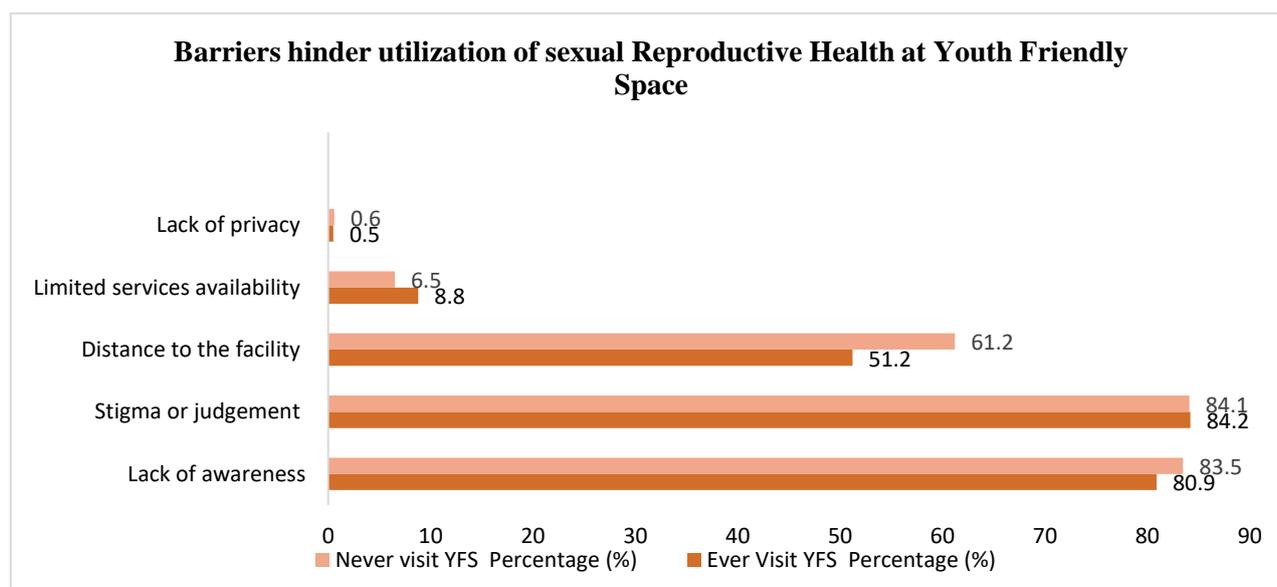
2. To determine the level of SRH services utilization in youth friendly spaces among adolescents aged 10-19 years' old

Figure1: Level of SRHR Utilization at Youth Friendly Spaces (YFS)



This figure shows data on how often teenagers between the ages of 10 and 19 use Sexual Reproductive Health and Rights (SRHR) services at youth-friendly locations. The majority of respondents—215 (55.7%)—reported having attended a youth-friendly place for SRHR services, whilst 170 (44.2%) said they had never done so. obstacles to using the Youth Friendly Space services for Sexual Reproductive Health and Rights (SRHR).

Figure 2: Barriers hinder Sexual Reproductive Health (SRH) utilization at YFS



This figure present barriers to access youth friendly services (YFS) a notable barrier is lack of awareness with 80.9% of these who ever visited. Stigma or judgement is also factors reported by 84.2% of users and 84.1% of non-users. Distance to the facility emerges as significant barriers with 51.2% of these who ever visited YFS compared to 61.2% of those who have never visited.

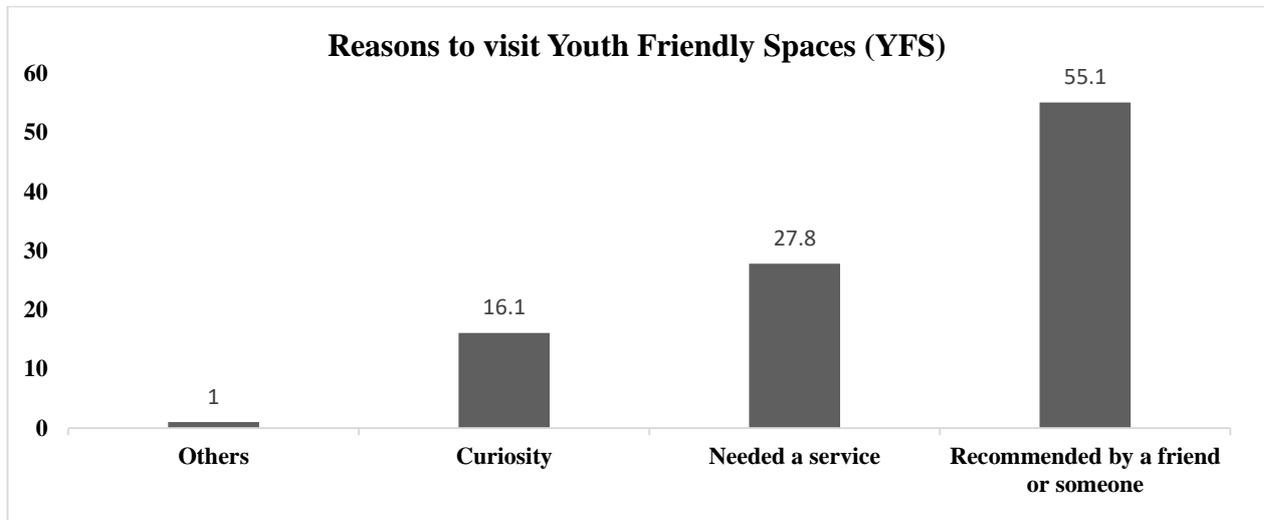
3.To describe the types of SRHR services utilized by among adolescents aged 10 to 19 years at Youth Friendly Services

Table 2: Types of SRH services utilized by among adolescents aged 10 to 19 years at YFS

Variable	Frequency (N)	Percentage (%)
Ever recommended by friend to visit YFS		
Yes	116	54.0
No	99	46.0
Feel comfortable and safe when visiting YFS		
Always	50	23.3
Most of the time	164	76.3
Sometimes	1	0.3
Visiting YFS impacted towards SRH attitudes		
Significantly improved	190	88.4
Somewhat improved	25	11.6
Sources of information related to Youth Friendly Spaces (YFS)		
School	60	27.9
Friends	123	57.2
Family	2	0.9
Community Health Workers (CHWs)	40	18.6
Radio	36	16.7
Rates of accessibility of health facilities		
Accessible	52	24.2
Very Accessible	162	75.3
Not accessible	1	0.5
Often do visit YFS		
Daily	1	0.5
First Visit	117	54.4
Monthly	2	0.9
More than a month	95	44.2
Far is YFS from home		
Less than 1 km	22	10.2
2 km	86	40.0
Between 3-5 km	103	47.9
More than 5 km	4	1.9
Time you took to reach nearest YFS from home		
Less than ½ hour	25	11.6
½ hour	81	37.7
One hour	87	40.5
Two hours	18	8.4
More than 2 hours	4	1.9
Contraceptives readily available at YFS		
Yes	169	78.6
No	46	21.4
Healthcare provider at YFS ever provided SRH related information include STIs, HIV, Pregnancy, abortion or contraception		
Yes	213	99.1
No	2	0.9
Quality of services provided		
Excellent	201	94.4
Good	12	5.6
Adequate secrecy maintained		
Yes	214	99.5
No	1	0.5
Time waits to receive SRH information at YFS		
1min -10 min	70	32.6
11min -20 min	120	55.8
21min -30 min	23	10.7
31 min and above	2	0.9

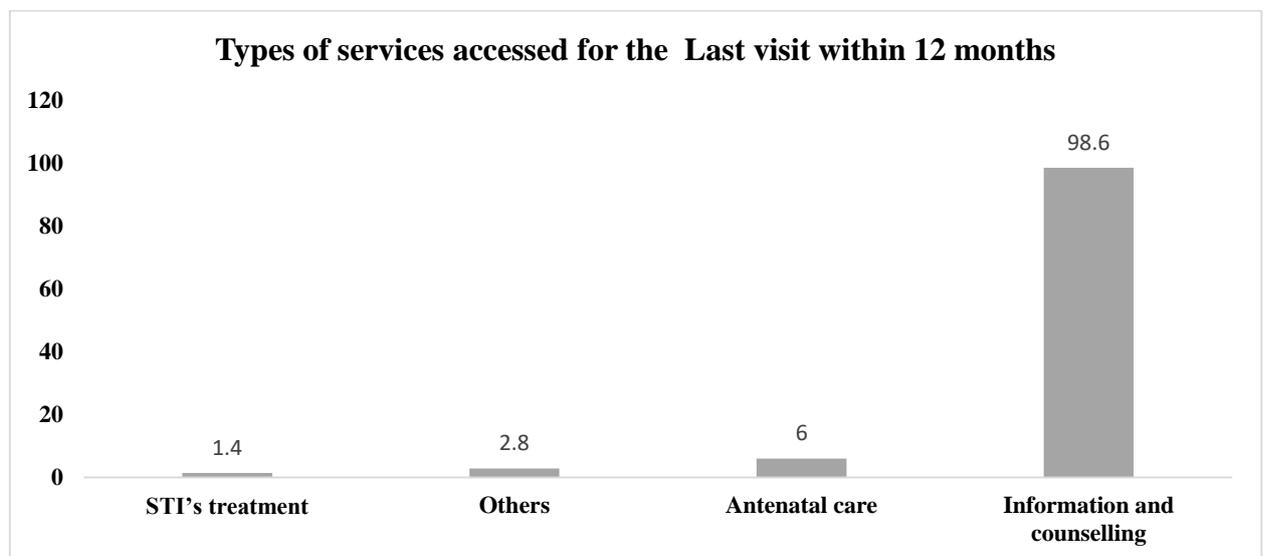
Among the 215 adolescents who attended Youth Friendly spaces, majority with (54.0%) reported being recommended by their friends to visit for SRHR services. When it comes to comfort and safety during their visits, of them 164 (76.3%) feel comfortable and safe most of time while only very small percentage (0.3%) reported feeling comfortable sometimes. Impact of visiting Youth Friendly Spaces on SRHR (88.4%) reported significant improved to their attitudes as a result of their visits. In terms of information sources, friends were reported more with 123(57.2%) followed by school 60(27.9%). Accessibility to health facility was also reported with (75.3%) as very accessible. However, frequency of visits shows that (54.4%) were reporting first visit. The distance from home varies with (47.9%) living between 3-5km and most of study respondents (40.5%) taking about one hour to reach nearest youth friendly space. Despite the distances, (78.6%) reported that contraceptives are readily available at Youth friendly spaces and (99.1%) received SRHR related information from healthcare provides covering essential topics includes STIs, HIV, pregnancy and contraception. The quality of services provided rated high with (94.4%) reported it as excellent and (99.5%) affirming that adequate secrecy was maintained. Waiting time for receiving SRHR services at Youth Friendly Spaces (55.8%) reported waiting between 11 to 20 minutes.

Figure 3: Reasons of Adolescents aged 10-19 years to visit Youth Friendly Space (YFS)



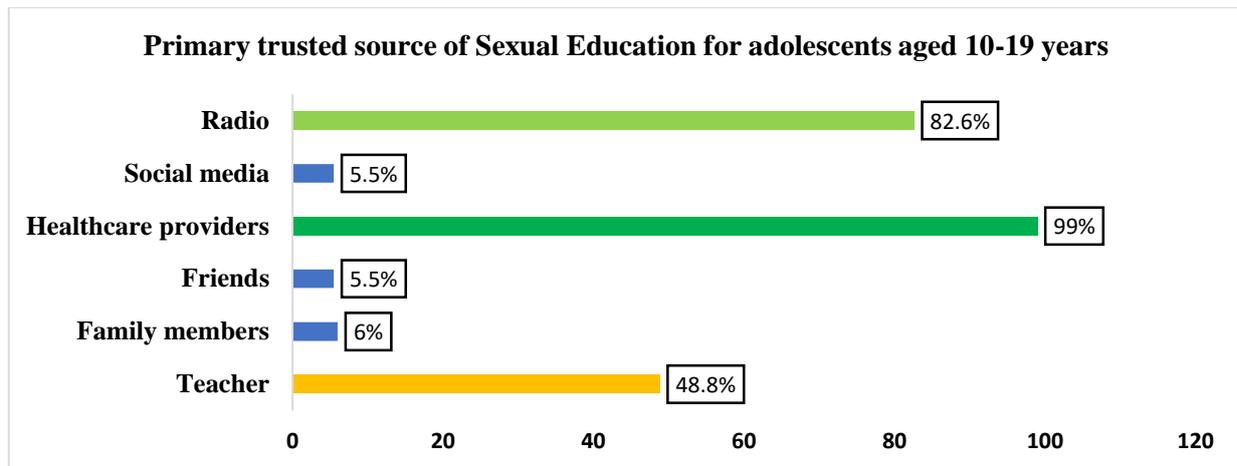
This figure shows that majority of respondents whomever attender Youth Friendly Services (YFS) 55.1% recommended their visits with someone or a friend and 27.8% of them visited there Because they need to receive SRHR service while 16.1% have curiosity.

Figure 4: Types of services accessed for the last visit of adolescents aged 10-19 years within last 12 months



For these reported their last visit in 12 months' majority of them were at Youth Friendly Services for information with 98.6% and counselling, only 6.0% were there for antenatal care and small proportion of 1.4% were there for STIs treatment.

Figure 5: Primary trusted source of Sexual Education for Adolescents aged 10-19 years



This figure present primary trusted source of Sexual Education for adolescents aged 10-19 years. Majority of respondents reported healthcare providers as trusted source for SRHR information with 99% of respondents, followed by Radio with 82.6% and Teachers with 48.8%. others include family members, friends and social media were 6% and 5.5%.

4. Determine the factors associated with the utilization of SRH services per personal characteristics at youth-friendly space by youths aged 10-19 years in Muhanga District

Table 3: Bivariate analysis

Variable	Ever use of SRH services at YFS		P-value
	Yes n (%)	No n (%)	
Gender			0.004
Male	99(46.0)	54(31.8)	
Female	116(54.0)	116(68.2)	
Age group			0.971
10-14	49(22.8)	37(21.8)	
15-17	57(26.5)	46(27.1)	
18-19	109(50.7)	87(51.2)	
Religion			0.337
ADEPR	7(3.3)	8(4.7)	
Seventh day Adventist	25(11.6)	10(5.9)	
Anglican (EAR)	57(26.5)	52(30.6)	
Catholic	125(58.1)	99(58.2)	
Muslim	1(0.5)	1(0.6)	
Marital status			0.438
Single	212(98.6)	169(99.4)	
Living with partner	3(1.4)	1(0.6)	
School Status			0.239
In school	120(55.8)	105(61.8)	
Out of school	95(44.2)	65(38.2)	
Level of Education attained			0.854
Primary level	88(40.9)	68(40.0)	
Secondary Level	127(59.1)	102(60.0)	
Mother's level of education completed (N=380)			0.045
No Formal Education	60(28.7)	31(18.6)	
Primary Level	108(50.7)	87(52.1)	
Secondary and above Level	45(21.1)	49(29.3)	

Father's level of education completed (N=362)			0.061
No Formal Education	90(44.8)	53(32.9)	
Primary Level	65(32.3)	59(36.6)	
Secondary and above Level	46(22.9)	49(30.4)	
Have health insurance			0.335
Yes	181(84.2)	149(87.6)	
No	34(15.8)	21(12.4)	
Type of insurance			0.324
Mutuel de sante (Health insurance)	151(83.4)	118(79.2)	
MMI/RSSB and others	30(16.6)	31(20.8)	
Family talks to SRH topics			0.001
Yes	40(18.6)	56(32.9)	
No	175(81.4)	114(67.1)	
Frequency family talk about SRH topics			0.239
Never	0(0.0)	3(5.4)	
Occasionally	38(95.0)	48(85.7)	
Often	2(5.0)	5(8.9)	
Engaged in discussions SRH with your peers within the past 12 months			0.147
Yes	192(89.3)	159(93.5)	
No	23(10.7)	11(6.5)	
Participated any event discussing SRH in the past 12 months			0.012
Yes	182(84.7)	158(92.9)	
No	33(15.3)	12(7.1)	
Have Boy/girlfriend			0.702
Yes	163(75.8)	126(74.1)	
No	52(24.2)	44(25.9)	
Ever did sexual intercourse			0.724
Yes	115(53.5)	94(55.3)	
No	100(46.5)	76(44.7)	
Having sex partner to talk about SRH topics			0.020
Yes	76(35.3)	80(47.1)	
No	139(64.7)	90(52.9)	

This table present factors influence utilization of Sexual Reproductive Health and Rights (SRHR) at youth friendly spaces. Overall, the findings indicate that gender and age were determinants of SRHR services utilization. Specifically, 46.0% of male reported ever using services, while a higher percentage of females (68.2%) reported non -utilization. Age among youth aged between 18-19 years 50.7% of them utilize SRHR services at Youth Friendly Spaces while only 22.8% among these with 10-14 years did so.

Religious affiliation appears to influence SRHR services utilization at Youth friendly spaces particularly among catholic who comprised 58.1% of users while Adventist reported 11.6%. Marital status shown that 98.6% of users and 99.4% of none users are single with P-value of 0.438.

Education factors, 28.7% of users had mother with no formal education, compared to non-users of 18.6% of non-users with p-value of 0.045. Health insurance status significant utilization as 84.2% of users had insurance compared to 87.6% of non-users with P-value of 0.335.

Furthermore, communication about SRHR topics is associated with lower utilization rates with only 18.6% of users reporting family discussions compared to 32.9% of non-users a significant P-value of 0.001. Engagement in peer discussions and participation with 89.3% of users having engagement discussion with peers to 93.5% of non-users. Although this association is less association is less significant (P-value -0.147)

Table 4: Multivariate Analysis

	AOR	95%CI	P-value
Gender			
Male	Ref.		
Female	1.79	1.139-2.814	0.012
Mother's level of education completed			
No Formal Education	Ref.		
Primary Level	0.94	0.521-1.716	0.853
Secondary and above Level	1.28	1.109-2.606	0.049
Talks about SRH topics with parents/caregivers			
Yes	1.82	1.017-3.258	0.044
No	Ref.		
Participated any event discussing SRH in the past 12 months			
Yes	2.07	1.983-4.383	0.046
No	Ref.		
Talk about SRH topics with sexual partner			
Yes	1.29	1.101-2.013	0.026
No	Ref.		

Finding the variables linked to the use of SRHR services at Youth Friendly Spaces (YFS) was the third goal of the research. Multivariate analysis showed that adolescents who were female were more likely than those who were male to use SRHR services [AoR: 1.79, 95%CI: (1.139-2.814), P=0.012]. Compared to adolescents born to mothers without formal education, adolescents whose mothers had completed secondary school or above were 28% more likely to use SRHR services at Youth Friendly Spaces [AoR:1.28, 95%CI: (1.109-2.606), P=0.049]. Adolescents' utilization of SRHR services at Youth Friendly Spaces was substantially correlated with talking or discussing SRHR themes with parents or caregivers [AoR: 1.82, 95%CI: (1.017-3.258), P=0.046]. The use of SRHR services at Youth Friendly Services was significantly correlated with discussing SRHR topics with a sexual partner. Adolescents who engaged in such conversations were 29% more likely to use SRHR services [AoR: 1.29, 95%CI: (1.101-2.013), P=0.026].

4. DISCUSSION

The utilization of Sexual Reproductive Health and Rights (SRHR) services among adolescents continues to be a vital public health concern globally. Existing studies have shown significant disparities in the uptake of SRHR services, often reflecting variations in program design, cultural perceptions, accessibility, and levels of awareness among adolescents (Obiezu-Umeh et al., 2021). For instance, research conducted in Uganda reported a relatively low utilization rate of SRHR services, averaging around 42%, compared to 67.5% in Nepal (Kigongo et al., 2024; Sharma et al., 2023; Pahari et al., 2025). Such differences across contexts demonstrate the influence of sociocultural norms, the quality of youth-friendly programs, and the degree of governmental and community support for adolescent health initiatives.

Peer influence has been consistently identified as a significant determinant of SRHR service utilization among adolescents. Studies in Sub-Saharan Africa have documented that over half of young people obtain information about SRHR services from peers, emphasizing the central role of friendship networks in shaping health-seeking behavior (Bakesiima et al., 2021; Tsegaw et al., 2023; Helamo, 2017). This underscores the importance of integrating peer education and youth engagement strategies within SRHR programs, as adolescents tend to rely heavily on trusted social circles for advice and encouragement. Similarly, media platforms such as local radio, posters, and social events have proven to be effective in promoting awareness and reducing fear or stigma associated with accessing SRHR services (Agu et al., 2024).

Accessibility remains a major determinant of adolescents' ability to utilize SRHR services. Long travel distances, inadequate transportation, and limited operating hours have been reported as significant barriers, particularly in rural areas (Habtu et al., 2025; Ndayishimiye et al., 2020). These findings align with broader regional research, which identifies geographical and infrastructural barriers as persistent obstacles to youth-friendly service delivery (Geary et al., 2014; Jakobsson et al., 2024). Furthermore, affordability and confidentiality have emerged as critical factors influencing adolescents' decisions to seek care. Evidence from multiple Sub-Saharan studies indicates that free or low-cost services, combined with assurances of privacy, significantly enhance adolescents' trust and willingness to utilize SRHR facilities (Achen et al., 2021; Uka et al., 2024; Chandra-Mouli et al., 2015).

Cultural and familial contexts also play an essential role in shaping adolescent SRHR behaviors. In many African societies, cultural taboos around discussing sexual health create stigma and discourage open communication between adolescents and adults. Studies suggest that promoting parental engagement and intergenerational dialogue can greatly improve young people's knowledge and utilization of SRHR services (Merkeb Alamneh et al., 2022; Bergam et al., 2022). Adolescents whose parents or caregivers maintain open discussions about SRHR matters tend to exhibit higher confidence in seeking care and making informed decisions. Similarly, partner communication has been identified as a key facilitator in service uptake, as mutual understanding within relationships promotes informed reproductive choices and shared responsibility for sexual health (Mngomezulu et al., 2025).

Overall, the literature highlights that effective adolescent SRHR programming must be multidimensional—addressing social, cultural, educational, and structural determinants simultaneously. Strengthening peer education, expanding outreach to rural communities, and fostering supportive family environments are crucial strategies for improving utilization rates. Moreover, ensuring confidentiality, accessibility, and culturally sensitive service delivery will remain essential to achieving universal SRHR coverage among adolescents, especially in low- and middle-income countries like Rwanda.

5. CONCLUSION

The study evaluated how often teenagers (10–19 years old) used Sexual Reproductive Health (SRH) services at Youth Friendly Spaces (YFS) in Rwanda's Muhanga District. The majority of adolescents sought information and counseling rather than preventive services like HIV testing, according to the findings, which showed that 55.8% had ever used SRH services. Discover the elements that are linked to the use of SRH services.

Being Female adolescents, having parents who complete secondary education and above, discussion of SRH topics with parents' participation in the event discussing about SRHR topics and discussing with sex partner about SRH topics were independent associated factors associated with utilization of SRH at YFS. The findings underscore the importance of discussing sexual reproductive health and rights topics at family level. Including SRH topics during community events such Umuganda, Umugoroba w'ababyeyi and Inteko Z'abatwaga will increase the use of SRHR services at Youth Friendly Spaces (YFS).

6. ETHICAL CONSIDERATIONS

Ethical approval for this research project was obtained from the Mount Kenya University Institutional Review Board (IRB). In addition, permission to conduct the study was granted by the Muhanga District local authorities. Both informed consent and assent forms were duly obtained from the participants, ensuring voluntary participation.

Throughout the data collection process, strict adherence to ethical standards of privacy and confidentiality was maintained. All collected data were handled with the utmost confidentiality and used solely for academic and research purposes.

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