Effects of Peer Education on Knowledge of AIDS, Attitudes and Sexual Behaviour of Undergraduates in South-west, Nigeria

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This study assessed the effects of Peer Education in facilitating improved knowledge of reproductive health and AIDS, attitudes and behaviour change among university students in South-west, Nigeria with the aim of promoting HIV prevention. The study involved 230 Undergraduates from two old generation federal universities (149 males & 81 females), aged between 17 and 31 years old. A pretest, posttest control group, quasi-experimental design was used in the study. One instrument consisting of four sections, with reliability indices ranging from .63 to .80, was used for data collection. Findings revealed significant main effects of peer education on knowledge and attitudes of the two groups of participants, however, the peer-led intervention group gained more than the control group in knowledge of reproductive health, AIDS related issues and attitudinal change. There was no significant effect of peer education on the behaviours and practices related to HIV prevention.

Key words: Peer education, Undergraduates, HIV prevention, Reproductive health, South-west Nigeria.

Introduction
Young people aged 10-24 years that constitute about 30% of the population in Nigeria are faced with serious reproductive health risks, notable among which are early sexual debut; early pregnancy, abortion and sexual abuse. About 20% of young people in Nigeria have had their first sexual intercourse by age 15 years, and by the age of 18 years, over 50% of young people have had sexual intercourse (Ajuwon, Owoaje, Falaye, Osinowo, Aimakhu & Adewole, 2007). Due to low contraceptive use among young people, they are vulnerable to contracting sexually transmitted infections (STIs) including HIV (Ajuwon, Titiloye, & Oshiname, 2008). Also, they are at risks of unplanned and unwanted pregnancies, which often Heighten their risks of pregnancy-related morbidity and mortality. The Campaign against Unwanted Pregnancy of Nigeria (CAUP) has estimated that about 760,000 abortions occur annually in Nigeria (Ajuwon, et al 2007).

Furthermore, young people do not have the skills to protect themselves against sexual abuse. Pressure for sex and rape are commonly reported among this group. Youth vulnerability to reproductive health risks have been heightened by incomplete and incorrect information. There have been reported cases of low knowledge of their reproductive processes and puberty-related changes. For instance, Osotimehin (2006) noted that even though awareness about HIV and AIDS is high, some of the information given especially to young people mostly by their peers is incorrect and
incomplete, making informed decisions about their reproductive health care become problematic.

The HIV zero-prevalence rate for young people is higher than that of the general population in Africa. In Nigeria in particular, data show that the prevalence rate for this group ranges between 6.5% and 6.8% as against 4.4% national prevalence rate (UNESCO, 2003). Targeting the young people, therefore, becomes crucial.

Recognizing the risks young people face, various intervention programmes focus more on them. Programmes aimed at improving sexual and reproductive health including HIV and AIDS education of young people are organized at the formal, informal and non-formal levels. Such programmes mostly focus on awareness creation, provision of information, attitudinal change and modification of behavior, using a variety of approaches. Popular among which are enter-education, Health Education Clubs, sports, provision of information communication and education (ICE) leaflets, school-based reproductive health education, radio jingles, peer education and service provision, which is usually facility based and provided in an integrated form.

It is believed that education is a potent tool for modifying behaviour and reducing HIV sero-prevalence rate in the society, more so that the education sub-sector in Nigeria, for example, has the largest cohort of young persons whose sexual activities make them vulnerable to HIV. Therefore, using education as a preventive tool underscores the need to develop and implement effective education strategies in the sub-sector.

Peer education, an approach whereby an individual has his or her knowledge, attitudes, beliefs and behaviour appropriately developed and modified through training, has been used extensively in reproductive health programme and HIV/AIDS prevention among young people with high rate of success (Ajuwon et al, 2008, ARPH, 1998a, 1998b). The trained individual in turn can interact with other peers either in groups or on individual basis, with the aim of influencing them positively. This research investigated how effective peer education is in facilitating improved knowledge of reproductive health, HIV/AIDS, and attitudes and behavioural changes among young people in the university.

Peer Education in Reproductive Health, HIV and AIDS Intervention Programmes

Worldwide, peer education is one of the most widely used approaches to address sexual and reproductive health issues and HIV prevention with high success rates. In Africa, for example, professional soccer players trained as peer educators provided HIV education for 7th grade boys and girls in Bulawayo, Zimbabwe. The students in the intervention group demonstrated significant increases in knowledge and attitudes using pre, immediately post, and 5-month post intervention, while the control group recorded a delayed increase in knowledge and attitudes (Clark, Friedrich, Ndlovu, Neilands & McFarland, 2006).

In recognition of the roles information about reproductive health issues and access to appropriate services play in sustaining sexual and reproductive health of youth, a project titled “The West African Youth Initiatives (WAYI)” was implemented in seven Nigerian and two Ghanaian sites (ARFH, 1998a). The project revealed the possibilities of using peer education and other strategies in promoting adolescent health.

As a follow-up, the Nigerian Youth Initiative (NIYI) project built on the methodologies and lessons learnt from the initial pilot project - the WAYI. Findings from the project show that the peer education approach can promote changes in knowledge, attitude and behaviour of adolescents in reproductive health matters. However, peer education approach was more successful in in-
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In-school than in out-of-school situations (ARFH, 2001).

Peer education proved an effective strategy in improving the reproductive health of in-and-out-of school youths in Ibadan, Nigeria. Youths from four (4) Co-educational Secondary Schools and youths who were serving as apprentices in trade groups such as motor spare parts sellers, hair dressers, fashion designers and pharmacy assistants participated in the project. The project which aimed at promoting improved adolescent reproductive health reached the target groups with information and services through the peer education and family life approach, backed up with clinical services provided at a youth friendly centre and a satellite clinic (ARFH, 1998b).

Similarly, a research project was conducted to address the problem of low utilization of Voluntary Counselling and Testing (VCT) services among secondary school students and apprentices in selected locations in Ibadan, Nigeria. Among other research objectives, peer education was used to promote the use of VCT services. Records from VCT centres confirmed that the activities of peer educators increased the use of VCT services (Ajuwon et al, 2008).

Katzenstein, McFarland, Mbizvo, Latif, Machekano, Parsonnet and Basset (1998)'s study involved 2000 factory workers in Zimbabwe. The aim was to determine the effectiveness of Peer Education. The intervention group received HIV Counselling and Testing, and peer education while the control group did not include peer education. Both groups had access to condoms and STI management. Result showed that HIV incidence in the intervention group was 34% lower than incidence in the control group.

Also, peer education proved effective among injection drug users (n=1,997) who were involved in a study conducted in the United States. In the study, the intervention group received peer education, and distribution and discussion of intervention kits containing condoms and bleach bottles. The control group received no intervention. Participants from the intervention group reported significant increases in consistent use of bleach, and condom use with occasional partners (Rietmeijer, Kane, Simons, Corby, Wolistski, Higgins, Judson & Cohn, 1996).

In the United States, 438 homosexuals were involved in a study whereby peer education and HIV/AIDS materials were distributed by popular opinion leaders in gay bars in four intervention cities. In the four control cities, educational materials only were placed in bars. Unprotected anal intercourse in the last 2 months decreased and condom use during anal intercourse increased significantly in intervention cities only (Kelly, Murphy, Sikkema, McAnliffe, Roffman, Solomon, Winett & Kalichman, 1997).

No doubt the peer education approach is very popular in providing information and referral services to meet the reproductive health needs of the youth, but its effectiveness has not been evaluated using rigorous research designs. Without controlling other variables it is difficult to attribute impacts to peer education alone.

However, Jahanfar, Lye and Rampal (2009) used a more rigorous approach to investigate the knowledge, attitudes and behaviour of university students as relating to AIDS and HIV using randomised controlled trial and peer-adult facilitators. The main outcome measured was the level of knowledge, attitudes and behaviour scores. The results suggest that relative to the control group, participants in the intervention group had higher levels of knowledge and a better attitude. However, there was no difference in the behavioural score.

Olagunju, Busari and Ogunbiyi (2007) also investigated the differential effects of peer education and role play strategies on Nigerian Secondary School Students' practices and knowledge of HIV/AIDS. The findings revealed
that peer education and role playing were effective in promoting students' practices and knowledge of HIV/AIDS. Again both approaches had an appreciable effect on students from high and low SES background. However, students from high SES profited more.

In another study conducted with 71 people living with HIV/AIDS (PLWHA) in the United States, Gifford, Laurent, Gonzales, Chesney and Lorig (1998) employed peer-led group sessions to improve disease self-management in patients with symptomatic HIV/AIDS with the intervention group, while the usual care was used with the PLWHA in the control group. Findings showed a decrease in symptom severity among PLWHAs in the intervention group while symptom severity index increased among those in the control group. Further still, Ergene, Cok, Turner, Unal (2005) assessed the impact of peer education and single-session educational lectures on HIV/AIDS knowledge and attitude change among university students. The result showed significant differences in knowledge and attitudes, personal behavior and awareness of HIV/AIDS. Both the peer education and HIV/AIDS lecture strategies were more effective in eliciting change in students' knowledge and attitudes than the control condition. Nevertheless, in many of the reported interventions, peer education was just one of the several strategies used for project implementation.

**Statement of the Problem**
The widespread popularity of peer education stems from its application to different settings with its potential to reduce the incidence of HIV and other sexually transmitted infections. It has been used extensively in reproductive health programme and HIV prevention among young people with high rate of success (Ajuwon et al, 2008; ARPH, 1998a, 1998b & 2001; Clark et al 2006). Trained Peer Educators, in turn, interact with other peers with the aim of influencing and promoting positive changes in their attitudes and behaviors.

Even though peer education has been widely used, only few studies set up control groups with which to measure the impact at the end of interventions. Although, reproductive health problems and HIV and AIDS affect all strata of the population in Nigeria, posing major public health problems, but, many of the studies concentrated on young people in secondary schools (ARFH, 1998b, 2001; Olagunju, Busari & Ogunbiyi, 2007). Hence, this research targeted University Undergraduates who are mostly young adults. The purpose is to find out how effective peer education is in facilitating improved knowledge of sexual and reproductive health, including HIV and AIDS issues, attitudinal change and enhanced behavior towards the prevention of HIV among university students in South-west, Nigeria.

**Hypotheses**
Specifically, the research tested the following four hypotheses:
1. There is no significant main effect of Peer Education on Undergraduates' knowledge of reproductive health.
2. There is no significant main effect of Peer Education on Undergraduates' knowledge of issues related to HIV and AIDS.
3. There is no significant main effect of peer education on Undergraduates' attitudes towards HIV prevention.
4. There is no significant main effect of peer education on the Undergraduates' behaviors and practices related to HIV prevention.

**Research Justification**
The youths, anywhere in the world, represent formidable human resources that must be empowered in order to avert the ensuing health, social and political problems. Education/training
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and health have been identified as the two major indices of human capital (Olaniyan & Bankole, 2005), defined as the abilities and skills of human resources of a country (Adams, 2002). While education and training are generally shown to be a means of improving the human intellect and upgrading skills for productive employment (Yesufu, 2000) on the one hand, improved health, on the other hand, leads to increase live expectancy, which is an indicator for human development (Deaton, 2003). In essence, one of the ways to reduce unemployment and poverty among the Nigerian youth is to improve their health status. Therefore, there is need for preventing the spread of HIV among the youth, especially the undergraduates through education.

Further still, any economic sector that records high mortality rate due to HIV infection among young adults in their productive years, the labour force will be adversely affected, invariably reducing the overall productivity and placing a lot of financial burden on the government for provision of health facilities and services (Falaye, 2004).

It is hoped that peer education will improve the knowledge of the participants in sexual and reproductive health, AIDS related issues, and modify their attitudes and behaviour with the aim of protecting the teeming population of the Nigerian youth from the scourge of HIV and AIDS.

Methods
Research Sites
The research was conducted in two (2) old generation Federal Universities in the South-west, Nigeria- the University of Ibadan and Obafemi Awolowo University (formerly University of Ife), Ile-Ife.

Research Design
The research adopted a pretest, posttest, control group, quasi-experimental design to evaluate outcome measures of reproductive health, HIV and AIDS related knowledge, attitudes and behavioural practices using the Peer Education as the independent variable. Since it was not feasible to randomly assign the undergraduates individually to the intervention (Peer Education group) and control groups, instead each of the two participating universities was randomly assigned to the intervention and the control groups. This was done to avoid contamination that would have occurred if the research took place in one university. The intervention was mounted in the Obafemi Awolowo University, Ile, while the control was mounted in the University of Ibadan.

Sample
The sample for the research comprised of 230 university students, 149 males and 81 females, aged between 17 and 31 years old. The sample was drawn from the University of Ibadan and Obafemi Awolowo University, Ile-Ife in the South-west Nigeria. With the approval of the Deans of Students of the two Universities, a list of Halls of residence in each university was collected from the Students' Affairs Office. Access to the students was facilitated by the Hall Wardens and Hall Chairpersons. Selection of participants was based on volunteerism.

Instrument
One research instrument was constructed and validated by the researcher for data collection. The instrument was made up of four sections. Section A consists of 25 items measuring the knowledge of reproductive health, such as the male and female reproductive organs and their functions, Sexually Transmitted Infections, HIV and AIDS issues covering the meaning of commonly used acronyms, and the window period. The prevalence rate of HIV and the first reported case of AIDS in Nigeria were also included in this section. Section B consists of
of 12 items to measure the attitude of participants towards HIV prevention. For example, attitudinal items cover participant's disposition towards HIV testing, disclosure of HIV and AIDS status, resources committed to fighting HIV and AIDS scourge, and discrimination against people living with HIV and AIDS. A four-point scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) was used. Section C contains 10 items on behaviour and practices related to HIV and AIDS, which were rated on a three-point scale 'Yes', 'Not Sure' and 'No'. Items in this section cover issues of abstinence, being faithful to one sexual partner, voluntary testing and disclosure of HIV status, sharing toothbrush and room, and taking care of people living with AIDS. Section D requested information on the socio-demographic characteristics of participants such as age, sex, course of study and level, and religion.

Validity and Reliability of Instrument

Content validity was ascertained with the use of expert judgment. Copies of the draft instrument were reviewed by experts in Reproductive Health and evaluation in order to assess the face and content validity. Suggestions provided by the experts were used in correcting the instrument before the final version was produced. Copies of the final version were administered to undergraduates of the University of Lagos for the purpose of establishing the construct validity and reliability of the instrument.

Average item total correlation coefficient of .60 was obtained for the construct validity of the items. It indicated that the items correlated meaningfully to the constructs measured, that is, the four dependent variables (knowledge of reproductive health; knowledge of HIV and AIDS related issues; attitudes towards HIV prevention; and behaviours and practices related to HIV prevention). Spearman Brown split half reliability coefficient of .79 was obtained for section A, while the Cronbach alpha of .80 and .63 were obtained for sections B and C respectively. The psychometric properties of each of the sections showed that the instrument was reliable.

Procedure

Following the approval to conduct the study, and with the assistance of the Hall Wardens, Hall Chairpersons and Research Assistants, the researcher held meetings with the students and discussed the purpose of the research. Among the students who signed up to participate, those who have been involved in similar activities on HIV and AIDS were identified and constituted into a group. From this group, interested students were recruited and trained as peer educators for three days, covering the content they will in turn deliver through peer education to the participants. The remaining students in the group were excluded from the study. The trained Peer Educators in turn trained the remaining student volunteers (the peer group) who have not been exposed to a similar training.

The instrument was administered on all participants, excluding the Peer Educators prior to the commencement of the investigation. The peer education group from Obafemi Awolowo University was broken into two classes for ease of management. The group covered eleven (11) topics on reproductive health, HIV and AIDS issues as well as Life Skills and Behaviour Change Communication contained in a handbook produced for the research. The topics were facilitated by the trained Peer Educators using interactive methods. After covering all the content areas, a post-test was administered on the participants.

In the University of Ibadan where the control was mounted, Peer Educators were not trained, hence participants in the control group did not receive training from Peer Educators. The group relied on the handbook that contained the eleven
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topics given to them prior to the study. However, similar to the peer education group, the control group also took the pre-test and the post-test. The experiment lasted 4 weeks.

**Data Analysis**

Data collected were analysed using frequency counts, means and standard deviations. Using the pretest scores as the covariates, analysis of covariance (ANCOVA) was used to statistically equate the Peer Education group (intervention) and the control group.

**Ethical Considerations**

Prior to the commencement of the research, a formal letter of introduction was forwarded to the selected universities through the Deans of Student Affairs seeking approval to conduct the research. The research focus was also discussed with the students and their level of involvement clearly spelt out. Therefore, informed consent of the institutions as well as the participating students was ensured. Students who consented to participate indicated in writing. Their participation was, therefore, voluntary. Further still, it was affirmed that the data that would emanate from the study would be used strictly for research purposes and information provided would be treated with confidentiality.

**Results**

**Hypothesis 1:** There is no significant main effect of Peer Education on Undergraduates' knowledge of reproductive health.

**Table 1: Descriptive Statistics of Undergraduates' knowledge of Reproductive Health**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer group</td>
<td>75</td>
<td>10.84</td>
<td>4.57</td>
<td>2.84</td>
</tr>
<tr>
<td>Control</td>
<td>155</td>
<td>8.00</td>
<td>3.79</td>
<td></td>
</tr>
</tbody>
</table>

From table 1, participants in who were in the Peer Group had higher score (M = 10.84) in reproductive health than their colleagues in the control group (M = 8.00). As shown in Table 2, the observed mean difference of 2.84 is statistically significant ($F_{(1,227)} = 18.99, p < .05$). The null hypothesis is therefore rejected. It then means that Peer Education significantly affected participants' knowledge of reproductive health, with the Peer Education group profiting more than their counterparts in the control group.

**Table 2: ANCOVA Test of between-subject Effects on Undergraduates' Knowledge of Reproductive Health**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>1356.48</td>
<td>2</td>
<td>678.24</td>
<td>68.03</td>
<td>0.00*</td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1415.59</td>
<td>1</td>
<td>1415.59</td>
<td>141.98</td>
<td>0.00</td>
</tr>
<tr>
<td>Pre-test</td>
<td>948.82</td>
<td>1</td>
<td>948.82</td>
<td>95.17</td>
<td>0.00</td>
</tr>
<tr>
<td>Score/RH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>189.29</td>
<td>1</td>
<td>189.29</td>
<td>18.99</td>
<td>0.00</td>
</tr>
<tr>
<td>(Peer Education)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>2263.26</td>
<td>227</td>
<td>9.97</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hypothesis 2:** There is no significant main effect of Peer Education on Undergraduates' knowledge of issues related to HIV and AIDS.

**Table 3: Descriptive Statistics of Undergraduates' Knowledge of HIV and AIDS Issues**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer group</td>
<td>75</td>
<td>19.55</td>
<td>4.70</td>
<td>3.37</td>
</tr>
<tr>
<td>Control</td>
<td>155</td>
<td>16.18</td>
<td>4.2</td>
<td></td>
</tr>
</tbody>
</table>
Table 3 presents the descriptive statistics showing the mean difference in the students' knowledge of AIDS related issues. The peer education group with a mean score of 19.55 and standard deviation of 4.70 scored higher than the control group with a mean score of 16.18 and standard deviation of 4.20.

Table 4: ANCOVA of between-subject effects on Undergraduates' Knowledge of HIV and AIDS Issues

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>1356.48</td>
<td>2</td>
<td>853.29</td>
<td>60.35</td>
<td>.000*</td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>855.09</td>
<td>1</td>
<td>855.09</td>
<td>60.48</td>
<td>.000</td>
</tr>
<tr>
<td>Pre-test</td>
<td>1133.92</td>
<td>1</td>
<td>1133.92</td>
<td>60.20</td>
<td>.000</td>
</tr>
<tr>
<td>Score/HIV &amp; AIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>592.34</td>
<td>1</td>
<td>592.34</td>
<td>41.90</td>
<td>.000</td>
</tr>
<tr>
<td>(Peer Education)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>3209.61</td>
<td>227</td>
<td>14.139</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>73580.00</td>
<td>230</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant P<0.05

The observed difference of 3.37 in the mean score of students in the peer education group and the control group in knowledge of AIDS related issues is statistically significant (F_{(1,227)} = 41.90; P<0.05) as shown in Table 4. The null hypothesis that there is no significant main effect of Peer Education on Undergraduates' knowledge of issues related to HIV and AIDS is rejected. This means that peer education approach significantly improved Undergraduates' knowledge of AIDS related issues and HIV prevention.

Hypothesis 3: There is no significant main effect of peer education on Undergraduates' attitudes towards HIV prevention.

This hypothesis was formulated to test whether Peer Education was effective in modifying undergraduates' attitudes towards AIDS issues and HIV prevention.

Table 5: Descriptive Statistics of Undergraduates' Attitudes towards HIV prevention

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer group</td>
<td>75</td>
<td>38.24</td>
<td>5.56</td>
<td>3.05</td>
</tr>
<tr>
<td>Control</td>
<td>155</td>
<td>35.19</td>
<td>4.76</td>
<td></td>
</tr>
</tbody>
</table>

The descriptive statistics shown in Table 5 reveals that members of the peer education group had a higher mean score on attitude (M = 38.24; SD = 5.56) than the control group (M = 35.19; SD = 4.76), which means that the group showed better attitude than the control group. The main difference of 3.05 in attitudes is statistically significant (Table 6). As shown in the table, there is a significant main effect of peer education on the attitude of the participants (F_{(1,227)} = 12.74; P<0.05). Again the null hypothesis 3 is rejected.

Table 6: ANCOVA of between-subject Effects on Undergraduates' Attitudes towards HIV prevention

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>1801.0</td>
<td>2</td>
<td>900</td>
<td>40.03</td>
<td>.000</td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>2722.51</td>
<td>1</td>
<td>2722.51</td>
<td>121.01</td>
<td>.000</td>
</tr>
</tbody>
</table>
Hypothesis 4: There is no significant main effect of peer education on the Undergraduates' behaviours and practices related to HIV prevention.

Findings in Table 7 show that there is no significant main effect of peer education on HIV and AIDS related behaviour. The result shows that there was no significant change in the behaviour and practices of participants as a result of the intervention. The null hypothesis of no significant main effect of peer education on the Undergraduates' behaviours and practices related to HIV prevention is therefore not rejected.

Table 7: ANCOVA of between-subject effects on Undergraduates' Behaviour and Practices related to HIV Prevention

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of squares</th>
<th>DF</th>
<th>Mean square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected</td>
<td>594.47</td>
<td>2</td>
<td>297.23</td>
<td>30.22</td>
<td>0.00*</td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1097.53</td>
<td>1</td>
<td>1097.53</td>
<td>111.60</td>
<td>0.00</td>
</tr>
<tr>
<td>Pre-test</td>
<td>582.93</td>
<td>1</td>
<td>582.92</td>
<td>59.27</td>
<td>0.00</td>
</tr>
<tr>
<td>Score/Behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

The results of this study showed that there is a significant main effect of peer education on the Undergraduates' knowledge of reproductive health, HIV and AIDS issues. This is confirmed by higher mean scores obtained by the Peer Education group than the control group on knowledge of reproductive health, HIV and AIDS. Similarly, the Peer Education group, with a higher mean score, showed better attitude than the control group towards HIV prevention.

The improvement in knowledge and attitudes of participants recorded in this study can be traced to the training to which the Peer Educators were exposed and their ability to step down the information received during the training to the participants. Also, the handbook prepared as a resource material, which the students would have consulted, provided additional source of information. Even though the control group had access to the same materials, students' interaction with the Peer Educators further increased the mean scores of the intervention group over those of the control group both in their knowledge and attitudes.

Findings from this research support those of Ajuwon, et al (2008). They also corroborate the findings of ARFH (1998a & 1998b), and Clark, et al (2006). On the other hand, there was no significant
Although, the level of awareness about HIV is high (Osotimehin, 2006) as a result of the information provided by the media through the television, radio, newspapers, and the provision of information, communication and education (ICE) materials by governmental and non-governmental organizations, the high level of awareness is yet to make appreciable impact on the behaviour of Nigerians, especially the young people. In the context of the university students, their busy academic schedule could be a plausible explanation for the observed little or no impact of Peer Education on their behaviour. Since university students operate on tight schedules, the issue of time would seem to be a serious constraint to realizing the full potentials of peer education, particularly in modifying the behaviours of this cohort of young people.

With these findings, it appears that knowledge of reproductive health, HIV and AIDS related topics, and attitudes can be shored up with Peer Education, but it is difficult with behaviour. No wonder, the decline in the sero-prevalence rate of HIV in Nigeria is still marginal when compared with multi-sectoral responses to the scourge at the national, state and local levels, and at the formal and informal settings, by private and governmental agencies. In addition, the impact of the huge funding support to stem the scourge of HIV virus seems to be peripheral.

**Conclusion**

This research has confirmed the usefulness of Peer education in improving knowledge of reproductive health, HIV and AIDS issues with the ultimate aim of preventing the pandemic especially among young people who are mostly affected by the virus. However, peer education did not show similar impact on behavioural change. By this finding, the assertion that human behaviour is difficult to modify within a short period of time is upheld. None the less, there is need to intensify efforts aimed at preventing the spread of HIV among the Nigerian youths, hence, it is suggested that an integrated approach to peer education should be adopted when focusing on this group. A variety of activities such as service provision and Voluntary Counselling and Testing, should be incorporated into peer education. The use of games could also serve as a diversionary strategy from sexual activities which expose them to HIV virus. Hence, university authorities should provide variety of games for the students in order to engage them in healthy physical activities that will improve not only their health, but their mental well-being, academic achievement, and invariably, their holistic development.

In view of the time constraint, regular short term activities such as health talks, seminars and workshops focusing behavioural modification at the hall and faculty levels can be initiated and implemented. Such activities are likely to influence their attitudes and modify behaviours positively, since behavioural change is central to HIV prevention. Furthermore, each university should put in place policies that would ensure the prevention of HIV. Funds can be accessed from multi-lateral and development agencies for implementing such policies. Public - Private - Partnership could also be explored.

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