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Research Article

Assessment of Structural and Process Factors in Delivering Quality Adolescent Sexual and Reproductive Health Services in Ghana

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ABSTRACT

Introduction: Sexual and reproductive health services are often underserved to adolescents in many societies. For many of these sexually active adolescents, reproductive health services such as the provision of contraception and treatment for sexually transmitted infections, either are not available or are provided in a way that makes adolescents feel unwelcome and embarrassed. This study assessed the structural and process factors available in delivering quality adolescent sexual and reproductive health (ASRH) services in health facilities across three regions in Ghana. **Methods:** A facility-based descriptive cross-sectional study assessed the structural and process factors available for delivering quality adolescent sexual reproductive health services in 158 selected health facilities across three regions (Oti, Eastern, and Volta) of Ghana. A simple random sampling by balloting was used to select the health facilities and a total of 158 adolescents who used ASRH services in the selected facilities were sampled for an existing interview. The Donabedian model of quality assessment was adopted and modified into an assessment tool and a questionnaire to assess the selected health facilities and respondents. The Statistical Package for the Social Sciences (SPSS) version 20.0 was used to analyze the data collected and the findings presented in the tables. **Results:** The study found some structural and process barriers that affected the delivery of quality ASRH services in Ghana. A proportion of 85 (53.50%) of the facilities assessed did not have separate spaces for delivering services for adolescents. All 158 health facilities had the National Health Insurance Scheme (NHIS) covering contraceptive/family planning services for adolescents. Most (128, 81.01%) facilities had available educational materials on ASRH but were not made available for take home by adolescents. The findings indicated that most respondents did not require parental, spouse, or guardian consent before using ASRH services. The average waiting time for adolescents to be attended to by service providers was ≤30 minutes. **Conclusions:** The study found some structural and process barriers that affected the delivery of quality ASRH services in Ghana. ASRH services, particularly contraceptive/family planning services, were well integrated into NHIS to improve access and utilization by adolescents.

Keywords: structural factors, process factors, quality, adolescent, sexual and reproductive health, Ghana

INTRODUCTION

Adolescent sexual and reproductive health (ASRH) services for adolescents are often underserved to adolescents in many societies.[1] Currently, there are approximately 1.2 billion adolescents globally who are assets to countries.[2] Adolescents are characterized by a series of physiological, psychological, and social changes that expose them to unhealthy sexual behaviors such as early sex experimentation, unsafe sex, and multiple sexual partners. These put them at high risk of sexual and reproductive health (SRH) problems. Such problems include

early marriage, teenage pregnancies, unsafe abortion, sexually transmitted infections (STIs), HIV and AIDS, and other life-threatening SRH problems.

For many of these sexually active adolescents, reproductive health services, such as the provision of contraception and treatment for sexually transmitted infections, either are not available or are provided in a way that makes adolescents feel unwelcome and embarrassed. As a result, adolescents are more likely to rely on resources outside the formal health service provision system, such as home remedies, traditional methods of contraception, clandestine abortion, or medicines from shops or traditional health practitioners.[5] Adolescents also go through financial barriers, long waiting times, inconvenient working hours, and lack of parental support when accessing healthcare services.[6,7] Other barriers include lack of adolescent-friendly resources in health facilities,[8] unfriendly and perceived negative attitudes of providers,[9,10] and poor quality of care.[7]

Despite the clear need for access to sexual reproductive health services (SRHS),[11] coverage rates are low. Data from five countries in Sub-Saharan Africa (SSA) with high rates of new HIV infections found that 7% to 31% of boys and 9% to 58% of girls aged 15 to 19 years had been tested for HIV and received their results.[12] Fewer than half of young men in SSA reported using condoms at the time of the last sexual intercourse, and rates were even lower among young women.[12] In SSA, as many as 68% of adolescents have an unmet need for contraception.[12] Rates of skilled birth attendance is a critical intervention to reduce maternal and newborn mortality of approximately 55% in developing countries; however, coverage is low among adolescent births, despite the higher risk related to young maternal age.[12] Efforts in recent years have focused not only on ensuring health service availability but also on making its provision adolescent-friendly—that is, accessible, acceptable, equitable, appropriate, and effective.[13]

In Ghana, the utilization of ASRH services by adolescents remains poor.[14] Community participation in the National Adolescent Health and Development program has been weak, and less improvement in the various adolescent health indicators was reported.[14] The 2022 Ghana Demographic and Health Survey indicated that 15% of girls aged 15 to 19 have ever been pregnant, including 11% who have had a live birth, 4% who have had a pregnancy loss, and 2% who are currently pregnant.[15] To address these issues, several initiatives have been developed by the World Health Organization (WHO) and implemented that have made it easier for adolescents to obtain the quality health services that they need, by making health services "adolescent-friendly." However, a report by WHO argues that healthcare for adolescents remains highly fragmented, poorly coordinated, and uneven in quality.[11] For instance, the age of adolescents around the globe does not allow them access to health information, coupled with poor provider attitudes, lack of privacy, and weak parental support to access available healthcare services.[16] Sustainable Development Goal 3 focuses on ensuring healthy lives and promoting the well-being of all ages, including adolescents.[11,17] To achieve this goal, it is very important to consider the health and well-being of adolescents in development agendas.[18]

Quality improvement is necessary in every sector given the high demand for quality goods and services and the strong competition that characterizes the corporate world. Quality assurance in healthcare is a necessity and should not be compromised, because human lives are at risk.[19] In addition, the health sector, like any other sector, is subject to competition, especially with the fast-growing private health sector. Hence, patients expect nothing but quality healthcare. Giving a precise definition of quality is difficult because of its subjective and intangible nature. Setting and assessing quality in healthcare is harder than other disciplines because new definitions for healthcare quality are emerging.[20] The Institute of Medicine defined healthcare quality as the degree to which healthcare services for individuals and populations increase the likelihood of desired health effects and are coherent with current professional knowledge.[19] This means that healthcare delivery must be in line with professional criteria and principles and must match the expectations of patients. The Institute of Medicine's domains of healthcare quality are effectiveness, efficiency, equity, patient-centeredness, safety, and timeliness.

This study adopted the Donabedian model of healthcare quality assessment. Avedis Donabedian, a doctor and a health services researcher at the University of Michigan, developed a healthcare quality model in 1966. Donabedian (quoted in Ayanian and Markel[21]) defined healthcare quality as the application of medical services and engineering in a way that maximizes its benefits to health without correspondingly increasing the risk. Donabedian is well recognized for his structure, process-outcome quality model, which he believes is based on a systems approach to thinking about healthcare quality.[19] Donabedian argued that quality could be assessed based on three main domains, namely: structure, process, and outcome. According to Donabedian, structure refers to the characteristics of the health facility in which maintenance is delivered and accessed. Models are amenities, equipment, human imagination, and organizational structures. The structure may also include the health provider's skills, operating hours of the facility, and convenience in scheduling appointments.

Donabedian defined process as what is done in the giving and receiving of health concerns. He classified processes into clinical and interpersonal processes. Clinical process refers to the clinical guidelines and criteria that must be discovered by health providers. The interpersonal process refers to the interaction between the patient and the provider.[22] The process extends to diagnosis, treatment, prevention, patient education, patient

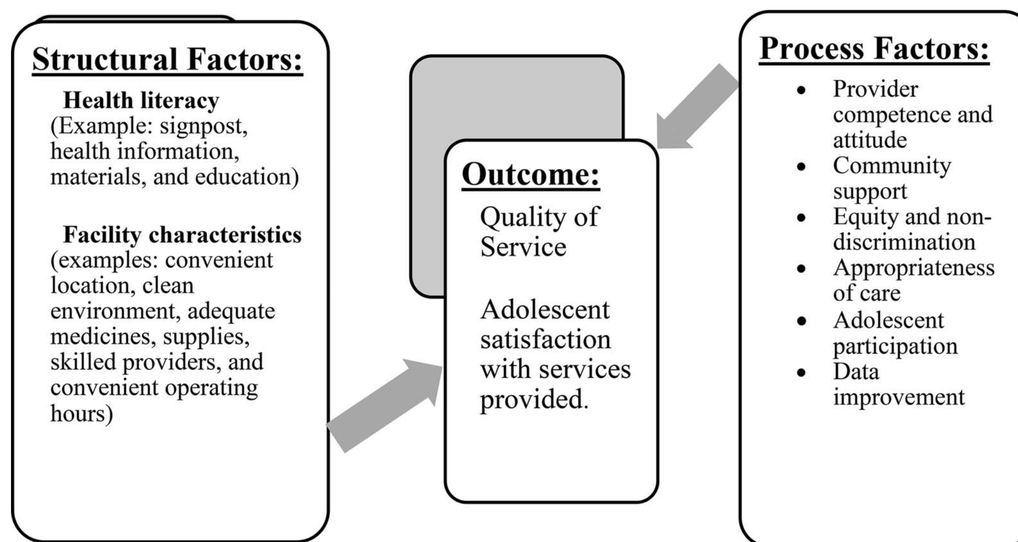

Figure 1. Conceptual framework (adopted Donabedian model).

and family activities, access to care, and healthcare utilization. It is likewise the ability to build a relationship of faith, empathy, and understanding with patients, and showing humanism and sensitivity to patient needs as well.[22,23] The procedure extends to discussing or explaining the patient's conditions to them and taking them in decisions involving their care. Thus, the process comprises all the activities between structure and outcome.[21]

Outcome or the product of care refers to the effect(s) of the care on the health status of the patient and the population.[21] It includes improvements in a patient's knowledge, changes in behavior, and patient satisfaction; that is, a reduction in mortality, morbidity, disability, and improvement in patients' perceptions. Donabedian argued that there is a relationship among structure, process, and outcome. He emphasized that quality assessment is possible simply because good structure increases the likelihood of good process, and good process increases the likelihood of good outcome.[21] Construction (structure) and process can influence outcome, either immediately or indirectly.

METHODS

Ethical approval was obtained from the Ghana Health Service Ethical Review Committee of the Research and Development Division of the Ghana Health Services. Permission was obtained from the selected health facilities and respondents. Parental consent was sought from adolescents who are younger than 18.

This study used a facility-based descriptive cross-sectional study design to assess the structural and process factors available for delivering quality adolescent sexual reproductive health services in the Volta, Eastern and Oti regions of Ghana from November 2021 to April 2022. The target population for this study included all adolescents (10–19 years), and all health facilities (hospitals, health centers, and community health planning services compounds) that provided ASRH services in the selected three regions.

The three regions (Oti and Volta and Eastern) were purposefully selected due to the high rate of adolescent pregnancy and fertility rate (Oti 21.1%, Eastern 13.7%, and Volta 11.8%)[15,24] compared with other regions within the southern zone of Ghana. A simple random sampling by balloting was used to select 158 health facilities across the three regions for the assessment of the structural factors. A total of 158 adolescents who used ASRH services were also randomly sampled to assess the process factors available for the delivery of quality ASRH services using an existing interview guide. The WHO global standards for quality healthcare services for adolescent assessment were adopted and used to collect data from the respondents.[11] Only the sections that elicit information on ASRH services were adopted. The Donabedian model of quality assessment (Figure 1) was adopted, modified, and used to assess the structural and process factors at the selected existing health facilities. The Statistical Package for the Social Sciences (SPSS) version 20.0 was used to analyze the data collected and the findings presented in the tables.

RESULTS

Facility Background Information

Most (121 [76.58%]) of the facilities assessed were in the rural communities, and 37 (23.42%) were in urban communities. Most (138 [87.34%]) of the facilities were owned by the government of Ghana. A total of 32.91% (52) of facilities were community health and planning services, 52 (32.91%) were health centers, and 26 (16.46%) were hospitals, respectively, as shown in Table 1.

Table 1. Facility background information

	Frequency (*n* = 158)	Percentage (%)
Locality of the Facility		
• Rural	121	76.58
• Urban	37	23.42
Ownership of the Facility		
• Government	138	87.34
• CHAG	20	12.34
Level of Facility		
• Community health planning services	52	32.91
• Health Center/Post	52	32.91
• Hospital	26	16.46
• District hospital	24	15.19
• Polyclinic	2	1.27
• Regional hospital	1	0.63
• Teaching hospital	1	0.63

CHAG: Christian Health Association of Ghana.

Structural Factors in Delivering Quality ASRH Services

Facility characteristics

The study assessed the structural factors (facility characteristics) available to ensure the delivery of quality ASRH services in Ghana. The results showed that most (137 [86.71%]) health facilities had a clean and welcoming environment. A proportion of 85 (53.50%) facilities did not have separate space for adolescents, and a proportion of 73 (46.20%) facilities had a separate space for adolescents. Most (90 [56.96%]) health facilities had signposts indicating services available and the working hours for adolescents, and 68 (43.04%) of the facilities did not have signposts to indicate services/working hours for adolescents (Table 2).

All 158 health facilities had the National Health Insurance Scheme (NHIS) covering contraceptive/ family planning (FP) services for adolescents. Although most (126 [79.75%]) facilities provided privacy (ensuring that there was no interruption from any other staff or client when attending to adolescents), 32 (20.25%) of the facilities did not ensure privacy for adolescents. In most (136 [86.08%]) of the facilities, there were ASRH teaching and learning aids available to help service providers. Also, most (106 [67.09%]) of the facilities had standard guidelines, protocols, and policies available to guide service provision. The average waiting time for adolescents to be attended to by service providers was 30 minutes or less (Table 2).

Table 2. Facility characteristics

	Frequency (*n* = 158)	Percentage (%)
The facility has a clean and welcoming environment		
• Yes	137	86.71
• No	1	0.63
• Somehow	20	12.66
The facility has separate spaces for adolescents		
• Yes	73	46.20
• No	85	53.80
The facility has convenient hours and working days for adolescents		
• Weekdays (Monday–Friday from 8 AM–5 PM)	158	100.0
• Night	0	0.00
• Holidays	0	0.00
• Weekends	0	0.00
The facility has a signpost indicating services/working hours		
• Yes	90	56.96
• No	68	43.04
Contraceptive/family planning services are covered by the NHIS		
• Yes	158	100
• No	0	0.00
Privacy is ensured when attending to adolescent		
• Yes	126	79.75
• No	32	20.25
ASRH teaching and learning aids available to help service providers		
• Yes	136	86.08
• No	30	13.92
Standard guidelines, protocols, and policies are available to guide service provision		
• Yes	106	67.09
• No	52	32.91
What is the waiting time for an adolescent to see a provider?		
• ≤ 30 min	119	75.32
• 30 min–59 min	26	16.45
• 1 hour–1:59 mins	11	6.96
• More than 2 hours	2	1.27

ASRH: adolescent sexual and reproductive health; NHIS: National Health Insurance Scheme.

Adolescent health literacy

As shown in Table 3, the study also assessed the adolescent health literacy materials available to ensure the delivery of quality ASRH services in Ghana. Most (128 [81.01%]) facilities had available educational materials on ASRH, and a proportion of 30 (18.99%) of the facilities had no educational material on ASRH for adolescent education. However, most (107 [83.89%]) facilities that had educational material on ASRH education had them in only one language (English), whereas only 21 (16.41%) of the facilities had them in different languages. In all the facilities that had educational materials on ASRH, they were not available for take home by adolescents in most of the 102 (79.69%) facilities. Only 26 (20.31%) had educational materials for take home by adolescents. Adolescents can only access services offsite (without physically being present) in 63 (39.87%) facilities assessed in Ghana (Table 3).

Table 3. Adolescent health literacy

	Frequency (*n* = 158)	Percentage (%)
Availability of educational materials on ASRH (*n* = 158)		
• Yes	128	81.01
• No	30	18.99
Educational material in different languages (*n* = 128)		
• Yes	21	16.41
• No	107	83.59
Educational material available for take home (*n* = 128)		
• Yes	26	20.31
• No	102	79.69
Do providers speak to adolescents in languages they understand (*n* = 158)		
• Yes	158	100
• No	0	0.00
Can adolescents access services offsite from the facility (*n* = 158)		
• Yes	63	39.87
• No	95	60.12

ASRH: adolescent sexual and reproductive health

Table 4. Equity and non-discrimination

	Frequency (*n* = 158)	Percentage (%)
Did you require parental, spouse/ guardian consent?		
• Yes	59	37.34
• No	99	62.66
Were services rendered based on age race, gender, marital, educational, or economic status?		
• Yes	2	1.27
• No	156	98.73
Were services ever denied you because you don't have money?		
• Yes	56	35.44
• No	102	64.56
Did the provider speak to you in a language you understand?		
• Yes	158	100
• No	0	0.00
Is there a minimum age requirement for adolescents to receive services?		
• Yes	0	0.00
• No	66	41.77
• I don't know	92	58.23

Process Factors in Delivering Quality ASRH Services

Equity and non-discrimination

Table 4 shows that most (99 [62.66%]) of the respondents did not require parental, spouse, or guardian consent before using ASRH services in health facilities, whereas a proportion of respondents required parental, spouse, or guardian consent to use ASRH services. When asked whether ASRH service was rendered based on age race, gender, marital, educational, or economic status, 156 (98.73%) respondents said "No." A proportion (34.44%) of respondents said they were once denied services because they did not have active NHIS or did not have money to pay for it (Table 4).

Community support

The study showed that there were no cultural/religious values in the respondent's community that did not support ASRH services. Most (155 [98.10%]) of respondents responded "No" to not having any cultural/religious values in their communities that did not support ASRH services.

Provider competencies and attitude

Findings (Table 5) from the study showed that ASRH service providers respected the opinions, decisions, and choice of services of adolescents. Service providers allowed adolescents to ask questions and ask for clarification on service availability. Service providers treated adolescents respectfully and were friendly. Most (118 [74.72%]) respondents believed that their information would be kept confidential by the service provider. When asked whether there was any interruption by others when the provider was attending to them, Most (109 [68.99%]) responded "Yes," attesting to the fact that privacy was not provided in most of the facilities when the service provider was attending to adolescents (Table 5).

Adolescent participation

The study assessed whether adolescents were involved in the planning, monitoring, and evaluation of health services and decisions regarding their care, as well as in certain appropriate aspects of service provision by health facilities. The study showed that most (157 [99.37%]) facilities did not involve adolescents in the planning, monitoring, and evaluation of health services and decisions regarding their care, as well as in certain appropriate aspects of service provision. The study, however, found that most (156 [98.73%]) adolescents believed they were better positioned to suggest ways in which facilities could improve the quality of ASRH service delivery.

Appropriate package of services

In assessing the health facility's ability to provide a package of information, counseling, diagnostic, treatment, and care services that fulfilled the needs of all adolescents as well as how ASRH services were provided in the facility and through referral linkages and outreach systems, results of the study showed that all 158 (100%) facilities accessed were able to provide services to adolescents and were not referred to other facilities for the intended services.

Data and quality improvement

Facilities' capacity to collect, analyze, and use data on service utilization and quality of care, disaggregated by

Table 5. Provider competencies and attitude

	Frequency (n = 158)	Percentage (%)
Did the service provider respect your opinion, decisions, and choice of service?		
• Yes	158	100
• No	0	0.00
Did the provider allow you to ask questions and ask for clarifications on available services?		
• Yes	158	100
• No	0	0.00
Did the provider treat you respectfully and was the provider friendly?		
• Yes	158	100
• No	0	0.00
Do you think your information will be kept confidential?		
• Yes	118	74.72
• No	12	7.59
• Maybe	28	17.72
Was there any interruption by others when the provider was attending to you?		
• Yes	109	68.99
• No	49	31.01

age and sex, to support quality improvement by policies and protocols information storage and disclosure was assessed. Findings, however, show that adolescents do not know of any written policies or protocols on adolescent information storage and disclosure in the facility.

DISCUSSION

Structural Factors in Delivering Quality ASRH Services

The study found some structural barriers (facility characteristics) that affected the delivery of quality ASRH services in Ghana. The results showed that a proportion of 85 (53.50%) of the facilities assessed did not have separate spaces for delivering services for adolescents. This finding is similar to the finding in a study carried out in South Africa, Ethiopia, and Uganda.[25–27] The studies indicated a lack of a dedicated space for young people at the facilities.[25,26] In a study from Ethiopia, one of the participants indicated the lack of separate youth clinics saying, that designated space for the provision of Youth-Friendly Sexual Reproductive Health services has been mentioned numerous times as a barrier. Even where youth clinics exist, participants report a lack of privacy for SRH services and/or a sense of belonging. *"When you go to hospitals for services, you may meet your parents there. I remember my friend who met her mother in a clinic."*[28] However, even though there was a lack of separate space for the provision of ASRH services, the study found the majority 126 (79.75%) of facilities provided privacy in delivering ASRH services. This finding is, however, contrary to the findings of Rukundo et al.[26] and Wakjira and Habedi,[29] who indicated a lack of privacy in providing ASRH services.

Many operational barriers in health facilities also impact access and utilization of ASRH services, such as inconvenient operating times, lack of transportation, and high cost of services. However, all the health facilities assessed had the NHIS covering contraceptive/FP services for adolescents in Ghana. This made it easy for adolescents in Ghana to access and afford the cost of services delivered. Three studies reported that adolescents and young people mostly preferred low-cost or no charges at all when seeking SRH services from youth centers.[27–29] However, studies in Uganda, Nigeria, and Kenya[30–32] showed contrary results, as in 19 of the 20 focus group discussions (FGDs), adolescents noted that ASRH services were not free, and the cost was not affordable to them.

Process Factors in Delivering Quality ASRH Services

The study assessed ASRH service equity and non-discrimination in service delivery. The findings indicated that most respondents did not require parental, spouse, or guardian consent before using ASRH services. The study also found that respondents were not denied access to ASRH services based on age, race, gender, marital, or educational status. However, a proportion (34.44%) of respondents said they were once denied services because they did not have active NHIS or did not have money to pay for it. Studies in Uganda, Nigeria, and Kenya,[30–32] however, showed that in 19 of the 20 FGDs, adolescents noted that ASRH services were not free, and the cost was not affordable to them.

Findings from the study showed that ASRH service providers had received adequate training and were well-skilled to provide ASRH services. The study indicated that service providers respected the opinions, decisions, and choices of services of adolescents. Service providers allowed adolescents to ask questions and ask for clarification on service availability. Most (118 [74.72%]) respondents believed that their information would be kept confidential by the service provider. Contrary to this finding, a study in Tanzania indicated that only 37.2% of the service providers received training in ASRH information and counseling, which is significantly very low.[33] Also, studies from South Africa, Uganda, and Ethiopia found inconsistencies in the perceptions of provider attitudes toward adolescents.[27,30,34,35] Negative attitude of health workers as per the case in one of the studies indicated that 30% had negative attitudes toward the youth in Ethiopia.[34] From FGDs in a study done in Uganda, 18 of 20 participants indicated that experiencing healthcare providers' negative attitudes toward providing SRH services affects the utilization aspects among adolescents.[30] Health worker attitudes can also significantly hinder adolescents' utilization of reproductive health

services. Services need to be provided in a youth-friendly environment with health workers who are welcoming and supportive toward adolescents seeking care.[36]

Community norms and traditions have a powerful influence on health. They can and, in some places, do, promote progressive and pro-social actions.[37] In many places, however, especially about ASRH, norms and traditions hinder rather than help.[37] The study, however, showed that there were no cultural/religious values in the respondent's community that did not support ASRH services. Contrary to this finding, studies[31,38,39] identified that social-cultural factors were greatly associated with some services mainly FP, voluntary counseling, and testing, and counseling services. It was established that some cultures and parents in a community cross-sectional study done in Kenya and Ethiopia prohibited the youth from using ASRH services as this was brought out when descriptive, chi-square, and odds statistics all showed significant relationships.[38] Some participants in a study done in Malawi indicated that parents expressed negative opinions of youth using FP and parents could prevent youth from accessing FP services and said youth younger than 18 are not old enough to be sexually active. Therefore, the youth did not need FP and should focus on completing their education and not engage in sexual activities.[39]

The study showed that facilities did not involve adolescents in the planning, design, implementation, monitoring, and evaluation of health services and decisions regarding ASRH services. However, adolescents believed they were better positioned to suggest ways in which facilities could improve the quality of ASRH services delivered. WHO has called for the participatory engagement of adolescents, supporting programs and policies that are "partnership-driven, evidence-informed, gender-responsive, human rights–based, sustainable, people-centered, and community-owned."[11,40]

Facilities require information about adolescent clients, and they must be able to keep this information confidential. Findings, however, show that adolescents did not know of any written policies or protocols on adolescent information storage and disclosure in the facility. Findings of a study indicated that less than half (45%) of facilities in Mali and Niger collected information to improve adolescent healthcare and 30% of facilities in Guinea did.[41]

Limitations

Many of the limitations encountered point to the pressing need for further research on how to best deliver quality adolescent SRH services and determine which components are most effective. Also, this study was limited to only three regions of Ghana of a total of 16 regions. Thus, the study was limited in terms of the sample size (number of health facilities assessed and the number of adolescents interviewed) implying the generalizability of findings.

Recommendation

Health facilities need to make available ASRH educational material for adolescents. These materials will equip adolescents with the needed knowledge, skills, attitudes, and values that will empower them to realize their health, well-being, and dignity; develop respectful social and sexual relationships; consider how their choices affect their well-being and that of others; and understand and ensure the protection of their SRH rights throughout their lives.

Because this is limited to selected facilities in only three regions of Ghana, further study to include facilities in all regions of Ghana are needed to verify if the findings apply to other facilities in the country.

CONCLUSIONS

The study found structural and process barriers that affected the delivery of quality ASRH services in Ghana. To improve the quality of ASRH services, standards for ASRH services for adolescents should include considerations related to adolescents' health literacy, community support, appropriate packages of services, healthcare providers' competencies, facility characteristics, equity and non-discrimination, high-quality data, and adolescent participation.

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