

Your advice, my choice: a case study of adolescents' reproductive health choices at Nadowli-Kaleo district of the Upper West region of Ghana

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Abstract: *The aim of this study is to elicit adolescents' responses on their reproductive health choices. It was designed to assess the reproductive health choices of adolescent in the Nadowli –kaleo district in the Upper West region. A quantitative cross sectional survey was employed in the study. Multi-stage sampling technique was used to sample 376 adolescents between the ages of 15-24 years of age to respond to a structured questionnaire. The data was cleaned, entered into Statistical Package for Social Sciences for analysis and the results presented in descriptive tables. Parental sources of information emerged as the highest source of information for adolescents as 356 of the 376 respondents representing 94.8% indicated they got information from parents. The second most important source of information on reproductive health of 92.4% came from peers. 64.0% of the respondents indicated that service providers were friendly to clients but did not explain details. Majority of the respondents, 271 (72.1%) agreed that many adolescents engage in unprotected sexual practices. The study revealed that knowledge on reproductive health choice was average and many adolescent acquire information on reproductive health choices from parents and peers. In addition, study indicate that unprotected sex was common among adolescents whilst knowledge on safe abortion was low indicating that majority of the adolescents who get pregnant accidentally may have terminated the pregnancy using unsafe methods.*

Key Words: *Adolescents, reproductive health, choices, Nadowli-Kaleo, Upper West region, Ghana*

I. Background

The period of adolescence is seen as a critical period in most parts of the world. It is a transitional period that marks the end of childhood and the beginning of adulthood and it concerns individuals within the ages of 10 and 19 years. It has been observed that a considerable population of adolescents, aged 15-19 years are sexually-active but may be extended to 24 years (WHO, 2010). Adolescents constitute a vital component in every society but unfortunately, this large but vulnerable group is not adequately prepared for sexual and reproductive life as most of them lack basic information about their bodies, sexuality, contraception and sexually transmitted infections (STIs) including HIV and AIDS. There is a growing interest in adolescent reproductive health globally and this has been documented in several international declarations and treaties. Adolescents' decisions and behaviours during this periods can have life – altering and lifelong consequences for them as well as having a major cost implications for society as a whole.

Adolescent reproductive issue became of global concern following the International Conference on Population and Development. The International Conference on Population and Development (ICPD) held in Cairo in 1994 marked the watershed for Reproductive Health after which the shift from Maternal and Child Health and Family Planning to the broader reproductive health came into effect. Ghana after the International Conference on Population and Development in 1994 at Cairo revised her population policy and introduced adolescent-friendly health services, to curb teenage pregnancy (Odoi-Agyarko, 2003). However available records still indicate that adolescent related reproductive health issues are rife across Ghana with several health and socio-economic consequences. It has been reported that about 750,000 teenagers in Ghana between the ages of 15 and 19 became pregnant in 2012 (GHS, 2012).

With decreasing age of menarche and onset of sexual activity, young people are exposed early to unplanned and unprotected sexual intercourse leading to unwanted pregnancies and invariably abortions especially very common in many Sub-Saharan African countries where persistent high rates of unmet need for family planning and low rates of contraceptive use are reported (Westoff, 2001). In addition, with contemporary developments and advances in western education, adolescents now stay longer in schools, and marry later. This is against the backdrop that there is an increase in them becoming sexually active before marriage, and before completion of higher education. Adolescents (aged 15–24 years) are increasingly exposed to reproductive health risks such as sexually transmitted infections (STIs), unintended pregnancy and childbirth (Creel and Perry,

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2003). Though Ghana has made progress in reducing the HIV prevalence to about 1.3%, it is reported that more adolescents continue to be infected with HIV (NACP, 2013). Evidences from different studies continue to confirm the existence of increasing sexual activities among the youths globally, with those in developing countries perceived to be at greater risk because of their low level of access to medical facilities and other problems associated with the less developed world (Nwaforand Madu 2002; Ghuman 2005). The choices that adolescents make influence whatever their health outcomes would be and it is therefore important to understand the reproductive health choices they make and factors that determine those choices. This is required to be able to design appropriate strategies to minimize the negative effects of these choices.

II. Problem Statement

In Ghana, one in eight pregnancies occurs among adolescents and 13% of all births (GHS, 2010). It has been reported that about 750,000 teenagers in Ghana between the ages of 15 and 19 became pregnant in 2012 (GHS, 2012). In the report of the Global Health Forum (2005) it was reported that many young people encounter significant obstacles to receiving sexual and reproductive health services. Due to the increasing vulnerability of adolescents to STIs, HIV and AIDS, unwanted pregnancies and unsafe abortions, it is prudent to have better understanding of their health seeking behaviour and access to health services in order to help them protect themselves and have healthy and fulfilling reproductive lives (UNAIDS 2004). According to Rosen (2004) adolescents have the right to reproductive health services and their lives are affected by the choices they make. Uninformed or wrongly informed adolescents may have irredeemable and long lasting implications for the family and the society at large since the future of any nation depends on them. What is problematic about the stage is that the result determines the lifestyle of boys and girls in adult life and this includes not only their reproductive life but also their socioeconomic life. That is where the knowledge of sexual and reproductive health and rights of adolescents become imperative and therefore requiring further research.

III. Objectives

The general objective of the study would be to assess the reproductive health choices of adolescent in the Nadowli –kaleo district.

The specific objectives of this study will include;

- To assess the knowledge of adolescents on reproductive health choices
- To assess the sources of reproductive health information
- To explore the determinants of reproductive health choices among adolescents
- To explore ways of improving adolescents' access to their reproductive rights

IV. Literature review

Reproductive Health is now a human right issue and has been given global priority. This has been well captured in the Millennium Development Goals (M.D.Gs) and the policies of most international organizations (UNFP, 2004). Reproductive health has been defined by the World Health Organization, WHO (1994) as “*a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system, functions and processes*”. This definition implies that individuals should be able to have a satisfying and safe sex life, access to safe, effective, affordable and acceptable methods of family planning based on informed choice, health remains considerably high most especially in developing countries. Estimates suggest that sexual and reproductive conditions account for 18.4% of the global burden of diseases and 32% of the burden of diseases among women who are between 15-44 years of age (WHO, 2008). Records available in Ghana indicate that 16% of births are unwanted, 40% are unplanned and 24% mistimed. However, it has been estimated that maternal deaths would decline by between 25-35% if contraception were accessible and used consistently and correctly by women who want to avoid pregnancy (GSS/GHS/ Macro International, 2009). The burden may be severe for adolescent most especially.

Socio-demographic Characteristics and Reproductive Health Choices

Most men and women become sexually active during adolescence (Glaser et al, 2006). Recent evidence from the Demographic and Health Surveys and the AIDS Indicators Surveys (Khan & Mishra, 2008) show that median age at first sex among 20–24-year-old women ranges from a low of 16 years or younger in Chad, Mali and Mozambique to a high of 19.6 in Senegal. Overall, the median age in the rest of Sub-Saharan Africa is about 18.5 years. Among young men of the same age-group in Sub-Saharan Africa, the median age at first sex ranges from a low of 16.9 in Mozambique to a high of 19.6 in Ghana. Contraceptive usage by adolescents has been perceived to be influenced by various factors, including, socio-economic status, knowledge about contraceptives, attitudes about issues related to contraceptives, residential area, educational status, counseling

received about contraceptives, attitudes of the contraceptive providers, cultural values and beliefs (Kanku & Mash 2010).

Contraceptive use increases with increased schooling and is highly significant with secondary and higher education than with primary education. This is partly explained by the fact that secondary schooling allows a woman to stay in school longer thereby reducing the risk of exposure to marriage. Educated women are also more likely to earn an income, understand their physiology and social needs, and adopt appropriate reproductive health behavior (Khan and Khan, 2007; Ojaka, 2008) before marriage.

Sources of Information on Reproductive Health choices

A study in Ghana showed that school-going youth who reported parent-child communication about HIV and AIDS were more likely to have used condoms at last sex, but communication was not associated with onset of sexual activity (Adu-Mireku, 2003). A longitudinal study of 12–14-year-old virgins in Tanzania showed that 27% reported talking to their parents about sex and HIV, but that these discussions were not associated with the timing of sexual initiation. Interestingly, however, communication with teachers was associated with delayed sexual initiation (Kawai et al, 2008). Other studies ranked the family (parents, brothers and sisters) as the lowest source of information on sexuality (Odumegwe, 2002).

Healthy Sexuality among Adolescents

Healthy sexuality should include the concept of volition and informed decision making (Tsui, Wasserheit & Haaga, 1997). Healthy sexuality is a vital component of reproductive health and a reproductive right for adolescents. However, this reproductive goal is farfetched from realizing in many countries especially in developing countries. This is because sexual intercourse before marriage is increasingly reported amongst adolescents and some research findings have lent credence to this. Pachauri *et al.* (2002) conducted a study in Bangladesh and found high rates of premarital sexual activity among adolescents in rural areas. The study noted that 38% of unmarried males and 6% of unmarried females were sexually active by age 18. The same study (in Bangladesh) also revealed that 14% of married and 11% of unmarried adolescent males reported premarital sexual activity.

In another study in the district of Nepal, it was indicated that, one in ten rural unmarried people within the ages of 15-19 years reported having indulged in sexual activity. Similarly, a study in Vietnam among urban unmarried students (17-24 years) contended that 15% of young men and 2% of young women reported sexual experiences. Again, a survey on sexual behaviour of adolescent students in Indonesia, found that 20% of young men and 6% of young women had experienced sexual intercourse.

Again, they (Pachauri *et al.* 2002) interviewed students on premarital sexual behaviour among males in India. The study pointed out that, the vast majority engaged in unprotected sex even with commercial sex workers. Another study in Sri Lanka found that, less than one in five sexually active unmarried adolescents used contraceptives. In a repeated study involving youth (13-22 years) in six provinces in Vietnam, showed that 41% of unmarried sexually active males reported using modern contraceptive methods.

Adolescents, contraceptive use and barriers

Among sexually active youth, contraceptive use reduces the number of unplanned pregnancies. However, before using a contraceptive, youth must first have knowledge of different methods. A study has reported unmarried adolescents (15–19), current contraceptive use ranges from 21%-64%; for the married, the range is even wider, 6%-67%. Percentages having unmet need range from 34%-67% for the unmarried and 7%-62% for the married (Chandra-Mouli et al, 2014). The low contraceptive use among adolescents has often been attributed to barriers. One of the barriers has been reported as the traditional facility-based delivery of reproductive health services. Adolescents in many places are unwilling to visit facilities providing contraception because they view them as unfriendly. In many countries, laws and policies restrict the provision of contraception to unmarried adolescents or those below a certain age. This has also been reported as a barrier (Oringanje, Meremikwu and Eko, 2009). Social pressure may prevent their use contraceptives by adolescents. In many places young women are under pressure to conceive and bear children soon after marriage. Contraception is considered only after a first child is born (Pulerwitz and Barker, 2004). A study in the Northern region of Ghana revealed that women especially those who had never given birth to desist from contraceptive use as it could lead to infertility (Tabong and Adongo, 2013). Conceptions like these have been associated with low contraceptive use among adolescents.

Consequences of Wrong Reproductive Choices

Some of the consequences of wrongful choices include acquiring HIV and other sexually transmitted infections (STIs), unintended pregnancies and maternal complications (Rani and Lule, 2004). Adolescents bear the risk of more vulnerability to STIs and HIV/AIDS because they indulge in multiple short-term relationships

and practice unsafe sex. Unplanned pregnancies will often be terminated through unsafe methods. Adolescents are predisposed to complications of abortion because they delay in seeking help as a result of fear of social sanctions, ignorance, and high cost of medical services. The complications of abortion can be divided into early complications and late complications. Complications from pregnancy and childbirth are the leading cause of death in girls aged 15-19 years in Low and Middle Income Countries (LMIC) where almost all of the estimated 3 million unsafe abortions occur (Lopez, Hiller, Grimes, 2010). This therefore has implications in Ghana achieving MDG 5 at the close of 2015 (UNDP, 2005) and be transformed from MDG to SDG (Sustainable Development Goals).

These adolescents, who are the future leaders and human resource, end up as school dropout as a result of pregnancy and its complications. Those unfortunate often end up losing their lives as a result of the illegal ways of terminating the pregnancy, such as insertion of sticks, ingestion of herbs, concoctions, and placement of chemicals and herbal solutions into their vagina or uterus (Bernstein and Hansen, 2006). Unintended pregnancy had been a major cause of dropping out of school for thereby limiting their education, economic opportunities and career choices for both males and female adolescents (Okereke, 2010). Those that give birth frequently cannot adequately care for their offspring, resulting in a vicious cycle of poverty. Besides, children of adolescent parents may end up on the streets as juvenile delinquents which lead to severe economic burden on the nation. An earlier study has revealed that daughters of teenage mother are more likely to become teenage mothers in future whilst their sons have a significant probability of incarceration as adults (CPO, 1992).

The youth is particularly at risk for STIs, among which HIV/AIDS, whose occurrence has been on the increase in Ghana since 2000, after a seeming decline in the late nineties. HIV/AIDS prevalence rate increased from 2.3% in 2000 to 3.6% in 2003 in the 15-24 years old age group (GSS, 2003). The highest mean HIV prevalence was recorded in the 25-29 years old age group (4.5%), while the mean prevalence in the 15-19 years group was 2.0% and in the 15-24 years group was 2.5% (Akwei-Addo, 2004). Considering the time gap between infection and HIV/AIDS manifestation, it correlates that a large number of infections occur during adolescence. Therefore good reproductive health choices are important to ameliorate the negative effects of unhealthy choices.

Reproductive Health choices among Ghanaian Adolescents

There is paucity data on reproductive health choices of Ghanaian adolescents. Afenyadu and Goparaju (2003) carried out a study amongst 398 adolescents drawn from junior high school (JHS) and senior high school (SHS) at Dodowa, Ghana. The results indicated that, pre-marital sex by adolescents was very common. About 9 in 10 (88%) of all sexually experienced adolescents were never married. About one-third of the sexually active female adolescents and 13% of the sexually-active males indicated that, they had sex for financial reward. Two times more male adolescents than females reported having multiple sexual partners over the past years. The results also revealed that, unprotected sex was common. Again, among the 195 sexually active adolescent respondents, 41% did not use condom, 34% did not use any modern contraceptive (e.g. Vaginal foaming tablets, pills, condom, IUCD, injectables, Norplant) and 30% did not use any family planning method at all during their last sexual encounter. Condom was the contraceptive method known to most adolescents. With regards to adolescent pregnancy, 19% of 195 sexually active female adolescents had a child. Even though 19% of the sexually active female adolescents indicated that they had a child, 29% indicated they had ever been pregnant, suggesting that some pregnancies did not progress to delivery. Ten percent (10%) of all SSS females indicated they had ever been pregnant.

Another study in Ghana revealed that four in 10 Ghanaian women and two in 10 men aged 15-19 years have ever had sex. By age 20 years, 83% of women and 56% of men have had sex; the median age at first intercourse is 17.4 for women and 19.5 for men. Among those who have had sex, four in 10 women and six in 10 men aged 12-24 have had more than one sexual partner (Department of Health and Human Service, 2007).

In conclusion, the analysis of the related studies on adolescents reproductive health choices, it appears most of them were carried out outside Ghana. Mostly, these studies were done in Asia. One important obstacle to this is the fact that, most of these findings cannot be generalized to a large extent in Ghana. This is so because sexual behaviour or reproductive health choices are influenced by cultural undertones. Therefore, what is reinforcing in one culture may not be reinforcing in another culture. Different cultures tend to have different values, marriage practices, birth control methods and even social conditions that push people into early sexual activities. A few studies have focused on adolescents in southern Ghana. This therefore makes this study very relevant in northern Ghana.

V. Materials and Methods

Research Design

This was a cross sectional quantitative study. a cross section of adolescents were recruited in the study area to explore their knowledge, attitude of adolescents about their reproductive health choices. A cross

sectional study is a type of research study in which the entire population or a subset of the population are selected, and from these individuals, data are collected to help answer research questions of interest and the data is collected at one point in time (Oslen & Marie, 2004). Quantitative study on the other hand involves explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (Tashakkori & Teddlie, 2000). Therefore given the nature of the research question, cross sectional quantitative research was deemed the most appropriate research strategy.

Study Area

The Nadowli-kaleo district is one of the Eleven (11) districts in the Upper West Region of Ghana. Nadowli district is located in the heart of the Upper West region of Ghana. The Nadowli-Kaleo District Assembly was established in 1988 under the Local Government Law 1988 (PNDC Law 207). The District shares boundaries with Jirapa district to the North, to the South with Wa west, to the East with Daffiama-Bussie-Issa District and to the West with Ivory Coast. The Nadowli-Kaleo District in the Upper West Region is becoming area for illegal small scale mining (District Report, 2013). The Ghana health service runs the public sector providing both curative and preventive care in the district hospital, health centers and community based health planning and services (CHPS) compounds. According to the 2010 Population and Housing Census, the district has a total population of 94,388. However, the number of adolescents with ages between 15-24 years is 18,335 (GSS, 2011).

Study Population

The target population of this study includes all adolescent in the Nadowli sub-district who are aged 15-24 years. This would include both males and females as well those in-school and out-of- school. According to the 2010 Population and Housing Census report, there are about 18,335 of the districts population are between the ages of 15-24 years (GSS, 2011).

Sample Size Determination procedure

The sample size for the study was determined using the Cochran formula (1977)
 $n = z^2 p (1-p)/d^2$, where $z=1.96$, z-score for 95% confidence interval; p is the proportion of some relevant characteristic, in this case it is the reproductive health and since study has previous reported on this, Cochran recommends the said characteristic should be assumed to be 50%, meaning 0.5, and d is the margin of error to be tolerated in this case was 0.05 (5%) since the study is using 95% confidence level.

$$n = 1.96^2 \times 0.5(1-0.5)/0.05^2$$

$$n = 3.8416 \times 0.25/0.0025$$

From the above, the minimum sample size using the Cochran formula is

$$n = 384$$

However, because the population is less than 10, 000, Cochran (1977) recommends a finite adjustment is done,

The population of adolescents in the district, N is 18335

$$N = 18335$$

The formula for finite adjustment is

$$n_f = n / (1 + (n/N))$$

Where n_f is the desired sample size after adjustment

n is the minimum sample size before adjustment, N is the population

Therefore using the formula

$$n_f = 384 / (1 + 384/18335)$$

$$n_f = 384 / 1.0209$$

$$n_f = 376$$

Therefore the ideal sample size for this study is 376

Sampling Procedure

Multistage sampling strategy was used in this study. The study adopted the sampling frame that was used for the 2010 Ghana Population Census for the listing of households. The list of enumeration areas (EAs) from the 2010 Ghana Population and Housing Census (PHC) therefore served as a frame for this study. The researcher collected the list from the district statistics office which contains a listing of all the houses and household within Nadowli sub-district structured in the form of enumeration areas. The enumeration areas were further divided into rural and urban areas based on populations of the sub-districts. Three enumeration areas were then randomly selected; one enumeration area in urban and two in the rural areas. This was done based on population and number of people between the ages 15-24 years of age as reported by the population and housing

census 2010. All the households in the selected enumeration areas were visited. At the household level, all adolescents within the ages of 15-24 years were recruited and interviewed.

Data Collection Instrument

Structured questionnaires were designed and used as instruments for data collection. These questionnaires were administered to the representative sample of the adolescents. All the questionnaires were self-administered by the researchers and the participants were given time to complete the questionnaire. Steps were taken to avoid leading, ambiguous, double barrel, and double negation in the construction of the questionnaires. The use of jargons as well as very long questions was equally avoided. The questionnaires were developed in English language but were translated into Dagaare, the local language spoken in the Nadowli-Kaleo district using back-to-back translation strategy. In this strategy, the questionnaire in English was given to an independent person who is proficient in both English language and Dagaare to translate all the questions into Dagaare. The Dagaare version was subsequently given to another language expert to retranslate the version in Dagaare to English. The two were compared and there was agreement. It is however, important to note that some of the terms could not be translated into the local language; therefore they were described in detail to the understanding of participant who could not read the English version of the questionnaire.

The questionnaire is made up of two sections. Section A, contained data on the socio-demographic characteristics of the respondents including age, sex marital status, religion amongst others. The section B is designed to elicit data on the adolescent's knowledge and attitude on reproductive health choices and practices. This section specifically collected data on knowledge on short and long term contraceptives, reproductive choices including use of contraceptives, knowledge on safe abortion and sexual practices.

Validity and Reliability

Validity of this measuring tool (questionnaire) is the extent to which this questionnaire would measure what it is intended to measure. These questionnaires are intended to measure the reproductive health choices of adolescents. To be able to measure these items, the questionnaires must have content, construct, and predictive validity. Content validity was done by framing questions to cover all aspects of the topic being investigated.

Construct validity on the other hand was tested by strictly adhering to the standards in setting research questions. Hence, double negation, double barrel, ambiguity, and the use of jargons were avoided. A pretest was further carried out to augment this strategy of ensuring construct validity. Sticking to the above measures therefore guaranteed a very good predictive validity for the research questionnaire.

Reliability on the other hand, is a measure of the consistency of the measuring device. In this case, the extent to which these questionnaires would yield consistent results. The reliability of these questionnaires was measured using test-retest strategy. Samples of these questionnaires were given to adolescents in Nadowli West district to respond. The results were analyzed and a repeat test using the same questionnaire was carried out and the results of the two studies compared for consistency.

Ethical Consideration

A proposal was submitted for ethical clearance from my supervisor before proceeding to collect the data. Approval was also sought and obtained from the district assembly before the study was carried out. The respondents were fully aware of the study and offered their consent willingly. Information collected was treated as confidential and the identities of the respondents were not disclosed in writing the report. The objectives, risk and benefits of the study were explained to participants in the language they understand. All questions asked by the participants were addressed appropriately after which they were made to either sign or thumbprint the consent form as an indication of acceptance to take part in the study.

Method of Data Analysis

The data collected were cleaned and checked for completeness and consistency. The data was then entered into Statistical Package for Social Science, version 20. Coding of the data was carried out. Descriptive statistical strategies such as frequencies and proportion were computed. These results were then presented in the form of tables.

VI. Results/findings

Socio-demographic Data of Respondents

In all, 376 participants took part in the study. The results from the study indicate that majority of the respondents, 233 (62%) were between the ages of 15-19 years whilst, 143 (38%) were between 20-24 years of age. Majority of the participants, 251 (66.8%) were females as against 125 (33.2%) were males. Regarding religious affiliations, majority, 263 (70%) were Christians whilst 113 (30%) adhere to the Islamic religion. In addition, about 96.8% of the respondents were single whilst only 3.2% were either married or co-habiting. The

education attainment of the respondents was also varied. However, majority, 263 representing 69.9% were in second cycle institution. In terms of age of first menstrual flow for girls and bedwetting for men, it emerged that majority of the respondents experienced this landmark at between 11-14 years of age as with an average age of 12.67 years summarized on table 1.

Table 1: Socio-demographic Data of Respondents **n=376**

Characteristics	Number (n)	Percentage (%)
Age (Years)		
15-19	233	62.0
20-24	143	38.0
Total	376	100.0
Sex		
Males	125	33.2
Females	251	66.8
Total	376	100.0
Religion's Affiliation		
Christianity	263	70.0
Islam	113	30.0
Total	376	100.0
Marital Status		
Single	364	96.8
Married	12	3.2
Total	376	100.0
Educational Attainment		
No formal education	45	12.0
Primary/JHS	56	14.9
Second cycle	263	69.9
Tertiary	12	3.2
Total	376	100.0
Age of First menses/bedwetting (years)		
11-13	223	59.3
14-16	76	20.2
Above 16	77	20.5
Total	376	100.0

Reproductive Information and Service Quality

The results of the study indicate adolescent get information on reproductive health from multiple sources. However, parental sources of information emerged as the highest sources of information for adolescents as 356 of the 376 respondents representing 94.8% indicate they get information from parents. Information from peer also emerged as the second most important sources of information on reproductive health. About 92.4% of respondents indicated they had information from peers. Radio and school teachers emerged as the lowest sources of information on reproductive health. Regarding the availability and quality of reproductive health services, it emerged that majority, 334 (88.9%) felt that reproductive health services were available. However, the study revealed that adolescents perceived that the quality of to be a challenge as only 241 (64.0%) of the respondents indicate that service providers were friendly to clients and explained details.. This further reflected in about only 60% of the respondents indicating that they will be comfortable asking questions on reproductive health services from care providers as summarized on table 2.

Table 2: Sources of Information and Quality of Reproductive Health Services **n=376**

Information Sources	Frequency, n (%)		
	Yes	No	No idea
Parents	356 (94.8%)	19 (5.0%)	1 (0.2%)
Health workers	331 (88.0%)	30 (8.0%)	15 (4.0%)
Peers	347 (92.4%)	16 (4.2%)	13 (3.4%)
School Teachers	330 (87.9%)	24 (6.5%)	22 (5.6%)
Radio	211 (56.2%)	126 (33.5%)	39 (10.3%)
Service availability and Quality			
Reproductive health services are readily availability	334 (88.9%)	34 (9.0%)	8 (2.1%)
Service providers are friendly and explain details to clients	241 (64.2%)	131 (34.8%)	4 (1.0%)
I am comfortable asking question about reproductive health services	225 (59.8%)	92 (24.6%)	59 (15.6%)

VII. Knowledge on Contraceptive

Knowledge on the various contraceptive methods was variable. Condom emerged as the most highly known contraceptive among respondents. A little over half (55.5%) were able to identify injectables. However, Norplant, tubal ligation, intra-uterine contraceptive device and vasectomy were least known as less than 40 % of respondents could identify them as contraceptive methods. In the same way little was known about reversible contraceptive methods as less than 30% of the respondents could correctly identify reversible contraceptives. In addition, was the knowledge on contraceptives that could provide dual protection against pregnancy and sexually transmitted infections (STIs). About 204 respondents representing 54.3% were able to identify condom as capable of providing protection against pregnancy and STIs. One hundred and seventy-nine respondents (47.6%) could identify the use of pills in combination of condom as capable of offering dual protection. Assessment of the knowledge of adolescents on abortion and abortion law revealed that only 108 (28.7%) were aware that adolescents could have access to safe abortion for unplanned pregnancies. This also reflected in low knowledge on safe abortion in Ghana. Only 78 (20.7%) of respondents were aware that safe abortion was permissible in Ghana. Also, only 67 (17.8%) were safe abortion could be carried out in health facilities as summarized on table 3.

Table 3: Knowledge on Contraceptives **n=376**

Variables	Frequency, n (%)		
	Yes	No	No Idea
Knowledge on Contraceptives			
Condoms	376 (100)	-	-
Norplant	128 (34.0)	115 (30.6)	133 (35.4)
Injectables	208 (55.5)	78 (20.7)	90 (23.8)
Tubal ligation	115 (30.6)	92 (24.5)	169 (44.9)
Intra-uterine contraceptive device	121 (32.2)	123 (32.7)	132 (35.1)
Vasectomy	142 (37.8)	105 (27.9)	129 (34.3)
Reversible contraceptive include			
Intra-uterine contraceptive device	78 (20.7)	124 (33.0)	174 (53.7)
Tubal ligation	100 (26.6)	74 (19.7)	202 (53.7)
Injectables	107 (28.4)	94 (25)	175 (46.6)
Knowledge on Dual Protective Strategies against STIs and Pregnancy			
Pills only	24 (6.4)	271 (72.1)	81 (21.5)
Condom only	204 (54.3)	78 (20.7)	94 (25)
Pills with condoms	179 (47.6)	82 (21.8)	115 (30.6)
Knowledge on Abortion Law in Ghana			
Safe abortions are available for adolescents who become pregnant	108 (28.7)	206 (54.8)	62 (16.5)
Safe abortion is legal in Ghana	78 (20.7)	214 (56.9)	84 (22.4)
Safe abortions can be done in our health facilities	67 (17.8)	249 (66.2)	60 (16.0)

Knowledge on Reproductive Service Outlets and Reproductive Choices

In terms of the outlets for reproductive health care, hospitals and clinics were perceived to be the most outlets. Three hundred and sixty-five (97.1%) and 370 (98.4%) perceived reproductive health services to be available at hospitals and clinic respectively. Generally majority, 344 (91.5%) perceived reproductive health services to be available at school clinics. The results further revealed that 157 (41.8%) had indicated they had sexual partners as against 219 (59.3%) indicated they had no partners. About 123 (32.7%) had engaged sexually act before whilst 223 (55.3%) indicated they have never engaged in sexually act, only 30 (8.0) were unsure if they and engaged any sexually act or not. In terms of condom use during sexually act, only 78 (20.7%) had used condom during their last sexually act. Majority, 271 (72.1%) agreed that many adolescent engage in unprotected sexually practices. In addition, about 37 (9.8%) and 24 (6.4%) of the respondents indicated they have ever become pregnant or contracted sexually transmitted infections respectively. Even though 78 people had indicated they had become pregnant before, only four had indicated they had a child as summarized on table 4.

Table 4: Sources of Reproductive Services and Reproductive Choices **n=376**

Reproductive Health Care are available in the following Area			
Hospitals	365 (97.1)	11 (2.9)	-
Clinics	370 (98.4)	6 (1.6)	-
School clinics	22 (5.9)	344 (91.5)	10 (2.6)
Practices			
Do you have sexual partner	157 (41.8)	219 (58.2)	-

Have you ever engaged in sexual act	123 (32.7)	223 (59.3)	30 (8.0)
I have used contraceptive to prevent pregnancy	78 (20.7)	208 (55.3)	90 (24.0)
Do you have a child	4 (1.1)	372 (98.9)	
I used condom during my last sexual intercourse	72 (19.1)	245 (65.2)	59 (15.7)
Many adolescents usually have unprotected sexual experience	271 (72.1)	78 (20.7)	27 (7.2)
Adolescents should have access to abortion for unwanted pregnancy	108 (28.7)	137 (36.4)	131 (34.9)
Using contraceptives methods quite often is ideal	157 (41.8)	121 (32.2)	98 (26.0)
Have you ever been pregnant or impregnated a girl	37 (9.8)	251 (66.8)	88 (23.4)
Have you ever had a sexually transmitted disease	24 (6.4)	308 (81.9)	44 (11.7)

VIII. Discussion

Socio-demographic Data

Majority of the participants, 251 (66.8%) were females as against 125 (33.2%) males. The Ghana Population and Housing Census (2010) reported a male to female ratio 1:3 which agrees with the findings of this study. Generally, there were reports of decline in age at first of menarche for girls and spermarche for boys. In the study it emerged that majority of the respondents experienced this landmark at between 11-14 years of age with average age of 12.67. Mean age at menarche was 12.74 +/- 1.15 years among girls in Madina in the Greater Accra region of Ghana (Aryeetey, Ashinyo, and Adjuik, 2011). Another study in Kuwait reported that the mean age at menarche was 12.41 years (Al-Awadhi et al., 2013). This has implication in the design of reproductive health services. Currently in Ghana, the legal age is 18 years and this therefore is the age at which a reproductive service provider can provide services to adolescent. This therefore creates a gap because adolescents who start this transitional period of menarche and spermarche will require services but may be denied service because of the age restrictions.

Sources of Reproductive Health Information

Sources of reproductive health information are an important consideration because it affects the quality of information. Parental sources of information emerged as the highest sources of information followed by peers. Radio and school teachers emerged as the lowest sources of information on reproductive health. This is an important finding in this study as an earlier study in Ghana showed that school-going youth who reported parent-child communication about HIV and AIDS were more likely to have used condoms at last sex, but communication was not associated with onset of sexual activity (Adu-Mireku, 2003). Another study has reported that communication with teachers was associated with delayed sexual initiation (Kawai et al, 2008).

Contrary to the findings that parents were ranked as the highest sources of information, an earlier study has ranked the family (parents, brothers and sisters) as the lowest source of information on sexuality (Odumegwe, 2002). However, reproductive health advocates should be concerned about the fact that peers was emerged as one of the important information sources as peer information may be inaccurate. School-based health education on abstinence and pregnancy prevention has been documented to more effective. A systematic review of 19 randomised trial of school-based pregnancy prevention intervention revealed that programmes that emphasised abstinence and those with abstinence plus education on contraceptive used had positive impact in reducing teenage pregnancy (DiCenso, Guyatt Willan and Griffit, 2002). Therefore measure should be put in place to increase reproductive health educations in elementary and second cycle institutions to ensure adolescent get the required knowledge to prevent then falling prey to peer influences which may have untoward consequences on them.

Knowledge on Reproductive Service Outlets and Reproductive Choices

The study revealed that about 123 (32.7%) had engaged in sexual act before, whilst 223 (55.3%) indicated they have never engaged in sexually act, only 30 (8.0) were unsure if they and engaged any sexually act or not. In terms of condom use during sexually act, only 78 (20.7%) had used condom during their last sexually act. The low use of condom during last sexual act should be of concern to reproductive health advocates. Adolescents are more susceptible to sexually transmitted infections and unplanned pregnancy. Condom use remains one of the effective strategies being espoused by the National AIDS Control Programme (NACP). A review of multiple studies reported that, consistent condom use during sexual intercourse reduced HIV incidence by 80% (Weller and Davis, 2002). Meta-analysis of several studies also revealed that male latex condoms are effective in reducing HIV transmission by 85% (United States Department of Health and Human Services (US DHHS, 2001). In addition, about 37 (9.8%) and 24 (6.4%) of the respondents indicated they have ever become pregnant or contracted sexually transmitted infections further supporting the low prevalence of condom use among adolescents.

The study also revealed a disparity between the number of people who indicated they had become pregnant and has a child. Out of the 78 adolescents who indicated they had become pregnant, only four indicated they had a child. This implies that majority of the pregnancies were not carried to term and therefore might have been aborted. A similar observation by Afenyadu and Goparaju (2003) confirms a disparity among

the number of adolescents who admitted ever becoming pregnant and those who had children. In their research among adolescents in Dodowa, they discovered that about 29% of the respondents acknowledged ever becoming pregnant while only 19% of the same respondents admitted having a child. Adolescents may face multiple medical and institutional barriers to receive contraceptive services including provider bias, parental consent restrictions and restrictive laws. In Ghana for instance the legal age for informed consent has been put at 18 and hence denying people below this age free access to reproductive health care. Given the low level of knowledge of adolescents on safe abortion (20.7%), majority of these abortions could have been done by unsafe methods. These have implications as death resulting from such unsafe abortion would be recorded as maternal death which may affect Ghana's effort to achieving MDG 5.

IX. Conclusion

The study revealed that knowledge on reproductive health choice was average and many more adolescents acquired reproductive health information upon which they make their choices from their parents and peers. In addition, study indicate that unprotected sex was common among adolescents whilst knowledge on safe abortion was low indicating that majority of the adolescents who get pregnancy accidentally may have terminated the pregnancy using unsafe method.

X. Recommendations

1. There is the need for reproductive health services for adolescents to target schools to provide them with reproductive health information for informed choices.
2. Parents should make it a point to give age-specific reproductive health information to ensure adolescents do not rely on peers for reproductive health information.
3. There is the need to adopt adolescents' friendly behavioural change communication strategies such as community drama to increase health education on reproductive health and the consequences of unhealthy choices.

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