Original Paper

Access to Sexual and Reproductive Health Information among

Female Adolescents in Selected Senior High Schools in the

Lower Manya Krobo Municipality, Ghana

Stephen Manortey^{1*} & Ellen Korlu Geh¹

Received: October 9, 2018 Accepted: October 19, 2018 Online Published: October 25, 2018

Abstract

Background: Female adolescents are unduly disadvantaged regarding the risks of unintended pregnancies that are associated with poor outcomes which often results in infant or maternal death. This study sought to explore factors that influence female adolescents' knowledge level of their sexual and reproductive health (SHR) information in the Lower Manya Krobo Municipality in the Eastern Region of Ghana.

Methods: A cross-sectional school-based study was conducted using a self-administered structured questionnaire. A purposive sampling method was used to select a total of 336 respondents from four Senior High Schools in the municipality to participate in the survey. Data obtained was analyzed using descriptive statistics, bivariate analysis, and a multivariate logistic regression.

Results: Findings from this study revealed that the majority of the students had good access to SRH information where the teacher and the media play a crucial role as a source of information. Contrary to the good access to health information, the majority (39.29%) of the respondents demonstrated a low level of comprehensive knowledge. The result from the analysis further revealed that 28.57% of the respondents admitting to being involved in sexual intercourse with 48.96% registering the use of contraceptive at the time of the study. A Pearson's chi-square test for association revealed that there is a significant statistical association between the respondent's access to SRH information with some of their demographic characteristics and their main sources of information based on a predetermined p-value lower than 0.05. Respondents exposed to social media as information source were found to be nine times more likely to have access to SRH information compared to their counterparts, after adjusting for all other covariates.

¹ Ensign College of Public Health, Kpong, Eastern Region, Ghana

^{*} Stephen Manortey, Ensign College of Public Health, P.O. Box 136, Akosombo, (E/R), Ghana

Conclusion: Sexual and reproductive health information is accessible to female adolescents but they lack an adequate level of comprehensive knowledge, therefore, an effective education and communication program is required to contribute towards the understanding of communicated messages. Additionally, the data reveal that the sources of information are associated with the respondents' level of knowledge.

Keywords

Adolescents, Sexual reproductive health, Information, Lower Manya Krobo Municipality, Ghana

1. Introduction

Adolescence is a stage in life where the opportunities for health are great and future patterns of adult health are established. Health in adolescence is the result of interactions between prenatal and early childhood development and the specific biological and social-role changes that accompany puberty, shaped by social determinants, risk and protective factors that affect the uptake of health-related behaviours (Sawyer, Afifi, Bearinger, Blakemore, Dick, Ezeh, & Patton, 2012). Reproductive health, or sexual health/hygiene, addresses the reproductive processes, functions, and system at all stages of life (Abalos, Carroli, Mackey, & Bergel, 2001).

Adolescent sexual and reproductive health (ASRH) comprises a major component of the global burden of sexual ill health (Morris & Rushwan, 2015). Sexual activities are detrimental to the health and wellbeing of adolescent girls and it put them at high risks of various reproductive health (RH) challenges such as unwanted pregnancies, unsafe abortions and high levels of sexually transmitted infections (STI), including HIV (Ngwenya, 2016). Adolescents often lack basic RH information, knowledge, and have difficulties accessing RH services (Tegegn, Yazachew, & Gelaw, 2008). In spite of continuous global investments in adolescent sexual and reproductive health programmes, in sub-Saharan Africa (SSA), constraints such as limited knowledge and lack of access to resources as well as services still exist in effectively meeting the ASRH information and service needs (Nyarko, 2015). Lack of appropriate SRH information results in risky health behaviors that have a lasting effect on adolescents in their adulthood and threaten the health sector of any society.

Adolescents are generally thought to be healthy, yet many adolescents do die prematurely. An estimated 1.7 million young men and women between ages of 10 and 19 lose their lives to accidents, violence, pregnancy-related complications and other illnesses that are either preventable or treatable (Tegegn, Yazachew, & Gelaw, 2008). As a result, adolescent RH is an increasingly important component of global health. The World Health Organization (WHO) estimates that 70% of premature deaths among adults are largely due to behaviours initiated during adolescence. Each day, over 6,500 young people aged 10 to 24 become infected with HIV (World Health Organization, 2001). Global estimates indicate that every year, about 3 million adolescents (one in every eight sexually active) are infected with sexually transmitted disease. WHO estimates indicate that STI rates are high in SSA with 69 million new cases per year in a population of 269 million people aged 15-49 (Ngwenya, 2016). Adolescent

girls and young women aged 15-24 years are at particularly high risk of HIV infection. They account for 20% of new HIV infections globally in 2015; resulting from harmful gender norms and inequalities, insufficient access to education, SRH services, poverty, food insecurity and violence (Pustil, 2016).

Female adolescents are unduly disadvantaged in terms of the risks of unintended pregnancies that are associated with poor outcomes such as miscarriages stillbirths, unsafe abortion and other complications that might result in infant or maternal death (Nyarko, 2015). Girls under 18 are two to five times more likely to die in childbirth compared to women in their twenties; their children are also more likely to die during infancy (World Health Organization, 2001). Findings in Ghana are similar to those regionally. Ghanaian adolescents still avoid SRH services, particularly due to the stigma around premarital sex, while over 750,000 adolescents become pregnant annually (Aninanya, Debpuur, Awine, Williams, Hodgson, & Howard, 2015).

There are impediments to SRH information that poses significant consequences not only for the adolescents themselves but also for every sector of the society; which include governments and most notably the health sectors. Considering these challenges, the aim of the study is to assess factors influencing female adolescents' access to SRH information and the influences of this information on their knowledge on SRH issues.

2. Methods

2.1 Study Area

The Lower Manya Krobo Municipality (LMKM) forms part of the twenty-six Municipalities and Districts in the Eastern Region of Ghana. It lies between latitude 6.05°S, 6.30°N and longitude 0.08°E, 0.02°W. The administrative capital of the municipality is Odumase-Krobo. It covers a total land area of 1,476 km², constituting about 8.1% of the land area within the Eastern Region (18,310 km²). The municipal shares common boundaries with Upper Manya Krobo District to the north, to the south with Dangme West District and Yilo Krobo Municipality respectively, to the west with Yilo Krobo Municipal and to the east with Asuogyaman District. Lower Manya Krobo Municipality is the home of Ensign College of Public Health and other secondary and basic educational institutions. Senior High School (SHS) enrollment for females in both private and public schools in the municipality slightly increased from 49.3% in 2013/2014 to 50.3% in 2014/2015 academic years. The overall illiteracy rate for the municipality as at 2016 was approximately 45% of the population (Manortey & Agyemang, 2018).

2.2 Study Design and Sample Size

A cross-sectional study design was carried out using a self-administered structured questionnaire comprising mainly closed-ended and a few open-ended questions. The study focused on female adolescents between the ages of 15 to 19 years in Forms 2 and 3 in selected SHSs in the Municipal. The SHSs were purposively sampled. Simple random sampling was then used to select students from the selected schools. The schools that participated in the study were Krobo Girls Secondary (single-sex

school), Akro Sec./Tech School, Community Development and Vocational Training Institute (CDVTI), and Manya Krobo Senior High (Makrosec). To determine the sample size, Roasoft calculator (http://www.raosoft.com/samplesize.html) was used at 95% CI with 5% margin of error and 50% response distribution rate. With a total population of 3,270 female adolescents from the participatory schools, the derived sample size was 344 participants. A non-response rate of 5% percent was considered to adjust the actual sample to 353 participants.

2.3 Data Management

To avoid cross-contamination through discussion among participants, data were collected at the same time on the same day in each school. At the beginning of each session, an information statement was read to students outlining the objective of the survey and the reason respondents had been carefully chosen. In other to promote candid responses, students were assured anonymity and were free to refuse to complete the survey or any particular question. The researcher collected completed questionnaire and kept them under straight confidentiality.

Data were entered into Microsoft Excel 2016 and checks performed to ensure accuracy. All discrepancies and inconsistencies were noted and rectified. The data were then imported into STATA statistical software package (*StataCorp.2007. Stata Statistical Software. Release 14.* StataCorp LP, College Station, TX, USA) for analysis.

2.4 Ethical Consideration

Ethical approval was received from the Institutional Review Board of Ensign College of Public Health. Ghana Education Service provided administrative approval to work with the School Health Education Program (SHEP) coordinator. Study code on data collection instruments was used in place of identification information so as to protect participant's responses. All participants provided written consents prior to being involved in this study and all results were de-identified prior to reporting.

3. Results

The overall number of respondents investigated was 353 female students from four selected SHSs. Out of the projected sample size, 336 were reached, resulting in a 95.18% total respond rate where Krobo Girls registered the highest (44.64%). The respondents were recruited from Form 2 (32.14%, n=108) and Form 3 (67.86%, n=228) of the various academic program with the age distribution ranging from 15 to 19 years. The majority (234) representing 69.64% of the respondents were boarders, with 98.21% of them reportedly professed faith in Christianity as seen in Table 1.

Table 1. Demographic Characteristics of Respondents

Variables (N=336)	Category	n	%
Religion			
	Christianity	330	98.21
	Islam	6	1.79
Senior High School			
	Akro	58	17.26
	CDVTI	43	12.80
	Makrosec	85	25.30
	Krobo Girls	150	44.64
Program			
	Science	85	25.30
	General Arts	112	33.33
	Home Economics	139	41.37
Form			
	Form 2	108	32.14
	Form 3	228	67.86
Residential Status			
	Day	102	30.36
	Boarding	234	69.64
Mean Age	17.71	SD 12	

The level of knowledge of the study participants on SRH information was measured as an aggregate score of their familiarity on corresponding questions on the reproductive system, STIs, ways of preventing pregnancy and the types of contraceptive methods. Those who scored less than or equal to three were tagged as having "Low-level" of comprehensive knowledge, anyone who made between four to six was tagged as having "Medium-level" of comprehensive knowledge and those whose aggregate score was greater than six were categorized as having "High-level" of comprehensive knowledge. Finding from the study indicates that (39.29%, n=132) of the respondents had a Low-level of comprehensive knowledge on SRH information. The rest were identified to have a Medium-level of comprehensive knowledge (31.55%, n=106) and High-level of comprehensive knowledge (29.16%, n=98) respectively. The most frequent source of information available to respondents on SRH was from Schoolteacher and the Media 44.05% (n=148). A further look at the data on the main sources of information on SRH, a minimum of 4.46% (n=15) reported health workers. See Table 2.

Table 2. Respondents Level of Knowledge on SRH Based on Sources of Information

Variables	es Level of knowledge on SRH Information			
Main Sources of information	High	Medium	Low	Total N=336
School Teacher Only				
Yes	5 (7.35)	15 (22.06)	48 (70.59)	68 (20.24%)
Mother				
Yes	21 (52.50)	15 (37.50)	4 (10.00)	40 (11.90%)
Schoolteacher & Media				
Yes	58 (39.19)	56 (37.84)	34 (22.97)	148 (44.04%)
Health worker				
Yes	1 (6.25)	8 (53.33)	6 (40.00)	15 (4.46%)
Peers				
Yes	10 (16.67)	11 (18.33)	39 (65.00)	60 (17.88%)
Other Sources of Information				
Using of Social media				
Yes	94 (33.94)	93 (33.57)	90 (32.49)	277 (82.44%)
Discuss sex-related matters				
with mother				
Yes	70 (53.44)	49 (37.40)	12 (9.16)	131 (38.99%)

Despite the respondents' main source of information, 33.63% (n=113) of them reported seeking clarifications from peers in case of doubt about SRH issues, 30.36% (n=102) from the internet, 21.43% (n=72) from teachers, 14.48% (n=49) from their mothers. In response to a question on the preferred source of information, 58.63% (n=197) of the respondents mentioned their mothers, 17.26% (n=58) mentioned the internet, 13.10% (n=44) pointed to health workers and 11.01% (n=37) hinted their teachers. Though most of the participants preferred mothers as their source of information, about 61.01% (n=205) admitted that they have never discussed sex-related matters with their mothers.

In response to a question on their sexual activeness and contraceptive use, 28.57% (n=96) of the respondents admitted to being involved in sexual intercourse and 14.58% (n=14) of this number experiencing pregnancy. The reported contraceptive use of the respondents during sexual intercourse is 48.96% (n=47), 51.04% are not using any form of family planning methods. Majority of the respondents from both school type use the natural family planning method as shown in Table 3.

Table 3. Sexual Status and Contraceptive Use

	Categories	School type				
Variables		Mixe	d school	All gi	rls	_
variables		n=18	n=186		0	Total
		n	%	n	%	N=336
Knowledge on at least one method	Yes	129	69.35	150	100	279 (83.04%)
Involved in sexual intercourse	Yes	73	39.25	23	6.85	96(28.57)
Sexually Active		n=73		n=23		n=96
Experienced teenage pregnancy	Yes	12	16.44	2	8.70	14(14.58%)
Used FP methods	Yes	38	52.05	9	39.13	47(48.96%)
FP method used	M-condom	11	15.07	4	17.39	15(15.63%)
	F-condom	6	8.22	1	4.35	7(7.29%)
	Pills	5	6.85	1	4.35	6(6.25%)
	Natural	15	20.55	3	13.04	18(18.76%)
	Injection	1	1.37	0	0.00	1(1.04%)

The study also evaluated access to SRH information base on the school types: Mixed-sex schools and All-girls school. Access to sexual and reproductive health was scored as "good" and "poor" based on the sources of information and the level of knowledge. Findings from the study revealed that 55.36% (n=186) and 44.64% (n=150) of the respondents were from the mixed-sex schools and all-girls school respectively. The proportion of respondents reported having good access to SRH information was 46. 38% from the mixed-sex schools and 53.62% from the All-girls school. This indicates that there were more students from the all-girls school who had good access to SRH information more than those from the mixed-sex schools did. In all, 69.94% (n=235) of the respondents recorded having good access to SRH information while 30.06% (n=101) recorded having poor access to SRH information. Details are shown in Table 4 below.

Table 4. Access to Sexual and Reproductive Health Information by Schools

Assess to SRH	School Type				
		<u>Mixed-sex</u>			Total
information	Akro	CDVTI	Makrosec	Krobo Girls	
	25	22	30	24	101
Poor Access	43.10%	51.16%	35.29%	16%	30.06%
	33	21	55	126	235
Good access	56.90%	48.84%	64.71%	84%	69.94%
	58	43	85	150	336
Total	100%	100%	100%	100%	100%

The bivariate analysis revealed statistically significant associations between access to SRH information and most of the demographic indicator variables tested for as shown in the table below (Table 5). However, the individual's choice of academic program and the stage or class were both not significantly associated with her reported access to SHR information. Also, the data revealed no statistical association between having the health workers as the source of information and access to SHR information.

Table 5. Bivariate Analysis of Respondents' Access to SRH Information on Demographic Characteristics and Source of Information

Variables	Access to	D	
(N=336)	Poor (n=101)	Good (n=235)	—— P-value
Age			0.012*
15	5 (25.00)	15 (75.00)	
16	10 (47.62)	11 (52.38)	
17	21 (22.83)	71 (77.17)	
18	26 (24.07)	82 (75.93)	
19	39 (41.05)	56 (58.95)	
Religion			0.004*
Christianity	96 (29.09)	234 (70.91)	
Islam	5 (83.33)	1 (16.67)	
Senior High School			<0.001*
Akro	25 (43.10)	33 (56.90)	
CDVTI	22 (51.16)	21 (48.84)	
Makrosec	30 (35.29)	55 (64.71)	
Krobo Girls	24 (16.00)	126 (84.00)	
Program			0.459
Science	21 (24.71)	64 (75.29)	
General Arts	36 (32.14)	76 (67.86)	
Home Economics	44 (31.65)	95 (68.35)	
Form			0.518
Form 2	35 (32.41)	73 (67.59)	
Form 3	66 (28.95)	162 (71.05)	
Residential Status			<0.001*
Day	45 (44.12)	57 (55.88)	
Boarding	56 (23.93)	178 (76.07)	
School Teacher Only			<0.001*
No	55 (20.52)	213 (79.48)	
Yes	46 (67.65)	22 (32.35)	
Mothers			<0.001*

No	98 (33.11)	198 (66.89)	
Yes	3 (7.50)	37 (92.50)	
School Teacher & Med	lia		<0.001*
No	88 (46.81)	100 (53.19)	
Yes	13 (8.78)	135 (91.22)	
Health Workers			0.777
No	96 (29.91)	225 (70.09)	
Yes	5 (33.33)	10 (66.67)	
Peers			<0.001*
No	68 (24.64)	208 (75.36)	
Yes	33 (55.00)	27 (45.00)	
Using of Social media			<0.001*
No	41 (69.49)	18 (30.51)	
Yes	60 (21.66)	217 (78.34)	

^{*} Denotes statistical significance at = 0.05.

Contrary to our expectations from the analysis in Table 6, the only demographic variables with significant incremental effect on access to SRH information were students from Krobo Girls SHS. They were five (5) times more likely to have access to SRH information than those in the reference group. This could probably be attributed to the fact that Krobo Girls is a single-sex school and the students could comfortably share personal information without the fear of the opposite sex student eavesdropping. The respondents whose main source of information were from schoolteachers and media were 4.62 more likely to have access to SRH information as compared to the reference group holding all other covariates constant. Respondents who relied on their schoolteachers only and peers had lower odds of having access to SRH information as compared to their respective reference group adjusting for all other variables.

Table 6. Output of Multiple Logistic Regression on Access to SRH Information and Selected Independent Variables

Variable		Adjusted		
	Categories	P-value	OR(95% CI)	
Age	15	R	1	
	16	0.412	0.42 (0.05 - 3.31)	
	17	0.724	1.32 (0.28 -6.25)	
	18	0.720	1.31 (0.30 -5.71)	
	19	0.902	0.91 (0.21 -3.96)	
Ethnicity	Akan	R	1	
	Ga	0.162	0.43 (0.14 - 1.40)	

	Ewe	0.299	0.56 (0.20 - 1.66)
	Adangme	0.827	1.12 (0.38 - 3.33)
	Others	0.267	3.37 (0.40 – 28.77)
Religion	Christianity	R	1
	Islam	0.116	0.10 (0.01 - 1.78)
Schools	Akro	R	1
	CDVTI	0.826	1.13 (0.37 - 3.45)
	Makrosec	0.081	2.43 (0.90 - 6.59)
	Krobo Girls	0.014*	5.00 (1.39 - 18.05)
Previous residency	LMKM	R	1
	Outside LMKM	0.220	1.90 (0.68 - 5.24)
Residential Status	Day	R	1
	Boarding	0.351	0.64 (0.25 - 1.64)
Using Social media	No	R	1
	Yes	0.000*	9.00 (3.83 - 21.13)
School Teacher & Media	No	R	1
	Yes	0.031*	4.62 (1.15 - 18.66)
School Teacher only	No	R	1
	Yes	0.012*	0.17 (0.04 - 0.68)
Mothers	No	R	1
	Yes	0.082	5.10 (0.81- 32.03)
Peers	No	R	1
	yes	0.040*	0.23 (0.06 - 0.94)

^{*} Denotes statistical significance at = 0.05.

4. Discussion

This study employed a cross-sectional study that sought to assess factors influencing access to SRH information among female adolescent students in selected Senior High Schools (SHSs) of Lower Manya Krobo Municipality. Adolescents' access to SRH information is vital in building healthy lifestyles among adolescents that improve sexual health, reduce teenage pregnancy, STIs, and major health indicators such as maternal and neonatal deaths. It is essential to ensure that adolescents are provided truthful, correct and objective information to enable them to make an informed decision about their sexual behaviours.

Generally, the total number of respondents having good access to SRH information was 235 (69.94%) but established the incomprehensiveness of the information provided based on the various sources of information. In a related study among SHS students and teachers in Ghana, teachers reported challenges to teaching SRH topics effectively due to lack of time, lack of appropriate skills and inadequate teaching materials, topics or content contradict their religious, traditional and personal

beliefs or values among others (Monzón, Keogh, Ramazzini, Prada, Stillman, & Leong, 2017).

In this study, it was revealed that respondents acquired information from many sources. For example, 33.63% (n=113) of them reported seeking clarifications from peers in case of doubt about SRH issues, whiles 30.36% (n=102) from the internet, and the rest were from other sources such as their mothers and teachers. This implies that they have previously obtained information from the primary source. Evidence from Sidze et al. (2017), suggests that while school may be an ideal setting for sexual and reproductive health education, many adolescents receive additional information about these topics outside of the classroom. Notably, 98% of students in the study with Sidze et al., reported receiving information on SRH topics from media sources, including books, pamphlets, the Internet, radio, TV and social media; another 80-86% of students said they received information from friends, mothers or other family members (Monz ón, Keogh, Ramazzini, Prada, Stillman, & Leong, 2017).

Majority of the respondents (58.63%) recorded their mother as their preferred source of information because of their accessibility and experiences. Adolescents who preferred their mothers for sexual information raises questions as to the roles of mothers in the sexual education of their female children. This is a significant potential for programs to encourage and train mothers to impart their children about SRH issues. Although more than half of the participants preferred mothers as their source of information, on the contrast, about 61.01% admitted that they have never discussed sex-related matters with their mother or parental figure. Those of the girls who discussed sex-related matters with their mothers or parent figure (94.66%) had good access to SRH information. This suggests that parents communicating with their female children about SRH issues has an influence on the level of knowledge by providing good information.

A study conducted in four African countries: Uganda, Ghana Burkina Faso, and Malawi recorded that parental communication about sex-related matters was low. Between 8% and 38% said a parent or parental figure had ever talked to them about sex. The study further discussed that it may be more beneficial for adolescents to be able to ask parents for advice about sex-related matters or even for help in obtaining methods to avoid unintended pregnancy than for parents to assume a teacher's role about methods with their adolescent children (Biddlecom, Awusabo-Asare, & Bankole, 2009).

Appreciating the sources of information that are most used, the quality of the information and the importance people place on different types of information, determine the quality of access and level of knowledge acquired (Monzón, Keogh, Ramazzini, Prada, Stillman, & Leong, 2017). Findings in this study show that respondents using schoolteacher and the media (39.19%) as their source of information and those discussing the sex-related matter with mother or parental figure (53.44%) contributed to the High-level of comprehensive knowledge of the respondents. The Low-level of comprehensive knowledge was mainly as the result of respondents using their teacher only (70.59%) and peers (65.00%) as their source of information around SRH issues. A study conducted by Lou et al. (2012) reported that contextual factors including family, peer, school, and media, explained 30%-50% of the variance in sex-related knowledge. Access to and use of mass media and the messages they present are

influential factors on sex-related knowledge, attitudes, and behaviors of unmarried Asian adolescents and young adults (Lou, Cheng, Gao, Zuo, Emerson, & Zabin, 2012).

Respondents involvement in sexual relationships had less impact on the level of knowledge, 53.13% had Low-level of comprehensive knowledge. This means that most respondents enter into sexual relationships without having adequate knowledge about SRH issues. This might contribute to teenage pregnancy and the spread of STIs. For example, 78.57% of the respondents who have experience pregnancy had Low-level comprehensive knowledge on SRH issues. Furthermore, most of the girls admittedly use the natural contraceptive method, thereby, putting them at high risk of contracting STIs. According to the National Population Council, 16% of teenage girls in Ghana could correctly identify when during a woman menstrual cycle she was likely to become pregnant (Kwankye & Augustt, 2013). Among the girls who had had sex before, only 22% knew when a woman gets pregnant. Such inadequate knowledge of the menstrual cycle of women among young adult limits their ability to take appropriate and responsible measures in sexual encounters. Such situations could lead to unplanned pregnancy. This analysis and cited references support the justification of this study; it can be established that inadequate knowledge about SRH issues put an adolescent at high risk of unfavorable health outcomes.

5. Conclusion

In spite of all the effort to ensure that adolescents have access to SRH information, there is still challenges around the world mainly sub-Sahara Africa including Ghana as it relates to the inaccuracy due to erroneous information they received from various sources and the challenges posed due to the inaccessibility to SRH information. Access to appropriate and accurate SRH information aimed at adolescents is crucial in reducing the increase in major health indicators such as STIs rate, maternal and neonatal mortality. It is important to educate the adolescents (especially the females) about SRH problems, which will alert them to seek timely medical attention and safeguard themselves from future health and pregnancy-related complications accordingly.

Majority of the respondents in this study had good access to SRH information based on their sources of information but lack adequate level of knowledge, thereby depriving them the requisite knowledge prior to and/or during their sexual activities. Additionally, the data revealed that the sources of information determined the level of knowledge.

6. Limitations

Notwithstanding the contribution of the study to scientific knowledge, it needs mentioning that information gathered from the study participants were self-reported and could be subjected to recall biases. Secondly, given that this is a cross-sectional study, it was not possible to ascertain causality from associations. There will be a need for further comprehensive qualitative research work in a follow-up study to establish these preliminary results.

References

- Abalos, E., Carroli, G., Mackey, M., & Bergel, E. (2001). The WHO Reproductive Health Library. World Health. *Organization*, 4(Geneva), 414-418.
- Aninanya, G. A., Debpuur, C. Y., Awine, T., Williams, J. E., Hodgson, A., & Howard, N. (2015). Effects of an adolescent sexual and reproductive health intervention on health service usage by young people in northern Ghana: A community-randomized trial. *PLoS One*, 10(4), e0125267. https://doi.org/10.1371/journal.pone.0125267
- Biddlecom, A., Awusabo-Asare, K., & Bankole, A. (2009). Role of parents in adolescent sexual activity and contraceptive use in four African countries. *Int. Perspect. Sex. Reprod. Health*, *35*(2), 72-81. https://doi.org/10.1363/3507209
- Kwankye, S. O., & Augustt, E. (2013). Media Exposure and Reproductive Health Behaviour Among Young Females in Ghana. *African Popul. Stud.*, 22(2). https://doi.org/10.11564/22-2-330
- Lou, C., Cheng, Y., Gao, E., Zuo, X., Emerson, M. R., & Zabin, L. S. (2012). Media's contribution to sexual knowledge, attitudes, and behaviors for adolescents and young adults in Three Asian Cities. *J. Adolesc. Heal.*, 50(3 SUPPL.). https://doi.org/10.1016/j.jadohealth.2011.12.009
- Manortey, S., & Agyemang, D. (2018). Awareness and Knowledge of Cervical Cancer among Female Senior High School Students in Lower Manya Krobo Municipal in Ghana. *J. Sci. Res. Reports*, 19(2), 1-11. https://doi.org/10.9734/JSRR/2018/41116
- Monzón, A. S., Keogh, S., Ramazzini, A. L., Prada, E., Stillman, M., & Leong, E. (2017). From Paper to Practice: Sexuality Education Policies and Curricula and Their Implementation in Guatemala Key Points.
- Morris, J. L., & Rushwan, H. (2015). International Journal of Gynecology and Obstetrics Adolescent sexual and reproductive health: The global challenges. *Int. J. Gynecol. Obstet.*, 131, S40-S42. https://doi.org/10.1016/j.ijgo.2015.02.006
- Ngwenya, S. (2016). Communication of reproductive health information to the rural girl child in Filabusi, Zimbabwe. *Afr. Health Sci.*, 16(2), 451-461. https://doi.org/10.4314/ahs.v16i2.13
- Nyarko, S. H. (2015). Prevalence and correlates of contraceptive use among female adolescents in Ghana. *BMC Womens. Health*, *15*(1), 4-9. https://doi.org/10.1186/s12905-015-0221-2
- Pustil, R. (2016). Global AIDS... AIDS, 17(4), S3-S11.
- Sawyer, S. M., Afifi, R. A., Bearinger, L. H., Blakemore, S.-J., Dick, B., Ezeh, A. C., & Patton, G. C. (2012). Adolescence: A foundation for future health. *Lancet*, *379*(9826), 1630-1640. https://doi.org/10.1016/S0140-6736(12)60072-5
- Tegegn, A., Yazachew, M., & Gelaw, Y. (2008). Reproductive Health Knowledge and Attitude among Adolescents: A community-based study in Jimma Town, Southwest Ethiopia. *Ethiop. J. Heal. Dev.*, 22(3), 243-251.
- World Health Organization. (2001). The Second Decade: Improving Adolescent Health and Development. *Child Adolesc. Heal. Dev*.