Peer Education and Students' Knowledge of HIV, AIDS and Syphilis in Senior Secondary Schools in Uyo Senatorial District of Akwa Ibom State

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ABSTRACTS

The sought to assess the effect of peer education on student's knowledge of HIV, AIDS and syphilis in senior secondary schools in Uyo senatorial district of Akwa Ibom State. This study was an intervention research using a quasi-experimental research design with a non-equivalent control group design. The study was conducted in Uyo Senatorial District of Akwa Ibom State. The target population for this study was all the senior secondary school students studying within Uyo senatorial districts of Akwa Ibom State. A sample size of 422 subjects was used for the study. The study developed an instrument titled "Peer Education and Student's Knowledge of HIV, AIDS and Syphilis Questionnaire (PESKHIVAIDSSQ). Face and content validation of the instrument was carried out by three experts in the Department of physical and Health Education, Educational foundation, Guidance and Counselling in the University of Uyo, Uyo. The reliability of the instrument was established using a pilot group that was not part of the main study, but was found to be equivalent in all respect to the study. Five research assistants were trained and finally three research assistants were used by the researcher for the intervention and administration of the questionnaire. The study concluded that peer education is one of the most widely used strategies to address the sexually transmitted infections among adolescence. Peer education is a specific teaching practice used with good results in sexual education of students. The study reveals that sexually transmitted infections can be transmitted through non-sexual routes such as blood transfusion or from infected mother to her baby as the case of HIV, or congenital Syphilis during pregnancy or contact with infected secretions in the birth canal during delivery, sharing of contaminated items such as needles and syringes. One of the recommendations was that, young people should not be kept ignorant of their sex life. Given the circumstances of modern life, it is imperative for parents as well as tutors to explain to young people the need for sex education.

KEYWORDS: Peer Education, Student's, Knowledge, HIV and AIDS, Syphilis, and Akwa Ibom State

Introduction

It has been observed from studies on adolescent health behaviour and other groups within the communities that people are often willing to listen to, and follow advice from their peers - those similar to themselves in age, background and interest, with basic training and support. Young men and women can carry out range of educational activities with peers. These activities ranges from informal conversation to organized group session and can take place in communities, youth clubs, schools, churches or work place (Cronish and Campbell, 2009). Peer education programme aim to help young people to increase their confidence,

knowledge and skills in relation to sexual development in order to reduce their risk of reproductive health problems, sexually transmitted infections including HIV and AIDS.

Globally, peer education is one the most widely used strategies to address the issue of sexually transmitted diseases including HIV and AIDS pandemic. Peer education typically involves training and supporting members of a given group to effect change among members of the same group (Cornish & Campbell, 2009). Peer education is often used to effect changes in knowledge, attitude, beliefs and behaviours at the individual's level. Peer education may also create change at the group or societal level by modifying norms and stimulating collective action that contribute to changes in policies and programs. While it can be used for a variety of age groups and population for various goals, peer education as supported by United Nation Population Fund and Family Health International (2005) has been widely used as approach in behaviour change communication component of pregnancy, sexually transmitted infection and HIV prevention programs for youths.

Statement of the Problem

School children of today are exposed to the risk of being victims of sexually transmitted infections which was quite unknown to their predecessors a few decades ago. The epidemic of sexually transmitted infections is now progressing at a rapid pace among young people and secondary school students. Every year, one in twenty young people worldwide contract sexually transmitted infections and over 50% of newly infected with HIV are between 15-25 years old. Studies also confirm that young people form a significant segment of those attending sexually transmitted infections clinic and those infected with sexually transmitted infections, reasons include lack of sexual education and taboos still prevailing in our society.

Objectives of the study

The purpose of this study was to determine the effect of peer education programme on student's knowledge of sexually transmitted infections in senior secondary schools in Uyo senatorial district of Akwa Ibom State. Specifically, the study aimed to:

1. Determine the effect of peer education on student's knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial district of Akwa Ibom State;
2. Examine the effect of peer education on student's knowledge of syphilis in senior secondary schools in Uyo senatorial district of Akwa Ibom State;

Research Question

1. What is the mean response of the students exposed to peer education and the control group on knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial district of Akwa Ibom State?
2. What is the means response of the students exposed to peer education and the control group on knowledge of syphilis in senior secondary schools in Uyo senatorial district of Akwa Ibom State?

Research Hypotheses

The following null hypotheses will be tested

HO_1 There is no statistically significant effect of peer education on students' knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial district of Akwa Ibom State.

HO_2 There is no statistically significant effect of peer education on students' knowledge of syphilis in senior secondary school in Uyo senatorial district of Akwa Ibom State.

Concept of Peer Education

Peer education is a strategy, tool or communication channel used by people who share similar age, background and interest to communicate messages, (Sharma, 2002). Similarly, Mabala and Allen (2002) viewed peer education as a process whereby well trained and motivated young people undertake informal or organized educational activities with their peers – those similar to themselves in age, background or interest. Also, Hughes-d' Aeth (2002) agreed that peer education is considered one of many tools available to reach young people with information and skills. Peer education is typically used in conjunction with other means of communication and information dissemination such as media campaigns, advocacy by celebrity, spokesperson and youth friendly services (Gallant, 2005). Esu-Williams, Schenk and Motsepe (2004) asserted that peer education is a popular concept that refers to an approach, a communication channel, a methodology, a philosophy and or an intervention strategy. Similarly, peer education is a systematic training, people carry out as informed, organized educational activities with individuals or small groups over a period of time to achieve specific objective designed, (WHO, 2007).

Worldwide, peer education is one of the most widely used strategies to address the HIV and AIDS pandemic. It involves the training and use of individuals from the target group to educate, teach and support their peers (Minei, 2003). By using peers as resource, information, skills and caring can be extended in an exponential way and the social climate can be enhanced. Peer education is a specific teaching practice used with good results in sexual education of adolescents. The main goal of peer education as confirmed by Gallant, (2005) is to achieve a behavioural change that would promote healthier and safer sex.

Concept of Sexually Transmitted Infections

Sexually transmitted infections are infectious diseases, which are primarily transmitted from person to person through sexual intercourse or sexual contact (Joshi et al 2007). Sexually transmitted diseases also called communicable diseases, they are those diseases that can spread through normal heterosexual sex (penis-vagina) homosexual or anal sex (penis-anus). Oral sex (mouth on penis or mouth on vagina). However, some sexually transmitted infections can be transmitted through non-sexual routes such as blood transfusion or from infected mother to her baby as in the case of HIV, or congenital syphilis during pregnancy or contact with infected secretions in the birth canal during delivery, sharing of contaminated items such as needles and syringes as in the case of HIV or sharing of contaminated clothes as in the case of pubic lice or genital scabies (Achalu, 2008).

Sexually transmitted infections are caused by germs or microorganism which cannot be seen with the naked eyes and these according to (Okafor, 2002) include bacteria, viruses, fungi, protozoans and arthropods. These germs are present in secretion and discharges of urethra

(penis) and vagina which can be passed from one person to another during sexual contact (Achalu, 2007). In addition, the author highlighted that AIDS is not the only sexually transmissible disease that there are over twenty (20) different types of STD and some of them include HIV and AIDS, gonorrhea, syphilis, genital herpes, genital warts, trichomoniasis, candidiasis, genital scabies, pediculusis like, public lice etc.

Concept of HIV and AIDS

Of the many theories and myths about the origin of HIV, the most likely explanation is that HIV was introduced to humans from monkeys. A recent study (Gao et al., 1999) identified a subspecies of chimpanzees native to west equatorial Africa as the original source of HIV-1, the virus responsible for the global AIDS pandemic. The researchers believe that the virus crossed over from monkeys to humans when hunters became exposed to infected blood. Monkeys can carry a virus similar to HIV, known as SIV (simian immunodeficiency virus), and there is strong evidence that HIV and SIV are closely related (Simon et al., 1998; Zhu et al., 1998). AIDS is caused by HIV infection and is characterized by a severe reduction in CD4+ T cells, which means an infected person develops a very weak immune system and becomes vulnerable to contracting life-threatening infections (such as Pneumocystis carinii pneumonia). AIDS occurs late in HIV disease. Tracking of the disease in the United States began early after the discovery of the pandemic, but even to date, tracking data reveal only how many individuals have AIDS, not how many have HIV. The counted AIDS cases are like the visible part of an iceberg, while the much larger portion, HIV, is submerged out of sight.

Concept of Syphilis

Syphilis is caused by bacteria called treponema palladium, (spirochacte). It is transmitted by sexual intercourse, oral or anal contact with an infected person. It can also be transmitted from an infected mother to be unborn child in the case of congenital syphilis. The incubation period ranges from 10-90 days or average of 30 days from exposure (Achalu, 2007). The chancre looks like pimples or sores that are usually painless on the genitals or site of infection. If untreated, the primary lesions disappear and progress into the next stage. The genital lesions heal in a few weeks followed by rash, malaise, fever enlargement of lymph nodes, arthritis and hair loss after lesion have disappeared. Syphilis according to UNAIDS (2000) occurs in three stages – the primary, secondary and tertiary stages. The early symptoms can be mild but as the infection moves to the end tertiary stage it could result to damage of organs such as the eyes, brains, heart, nervous system, skin. This could however result to dementia, paralysis and even death (Achalu, 2008). Workowski & Berman (2010) stated that syphilis is a sexually transmitted infection caused by Treponema pallidum. People with untreated infection might present the symptoms not only limited to ulcer, chancre, skin rash, mucocutaneous lesions and lymphadenopathy, but also cranial nerve dysfunction, auditory or ophthalmic abnormalities, and cardiac or gummatous lesions.

Active syphilis infection in pregnancy when untreated or inadequately treated, can lead to abortion, stillbirth, prematurity, low birthweight, neonatal death or congenital syphilis (Hawkes, Matin, Broutet& Low 2011). Syphilis can also increase the risk of HIV acquisition and transmission. Regular treatment for syphilis patients is thus suggested to be one way in controlling HIV epidemic. (Buchacz et al 2004). Syphilis is one the sexually transmitted infections that can passed through sexual intercourse such as Gonorrhea; caused by bacteria called Treponemapalidium (Asfaw, 1988). Study of Shoquist and Diane (2003) revealed that

syphilis is a bacterial infection that is usually passed on through having sex with someone who is infected.

Role of Peer Health Education in the Control of STD

Generally, the purpose of health education is to inform people and help them to make intelligent decision and take actions that will improve or promote their health (Achalu, 2008). The importance of health education as a means of controlling sexually transmitted diseases is widely accepted, since it is increasingly recognized that their prevention, transmission, diagnosis and treatment are influences to a large extent by the behavioural and socio cultural factor involved (WHO 2007). The role of peer health education in the control of sexually transmitted infections to enlighten peers about the problem of sexually transmitted infections, to secure support for STD control, to educate peer about the risk factors contributing to sexually transmitted infections, to encourage peers to avoid or reduce risk of infection, to inform peers about prevention measures or treatment.

To prevent the development of sexually transmitted infections and their consequences. This according to WHO can be accomplished by the following:

- Reducing diseases exposure by advising individuals at risk to avoid unsafe sexual behavior.
- Preventing infection by promoting the use of condom or other preventing barriers.
- Detecting and curing diseases by providing effective and efficient diagnostic and treatment facilities and promoting and supporting health seeking behaviours.

Prevention of HIV and AIDS

This could be done through information and education of the general public. This could also be done through behavioural change which according to Achalu (2008) include: Having sex with a faithful partner, sexual abstinence by unmarried people, use of condom for protection by unfaithful partners, reducing number of sexual partner, avoiding oral (Anal sex), avoiding sex with commercial sex workers, getting prompt medical attention when necessary, avoiding intravenous drug use and homosexuality.

Generally, the danger, signs and symptoms for sexually transmitted diseases include:

1. Itching around the genitals
2. Abnormal discharge from the genitals
3. Pains on urination or during intercourse
4. Pains in the stomach or groin area
5. Bumps or lumps on the genitals
6. Rashes, blisters or sores on the genitals
7. Pains or discomfort around the genitals
8. Skin rash or lesions
9. Sore throat
10. Sores or ulcers on the genitals
11. Lower abdominal pain in the female
12. Swelling on the scrotum.

The guidelines to reduce the risk of getting HIV and AIDS infections are as follows:

13. Learn about sexually transmitted infections and the signs and symptoms

14. Have sex with only a faithful and uninfected partner

15. Use condom to protect yourself if you must have casual sex

16. Reduce the number of sex partners

17. Avoid unnecessary blood transfusion

18. Avoid sharing of skin-piercing instruments

19. Avoid drug abuse especially intravenous drug use

20. Avoid sexual contact with people who have symptoms such as lesion, ulcers, or genital discharges

21. Seek treatment if you suspect that you have a sign of an infection, including urinary tract infection (Achalu, 2008).

Prevention of Syphilis

According to UNICEF (2001) reports in Nigeria young people obtain information on sex from peers; most of the information is inadequate and erroneous. Gupta (2002) also observed that the increasing reliance on television, alcohol and gambling as an outlet for stress and tension reduction and a firm that entertainment is a devastating behaviour since its consequence are risky sexual behavior. Moreover, Theerapon, Suankratay and Jitapunkul, (2000) revealed that students in rural settings are vulnerable and likely to lack the knowledge for many reasons but especially because of language issues, differences in cultural beliefs and socio-economic barriers.

Bishaw, Tafari, Zewdie, Hail, Mascola and Brown (1983) reported that syphilis can be prevented through the following ways:

- Have sex with a healthy faithful partner who has been tested and is clear from the infection.
- Condoms can reduce your risk of contracting the disease,
- Using a dental dam (square of plastic) when ones mouth makes contact with partner's vagina or anus.
- Avoid sharing sex toys.
- Avoid multiple injection use; do not use other people's needles.

Shoquist and Diane (2003) postulated that youths engage in unprotected sex which exposes them to certain number of risks such as sexually transmitted infections (STIs) early pregnancy or unwanted pregnancy which can lead to unsafe abortions, resulting into life threatened damages such as ruptured uterus, septicemias, hemorrhage and even death. It is important that both rural and urban secondary school students should have the basic knowledge of this disease. Therefore, knowledge in this context is viewed as a general awareness or information, facts, ideas, truths, or principles of a particular thing that the urban and rural secondary school students have regarding syphilis. It was observed that most parents feel that teaching sex education to children will lead to experimentation and promiscuity.

Empirical Framework

World Health Organization has estimated that 333 million curable sexually transmitted infections occur each year, more than two-thirds in the developing world (WHO, 1995). The

large proportion of infections is believed to occur in people younger than 25 years, with the highest rates usually observed in the 20-24-year age group followed by the 15-19 years' age group (WHO, 1995; Cates & Duming, 2008). Although probably a true reflection of the prevalence of STD among adolescents, these global estimates are based on a relatively small number of surveys. Valid data on STD incidence and prevalence especially among sexually active adolescents in developing countries is still rare (Dehne & Riedner, 2005). In a study conducted by many experts on peer education as an instrument for the reduction of sexually transmitted diseases among secondary school adolescents in Sagamu Township of Ogun State. Fifty secondary school adolescent were randomly selected from five secondary schools in Sagamu Township. Experimental research design of one group pre-test and post-test was used for the study. The major instrument used for data collection was the Youth Action Project (YAP) (1998) prepared guide question on adolescent sexual health problems 4.00 – 5.00mp daily for five days (Monday – Friday) for six weeks. Data were collected through pretest and posttest questionnaire based on their knowledge attitude and practice on sexually transmitted diseases HIV and AIDS as sexual health problems. The t-test statistical analysis was used to analyze the data. The result revealed that peer education method has significant influence on the reduction of sexually transmitted diseases among secondary school adolescents in Sagamu Township. It was therefore recommended that peer education method should be used in solving adolescents' health problems in the school and in the society.

Methods

This study was an intervention research using a quasi-experimental research design with a non-equivalent control group design. The of study was conducted in Uyo Senatorial District of Akwa Ibom State. The target population for this study was all the senior secondary school students studying within Uyo senatorial districts of Akwa Ibom State. A sample size of 422 subjects was used for the study. The study developed an instrument titled "Peer Education and Student's Knowledge of HIV, AIDS and Syphilis Questionnaire (PESKHIVAIDSSQ). Face and content validation of the instrument was carried out by three experts in the Department of physical and Health Education, Educational foundation, Guidance and Counselling in the University of Uyo, Uyo. The reliability of the instrument was established using a pilot group that was not part of the main study, but were found to be equivalent in all respect to the study. Five research assistants were trained and finally three research assistants were used by the researcher for the intervention and administration of the questionnaire.

Results and Discussion

Research Question 1: What is the mean response of the students exposed to peer education and the control group on knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial district of Akwa Ibom State? The data used in answering this research question are presented in table 1 below.

Table 1: Mean Analysis of Response of Students Exposed to Peer Education and the Control Group on Knowledge of HIV and AIDS.

Variable	N	Pre-test ($\overline{X}$)	Post-test ($\overline{X}$)	Mean Gain Score	Post-test Difference
Experimental Group	210	5.17	8.80	3.63	3.14
Control group	207	5.10	5.66	0.56	
Total	**417**	**10.27**	**14.46**	**4.19**	

Table 1 indicates that the mean gain score of experimental group (3.63) was greater than the mean gain score of control experimental group (0.56). Besides, the post-test mean score of experimental group (8.80) was greater than that of control group (5.66) with a difference of 3.14.

Research Question 2: What is the mean response of the students exposed to peer education and the control group on knowledge of Syphilis in senior secondary schools in Uyo senatorial district of Akwa Ibom State?

Table 2: Mean Analysis of Response of Students Exposed to Peer Education and the Control Group on Knowledge of Syphilis.

Variable	N	Pre-test ($\overline{X}$)	Post-test ($\overline{X}$)	Mean Gain Score	Post-test Difference
Experimental Group	210	5.17	8.12	3.63	3.14
Control group	207	5.08	5.68	0.56	
Total	**417**	**10.25**	**13.8**	**3.55**	

Table 2 shows that the mean gain score of experimental group (2.95) was greater than that of control group (0.6), Moreno, the post-test mean score of experimental group (8.12) was greater than the post-test mean score of control group (5.68) with a difference of 2.44.

Hypotheses 1: There is no statistically significant effect of peer education on students' knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial district of Akwa Ibom State.

Table 3: One Way Analysis of Covariance (Ancova) of Effect of Peer Education on Students' Knowledge of HIV and AIDS.

Sources of Variation	SS	df	Ms	f-cal	f-cri
Pre-test (covariates)	3.072	1	3.072	6.605	3.84
Main effects (post-test treatment)	1010.796	1	1010.796	2173.072	
Between groups	1035.967	2	517.983	1113.593	
Within groups (error)	192.570	414	465		
Total	**1228.538**	**416**			

*=Significant at p<.05 alpha level

Table 3 indicates that the f-calculated (2173.072) was greater that f-critical (3.84) at df of 1,414 and .05 level of significance. Therefore, the null hypotheses that there is no statistically significant effect of peer education of students' knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial district of Akwan Ibom State is rejected. Hence, there is a statistically significant effect of peer education of students' knowledge of HIV and AIDS in senior secondary schools in Akwa Ibom State.

Hypotheses 2: There is no statistically significant effect of peer education on students' knowledge of syphilis in senior secondary schools in Uyo senatorial district of Akwa Ibom State.

Table 4: One-Way Analysis of Covariance (Ancova) of Effect of peer Education on Students' knowledge of Syphilis.

Sources of Variation	SS	df	Ms	f-cal	f-cri
Pre-test (covariates)	5.680	1	5.680	12.162	3.84
Main effects (post-test treatment)	749.768	1	749.768	1605.499	
Between groups	758.712	2	379.356	812.325	
Within groups (error)	193.154	414	.467		
Total	**952.154**	**416**			

*=Significant at p< .05 alpha level

Table 4 shows that the f-calculated (1605.499) was greater that the critical f (3.84) at df of 1, 414 and .05 level of significance. Therefore, the null hypotheses that there is no statistically significant effect of peer education of students' knowledge syphilis in senior secondary schools in Uyo senatorial district of Akwa Ibom State is rejected. Hence, there is a statistically significant effect of peer education on students' knowledge of syphilis in secondary schools in Akwa Ibom State.

Discussion of Findings

The analysis of data as shown in Table 1 indicated a significant effect of peer education on students' knowledge of HIV and AIDS in senior secondary schools in Uyo senatorial districts of Akwa Ibom State. In terms of knowledge of the various ways which a person can be infected with HIV and AIDS, which has no cure but it could be prevented, knowledge through peer educators that a person can get the AIDS virus by having sex with someone who is already infected and knowledge through friends of sex education and effect of HIV and AIDS. As shown in research question 1 table 1 the mean gain score of experiment group 3.63 was greater than the mean gain score of the control group 0.56. Also, the post-test mean score of experimental group 8.80 was greater than the post-test mean score of the control group 5.66 with a difference of 3.14. in the one-way analysis of covariance (ANCOVA) the f-calculated 2173.072 was greater than f-critical 3.84 at degree of freedom. 1.414 and .05 level of significance. This empowers the researcher to reject the null hypotheses. It is therefore concluded that there is statistically significant effect of peer education on students' knowledge of HIV and AIDS.

The findings from analysis of data in Table 2 revealed that there is a positive effect of peer education on students' knowledge of syphilis in senior secondary schools in Uyo Senatorial district of Akwa Ibom State in terms of knowledge through peers that one cannot easily tell if a person has syphilis infection by the way he or she looks. Knowledge of the fact that people who have many sexual partners are more likely to get infected with syphilis may not shown sign or symptom of the disease, that using condom can help to protect one from getting syphilis infection and that syphilis is caused by a bacteria called trepodema palidum. As shown in research question 2 Table 2, the mean gain score of the experimental group 2.95 was greater than that of the control group 0.6. More so, the post-test mean score of experimental group 8.12 was greater than the post-test mean score of the control group 5.68 with a difference of 2.44. In the one-way analysis of covariance (ANCOVA) findings revealed that, f-calculated 1605.499 was greater than the f-critical 3.84 at degree of freedom 1.414 and .05 alpha level of significance. Hence, the null hypotheses which stated that there is no statistically significant effect of peer education on students' knowledge of syphilis in

senior secondary schools in Uyo senatorial district is rejected. This implies that peer education is effective in promoting students' knowledge of sexually transmitted disease such as syphilis.

Conclusion

Base on the study it was concluded that peer education is one of the most widely used strategies to address the sexually transmitted infections. Peer education is a specific teaching practice used with good results in sexual education of students. It was discovered that most parents feel that teaching sex education to children will lead to experimentation and promiscuity. The study also concluded that sexually transmitted infections can be transmitted through non-sexual routes such as blood transfusion or from infected mother to her baby as the case of HIV, or congenital Syphilis during pregnancy or contact with infected secretions in the birth canal during delivery, sharing of contaminated items such as needles and syringes.

Recommendation

1. Young people should not be kept ignorant of their sex life. Given the circumstances of modern life, it is imperative for parents as well as tutors to explain to young people the need for sex education.
2. It is advisable to have sex with a healthy faithful partner who has been tested and is clear from any infection.
3. Avoid multiple injection use; do not use other people's needles.
4. More awareness should be made by peer educators about sexually transmitted diseases to students and the society at large.

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