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First Year Colleges of Education Students' Sexual Behaviour and Awareness of Hiv/Aids Prevelence in the Central Region, Ghana

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ABSTRACT: The purpose of the study was to examine Teacher trainees' knowledge and sexual behaviour towards HIV\AIDS. The study which adopted the descriptive design utilized a sample of 177 students obtained through purposive and simple random sampling of students from OLA, Fosu and Komenda Colleges of Education in the Central Region, Ghana. Questionnaire was used in the data collection. Percentages and frequencies were used to analyze the data for easy interpretation. The study revealed that although all the respondents were aware of HIV and AIDS, they rarely talked about HIV and AIDS issues with their friends or relatives. Furthermore, even though majority of the respondents have had sexual intercourse after age 18, they usually had unprotected sex. It is therefore recommended that the Ghana Education Service in collaboration with donor agencies like WHO and UNAIDS should resource teachers well and build their capacity in order to make their lessons on HIV very interesting and effective to broaden the students' knowledge base on good sexual behaviour to avoid being infected with the HIV/AIDS. College counsellors are recommended to organize talks, seminars and other relevant activities to reduce or curb the infection rate among College of Education students in Ghana.

KEYWORDS: Awareness, Counselling implications, Knowledge, Prevalence, Sexual behavior

INTRODUCTION

Infection with the Human Immunodeficiency Virus (HIV) and the Acquired Immune Deficiency Syndrome (AIDS) continues to be a significant public health issue (UNAIDS. Global HIV & AIDS Statistics, 2018; Gallant, 2017). Human immunodeficiency (HIV) is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). Scientists identified a type of chimpanzee in West Africa as the source of the HIV infection in humans. They believe that the chimpanzee version of the immunodeficiency virus was called Simian immunodeficiency virus (S.I.V) which was most likely transmitted to humans and mutated into HIV when humans hunted these chimpanzees for meat and came into contact with the infected blood (Wolfe, 2004). Very little was known about this horrifying disease in the world until its discovery in 1981. However, retrospective studies seem to indicate that it may have existed much earlier, possibly dating back to about 1979 (Agadzi, 1990). From the beginning of the HIV/AIDS pandemic till the end of 2009, an estimated 33.3 million people throughout the world have been infected with HIV (UNAIDS/UNICEF/WHO, 2010). The global pandemic, which is the most feared of our time, has already had profound economic and social effect and has resulted in great population loss in many parts of the world (Nketia-Amponsah, Codjoe&Ampaw, 2019).

According to UNAIDS/UNICEF/WHO (2010) Sub-Saharan African is more heavily affected by the HIV/AIDS than any other region of the world. It further states that an estimated 22.5 million people are living with HIV in the region at the end of 2009. This means that around two thirds (68%) of the global total population infected are in Sub-Saharan Africa. In the same year, around 1.3million people died from AIDS and 1.8 million people became infected with HIV. Since the beginning of the epidemic, more than 14.8 million children have lost one or both parents to HIV/AIDS. The report added that whiles all regions in Ghana are said to have cases of HIV/AIDS, HIV prevalence at regional levels ranged from 2.0% in the Northern region to 4.2% in the Eastern region. Needless to point out is the fact that nearly 90% of all reported cases that have occurred in Ghana fall within the age range of 20-44 years which incidentally turns out to be the productive age group. (National AIDS/STI Control Programme, (2010).

In the central region of Ghana, the prevalence rate in 2009 was 3.0% with Cape Coast reporting the highest of 5% meanwhile, AssinFosu and AsikumaOdobenBrakwa recorded 2.0% each. This was contained in HIV Sentinel Survey Report carried out in three districts in central region of Ghana (National AIDS/STI Control Programme (2010). The report concluded that in the

absence of massively expanded prevention, treatment and care efforts, it is expected that the AIDS death toll in Sub-Saharan Africa will continue to rise.

LITERATURE SURVEY

Knowledge of AIDS

The incidence of HIV remains high in Sub-Saharan Africa, with the region recording the highest incidence globally in 2015 (United Nations, 2017). This is a worrying situation in light of the fact that in January 2010, the United Nations Security Council held a meeting devoted to the security impact of HIV/AIDS in Africa, and as a consequence, several national governments adopted a number of high-profile declarations of commitment and multilateral agreements to combat the emerging threat (Vieira, 2011).

A number of studies conducted on adolescents' knowledge on AIDS have presented conflicting results (Aggleton, Homans& Warwick, 1988; Sherr, 1987; Abrams, Abraham Spears & Mark, 1990). However, Di Clememte, Boyer and Mills (1987), Reader Carter and Crawford (1988); Fisher and Misovich (1990); Takyi (1996); Anarfi (1997); Qashqari, Alsani, Kabrah, Algary, Naeem, Alsulami and Makhdoom (2022) found in various studies that their subjects were significantly knowledgeable about AIDS. All these studies recorded not less than 90% awareness.

Data from other studies give contrary pictures. Price, Desmond and Kukula (1985) studied the perception of adolescents aged between 16 and 19 years and found that they had great misconceptions about the disease. All the 250 subjects involved in the study could answer only 47% of the questions about AIDS correctly. While some studies have revealed discrepancies in the adolescents' knowledge of AIDS, others have reported adolescents' information about AIDS to be generally superficial and vague (United Nations International Children's Emergency Fund, 2020).

In addition, studies have found that females are less knowledgeable than their male counterparts in all instances including vital questions as transmission via blood transfusions and infected needles. Alarmingly, only 65% of women knew that condoms can prevent sexual transmission of HIV (Singh, Porterfield, Thilakavahi, Shepard, Mawar, Divekar& Bollinger, 1997). Anarfi (1997) in a study on the vulnerability to sexually transmitted diseases among street children in Accra found that though AIDS awareness is very high at about 93%, the level was significantly much higher among males (96.7%) than females (87.8%).

The Ghana Demographic and Health Survey (1998) report revealed that 14% of females and 9% of males did not know that AIDS is avoidable, and one in five females and ten males did not know of any way to avoid contracting AIDS. Three-quarters of females and four-fifths of males believe that a healthy person can have the AIDS virus. More than 80% of males and females correctly believed that AIDS can be transmitted from mother to child in utero and through breastfeeding. Invariably, this apparent lack of accurate information on the part of females places them at a higher risk for HIV acquisition. The same study showed that radio is the most important source of information on AIDS for both males and females. However, others obtained their information from the television, newspapers, workplace, church and mosque.

Sexual Behaviour

In human beings, learned attitudes have a greater influence than biological factors in determining sexual behaviour; and people first learn about such behaviour at home. Their parents' attitudes and behaviour affect children whether, for instance, parents hug and kiss openly, seem embarrassed by their bodies, or talk freely about sexual issues (Guiella&Madise, 2007). Although, there may be cultural differences in adolescent sexuality, the bottom line still remains the same that a proportion of adolescent populations everywhere around the globe engage in premarital heterosexual activity.

Guiella&Madise (2007) observed that America adolescents view sexual intimacy as an important and normal part of growing up. He added that premarital heterosexual activity had become increasingly common among adolescents especially 13 to 17 years old. Three-fifth (60%) of white male teenagers have intercourse by age 18 and the same percentage of white female adolescents do so by just a year later, age 19. For Africa Americans, 60% of males have intercourse by age 16 and 60% of females do so by age 18. In 2002, the National Longitudinal Study of Adolescent Health reported a "dramatic trend toward the early initiation of sex" (Sieving, et al., 2002).

Guiella&Madise (2007) asserted that there are great differences in age at first intercourse and in subsequent frequency of intercourse. Lescano, et al. (2006) concluded that it is not uncommon for first intercourse to occur at age 14 or 15 and then for the teenager not to have relations again for a year or two. In 2006, a survey conducted by The Observer showed that most adolescents in Britain were waiting longer to have sexual intercourse than they were only a few years earlier. In 2002, 32% of teens were having sex before the legal age of consent of 16; in 2006 it was only 20%. The average age a teen lost his/her virginity was 17.13 years in 2002; in 2006, it was 17.44 years on average for girls and 18.06 for boys. The most notable drop among teens who reported having sex was 14 and 15 year olds (Campbell, 2006).

HIV/AIDS has a devastating impact on the individual lives, households and communities. It depletes the working population, intensifies poverty, reduces the number of teachers and skilled workers and strains overtaxed health care systems and other social

services. The impact of the AIDS epidemic on society will be felt most strongly in the course of the next ten years and beyond, in the absence of massively expanded prevention, treatment and care (Joint United Nations Programme on HIV/ Acquired Immune Deficiency Syndrome, 2009).

PROBLEM STATEMENT

The issue is that in spite of the high level of awareness that HIV/AIDS is sexually transmitted, more and more people are becoming infected. What then is the problem? Are people finding it difficult to restrain themselves from sex? What makes them engage in unprotected sex? Do the people find it difficult in obtaining condoms? What other risk-related behaviour make them vulnerable to HIV infection? All these concerns require scrutiny. A number of studies have been conducted on HIV/AIDS, STDs and sexual behaviour of adolescents in Ghana. Edjah (1999) looked at "some aspects of adolescents' sexual behaviour." Asamoah (1997) also studied "The effects of adult-led lecture and peer-led discussion on AIDS-knowledge and attitudes of Junior Secondary School students." However, none of the above studies was on knowledge Trainees of Colleges of Education and their sexual behaviour towards AIDS prevention in Ghana.

Since AIDS is mainly transmitted through sexual intercourse and spread silently among people, the researchers have been worried for some time now about the possible silent spread of the AIDS disease among adolescents in Ghana. This was based on the story rumoured that some students tested positive for HIV in one of the understudied colleges when an organisation was invited for free voluntary counselling and Testing. It is against this background that the researchers want to investigate the students' awareness and their sexual behaviour towards AIDS prevention in Colleges of Education in the Central Region of Ghana. The purpose of the study is to determine whether first year students in Colleges of Education in Central Region are aware of the means of contracting HIV. It also examines aspects of their sexual behaviour that makes them vulnerable to the acquisition of HIV.

The primary concern of this study therefore is to identify aspects of these trainees' sexual behaviour that makes them vulnerable to AIDS infection, and also identify areas of confusion that might serve as important targets of counselling intervention.

Research Questions

- 1. To what extent do the teacher trainees have knowledge about HIV/AIDS?
- 2. What are the sexual behaviours of these teacher trainees?

RESEARCH METHODOLOGY OR METHODS

Research Design

The researchers used a descriptive survey (quantitative approach) for this study, so that inferences could be made about characteristics, attitudes and behaviour of the population with respect to the sample size. Osuala (2001) notes, that descriptive survey is versatile and practical, especially to the researchers in that, they identify present needs of respondents. The population for the study covered 889 male and female students in the first year of the three Colleges of Education in the Central Region of Ghana.

Sample and Sampling Procedure

Sampling involves the process of selecting a portion of the population to represent the entire population (Amedahe, 2005). The three Colleges of Education were purposively selected for the study. Simple random sampling technique (Lottery method) was further used in drawing the required sample for the study. A list of all first-year students in the register in each of the colleges was obtained, numbered and ordered accordingly. The researchers randomly selected students with their first surname lettered 'A' until the required numbers were obtained in each of the colleges, OLA College of Education (60), Fosu College of Education (60) and Komenda College of Education (57) making 177 the total number sampled of which 65 were males and 112 were females. Their age range were between 21 to 23 years. The simple random sampling approach was adopted the give the respodents the equal chance of being selected to do way with bias.

Instrument

The instrument that was used to collect data was a questionnaire. Leedy&Ormrod (2010) and Amedahe (2005) state that questionnaire is widely used for collection of data in educational research and if developed to answer questions, it is very effective for securing factual information about practices, enquiring into opinions and attitudes of the subject. The questionnaire was developed based on the research questions derived from the related literature. The questions were multiple choice and 4-Point Likert-type of scale. Those close-ended types of questions were used because of the advantages over open-ended type of questions (Amedahe, 2005).

A pilot test was conducted on ten percent of the total prespondentsof 177 thus 18 students in HolyChild College of Education which students exhibit similar characteristics, Baker (1994). The internal consistency of the instrument was assessed using the Cronbach alpha. From the final instrument, an internal consistency reliability coefficient of .88 which was good was ascertained. Due the nature of the study, the respondent were assure confidentiality and anonymity on the information being divulged to the

researchers, that the information was purely ment for academic work. The data was gathered by the researchers themselves within three weeks with a 100% rate of returns. Frequencies and percentages were used for analysing questions demanding "agree" or "disagree" answers. Means and standard deviations were used to analyse the responses to determine their knowledge of how the virus is contracted. T-test was used to test differences in knowledge for male and female respondents. Also, F-statistic was used to test differences in knowledge among various age groups.

DATA ANALYSIS AND DISCUSSIONS RESULTS AND DISCUSSION

Introduction

This covers the demographic characteristics of respondents (that is students) and are presented and discussed with the help of tables and graphs. It also covers the various topics that examined aspects of students' knowledge and their sexual behaviour of students that make them vulnerable to the acquisition of HIV towards AIDS prevention. One hundred and seventy-seven respondents took part in this study.

Demographic Characteristics of Trainees

Out of the 177 trainees, 65 (36.9%) were males whilst 112 (63.1%) were females. This shows that majority of them were females. This may be the result of OLA being the female college among the population sampled. It is quite obvious that females have become the dominant sample in the population.

The age distribution of respondents shows that out of the 177 respondents, 12 (7%) were between the age groups of 18-20 years. Similarly, 101 (56.5%) of the respondents were of the age group of 21-23 whilst 64 (36.2%) were beyond 23 years of age. More than half (56.5%) of the respondents were within the age group of 21-23 and beyon. Majority of the trainees fell within the age group of 21-23 years. This is an indication that the colleges students are made up of young students who are prone to peer pressure and other issues which may put them in high risk of being infected with HIV.

Research Question One: To what extent are the teacher trainees knowledgeable about HIV/AIDS?

The primary concern was to determine whether teacher training students were aware of the modes of contracting HIV. Responses gathered from the field have been presented in Table 1

| Misconceptions | Agre | e | Disag | gree | Unce | rtain |
|---|------|-------|-------|-------|------|-------|
| A person can be infected with HIV by | No | % | No. | % | No. | % |
| sharing clothes with someone who has the virus. | 2 | 0.77 | 172 | 98.08 | 3 | 1.15 |
| hugging someone with HIV. | 5 | 2.69 | 168 | 95.39 | 4 | 1.92 |
| sleeping in the same room with someone who has the virus | 12 | 6.92 | 140 | 79.23 | 25 | 13.85 |
| swimming with someone who has the virus. | 18 | 10.38 | 136 | 77.31 | 21 | 12.31 |
| receiving blood transfusion with infected blood. | 176 | 99.63 | 0 | 0.00 | 1 | 0.38 |
| kiss on cheek of someone who has the virus. | 33 | 18.85 | 79 | 44.61 | 65 | 36.54 |
| being bitten by mosquitoes. | 0 | 0.00 | 169 | 95.77 | 8 | 4.23 |
| being closer to an infected person coughing. | 6 | 3.46 | 161 | 91.16 | 10 | 5.38 |
| using the same toilet seats with someone who has the virus. | 9 | 5.00 | 166 | 93.85 | 2 | 1.15 |
| having unprotected sex with someone you met for the first time. | 174 | 98.46 | 0 | 0.00 | 3 | 1.54 |
| having anal sex with an infected person. | 176 | 99.23 | 0 | 0.00 | 1 | 0.77 |
| having multiple sexual partners. | 175 | 98.85 | 1 | 0.77 | 1 | 0.38 |
| having contact with blood of an infected person. | 177 | 100.0 | 0 | 0.00 | 0 | 0.00 |
| having many unprotected sex (without condom) with a prostitute. | 176 | 99.23 | 1 | 0.38 | 0 | 0.38 |

Table 1. Descriptive statistics indicating the Awareness Level of Trainees on HIV/AIDS

Respondents were asked to agree or disagree to some suggestions and these were analysed using frequencies and simple percentages. From Table 1, all the respondents agreed that a person can get infected with HIV by having contact with blood of an infected person. This means that the respondents, even though, have some basic ideas about HIV, they do not know that HIV deals with cut, so if there is no cut, wounds or open sore and one gets in contact with an infected blood he/she will not be infected. The second most frequent misconception was kissing on the cheeks of someone who has the virus which received 33 (18.85%) affirmative responses meaning, HIV education is going on well since most respondents 79 (44.62%) responded negatively whilst 65 (36.5%) were not certain. From the response on Table 1, it was observed that most of the respondents 136 (77.31%) believed that one will not be infected when he/she swims with someone who has the virus, 18 (10.38%) gave affirmative response whiles 22 (12.31%) were not sure if they will be infected or not. Furthermore, 166 (93.85%) of the respondents disagreed that using the same toilet with an infected person, 9 (5%) responded in the affirmative while two (1.15%) were not certain.

Also, sleeping in the same room with an infected person, 140 (79.23%) responded negatively, 12 (6.92%) responded in the affirmative whilst 25 (13.85%) were not certain about it. Lastly, 161 (91.15%) agreed to the statement that being closer when an infected person coughs, 6 (3.46%) disagreed, whiles 10 (5.38%) were not sure. The respondents' responses indicated that HIV is just like the air-borne disease, where the organisms pass through air to infect another person hence 91.15% responded in the affirmative. From Table 1 most of the respondents' responses were correct to say that receiving blood transfusion with infected blood, one will become infected. Also, being bitten by mosquitoes is also a misconception and that having unprotected sex with someone you met for the first time, having anal sex with an infected person and having multiple sexual partners are all risky behaviours which can make one infected. Singh (1997) support this by the finding that misconceptions about HIV transmission via casual contact such as shaking hands, being sneezed or coughed upon or sharing a glass with an infected person were abundant.

| Knowledge | Yes | | No | | Uncertain | |
|---|-----|-------|-----|------|-----------|------|
| | No. | % | No. | % | No. | % |
| Have you heard of Acquired Immune Deficiency Syndrome (AIDS)? | 177 | 100 | 0 | 0.00 | 0 | 0.00 |
| Is HIV / AIDS real? | 177 | 100 | 0 | 0.00 | 0 | 0.00 |
| Does AIDS kill? | 173 | 97.69 | 0 | 0.00 | 4 | 2.3 |
| A pregnant woman infected with the virus can pass it to her baby. | 161 | 91.15 | 13 | 7.31 | 3 | 1.5 |
| There is a vaccine which can prevent AIDS. | 171 | 96.54 | 0 | 0.00 | 6 | 3.4 |
| cannot tell if a person has HIV by the way he or she looks. | 175 | 98.85 | 0 | 0.00 | 2 | 1.1 |
| AIDS destroys the body's ability to fight diseases/illness. | 166 | 93.85 | 2 | 1.15 | 9 | 5.0 |
| AIDS can be cured if detected early. | 176 | 99.23 | 0 | 0.00 | 1 | 0.7 |
| AIDS is caused by a virus. | 170 | 95.77 | 1 | 0.77 | 6 | 3.4 |
| A healthy-looking person with the virus can pass it on. | 160 | 90.38 | 4 | 2.31 | 13 | 7.3 |
| You can have HIV/AIDS and not know it. | 164 | 92.69 | 5 | 2.69 | 8 | 4.6 |

Table 2 indicates that almost all the respondents were aware of how HIV is spread. All the respondents (100%) had heard about HIV and AIDS and that they knew that HIV is real but only 4 (2.31%) did not believe AIDS kills. Also, 170 (95.77%) of the respondents knew that AIDS is caused by a virus and that one can have HIV/AIDS but do not know he/she has it. About 92% of respondents believed that a pregnant woman can pass the virus to her unborn baby, 13 (7.31%) did not believe that, whiles 3 (1.54%) did not know anything about it. In addition, AIDS can be cured if detected early received very shocking responses, 176 (99.23%) said yes, it can be cured whilst only 1 (.77%) said no, there is no cure. Also, is there a vaccine for AIDS, 171 of the respondents knew that AIDS is caused by HIV. The root cause of HIV transmission was correctly identified as blood transfusion (88%), sexual contact (92%), infected needles (79%), vertical transmission (90%), Also, 74% of their respondents knew that AIDS was curable. Figure 1 shows responses on respondents' sources of information about HIV.

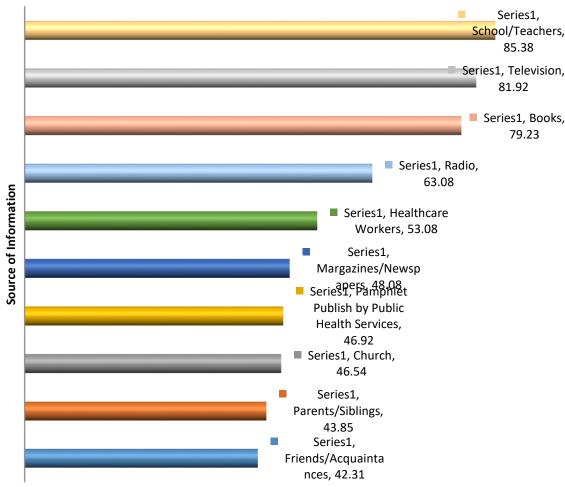


Figure 1. Source of information on HIV/AIDS

From Figure 1, 150 respondents thus (85.4%) of the trainees have heard about HIV/AIDS through their school that is from teachers. Those who heard it through television constitute 145 (81.9%) and radio are 112 (63.1%). Those who read books 140 (79.2%), magazines/newspapers were 85 (48.1) and health service's published pamphlet before having information about HIV/AIDS were 83 (46.9%). Those who received information from church were 83 (46.5%). Also, 94 (53.1%) of the trainees' source of information on HIV/AIDS was through teachings from health workers. Lastly, 74 (42.3%) respondents said they heard it through friends or acquaintances.

The findings on the sources of information on HIV/AIDS indicate that, teachers provide most information on HIV. This is because; Ghana Education Service has made it compulsory for HIV programme to be included the mainstream subjects. Hence most subjects are integrated with HIV and teachers are to infuse where necessary. On media such as television and radio, there are a lot of programmes to sensitize people about the modes of transmission and misconceptions surrounding the virus. This goes to buttress the study in which the U.S. teens ranked the media second to school sex education programme (Paediatrics, 2001). On the print media such as books, newspapers and magazines, although they play significant role in creating awareness, more than half of the respondents do not read anything aside their lecture notes.

In addition, some respondents said they got the message in church, less than half of the respondents identified their parents and friends as their source of information. This indicates that, Ghanaian parents do not talk about sex to their children since they consider it as a taboo. Their fear is that, educating your child about sex is teaching him/her to it. Also, 94 (53.1%) of the trainees' source of information on HIV/AIDS was through teachings from health workers and 74 (42.3%). Lastly 74 (42.3%) said they heard it through friends or acquaintances. Couric (2005) confirmed that, most sexually active teens are more likely to cite their friends and partners as information sources. Parents refuse to educate their children on issues concerning sex, hence they rely on friends for information. Although early sexual activity may be caused by a variety of factors, the media are believed to play a significant role. U.S. teens ranked the media second only to school sex education programs as a leading source of information about sex (Wingood et al, 2001). Couric (2005) asserts that about (70%) of most teenagers received some or a lot of information about sex and sexual relationships from their parents. Other sources of information included friends at 53%, school, also at 53%,

TV and movies at 51% and magazines at 34%. School and magazines were said to be used as sources of information more by girls than by boys, and sexually active teens were more likely to cite their friends and partners as information.

A test was conducted among the respondents to assess their knowledge on HIV/AIDS. The test was marked over 15. The summary of result for both gender groups is depicted in Table 3.

| est score for frances across Gender | | | | | | | |
|-------------------------------------|-------|------|----------|----------|--------|------|--|
| Gender | Mean | SD | Skewness | Kurtosis | t-test | Sig | |
| Male | 11.48 | 1.29 | -2.13 | 6.03 | 699 | | |
| Female | 11.59 | 1.18 | -1.87 | 5.18 | .486 | .486 | |
| Overall | 11.55 | 1.22 | -1.98 | 5.52 | | | |

 Table 3. HIV/AIDS Test Score for Trainees across Gender

Generally, on a scale of 15, the average performance for the respondents was 11.55. Comparatively, the males have an average score of 11.48 whereas the females had an average performance of 11.59 (Table 3). This shows that the females' performance was slightly better than the males. Also, the scores for the females were less spread than that of the males, since the standard deviation for the females was 1.18, whiles that of the males was 1.29. The skewness of -2.13 for the males and -1.87 for the females imply that the distribution of both males' scores and females' scores are negatively skewed. Test on differences between the scores of the males and females show that there is no significant difference in scores for gender of the trainees.

A t-test value of -.699 with a significant value of .486 which is considerably greater than 0.05 level of significance was realised among genders. Table 4 presents the F test results of HIV/AIDS test score for trainees across age groups.

Table 4. HIV/AIDS Test Score for Trainees across age Groups

| is beare for framees across age Groups | | | | | | | | |
|--|-------|-------|----------|----------|--------|--|--|--|
| Age | Mean | SD | Skewness | Kurtosis | F-test | | | |
| 18 - 20 | 11.58 | 1.170 | -1.143 | .885 | 1.608 | | | |
| 21 - 23 | 11.44 | 1.390 | -1.935 | 4.673 | (.202) | | | |
| 23+ | 11.72 | .897 | -1.430 | 3.126 | | | | |
| Overall | 11.55 | 1.221 | -1.981 | 5.519 | | | | |

Assessment of knowledge difference in ages of respondents was made (Table 4). Those who belong to the age group of 18 to 20 years and 21 to 23 years had an average score of 11.58 and 11.44 respectively. Those above the age 23 had an average score of 11.72. This shows that that above the 23 years performance was slightly better than those belonging to other age groups. Also, the scores for those above 23 years were less spread than others, if their standard deviation is taken into consideration. Test on differences between the scores among various age groups of respondents show that there is no significant difference in scores for ages of the trainees at 0.05 level of significant, since f-statistics value was 1.608 and the significant value was .202 which is by far greater than 0.05 level of significance was realised among genders.

Research Question Two: What are the sexual Behaviours of Teacher Trainees in the three Selected Colleges of Education in Ghana?

The questions were asked to find out the sexual behaviours of students. The responses were analysed by frequency and percentages in the form of tables and graphs. Figure 2 depicts the responses elicited from students on their sexual activeness. Fifty-seven representing (31.9%) have never had sexual intercourse before as shown in Figure 4, whereas 120 (68.1%) have had sexual intercourse before.

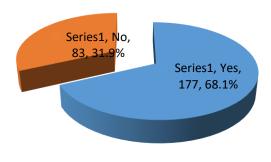
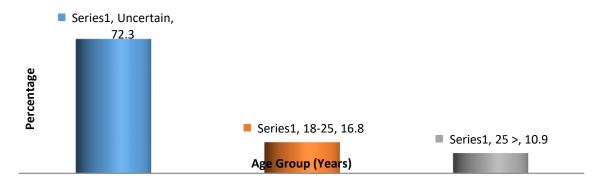


Figure 2. Have you ever had sex?

This goes to buttress Anarfi's (1997) study in which majority of the respondents aged between 8-19 years did not know whether it is possible for a normal person to stay a long time without having sex, because they deem it as natural, biological necessity and

without it, one may look stupid and a good thing to have children. Results from the 2008 Ghana Demographic and Health Survey show that over three-quarters of females and close to 60 percent of adolescent males in Ghana have had sex before. In addition, Ajuwon (2006) indicated in his study that, about 50% of the students reported they have had romantic relationship before. All these may be the result of Coon (1996) assertion in which secondary sex characteristics appears at puberty in response to hormonal signal from the pituitary gland which causes a number of physical changes.

When adolescents see this change, they become curious and begin to follow their instincts. Hence the great number of people who have had sexual intercourse. According to Rubin (1965), fun morality value system upholds the view that, sex is fun and the more fun, the better. Most of the adolescent feel having sex with a partner is fun that is why after going out to enjoy drinks, they add sexual intercourse to it, to make the fun complete. Figure 5 shows the age students want to have sex.



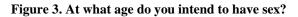


Figure 3 indicated that, 72.3% who have never had sexual intercourse before were not sure about the time they will have their first sex, 10.9% said that they will have their first sex when they are above 25 years. This shows that majority of the respondents who have never had sexual intercourse before were uncertain about the time they will have sex. The reason for this uncertainty may be that most of the respondents want to fulfill their dreams by being independent and responsible. Table 5 presents the age of first sexual intercourse.

| Age Group | Gender | | | | Total | |
|-----------|--------|-------|--------|-------|-------|-------|
| (Years) | Male | | Female | | | |
| | No. | % | No. | % | No. | % |
| < 13 | 1 | 2.8 | 1 | 1.9 | 2 | 1.6 |
| 13 - 15 | 1 | 2.8 | 5 | 6.7 | 6 | 5.1 |
| 16 - 18 | 13 | 30.6 | 18 | 22.9 | 31 | 25.8 |
| 18 > | 27 | 63.8 | 54 | 68.5 | 81 | 67.5 |
| Total | 42 | 100.0 | 105 | 100.0 | 177 | 100.0 |

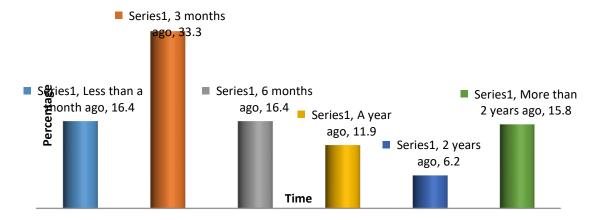
Table 5. Age distribution of students First Sexual Intercourse

From Table 5, 81(67.5%) had sexual intercourse when they were above 18 years, 31(25.8%) had sex when they were between the ages of 16-18, 6(5.1%) had sex between 13-15 years and 2(1.6%) when they were below 12 years. This show that majority of the respondents who have had sex before had their first sex when they were above 18 years of age. Also, more than half of both males and the females had their first sex when they were above 18 years. This goes to buttress the results from the 2008 Ghana Demographic and Health Survey which shows that over three-quarters of females and close to 60 percent of males in Ghana had their first sexual encounter before age 20 (Ghana Statistical Service, 2010).

The 2011 Edulink survey conducted in Ga Mashie show comparable results. In addition, over 40 percent of girls and about 20 percent of boys ages 15 to 19 in Ga Mashie reported ever having sexual intercourse, similar to national rates; and these data suggest that a large proportion of Ghanaians have sex before age 20, and more females than males start sex during adolescence (Edulink, 2011). Guiella&Midisa (2007) opined that premarital heterosexual activity is common among adolescents between the ages of 13-17 years. Also, Singh et al (1997) indicated that among his population, most students reported of early sexual activity before the ages of 18. Ajuwon (2006) stated that the mean age of first sex in his study was 15.8 years. Among the boys, the age of first sex was 16 years whilst girls were 17 years. This is in support of Freud's psychosexual theory of development; he noted that in a certain point in time individual (adolescent) is faced with two forces, the biological and social.

The biological factor (sex drive) dictates to the adolescent to act contrary to the norms of society. This goes to confirm the assertion that most young adults always follow their instinct rather than what the society (culture) of the people permits. The

society at the same time expects the individual to delay gratification of sex drive in response to societal values and norms. Against this background the adolescent must go through some rituals to signify the transition from childhood to adulthood. Thereafter, the individual is socially accepted as an adult. Those who go contrary to this, certain societal sanctions were meted out against them (Adomoko, 1991). Figure 6 shows the response of respondents on the last time they had sexual intercourse.



Among those who have had sex before, 33.3% had sex about 3 months prior to the time the data was collected, 16.4% had sex less than a month prior to the data collection, 16.4% indicated six (6) months ago and 6.2% was 2 years ago, 15.8% stated more than two years ago and 6.2% said a year ago using the time the data was collected as reference point (Figure 6). This shows that majority of the respondents had sex about 3 months ago. This may happen because at the time data was collected, students had spent more than three months on campus. This gives the true reflection of students' sexual behaviour which indicates that, most students are sexually active and have regular sexual partners. Figure 7 shows the circumstances under which students had sex.

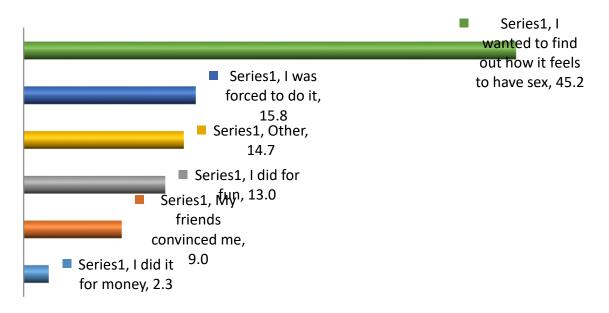


Figure 5. Circumstances under which respondent had sex

From Figure 5, among those who have had sex before, 45.2% of them had sex because they wanted to see how it feels thus out of curiosity, 15.8% of them were forced and 9% were due to peer pressure. Also, 13.0% did it for fun, 2.3% did it for money and 14.7% did it with no apparent reason. This shows that majority of the respondents had sex because they wanted to feel how it is, which in case may be attributed to what they have seen or heard. The findings above confirm the fact that adolescents engage in sex for various reasons (Asiimuwe-Okiror et al. 1997; Best, 2000; Kelly, 2001).

In those previous studies, they agreed that peer pressure and sexual coercion among others are the major reasons for adolescents' sexual initiation. In this study, however, a significant proportion of students indicated that they initiated sex because they wanted to find out how it feels. Tanner, (1990) and Udry, (1990) point out that increase in sexual behaviour is largely hormonal and such increase in hormone levels occur at the same period of adolescent development. This perhaps explains why a significant number

of students stated that they initiated sex because they wanted to find out how it feels. Table 8 depicts the responses from of students who have used condom before.

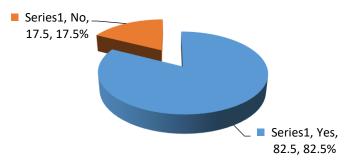


Figure 6. Usage of condom by students

Figure 6 shows condom usage among respondents who have had sex before. It indicated that, 82.5% of the respondents who had sexual intercourse have used condom before, whereas 17.5% have never used it before. This shows that majority of the respondents who have had sexual intercourse, have used condom before which may be attributed to the advantage of its usage. This contradicts Anarfi's (1997) study, in which 83% of the young people knew about condom but only 28% had ever used them. Again, Asiimuwe-Okoror et al (1997) observed that knowledge about condom was high but only 11% of men and the same percentage of women reported condom use during the last sexual intercourse with their current spouse or regular partner.

Also, Lamptey (1994) showed that in Africa, overall condom sales increased from less than one (1) million in 1988 to almost seventy (70) million in 1992. This shows that most of the people are enlightened about the use of condoms. The increase in condom use could be attributed to massive education among both men and women. A study in Ghana found out that condom use rises with increasing education among both men and women, but urban dwellers are likely than their rural counterparts to have ever used a condom; younger respondents (aged15-24) are likely to have used a condom during last sex (GDHS, 2009). Figure 9 depicts students' responses on their usage of condoms the last time they had sex.

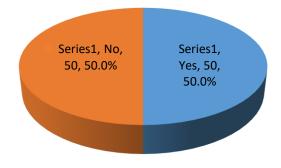


Figure 7. Usage of condom at last sexual intercourse

Figure 7 shows whether students used condom the last time they had sex. Out of the total number of respondents who have had sex before, 50% responded in affirmative whilst the rest responded negative. Thus, half of the respondents who have had sex before indicated that they did use condom during their last sexual intercourse. This confirms Civic's (2000) finding in which inconsistent use of condom was attributed to individuals' perceptions that they "knew" their partners sexual history or" just knew" their partner was safe. In addition, Wilson and Lavelle (1992) found out that in Zimbabwe, adolescents are concerned that condoms are off-putting and apprehensions that insisting on condom use suggests that one has AIDS.

This shows that, more students are having unprotected sex which is very dangerous and risky to their health apart from HIV. There are other sexually transmitted diseases (STD) they will be exposing themselves to. This confirms why STD such as syphilis, HIV and teenage pregnancy is on the increase in Central Region (National Prevalent and AIDS Estimate, (2008-2015). Figure 8 depicts students' responses on the issue of having regular sexual partners.

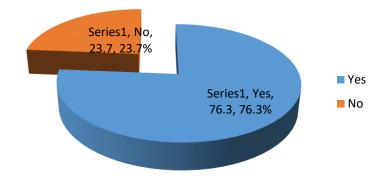


Figure 8. Regular sexual partner

Figure 8 shows respondents who have regular sexual partners. Out of 177 trainees interviewed, 76.3% answered in the affirmative whiles 23.7% said no. This indicates that majority of trainees have regular sexual partners. It is clear from the study that, most of the respondents are between the ages of 21-23 years so it is obvious that most have regular sexual partners. It is most common to find most students getting married either within the school time or after completing their Diploma studies. Table 6 presents the number of regular sexual partners on should have.

Table 6. Number of Regular Sexual Partners

| Regular sexual partners | No. | % |
|-------------------------|-----|------|
| 1 | 124 | 70 |
| 2 | 43 | 24.3 |
| 3 | 6 | 3.4 |
| 4 | 4 | 2.3 |
| Total | 177 | 100 |

Table 6 indicates that out of 177 respondents, 124 (70%) said one must have one regular sexual partner. Forty-three (24.3%) indicated two (2), whilst 6 (3.4%) and 4 (2.3%) said one must have three (3) and four (4) regular sexual partners respectively. This goes to support Konde-Lule et al. (1997) studies of "Adolescents and HIV-I in Uganda" in which of the 108 sexually active men, 56.5% reported one partner in the previous year, 25.0% had two partners, and 10.2% reported three partners. 4.6% had four partners and 3.7% reported five partners or more partners in the previous years. The study revealed that among the 227 sexually active women who provided partner data, 80.6% reported one 11.9% reported two, 4.8% reported three, 1.3% reported four, and 1.3% reported five or more partners in the previous years. Figure 11 looks at the time needed for one to know someone before they have sex.

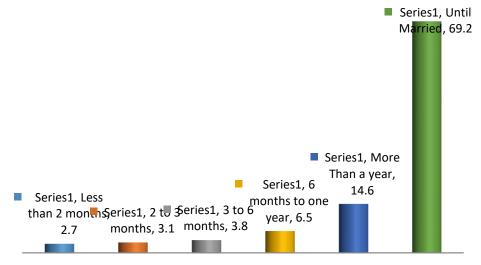


Figure 9. How long must one have to know someone before having

Looking at Figure 9, 69.2% of respondents explained that one must wait until he/she is married before having sexual intercourse. Moreover, 14.6% of them said that one must know someone for more than a year before any sex can take place, 6.5% also

indicated that, one must know someone between six (6) months to one year. Moreover, 3.8% said between three (3) to six (6) months whilst 3.1% and 2.7 indicate two (2) to three (3) months and less than two (2) months respectively. However, it can be seen that majority of the respondents will wish to know someone until married before he or she will have any sexual intercourse with the person.

RESEARCH IMPLICATIONS FOR COUNSELLING

Counsellors would be informed as to the sexual orientations of the student and be ready to run seminars, organize talk shows to inform the students about the existence of HIV/AIDS and how it is fast spreading and killing innocent people in Ghana and as well as the world as whole.

Since HIV/AIDS is a very sensitive issue and most people are uncomfortable sharing such issues, it implies that college counsellors must watch out for clients dealing with low self-esteem, isolation from friends and mostly kept to themselves and probe further during counselling sessions to reduce the spread of HIV/AIDS among them.

The result of the study will help college counsellors to train the students by organizing workshop on assertiveness towards sexual advancement and miss education from their counter-parts and friends who force or convince them to engage in sexual activities.

CONTRIBUTIONS TO SCIENTIFIC COMMUNITY AND FUTURE RESEARCH

The results or findings of the study will help Guidance and Counselling coordinators to gain more knowledge on HIV/AIDS, educate and create awareness of the existence of HIV/AIDS on how fast people are being infected with the virus.

The study will also enlighthened student and other individuals who chance on this article to be weary of their sexual behavior, thus, in terms of having multiple sexual partners.

The research was quantitative in approach. Future studies should focus on using a mixed method to gain an indepth understanding and comprehensive information on the prevalence rate of HIV/AIDS and students sexual behaviours.

CONCLUSIONS

The study sought to assess students' knowledge of HIV/AIDS and their sexual behaviour towards AIDS prevention.

From the findings, almost all the respondents were aware of how HIV is spread and that they knew that HIV is real and knew that AIDS is caused by a virus and that one can have HIV/AIDS but do not know their HIV/AIDS status.

Most of the trainees have heard about HIV/AIDS through their school that is from teachers/tutors. Some heard it through television and radio presentations and discussions. Others also read it either from books, magazines/newspapers while the rest heard it from pamphlets published by health services.

Furthermore, on the students' sexual behaviours, most had sexual intercourse when they were above 18 years, also most of the males and females had their first sex when they were above 18 years.

Majority also agreed that peer pressure and sexual coercion were the major reasons for adolescents' sexual initiation. In this study, however a significant proportion of students indicated that they initiated sex because they wanted to experience out how it feels like to have sex.

Concerning the use of condom, most of the respondents who have had sexual intercourse, had used condom before but half of the majority of the respondents had unprotected sex which is very dangerous and risky to their health. This confirms why STD such as syphilis, HIV and teenage pregnancy is on the increase in Central Region (National Prevalent and AIDS Estimate, (2008-2010).

RECOMMENDATIONS

It is therefore recommended that, the Ghana Education Service in collaboration with donor agencies like WHO and UNAIDS should resource teachers well enough and build their capacity in order to make their lessons on HIV very interesting and effective to broaden the students' knowledge base on good sexual behaviour to avoid being infected with the HIV/AIDS.

College counsellors are recommended, to organize talks, seminars and other relevant activities to reduce and curb the infection rate among College of Education students in Ghana.

It is recommended that Colleges of Education institutions and other tertiary institutions should make a mandatory entry requirement for HIV/AIDS testing before entering the College so the trainees will know their status to take the precautionary measure to prolong their lives. This will also put fear in the younger ones who would like to pursue their education through the colleges of education and other tertiary institutions to stay away from early sexual activities.

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REFERENCES

- 1) Abrams, D., Abraham, C., Spears, R., & Marks, D. (1990). *AIDS invulnerability relationships, sexual behaviour and attitudes among 16-19 years olds.* Lewes: Falmer Press.
- 2) Agadzi V. K. (1990). AIDS: The African perspective of the killer disease. Accra: Ghana University Press.
- 3) Aggleton, P. H., Homans, H., & Warwick, I. (1988). Young people sexuality education and AIDS. *Youth and Policy*,23(2), 25-48.
- 4) Agyei, W. K., Epoma, E. J., &Lubega, M. (1992). Contraception and prevalence of sexually transmitted diseases among adolescents and young adults in Uganda. *International Journal of Epidemiology*, *21*(5), 981-988.
- 5) Ajuwon, J. (2006). BMC public health. Retrieved on June 10, 2012 from www.biomedcentral.com/1471-2458/6/310.
- 6) Amedahe, F. K. (2005). Lecture notes on educational research. Cape Coast: University of Cape Coast Press.
- 7) Anarfi, J. K. (1997). Vulnerability sexually transmitted disease:Street children in Accra. *Health Transition Review*, *7*, 281-306.
- 8) Asamoah, A. (1999). The effects of adult-led didactic presentation and peer-led discussion on AIDS-knowledge of junior secondary school students in Ghana: *Ife Psychologia*, 7(2), 213-228.
- Asiimwe-Okiror, G., Opio, A. A., Musinguzi, J., Madraa, E., Tembo, G., &Carael, M. (1997). Change in sexual behaviour and decline in HIV infection among young pregnant women in urban Uganda. *AIDS Journal*,11(14), 1757-1763.
- 10) Baker, T. L. (1994). Doing social research (2nded.) McGraw-Hill Inc.
- 11) Best, K. (2000). Many youths face grim STD risks. Network-Adolescent Reproductive Health, 20(3), 4-9.
- 12) Campbell, D. (2006). *No sex please until we're at least 17 years old, we're British.* Retrieved on November 26 2011 from<u>http://en.wikipedia.org/wiki/Adolescent sexual behavior</u>
- 13) CDC HIV/AIDS (2010). *Resources HIV prevention in the United States ata critical crossroads*. Retrieved on July 28 2010 from <u>http://www.cdc.gov/hiv/resources/reports/hiv_prev_us.htm.Retrieved</u>
- 14) Centres for Disease Control and Prevention. (2008).Nationally Representative CDC study finds 1 in 4teenage girls has a sexually transmitted disease. Retrieved on July 03, 2010 on <u>http://www.cdc.gov/STDConference/2008/media/release-11march2008</u>
- 15) Coovadia, H. M. (2004). Antiretroviral agents, how best to protect infants from HIV and save their mothers from AIDS. *N. Engl. J. Med.* 351(3), 289–292.
- 16) Couric, K. (2005). *Nearly 3 in 10 young teens sexually active*. Retrieved on January 01, 2011 from http://www.msnbc.msn.com/9072
- 17) Cunningham, A., Donaghy, H., Harman, A., Kim, M., &Turville, S (2010). *Manipulation of dendritic cell function by viruses.Current Opinion in Microbiology*, *13*(4), 524–529.
- 18) Di Clemente, R. J. (1987). Prevention of AIDS among adolescents: Strategies for the development of comprehensive risk-reduction health education programmes. *Health Education Research*, 2(3), 278-281.
- 19) Edjah, K. (1999). Some aspect of the adolescent sexual behaviour. IFE PsychologIA, 7(2), 129-137.
- 20) Ehrhardt, A. A. (1996). Sexual behaviour among heterosexuals. AIDS in the World II, 527(2), 259-263.
- 21) Fisher, J. D. & Misovich, S. (1990). Evolution of college students' AIDS related behavioural responses, attitudes, knowledge and fear. *AIDS Education and Prevention*, 2(4), 322-337.
- 22) Frankel, J. R., & Wallen, N. E. (2003). How to design and evaluate research in education. Boston, McGraw-Hill.
- 23) Ghana Demographic and Health Survey. (2009). *Ghana demographic and health survey*. Accra: Ghana Statistical Service.
- 24) Guiella, g. & Madise, N. J. (2007). HIV/AIDS and Sexual-Risk Behaviour among Adolescents: Factors influencing the use of condoms in Burkina Faso. *Afr J Reprod Health* 11(3), 182-196.
- 25) Joint United Nations Programme on HIV/AIDS (UNAIDS) (2010). AIDS epidemic update: Geneva: UNAIDS.
- 26) Joint United Nations Programme on HIV/AIDS (UNAIDS) (November, 2009). *AIDS epidemic update:* Geneva: UNAIDS.
- 27) Jurich, A. P. (1979). Differential determinants of premarital sexual standard among college students. *Adolescence*, *14*, 797-810.
- 28) Kelly, M. J. (2001). *Challenging the challenger: Understanding and expanding the response of Universities in Africa to HIV/AIDS*. Washington D.C.: A.D.E.A Working Group on Higher Education.

- 29) Lamptey, P, (1994). Slowing AIDS: Lessons from a decade of prevention efforts. AIDS Captions- Family Heath International, 1(3), 2-4.
- 30) Lescano, C. M., Vazquez, E. A., Brown, L. K., Litwin, E. B., &Pugatch, D. (2006). Condom use with 'casual' and 'main' partners: What's in a name? *Journal of Adolescent Health* 39(3), 443.e1-443.e7
- 31) National AIDS / STI Control Programme. (2009). *National HIV prevalence and AIDS estimates report 2008-2015*. Accra: National AIDS Control Programme.
- 32) National AIDS / STI Control Programme. (2010). 2009 HIV sentinal survey report. Accra: Ghana Health Service.
- 33) Nketia-Amponsah, Codjoe&Ampaw, (2019). HIV/AIDS Awareness and Knowledge Among Ghanaian Women of Reproductive Age: What Are the Correlates? *Journal Asian and African Studies*, 54(2), 268-281
- 34) Wingood, G. M., McCree, H. D., Harrigton, K. & Davies, S. L. (2010). Dating Violence and the Sexual Health of Black Adolescent Female. *Pediatrics* 107(5), e72
- 35) Price, J. H., Desmond, S., &Kukula, G. (1985). High school student` Perception and misperceptions of AIDS. *Journal of School Health*, *55*, 107-109.
- 36) Qashqari, F. S., Alsafi, R. T., Kabrah, S. M., AlGary, R. A., Naeem, S.A., Alsulami, M. S. &Makhdoom, H. (2022). Knowledge of HIV/AIDS transmission mode and attitudes towards HIV/AIDS infected people and the level of HIV/AIDS awareness among the general population in the kingdom of Saudi Arabia: A cross-sectional study. Front. *Public Health* 10:955458.doi:10 3389/fpubh.2022.955458
- 37) Reader, E. G., Carter, R. P., & Crawford, A. (1988). AIDS knowledge, attitudes and behaviour: A study with University students. *Health Education Journal*, 47, 125-127.
- 38) Rubin, I. (1965). Transition in sex values: Implications for the education of adolescents. *Journal of Marriage and the Family*, 27, 185-189.
- 39) Sarantakos, S. (1994). Social research. London: The Macmillan Press Ltd.
- 40) Sherr, L. (1987). An evaluation of the UK government health education campaigns on AIDS. *Psychology and Health*, *1*, 61-72.
- 41) Singh, U., Porterfield, D., Thilakavathi, S., Shephard, M., Marwar, N., Divekar, A. D., & Bollinger, R. (1997). Knowledge of HIV transmission and sexual behaviour of college students in Pune, India. *AIDS Journal*, 11(12), 1519-1533.
- 42) Takyi, B. K., (1996). The effects of HIV/AIDS knowledge on contraceptive use behaviour in Ghana. Montreal: McGill University.
- 43) Tanner, J. M. (1990). Foetus into man. Cambridge: Havard University press.
- 44) <u>Teen Sex Survey</u> (2008). *Broaching the subject*. Retrieved on August 11, 2011 from http://sexperienceuk.channel4.com/teen-sex-1.
- 45) UNAIDS/UNICEF/WHO. (2010). Towards universal access: Scaling up priority HIV/AIDS interventions in the health sector. Geneva: UNAIDS
- 46) United Nations (UN) (2017) Progress towards the Sustainable Development Goals: Report of the Secretary General. New York: United Nations Economic and Social Council.
- 47) United Nation's International Children's Emergency Fund (2020). HIV and AIDS in adolescents: https://data.unicef.org/topic/adolescents/hiv-aids.
- 48) Universal International AIDS Society (2010). Access: Rights here, right now. New York: McGraw Hill.
- 49) Vieira MA (2011) Southern Africa's Response(s) to International HIV/AIDS norms: The politics of assimilation. Review of International Studies 37(1): 3–28.
- 50) Wilson, D. & Lavelle, S. (1992). Psychosocial predictions of intended condom use among Zimbabwean adolescents. *Health Education Research*, 7(1), 55-68.
- 51) Wolfe, L. (2004). Management of stigma and disclosure of HIV or AIDS status in healthcare settings. *Journal of Health Organization and Management*, 20 95 –114.
- 52) Udry, J. R. (1990). Patterns of adolescent friendship and effects on sexual behaviour. Social Psychology Quarterly, 48, 27-41.
- 53) UNAIDS. (2008). Joint United Nations Programme on HIV/AIDS. Report on the global HIV/AIDS epidemic.
- 54) Sieving, et al., (2002) Cognitive and behavioral predictors of sexually transmitted diseaserisk behavior among sexually active adolescents. Archives of Pediatric Adolescent Medicine, 151(3), 243–251.
- 55) Furstenberg et al. (1989). Does condom availability make a difference? An evaluation of Philadelphia's health resource centers. *Family Planning Perspectives*, 29(3), 123–127.
- 56) Ghana Statistical Service (2010), Ghana Health Service (GHS), Ghana demographic and health survey 2008. Calverton, Maryland, USA: GSS, GHS, and ICF.

- 57) Osuala, E. C. (2001). A handbook of vocational-technical education for Nigeria, Uruowulw-Obosi: Pacific Publishers.
- 58) Leedy, P. D. &Ormrod, J. E. (2010). Practical Research: Planning and Design. Strayer University, New York
- 59) Robson, C. (2002). *Real world research: A resource for social scientists and practitioner researchers* (2nd ed.). Oxford: Blackwell Publishing.
- 60) Gallant JE. Human immunodeficiency virus medicine. J Infect Dis. (2017) 216:624-5. doi: 10.1093/infdis/jix238
- 61) UNAIDS. Global HIV & AIDS Statistics--2018 fact sheet. The Joint United Nations Programme on HIV/AIDS. Available online at: https://www.unaids.org/en/resources/fact-sheet (2018) (accessed March 2, 2022).