

Title: Knowledge, Attitude and Practices towards HIV testing among adolescent girls and young women in the southern province of Rwanda

Author's: Francis Nuwagaba^{1*}, Monica Mochama¹, Kevin Nwanna²

Affiliations:

¹Department of public Health, Mount Kenya University- Kigali Rwanda

²Department of public Health, University of Rwanda

Corresponding Author:

Francis Nuwagaba

Kigali City, Gasabo District

E-mail: fnuwagaba1@gmail.com

Abstract

Human Immunodeficiency Virus (HIV) testing is the primary entry to care and treatment services and ultimately HIV epidemic control. Adolescent girls and young women are generally an important population as they traditionally have been shown to lack access to health education. This study aimed to determine the knowledge, attitude, and practices toward HIV testing among adolescent girls and young women in the southern province of Rwanda. The study was a cross-sectional that applied cluster sampling to select youth groups of AGYW. Simple random sampling was used to select 387 AGYW. Descriptive statistics was used to give a clear picture of background variables like age, gender, and other variables. The SPSS Ver.21 software was employed for statistical analysis. Young women participated in the study; 210 (54.3%) were between 15-19 years and 177(45.7%) were aged 20-24 years at the time of the study. This study revealed that 43.4% respondents had high level of knowledge while 56.6% respondents had low level of knowledge, 41.6% respondents had positive attitude and 55.30% respondents had poor practice towards HIV testing. The findings from bivariate analysis revealed that District, distance to health, doubt about confidentiality of positive results and the level of practice were statistically significantly associated with HIV testing with the p-value <0.05 calculated at 95%CI. Respondents who did not have the doubt about confidentiality of positive results were

more likely to go to the health center for HIV test [AOR=2.513; 95%CI=0.23-7.143; P=0.0102] compared to respondents doubted confidentiality of positive results. It concludes that majority (56.6%) of respondents had low level of knowledge and negative attitude while more than a half of them had poor practices towards HIV testing. The results further suggest that these initiatives would be strengthened by including strategies to increase HIV comprehensive knowledge.

Key words: Knowledge, Attitude and Practice; Adolescent and young girls

Introduction

AIDS is the leading cause of death for adolescent girls and young women in Eastern and Southern Africa [1]. Adolescence (10-19) represents 39% of new HIV infections in people aged 15 years and older. HIV remains particularly devastating for adolescents and young adults aged 15-24 years who account for approximately 50% of all new HIV infections and 30% of persons living with HIV/AIDS worldwide [2].

New HIV infections among adolescent girls and young women are substantially higher than among males of the same age because HIV is more commonly acquired from male sexual partners who are a few or several years older. Gender inequality also disproportionately affects girls and women, but addressing it requires working with both women and men to consider not only unequal power dynamics but also risk practices and underlying social and gender norms. Several trials of biomedical and other combination HIV prevention programs that influenced biological outcomes have focused on both women and men.

The United Nations (UN) Political Declaration on Ending AIDS adopted in June 2016 calls for reducing new HIV infections to fewer than 500 000 per year by 2020, and it sets a specific target to reduce new HIV infections among adolescent girls and young women aged 15 to 24 years to fewer than 100 000 by 2020. The targets set by 2016. Political Declaration require that by 2020 there is a 75% reduction of the registered new infections documented in 2010[3].

Globally, 20 million females aged 15-24 are living with HIV and are 2 to 14 times as likely to acquire HIV than males of the same age, dependent on the country; The impact of HIV on young women and adolescent girls is critical: they account for one in five new HIV infections in Africa and are almost three times as likely as their male peers to be living with HIV in sub-Saharan Africa, Approximately 4,900 Adolescent girls and young women become infected with HIV each week in sub-Saharan Africa, girls and young women account for four out of five new

HIV infections among youth aged 15-24, this translates to girls and women representing 63% of all new HIV infection [1].

Access to HIV testing for adolescent girls and young women remains a concern globally. Young people's HIV testing levels in low- and middle-income countries (LMICs), that contain most global HIV disease burden, is uneven. Only one in three girls and 10-19 years in Africa report ever HIV testing[4].

In Eastern and Southern Africa (ESA) AGYW 15-24 account for 68% of young people and are twice as likely as their male peers to acquire HIV infection, which translates account for 26% of new HIV infection in the region, the adolescent birth rate in ESA doubles the global birth rate in the same age range accounting for 92 births/1000 girls [4].

Adolescent girls and young women's Knowledge Attitude and Practices towards HIV testing is shown to be a challenge as reported by many studies conducted from different African countries. Poor practice and low level of knowledge towards HIV testing have been indicated among AGYW, despite attempts to decentralize testing services and enhance community-based testing, stigma, fear for discrimination due to positive results, prejudice, and distance to health facilities, hence the lack of understanding continue to be significant barriers to testing access[5].

The information from this study may assist policy makers to give attention towards planning and implementing effectively, in designing or improving quality of HIV testing for adolescent girls and young women. The studies also provide information for other researchers who want to conduct further study on this area. In view of these, the present study sought to assess the knowledge, attitudes, and practices towards HIV testing; and the various factors that may be associated with HIV testing among adolescent girls and young women aged 15-24 in the Southern province of Rwanda.

In Rwanda, from early 80's, HIV/AIDS was not a concern until first case was discovered in Kigali, the entire national knowledge of many Rwandans even in many Africa countries on this epidemic was not well understood in terms of mode of transmission and prevention. The first HIV program in Rwanda was established in 1987; the access to medication was almost none. This turned worse when almost the entire country health system destroyed in the Genocide against Tutsi in 1994 till the program resumed in 2004 with slight measures to access to anti-retroviral therapy. Twenty years later, there was a remarkable improvement done in terms HIV testing, prevention, and access to Anti-retroviral therapy (ART) under the government leadership in collaboration with international donors and partners in response to HIV. Current data and factsheet on Rwanda, showed that Rwanda is among few countries that achieved the global

target of UNAIDS 90-90-90 and regarding the pace of HIV programing in Rwanda, the country expect to achieve the HIV epidemic control stage by next 5 years[6].

Globally, almost three out of five or 250 000 [150 000–360 000] of the 400 000 [250 000–570 000] young people who acquired HIV in 2021 were adolescent girls and young women. In sub-Saharan Africa, they accounted for almost four in five new infections among young people. Within this group, an estimate of 38.8% tested for HIV and were aware of their status [1].

In sub-Saharan Africa, about 33% of all young people have ever tested for HIV and just 20% of youthful young ladies who are living with HIV know their HIV status. There are constrained proof-based mediations focusing on this population that viably analyze and interface youths and youthful grown-ups to mind [7].

In Rwanda, according to the Rwanda Demographic and Health Survey, seeking an HIV test is more difficult for young people than adults because many young people lack experience in accessing health services for themselves and because there are often barriers to young people obtaining services. Among young people aged 15-24 who have had sexual intercourse before the survey, 55% of young women and 41% of young men were tested for HIV in the 12 months preceding the survey and received the results of their last test [8].

Few papers have been published about Knowledge Attitude and Practices at subregional and provincial level hence the present study will come up with KAP towards HIV testing among adolescent girls and young women in the southern province of Rwanda.

Methods

Study design

The study design was a cross-sectional using quantitative approach from March to August 2022 to determine knowledge, attitude, and practices towards HIV testing among adolescent girls and young women aged 15-24 years in Southern Province of Rwanda. The level of knowledge, attitude and practice was determined by score assessment.

Target Population

The target population was 12,000 adolescent girls and young women aged 15-24 years from the southern province of Rwanda that attend the youth clubs for sexual and reproductive health and rights education sessions at youth centers.

Sample size and sampling procedure

The study interviewed 387 adolescent girls and young women aged 15-24 years. Adolescent girls below 15 years and young women above 24 years were excluded.

Quantitative data was collected physically using a pre-tested questionnaire with close ended questions that were administered to participants to obtain information on their level of knowledge, attitude, and practices towards HIV testing, as well as their sources of information on the issue. The structured and self-administered questionnaire that contained questions on knowledge, attitudes and practices guided the researcher to gather data needed for the study.

Data analysis and ethical consideration

The frequency, percentage and cross tabulation of variables was also used. Data was collected and statistically analyzed using SPSS V 21 software and Microsoft office excel and Microsoft word for interpretation and presentation of results. To evaluate knowledge and practices, research participants, was required to provide mostly “yes”, “no” responses and to elaborate inside the allotted area in which necessary. For attitude related questions, respondents were required to respond, “Agree or Disagree.” A score of 1 was assigned for a correct answer and 0 for an incorrect answer, for the knowledge and practice-associated questions a good way was strictly “Yes/No”. For the questions pertaining to attitude, a score of 1 was given to positive answers and a score of 0 was given for negative answer.

Ethical approval was needed, and the researcher reached out to Mount Kenya University to ask for the ethical approval for the purpose of this academic thesis. Each participant signed an informed consent before the beginning of the discussion, the ethical approval letter was presented to southern province authorities. The records gathered during this study continued to be private in a locked draw. At some point, the participant’s names were not head to anybody else.

Results

Demographic Characteristics of Respondents

The table 4.1 below, indicates the socio-demographic characteristics of 387 respondents all reached and data collected using questionnaire through face-to-face interview.

Table 1 Socio-demographic characteristics of the respondents.

Variables	Frequency	Percentage
Age group		
15-19 Years Old	210	54.3
20-24 Years Old	177	45.7
District		
Gisagara	47	12.1
Huye	53	13.7
Kamonyi	49	12.7
Muhanga	49	12.7
Nyamagabe	42	10.9
Nyanza	58	15.0
Nyaruguru	44	11.4
Ruhango	45	11.6
Level of Education		
No formal education	40	10.3
Primary	107	27.6
Secondary	240	62.0
Religion		
Anglican	35	9.0
Catholics	273	70.5
Muslims	46	11.9
Other religions	33	8.5

Source: Primary data

Table above represents the characteristics of the study participants. A total of 387 adolescent girls and young women (AGYW) aged 15-24 years were enrolled in this study. Majority of adolescent girls and young women 273(70.5%) were catholic, 46(11.9%) were Muslims and

35(9%) were Anglicans. Most of adolescent girls and young women 240(62%) completed secondary level of education while 40(10.3%) did not attend formal education.

Presentation of findings

The findings of this study are presented according to the four research objectives. The first objective was to determine level of knowledge on HIV testing services among adolescent girls and young women in southern province, the second objective was to determine attitude towards HIV testing services among adolescent girls and young women in southern province, the third objective was to determine practices towards HIV Testing among Adolescent girls and Young Women in southern province and the fourth objective was to analyze factors associated with HIV testing among adolescent girls and young women in southern province of Rwanda.

Knowledge on HIV testing services among adolescent girls and young women in southern province.

To determine the level of knowledge on HIV testing services among adolescent girls and young women in southern province of Rwanda was the first objective.

Table 2 Knowledge on HIV testing services among adolescent girls and young women in southern province.

Variables	Frequency	Percentage
Ever heard HIV Testing		
Yes	289	74.7
No	98	25.3
Knowledge on pre-HIV test counselling services		
Yes	270	70.0
No	117	30.0
Voluntary HIV testing Knowledge		
Yes	210	54.3
No	117	45.7
Know place where HIV testing services are provided		
Yes	220	56.9
No	167	43.1
Knowledge on HIV prevention and control measures		
Yes	242	62.5
No	145	37.5
Knowledge on service points for HIV testing		
Yes	233	60.2
No	154	39.8

Knowledge on periodic HIV testing for at risk population

Yes	243	62.8
No	144	37.2

Knowledge of HIV testing procedures

Yes	227	58.7
No	160	41.3

Source: Primary data

Of the respondents, 289(74.7%) indicated as ever heard about HIV testing in their lifetime, 270(70%) respondents had knowledge on pre and post-test counselling services. Regarding the understanding of the testing points, 220 (56.9%) were aware of different places where HIV testing would be conducted, and 242(62.5%) respondents agreed that they know about HIV prevention and control measures.

Overall level of knowledge among AGYW

The score assessment of eight variables have been used to assess the level of knowledge of respondents. The mean score was 6.22 and respondents with total score less than mean score were considered as the one with low level of knowledge while the one with score which is greater than mean score were considered as the one with high level of knowledge.

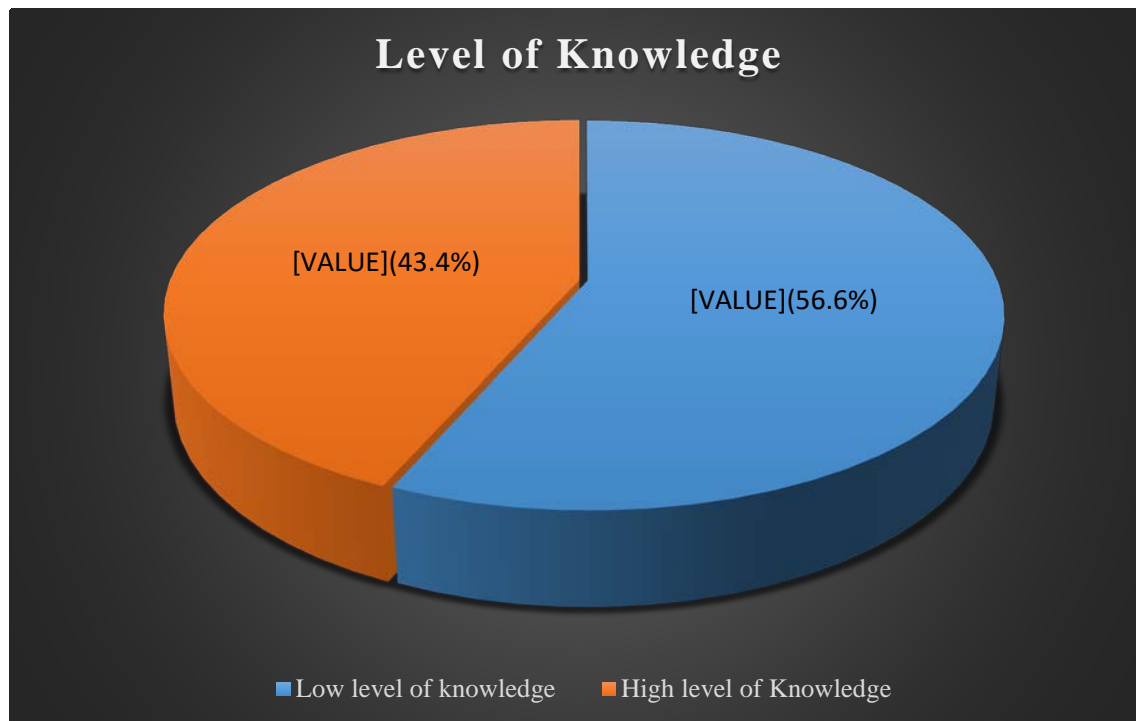


Figure 1: Level of knowledge on HIV testing among the AGYW in the Souther Province of Rwanda

The figure 1 shows that 168(43.4%) respondents had low level of knowledge while 219(56.6%) respondents had high level of knowledge.

Attitude towards HIV testing among adolescent girls and young women in the southern province.

The second objective was to determine attitude towards HIV testing services among adolescent girls and young women in southern province of Rwanda.

Table 3 Attitude towards HIV Testing services among adolescent girls and young women in southern province.

Variables	Frequency	Percentage
Agree to attend Periodic attendance of HIV testing services		
Agree	324	83.7
Disagree	63	16.3
Testing for the at risk AGYW		
Agree	307	79.3
Disagree	80	20.7
HIV testing for every 6 to 12 months		
Agree	319	82.4
Disagree	68	17.6

Mass Screening during community outreach

Agree	174	44.9
Disagree	213	55.1

Taking HIV testing whether had it before or not

Agree	196	50.6
Disagree	191	49.4

Disclosing HIV status with sexual partner

Agree	186	48.0
Disagree	201	52.0

The testing procedure would hinder AGYW to attend HIV testing services.

Agree	356	92.0
Disagree	31	8.0

Source: Primary data

Among the interviewed AGYW at the time of the study, 324(83.7%) of them agreed that they attend HIV testing services periodically, 319(82.4%) reacted positively towards a 6 to 12 months testing plan, 186(48%) respondents agreed that with the statement which was asking whether they can share/discard their HIV status with their partners while 356(92%) indicated that the testing procedure would hinder their attendance to HIV testing.

Graphical presentation of Level of attitude

The score assessment of seven variables have been used to assess the level of attitude of respondents. The mean score was ± 5.19 SD and respondents with total score less than mean were considered as the one with negative attitude while the one with score which is greater than mean were considered as the one with positive attitude.

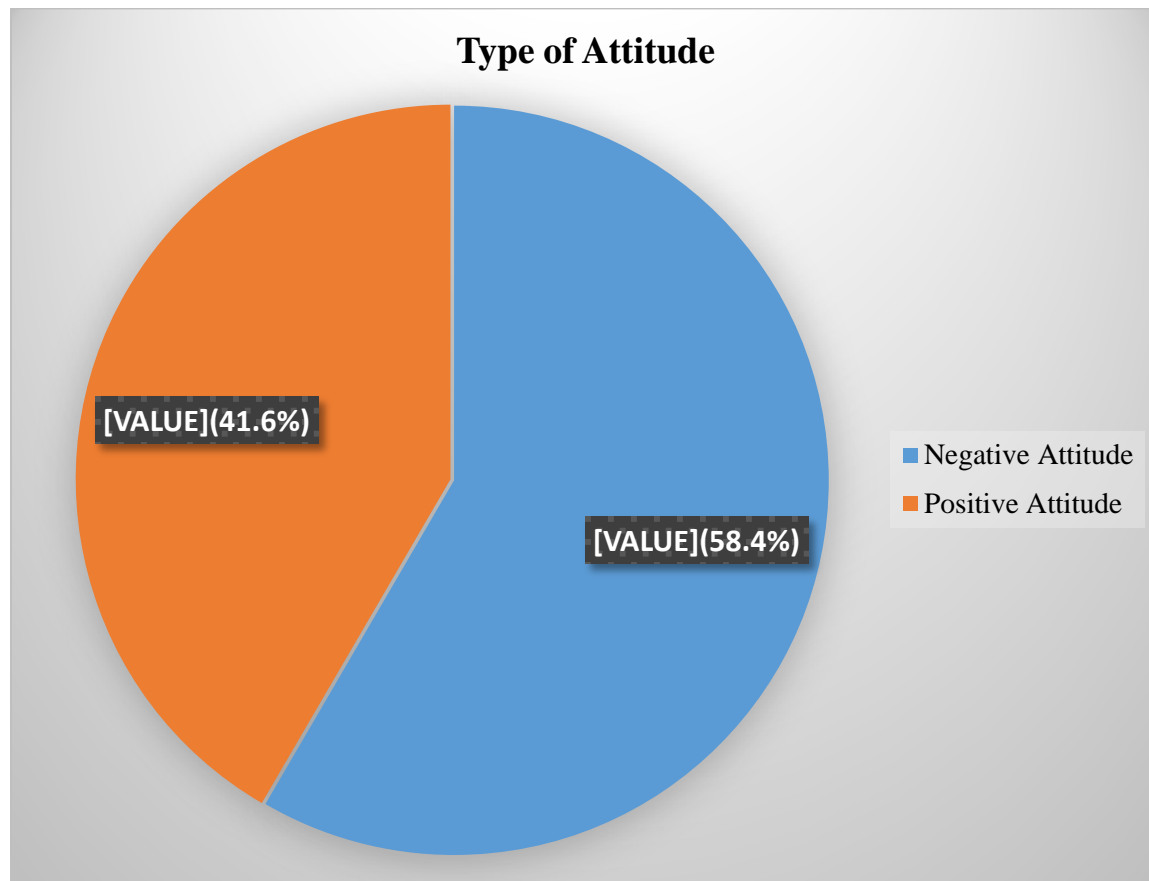


Figure 2 Type of attitude on HIV testing among AGYW in the Southern province of Rwanda

The figure 2 shows that 226(58.4%) respondents had negative attitude while 161(41.6%) respondents had positive attitude.

Practices towards HIV Testing among Adolescent girls and Young Women in southern province.

The third objective was to determine practices towards HIV Testing among Adolescent girls and young women in southern province of Rwanda.

Table 4 Practices towards HIV Testing among Adolescent girls and Young Women in southern province.

Variables	Frequency	Percentage
Ever tested for HIV before and know status		
Yes	123	31.8
No	264	68.2
Ever Practiced self-testing procedure in the past 6 to 12 months		

Yes	251	64.9
No	136	35.1
Attending HIV testing services does not affect daily endeavors		
Yes	208	53.7
No	179	46.3
Exploring test procedures to increase uptake of HIV testing		
Yes	223	57.6
No	164	42.4
Engaging sexual partner to attend HIV testing		
Yes	244	63
No	143	37
Recommending HIV testing services to fellow AGYW		
Yes	234	60.5
No	153	39.5
Encouraging other peers at high risk to have HIV test		
Yes	278	71.9
No	109	28.2

Source: Primary data

The table above indicated that 123 (31.8%) of the respondents reported to have ever tested for HIV, 251 (64.9%) of the respondents reported ever practicing self-testing procedure to know their HIV status and 278 (71.9%) respondents indicated the willingness to encourage their peers at high risk to attend HIV testing services.

Overall level of Practice

The score assessment of seven variables have been used to assess the level of practice of respondents. The mean score of variables was 5.24 and respondents with total score less than mean were considered as the one with poor practice while the one with score which is greater than mean were considered as the one with good practice.

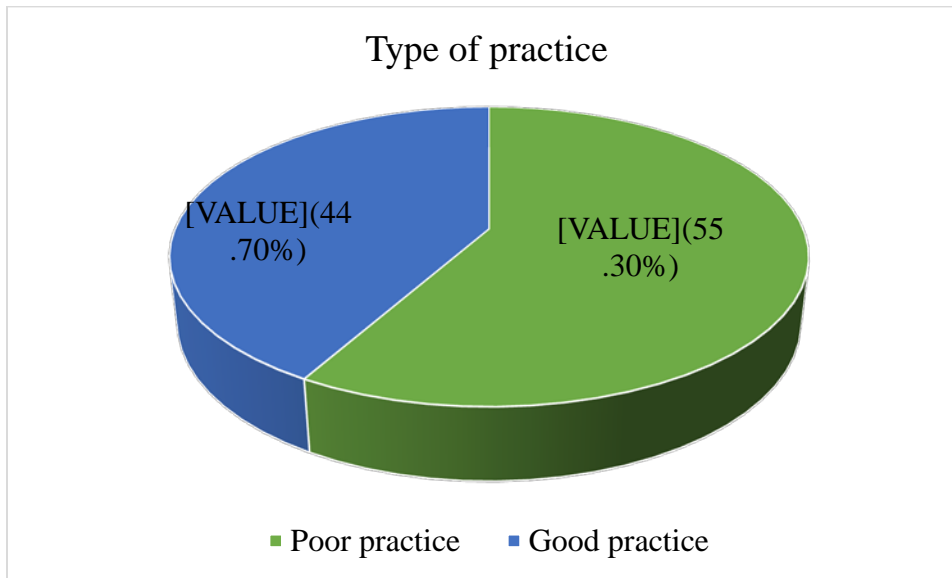


Figure 4 shows the type of practice on HIV testing among AGYW in the Southern province of Rwanda

The figure above shows that 214(55.30%) respondents had poor practice while 173(44.70%) respondents had good practice.

Factors associated with HIV testing among adolescent girls and young women in southern province.

The fourth objective of this study was to analyze factors associated with HIV testing among adolescent girls and young women in southern province of Rwanda. Bivariate analysis was performed to check variables which are statistically significant associated with HIV testing with p-value <0.05 calculated at 95%CI.

Table 5 Factors associated with HIV testing among adolescent girls and young women in southern province (Bivariate analysis).

Variables	HIV testing		Chi-Square	P-Value
	Yes(%)	No(%)		
Age group				
15-19 Years Old	165(78.60)	45(21.40)	1.703	0.192
20-24 Years Old	129(72.90)	48(27.10)		
Level of Education				
No formal education	32(80.00)	8(20.00)	4.888	0.087
Primary	73(68.20)	34(31.80)		
Secondary	189(78.80)	51(21.30)		
Religion				

Anglican	29(89.90)	6(17.10)	2.915	0.405
Catholics	208(76.20)	65(23.80)		
Muslims	31(67.40)	15(32.60)		
Other religions	26(78.80)	7(21.20)		
District				
Gisagara	40(85.10)	7(14.9%)	12.221	0.047
Huye	35(66.00)	18(34.00)		
Kamonyi	41(83.70)	8(16.30)		
Muhanga	36(73.50)	13(26.50)		
Nyamagabe	35(83.30)	7(16.70)		
Nyanza	48(82.80)	10(17.20)		
Nyaruguru	30(68.20)	14(31.80)		
Ruhango	29(64.40)	16(35.50)		
It requires parental consent to attend HIV testing services.				
Yes	22(71.00)	9(29.00)	0.462	0.497
No	272(76.40)	84(23.60)		
The location/ distance to Health facility affects your attendance to HIV testing services.				
Yes	213(73.40)	77(26.60)	14.495	0.039
No	81(83.50)	16(16.50)		
The testing centers/sites usually too busy.				
Yes	83(74.80)	28(25.20)	0.122	0.727
No	211(76.40)	65(23.60)		
The attitude of Health Workers affects your HIV testing before				
Yes	80(80.80)	19(19.20)	1.706	0.191
No	214(74.30)	74(25.70)		
Ever experienced poor counselling practices				
Yes	61(77.20)	18(22.80)	0.084	0.771
No	233(75.60)	75(24.40)		
Fear of stigmatization and discrimination following positive results affect your HIV testing practice				
Yes	247(75.80)	79(24.20)	0.046	0.83
No	47(77.00)	14(23.00)		
Doubt about confidentiality about positive results affect your attendance to HIV testing				
Yes	238(74.10)	83(25.90)	13.437	0.041
No	56(84.80)	10(15.20)		
Level of knowledge				
Low level of knowledge	240(73.10)	86(26.90)	0.051	0.92
High level of knowledge	41(74.00)	20(26.00)		
Level of Practice				
Poor Practice	130(60.70)	84(39.30)	60.754	<0.001

Good Practice	164(94.80)	9(5.20)		
Level of attitude				
Negative attitude	200(88.50)	26(11.50)	0.010	0.921
Positive attitude	143(88.80)	18(11.20)		
Educational level				
Primary	133(90.50)	14(9.50)	0.801	0.371
secondary	210(87.50)	30(12.50)		

Source: Primary data

The findings from bivariate analysis revealed that District, location/ distance to health, doubt about confidentiality of positive results and the level of practice were statistically significant associated with HIV testing with the p-value <0.05 calculated at 95%CI.

Table 6 Factors associated with HIV testing among adolescent girls and young women in southern province (Multivariable analysis).

Variables	AOR	95% CI		P-Value
		Lower	Upper	
District				
Gisagara	Ref			
Huye	2.27	1.348	9.112	0.01
Kamonyi	1.499	0.454	4.948	0.507
Muhanga	1.78	1.156	10.710	0.03
Nyamagabe	1.109	0.327	3.759	0.869
Nyanza	1.572	0.501	4.933	0.438
Nyaruguru	2.467	0.813	7.486	0.111
Ruhango	2.963	1.031.	7.422	0.02
The location/ distance to Health facility affects your attendance to HIV testing services				
Yes	Ref			
No	1.685	1. 032	10.325	0.02
Doubt about confidentiality about positive results affect your attendance to HIV testing.				
Yes	Ref			
No	2.513	1.568	8.396	0.01
Level of Practice				
Poor Practice	0.09	0.043	0.188	<0.001
Good Practice	Ref			

Source: Primary data

This study revealed that respondents from Huye, Muhanga and Ruhango District were more likely to go to the health center for HIV test [AOR=2.27; 95%CI=1.348-9.112; P=0.01]; [AOR=1.78; 95%CI=1.156-10.710; P=0.03]; [AOR=2.963; 95%CI=1.031-7.422; P=0.02] compared to respondents from Gisagara District respectively. Respondents who disagreed with the statement which was asking whether the location/ distance to health facility affect their attendance to HIV testing services were more likely to go to the health center for HIV test [AOR=1.685; 95%CI=1.032-10.325; P=0.02] compared to respondents who agreed with that statement. Respondents who did not have the doubt about confidentiality about positive results were more likely to go to the health center for HIV test [AOR=2.513; 95%CI=1.568-8.396; P=0.01] compared to respondents doubted confidentiality of positive results and respondents with poor practice were less likely to go to the health center for HIV test [AOR=0.09; 95%CI=0.043-0.188; P=<0.001] compared to the respondents with good practice.

Discussion

Adolescent girls and young women face significant barriers in accessing health services or protecting their own health. Lack of comprehensive knowledge and accurate information on sexual and reproductive health means that adolescent girls and young women are not equipped to manage their sexual health or to reduce potential health risks.

The present study revealed that 43.4% respondents had high level of knowledge while 56.6% respondents had low level of knowledge and the score assessment of eight variables have been used to assess the level of knowledge of respondents.

The study conducted in sub-Saharan Africa was in the same line with the present study, where it revealed that there was the higher prevalence of HIV infection among young women and this study found that between a quarter (Nigeria) to a third (Uganda) of youth demonstrated comprehensive knowledge of HIV. In rural Ethiopia, for example, less than half of young people (44% among boys and 41% among girls) correctly answered questions regarding HIV while only 28.0% of Nigerian students aged 15–25 displayed comprehensive knowledge of the virus [2].

Among the interviewed AGYW at the time of the study, 83.7% of them agreed that they attend HIV testing services periodically, 82.4% reacted positively towards a 6 to 12 months testing plan, 48.1% respondents agreed that with the statement which was asking whether they can share/disclose their HIV status with their partners while 92.0% indicated that the testing

procedure would hinder their attendance to HIV testing. The present study shows that 58.4% respondents had negative attitude while 41.6% respondents had positive attitude.

The study carried out in Uganda was in the same line with the present study and it revealed that psychosocial barrier to HIV testing including worry of being seen having access to HIV testing services, HIV related prejudice it was all about negative attitude. This is in line with the loss of economic benefits ranging from the incapacity to get some jobs or interact in some corporations that could discourage testing due to anticipation of stigma as well as linkage to care due to presumption of stigma while seen gaining access to care or taking medications [9].

The present study indicated that 31.8% of the respondents reported to have ever tested for HIV, 64.9% of the respondents reported ever practicing self-testing procedure to know their HIV status and 71.9% respondents indicated the willingness to encourage their peers at high risk to attend HIV testing services and it shows that 55.30% respondents had poor practice while 44.70% respondents had good practice.

Together with the limited access to HIV-related information and services, women engaging in compensated dating are expected to have lower HIV testing rate compared to other Female Sex Workers (FSW) counterparts. A report from Global Network of Sex Work Projects also concluded that young female sex workers were often excluded from their services that promoted HIV testing [10].

In our study, a bivariate analysis was performed to check variables which are statistically significant associated with HIV testing with p-value <0.05 calculated at 95%CI and it revealed that District, location/ distance to health, doubt about confidentiality of positive results and the level of practice were statistically significant associated with HIV testing.

Several studies carried out by National Agency For the Control of AIDS in Nigeria, the findings were contradictory with our study. It has focused on factors hindering the uptake of HIV testing with lack of access, fear of being diagnosed positive, perceived low risk of contracting HIV, fear of stigmatization, and the perceived psychological burden of living with HIV being among the most reported barriers. The lack of access to HIV testing, especially in rural areas, is also among the factors fueling new HIV infection [11].

This study revealed that respondents from Huye, Muhanga and Ruhango District were more likely to go to the health center for HIV test [AOR=2.27; 95%CI=1.348-9.112; P=0.01]; [AOR=1.78; 95%CI=1.156-10.710; P=0.03]; [AOR=2.963; 95%CI=1.031-7.422; P=0.02]

compared to respondents from Gisagara District respectively. Respondents who disagreed with the statement which was asking whether the location/ distance to health facility affect their attendance to HIV testing services were more likely to go to the health center for HIV test [AOR=1.685; 95%CI=1.032-10.325; P=0.02] compared to respondents who agreed with that statement.

In the study conducted in South Africa, Univariate analyses revealed that men, compared to women, were less likely to be tested for HIV and that living more than 20 km from the nearest clinic reduced the chance for HIV testing. Cohabiting possessed a post-primary education and had one sexual partner were positively associated with HIV testing. Respondents who were aware of HCT services were more than four times more likely to get HIV testing in comparison with those without this knowledge (Chimoyi et al., 2019). This study was not in the same line with the present because they studied about the knowledge, attitude and practice of all population including male and female while our study focused only on female.

Conclusion

The main objective of this study was to determine the knowledge, attitude, and practices towards HIV testing among adolescent girls and young women in Southern Province of Rwanda and the results of this study show that majority (56.6%) of respondents had low level of knowledge and negative attitude while more than a half of them had poor practices towards HIV testing.

The study results also showed that there were some factors which were statistically significant associated with HIV testing with p-value <0.05 calculated at 95%CI and those factors are: District, location/ distance to health, doubt about confidentiality of positive results and the level of practice.

Recommendation

Given the findings of this study, the following key recommendations are suggested to the Rwanda Ministry of Health (MoH) and Rwanda Biomedical Center (RBC).

Public health programs that seek to increase HIV counseling and testing among youth should pay particular attention to efforts that target high-risk subpopulations of youth.

This study demonstrated the need for intensive campaigns among adolescent girls and their parents to create awareness about the importance of HIV testing as this is an entry point for all HIV and AIDS services.

It is also recommended that the Ministry of Health of Rwanda need to further strengthen capacity of personnel especially training healthcare providers on ensuring confidentiality on HIV positive

results. And awareness should be raised among the AGYW to know the procedures for HIV testing, the accessibility and useability of the HIV testing services.

The ministry of health in collaboration with Southern province can prioritize to put in place additional HIV testing points/health facilities to support AGYW attend the service with convenience.

Youth clubs and youth centers need to be strengthened and equipped with HIV education information and materials including sexual and reproductive health and rights. There is need to empower adolescent girls and young women to take the lead in empowering their peers through collaboration with different stakeholders including PEPFAR/USAID and other key player in HIV response.

References

1. Asaolu, I. O., Gunn, J. K., Center, K. E., Koss, M. P., Iwelunmor, J. I., & Ehiri, J. E. (2016). Predictors of HIV testing among youth in sub-Saharan Africa: A cross-sectional study. *PLoS ONE*, *11*(10), 1–12. <https://doi.org/10.1371/journal.pone.0164052>
2. Joint United Nations Programme on HIV/AIDS (UNAIDS), & African Union (AU). (2015). *Empower young women and adolescents girls: Fast-tracking the end of the AIDS epidemic in Africa*. 32. http://www.unaids.org/sites/default/files/media_asset/JC2746_en.pdf
3. UNAIDS. (2016). Putting HIV prevention among adolescent girls and young women on the fast-track and engaging men and boys. *Geneva*. <https://doi.org/10.1186/1477-7819-3-27>
4. NACA. (2016). National HIV strategy for adolescents and young people 2016-2020. *National Agency For the Control of AIDS*, 58. http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_532857.pdf
5. Sharma, S. K., & Vishwakarma, D. (2022). Socioeconomic inequalities in the HIV testing during antenatal care: evidence from Indian demographic health survey, 2015–16. *BMC Public Health*, *22*(1). <https://doi.org/10.1186/s12889-022-13392-6>
6. PHIA. (2019). *October 2019 Rwanda Population-Based Hiv Impact Assessment. October 2019*, 2–7.
7. Zandoni, B. C., Elliott, R. J., Neilan, A. M., & Haberer, J. E. (2018). Screening for HIV and linkage to care in adolescents: insights from a systematic review of recent interventions in high-versus low- and middle-income settings. *Adolescent Health, Medicine and Therapeutics, Volume 9*, 211–235. <https://doi.org/10.2147/ahmt.s153204>
8. *Rwanda Demographic and Health Survey*. (2019).

9. Bogart, L. M., Naigino, R., Maistrellis, E., Wagner, G. J., Musoke, W., Mukasa, B., Jumamil, R., & Wanyenze, R. K. (2016). Barriers to Linkage to HIV Care in Ugandan Fisherfolk Communities: A Qualitative Analysis. *AIDS and Behavior*, 20(10), 2464–2476. <https://doi.org/10.1007/s10461-016-1331-z>
10. Mo, P. K. H., Lau, J. T. F., Xin, M., & Fong, V. W. I. (2019). *Understanding the barriers and factors to HIV testing intention of women engaging in compensated dating in Hong Kong : The application of the extended Theory of Planned Behavior*. 1–13.
11. NACA. (2016). National HIV strategy for adolescents and young people 2016-2020. *National Agency For the Control of AIDS*, 58. http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_532857.pdf

