

Predictors of education and utilization of adolescent-friendly health services among youth in Kumbungu district, Ghana

Adolescent
friendly health
services in
Ghana

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Martin Nyaaba Adokiya
*Department of Global and International Health,
School of Public Health, University for Development Studies (UDS), Tamale, Ghana*
Francis Kronzu Cudjoe
*Department of Environmental and Occupational Health, School of Public Health,
UDS, Tamale, Ghana, and*
Vida Nyagre Yakong
Department of Midwifery, School of Nursing and Midwifery, UDS, Tamale, Ghana

Abstract

Purpose – This paper assessed factors affecting adolescent-friendly health services (AFHS), education and utilization among youth (10–19 years) in Kumbungu district, Ghana.

Design/methodology/approach – The study used a cross-sectional design involving 416 adolescents from households using a random sampling technique. The authors collected data on sociodemographic characteristics, education and utilization of AFHS using a semi-structured questionnaire between June and September 2017. Logistic regression models were used to determine the factors associated with AFHS education and utilization.

Findings – Of the 416 adolescents interviewed, 66% were between 15 and 19 years. Half (50%) of the adolescents received AFHS education, 54% utilized existing services and 85% knew about health challenges. Females (aOR = 0.64; $p = 0.031$) were less likely to receive AFHS education compared to males. Muslims (aOR = 0.21; $p < 0.001$) were less likely to utilize AFHS compared to Christians. Adolescents with primary (aOR = 6.65; $p = 0.020$), junior high school (JHS) (aOR = 10.66, $p = 0.079$) or senior high school (SHS) (aOR = 1.04; $p = 0.954$) education were more likely to utilize AFHSs compared to those with no education.

Originality/value – This study reports a moderate level of education and the utilization of adolescent health services. Sex, religion and education are the key predictors of AFHS education and utilization. This study contributes to the understanding of adolescent health services and the foundation for future studies. It may be used for the planning of adolescent health service programs in disadvantaged settings.

Keywords Adolescent, Friendly health services, Education, Utilization, Ghana

Paper type Research paper

Introduction

Adolescents are persons between 10 and 19 years of age [1, 2]. They constitute about 25% of the world population [3, 4]. In Ghana, 23% of the total population is made up of adolescents

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[4]. Adolescence is a stage in the life of an individual. It is a critical developmental period between the onset of puberty and the establishment of social independence [1, 5]. The period is characterized by physical, psychological, emotional changes and sexual maturity with a higher risk of reproductive health problems [6]. The common challenges affecting adolescents include teenage pregnancies, early marriage, unsafe abortion, sexually transmitted infections (STIs), human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS) and other sexual-related health problems [1, 7]. Thus, knowledge and access to reproductive health services are essential for their physical, emotional and psychological well-being [4]. Globally, the needs of adolescents remain neither poorly understood nor served in many settings. In Ethiopia, 25, 39 and 64% of adolescents have reported utilizing health services [8–10]. Many adolescents are less informed, less experienced and uncomfortable when accessing and utilizing health services. Adolescents often lack appropriate reproductive health information [10]. Some of the main sources of reproductive health information and knowledge include peers, parents, teachers, radio and television [4]. It has been reported that lack of knowledge about the consequences of unprotected premarital sex among adolescent females predisposes them to unwanted pregnancies, unsafe abortion, increased complications and STIs [4]. The 2014 Ghana Demographic and Health Survey (GDHS) reported that about 14% of females aged 15–19 years had begun childbearing in Ghana [4, 11]. Common predictors of AFHS utilization are gender, education, income, parental status and nearness to reproductive health facilities [9]. Thus, adolescent education on reproductive health services is vital to enable them to utilize existing services. However, information on the number of adolescents with AFHS education or utilization is limited, particularly, in the northern part of Ghana. This study assessed the factors affecting AFHS education and utilization in Kumbungu district, Ghana.

Methodology

Study area

Ghana is a West African nation of about 30 million people, who are mostly concentrated in the southern and coastal regions. The country is bordered by the Ivory Coast to the west, Burkina Faso to the north, Togo to the east and the Atlantic Ocean to the south [12, 13]. Ghana's healthcare system is organized in a three-tier structure. The main implementing agency is the Ghana Health Service (GHS) at three levels: district, regional and national. Each district is supposed to be served by a hospital, health centers, private health facilities, mission clinics and community-based health planning and service (CHPS) compounds. The smallest unit of the health system is the CHPS [14]. This study was conducted in a poorer and predominantly agricultural area made up of 16 districts/municipalities in the Northern Region, Ghana. Kumbungu district has five sub-districts with an estimated population of 46,171 and covers 144 communities with a population density of 89 people per square kilometer [15]. Of this population, 13,631 are adolescents. In total, 24 health facilities are operating in the district with one major referral center. School enrollment is about 75% for males and 25% for females [15]. The study was conducted between June and September 2017.

Study design and sample

The study used a cross-sectional design to collect data from 416 adolescents between 10 and 19 years of age in the Kumbungu district, Ghana.

The sample size was calculated using Slovin's formula $n = N/(1 + Ne^2)$.

Where n = sample size, N = population (7261) and e = margin of error of 0.05 at a confidence level of 95%. A 95% confidence level (CI), 5% margin of error and 5% nonresponse rate were considered in the sample size determination.

A multistage sampling technique was employed in this study. The adolescents were sampled from the five sub-districts (clusters) based on the GHS classification. Every sub-district is supposed to have a health center that provides health services to a geographical area with a population of 15,000–30,000. It mainly focuses on basic curative care, disease prevention and maternity services in the context of primary healthcare [16]. The number of respondents sampled per sub-district was based on the total number of adolescents in each sub-district. They were randomly selected from various communities chosen within the five sub-districts. Respondents were recruited following the informed consent and interviewed based on their willingness to participate.

Inclusion and exclusion criteria

Inclusion criteria included the following: being 10–19 years of age, residing in the district for the past six months, having proof of birth date (e.g. birth certificate) and agreeing to provide their health-related information. Adolescents were excluded if they were <10 or >19 years of age, had been diagnosed with a speech impairment, severely ill, unable to communicate with the research team in any of the languages such as Dagbani, Twi or English and did not reside in the district.

Data collection

A semistructured questionnaire was designed, pretested and used for the data collection. The questionnaire had three sections: sociodemographic characteristics; education and knowledge of AFHS and utilization of existing AFHS. In total, three trained research assistants conducted the interviews in the Dagbani local language or in English. The adolescents were asked various questions including (1) what is the age, gender, religion, education, marital status and employment status of the respondents? (2) what is the knowledge of adolescents about their health problems? what are the common types of health problems adolescents experience? (3) education and knowledge of AFHS, (4) general and specific AFHS utilization, (5) details of the person who makes the decision to utilize health services, (6) days of the week that adolescents utilize health service, (7) privacy during AFHS utilization, (8) availability of needed AFHS services, (9) alternative adolescent health services and (10) perceived importance of adolescent health services. To all questions, respondents provided categorical answers except the question on the age of adolescents, which required a numerical response. It took about 15 minutes for the questionnaire to be completed per respondent. All questionnaires were administered in their households. Before the main data collection, a pretest was conducted among 15 adolescents in the Sagnarigu Municipality near the study area but with similar characteristics as the Kumbungu district. The research assistants had a good understanding of the content of the questionnaire, and they ensured the privacy and confidentiality of the respondents. Completeness and consistency of data were assured by checking completed questionnaires daily and errors during data cleaning.

Data analysis

Data were entered in Microsoft Excel and exported to Statistical Package for Social Sciences (SPSS) version 20.0 for analysis. Descriptive statistics are presented as frequencies and percentages. Bivariate and multivariate logistic regression models were used to determine factors associated with AFHS education and utilization. To identify factors that were associated with AFHS education or utilization, binary logistic regression analyses were first performed for each independent variable. Subsequently, multivariable logistic regression was performed to determine independent predictors of education or utilization among adolescents. This is presented in the form of odds ratio (OR), confidence interval and *p*-values.

The OR and 95% confidence level were estimated to identify the factors associated with AFHS education or utilization, and the level of statistical significance was determined at a p -value < 0.05.

Ethical consideration

This study received ethical approval from the Navrongo Health Research Centre Institutional Review Board (NHRCIRB310). Permission was also obtained from the Kumbungu District Health Directorate before the study was conducted.

Results

Sociodemographic characteristics

A total of 416 adolescents were interviewed, and about two-thirds (66%) were between 15 and 19 years of age. More than half (54%) were males. In every ten respondents, about nine (88%) were Muslims, and 1% were married. About 71% of the adolescents were educated to junior high school (JHS) level, and 19% had only primary education and 8% had no formal education. It was found that about 6% of the adolescents were working for an income (Table 1).

AFHS education and utilization

About 85% of the respondents had knowledge of common health problems affecting adolescents. The most common problem was general diseases (78%) such as STIs, followed by menstrual issues/teenage pregnancy (13.9%). The remaining problems were lack of health information, sexual violence and substance abuse. Half (50%) of the adolescents reported receiving AFHS education (207/416). Of the 207 adolescents, who received AFHS education,

Variable	Frequency	Percentage (%)
<i>Age (yrs)</i>		
10–14	141	33.9
15–19	275	66.1
<i>Gender</i>		
Male	226	54.3
Female	190	45.7
<i>Religion</i>		
Christians	52	12.50
Muslims	364	87.5
<i>Marital status</i>		
Single	411	98.8
Married	5	1.2
<i>Education</i>		
Uneducated	32	7.7
Primary	77	18.5
Junior high school (JHS)	297	71.4
Senior high school (SHS)	10	2.4
<i>Employment</i>		
Employed	24	5.8
Unemployed	392	94.2

Table 1. Sociodemographic characteristics of adolescents in Kumbungu district ($n = 416$)

48% (100/207) of their source of education was from school, 19% from friends'/family members, 18% from health care providers, 13% from media and only 2% from the Church. The common AFHS known by the 207 adolescents were as follows: treatment of diseases such as STIs (67%) and nutritional management (15%), antenatal/postnatal care services (7%) and inadequate family planning/counseling services (5%), [Table 2](#).

More than half (54%) of the adolescents ever utilized AFHS. Of the 225 adolescents who utilized AFHS, 94% (212/225) were for general healthcare such as treatment of disease, 2% were for testing/counseling and treatment of STIs and the remaining 4% were for maternal and child health services (i.e. family planning, postabortion care and general counseling). Only 23% decided to seek healthcare by themselves while the majority (86%) of the decisions to seek healthcare were made by their parents. Among the adolescents (225) who utilized health services, more than half (58%) received the services on weekends (Saturday/Sunday). Of the 225 adolescents who utilized health services, about 68% indicated that their privacy was protected during healthcare service provision. Regarding AFHS availability, 98% confirmed the existence of the services they needed. For adolescents who did not utilize AFHS (191), 67% used self-medication from the pharmacy/chemical shops while 33% used herbs or divine healing. Overall, 97% considered AFHS to be important for better health and well-being.

Factors associated with AFHS education

When sociodemographic factors were compared with AFHS education using bivariate (unadjusted) logistic regression ([Table 3](#)), it was lower with senior high school (SHS) (OR = 0.27; 95% CI: 0.11, 0.65; $p = 0.003$). The remaining sociodemographic characteristics were not significantly associated with AFHS education. When the adjusted logistic regression model was performed, we found that females were less likely to receive AFHS education (aOR = 0.64; 95% CI: 0.43, 0.96; $p = 0.031$) compared to males. Only the sex of adolescents was associated with AFHS education when the multivariate logistic regression was employed.

Factors associated with AFHS utilization

In the crude logistic regression model, AFHS utilization was significantly higher amongst Muslims (OR = 4.78; 95% CI: 2.26, 10.09; $p < 0.001$). Adolescents who had no AFHS education were less likely to utilize AFHS (OR = 0.47; 95% CI: 0.32, 0.70; $p < 0.001$). The remaining variables such as age, gender, marital status and employment status were not significantly associated with AFHS utilization. In using an adjusted logistic regression model, adolescents who belonged to the Muslim denomination (aOR = 0.21; 95% CI: 0.09, 0.45; $p < 0.001$) were less likely to utilize AFHSs compared to adolescents with a Christian denomination, while adolescents with primary education were more likely to utilize AFHS (aOR = 6.65; 95% CI: 1.36, 32.65; $p = 0.020$) compared to participants with no formal education. The factors of age, gender, marital status, employment status and AFHS education were not associated with AFHS utilization.

Discussion

We assessed the factors affecting AFHS education and utilization in northern Ghana. The utilization of adolescent health services is influenced by adolescents' knowledge and education. In total, 85% of the respondents had knowledge of common adolescent health problems such as general diseases, menstrual issues and teenage pregnancy. Only half (50%) of them received AFHS education. This finding is similar to previous studies that reported that adolescents had little knowledge or education on AFHS [[4](#), [6](#)]. It was found that 53% of

Variables	Frequency	Percentage (%)
<i>Knowledge of adolescent health problems</i>		
Yes	352	84.6
No	64	15.4
<i>Types of adolescent health problems</i>		
Disease condition	273	65.6
Lack of health information	16	3.8
Menstrual issue/teenage pregnancy	49	11.8
Others (e.g. sexual violence, substance abuse, etc.)	14	3.4
Do not know	64	15.4
<i>Received AFHS education</i>		
Yes	207	49.8
No	209	50.2
<i>Source of AFHS education</i>		
School	100	24.0
Church	4	1.0
Friends/family members	40	9.6
Healthcare providers	37	8.9
Media	26	6.3
No AFHS education	209	50.2
<i>Knowledge of AFHS</i>		
Treatment of disease including STIs	138	33.2
Nutritional management	30	7.2
Family planning and counseling services	10	2.4
Antenatal and post-natal services	14	3.4
Others (Check-ups/screening, recreational services, etc)	15	3.6
No knowledge of AFHS	209	50.2
<i>Utilization of AFHS</i>		
Yes	225	54.1
No	191	45.9
<i>Specific services utilized by adolescents</i>		
General health service (treatment of disease)	212	51.0
Testing, counseling, and treatment of STIs	5	1.2
Family planning services, postabortion care and general counseling	8	1.9
Did not utilize	191	45.9
<i>A person who decided for AFHS utilization</i>		
Self (adolescent)	51	12.3
Others (parents, relatives etc.)	174	41.8
Did not utilize	191	45.9
<i>The decision by others for AFHS utilization</i>		
A relative	23	5.5
Teacher	2	0.5
Parents	149	35.8
Self	51	12.3
Did not utilize	191	45.9
<i>Days of the week AFHS were utilized</i>		
Monday–Friday	95	22.8
Saturday–Sunday	130	31.3
Did not utilize	191	45.9

Table 2.
AFHS education and
utilization in
Kumbungu
district ($n = 416$)

(continued)

Table 2.

Variables	Frequency	Percentage (%)
<i>Privacy during AFHS utilization</i>		
Yes	153	36.8
No	72	17.3
Did not utilize	191	45.9
<i>Availability of needed AFHS services</i>		
Yes	221	53.1
No	4	1.0
Did not utilize	191	45.9
<i>Alternative services to AFHS</i>		
Pharmacy /chemical shop	127	30.5
Others, (use of herbs, divine healing, etc)	64	15.4
Utilized existing AFHS	225	54.1
<i>Perceived AFHS to be important</i>		
Yes	405	97.4
No	11	2.6

Variables	Frequency	AFHS education		Crude OR (95% CI)	<i>p</i> -value	Adjusted OR (95% CI)	<i>p</i> -value
		Educated <i>n</i> (%)	Not educated <i>n</i> (%)				
<i>Age (yrs)</i>							
10–14	141	70 (49.6)	71 (50.4)	1.0		1.0	
15–19	275	137 (49.8)	138 (50.2)	1.03 (0.63, 1.42)	0.782	0.99 (0.63, 1.56)	0.922
<i>Gender</i>							
Male	226	125 (55.3)	101 (44.7)	1.0		1.0	
Female	190	82 (43.2)	108 (56.8)	1.45 (0.98, 2.14)	0.061	0.64 (0.43, 0.96)	0.031
<i>Religion</i>							
Christian	52	26 (50.0)	26 (50.0)	1.0		1.0	
Muslim	364	180 (49.5)	184 (50.5)	1.32 (0.73, 2.36)	0.355	1.35 (0.73, 2.47)	0.339
<i>Marital status</i>							
Single	411	203 (49.4)	208 (50.6)	1.0		1.0	
Married	5	4 (80.0)	1 (20.0)	0.67 (0.25, 9.03)	0.657	0.27 (0.03, 2.67)	0.261
<i>Education</i>							
Uneducated	32	11 (34.4)	21 (65.6)	1.0		1.0	
Primary	77	45 (58.4)	32 (41.6)	1.36 (0.82, 2.26)	0.235	0.39 (0.08, 1.93)	0.249
JHS	297	144 (48.5)	153 (51.5)	0.65 (0.18, 2.33)	0.503	0.24 (0.02, 3.47)	0.298
SHS	10	7 (70.0)	3 (30.0)	0.27 (0.11, 0.65)	0.003	2.29 (0.57, 9.22)	0.242
<i>Employment status</i>							
Employed	24	15 (62.5)	9 (37.5)	1.0		1.0	
Unemployed	392	192 (49.0)	200 (51.0)	0.69 (0.30, 1.69)	0.389	2.04 (0.79, 5.29)	0.142

Table 3.
Factors associated
with AFHS education
in Kumbungu
district (*n* = 416)

adolescents received AFHS education [8], and more than half of adolescents heard of adolescent reproductive health [17]. However, the current finding is lower than other studies that found higher levels (86% or 94%) of adolescent knowledge or heard of AFHS [18, 19]. The reasons for the low level of AFHS education in this study may include the quality and

Table 4.
Factors associated
with AFHS utilization
in Kumbungu (*n* = 416)

Variables	Frequency	AFHS utilization		Crude OR (95% CI)	<i>p</i> -value	Adjusted OR (95% CI)	<i>p</i> -value
		Utilized <i>n</i> (%)	Not utilized <i>n</i> (%)				
<i>Age (yrs)</i>							
10–14	141	83 (58.9)	58 (41.1)	1.0		1.0	
15–19	275	142 (51.6)	133 (48.4)	1.41 (0.51, 1.15)	0.192	1.23 (0.77, 1.97)	0.393
<i>Gender</i>							
Male	226	121 (53.5)	105 (46.5)	1.0		1.0	
Female	189	104 (54.7)	85 (45.3)	1.05 (0.71, 1.55)	0.807	1.11 (0.73, 1.68)	0.620
<i>Religion</i>							
Christian	52	42 (80.8%)	10 (19.2)	1.0		1.0	
Muslims	364	182 (50.0)	182 (50.0)	4.78 (2.26, 10.09)	<0.001	0.21 (0.09, 0.45)	<0.001
<i>Marital status</i>							
Single	411	222 (54.0)	189 (56)	1.0		1.0	
Married	5	3 (60.0)	2 (40)	0.79 (0.13, 4.74)	0.657	0.57 (0.08, 4.04)	0.571
<i>Education</i>							
Uneducated	32	7 (21.9)	25 (78.1)	1.0		1.0	
Primary	77	50 (64.9)	27 (31.5)	0.65 (0.39, 1.09)	0.103	6.65 (1.36, 32.65)	0.020
JHS	297	162 (54.6)	135 (45.4)	0.80 (0.22, 2.89)	0.734	10.66 (0.76, 149.54)	0.079
SHS	10	6 (60.0)	4 (40.0)	4.29 (1.80, 10.22)	0.734	1.04 (0.26, 4.19)	0.954
<i>Employment</i>							
Employed	24	14 (58.0)	10 (42.0)	1.0		1.0	
Unemployed	329	212 (54.1)	180 (45.9)	1.20 (0.52, 2.77)	0.667	0.45 (0.17, 1.18)	0.104
<i>Education on AFHS</i>							
Yes	207	130 (62.8)	77 (37.2)	1.0		1.0	
No	209	95 (45.6)	114 (54.4)	0.47 (0.32, 0.70)	<0.001	0.31 (0.02, 4.79)	0.415

level of health facilities. The district does not have a hospital and relies on a faith-based health center as the referral facility. This implies that the human resource capacity of the facilities may be a factor for the low level of AFHS education. We may also attribute the low level of AFHS education to the faith-based health facilities. Different religions approach adolescent sexual and reproductive health issues from the perspective of their beliefs. This low level of AFHS education has implications on adolescents' ability to recognize and utilize existing services for better health outcomes. It has been reported that a substantial proportion of female adolescents have knowledge gaps and misconceptions about menstruation leading to fear and anxiety. As a consequence, they start menstruating whilst still ill-informed and unprepared [20]. This is most likely to be the situation in the study setting and resulted in unwanted consequences. Cultural beliefs concerning gender relations and information sharing could also be a factor in this setting. This discrepancy could be due to fewer information sources and weak peer education programs. The major sources of information were school teachers (48%) and healthcare providers (18%). These findings imply that healthcare providers who are expected to provide credible health information to enable adolescents to make better health decisions are probably not doing enough in the study setting.

For education, 92% of adolescents had primary or secondary education in the current study. This finding is similar to a study that found 83% of literacy among adolescents in India [21]. With the majority of the adolescents being in school, 48% reported that their source of reproductive health information was from their schools rather than healthcare providers. This is relatively higher than the 5 and 24% who reported that school teachers were their source of reproductive health information [8, 18]. This finding is consistent with other studies in Ghana and Ethiopia, which found that school teachers were the main source of adolescent health information [4, 10]. However, evidence indicates that mothers, friends and media are the main sources of adolescent reproductive health information [22, 23]. In the current study, the majority of the respondents were in school. This explains why school is the main source of information for adolescents.

In adjusting for other variables, the odds of adolescent education were lower among females (aOR = 0.64). This is consistent with a previous finding that showed a significant association with reproductive health education of females [6]. The possible explanation for the lower odds could be due to cultural barriers, gender relations and stigma. Females are shy to seek or access reproductive health services for fear of stigmatization and lack of adequate privacy. Education is a significant social determinant affecting adolescent health services knowledge. Adolescents with SHS education had higher odds (aOR = 2.29) of receiving AFHS information than their counterparts with no formal education on reproductive health. The level of education may also be a factor that influences female adolescents' access. In rural Ghana, females tend to have lower levels of education compared to their counterparts. The observed differences were not statistically significant. This differs from a previous study that reported that females were more likely to utilize AFHS compared to males [18].

The utilization of AFHS is often measured as the experiences of youth with reproductive health services. In the current study, 54% of the respondents reported ever utilizing AFHS. This is similar to previous studies which found that about 55, 64 or 69% of adolescents utilized at least one reproductive health service [10, 18, 19]. The current finding is higher than other studies where 25–39% of adolescents utilized reproductive health services [6, 8, 9, 17]. It is lower than 85% of adolescents utilizing reproductive health services in another study [7]. The possible explanation for low AFHS utilization is due to the geographical location, cultural practices and category of health facilities in the district. Low utilization of existing AFHS is also due to a lack of information and religious beliefs. Islam is the major religious group in the study area. The reported underutilization of existing services has the potential to contribute to unwanted pregnancies, unsafe abortions, increased complications and poor management.

In this study setting, the major services utilized by adolescents were general health service, voluntary counseling and testing (VCT) and family planning (e.g. post abortion care). A previous study found that the major services needed by youth include VCT, counseling, contraceptives and abortion care [17].

We found that the most reported service utilized was the treatment of diseases (67%). This finding differs from other studies where counseling services (60%), contraceptives (40%) and VCT service (40%) were the most utilized services [8]. This may be attributed to religious, social and cultural variations across the study areas. For example, Islam is the main religious denomination (87%) in the study setting, and adolescents are likely to be discouraged by their parents or leaders from discussing reproductive health issues and family planning-related topics, which are believed to be contrary to their religion. We found that 23% of adolescents made the decision to seek healthcare. This is close to a study that reported that 32% of adolescents discussed adolescent reproductive health with their parents [6]. Thus, parental approval might be the underlying factor for the utilization of AFHS in the study area.

For factors associated with AFHS utilization, Muslims had lower odds (aOR = 0.21) of utilizing reproductive health services compared to Christian adolescents. This association was statistically significant. Adolescents who are from Muslim backgrounds were less likely to use reproductive health services [2, 10]. This is likely due to the link between Islam and education in Ghana. Adolescents with Muslim backgrounds are often discouraged from utilizing family-planning services, which imply reproductive health services [24].

Strengths and limitation

This study was conducted in a deprived setting with a population that has not been given the needed attention and contributes to filling the existing knowledge gap on adolescent health services. It may be used for the planning of adolescent health service programs in disadvantaged settings. This was a descriptive study, and thus unable to generalize the findings. The study examined personal and sensitive issues that are prone to recall bias. However, the limitations were mitigated through the large sample size, the quality of training and regular checking of the questionnaires for completeness.

Conclusion

AFHS education and utilization were found to be low in the study setting. This makes adolescents prone to preventable sexual and reproductive health problems. Sex, religion and education of adolescents were associated with sexual reproductive health education and utilization. Efforts to scale-up AFHS education should be intensified. Health workers should identify innovative approaches to engage adolescents with essential sexual and reproductive health information to make informed choices. It is recommended to scale-up training of teachers for reproductive health education at schools. Religious groups and parents should be encouraged to educate adolescents on reproductive health issues to improve knowledge and better health decisions. We also recommend further research on the role of cultural barriers, attitudes of health workers and logistics on AFHS availability and utilization.

Conflict of Interest: None

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Corresponding author

Martin Nyaaba Adokiya can be contacted at: mnyaaba11@gmail.com