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PREVALENCE, ASSOCIATED FACTORS, DRIVERS AND BARRIERS OF SATISFACTION WITH HIV COUNSELLING AND TESTING SERVICES AMONG ADOLESCENT GIRLS AND YOUNG WOMEN ATTENDING MILDMAY HOSPITAL: A MIXED-METHODS CROSS-SECTIONAL STUDY.

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ABSTRACT.

Background:

Uganda faces high HIV/AIDS rates among adolescent girls and young women (AGYW). This study sought to determine the prevalence of satisfaction with HIV counseling and testing services among AGYW. It aimed to identify factors associated with their satisfaction and explored drivers and barriers to their satisfaction with HCT provided at the adolescent and pediatric clinic in Mildmay Hospital.

Methodology:

A mixed methods cross-sectional study was conducted, 385 AGYW aged 15-24 were obtained through systematic random sampling. Quantitative data on patient satisfaction was collected through exit interviews using a patient satisfaction questionnaire. Modified position regression was conducted to determine factors associated with satisfaction with HCT using STATA version 15 software. Qualitative data was obtained through ten in-depth interviews. Data analysis for this was done by transcribing, coding, and extracting themes manually.

Results:

The prevalence of satisfaction with HCT services was 86%. AGYW with the following characteristics had higher odds of being satisfied: primary as the highest level of education APR: 1.17, 95 CI(0.70-1.97), age (23-25), APR: 1.18, 95 CI (0.82-1.70), single APR: 0.93 95 CI (0.69-1.26) and students APR: 1.17, 95 CI(0.80-1.70). Drivers of satisfaction included a friendly and supportive environment, positive interactions with healthcare professionals, and efficient service delivery. Barriers on the other hand included long waiting times and accessibility challenges.

Conclusion:

High satisfaction with HCT services was found among AGYW. Paying attention to the barriers to satisfaction as mentioned by respondents can significantly enhance satisfaction as well as the quality of HCT services.

Recommendation:

The hospital should work towards reducing waiting times, staff communication skills, and providing transportation assistance to AGYW to ensure that they can access the facility whenever they need to. This will help maintain and enhance satisfaction.

Keywords: *Satisfaction, HIV counseling and testing, Adolescent girls and young women*
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BACKGROUND.

HIV /AIDS remains a global burden with 39.0 million infections across the globe (WHO, 2023), of these, 68% are in Sub-Saharan Africa (SSA). In Uganda, 1,400,000 people are estimated to be living with HIV (GE Healthcare, 2023a). On the other hand, the number of AGYW living with HIV infections in Uganda is 119,000 and these are aged 15-24 years (GE Healthcare, 2023b). Additionally, 70% (15,000) of Uganda's new HIV infections in 2022 were reported to be among AGYW (GE Healthcare, 2023b). Despite representing just 10% of the total

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population, HIV prevalence among AGYW is 4 times higher than boys of the same age group. To note, these remain at substantial risk of contracting the virus.

The provision of HCT services has been instrumental in combating the HIV epidemic through early detection, linkage to care, and prevention of transmission. In 2016, Uganda implemented a multi-sectoral AGYW HIV prevention approach to reduce new HIV infections (The National Hiv And Aids Strategic Plan, 2020). Program activities aimed at empowering AGYW who are not HIV positive to remain negative and link those already positive to care.

Efforts to put the world on track to end HIV among AGYW must be grounded in an understanding of young people themselves (Atuyambe et al., 2009), and this cannot occur without their active involvement and leadership. To note, adolescence is a time when human bodies and brains are rapidly developing; a time of experimentation, personal exploration, and new experiences; and a period when many young people take risks (Bukenya et al., 2020). This therefore calls for special attention to their needs through the provision of youth-friendly health services that meet their actual needs and are satisfactory.

Adolescent girls and young women in Uganda have access to HCT services since they have been made available at different health facilities around the country, HCT is offered with guidance from the National HIV testing and treatment guidelines (Ministry of Health and Population Government of Nepal, 2017). Under the Sustainable Development Goals (SDGs), the world has committed to end the HIV epidemic by 2030 (Hák et al., 2016). By definition, this target cannot be reached if we fail to end HIV among young people. However, the world is not on track to end the epidemic, especially concerning existing gaps in meeting the HIV-related needs of young people. Countries and programs must prioritize and concentrate on personalized HCT service approaches if they are to lower the HIV epidemic among AGYW. This study, therefore, sets out to assess satisfaction with HCT services among AGYW, factors associated with satisfaction, drivers, and barriers to it.

General objective.

To determine the prevalence of satisfaction with HIV Testing and counseling services among adolescent girls and young women,satisfaction-associated factors, drivers, and barriers at Mildmay Hospital.

Specific objectives.

To determine the prevalence of satisfaction with HIV Testing and counseling services among adolescent girls and young women at Mildmay Hospital.

To determine factors associated with satisfaction with HIV Counselling and Testing services among adolescent girls and young women attending the HIV clinic at Mildmay Hospital.

To explore the drivers and barriers of satisfaction with HCT services among adolescent and young women attending the HIV clinic at Mildmay Hospital.

METHODOLOGY.

Study design.

This was a mixed methods cross-sectional study.

Study area.

The study was conducted at Mildmay Hospital located in Wakiso District 12 km along Entebbe Road, Naziba Hill, Lweza. It is a Non-Governmental Organization that was established in 1998 as a Centre of Excellence for the provision of Comprehensive HIV & AIDS prevention, care, and treatment and training services. The hospital provides free HIV prevention, care, and treatment to adolescent girls and young women through its adolescent and pediatric clinic. The clinic has four clinic days during which HCT services are typically provided. The clinic also offers different testing procedures depending on their preferences, results are usually obtained in 15 minutes depending on the procedure. The hospital also employs a satellite clinic model that is aimed at strengthening the approach to improving healthcare services in the Wakiso district and strengthening HIV service delivery capacity in the communities.

Study population.

The study populations were adolescent girls and young women aged 15-24 years, attending the adolescent and pediatric clinic at Mildmay Hospital.

Sample size determination.

The sample size was determined using the Leslie Kish formula for single proportions (Kish, 1965)

$$n = \frac{Z^2 pq}{d^2}$$

Where;

n - Sample size of adolescent girls and young women to be interviewed

Z – Score corresponding to a 95% level of significance

P – Assumption that 50% of the AGYW would report being satisfied with the HCT services (this is because there were no prior published studies on patient satisfaction with HCT at Mildmay Hospital or any other similar setting).

q – 100% - p

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d – Allowable error (precision) of 5% maximum margin of error acceptable

Therefore, $n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2}$

$n = 385$

A sample size of 385 AGYW was obtained.

In-depth interviews were conducted until saturation. A total of 10 interviews were conducted.

Sampling technique.

A systematic random sampling technique was used to select participants in the first stage. At the qualitative data collection stage, information-rich AGYW were identified from the exit interviews and scheduled for an in-depth interview on a separate day.

Sampling procedure.

Using the formula;

$K = \frac{N}{n}$

Whereby; *K* is the sampling interval; N is the average population size for four quarters and n is the sample size.

Therefore; $K = \frac{383.25}{385}$

$K = 0.9$

K estimate is 1

The first participant was chosen at random from the clinic thereafter every adolescent girl who visited the clinic for HIV testing and counseling was selected and consented to take part in the study until a sample size of 385 participants was met. Information-rich AGYW were later selected for the in-depth interviews.

Data collection tools.

Quantitative data was collected using a modified standardized patient satisfaction questionnaire (PSQ-III). The tool had two sections, one with questions on patient social demographic factors and another section on different aspects of HIV testing and counseling i.e., accessibility, structural/health system and process factors, technical competence/interpersonal skills, and general satisfaction.

In-depth interview guides were used to gather rich and detailed information about participants' experiences, attitudes, beliefs, and perceptions related to satisfaction with HCT services. Both data collection tools were translated from English to Luganda using forward-to-back translation to make sure the same meaning was conveyed.

Data collection procedure.

Exit interviews were conducted at the adolescent clinic with respondents after consenting them. Literate participants were given the questionnaire to fill in themselves whereas illiterate AGYW were helped. The interviews lasted 30-40 minutes and were conducted in privacy.

Each of the questionnaires was checked for completeness by the researcher.

In-depth interviews were conducted in the participants' languages of choice, informing of one-on-one conversations with study participants. The conversation was recorded using an audio recorder. Each in-depth interview lasted for 20-30 minutes.

Study variables.

Dependent variables.

The dependent variable was satisfaction with HCT services.

Independent variables.

Individual factors collected included Age, marital status, religion, occupation, tribe, education level, employment status, distance to/from the facility, village of residence, and number of times one has visited the facility. Variables with many categories were re-categorized to form smaller groups. Some of the categories under the different variables were merged into one group if they were related or meant the same thing. Structural /health system factors; cleanliness of facility, availability of equipment (waiting chairs, rooms), convenience of waiting time before and after HCT, appropriateness of working schedule, ease of getting an appointment, and waiting area being comfortable), and process factors such as attentiveness of health worker, health worker sharing of information, communication attributes/consent process, health workers knowledge, observation of privacy and confidentiality, convenience of waiting time before and after receiving HCT and time spent receiving the service.

Quality control.

Both data collection tools were pretested at the study sites. A sample size of 5 participants was interviewed thereafter adjustments were made before being administered to study participants. Research assistants were trained on the data collection tools to enable them to collect meaningful data.

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Inclusion criteria.

This study included AGYW aged 15 -24 years, attending the adolescent and pediatric clinic at Mildmay Hospital during the study period, and consented to participate in the study.

Exclusion criteria.

Adolescent girls and young women who were too ill to take part in the interviews were excluded as this could affect their responses. Also, adolescents who did not accept/consent to take part in the study were left out.

Data analysis and presentation.

Data was entered into Excel spread where it was checked for completeness and thereafter cleaned, coded, and renamed. Reverse coding was also done for negatively phrased questions. Participants' responses were scored using a Likert scale of 1 to 5. Individual rating for each study participant was summated and the overall average rating by the respondent was calculated. Responses rated 'strongly disagree', 'disagree', and neutral were combined and was considered as 'not satisfied' whereas 'agree' and 'strongly agree' were considered as 'satisfied'. Overall satisfaction was based on the demarcation threshold formula [total highest score – lowest score]/2] + [total lowest score] patients who scored less than 15 "on general satisfaction" were considered dissatisfied whereas 15 and above were considered satisfied. Univariable, bivariable modified Poisson, and multivariable analysis were done using STATA version 15 software.

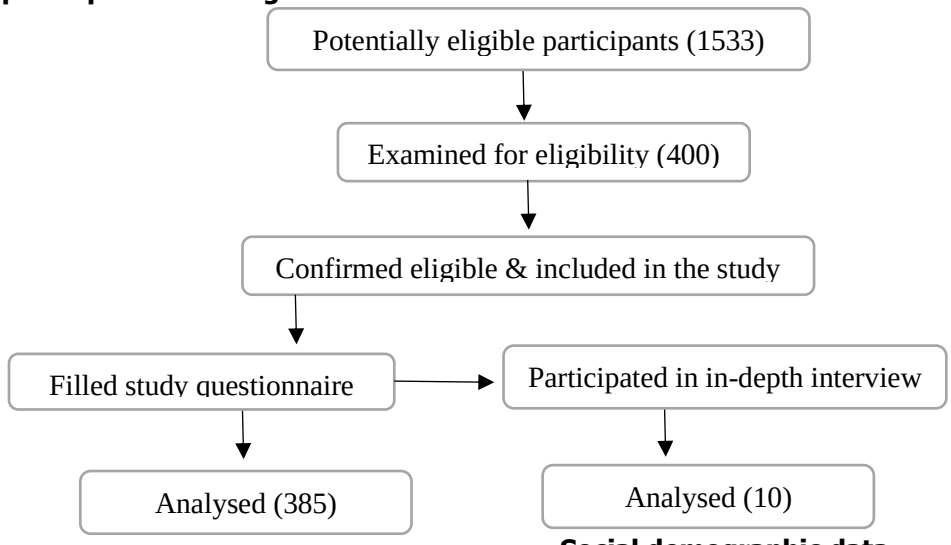
Audio recordings from in-depth interviews were transcribed by two independent persons known to be well-versed in transcription. This was done to ensure that participant responses were not altered and that a textual representation of the data was obtained. Responses were coded manually into themes and subthemes emerging from the interviews. Themes that appeared more than once were further assessed for commonalities, variations, and disagreements.

Ethical consideration.

Ethical approval for the research protocol and data collection tools was obtained from Makerere University School of Public Health Research and Ethics Committee, Higher Degrees, Research and Ethics Committee (MakSPH-REC protocol no. 258). Permission to conduct research was obtained from Mildmay Hospital. Additionally, ethical procedures such as consenting and ensuring confidentiality were put in place before the commencement of data collection. At the onset of the study, participants were informed that participation was voluntary and would not affect their eligibility to receive services at the facility. After explaining the study objectives to each candidate respondent, informed consent to participate in the study was obtained. Confidentiality was ensured through anonymous identifiers or codes and interviews were conducted in privacy.

PRESENTATION OF RESULTS.

Study participant flow diagram.



Social demographic data.

From table 1, the average age of adolescent girls and young women was 19.8 years old, with a standard deviation of 2.92. The majority of the respondents (70%) were single, their highest level of education was secondary (48%), resided in peri-urban areas (57%), were still students (38%), and had ever engaged in sexual activity (69). Additionally,

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most of them were Catholics (30%), from the central region (49%), resided in a place that is over 5 kilometers away from the facility (79%), had visited the facilities over 10 times (38%), and would recommend Mildmay hospital to people (85%).

Table 1. Characteristics of study participant (n=385)

Variable	Frequency	Proportion %
Age	19.8 (Mean)	2.92 (SD)
Marital status		
In informal relationship	81	21
Single	269	70
Others	35	9
The highest level of education attained		
Not educated	25	6
Primary	77	20
Secondary	185	48
University	37	10
Vocational	61	16
Residence		
Peri-urban	219	57
Rural	33	9
Urban	133	34
Occupation		
Formal	54	14
Self-employed	84	21
Student	148	38
Unemployed	99	25
Ever had sex		
No	118	31
Yes	267	69
Can recommend the health facility		
No	58	15
Yes	327	85
Distance to facility	45	12
1-3 km	34	9
4-5 km	306	79
Over 5km		
Number of times visited the facility		
1- 6	104	27
7-12	26	7
Over 10 times	147	38
Since childhood	108	28
Religion		
Born again	84	22
Anglican	84	22
Catholic	116	30
Muslim	69	18
Others	32	8
Region		
Eastern	61	16
Northern	21	5
Western	87	23
Central	189	49
Other	27	7

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Prevalence of satisfaction with HIV testing and counseling among AGYW.

The proportion of adolescent girls and young women who were satisfied with HIV testing and counseling services was 86% (331). This implies that the majority were highly satisfied with the HCT services offered at the adolescent and pediatric clinic in Mildmay Hospital.

Table 2. Distribution of ratings of general satisfaction parameters by AGYW.

Parameter	SD n (%)	D n (%)	N n (%)	A n (%)	SA n (%)
I have received the best care from the staff working at this practice	8 (2)	29 (8)	40 (10)	160 (42)	148 (38)
I have absolute faith and confidence in the health workers	6 (2)	37 (10)	52(14)	160 (42)	130 (34)
I am not satisfied with the health workers *	18 (5)	47 (12)	32(8)	197 (51)	91 (24)
There are things about HCT that I am not happy about *	22 (6)	93 (24)	35 (9)	168 (44)	67 (17)
I feel perfectly satisfied with the way I am treated at the clinic	8 (2)	40 (10)	22 (6)	117 (30)	198 (51)

NOTE: N=385, SD -Strongly disagree, D- disagree, N -neutral, A- agree, SA- strongly agree
**Reverse-coded item*

According to the above table, 80% of the adolescent girls reported having received the best care from the staff working at this practice. 76% expressed absolute faith and confidence in the healthcare providers, indicating their satisfaction, and, 81% felt perfectly satisfied with the way they were treated at the clinic. However, there was a significant number of respondents who expressed dissatisfaction with specific things about HIV testing and counseling (24%) and the clinic in general (21%).

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Factors Associated with AGYW satisfaction with HIV counseling and testing.

Table 3. Factors Associated with satisfaction with HIV testing.

Variables	Satisfaction with HIV		UPR	CI (95)	P Value	APR	CI (95)
Residence	Yes (%)	No (%)					
Peri-urban	190 (86.76)	29 (13.24)	Ref				
Rural	29 (87.88)	4 (12.12)	1.012	0.685 - 1.497	0.949		
Urban	112 (84.21)	21 (15.79)	0.970	0.768 - 1.225	0.802		
Level of Education							
Not educated	19 (76.00)	6 (24.00)	Ref			Ref	
Primary	68 (88.31)	9 (11.69)	1.161	0.698 - 1.932	0.563	1.179	0.704 -1.974
Secondary	161 (87.03)	24 (12.97)	1.145	0.711 - 1.842	0.576	1.109	0.675 - 1.823
University	31 (83.78)	6 (16.22)	1.102	0.622 - 1.951	0.738	1.015	0.549 - 1.876
Vocational	52 (85.25)	9 (14.75)	1.121	0.663 - 1.896	0.668	1.069	0.615 - 1.858
Age							
15-18	112 (84.21)	21 (15.79)	Ref			Ref	
19-22	126 (84.56)	23 (15.44)	1.004	0 .778 - 1.295	0.974	1.069	0.803 - 1.423
23-24	93 (90.29)	10 (9.71)	1.072	0.814 - 1.411	0.619	1.187	0.825 - 1.709
Marital status							
Cohabiting	74 (91.36)	7 (8.64)	Ref			Ref	
Others	28 (80.0)	7 (20.00)	0.875	0.566 - 1.352	0.550	0.874	0.562 - 1.359
Single	229 (85.13)	40 (14.87)	0.931	0.716 - 1.211	0.597	0.937	0.692 - 1.268
Region							
Eastern	49 (80.33)	12 (19.67)	Ref				
Northern	20 (95.24)	1 (4.76)	1.185	0.704 - 1.994	0.521		
Western	74 (85.06)	13 (14.94)	1.058	0.738 - 1.519	0.756		
Central	168 (88.89)	21 (11.11)	1.106	0.804 - 1.521	0.533		
Other	20 (74.07)	7 (25.93)	0.922	0.548 - 1.551	0.760		
Religion							
Born again	72 (85.71)	12 (14.29)	Ref				
Anglican	72 (85.71)	12 (14.29)	1	0.721 - 1.386	1.000		
Catholic	100 (86.21)	16 (13.79)	1.005	0.742 - 1.361	0.970		
Muslim	62 (89.86)	7 (10.14)	1.048	0.746 - 1.472	0.785		
Others	25 (78.13)	7 (21.88)	0.911	0.578 - 1.436	0.690		
No. of visits to the facility							
1 – 6	83 (79.81)	21 (20.19)	Ref				
7 – 12	21 (80.77)	5 (19.23)	1.012	0.627 - 1.633	0.961		
Over 10 times	133 (90.48)	14 (19.23)	1.133	0.861 - 1.491	0.370		
Since childhood	94 (87.04)	14 (12.96)	1.090	0.811 - 1.465	0.565		
Distance to facility							
1-3 km	40 (88.89)	5 (11.11)	Ref				
4-5 km	30 (88.24)	4 (11.76)	0.992	0.618 - 1.593	0.976		
Over 5km	261 (85.29)	45 (14.71)	0.959	0.687 - 1.338	0.808		
Ever had sex							
No	101 (85.59)	17 (14.41)	Ref				
Yes	230 (86.14)	37 (13.86)	1.006	0.796 - 1.271	0.957		
Occupation							
Formal	44 (81.48)	10 (18.52)	Ref			Ref	
Self-employed	72 (85.71)	12 (14.29)	1.051	0.722 - 1.530	0.791	1.037	0.706 1.522
Student	133 (89.86)	15 (10.14)	1.102	0.784 - 1.550	0.573	1.171	0.803 1.707
Unemployed	82 (82.83)	17 (17.17)	1.016	0.704 - 1.466	0.930	0.991	0.673 - 1.457

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Table 3 provides a summary of factors from bivariable analysis, where variables such as the frequency of facility visits (over 10 times) (P-value 0.370) and region (northern) (P-value 0.521) were close to a significance level of 0.2. However, none of the variables reached statistical significance at this stage. Consequently, we proceeded by selecting variables that were biologically/logically plausible and aligning with findings reported in existing literature, for inclusion in our final model. From the multi-variable modified Poisson regression model, the odds of being satisfied with HIV testing among adolescent girls and young women were 1.17 times higher among those who had primary education compared to those who were not educated, when there is no interaction between primary education and any other variable.

Regarding age, the odds of being satisfied with HIV testing among adolescent girls and young women was 1.18 times higher among adolescent girls and young women aged between 23 to 24 years compared to those aged between 15 to 18 years**,** when there is no interaction between age category 23 to 24 years and any other variable. For marital status, the odds of being satisfied with HIV testing among adolescent girls and young women was 0.93 times higher among adolescent girls and young single women compared to those who were cohabiting**,** when there is no interaction between being single and any other variable. Regarding occupation, the odds of being satisfied with HIV testing among adolescent girls and young women were 1.17 times higher among adolescent girls and young women who were still students compared to those who were formally employed**,** when there is no interaction between being a student and any other variable.

Drivers of satisfaction with HIV Counselling and Testing services.

Adolescent girls and young women mentioned factors that facilitated their satisfaction with HIV counseling and testing. Good environmental setting, Health worker helpfulness, privacy, and good time management were mentioned frequently as facilitators.

Structural drivers of satisfaction with HIV counseling and testing services

Friendly and supportive environment.

Many adolescent girls and young women praised the hospital for creating a supportive and friendly environment that made them feel valued. They appreciated the respectful and welcoming behaviour of the staff which made them more comfortable during their visits.

"They make me feel I am still someone because once you come, you see this environment is too…. (lifts thumb), the people are very many, you don't feel alone, you feel positive about life." (IDI, 24 years)

"This place is nice; it is safe…… you don't struggle to find a seat…… the washrooms are always clean because the cleaners are always cleaning. I also have never felt insecure in this place…… I trust them with my life." (IDI, 21 years)

Process drivers of satisfaction with HIV counseling and testing services.

Positive interactions and communications with health workers.

Several respondents consistently highlight the importance of respectful, informative, and supportive communication from the health workers and counselors. It was noted as crucial in facilitating a comfortable testing and counseling experience at the facility. For instance, feeling heard, receiving understandable explanations, and being treated with empathy and dignity were noted as satisfying experiences.

"….. I came for testing but I was fearing, even the doctor I found, I was crying. But the health worker who worked on me gave me strength, she told me that whatever comes out, it's okay, it is not the end of the world" (IDI, 23 years)

"The counselors we meet here, give enough time, and explain to you anything, even when you have some negative thoughts about something, they make you feel good and urge us to be careful with our lives. That's why I always come for testing here" (IDI 20 Years).

Information Sharing.

Adequate information and counseling were seen as important facilitators of satisfaction with HCT services. Those who received comprehensive interpretations of their HIV test results conveyed satisfaction and a better understanding of their health condition.

"*They give enough time, and explain to you anything, even when you have some negative thoughts about something, they make you feel good and tell us to be careful with our lives"* (IDI, 20 years)

"When someone tells you more about your test results, the condition you are in, they explain to you what is happening to your life by that time and give you information. That satisfies me" (IDI, 24 years)

Privacy during counseling.

Maintaining privacy and confidentiality, especially during counseling sessions was very much appreciated by many respondents during the in-depth interviews. They felt

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comfortable discussing personal matters knowing that the information would remain confidential.

"When there is counseling, I feel good because I know I am going to talk to someone about how I feel and I am always comfortable. They are private and do not share things we talk about with my parents. it all stays between me and the counselor." (IDI, 16 years)

"I cannot comment on the privacy and confidentiality because I have never had any issue with them. I always leave very calmly and happy that they will not tell anyone anything about me." (IDI, 18 years)

Efficient and Timely services.

Respondents highlighted the importance of managing time effectively during the counseling sessions, testing, and waiting periods. Quick and efficient services were seen as beneficial, especially for those with job obligations.

".....the doctors/counselors here, even when I don't know their names yet, they mind time. They don't make me sit for so long" (IDI, 19 years)

"They simplified things for us, we do not waste a lot of time here ……. they mind my time. They don't make me sit for so long." (IDI, 20 years)

Barriers to satisfaction with HIV counseling and testing among adolescent girls and young women.

Process barriers to satisfaction with HIV counseling and testing services.

Additionally, adolescent girls and young women mentioned long waiting periods, accessibility and transport challenges, lack of detailed result explanations, staff availability, and lack of empathy as barriers to satisfaction with HCT services.

Long Waiting times and Staff availability

Long waiting periods to receive services and delays in procedures were mentioned as significant barriers to satisfaction. Respondents expressed concern about delayed service, impacting their work commitments and daily schedules/ activities.

"Waiting time somehow presses us because most of us are employed by other people, we are not self-employed…. We cannot tell our bosses that we are going to hospital because they might chase you away from the job" (IDI, 23 years)

"Sometimes you come on time, you sit for long hours..... at that moment when I come and find a lot of people, I just think I should go back and come back the following day because sometimes you are rushing for other things…." (IDI, 24 Years)

Inconsistencies in staff availability were also highlighted, with some instances where staff shortages impacted the waiting times and satisfaction with the services.

"Sometimes the doctors are few yet we the clients we are many, it takes a long time for one to be worked on" (IDI, 21 Years)

Perceived rudeness or lack of empathy.

A few respondents mentioned encounters with staff members whom they perceived as rude or lacking empathy, which made them uncomfortable during their visits.

…the health workers, some of them are rude, I feel really bad when someone shouts at me, it is embarrassing" (IDI, 20 years)

"……they are rude, some, not all of them. You ask someone something for example last time I came for an appointment with a doctor and I asked the nurse if he was in and she shouted at me" (IDI, 24 Years)

Accessibility and transport.

These were raised as barriers, particularly for those who faced difficulties in reaching the hospital on time for appointments due to transport constraints

"… My negative experience is not from the hospital; now like sometimes I fail to come for testing because I don't have transport……" (IDI, 19 Years)

"Transport is a challenge… sometimes I get work in town, other times I go back to the village but when I am in town, I can fail to get transport to come test" (IDI, 20 Years).

DISCUSSION.

Overall, 86% of the adolescent girls and young women expressed satisfaction with the HCT they had received at Mildmay Hospital, highlighting the effectiveness of service provision at the facility. We did not find similar studies assessing satisfaction with HCT among AGYW, but relative to research evaluating satisfaction with standard HIV care and other health care services, the study participant's score fell between 44 to 95% (Wung et al., 2016) and (Atsebeha & Chercos, 2018). Another study conducted in South Africa by (Matseke et al., 2016) found 89.9% satisfaction with HCT services. These findings are slightly higher and were potentially influenced by their broader participant pool encompassing all age groups and genders across diverse public and private settings (56 HCT sites). The high prevalence of satisfaction in Mildmay can be attributed to the fact that the facility offers free HCT service. The findings of the present study were higher than that of other studies that found patient satisfaction with care was relatively low among study participants at an assessment center in Mulago Hospital, Uganda (53.9%) (Kabatooro et al., 2016), a health facility in Ethiopian

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(64.4%) (Ayele et al., 2022) and, not any different from Calabar, Nigeria (Udonwa & Ogbonna, 2012) were level of satisfaction was reported at 57.1%.

From the multi-variable modified Poisson regression model, the odds of being satisfied with HIV testing among adolescent girls and young women were 1.17 times higher among those who had primary education compared to those who were not educated, when there is no interaction between primary education and any other variable. This could be because they have a better understanding of the importance of HIV testing and have been empowered to take control of their health decisions. A study by (Chandra et al., 2019) provides insights into the importance of education attainment, such as having primary education, in influencing satisfaction with healthcare services. (Kalaja, 2023) and (Ayranci & Atalay, 2019) have similar results.

Regarding age, the odds of being satisfied with HIV testing among adolescent girls and young women was 1.18 times higher among adolescent girls and young women aged between 23 to 25 years compared to those aged between 15 to 18 years, when there is no interaction between age category 23 to 25 years and any other variable. This may be so because older patients may have fewer expectations from the health workers, also, from their younger times, there might have been an improvement in the services overall. Findings from studies conducted by (Jaipaul & Rosenthal, 2003) and (Omona et al., 2021) are in agreement with this.

For marital status, the odds of being satisfied with HIV testing among adolescent girls and young women were 0.93 times higher among adolescent girls and young women who were single compared to those who were cohabiting. This could be true because single individuals might not face the same level of stigma or fear of judgment from a partner regarding their decision to get tested, making the whole testing experience less stressful and more satisfactory (Quintana et al., 2006) findings in agreement. (Ayranci & Atalay, 2019) conducted a study among patients who received health services from clinics in Istanbul and reported that married patients were more satisfied compared to other participants with other marital statuses.

Regarding occupation, the odds of being satisfied with HIV testing among adolescent girls and young women were 1.17 times higher among adolescent girls and young women who were still students compared to those who were formally employed, when there is no interaction between being a student and any other variable. This can be attributed to the likeliness of students facing fewer economic pressures than those who are formally employed and may have more flexible schedules. This absence of workplace stressors might also contribute to a more positive experience with health care services. We did not find many studies reporting similar findings apart from a study conducted by (Naeem et al., 2024) who reported occupation being significantly associated with satisfaction among parents of children under 16 years receiving pediatric health services. Contrary to this, other studies (Atsebeha & Chercos, 2018) reported that occupation was not significantly associated with patient satisfaction with ART delivery.

Drivers and barriers of satisfaction with HIV counseling and testing among AGYW.

In-depth interviews further emphasized the importance of a friendly and supportive environment, positive interactions with healthcare professionals, and efficient service delivery as drivers of satisfaction. This is so because a clean and hygienic environment is essential for preventing the spread of other infections one might acquire from the hospital premises. Using the Donabedian framework (Chang & Chang, 2013) found that the structural aspects for example a good hygienic environment were a must be attributed to satisfaction among patients.

As well, the findings also resonate with previous research highlighting the crucial role of psychosocial factors and quality service provision in enhancing HCT uptake. The importance of having a friendly and supportive environment as a driver for satisfaction has been recognized in a study conducted by (Osborn & Obermeyer, 2016) where clients appreciated the convenience, accessibility, and cleanliness of testing sites.

Regarding positive interactions with healthcare professionals, other studies have found a direct positive relationship between patient-provider communication skills and patient satisfaction (Wachira et al., 2021), participants who have interfaced with clinicians who had better communication skills reported satisfaction with healthcare. This could be because a health worker's ability to connect on an emotional level helps patients feel heard and understood, fostering a sense of trust and satisfaction. This shows that it is a key component of patient-centered care. Similarly, studies by (Mukamba et al., 2020) and (Devnani et al., 2012) agree with the findings. And conversely, experiences of rude and disrespectful providers led to dissatisfaction among participants.

Information sharing was found to be a driver of patient satisfaction. When health workers share relevant information with patients, it empowers them to make informed decisions about their health and understand their medical conditions, treatment options, and any other potential outcomes. This aligns with (Ponsignon et al., 2023) findings that found satisfaction with the two home care therapies studied was influenced by support and guidance from health care providers but this varied across therapies. Similarly, a survey by (Simsekler et al., 2021) also reported that attentiveness and knowledge shared by the doctor while responding to queries is a leading driver of satisfaction, despite using a different study design and

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population from ours: Patients love being listened to and advised on how to improve their quality of life to have a healthy life.

About efficient service delivery of HCT services being a driver of satisfaction, AGYW pointed this out because most times it translates to reduced waiting times and faster receiving of services. (Lawrence et al., 2016) doesn't seem to agree with this finding. This could be because his study was in a school setting and the service providers used had less time to interact with students during counseling, so they were not able to provide quality service that met student expectations. This hindered the delivery of HIV Counselling and testing.

Conversely, barriers to satisfaction arose from issues like long waiting times, perceived lack of empathy and rudeness from staff, and accessibility challenges, providing a specific target for improvement during hospital health worker training. Experiences with rude healthcare providers hurt the mental health of AGYW. It is more likely to contribute to stress increment, anxiety, or even reluctance to seek HCT. Our finding is similar to a study conducted by(Osborn & Obermeyer, 2016) who reported that dissatisfaction came from experiences with rude and/or disrespectful healthcare providers.

Furthermore, this aligns with (Somi et al., 2021) whose research findings also pointed out long waiting times as a top reason for dissatisfaction among PLWHIV. To rectify long waiting times, studies suggest employing more staff members and scheduling patients at different times of the day (Ahmad et al., 2017). Another study differed as they reported that long waiting times contributed to satisfaction and this may have been compounded by the fact that patients spent insufficient time with healthcare providers making it difficult for their concerns to be heard (McCarthy et al., 2000).

GENERALIZABILITY.

This study was conducted in a private not-for-profit health facility so findings cannot be generalizable to public health facilities

CONCLUSION.

The study found high satisfaction with HCT services (86%) among adolescent girls and young women at Mildmay Hospital. The hospital however needs to work towards maintaining and boosting the satisfaction rate. Factors found to be associated with satisfaction with HCT were having primary as the highest level of education, age, being single, and being a student. Drivers of satisfaction mentioned by AGYW included a friendly and supportive environment, positive interactions with healthcare professionals, and efficient service delivery. However, the study also identified barriers to satisfaction, including long waiting times, perceived lack of empathy and rudeness from staff, and accessibility challenges.

STUDY LIMITATIONS.

This study faced inherent limitations, with the establishment of causality being unattainable due to the study's nature, this introduced a level of uncertainty in drawing direct cause-and-effect relationships. Additionally, this study was exclusive to adolescent girls and young women who sought care from the facility through exit interviews. Therefore, findings only reflect the opinions of AGYW who interacted with the hospital, not those of the general population. This limited the scope of perspectives, potentially overlooking diverse opinions within the broader population. Social desirability cannot also be ruled out because participants were interviewed in the health facility.

RECOMMENDATIONS.

Based on the findings and recurring themes from interviews, the hospital can enhance services for adolescent girls undergoing HIV counseling and testing by improving time management and reducing waiting times by managing appointments and streamlining processes, particularly in the triage area. As well, training for healthcare staff can be carried out to improve empathy, professionalism, and communication skills during their interactions with AGYW. The issue of accessibility can be resolved by establishing mobile testing units to cut down transport costs and transportation assistance programs to overcome logistical challenges and facilitate regular attendance. Finally, I recommend conducting a comparative study across various facilities and settings providing HCT to derive conclusive results applicable on a larger scale.

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LIST OF ABBREVIATIONS.

AIDS	Acquired Immunodeficiency Syndrome
HIV	Human Immunodeficiency Virus
HCT	HIV counseling and testing
AGYW	Adolescent Girls and Young Women
MOH	Ministry of Health
WHO	World Health Organization
UPR	Unadjusted Prevalence Ratio
APR	Adjusted Prevalence Ratio
CI	Confidence Interval

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CONFLICT OF INTEREST.

The author declares no conflict of interest.

AUTHOR'S CONTRIBUTIONS.

Ms. Juliana Namutundu oversaw research activity planning and execution, and, mentorship.
Dr. Aggrey Mukose Developing and designing of study methodology
Dr. Juliet Ntuulo was Overseeing research activity planning and execution, and, mentorship.
Rubanga Davud Atube: Managing and coordinating day-to-day study activities

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