

Research Article

Influence of Sex Education on the Sexual Behaviour of Adolescents

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Abstract: The purpose of this study was to assess the influence of sex education on the sexual behaviour of adolescents in Senior and Junior High Schools in the New Juaben Municipality. A cross-sectional research design was adopted for the study. The population of the study are adolescents in Junior and Senior High Schools in New Juaben Municipality. A random sampling technique was used to select two-hundred and fifty (250) respondents from two Junior High Schools and two Senior High Schools in New Juaben Municipality. The main instrument used for data collection was a questionnaire. Both inferential and descriptive statistics were used to analyse the data. The study indicated that sex education (in terms of HIV/AIDS education) has had a significant influence (impact) on sexual behaviours. The positive sexual behaviours of adolescent in Junior and Senior High Schools is evident in their attitude toward premarital sex. The study also revealed that adolescents exhibited a positive attitude toward premarital sex and abstaining from sex that will make them sick or look odd in society, neither would it give them problems during intercourse when they finally marry. It is recommended that Parents should ensure that their children receive more sex education to offset the negative influences of the media. It is also recommended that Government may also consider replicating the popular nationwide Science and Mathematics quiz in the area of adolescent sexual behaviour and reproductive health in SHS and JHS to increase the awareness of students about appropriate adolescents' sexual behaviours and reproductive health issues.

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1. Introduction

Sex education has become very important in educational sector in Ghana as far as the adolescent is concerned. There had been silence about issues of sex in the Ghanaian society because it is believed that discussion about sex will make young people adventurous and promiscuous. Many youths who become sexually active do so without accurate information about reproductive health. This lack of information can put them at risk of unplanned pregnancy or sexually transmitted diseases. Accurate knowledge about sex and sexuality will go a long way to make adolescents make an informed choice about their behaviour, and feel confident and competent executing these choices. Sex education, which is sometimes referred to as sexuality education is an important component of the school curricula as far as the adolescent is concerned [1].

Sex and sexuality are sensitive subjects, young people and sex educators can have strong views on what attitudes people should hold, and what moral framework should govern people's behaviour – these too can sometimes be at odds. Young people are very interested in the moral and cultural frameworks that bind sex and sexuality. They often welcome opportunities to talk about issues where people have strong views [2]. Sex education in schools is likely to face a number of challenges. This stems from the fact that

young people get information about sex from a wide range of sources including each other, through the media including advertising, televisions and magazines as well as leaflets, books and websites which are intended to be sources of information about sex, some of this will be accurate and some inaccurate [3]. However, providing information through sex education is the question of finding out what young people already know and adding to their existing knowledge and correcting any misinformation they may have and this is the crux of this study. The growth and development of the adolescents in this regard is as important as their physical growth and development [4].

Human growth is characterized by significant changes in which the young child grows to become a full blown adult. The stages involved in the growth of the young children are very crucial because it has the tendency of determining the behaviour and mind-set of young people or adolescents. Adolescence is a very interesting period of a child's development because it is associated with behavioural changes. This assertion holds true because young people at this stages of their development are exposed to variety of experiences which emanate from parents, music, movies, television and the internet [5].

One of the key issues during the turbulent period in the life of young people is knowledge of sex education and how it impinges on the life of young people [6]. Sex education seeks both to reduce the risk of potentially negative outcomes from sexual behaviour like unwanted pregnancies and infections with sexually transmitted diseases and do enhance the quality of relationships. Sex education is also about developing young people's ability to make decisions over their life time. From the discussion above, it is important to note that sex education is one of the mechanisms for addressing one of the key challenges that young people at the basic level of education encounter. Hence, the school becomes the right avenue for addressing the challenges that the young person is likely to encounter [7].

Teachers in basic schools in Ghana teach sex education which is normally part of a main subject. For example, topics like the Human Anatomy and fertilization is part of Science, whereas Sexually Transmitted infections and chastity fall Social Studies and Religious and Moral Education respectively [8]. The school-based sex education focuses on reducing specific risky behaviours and use a variety of approaches to teaching and learning that engage young people and help them to personalize the information. School based sex education is responsive to the needs of the young people. It has been shown to increase young people's level of knowledge about sex and sexuality, reproductive health. Uganda for example a study of 4,510 young people ages 15 to 24 found that men and women had a positive attitude about condom after acquiring the knowledge [9].

Researchers reviewed 69 published studies related to prediction/explanation of adolescents' sexual behaviour and intention to better understand why adolescents initiate sexual activity at early ages. The review was guided by eight key elements outlined in an integrative theoretical framework. Intention or motivation to have sex was the most stable predictor among the integrative model elements. Increased time alone with the opposite sex (or being home without a parent) is an indication of early initiation of sexual intercourse. Lastly, perceiving that believing most peers have had sex (at the individual and aggregated school level) is associated with intention to have sex [10].

According to the 2008 Ghana Demographic Health Survey (GDHS), almost all of the women and men have heard of AIDS. However, knowledge of HIV prevention methods is somewhat lower. Sixty-nine percent of women age 15–49 and 77% of men age 15–49 know that HIV can be prevented by using condoms and by limiting sex to one faithful partner. Only 25% of women and 33% of men age 15–49 have comprehensive knowledge about HIV. Knowledge of prevention increases with increasing education on health. Eighty-five percent of women and 78% of men age 15–49 know that HIV can be transmitted by breastfeeding. Half of women and 44% of men know that the risk of mother-to-child transmission can be reduced by taking special drugs during pregnancy, a remarkable increase in a few years from 16% for both women and men in the 2003

GDHS. Some Ghanaians still have misconceptions about HIV and AIDS. About two-thirds of women and men know that HIV cannot be transmitted by mosquito bites. On average, women age 15–49 have two sexual partners in their lifetime compared with men age 15–49 who have an average of 5 lifetime partners. In the 2008 GDHS, 2% of women and 17% of men who had sex in the past 12 months had two or more partners during that time. Of those who had multiple partners, 26% of men used a condom during their last sexual intercourse [11].

Awusabo-Asare, Abane and Kumi-Kyereme researched on adolescents' reproductive health issues in Ghana. They found out that half of Ghanaian adolescents aged 12–19 live in rural areas. Nearly ninety-six percent of adolescents have a religious affiliation; and of these, nearly 9 in 10 feel that religion is very important to them and attend a religious service at least once a week. About three-quarters of young women and more than half of young men report that their parents or guardians always know where they go out to at night, what they do with their free time or who their friends are. More than 9 in 10 of all adolescents are unmarried; however, 7% of 15–19-year-old women are married. Of the 9% of 15–19-year-old women who have given birth, 42% did not want their last birth at all, and an additional one-third wanted the birth at a later time. According to the authors, 51% of females and 38% of males have attended sex education classes or talks; of these, 93% did so before they first had sex. Nine in 10 adolescents who have attended school believe it is important for sex education to be taught in schools. Over 40% of adolescents are very worried about getting HIV/AIDS. About 1 in 3 adolescents are very worried about getting pregnant or getting someone pregnant. Half of adolescents are worried about their health, and at least 1 in 3 is worried about getting enough to eat. Ninety-two percent of 12–14-year-olds have never had sex, never had a boyfriend or girlfriend, and never experienced kissing or fondling, but nearly two-thirds or more have heard of each of these activities. Twenty-nine percent of 15–19-year-old females and 15% of such males have had sex. However, 9 in 10 adolescents think that both young women and young men should remain virgins until they marry. One in 4 young women and 1 in 5 young men have been touched, kissed, grabbed or fondled in an unwanted sexual way. Nine in 10 female adolescents and 7 in 10 males had sex for the first time with a boyfriend, girlfriend or spouse. For nearly 3 in 10 males, the first partner was a casual acquaintance. About two-thirds of adolescents did not use any contraceptive method the first time they had sex. However, 30% of females and 12% of males reported that they were not at all willing at the time of their first sexual intercourse [12].

The condom is the most commonly used method among sexually active adolescents who are using a contraceptive method. Nearly half of unmarried sexually active young women and more than one-third of all sexually active young men currently use no contraceptive method; 4 in 10 of these young women and half of these young men use the male condom. The main reasons young women did not use a condom the last time they had sex were that they felt safe and their partner refused. For young men, the main reasons were that they felt safe and that they did not have a condom. Only 16% of married young women use the condom; 60% use no contraceptive method. Ninety-six percent of all adolescents have heard of AIDS. Of these, about 8 in 10 are familiar with ways to avoid transmission of the AIDS virus, such as not having sex at all, being monogamous with an uninfected partner, or using a condom consistently and correctly; nearly 40% have personally known someone who has died of AIDS; and three-quarters would be willing to care for a family member infected with HIV, but more than half would want the infection kept secret. About 6 in 10 adolescents have never heard of any STIs apart from HIV/AIDS. 21% of sexually experienced 15–19-year-old women and 5% of such men have had an STI [12]. More than 6 in 10 adolescents who know of HIV/AIDS have received HIV information from teachers, health providers or the mass media; these are also the sources adolescents prefer. Among those who know of any source, adolescents prefer to obtain contraceptives and STI treatment from government clinics and hospitals. 2 in 3 females

and 4 in 5 males who have had an STI, did not seek treatment mostly because they were embarrassed or thought it costs too much. Sixty percent of adolescents know about HIV, know about testing and know a place where testing is done; 2% have ever been tested. Among adolescents who know about testing and have never been tested, 7 in 10 want to be tested. The most common reasons given by those who want to be tested but have not been is that they are not sexually active, they do not believe they are at risk for other reasons, it costs too much or they do not know where to go [12].

Half or more adolescents do not know whether or do not think that a woman can get pregnant the first time she has sexual intercourse, if she has sex standing up or if she washes herself thoroughly immediately after sex. One in five adolescents who have heard of AIDS believe that the AIDS virus can be transmitted by sharing food, more than 1 in 3 by witchcraft or supernatural means and 4 in 10 by mosquito bites. However, 1 in 5 adolescents who have heard of AIDS are unsure whether or believe that a man infected with the AIDS virus can be cured if he has sex with a virgin [12].

A similar study examined sexual and reproductive health behaviour among adolescent in Dodowa, Ghana. Fifty-four percent of the never-married male students and 32 percent of the never-married female students reported sexual experience. Adolescents' sexual partners include their peers, teachers and old men. Both female and male adolescents reported being forced to have sex. Three in five adolescents - both female and male - use condoms, but usage is selective and inconsistent. Males refuse to use condoms with their regular partners. Female adolescents do not insist on condom use because they are afraid of losing their boyfriends, or need monetary support from older partners. Some teachers use their position to force female students to have sex with them. Teenage pregnancy, its termination and unwedded motherhood are not that uncommon with 29% of the sexually active female adolescents reported that they had been pregnant at some time. Female adolescents use harmful albeit inexpensive methods for terminating their unwanted pregnancies. Most parents think that sexual and reproductive health education should be offered to adolescents. Abstinence and condom use are their preferred methods of protection for their adolescents [13].

Upadhyay examined the determinants of adolescent sexual behaviours leading up to and including first sex in Cebu, Philippines, with a focus on peer and parental-related influences. The research used a data of about 2000 Filipino adolescents from 1994 at ages 9-11, until 2002 at ages 17-19. First, the tempo and timing of emotional relationships and physical behaviours up to first sex are described. Second, survival analyses assess whether adolescents' perceptions of friends' sexual behaviours, measured at ages 14-16, increase the hazard of having first intercourse by ages 17-19. Third, survival analyses examine the effects of marital conflict and women's status, measured in 1994 and 1998, on age at first sex by ages 17-19. All analyses are done separately by sex. First, after adolescents begin courting, romantic relationships, and dating, several years pass before they have sex; this delay is longer for girls than boys. Fast pace of emotional relationships is a significant predictor of younger age at first sex among girls but not among boys. Secondly, perceptions of friends' behaviours significantly affect the behaviours of both boys and girls several years later. For each additional behaviour an adolescent perceived his/her friends to be engaging in, the hazard of having sex at a younger age increased by 1.15 among boys and by 1.19 for girls [14]. Mahali undertook a similar scientific study a study to find out impact of peer education on students' lifestyle and behaviour. The questionnaire was administered to all trained peer educators at an institution. Results indicated that all respondents agreed that peer education was educationally relevant and offered accurate information. Furthermore, the results indicated that peer educators who are 20 years or below are less likely to have a positive opinion on the impact of peer education on behavioural changes compared to those older than 20 years of age. The results showed that duration of involvement in peer education influences the opinion on the impact of the peer education on behavioural changes. Also, it supports the conclusion

that peer education can improve students' HIV/AIDS prevention, knowledge, attitudes, and self-efficacy [15].

In another study, by Whitaker, Miller and Clark to understand adolescents' sexual behaviour, the researchers used interview data of 907 high school students in Alabama, New York and Puerto Rico. They were examined on the relationships between sexual experience and a variety of social, psychological and behavioural variables. The study compared those who did not anticipate initiating sex in the next year (delayers), those who anticipated initiating sex in the next year (anticipators), those who had had one sexual partner (singles) and those who had had two or more partners (multiples). Anticipators reported more alcohol use and marijuana use; poorer psychological health; riskier peer behaviours; and looser ties to family, school and church and delayers. Similarly, multiples reported more alcohol and marijuana use, riskier peer behaviours and looser ties to family and school than singles. Risk behaviours, peer behaviours, family variables, school and church involvement showed a linear trend across the four categories of sexual behaviour [16].

Researchers reviewed trends in adolescent sexual health, the relation between parenting and adolescent sexual outcomes, and adolescent sexuality interventions with a parent component. American adolescents have higher rates of unprotected sex and STI contraction than adults and nine times the teen pregnancy rate of their European counterparts. Parenting efforts are related to adolescent sexual behaviour. The review of 19 relevant programmes supports the incorporation of theory and the ecological model in programme design and evaluation [17]. Kidane undertook a survey to determine the sexual behaviour of adolescents, their risk perception about HIV/AIDS and condom use. A total of 709 adolescents participated in the study. Of these, 489 (69.0%) were males and 220 (31.0%) were females. About 9% of the respondents were sexually active. Fifteen, (23.4%) of the sexually active respondents claimed to have more than one sexual partner. About 14.8% had coital contact with female commercial sex workers of which only 37.5% of them reported ever using condom use. Six hundred and seventy-four respondents (95.1%) knew about STDs and AIDS was the most commonly known STD (92.1%) followed by gonorrhoea (89.85%) and Syphilis (88.9%). About 76.9% of the respondents mentioned teachers as the most common source of information for HIV/AIDS and STIs. More than 70% of the respondents answered favourably for all questions concerning normal interactions such as eating together, shaking hands and continuing friendship with people living with HIV/AIDS (PLWHAs). About 5.8% of students perceived to high chance of acquiring HIV. Only 47.4% of the students felt that most students have adequate information about condoms. Four hundred and twenty-two (59.5%) of the students approved the idea of condom distribution in schools. About 82.2% of school adolescents claimed to undergo voluntary counselling and testing for HIV [18]. Another examined the impact of home type on involvement of in-school adolescents in premarital sex in Lagos, Nigeria. Three hundred and sixty-eight students from four secondary schools were randomly selected, 171 (46.4%) were males and 197 (53.6%) were females. Their ages range from 16 to 19 years with the mean of 18.24 years. Only 186 (69%) have had sexual intercourse and 94 of them had only one sex partner while 92 had more than one sex partner. The findings revealed a significant effect of home type in prediction of adolescents' involvement in premarital sex. There was a significant difference in involvement in premarital sex between adolescents from single parent and intact homes [19].

If adolescents especially those in the Junior and Senior High Schools in Ghana could take what they learn in sex education classes seriously and learn to behave appropriately, then the tendency for them to be infected by sexually transmitted diseases and unwanted pregnancies would be avoided. However, some casual observations made by the researcher in the New Juaben Municipality in the Eastern Region of Ghana have revealed that adolescents are exposed to a variety of sexuality influences ranging from peers to

parents, music, movies, television and the internet. This influence appears to end in some of them being raped, getting pregnant and/or having sexually transmitted infections. It is uncertain whether these young ones' adolescents have received any education on sex education and if they have what has been their attitude towards premarital sex and sexual behaviour. The purpose of this study was to assess the influence of sex education on the sexual behaviour of adolescents in Senior and Junior High Schools in the New Juaben Municipality. The study sought to answer these research questions – (1) What are the sexual behaviour of adolescents in Senior and Junior High Schools in the New Juaben Municipality? (2) How has sex education influenced adolescents in Senior and Junior High Schools in the New Juaben Municipality?

2. Materials and Methods

Cross-sectional research design was adopted for the study. The population of the study are adolescents in Junior and Senior High Schools in New Juaben Municipality. The school used in this study are SDA Demonstration Junior High School in Asokore and Roman Catholic Junior High School in Effiduase. The Senior High Schools are Oyoko Methodist Senior High School and Ghana Senior High School both in Oyoko and Effiduase respectively. Random sampling method was used to select two Junior High Schools and two Senior High Schools in New Juaben Municipality. The Junior High Schools are SDA Demonstration Junior High School and Roman Catholic Junior High School. The Senior High Schools are Oyoko Methodist Senior High School and Ghana Senior High School. Random sampling will be used to select 250 students as the sample size. The main instrument used for data collection was questionnaire. The data collected was statistically analysed using Statistical Package for the Social Sciences (SPSS) and Microsoft Excel 2007. Both inferential and descriptive statistics were used. Descriptive statistics such as frequency distribution in tabular form in graphical forms, and measures of central tendencies were used to analyse the data. Inferential statistical tools used to analyse some aspect of the data were Chi-square test and Analysis of Variance (ANOVA) test. Both the Chi-square test and the Analysis of Variance test were conducted at a 95% confidence level or an alpha level of 5%.

3. Results and Discussion

3.1. Sexual Behaviour of Adolescents

This section discusses the results on sexual behaviour of adolescent in the New Juaben Municipality of the Eastern Region of Ghana. The purpose is to understand the sexual experiences, practices and attitude in sexual relationship either with the same sex or the opposite sex.

3.1.1. Sexual Relationship with Opposite or Same Sex

Respondents in the study were asked to indicate if they have ever had a relationship with someone of the same or opposite sex; the responses received are outlined in [Table 1](#) below.

Table 1. Sexual Relationship with Same or Opposite Sex

Response	Had sexual relationship?	Frequency	Percent
Valid	Yes	77	30.8
	No	173	69.2
	Total	250	100.0

Source: Field Data

Table 1 above shows that more than two-thirds of adolescents in the four schools included in the study have not had sexual relationship with the opposite or same sex. Thus 69.2% of respondents have not had sexual relationship with either the same or opposite sex. On the other hand, 30.8% have had sexual relationship with either the same sex or opposite sex. A similar study on adolescents' reproductive health issues in Ghana showed that out of the 30.8% (77 out of 250 respondents) who have had sexual relationship with the same or opposite sex, the average age at which respondents had sexual intercourse is 15.4 years and the modal and median age were 16 years; the minimum age is 10 years and the maximum age a respondent had sexual intercourse is 18 years—the results can be seen in **Table 122** below [12]. Though this study covered adolescents aged 12–23 years, this result is nearly almost consistent with another study that examined the effects of knowledge of HIV/AIDS and attitudes on sexual behaviour of unmarried people aged 15–24 years in Ejura-Sekyedumase District. He found that the mean and median ages at first sexual experience were 17.5 years and 18 years respectively. Thus the inclusion of age 12–14 years (about one percent of total population) in this study might have skewed the mean and median ages down [20]. Critical assessment of data gathered reveals that just 17.7% of those who had had sexual intercourse did so under the age of 15 years and 82.3% did so at least at age 15 years. The results reveal that adolescents below the age of 15 years are more unlikely to engage in sexual intercourse relationship with the same or opposite sex. In fact, adolescents' reproductive health issues in Ghana found that 92% of adolescents age 12–14 years old have never had sex, never had a boyfriend or girlfriend and never experienced kissing or fondling [12]. They however found that just 29% of females and 15% of males within 15–19 years of age have had sexual intercourse; but the findings in this study indicates that majority of adolescents above the age of 15 years have had sexual relationship [12].

Table 2. Summary Statistics on the Age of First Sexual Intercourse

N	Minimum	Maximum	Mean	Std. Deviation
77	10.00	18.00	15.3871	1.68265

Source: Field Data

3.1.2. Sexual Practices of Respondents

The sexual practices of respondents is assessed on six key sexual interactions (romance) which covers holding of hands, kissing, fondling, petting, oral sex and vaginal intercourse. Out of a total of 250 adolescents 5 of them did not respond to question on what kind of sexual romance they have ever done. Regarding the 245 respondents, majority of them have ever held hands with the opposite sex and quite a good number of them have ever had vaginal intercourse. Detailed results on the six practices can be seen in **Table 3**.

Table 3. Sexual Practices of Respondents

Response	Sexual Practice	Frequency	Percent	Valid Percent
Valid	Holding hands	94	37.6	38.4
	Kissing	19	7.6	7.8
	Fondling	7	2.8	2.9
	Petting	4	1.6	1.6
	Oral sex	6	2.4	2.4
	Vaginal sex	70	28.0	28.6
	None	45	18.0	18.4
	Total	245	98.0	100.0
Missing	System	5	2.0	
Grand Total		250	100.0	

Source: Field Data

From [Table 3](#), 38.4% of respondents have ever held hands with the opposite sex, 7.6% of them have ever kissed, 2.9% have also ever fondled with the opposite sex, 1.6% have ever engaged in petting, 2.4% of them have ever practiced oral sex, and 28.9% have ever had vaginal sex in their life time. Also all respondents who indicated they have ever had vaginal sex have kissed, held hands, fondled and ever engaged in petting with the opposite sex.

3.1.3. Respondents and Number of Sexual Partners Ever Had

The number of sexual partners that each adolescent selected from the four schools have ever had in their lifetime is shown [Table 4](#).

Table 4. Number of sexual partners of respondents

	Sexual Partners	Frequency	Percent
Valid	0	164	65.6
	1	40	16.0
	2	20	8.0
	3 or more	15	6.0
	Don't remember	3	1.2
	Total	242	96.8
Missing	System	8	3.2
Total		250	100.0

Source: Field Data

The number of sexual partners of respondents is shown in [Table 4](#). More than two-thirds (65.6%) of adolescents in the four schools selected from the New Juaben

Municipality have not had sexual partners in their lifetime, 16.0% have ever had one sexual partner, eight percent have had two sexual partners in their lifetime, and six percent have ever been in a sexual relationship with 3 or more sexual partners. And also about one percent or just 3 out of the 250 of adolescents of the four schools included in the study do not remember or are unsure of the number of sexual partners they have ever had in their lifetime. The number of adolescents who did not respond to this question are 8, representing 3.2% of the entire sample size; and excluding results in an increase in the percentage of each category explained. Also further analysis showed that out of the 77 respondents who indicated they have had sexual relationship with the same or opposite sex, 46 representing 59.7% had only one sexual partner in the past one year as at the time of administering the survey questionnaire, 9 representing 11.7% had two sexual partners, and 8 representing 10.4% had three or more sexual partners in the past one year. Also 14 out of this 77 or 18.2% of the adolescents in the four schools could not state whether or not they had a sexual partner in the past one year.

3.1.4. Use of Condom

Analysis on results of condom use indicates that out of the 70 respondents that have had vaginal sex, 19 out of the 70 or 27.0% used condom the last time they had sexual intercourse. Also 40 of them which represent 57.0% did not use condom the last time they had sexual intercourse. Also, 11 out of the 70 or about 16.0% could not recall as to whether or not they had used a condom in their last sexual intercourse. This result might be revealing that adolescents in the New Juaben Municipality have poor attitude towards condom use. Results on sexual and reproductive health behaviour among adolescents in Dodowa, Ghana indicate that 3 in 5 (or 60% of) adolescents use condoms but their usage is selective and inconsistent [13]. Previous study found in their review of literature on adolescent reproductive health that about half of unmarried sexually active young women and more than one-third of unmarried young men do not use (at the time of the study) any contraceptive method including condom [12]. Early study indicated in their findings that female adolescents do not insist on condom use because they are afraid of losing their boyfriends, or need monetary support from older partners [13]. The result has been presented in Figure 1.

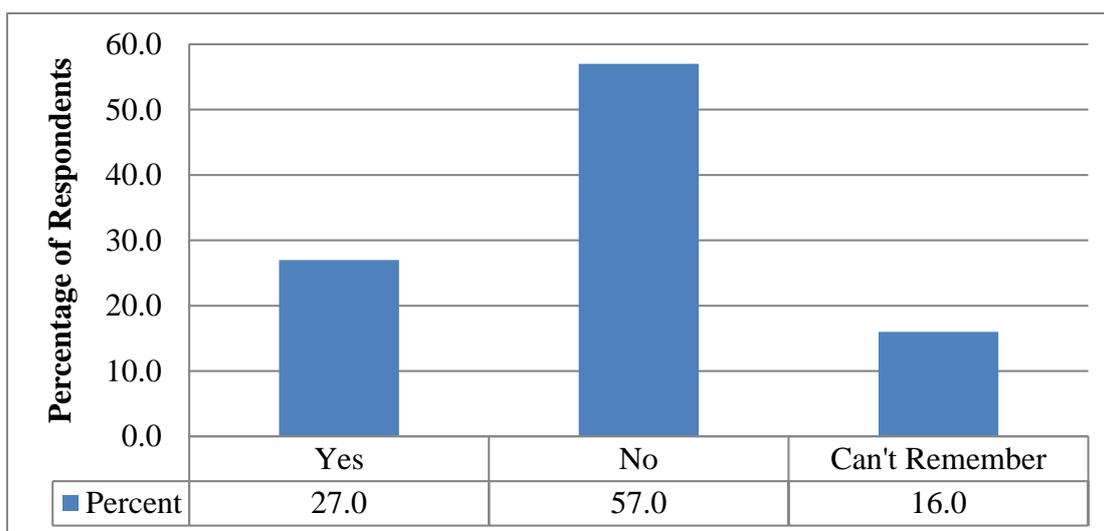


Figure 1. Use of Condom during last time of sex

3.1.5. Demographic Characteristics and Sexual Behaviour

This part of the study examines the sexual behaviour of adolescents in regard to some key social and demographic characteristics. The key social and demographic characteristics that have been considered are: gender of the adolescent, age, place of residence (or locality), and living arrangement. In this attempt a Chi-square test was conducted to investigate the association between each of the social & demographic characteristics and the tendency to engage in a sexual relationship with someone of the same sex or opposite sex. The test was conducted at a significance level of five percent or 95% confidence level.

A. Gender of Respondent and Tendency to Engage in Sexual Relationship

Here an attempt was made to determine whether or not male and female adolescent have the same tendency to engage in a sexual relationship with the same sex or opposite sex, or whether there is an association between gender and tendency to engage in a sexual relationship. The result of the Chi-Square test is shown in [Table 5](#).

Table 5. Gender and Tendency to Engage in Sexual Relationship

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.608	1	.000
Continuity Correction ^b	36.922	1	.000
Likelihood Ratio	41.126	1	.000
Linear-by-Linear Association	38.454	1	.000
<hr/>			
N of Valid Cases	250		

Source: Field Data

The results of the Chi-square test as seen in [Table 5](#) above shows that there was a significant association between gender of the adolescent and the tendency to engage in or initiate a sexual relationship with the same or opposite sex, $X^2(1, n=250) = 38.608, p < .05$. That is male adolescents and female adolescents have different tendencies to engage in a sexual relationship. A cross-tabulation between gender and whether or not adolescent has engaged in a sexual relationship reveals that male adolescents are more likely to initiate sexual relationship than do their counterpart and this was established in the study [\[21\]](#). The result can be seen in [Table 6](#) below. A study of the influence of sex education on adolescent sexual behaviour found that males were more likely to undertake sexual behaviour (relationship) than do females [\[21\]](#). However, the review of literature on adolescents' reproductive health issues in Ghana suggest that more females between the ages of 15–19 years old have had sex than males within the same age category. But interestingly, they found that 30.0% of female adolescents were unwilling to have sex at the time of their first sexual encounter whilst only 12% of males were unwilling [\[12\]](#). A research on sexual and reproductive health behaviour among adolescents in Dodowa in Ghana found that 54% (more than half) of never married male students reported sexual experience whilst 32% of female students also reported same. The fact that male students are more likely to initiate or engage in a sexual relationship [\[14\]](#). A study of the determinants of adolescent sexual behaviours leading up to and including first sex in Cebu, Philippines found that when adolescents begin courting, romantic relationships,

and dating; several years pass before they have sex and that the delay is longer for girls than boys [14].

Table 6. Crosstab of Gender and Sexual Relationship

		Relationship with someone of the same sex or opposite sex		Total
		Yes	No	
Sex of Respondent	Male	62	69	131
	Female	15	104	119
Total		77	173	250

Source: Field Data – June, 2013.

From table6 above, out of the 173 who indicated they have never engaged in a sexual relationship, 104 (60.1%) are females whilst 69 (39.9%) are males. And regarding those who indicated they have ever had sexual relationship 62 (80.5%) are males whilst just 15 (19.5%) are females. Thus there is enough evidence to suggest that males are more likely to engage in sexual relationship than females as shown by the Chi-square test above.

B. Age and Tendency to Engage in Sexual Relationship

The association or relationship between age and adolescent tendency to engage in sexual relationship is shown in Table 7 and Table 8 where Table 7 is the cross-tabulation showing the number of respondents for each category of age; the Chi-square test is shown in Table 8.

Table 7. Crosstab of Age and Sexual Relationship

		Relationship with Someone of the Same Sex or Opposite Sex		Total
		Yes	No	
Age	12-14	1	2	3
	15-17	48	110	158
	18-20	26	61	87
	21-23	2	0	2
Total		77	173	250

Source: Field Data

Table 8. Age and Sexual Relationship

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.550	3	.208
Likelihood Ratio	4.767	3	.190
Linear-by-Linear Association	.251	1	.617
N of Valid Cases	250		

Source: Field Data

The Chi-square table above shows that there was no significant association or relationship between age of adolescents and their tendency to indulge in a sexual relationship since $\chi^2(3, n=250) = 4.550, p > 0.05$. Thus all adolescent irrespective of their age are equally likely to engage in some form of sexual relationship.

C. Place of Residence in the Municipality

The association between adolescent place of residence (Urban or Rural) in the Municipality and tendency to engage in sexual relationship is given below by the crosstab and the Chi-square [Table 8](#).

Table 9. Crosstab of Place of Residence and Sexual Relationship

		Relationship with Someone of the Same Sex or Opposite Sex		
		Yes	No	Total
Place of Residence	Urban	39	121	160
	Rural	34	47	81
Total		73	168	241

Source: Field Data – June, 2013.

[Table 9](#) above gives the frequencies for respondents in each locality on whether they have engaged in sexual relationship with same or opposite sex. Out of a total of 160 urban respondents 75.6% said they have not engaged in a sexual relationship whilst 24.4% have done so. On the other hand, 58.0% in rural areas have never engaged in a sexual relationship whilst 42.0% have done so. It can be concluded from the above numbers that adolescents in rural areas in the New Juaben Municipality are more likely to engage in the sexual relationship with the opposite sex (or the same sex). This is evidence in the Chi-square table below.

The Chi-square table ([Table 100](#)) shows that there is significant association between sexual relationship and the locality of adolescents (urban or rural area).

Table 10. Place of Residence and Sexual Relationship

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.889	1	.005
Continuity Correction ^b	7.078	1	.008
Likelihood Ratio	7.702	1	.006
Linear-by-Linear Association	7.856	1	.005
N of Valid Cases	241		

Source: Field Data – June, 2013.

From the Chi-square table above, there is evidence to suggest that place of residence of adolescents in the New Juaben Municipality and their tendency to engage in a sexual relationship is dependent since $\chi^2(1, n=250) = 7.889, p < 0.05$.

D. Living Arrangement and Sexual Relationship

The association between living arrangement and sexual relationship is shown in the crosstab table (Table 11) and the Chi-square table (Table 12). Though the crosstab table shows a good number of adolescents who stay with both parents have never had a sexual relationship with the same or opposite sex, the Chi-square test shows there was no sufficient evidence to suggest a significant difference between them and those staying with single parents and other family members.

Table 11. Crosstab of Living Arrangement and Sexual Relationship

		Relationship with Someone of the Same Sex or Opposite Sex		Total
		Yes	No	
Living arrangement	With Single Parent	20	41	61
	With both parents	50	126	176
	With other family members	7	6	13
Total		77	173	250

Source: Field Data

Table 12. Living Arrangement and Sexual Relationship

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.825	2	.148
Likelihood Ratio	3.551	2	.169
Linear-by-Linear Association	.230	1	.632
N of Valid Cases	250		

Source: Field Data

The Chi-square test shows that there was no sufficient evidence to suggest that the living arrangement of adolescents (who the adolescent lives with) in the New Juaben Municipality have any influence on the tendency of the adolescent to engage in sexual relationship, $X^2(2, n=250) = 3.825, p > .05$. Thus adolescents in the New Juaben Municipality irrespective of whom they stay with—whether both parents, single parent or with other family member—are all equally likely to engage in sexual relationship. This finding contradicts the assertion parenting efforts are related to adolescents' sexual behaviours; adolescent sexual health, the relation between parenting and adolescent sexual outcomes and adolescent sexuality interventions with a parent component [17]. Previous study on the impact of home type on involvement of in-school adolescents in premarital sex in Lagos, Nigeria found a significant effect of home type in prediction of adolescents' involvement in premarital sex [19]. The finding was that there was a significant difference in involvement in premarital sex between adolescents from single parents and intact homes. Again the results is not consistent with the review of literature on the relationship of family structure and adolescent sexual activity. Sturgeon found that adolescents from intact family structures tend to delay sexual initiation until a significantly older age than their peers from non-intact family backgrounds [22].

3.2. Influence of Sex Education on Adolescents Sexual Behaviour

This sub-section presents results and discussion on the influence of sex education on adolescents' sexual behaviour. The sex education looks at the main source of information on sex for adolescents (respondents) in the New Juaben Municipality as well as education on HIV/AIDS and its effect on the adolescent.

3.2.1. Main Source of Information on Sex

The main source of information on sex was achieved by asking respondents to pick from ten different sources. The ten sources and the number (percentage) of respondents who obtain their information from are shown below.

Table 13. Main Source of Sex Education

Source	Frequency	Percentage	Rank
Television	198	79.2	1
Internet	150	60.0	3
Teachers	100	40.0	5
Friends	170	68.0	2
Parents	83	33.2	6
NGOs	25	10.0	7
Magazines	19	7.6	9
Pornography Videos	140	56.0	4
Government Agencies	18	7.2	10
News Papers	21	8.4	8

Source: Field Data

Table 133 above indicates that the very main source where respondents or adolescents in the New Juaben Municipality obtain sex information is the Television. Thus 79.2% of adolescent get information on sex from the Television. The second major source of information on sex for adolescents in the Municipality is through friends—thus 68.0% get information on sex from their peers. The next major source of information on sex is the internet since 60.0% of them access sex information from it. Following next is pornographic videos where 56.0% (more than half) of them get information from. The least among the sources where adolescents from the Municipality get information is Government Agencies. About a third of them get information from their parents. And more than a third obtain information from their teachers. Taking an instance from previous study regard of information on HIV/AIDS and found out that more than 6 in 10 (or more than 60%) of adolescents in Ghana receive HIV/AIDS information from the mass media, teachers or health providers and that these sources are their preference regarding HIV/AIDS [12]. It can be seen from Table 133 above that the Television and teachers are among the major sources of information on sexuality adolescents prefer.

3.2.2. HIV/AIDS Education and Impact on Sexual Behaviour of In-school Adolescents

Table 144 below shows the assessment of HIV/AIDS education and the influence on the sexual behaviour of adolescents in the New Juaben Municipality. In the table, SA = Strongly Agree; A = Agree; NS = Not Sure; DA = Disagree; SD = Strongly Disagree.

Table 14. HIV/AIDS Education an Impact on Sexual Behaviour of adolescents

Statements/Characteristics Of HIV/AIDS Education	Effect Of Hiv/Aids Education On In-School Adolescents' Sexuality/Sexual Behaviour (% of Students)				
	SA	A	NS	DA	SD
HIV/AIDS education taught me ways to protect myself from contracting HIV.	58.6	32.4	4.9	0.8	3.3
I have learnt from HIV/AIDS education that engaging in unprotected sex can make me contract diseases.	68.3	22.8	4.5	0.8	3.7
HIV/AIDS education has taught me about abstinence.	58.3	33.8	5.8	1.7	0.4
HIV/AIDS education has taught me safer sexual behaviours.	45.9	31.1	9.8	4.5	8.6
HIV/AIDS education has taught me to always ask my sexual partner to be faithful.	39.2	28.3	15.8	5.8	10.8
I started to use condom after attending HIV/AIDS education programme.	19.6	12.9	19.2	13.4	34.8
I went for a HIV test after attending HIV/AIDS education programme.	17.5	17.5	23.5	17.9	23.5
HIV/AIDS education activities do not provide awareness about the connection between drugs, relationship and sexuality issues.	13.5	9.4	22.0	15.9	39.2
I feel more comfortable to talk about sex and relationships to teachers than my peers.	20.5	11.9	9.0	23.4	35.2
I feel more comfortable to talk about sex and relationships to teachers than my family members.	15.5	17.6	13.1	17.6	36.3
HIV/AIDS education provided me with information about sex and HIV/AIDS to answer my questions.	52.7	30.0	7.2	5.9	4.2
HIV/AIDS education has reached its goal of reducing high -risk sexual behaviours on campus.	46.0	27.6	12.6	7.1	6.7
HIV/AIDS educators do not share reproductive health information with their friends/peers.	19.1	11.9	16.9	18.2	33.9
I would not be so much aware of risky behaviours had it not been for HIV/AIDS education programme on campus.	37.3	22.3	9.9	15.5	15.0
I will keep on attending HIV/AIDS education activities because they empower me with sexual limit-setting skills.	39.9	29.6	7.7	11.6	11.2
As a young person, I cannot do without being part of HIV/AIDS education if I want to live a healthy lifestyle.	45.5	30.3	9.1	8.2	6.9
I do not use condoms even though I have been in a HIV/AIDS education programme.	22.9	10.3	21.5	9.8	35.5

Source: Field Data

Table 144 clearly indicates that HIV education has had significant impact on the sexual behaviour of adolescents in Senior and Junior High Schools in the New Juaben Municipality. Thus by comparing the percentages of agree and disagree, it can easily be inferred from the numbers that indeed HIV/AIDS has impacted on the sexual behaviours of in-school adolescents. This assertion is evident as 69.5% of adolescents in this study indicate they will keep attending HIV/AIDS education activities to empower themselves with sexual limit-setting skills; and also, more than 70.0% of them indicate they cannot do without being part of HIV/AIDS education if living a healthy lifestyle is a concern. A study

on the effect of knowledge of HIV/AIDS and attitudes on sexual behaviour of unmarried adolescents in Ejura-Sekyedumase district found that Sex Education (HIV/AIDS) had a positive effect (impact) on knowledge and several attitude variables like abstaining from premarital sex [20]. It should however be noted that, HIV/AIDS education has not been able to influence positively the attitude of adolescents towards the use of condom. Early study on the effect of exposure to topics within the life skills curriculum on sexual and reproductive health knowledge and behaviours found that most youth were at least exposed to life skills education (methods of preventing pregnancy and transmission of STIs and HIV, abstinence) and that those exposed to life skills education were likely to use condoms [23]. This study's result contradicts their findings as condom use is low among respondents in this study. And the reason, as earlier discussed, might be because nearly 7 in every 10 adolescents in Senior High and Junior High Schools are stated they had not engage in a sexual relationship with the same or opposite sex.

4. Conclusions and Recommendations

The study indicated that sex education (in terms of HIV/AIDS education) has had significant influence (impact) on the sexual behaviours. The positive sexual behaviours of adolescent in Junior and Senior High Schools is evident in their attitude towards premarital sex. The study also revealed that adolescents' exhibited positive attitude towards premarital sex and abstaining from sex that will make them sick or look odd in society, neither would it give them problems during intercourse when they finally marry. It is recommended that, Parents should ensure that their children receive more sex education to offset negative influences of the media. The media (especially the television) emerged as the main source where adolescents in the New Juaben Municipality obtain sexual information. It should be noted however that the media is awash with both positive and negative aspects of sex education; therefore, it would be important that parents or guardians educate their children on current sexual behaviours that will impact their lives positively. It may not require formal education on sexuality to admonish children as the experience of parents would be invaluablely important to shaping the sexual behaviour and attitudes of their children. Thus the researcher recommends parents to spend time with their children to educate them on appropriate sexual behaviours and attitude. It is also recommended that, Government may also consider replicating the popular nationwide Science and Mathematics quiz in the area of adolescent sexual behaviour and reproductive health in SHS and JHS to increase the awareness of students about appropriate adolescents' sexual behaviours and reproductive health issues. Thus, Government should implement a national quiz competition on sexual behaviour and adolescent reproductive health for SHS and JHS to raise their awareness about the subject.

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