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Determinants of adolescent sexual and reproductive health service quality in Ghana

Emmanuel Anongeba Anaba
Department of Population, Family and Reproductive Health, University of Ghana, Legon, Accra, Ghana

ABSTRACT

Aim: The objective of this study was to assess the determinants of Sexual and Reproductive Health (SRH) service quality among adolescents.
Methods: This study was a cross-sectional survey of four adolescent health facilities in the Tema Metropolis, Ghana. A structured questionnaire was administered to 420 adolescent clients. Data were analyzed with the aid of Statistical Package for the Social Sciences software, version 23.0. Results were presented using uni-, bi-, and multivariate analyses.
Results: Majority (69.0%) of the respondents were females and students (62.0%), with a mean age of 16 years. It was found that of the five (5) quality of care dimensions, four dimensions were significantly associated with overall perception of quality. These include provider attitudes (β = 0.234, $p < 0.05$); facility characteristics (β = 0.128, $p < 0.05$); appropriateness of services (β = 0.108, $p < 0.05$); and health literacy (β = 0.208, $p < 0.05$). However, equity and nondiscrimination had no significant association with overall perception of the quality of care.
Conclusions: Adolescents perceived the quality of SRH services to be good. Adolescents' perceptions were influenced by positive provider attitudes, availability of age-appropriate sexual and reproductive health services, friendly hospital environment, and availability of sexual and reproductive health information. This study sends a strong message to stakeholders who have interest in adolescent health, well-being, and development.

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KEYWORDS

Adolescents; sexual and reproductive health; services; quality; Ghana

Background

In recent times, countries are investing more resources in adolescent (10–19 years) health, well-being, and development. This is because adolescents represent a significant proportion of the world's population. Furthermore, they are the world's greatest untapped human resource [1]. There are about 1.2 billion adolescents in the world [2], and many of the world's adolescents live in low- and middle-income countries, particularly Sub-Saharan Africa [1]. Adolescents are perceived to be healthy. However, adolescents engage in risky sexual behaviors, such as unprotected sex, multiple sexual partners, and unsafe abortions, and therefore have Sexual and Reproductive Health (SRH) problems. For instance, about 1.3 million adolescents die every year of causes that are largely preventable [3]. Pregnancy and childbirth complications are the second leading cause of death among adolescent girls worldwide [1]. The rate at which adolescent girls give birth remains high; 49 births per 1,000 girls worldwide, coupled with high unmet need for family planning services [4]. In addition, about 2 million adolescents in the world are living with human immunodeficiency virus (HIV), and over 41.0% of new HIV infections occur among adolescents every year. Acquired Immune Deficiency Syndrome remains the leading cause of adolescent deaths in Sub-Saharan Africa [1].

Notwithstanding, adolescents are usually reluctant to access SRH services, partly because of perceived poor quality of the services. The existing health systems do not adequately address adolescents' SRH care needs. According to the World Health Organization, SRH services for adolescents remain highly fragmented, poorly coordinated, and

Contact Emmanuel Anongeba Anaba ✉ emmaanaba24@gmail.com Department of Population, Family and Reproductive Health, University of Ghana, Legon, Accra, Ghana.

uneven in quality [4]. In addition, adolescents in their quest to access SRH services face more barriers than adults. Adolescents are more likely to face barriers such as inconvenient operating hours, privacy and confidentiality issues [5,6], unfriendly provider attitudes [7], discrimination, and poorly resourced adolescent health facilities among others [8].

Although decreasing high-risk behaviors, preventing mortality and morbidity, and improving health among adolescents require a life-course action, the role of health systems in providing adequate quality SRH services cannot be underestimated [3]. The World Health Organization highlights that countries can make progress toward universal health coverage, if their health systems are responsive to the healthcare needs of adolescents. In this regard, the WHO encourages all member nations to develop and implement adolescent healthcare quality standards [1]. Some developed countries such as the United States of America, United Kingdom, Italy, Canada, France, and Mexico have implemented adolescent healthcare quality standards [3], and more than twenty-five countries in Africa (i.e., South Africa, Kenya, and Malawi) have also implemented adolescent healthcare standards, which involve the integration of adolescent SRH services into primary health care [4].

The health sector of Ghana has recognized adolescent SRH needs as important. In 2001, Ghana launched Adolescent Health Development (ADHD) program. The main aim of the ADHD program is to promote adolescent health and development through preventing and responding to peculiar adolescent SRH problems, such as early sexual debut, teenage pregnancy, and sexually transmitted infections [9]. In this regard, adolescent-friendly SRH services are integrated into primary care through the setting up of adolescent health facilities, known in Ghana as Adolescent Health Corners. However, gray literature shows that adolescents' access to appropriate SRH information has not improved. Although there has been an overall improvement in utilization of health services in Ghana, utilization among adolescents remains low [10].

These suggest that there are some defects in the quality of SRH services that discourage adolescents from accessing such services. However, quality of care in adolescent health facilities has received little attention of researchers in Ghana. Understanding the salient factors that shape adolescent SRH service quality, especially from the perspective of adolescents, is necessary for healthcare quality improvement. The objective of this study was to assess adolescents' perceptions of the quality of SRH services in adolescent health facilities in Tema, Ghana. This study also aimed to identify factors that are salient to adolescents when gauging the quality of SRH services. Based on the objectives of this study, the researcher hypothesized that five constructs (i.e., provider attitudes, facility characteristics, appropriateness of services, equity and nondiscrimination, and health literacy) will significantly determine adolescents' overall perception of the quality of SRH services.

Materials and Methods

This study was a cross-sectional survey of 420 adolescent clients recruited from four (4) adolescent health facilities in Tema Metropolis, Ghana [11]. Ghana is administratively divided into ten regions. This study was conducted in the Greater Accra Region, where Ghana's capital city; Accra is located. Tema Metropolis is the second largest populated district in the region after Accra Metropolis. Tema Metropolis is divided into three sub-metropolitans, namely: Tema West, East, and Central. The Greenwich Meridian (longitude zero) passes through the metropolis and situated only about 50 km from the equator. In this regard, Tema is considered as a city at the center of the world. The metropolis has a large youthful population with over 40.0% been under 30 years, whereas 34.5% of the total population represents under 15 years alone [12]. The metropolis has four public health facilities, two quasi-governmental health facilities, and many private health facilities. It has four (4) Adolescent Health Corners (AHCs) and nineteen (19) Adolescent Health Clubs. The target population for this study was adolescents (10–19 years) visiting the AHCs. There are about 67,861 adolescents in Tema, representing 20.3% of the total population. The sample size was calculated using the formula below.

$$n = \text{deff} \times \frac{Npq}{\frac{d^2}{1.96^2}(N-1) + pq}$$

Where n = sample size;
deff = design effect;
N = population size;
p = estimated proportion;
$q = 1 - p$;
d = desired absolute precision/absolute level of precision.

The calculated sample size was 382, but 10.0% ($n = 38$) was added to cater for nonrespondents and

to increase the power of this study. Of the 420 questionnaires administered to adolescents, 372 questionnaires, representing 88.6%, were retrieved. Data collection was done between January and February 2017. A structured questionnaire was administered to adolescent clients through exit interviews and on the spot collection. The questionnaire was adapted from the World Health Organization and pilot-tested with 10 adolescent respondents. The questionnaire was categorized into three main sections, including sociodemographics, a section for measuring the quality of SRH services, and the last section for measuring overall perception of the quality of SRH services. The 23-item questionnaire was categorized into five quality of care dimensions (i.e., health literacy, appropriateness of the services, provider attitudes, equity and nondiscrimination, and facility characteristics). Overall perception of the quality of SRH services was measured on a five-point Likert scale, ranging from very poor (1) to very good (5). In addition, there were introductory and consent sections for respondents to sign. Respondents who could not sign were asked to thumbprint. For minors, consent was possibly taken from their parents. The questionnaire was administered by the author and a trained research assistant. Due to low turnout at the AHCs, about ten questionnaires were administered per visit. On average, 10 minutes was spent to administer a questionnaire.

Participation was purely voluntary and no respondent was coerced to participate. The purpose of this study was made known to a respondent before the questionnaire was administered. Respondents had the free will to opt out at any stage of the study. The questionnaire was designed and administered in English, but for respondents who did not understand English language, the items on the questionnaire were translated into Twi language (the largely spoken language in Ghana). Translation was not a challenge, since the data collectors were fluent in both the languages. The questionnaire was coded into a statistical software (Statistical Package for the Social Sciences) version 23.0. With the aid of this software, the data were analyzed and the results were presented using descriptive statistics, charts, Pearson's correlation coefficient, and Multiple Linear Regression analyses. Assumptions underlining multiple regression analysis, such as normality and multicollinearity, were all satisfied.

Results

It was found that majority of the respondents were females (69.0%), belonged to the Christian faith (86.0%) and unmarried (91.0%). Exactly, half (50.0%) of the respondents were between the ages of 15 and 17, with a mean age of 16 years, and 62.0% of the respondents were students (see Table 1). It was found that of the five quality dimensions, provider attitudes recorded the highest positive response rate (89.4%). Equity and nondiscrimination recorded the second highest positive response rate (87.7%), followed by appropriateness of services (75.8%) and facility characteristics (74.0%). The dimension that recorded the lowest positive response rate was health literacy (58.4%). The areas of weakness were lack of a sign post to direct adolescents to the AHC and inadequate SRH information materials for adolescents to take home. Notwithstanding, attitudes of providers were found to be satisfactory coupled with less discrimination. For instance, many of the respondents stated that the health providers did not condemn their actions. The health providers spent enough time listening to their concerns and communicated with them in a polite manner (see Table 2). It was found that 84.0% of the respondents rated overall quality of SRH services as either good or very good. This suggests that the respondents were comfortable with the quality of SRH services in the AHCs (see Fig. 1).

Table 1. Sociodemographic characteristics of respondents.

Characteristic	Frequency (percentage)
Gender	
Male	116 (31)
Female	256 (69)
Age	**mean age = 16**
10–14	72 (19)
15–17	186 (50)
18–19	114 (31)
Religion	
Christianity	316 (86)
Islam	52 (14)
Marital status	
Unmarried	332 (91)
Married/cohabitating	33 (9)
Occupation	
Schooling	231 (62)
Not schooling	141 (38)
Facility type	
Hospital	64 (17)
Polyclinic	57 (15)
Health Center	204 (55)
Clinic	47 (13)

Table 2. Descriptive statistics on dimensions of adolescent SRH service quality.

Characteristic	n	Yes (%)	No (%)	% of positive average response rate
Health literacy				**58.4**
Availability of sign post?	372	46	54	46
Availability of SRH information materials to read?	372	60	40	60
Availability of SRH information materials to take home?	372	31	69	31
Did providers talk to you about SRH services at the Adolescent Health Facility (AHF)?	372	66	34	66
Did the provider talk to you about how to prevent STIs	372	89	11	89
Facility characteristics				**74**
Are you comfortable with the location of the AHF?	372	63	37	63
Are you comfortable with the operating hours of AHF?	372	69	31	69
Did you get enough privacy at the AHF?	372	72	28	72
Was the AHF's environment welcoming?	372	92	8	92
Appropriateness of services				**75.8**
Availability of pregnancy or Sexually Transmitted Infection (STI) tests?	372	85	15	85
Availability of counseling services?	372	84	16	84
Availability of family planning services?	372	77	22	77
Availability of other healthcare services?	372	86	14	86
Availability of outreach and referral services?	372	47	53	47
Provider attitudes				**89.4**
Did the providers spend adequate time to listen to you?	372	93	7	93
Did the providers talk to you in a respectful manner?	372	95	5	95
Did the providers assure you of confidentiality?	372	85	15	85
Did the providers explain issues to your understanding?	372	90	10	90
Did the providers condemn your decisions or actions?	372	16	84	84
Equity and nondiscrimination				**87.7**
Were you denied SRH care due of your inability to pay?	372	16	84	84
Were you denied SRH care due of your gender?	372	9	91	91
Were you denied SRH care due of your marital status?	372	11	89	89
Were you denied SRH care due of your age?	372	13	87	87

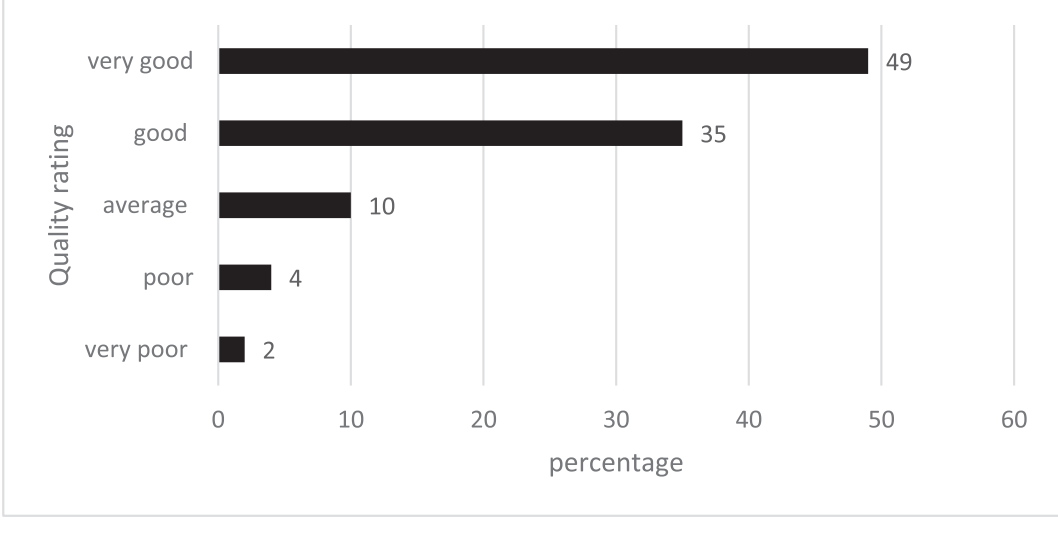

Figure 1. Respondent's overall perception of the quality of SRH services.

At the bivariate level, it was found that health literacy (r = 0.388, p = < 0.001), provider attitude (r = 0.334, p = < 0.001), appropriateness of services (r = 0.145, p = 0.003), and facility characteristics (r = 0.151, p = 002) had significant positive relationships with overall perception of the quality of care. Among the sociodemographic factors, only age had a significant relationship with the dependent variable. The relationship, however, was negative (see Table 3).

At the multivariate level, it was found that health literacy (β = 0.208, p < 0.05), appropriateness of services (β = 0.108, p < 0.05), providers' attitudes (β = 0.234, p < 0.05), and facility characteristics (β = 0.128, p < 0.05) were significant predictors of overall perception of quality, controlling for sociodemographic variables (see Table 4). This suggests that the salient factors that influenced adolescents' overall perception of the quality of SRH services were availability of SRH health information, appropriate services, positive provider attitudes, and facility characteristics.

Discussion

Adolescents engage in risky sexual behaviors but have unmet need for sexual and reproductive health services. Adolescent health services are highly fragmented and uneven in quality. The objective of this study was to assess the quality of sexual and reproductive health services in adolescent health facilities. Overall, adolescents in this study perceived the quality of SRH services to be good. Adolescents' perceptions were positively associated with provider attitudes, appropriateness of services, facility characteristic, and health literacy. This implies that holding other factors constant, improving the aforementioned factors will lead to improvement in the perceived quality of care.

It was found that adolescents perceived healthcare providers as friendly, respectful, nonjudgmental, competent, and trustworthy. These findings have been supported by existing studies. A similar study in New York by Gibson et al. [13] reported a higher quality of care among adolescents, due to caregivers' respect for adolescent health concerns and understandable provider communication. Another study in Swaziland found that adolescents who felt that caregivers understood their problems and complaints were more likely to be satisfied with services in youth clinics [14]. Moreover, Geary et al. [15] found, in South Africa, that young people who felt that caregivers were friendly and respectful were more likely to report positive experiences. On the contrary, some previous studies found that some healthcare providers held negative attitudes toward

Table 3. Correlation matrix of overall perception of the quality and dimensions of adolescent SRH care quality.

Characteristic	Pearson Correlation Coefficient	Sig
Health literacy	0.388	< 0.001
Appropriateness of services	0.145	0.003
Provider attitudes	0.344	< 0.001
Facility characteristics	0.151	0.002
Equity and nondiscrimination	−0.049	0.174
Age	−0.216	< 0.001
Note: significance level = 0.05		

Table 4. Multiple linear regression analysis on predictors of SRH service quality.

Predictors	B	Std. Error	B	*t*-value	*p*-value
(Constant)	2.191	0.472		4.639	< 0.001
Health literacy	0.377	0.093	0.208	4.045	< 0.001
Appropriateness of services	0.217	0.095	0.108	2.279	0.023
Provider attitudes	0.500	0.104	0.234	4.819	< 0.001
Facility characteristics	0.252	0.096	0.128	2.625	0.009
Equity and nondiscrimination	−0.027	0.050	−0.027	−0.553	0.581
Age	−0.198	0.073	−0.155	−2.720	0.007
R^2 = 0.265, adjusted R^2 = 0.242, F-value = 11.45, p = 0.000, $p \leq 0.05$					

adolescent sexual and reproductive health services. Geary et al. [15] found that adolescents who felt that caregivers expressed negative opinions about their actions were more likely to report negative experiences. Moreover, Kennedy et al., [7] confirmed that a lack of confidentiality and judgmental attitudes of caregivers are barriers to access sexual and reproductive health services among adolescents [15]. The differences in the findings might be due to the fact that providers in adolescent health facilities have received training in adolescent-friendly care and therefore are less likely to hold negative attitudes and perceptions about adolescent SRH services. Some studies have shown that healthcare providers who lack training in adolescent-friendly care are more likely to behave negatively toward adolescents who seek SRH services, such as contraceptives and abortion services [14–16]. This implies that interventions that seek to promote accessibility and utilization of SRH services among adolescents must address supply-side barriers.

It was also found that adolescents' perceptions were influenced by the appropriateness of the services, such as the availability of counseling and testing of pregnancy and HIV. Existing studies have shown that adolescents have special health needs and therefore prefer SRH services that are tailor-made to meet their health needs [17–19]. This finding is not surprising because the ADHD program received financial and technical support from international organizations such as United Kingdom Aid (UKAID) and United Nations Population Fund (UNFPA) in 2015 [20]. Through this support, healthcare providers were trained in sexual and reproductive health and deployed to the various AHCs. This implies that investing in adolescent health care can improve the quality, and when the quality is improved, accessibility and utilization can also improve. Going forward, stakeholders should consider including abortion and maternal healthcare services in the package. This would help adolescents to have a "one-stop shop" for all their sexual and reproductive health needs.

In addition, there was a significant relationship between facility characteristics and overall perception of quality. This suggests that adolescents rated overall quality of care high because the health facilities had a welcoming environment, convenient operating hours, and friendly location that ensured enough privacy for clients. This finding can be explained by the financial and technical support given to the ADHD program in 2015. Through this support, old AHCs were renovated and new AHCs were constructed [20]. This finding is laudable, since the aforementioned factors are essential for adolescent-friendly care. Adolescents are more likely to access health services if the environment is friendly and there is enough privacy [21,22]. These findings are encouraging because adolescents in Sub-Saharan Africa are more likely to face barriers when accessing health care, partly due to the unfriendly nature of general health facilities [3,7]. Therefore, creating an enabling environment would help break some of these barriers, which will eventually lead to increase in utilization of SRH services among adolescents.

Health literacy also had a significant influence on overall perception of the quality of care, suggesting that adolescents in this study received adequate health information from caregivers and also had access to sexual and reproductive health information materials. This finding is expected since 30,000 health information, education, and communication materials in the form of booklets and posters were printed and distributed to the AHCs across the country. These findings are also encouraging, since many adolescents lack accurate health information to make informed health choices. Lack of knowledge is one of the factors affecting low utilization of SRH services, such as contraceptives and abortion services [17,23]. Adolescents often consult their peer who also lack accurate health information [15]. Further, adolescents who lack knowledge of abortion services may resort to unsafe methods [14], which can lead to complications and even death. Adolescent-friendly care, therefore, can be a feasible intervention for equipping adolescents with accurate SRH information.

Implications of Findings

The practical implications of these findings cannot be underestimated. Promoting quality of SRH services can increase accessibility and utilization among adolescents. Further, an increase in utilization of SRH services, such as contraceptives, among adolescents would then mean bridging the gap in the unmet need for family planning services. An increase in utilization of family planning services would contribute to reducing adolescent births, which is a risk factor of maternal and infant mortality and school dropout. As stated earlier, pregnancy and childbirth complications are the leading cause of death among adolescent girls, and children born to adolescent girls have a higher risk of infant mortality compared to children born to adult women

[24]. Further, an increase in utilization of SRH services such as information and condoms can help reduce the burden of HIV among adolescents, which is currently high in Sub-Saharan Africa. Above all, investing in adolescent SRH would put Ghana on the verge of achieving the Sustainable Development Goals, particularly goal three, which seeks to improve health of all ages, including adolescents. This study, therefore, sends a strong message to policymakers, health practitioners, and government to act swiftly in promoting adolescent sexual and reproductive health services.

Limitation of the Study

Although this study provides useful information for quality improvement in adolescent health care in Ghana, it is not devoid of limitations. The researcher acknowledges that it would have been ideal to employ both quantitative and qualitative techniques. However, due to resource constraints, the qualitative aspect was not explored. Future studies may consider adopting a qualitative research approach. Furthermore, this study was conducted in an urban setting which has different characteristics from rural settings. Therefore, interpretation of the findings must be done with caution.

Conclusion

Adolescents perceived the quality of SRH services to be good. Adolescents' perceptions were influenced by positive provider attitudes, availability of age-appropriate sexual and reproductive health services, friendly environment, and availability of sexual and reproductive health information. Therefore, the low utilization of sexual and reproductive health services among adolescents in Ghana may be attributed to other factors than poor quality of care. Future studies should consider exploring other barriers to accessibility and utilization of SRH services among adolescents.

Declarations

Ethics approval and consent to participate

This study is an excerpt of a master's thesis. At the time of this study, the university was considerate on students applying for Ethical Review Board's approval. Parents or caretakers of respondents who were below 18 years signed a written consent form, while the respondents signed an assent form. Respondents who were 18 years and above signed a written consent form.

Consent to publish

This study does not require consent of any individual or institution before publication.

Availability of data and materials

All data and materials have been made available in this paper.

Competing interests

I declare that there is no competing interest.

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Authors' Contributions

I am the sole author of this paper.

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