

ORIGINAL RESEARCH ARTICLE

Barriers to access and use of sexual reproductive health and human immunodeficiency virus services among adolescent girls and young women in Maputo City, Mozambique

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Abstract

Adolescent girls and young women (AGYW) in Mozambique face a high risk of sexually transmitted infections (STIs) and unintended pregnancies, yet face substantial barriers to sexual and reproductive health and rights (SRHR) and HIV services. This qualitative study explored AGYW experiences in accessing SRHR and HIV care at Zimpeto and Primeiro de Junho Health Facilities (HF) in Maputo between June 12 and 28, 2023, using semi-structured interviews. Data were analyzed in NVivo 14 and interpreted using the socio-ecological model. Barriers were mainly institutional and individual. Institutional challenges included negative provider attitudes, long wait times, inaccessible services, limited provider skills, and medication stockouts. Individual barriers included fear of parental discussion, low self-esteem, and apprehension about HIV testing or contraceptives. Interpersonal barriers, such as limited family support, were less prominent. Addressing these barriers through enhanced service quality, adolescent-friendly approaches, and supportive, knowledgeable providers is crucial to improving AGYW access to SRHR and HIV services. (*Afr J Reprod Health* 2026; 30 [11]:72-86).

Keywords: Barriers; Adolescent Girls and Young Women; Sexual Reproductive Health; HIV; Mozambique

Résumé

Les adolescentes et les jeunes femmes (AJF) au Mozambique font face à un risque élevé d'infections sexuellement transmissibles (IST) et de grossesses non désirées, mais elles rencontrent d'importants obstacles dans l'accès aux services de santé sexuelle et reproductive et aux services liés au VIH. Cette étude qualitative a exploré les expériences des AJF dans l'accès aux soins de santé sexuelle et reproductive et aux services de lutte contre le VIH dans les centres de santé de Zimpeto et de premier de juin à Maputo, entre le 12 et le 28 juin 2023, en utilisant des entretiens semi-structurés. Les données ont été analysées à l'aide du logiciel NVivo 14 et interprétées selon le modèle socio-écologique. Les obstacles identifiés étaient principalement institutionnels et individuels. Les défis institutionnels comprenaient les attitudes négatives des prestataires de santé, les longs temps d'attente, l'inaccessibilité des services, les compétences limitées des prestataires et les ruptures de stock de médicaments. Les obstacles individuels incluaient la peur de discuter avec les parents, une faible estime de soi et l'appréhension face au dépistage du VIH ou à l'utilisation de contraceptifs. Les obstacles interpersonnels, tels que le soutien familial limité, étaient moins marqués. La résolution de ces obstacles, grâce à l'amélioration de la qualité des services, à l'adoption d'approches adaptées aux adolescents et à la présence de prestataires compétents et bienveillants, est essentielle pour améliorer l'accès des AJF aux services de santé sexuelle et reproductive et aux services liés au VIH. (*Afr J Reprod Health* 2026; 30 [11]: 72-86).

Mots-clés: Obstacles; Adolescentes et jeunes femmes; Santé sexuelle et reproductive; VIH; Mozambique

Introduction

Adolescent girls and young women (AGYW), aged 15–24 years, are disproportionately affected by sexually transmitted infections (STIs), including human immunodeficiency virus (HIV).^{1,2} In 2023,

an estimated 4,000 AGYW were newly infected with HIV each week worldwide, with approximately 75% of these infections occurring in sub-Saharan Africa. AGYW account for 27% of new HIV infections and are three times more likely to acquire HIV than their male counterparts.³ In the

Southern African Development Community (SADC) region, 25% of AGYW have experienced pregnancy.⁴ Pregnancy among AGYW is associated with higher child mortality, particularly in mothers aged 16–19 years, compared to those aged 23–25 years.⁵ Despite the risks, condom use for dual protection against STIs and early pregnancy remains significantly lower among adolescents in southern Africa compared to the rest of the world.⁶

The lack of youth-friendly sexual and reproductive health and rights (SRHR) services and comprehensive sex education in schools, unequal power dynamics in sexual partnerships, peer influences that discourage condom use, inadequate communication about SRHR from parents/caregivers, and negative attitudes and beliefs about condoms among adolescents all contribute to limited access to SRHR services for AGYW.⁷ Integration of SRHR services remains insufficient, with only 63% of facilities across the SADC region incorporating SRHR into their HIV programs, and just 46% addressing the specific needs of HIV-infected pregnant adolescents.⁸

In Mozambique, AGYW account for 46% of new HIV infections and 16% of all people living with HIV (PLHIV). HIV prevalence among AGYW stands at 8%, notably higher than the 2.6% observed among their male peers.⁹ Awareness of prevention methods is low - only 5.9% of adolescents report having heard of pre-exposure prophylaxis (PrEP). Additionally, 45% of adolescents report that they did not use a condom during their last sexual intercourse with a non-regular partner. Females over 15 years of age use condoms less frequently with non-regular partners in urban areas (43.1%) and rural areas (25%) than men in urban areas (58.6%) and rural areas (30%), suggesting that a similar situation may also be occurring among AGYW. HIV testing rates are also low, with only 26.4% of adolescents and young people having ever been tested and received their results. Among AGYW living with HIV, it is estimated that 43.6% are unaware of their HIV status, only 54.8% are on antiretroviral therapy, and just 41.6% have achieved viral load suppression, much less than the UNAIDS target of 95%-95%-95%. In Maputo City, the HIV prevalence among individuals over age 15 years is 16.2%, with a

significantly higher rate among women (20.2%) compared to men (11.6%). This highlights women's greater vulnerability to HIV infection at younger ages compared to men.⁹

Most adolescent services include access to youth-friendly SRHR services, general preventative care, STI management, and contraception, prioritizing privacy, convenient youth-oriented settings, and low-cost care.¹⁰ However, challenges persist related to access to HIV treatment services, poor support from care providers, and loss to follow-up.^{8,11,12}

Barriers operate across multiple levels. Individual barriers include inadequate information, low self-esteem, fear of disclosure, and financial limitations. Family barriers involve unsupportive families and communication gaps about sexuality. Institutional barriers encompass provider competency issues, negative attitudes, unsupportive environments, accessibility problems, and supply shortages.^{13,14}

These challenges underscore the need for a deeper understanding of the specific barriers *urban* AGYW face in accessing and utilizing SRHR and HIV services *in Maputo City*, allowing for the development of targeted interventions to improve their health and well-being. Therefore, this study aims to explore the experiences and perceptions of AGYW regarding the barriers to accessing and using SRHR and HIV services in urban Maputo, Mozambique, to inform strategies for improving service delivery and health outcomes for this vulnerable population.

Methods

Study design

We conducted a qualitative study based on semi-structured interviews to explore the barriers experienced by AGYW in accessing and using SRHR and HIV services in Maputo, Mozambique. This analysis represents baseline (phase one) data collected as part of a larger multi-phase, mixed-methods implementation science study aiming to assess the feasibility and effectiveness of an “adolescent-friendly approach” for improving access to and use of SRHR and HIV services by AGYW at selected health facilities (HF). The

interviews were conducted with AGYW seeking SRHR and HIV services at the *Zimpeto* and *Primeiro de Junho* HF in Maputo, Mozambique. Study health facilities were chosen based on their historically low performance in providing AGYW with access to SRHR and HIV services. The data presented here represent the results of the qualitative component of this multi-phase study.

Study population

All AGYW aged 15–24 years, who had accessed SRHR and HIV services at either of the two study facilities, were considered eligible to participate in an exit survey. AGYW were selected by convenience sampling and approached for enrollment as they exited the HF, provided they had sought SRHR or HIV services on that day. A total of 51 AGYW were recruited and consented to participate in the study.

Data collection and management

Interviews took place on weekdays between June 12 and June 28, 2023, during the normal service hours of the two HF (7:30 a.m. to 3:30 p.m.). Trained interviewers fluent in Portuguese conducted the interviews using a semi-structured interview guide in a private location. The interviews were recorded using a digital recorder and then transcribed verbatim by an independent transcriber hired for this purpose.

Before beginning individual data collection, interviewers conducted joint interviews under the supervision of the principal investigator, with one leading and the other assisting and probing, to calibrate their interviewing approach. During the interview recruitment period, the first AGYW to exit the HF within the time frame was approached. Upon agreeing to participate, she was interviewed. Only after completing this interview would the next participant be approached. Recruitment continued in this manner until the target sample was reached.

Quality control of the interviews was carried out by the principal investigator on a daily basis. Each day, the interviewers submitted the audio recordings of the interviews, which the principal investigator reviewed to ensure quality

and identify areas for improvement. Daily telephone debriefings were held between the principal investigator and each interviewer to provide feedback and recommendations. Additionally, upon completion, the transcriber submitted the transcripts to the principal investigator, who reviewed them against the audio recording for accuracy, checked for spelling errors, and provided feedback to improve the transcription process.

AGYW were interviewed about their sociodemographic background and whether they had experienced any barriers in seeking and using SRHR and HIV services on the day of their visit. If the answer was no, they were asked whether any of their friends had shared experiences of difficulties in seeking similar services.

Data analysis

Data analysis was based on a mixed approach, combining both deductive and inductive methods. The deductive approach was adapted from the socio-ecological model of barriers to accessing and using SRHR services for adolescents, focusing on three central themes: barriers at the individual level, barriers at the family level, and barriers at the HF level.¹⁴ Based on an inductive approach using line-by-line content analysis, 12 independent child codes were created. Four were associated with individual-level barriers, two with family-level barriers, five with HF-level barriers, and one independent theme for AGYW who reported no experience of barriers at any of the three levels mentioned above. A cross-matrix of the child codes and their corresponding themes (individual, family, and HF) was then created to identify the most prominent barriers at each level. The data were analyzed using the qualitative data analysis software NVivo, version 14.

Ethical considerations

The study protocol was reviewed and approved by the Mozambican National Bioethics Committee for Health (Ref: 88/CNBS/23). Administrative approval was also granted by the Ministry of Health of Mozambique (Note No: 396/GMS/290/023). All participants provided written informed consent

before participating in the exit interview. For participants under the age of 18, informed consent was first obtained from a parent or guardian, followed by informed assent from the participant. To ensure anonymity, no identifying information was recorded by the interviewer.

Results

Participant characteristics

A total of 51 AGYW were approached and interviewed, with 28 recruited from the *Primeiro de Junho* HF and 23 from the *Zimpeto* HF. The ages of the AGYW were nearly evenly split between those aged 15–19 years (n = 29) and those aged 20–24 years (n = 22). Most respondents (n = 32) identified as current students, the majority of whom (n = 31) had attained a basic secondary education level (Table 1).

Barriers reported by AGYW to accessing and using sexual and reproductive health and HIV services in health facilities

The results of this research have been summarized and presented according to the levels of the socio-ecological model used to identify barriers to accessing and using SRHR services among adolescents in sub-Saharan Africa. Overall, among the three levels, individual-level barriers were mentioned by 18 AGYW; family-level barriers were mentioned by three AGYW; and institutional-level (HF) barriers were mentioned by 34 AGYW. Additionally, 15 AGYW reported experiencing no

barriers to accessing and using SRHR and HIV services (Figure.1).

Barriers at the individual level

Four main types of individual-level barriers to accessing and using SRHR and HIV services were identified: 1) fear of talking to parents about SRHR needs; 2) fear of HIV testing and results; 3) low self-efficacy in expressing SRHR needs at the HF; and 4) fear of contraceptive injections, particularly Depo-Provera. (Table 2)

Fear of talking to parents about SRHR needs

Participants describe fear among AGYW in telling their parents when they become pregnant, so they hide the pregnancy until it is visibly advanced. As a result, AGYW frequently delay starting their antenatal care appointments, as mentioned by one of the participants below:

Participant: (...) many girls are afraid of a lot of things, even now I have a friend who is pregnant but doesn't want to come to the hospital, doesn't want to do anything, she's pregnant eh, (...) her parents don't know, but her belly is growing, (...) she hasn't had any prenatal appointments (...) she says she can't tell her parents because (...) she's afraid (...) [Adolescent girl 5, 17 years old, Primeiro de Junho HF]

Fear of HIV testing and results

Among AGYW, some are also afraid to disclose their HIV status to their relatives and, as a result, do not seek HIV care and treatment. Consequently, their health deteriorates, and in some cases, they have died without getting appropriate care. Even with support from friends, the fear of family members' reactions appears to negatively influence AGYW's willingness to seek HIV care, as expressed by one of the participants:

Participant: Look, I have a friend who had HIV and didn't want to tell anyone at home; she couldn't go to the hospital for medication; she said: No, I'm fine. I said: Go and take medication, even if you don't tell anyone at home, but you're taking medication just to help you. She [said]: No. She stayed for about three months. She became very

Table 1: Participant sociodemographic characteristics

Characteristics (n=51)	n (%)
Health facility	
Primeiro de Junho HF	28 (55.0)
Zimpeto HF	23 (45.0)
Age	
15-19 years	29 (58.0)
20-24 years	22 (42.0)
Level of education	
Basic secondary school	31 (61.0)
General secondary/higher education	20 (39.0)
Employment Status	
Currently studying	32 (63.0)
Unemployed/Out of School	19 (37.0)

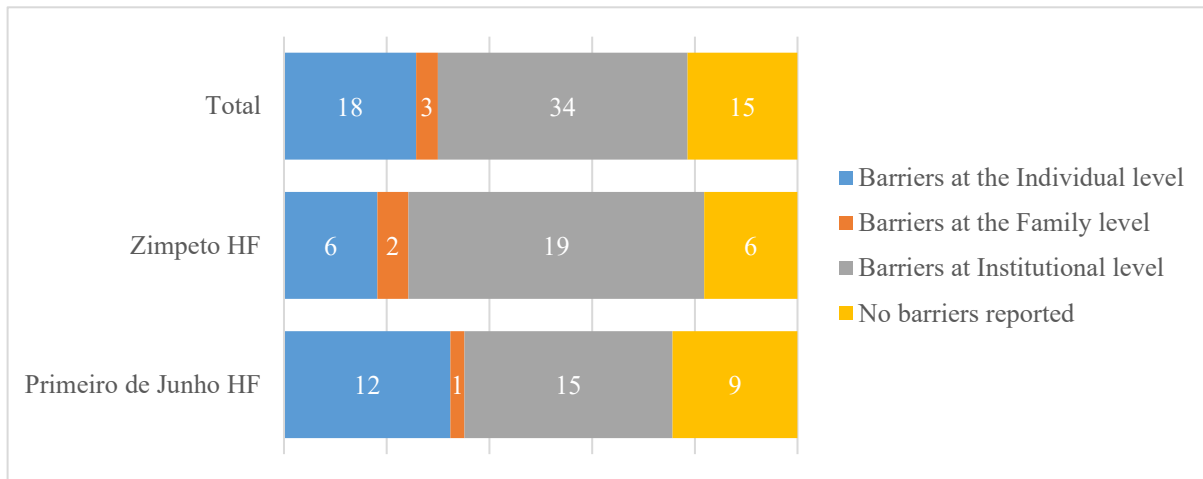


Figure 1: Barriers reported by AGYM in accessing and using SRHR and HIV services at health facility

Table 2: Barriers reported by AGYW to accessing and using SRHR and HIV, using the socio-ecological model

Barriers to accessing and using SRHR and HIV services	Primeiro de Junho HF	Zimpeto HF	Total
Barriers at the individual level	12	6	18
Fear of talking to parents about SRHR needs	8	0	8
Fear of HIV testing and results	2	3	5
Low Self-Esteem to express their SRHR needs at HF	2	2	4
Fear of injection - Depo-Provera (contraceptive injection)	0	1	1
Barriers at the family level	1	2	3
Lack of family support	0	1	1
Lack of dialogue with parents	1	1	2
Barriers at the institutional level	16	20	34
Negative behavior of providers	4	7	11
Long waiting times	5	4	9
Closed and unidentified doors	3	6	9
Limited skills of providers	1	1	2
Lack of medication to treat STIs	1	1	2
No barriers reported	9	6	15

thin, her face turned ugly, and suddenly she died. (...) She said she couldn't tell her parents because she was afraid. She died last year in November (...) [Adolescent girl 5, 17 years old, Primeiro de Junho HF]

Low self-efficacy

Some AGYW described low self-efficacy, characterized by a lack of confidence in communicating their health needs regarding SRHR and HIV services to their health providers, as illustrated by one participant:

Participant: The difficulty you have when you arrive at the hospital [to treat sexually

transmitted infections] is fear of expressing something (...) [Young Women 12, 19 years old, Zimpeto HF]

Low self-efficacy, stemming from a lack of confidence, also contributes to the challenges AGYW face in navigating health facilities. Upon arrival, some are uncertain about where to go or what actions to take, and due to feelings of shame or hesitation in asking for help, they may remain in one physical location for extended periods before eventually giving up and going home.

Participant: [AGYW] can (...) come here to the health facility, but they are afraid to ask where they are supposed to go, what they are supposed to do, and they end up staying here in the health

facility for a long time and going home without any information (...) [Adolescent girl 13, 16 years old, Primeiro de Junho HF]

Finally, low self-efficacy can also be associated with the uncertainty AGYW feel about how they will be received and treated by health providers when they arrive at the HF, as one of the participants described:

Participant: I accompanied a friend of mine (...) when she had a [vaginal] discharge, we came here to the hospital (...) it was a bit scary, a bit nervous, we had a lot of doubts and a bit of insecurity about what was going to happen, about the results and the answers the doctors were going to give. [Young women 18, 19 years old, Zimpeto HF]

Fear of contraceptive injections - Depo-Provera

There are some AGYW who showed they had very little knowledge about family planning methods and options, and others who expressed fear in receiving a shot associated with injectable contraceptive options. This fear was expressed as a cause for some AGYW not to go to the HF, as one of the participants mentioned below:

Participant: (...) other girls don't know about family planning, pills, (...) there are others like me, I'm afraid of the injections [Depo-Provera], when I see that needle, I think about it a lot (...) [Adolescent girl 9, 16 years old, Zimpeto HF]

Barriers at the family level

Two types of family-level barriers to accessing and using SRHR and HIV services in HF were identified: 1) lack of family support and 2) lack of dialogue with one's parents.

Lack of family support

There are cases of AGYW who do not seek SRHR services at HF due to a lack of family support. This occurs when parents forbid their daughters from accessing family planning services because they consider them too young, as one of the participants mentioned:

Participant: (...) It's just that, a lot of the time parents forbid [girls] from planning because they're still children (...) [Adolescent girl 9, 16 years old, Primeiro de Junho HF]

Some fathers constantly criticize their daughters and do not support them in their actions or aspirations:

Participant: (...) I think there are those [fathers] who only live to criticize their children and don't support anything they do (...) [Young women 12, 19 years old, Primeiro de Junho HF]

Lack of dialogue with parents

Despite concerns that parents may forbid them from seeking SRHR and HIV services, some AGYW will still find ways to access these services, frequently hiding it from their parents out of fear of their reaction, as one of the participants described:

Participant: I have a nineteen-year-old friend, she went to the hospital for family planning, (...) she didn't tell anyone at home, (...) she didn't even tell her own mother (...) mothers sometimes play the boring card, for example, I don't talk to my mother because she's very boring, I'm hardly friends with my mother, yes, it's because of that (...) [Adolescent girl 6, 16 years old, Primeiro de Junho HF]

Barriers at the institutional level

At an institutional level, four common types of barriers to SRHR and HIV services were identified. The most frequently mentioned barriers include 1) negative behaviors from the healthcare providers, 2) long waiting times, 3) facilities that are closed when the AGYW seeks them out, and 4) unidentified signage at the HF that easily identifies where the SRHR and HIV services are physically located. Less commonly described barriers included illegal charges being asked of the AGYW to pay for contraceptive implant removal, a perception by AGYW of incompetence on the part of their healthcare provider, and frequent stockouts of medications to treat STIs.

Negative behavior of providers

Some AGYW describe experiences in which the behavior of their healthcare providers was

inappropriate or had negatively impacted their seeking care on the day they visited the HF. Examples included the refusal to treat patients who showed up at the HF without a previous prescription and healthcare providers who demanded on-site payment for the removal of contraceptive implants. *Refusal to treat patients without a previous prescription:* There are some AGYW who, upon arriving at the HF, were sent home if they did not have a prescription for medication from a previous appointment, particularly when they went to the HF to treat a recurrent sexual infection, as one participant described:

Participant: (...) The only difficulty a friend of mine had (...), she came here to the hospital, and they told her to go back [home] and get a prescription from a long time ago that maybe does not even exist (...) [Young woman 10, 24 years old, Primeiro de Junho HF]

Inappropriate or unauthorized charges for implant removal

Other AGYW, who had experienced an adverse medical event from a contraceptive implant that had been inserted and who then sought care for its removal, reported being asked to pay a fee on the day they arrived at the facility to have it removed. Family Planning services offered through the National Health Service are free for women; as such, the payment request was considered by the AGYW to be an illicit charge from healthcare providers who were trying to take advantage of them.

Participant: (...) well, I was coming to have an implant removed, when I arrived, I opened up, they said they could not see me (...) because I did not have any money (...), as soon as they told me that, I was demoralized and went home (...) [Adolescent girl 7, 18 years old, Primeiro de Junho HF]

Long waiting times

Some AGYW reported that one of the main barriers to accessing and using SRHR services is arriving at the HF and having to wait a long time to be seen by a health provider, as one of the participants described:

Participant: (...) I have seen people arrive at the hospital at six [o'clock] to then be seen at ten [o'clock], so going to the hospital (...), I avoid it as much as I can because of that (...) [Adolescent girl 7, 16 years old, Zimpeto HF]

Delays in receiving services were also felt to result when an AGYW did not have a personal acquaintance working at the HF who could facilitate their being seen by the provider. This situation discouraged some AGYW from visiting the HF unless they knew someone there, as one of the participants mentioned:

Participant: (...) going to the hospital (...) I avoid it as much as I can, [when] I have a problem I call an uncle, I talk to him directly, right, then he calls me, says, go see doctor X; but my friends who went to the hospital without anyone they knew stayed a long time to be seen (...) [Adolescent girl 7, 16 years old, Zimpeto HF]

Closed and unidentified doors

Other AGYW perceived it as a barrier when they arrived at the HF and encountered closed offices without any identification, leaving them unsure of where to go or whom to consult, as one of the participants mentioned:

Participant: (...) for me, the other difficulty is when you get there [at health facility], even without anyone, the doors are closed [without identification], you don't know who you are going to ask, (...) [Young woman 10, 24 years old, Primeiro de Junho HF]

Limited skills of providers

Some AGYW considered it a barrier when providers appeared to lack technical knowledge about the medications they should prescribe and had to consult instructions, leading to suspicion about whether they were fully trained professionals or just trainees:

Participant: (...) for example, now that I was in there, I explained everything I had, and those, I don't know if they are trainees or what, I don't know. They had to look it up [medicines], it took them a long time, about five minutes to look for medicines in the notebook [list of medicines] and

not find them (...) [Young women 22, 19 years old, Primeiro de Junho HF]

Lack of medication to treat sexually transmitted infections

Other AGYW highlighted the lack of certain medicines for treating STIs as one of the barriers, as noted by one of the participants:

Participant: (...) in my case, (...) I've already come for treatment (...) I've been treated for discharge, but some medicines were missing (...) [Young woman 14, 21 years old, Zimpeto HF]

Discussion

This study explored the experienced barriers that AGYW face in accessing and utilizing SRHR and HIV services in urban Maputo, Mozambique, filling a gap in understanding these challenges within this specific context. Grounded in the socio-ecological model, the findings serve as baseline data for a broader, multi-phase, mixed-methods implementation science study aimed at evaluating the feasibility and effectiveness of an adolescent-friendly approach to improving SRHR and HIV service access at selected HF. Although the findings are limited by the relatively small sample size and its focus on two facilities, potentially limiting generalizability to other urban settings, they offer important insights into key barriers that must be addressed to improve service delivery and uptake in Maputo and similar urban areas. Notably, the results suggest that AGYW encounter more significant obstacles at the institutional and individual levels than at the family (interpersonal) level.

At the individual level, one of the most prominent barriers identified was the fear of discussing sexual and reproductive health needs with parents, stemming from negative past experiences of conversations with them. This aligns with evidence from Ethiopia, Kenya, Uganda, Nigeria, and other low- and middle-income countries (LMICs), where AGYW often experience anxiety over anticipated parental disapproval when addressing SRHR and HIV concerns.^{13,15–20} AGYW fear often stems from the authoritarian nature of parent - child discussions on SRHR, where parents

typically issue vague warnings rather than engage in informed, open dialogue, often due to their own limited understanding of the topic.²¹ This situation not only hinders open dialogue between parents and adolescents but also contributes to risky sexual behaviour, including unprotected sex and low uptake of contraceptive methods.¹⁶ Adolescents who perceive their parents as available are less likely to engage in risky behaviours.²² Furthermore, when parents provide accurate communication about sex and relationships, adolescents are more likely to delay sexual initiation and to avoid unintended pregnancies.²³ AGYW's fear of talking to their parents about health-related issues could indicate a gap in trust and/or a possible lack of family support. This suggests the need to empower parents not only with knowledge about SRHR, but also to strengthen AGYW's communication skills so they can engage in open and informed discussions with their parents about SRHR issues.

Additionally, fear of HIV testing and its potential results emerged as a critical deterrent to accessing HIV-related and other health services. In other studies conducted in sub-Saharan Africa, this fear was closely tied to concerns about stigma and discrimination should the test result be positive.^{13,15,17–19,24} Women are particularly more likely to withhold disclosure of their HIV status as compared to men, and those living in urban areas are more prone to non-disclosure than those living in rural areas.²⁵ However, this occurs mainly among those accessing HIV-testing for the first time, who are unaware of their serological status and uncertain about what a positive result might mean for their future.^{26,27} This avoidance may increase the likelihood of a late diagnosis and may contribute to the ongoing transmission of HIV.

Low self-confidence and shyness in expressing one's SRHR needs once they arrived at the HF were also reported. This shyness is not unique to Africa and has similarly been identified as a barrier to effective care in various Asian countries and systematic reviews.^{19,28,29} Among adolescents, low self-confidence and shyness can also significantly impair the capacity to assertively negotiate safer sexual practices. This vulnerability heightens the risk of HIV and other STIs and may also discourage timely access to testing and treatment services.^{30,31} This suggests the need to

find strategic interventions that aim to strengthen coping skills to address SRHR and HIV needs among AGYW. Some AGYW are afraid of receiving injections, especially the Depo-Provera contraceptive injection. This fear makes them less likely to seek SRHR services. The reason for this fear is often due to worries about possible side effects of the injection. Previous research has also found that such fears discourage adolescents from using long-acting contraceptive methods like Depo-Provera.^{32,33} Fear of the side effects of injectable contraceptives may be associated with a lack of knowledge about contraceptive methods.³⁴⁻³⁶

The results suggest that fear of injections, particularly related to Depo-Provera and its possible side effects, is a significant barrier that prevents some AGYW from accessing and using SRHR services, especially long-acting contraceptive methods. This fear may reduce the uptake of effective contraceptive options, potentially leading to increased risk of unintended pregnancies. To improve access and use of SRHR services among AGYW, it's important to address misconceptions, provide accurate information, and offer counseling on contraceptive methods, especially regarding their safety and side effects.

Regarding interpersonal (family-level) barriers, a lack of family support and limited dialogue between AGYW and their parents were frequently mentioned. These findings are consistent with evidence from multiple African countries, where poor parent-child communication has been found to hinder adolescents' access to SRHR and HIV services.^{15,16,19,28,36-40} While limited communication between adolescents and their parents is associated with limited availability of fathers due to parents' multiple tasks, cultural issues are also considered to have some influence, limiting not only the openness of parents, but also of adolescents to talk about SRHR and HIV issues, which are considered taboo.⁴¹ Other parents believe that their children are not yet sexually active.⁴² In addition to time constraints, the lack of accurate information, parental discomfort or shame in initiating such discussions, fear of potential consequences, and the perception that their children are too young to engage in conversations about SRHR, hinder effective communication between parents and their adolescent children about

SRHR⁴³, and consequently influences adolescents' use of SRHR services, increasing their vulnerability to STIs, HIV, and unintended pregnancies.⁴⁴⁻⁴⁷ Several studies suggest that communication between parents and adolescent children is associated with adolescents' knowledge of reproductive health issues, parents' belief in the importance of discussing SRHR, and mothers' openness to discussing SRHR^{48,49}, including prohibitive sociocultural and religious norms regarding sex and contraception.⁵⁰ However, many adolescents prefer to discuss SRHR issues with their peers rather than with their parents.⁴⁹ Others prefer to communicate with their mothers rather than their fathers.⁵¹ Overall, these findings suggest that fear of parental communication serves as a critical and modifiable barrier to SRHR service access among AGYW in Africa. Interventions that foster open, age and gender appropriate dialogue between parents and adolescents, as well as community education to reduce stigma, are urgently needed. Empowering parents with knowledge and skills, while reinforcing the importance of trust and nonjudgmental communication, may help AGYW feel safe in seeking support from their parents for SRHR issues.

At the institutional level, the negative attitude of healthcare providers was identified as a major barrier. AGYW reported that unwelcoming, judgmental, or unprofessional behavior by providers discouraged them from seeking services. This mirrors findings from other African studies, which documented similar challenges.^{15,19,20,35,38,52} and which is in direct contrast to the WHO's recommendations for adolescent-friendly health services as described within the Global Accelerated Action for the Health of Adolescents.⁵³ This could reduce the demand for and utilization of SRHR services among AGYW.^{14,15,54-57} The negative attitudes of providers toward adolescents' access to and use of SRHR have been described as being associated with the providers' level of education, years of accumulated experience, and their limited knowledge of adolescent SRHR.^{58,59} This could decrease the adolescents' trust in the provider, influencing their access to and use of SRHR services.^{60,61} These findings reinforce the need to focus on improving the capacity and training of healthcare providers to offer nonjudgmental, youth-

friendly, and confidential services. Additionally, long waiting times at HF were cited as a deterrent to access, echoing conclusions from several systematic reviews indicating that extended wait times reduce adolescents' willingness to seek care.^{19,62} It is important to understand the nature of long waiting times carefully and in depth, as patients with greater healthcare needs, such as those with STIs or HIV, may require longer health visits than those seeking only contraceptive services. However, this distinction is not always apparent or understandable to all patients.^{63,64} Long waiting times are commonly attributed to several factors. For instance, they may occur when patients arrive very early at the HF, often at the same time. This challenge is exacerbated by the lack of individually scheduled appointments, resulting in prolonged waiting times before being seen. Consequently, waiting time is largely determined by patient flow during specific periods of the day. When combined with high patient volumes and both infrastructure limitations that result in few patient exam rooms as well as human resource limitations, these conditions further intensify waiting times.^{65,66} Interventions are needed that focus on improvements in patient management systems to address long wait times.

Another notable institutional barrier was the presence of closed or unmarked doors within facilities. This led to confusion and delays, as AGYW often waited in the wrong areas before being directed to the correct location. Other studies have described the importance of internal signage for enhancing service accessibility, not only for patients but also for healthcare providers.⁶⁷ Appropriate door signage plays a critical role in facilitating patient navigation within healthcare facilities, minimizing time inefficiencies, and enhancing overall satisfaction with healthcare services.⁶⁸ These findings emphasize that simple infrastructure issues like signage can have real consequences for health service delivery and access, particularly for AGYW. Participants reported that some healthcare providers lacked adequate technical skills, which negatively impacted the quality of care they received. This perception is not unique to our study setting; similar issues have been documented in other countries like Ghana and Zambia, as well as in broader systematic

reviews, and are felt to reduce both the accessibility to and effectiveness of SRHR services, highlighting the need for improved provider education and skill development to enhance service quality.^{10,20,69} The provider's level of training, especially in SRHR services, has been linked to negative provider attitudes in delivering these services.⁷⁰ and to patients' preference for competent healthcare providers.⁷¹ Concerns regarding poor prescription practices highlight the importance of identifying the underlying factors and developing strategic solutions among SRHR service providers to enhance the uptake and utilization of SRHR services.

In addition to concerns about being given an inappropriate prescription, the lack of availability of medications for treating STIs was also a significant institutional barrier that AGYW face when seeking care at HF. These findings corroborate evidence from multiple surveys conducted in Mozambique in 2011 and 2013, which documented that shortages of essential medicines and supplies have affected over 90% (n=26) of HF's nationwide for several years.⁷² Further supporting this, a more recent survey conducted in 2018 reported that only 45% of HFs in Mozambique were fully equipped and prepared to treat STIs.⁷³ Medication shortages and supply chain systems need to be addressed to ensure full access to SRHR services. The shortage of essential medicines has likewise been reported in other research studies and systematic reviews.^{15,69,74,75} In Kenya, Tanzania, Uganda, and Zambia, the average availability of essential medicines for sexual and reproductive health was reported to be below 50%, underscoring persistent challenges seen across the sub-Saharan region.⁷⁶

Strengths

This study has important strengths. The qualitative design enabled an in-depth exploration of AGYW's lived experiences in accessing SRHR and HIV services, allowing participants to openly discuss sensitive issues such as stigma, provider attitudes, and fears related to HIV testing and contraceptive use, topics often insufficiently captured in quantitative research. The use of the socio-ecological model strengthened the analytical rigor

by examining barriers across individual, interpersonal, and institutional levels, supporting a comprehensive understanding of the multi-level challenges affecting SRHR service utilization.

Limitations

However, several limitations should be considered. The study was conducted in only two health facilities in Maputo, which may limit the transferability of findings to rural settings or other provinces where health system capacity and sociocultural norms differ. Findings relied on self-reported experiences, which may be influenced by recall or social desirability bias. Additionally, the study focused exclusively on AGYW perspectives; inclusion of healthcare providers, parents, and policymakers could have provided a more holistic understanding of systemic and relational barriers.

Policy implications

The findings have significant implications for strengthening AYPHS in Mozambique. Institutional barriers, particularly negative provider attitudes, long waiting times, limited competencies, and medication stockouts, emerged as critical obstacles. Policy priorities should include mandatory training in non-judgmental, continuous professional development in SRHR and HIV counseling; strengthened supply chain systems to prevent stockouts; and improved workforce planning to reduce waiting time. At the individual level, empowerment-based interventions, including comprehensive sexuality education and peer support programs, are needed to address fear, low self-efficacy, and anxiety surrounding HIV testing. Engaging parents and communities in dialogue may further reduce stigma and strengthen supportive environments. Overall, improving AGYW access requires both systemic strengthening and individual empowerment to advance equitable SRHR outcomes.

Conclusion

This study highlights key barriers AGYW in Mozambique face in accessing SRHR and HIV services. Guided by the socio-ecological model, individual and institutional factors emerged as the greatest obstacles. At the individual level, fear of

discussing SRHR with parents, concerns about HIV testing, and anxiety about contraceptive methods limit demand for services and increase risks of STIs, HIV, and unintended pregnancies. Strengthening knowledge, confidence, and communication skills among AGYW and their parents is essential to address these gaps.

Interpersonal barriers, particularly weak parent-adolescent communication, further constrain access. Promoting family dialogue and reducing stigma can build supportive environments for care-seeking. At the institutional level, negative provider attitudes, long waiting times, inadequate provider competencies, and frequent stock-outs undermine service quality and adolescent-friendliness. Addressing these requires system-wide reforms, including provider training, supportive supervision, infrastructure improvements, and stronger supply chain management.

Although limited by a small sample size, the study provides contextually grounded insights from AGYW with recent service experiences. Integrated strategies addressing barriers at individual, family, and institutional levels are vital to improving SRHR and HIV outcomes. These interventions must be adapted to the unique social and cultural context of urban Maputo City.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Author's contributions

VM conceived and designed the study, guided by KM, BC, and TDM. VM collected and analyzed the data. VM prepared the manuscript. All authors contributed to the interpretation of results and revising the manuscript. All authors approved the manuscript.

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