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*Full Length Research Paper*

## **Effects of Peer Education on the Knowledge and use of HIV Counselling and Testing services among Young Persons in Ibadan, Nigeria**

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### **ABSTRACT**

Although HIV counselling and testing (HCT) service plays important roles in prevention and control of AIDS, many young Nigerians under-utilize it. A peer education intervention was implemented to promote use of HCT among secondary school students and apprentices in Ibadan, Nigeria. Baseline data were collected from 1281 students from six schools and 100 apprentice workshops in four Local Government Areas of Ibadan. A total of 897 students from four schools and apprentices from 25 workshops were assigned as experimental group while 682 students from two schools and apprentices from 25 workshops were the controls. Three intervention activities were implemented: a one-day sensitization workshop for 31 apprentice instructors and 20 secondary school teacher-supervisors, training of 75 students and 46 apprentices as Peer Educators (PE), and development of Behaviour Change Communication (BCC) materials including posters and handbills. Six months after implementing these interventions, a follow-up survey was conducted to assess the effects of the PE on young person's knowledge of HIV and HCT and reported use of HCT services. Follow-up data were collected from 760 respondents from the experimental sites and 298 from the control areas using the same questionnaire administered during the baseline survey. PE educated a total of 1,917 persons with information on HIV/HCT-related issues. In addition, at follow-up, records of use of HCT services were obtained from two HCT centres situated in the experimental sites and one from the control. Data were analysed using descriptive statistics and t-tests. The results showed significant increase in knowledge of HCT among experimental (1.3 to 7.5) ( $p < 0.05$ ) and control groups (0.6 to 6.8) ( $p < 0.05$ ) at follow-up. At baseline, 29.0% of the experimental and 36.0% of control knew of the location of a HCT centre; at follow-up the percentage of experimental groups who could do so increased to 62.0%, while the number dropped to 34.0% among controls. Records at HCT centres showed that a greater number (309) of experimental groups used HCT services than control (43). PE were successful in influencing behaviour of their peers to use HCT services.

### **Keywords:**

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### **INTRODUCTION**

AIDS is a major public health problem in Nigeria. The number of persons infected by HIV increased from 1.8% in 1991 to 5.8% in 2001 (FMOH, 1995; 2001; 2003). Data from the most recent routine national HIV surveillance conducted in 2010 showed a prevalence of

4.1% (FMOH, 2010) and approximately 3.1 million Nigerians are estimated to be living with the virus. Nigeria now has the highest number of persons living with HIV in the world second only to South Africa (NACA, 2011a). HIV infection has been reported in all the 36 states including and the Federal Capital Territory, Abuja. It has also been reported in urban and rural

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communities, and among diverse populations such as pregnant women, long-distance drivers, sexually transmitted infections (STI) clinic attendees and female sex workers (Ekwezor et al, 1995; FMOH, 1999, 2005). The estimated number of new infections in Nigeria in 2010 alone was 281, 180 (NACA, 2011b).

In the absence of a cure for AIDS primary prevention through targeted intervention is one of the major means of controlling further spread of HIV in the country. Among the interventions which play a vital role both in treatment and prevention, HIV counseling and testing stands out (UNAIDS, 2004). Promotion of HCT is an important strategy in the control of HIV/AIDS because it is usually followed by major changes in HIV related behaviours (van Dyk and van Dyk, 2003). HCT is also a cost-effective means of preventing HIV transmission because it gives persons living with HIV/AIDS (PLWHA) early access to medical and emotional care, preventive therapies and the opportunity to prevent mother-to-child transmission (Sweat et al, 2000).

There are two approaches to promoting access to HIV testing service: client initiated and provider initiated. The client initiated testing is a process through individuals voluntarily receive counseling that enables them make informed choice about tested for HIV (UNAIDS, 2004a). The provider initiated testing is one in which health workers encourage individuals to use the service and allows those not interested to opt-out (UNAIDS, 2004a). HCT services are now widely available in Nigeria. Access to treatment with anti-retroviral (ARV) drugs, an important component of HCT services, has also expanded considerably due to support from the different levels of governments and from local and other international Non-Government Organizations (NGO).

Unfortunately the uptake of HCT services is generally low in the country (Ajuwon et al, 2010; NPC/ICF, 2008; Iliyasu et al, 2006; Adewole and Lawoyin, 2006). According to the National Demographic Health Survey (NDHS) of 2008, although 64.0% of males and 49.0% of females knew where HCT services were offered, only 15.0% of males and 17.0% of females had ever taken the test (NPC, 2009). Low utilization of HCT services is more acute among young persons (Babalola, 2007), many of whom participate in risky practices including unprotected sex with multiple partners (Ajuwon et al, 2002; Amazigo et al, 1998) and for whom HCT services would be of great benefit. One recent survey showed that only 7.0% of and apprentices in Ibadan had ever used HCT service (Ajuwon et al, 2010). Because most young Nigerians do not know their HIV status they are unable to take necessary care and

prevention actions (Babalola, 2007). However, majority of young persons are willing to take the test if it is provided free of charge and if there is a guarantee of confidentiality of test result (Ajuwon et al, 2010). Between January 2006 and December 2007, an intervention research was conducted to promote utilization of HCT services among in-school and out-of-school youths in Ibadan, Nigeria. The process and outcome of the research are described in this article.

Many of the existing interventions for the prevention of HIV are fraught with several limitations. For example, although the number of facilities providing treatment for HIV infection has increased rapidly during the last five years (NACA, 2011b), access to ARV drugs is severely limited. For example, as at December 2010, of the 1, 400,000 persons who need ART in the country, only 359, 181 (26.0%) were receiving this service (NACA, 2011b). In addition, use of ARV drugs is associated with serious side effects which sometimes undermine compliance (WHO, 2009). A vaccine is not yet available to prevent infection with HIV ([www.iavi.org](http://www.iavi.org)).

Thus Primary prevention through targeted intervention should be the mainstay of control programs for HIV in the country. Without effective prevention, there will be an ever increasing number of persons who will need treatment. HCT plays a critical role in HIV prevention and control program (UNAIDS, 2004b). There are four types of testing; client-initiated, diagnostic, provider-initiated and mandatory. The client initiated test (CIT) is being promoted since it fulfils the three major conditions for testing in that it is confidential, accompanied by counseling and based on voluntary informed consent (UNAIDS, 2004a). CIT has several advantages. It is cost-effective intervention for preventing HIV transmission which also gives seropositive persons early access to medical and emotional care, preventive therapies and the opportunity to prevent mother-to-child transmission (Sweat et al, 2000). Knowledge of their HIV status helps people make informed decisions to prevent themselves and their sexual partners from infection (UNAIDS, 2004b).

HCT is the gateway to treatment, care and support for AIDS (UNAIDS, 2004). It is also an important component of HIV prevention strategies globally (UNAIDS, 2004a). For example, one meta-analysis of use of HCT services in developing countries concluded that HCT recipients were significantly less likely to engage in unprotected sex when compared to behaviours before receiving HCT, or as compared to participants who had not received HCT (UNAIDS, 2004; 2004b). This confirms the fact that HCT is not only a service in itself, but also an effective intervention for HIV prevention. By combining personalized counseling with

knowledge of clients HIV status, HCT motivates clients to change their behaviours to prevent the transmission of the virus (UNAIDS, 2004a; 2004b)

HCT services provided as an integrated or in a stand-alone format, are now widely available in Nigeria. Access to treatment with ARV drugs has also expanded considerably due to increased funding support from The Global Fund, the world Bank, the World Health Organization's (WHO) "3 X 5" program, and the United States' President's Emergency Plan for AIDS Relief (PEPFAR) program. In addition, the federal government now provides ARV drugs at highly subsidized rate to facilitate increased access to treatment (FMOH, 2004). Despite the benefits of testing and expansion of access to treatment many Nigerians still under-utilize HCT service (Ajuwon et al, 2010; Adewole and Lawoyin, 2004). At present, the bulk of HCT users are pregnant women who are required to take the test as part of routine ante-natal services. The National AIDS and Reproductive Health Survey (NARHS) of 2007 showed that only 14% of survey respondents had ever taken an HIV test; 39% of the sample reported that they voluntarily requested for the test, 23% were offered and accepted it, while an equal number were mandated to do so (FMOH, 2008). Similarly the NDHS data of 2008 on use of HCT in Nigeria showed that overall, only 14.0% of males and 17.0% of females had ever tested for HIV (NPC/ICF, 2009). The same survey revealed that young women and men aged 23 and 24 were more likely to have been tested for HIV and to have received the results young men are more likely to have been tested than their younger counterparts aged 15 to 17 years. In urban areas, both young women and young men are more likely to have been tested for HIV and received the result than those in the rural areas. The prevalence of HIV testing and receipt of test results increases among both young women and young men with level of education and wealth quintile. The common problems associated with low utilization of HCT services in the general population in Nigeria are that clients do not return to receive test result are concerned that test results may be disclosed to relatives and fear that HIV positive tests may cause discrimination (NPC/ICF, 2009; Adewole and Lawoyin, 2004).

Many governmental and NGO have responded to the gap between intention and actual use of HCT services by implementing different promoting activities targeting young persons. A common approach is to organize rallies on university campuses during special events such as the World AIDS Day (YEF, 2009), offer testing services to students after public lectures and place jingles on the benefits of use of HCT on radio and television, and erect billboards in strategic locations in

schools and on campuses. The effects of these initiatives have not been systematically evaluated. This article was derived from a research conducted to promote and evaluate the effects of peer education on use of HCT among young persons in Ibadan, Nigeria.

## **METHODOLOGY**

**The Setting:** Ibadan, the setting for the study, is a metropolis with a population of over 3 million persons. It is the capital of Oyo State which is located in the southwest Nigeria. The city is divided into smaller units, called Local Government Areas (LGA), for ease of its administration. The study was conducted in four out of the six LGA in Ibadan, namely, Ibadan North, Ibadan South East, Ibadan South West and Egbeda. These LGAs were selected because they offer HCT services. The study populations were youth, including male and female secondary school students and apprentices aged 15 to 24 years. Apprentices are youth with limited formal education who learn a vocation under the direct supervision of an instructor. The instructor operates small businesses in the informal work sector of the Nigerian economy. Apprenticeship system is largely informal (Meagher, 1995). Apprenticeships are conducted in shops where clients are attended to, but the owners have no government recognition, registration, or support for their training. Instructors request money at inception of the training as a form of tuition, which is paid by the parents or guardians of the apprentices. The duration of apprenticeship varies depending on the level of education and age at entry and how quickly the apprentice acquires the skill of the trade.

With respect to availability of HCT services in the study area, during the study period, there were three government-owned health facilities providing HCT services in Ibadan North, two stand-alone service centres in Ibadan North and one in Egbeda. Two NGOs managed the stand-alone facility services which are provided services free of charge, while a fee of ₦500 (\$35) was charged for HCT in the government-owned facilities.

A quasi-experimental design was adopted for the research which was implemented in three phases: baseline needs assessment, intervention and evaluation. Four secondary schools and 50 apprentice workshops proximal to the HCT centres located in Egbeda and Ibadan North LGA were assigned as experimental groups while two schools and 50 apprentice workshops in Ibadan South West and Ibadan South East LGAs were the control. Prior to the commencement of the study, the Ethical Review Committees of the Oyo State Ministry of

Health and the University College Hospital/College of Medicine, University of Ibadan, Nigeria, reviewed and approved the research.

### **Baseline Needs Assessment**

**Focus Group Discussion:** Focus group discussions (FGD) were first conducted among the experimental group to determine current knowledge about HIV/AIDS and HCT and beliefs about HCT services. The FGD were also aimed at identifying the barriers that young person's face in accessing HCT services with a view to developing appropriate interventions to overcome them. Sixteen FGD, eight each for students and apprentices, were conducted. To encourage full participation during discussions, the groups were stratified by sex and status among both students and apprentices. Thus, we held four group sessions each for males and females among students and apprentices. Six to ten purposively selected persons participated in each group session. An experienced community organizer assisted with the recruitment of the FGD participants. Trained Research Assistants (RAs) used a guide developed by the investigators to moderate FGD sessions, which were recorded on audio-tapes. The FGD participants were provided with carbonated/fizzy drinks and snacks after the discussion. Each of the FGD lasted an average of 1½ hours. The FGD sessions were held inside unoccupied classrooms in the schools and in suitable locations near the apprentice workshops. Informed consent was obtained from each participant by explaining that their participation in the discussion was voluntary and that the data collected would be used for research purposes only.

**Sampling Procedures for baseline Survey:** The sample size calculation for the baseline survey was based on the two main variables of interest—knowledge, and use of HCT—and using a previous study among university students (Adewole and Lawoyin, 2004) as a reference, we derived the sample size to be a minimum of 275 each for students and apprentices. Baseline data were collected from six schools and 100 apprentice workshops in the study sites. Four schools were chosen as experimental groups from a list of the schools proximal to two of the stand-alone HCT Centres which served as referral centres. The project team paid advocacy visit to the schools and workshops to brief authorities about the nature of the project and solicit for their approval. In selected schools, an enumeration of the students' population was conducted and this information was used to calculate the appropriate sample size required for that school. A list was drawn up of all classes and the appropriate sample size in each school was selected through a systematic random sampling

technique using the class register. To ensure equal representation of both sexes, approximately the same number of male and female students was selected from each school.

For the apprentices, an enumeration was made of all workshops in the study sites having at least one apprentice. The enumeration revealed that there were 100 workshops offering training in four categories of apprenticeship vocations, namely tailoring, automobile mechanic, wood selling, and hair dressing. Trained interviewers visited each workshop and all persons who provided informed consent were invited to participate in the study.

**Questionnaire Administration:** A 36-item questionnaire was developed and used to collect data from respondents. The questionnaire was divided into three sections for ease of administration: demographic information, knowledge about HIV/AIDS and HCT, intention and use of HCT services. Knowledge about HIV/AIDS was assessed in two ways. First, respondents were requested to define HCT and asked if they knew of anywhere HCT services were being offered in their communities. Secondly, ten statements on HIV were formulated to which respondents were requested to determine which of the statement was "True" or "False." The same procedures were used for assessment of knowledge on HCT. Concerning use, respondents were asked if they had ever taken HIV tests and if not whether they would be willing to do so. The questionnaire was an adaptation of previously validated instruments on study on HIV/AIDS among young persons in Nigeria (Ajuwon and Brieger, 2007). Eight young male and female interviewers were recruited and trained on how to administer the questionnaire. The training contents consisted of data collection procedures, interview techniques, and interpersonal communication skills, with special focus on adolescent reproductive health issues. During the training, the authors reviewed each question in the questionnaire to ensure that the interviewers were familiar with them. At the end of the training, skills of the interviewers were verified to be adequate through role-plays. Prior to its administration, a draft of the questionnaire was pre-tested for clarity and comprehension on 20 male and female students from two public secondary schools and 20 male and female apprentices selected from five workshops from different LGA.

From July through September 2006, trained interviewers conducted face-to-face interviews with 1281 students comprising of 897 respondents from the experimental group and 384 from the control. Face-to-face interview was preferred to self-administered

method of data collection because field experiences with reproductive health surveys of young people in Nigeria show that the former usually yield a better rate of response and produce good quality data than the latter (Ajuwon and Brieger, 2007). The interviews were conducted in English among students and or Yoruba (the local language widely spoken in Ibadan) among apprentices since many of the latter could not communicate fluently in English. In order to avoid gender bias in responses, the interviewers and respondents were matched by sex. Interviews were conducted in privacy among students in unoccupied separate classrooms under the trees in quite environments free from distractions. Interviews for apprentices were conducted in private areas inside the workshops. Written informed consent was obtained from each respondent after explaining the purpose of the study, that participation was voluntary, and that information provided will be kept confidential.

**The Intervention:** The FGD data and survey data were used to plan intervention activities which took place in two secondary schools and 25 apprentice workshops in Ibadan North LGA and also in two secondary schools and in 25 apprentice workshops in Egbeda LGA. Students from one school and 25 workshops in Ibadan South East and a school and 25 workshops in Ibadan South West LGA served as the control.

The three intervention activities implemented were (1) one-day sensitization workshop for apprentice instructors and teacher supervisors (2) training of students and apprentices as Peer Educators (PE) (3) and development of Behaviour Change Communication (BCC) materials (see Table 1 for details). A total of 31

instructors and 20 teachers attended two separate sensitization workshops. Sensitization was considered necessary since instructors and teachers were expected to provide direct and day-to-day supervision of the activities of PE in their respective workshops and schools. During the workshops participants were provided information about the nature of HIV/AIDS, HCT and their supervisory roles were discussed. Later two rounds of a three-day workshop were conducted for 46 apprentices and 75 students who were trained as PE. The plan was that two persons from each workshop or class were to represent their peers at the training. However, not all the apprentices invited for the training showed up due to heavy workload at the shops. The project team suggested that the criteria for nomination be punctuality in school/workshop, communication and leadership skills, willingness and interest in the program. The contents of the training included the nature of HIV and AIDS, benefits and challenges involved in use of HCT services, process involved in testing, communication and counselling skills and roles and responsibilities of PEs.

These contents were delivered by the authors and other resource persons using lectures, question and answer sessions, group discussions and role play. Certificate of attendance were provided to all trainees who completed the training. The project team provided PE with forms in which they were expected to record the nature, types of educational activities completed and number of persons reached. In addition, Referral Forms were given to PE to facilitate the process of referral to the HCT centre proximal to their schools or workshops.

**Table 1:**  
Summary of Intervention Activities implemented in experimental sites

<b>Intervention Activity</b>	<b>Persons Involved</b>	<b>No</b>
One-Day sensitization workshops for gate-keepers and supervisors of Peer Educators	Instructors	31
	Teachers	20
Sub-Total		51
Three-day training of Peer Educators	Apprentices	46
	Students	75
Sub-Total		121
Development of BCC materials		
Posters		5,000
Handbills		3,000
T-Shirts		100
Fez caps		100
Sub-Total		8,200.00
Monthly meetings with PE	Apprentices	4
	Students	6
Sub-Total		10

**Table 2:**

Baseline socio-demographic profile of the respondents

<b>Socio-Demographic Profile</b>	<b>Experimental (%)</b>	<b>Control (%)</b>	<b>Total (%)</b>
<b>Sex</b>			
Male	456 (50.8)	247(64.3)	703(54.9)
Female	441(49.2)	137(35.7)	578(45.1)
<b>Age</b>			
15-19 years	592 (66.0)	229 (59.6)	821 (64.1)
20-24 years	305 (34.0)	155 (40.4)	460 (35.9)
<b>Mean Age</b>	18.3	18.4	18.4
<b>Status</b>			
Student	403 (44.9)	183 (47.7)	586 (45.7)
Apprentice	494 (55.1)	201 (52.3)	695 (54.3)
<b>Religion</b>			
Christianity	449 (50.1)	207 (53.9)	656 (51.2)
Islam	447 (49.8)	176 (45.8)	623 (48.6)
Traditional	0 (0.0)	1 (0.3)	1 (0.1)
None	1 (0.1)	0 (0.0)	1(0.1)
<b>Living with</b>			
Both parents	509 (56.7)	168 (43.8)	677 (52.8)
Relatives	139 (15.5)	78 (20.3)	217 (16.9)
Mother	73 (8.1)	35 (9.1)	108 (8.4)
Father	33 (3.7)	17 (4.4)	50 (3.9)
Friend	8 (0.9)	3 (0.8)	11 (0.9)
Alone	85 (9.5)	64 (16.7)	149 (11.6)
Boss	40 (4.5)	19 (4.9)	59 (4.6)
Others	10 (1.1)	0 (0.0)	10 (0.8)

The BCC materials developed were posters, handbills, T-shirts and Fez caps. PEs distributed handbills and pasted posters in schools and workshops. Upon completion of the initial training, the project team held monthly meetings with the PE to provide continuing education supply of BCC materials, and supportive supervision. The PE implemented educational activities in their respective workshops and schools during the months of January through June, 2007.

**Evaluation:** Six months after implementing these interventions, the project team conducted a follow-up survey to document the effects of the PEs on young person's knowledge of HIV and HCT and reported use of HCT services. Follow-up data were collected from 760 respondents from the experimental sites and from 298 from the control areas after modifying the same questionnaire administered during the baseline survey. The same set of interviewers who conducted baseline survey were invited and provided with refresher training before the commencement of the follow-up data collection. In addition, records kept at the HCT centres in the study sites were reviewed and relevant information extracted. The data in the forms completed by the PE were also collated.

**Data Analysis:** The FGD data were transcribed and subjected to content analysis. The completed questionnaires were collated, cleaned and entered into computer. The data were analyzed with the Statistical package for Social Sciences software version 15. The descriptive analysis was stratified by two groups to show changes in knowledge HIV/HCT and use of HCT service before and after the interventions. A 10-point knowledge scale was developed each for HIV/AIDS and HCT. A comparison was made between the experimental and control groups before and after the intervention.

## RESULTS

**Socio-demographic profile of respondents:** The profile of the respondents at baseline is shown in Table 2. The mean age for experimental group (18.3) is almost the same as that of the control (18.4). There are slightly more apprentices in both the experimental (55.1%) and control (52.3%).

### Knowledge on HIV/AIDS and HCT

The percentage of respondents who provided correct answers to knowledge statements at baseline and follow-up are shown in Table 3.

**Table 3:**  
Percentage of respondents with correct knowledge about HIV/AIDS

Statements about HIV/AIDS	Experimental		Control	
	Baseline (N=897)	Follow-up (N=607)	Baseline (N=384)	Follow-up (N=298)
HIV is transmitted through sex	97.9	97.7	97.0	97.5
It is easy to recognize a boy or girl who has HIV/AIDS	64.3	77.2	74.9	79.0
Sexual abstinence is the only way to avoid being infected with HIV	63.7	72.6	60.7	75.3
HIV cannot be transmitted through hand shake with infected person	74.2	86.8	76.3	75.8
HIV can be transmitted through unsterilised sharp objects	97.1	98.2	96.4	97.5
HIV can be prevented through regular use of condoms	65.8	72.9	71.4	76.8
HIV/AIDS can be cured if detected early	54.0	45.5	46.8	33.8
HIV can be transmitted from infected mother-to-child during pregnancy, birth or breast feeding	85.4	88.7	78.5	83.5
HIV cannot be contacted from the first sexual Encounter	60.0	72.1	68.1	70.0
HIV/AIDS can be contacted through mosquito bite	57.0	71.5	36.7	49.3

**Table 4:**  
Percentage of young persons with correct Knowledge about HCT Statements before and after intervention

Statements	Experimental		Control	
	Baseline %	Follow-up %	Baseline %	Follow-up %
Anyone who test positive to HIV will be detained in the hospital / clinic	9.8	61.1	3.4	46.3
Anyone who test positive to HIV will surely die of AIDS	6.4	46.6	2.1	35.2
One can become infected with HIV by taking HIV test	14.6	81.7	6.3	69.5
Only those who are sick need to take HIV test	17.6	90.5	8.1	90.9
One only need to take HIV test once in a life Time	16.8	72.4	7.6	86.2
Counselors will always keep test results Confidential	14.5	87.9	7.6	86.6
HIV test is usually conducted for all patients who attend any health care Facility	12.6	54.1	6.8	49.0
Drugs are now available for the treatment of anyone who test positive for HIV	9.3	71.2	3.9	73.8
HIV test can be easily done in any hospital	12.7	60.7	6.3	44.0
HIV test is meant for those who are not yet Married	17.3	97.1	8.6	95.0

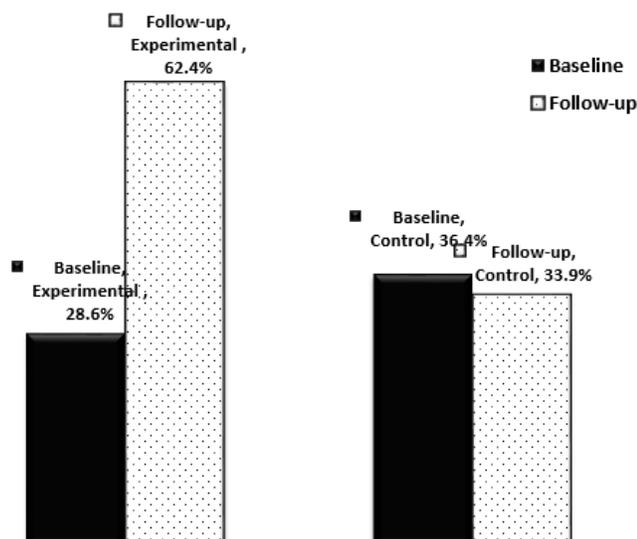
**Table 5:**  
Mean scores on knowledge about HIV/AIDS and HCT among young persons

Knowledge items	Experimental group		Control group	
	Baseline (n=897)	Follow-up (n=760)	Baseline (n=384)	Follow-up (n=298)
HIV/AIDS	7.1	7.7	7.1	7.4
P-value		p<0.05		p<0.05
HCT	1.3	7.5	0.6	6.8
p-value		p<0.05		p<0.05

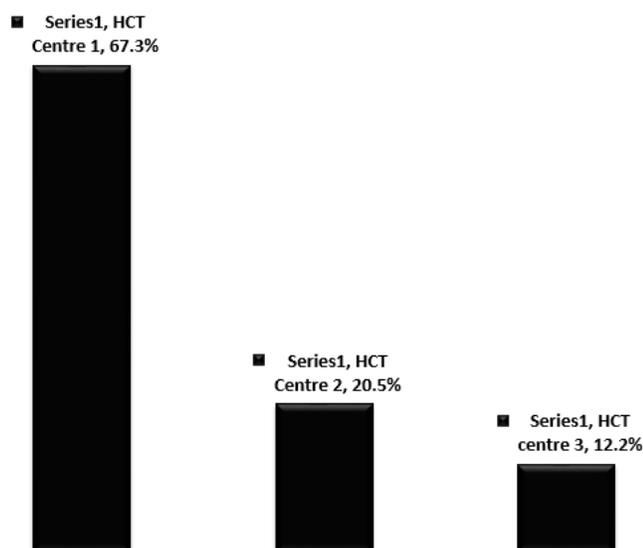
Overall, there is improvement of knowledge of HIV among both experimental and control groups at follow-up (Table 4). However, there was a higher increase in mean score among the experimental group (from 7.1 to 7.7) at follow-up than at the control (from 7.1 to 7.4). Before the intervention 18% of experimental and 9% of

control group participants could correctly define HCT; at follow-up a greater proportion of experimental group (56%) than control (21%) could do so (Table 4). Similarly at baseline, 29% of the experimental and 36% of control knew of the location of a HCT centre; at follow-up the percentage of experimental groups who

could do so increased to 62%, the number dropped to 34% among controls (Figure 1). Both the experimental and control groups showed increase in knowledge of HCT statements at follow-up (Table 5).



**Figure 1:**  
Knowledge of where HCT is done in the Community



**Figure 2:**  
Utilization of HCT service by Centres

### Use of HCT services

The reported use of HCT services among experimental and control groups at baseline and follow-up shows that at baseline, 7% and 6% of control and experimental groups reported ever taking HIV tests. However by follow-up, more experimental groups (20%) than controls (7%) had done so. The records at the HCT centres in the control site showed that 12.2% of adolescents in the control site used HCT service; the

corresponding figures for the first and second HCT centres in the experimental sites are 67.3% and 20.5% respectively (Figure 2). This implies that PE referred on average approximately 52 persons to use HCT services on a monthly basis. The main issues that the PE discussed with their peers are HIV-related and taking of HIV tests (Table 6).

**Table 6:**  
Topics discussed with Peer Educators

	Students Peer educators (%)	Apprentice peer educators (%)
About HIV/AIDS	98.6	100.0
Issues concerning HCT	92.9	88.7
Nature of Adolescent	77.2	64.8
Family Planning	4.4	1.4
Menstruation	0.7	0
STI	1.0	0
Sex	1.4	1.4
Abortion	1.7	0

## DISCUSSION

The results of the study show improvements in specific knowledge items about HIV and HCT among the experimental group at follow-up. For example, knowledge of the location of a HCT centre increased at follow-up in experimental groups compared to controls. This improvement is encouraging since acquisition of knowledge about the existence of a service is one of the first steps in the process of utilizing such service. This improvement may be attributed to the activities of PEs and distribution of BCC materials which provided information on where to access HCT services in schools and workshops. However, we are surprised that there is an overall improvement in knowledge about HCT among the control groups at follow-up. Several factors may account for this. First, it is possible that those in control groups were exposed to similar interventions in the interval between the baseline and follow-up. Secondly, the baseline interviews on HCT may have sensitized those in the control group to seek new information to educate themselves on the subject during the interval between baseline and follow-up surveys.

There was appreciable increase in the number of people that used HCT service among the experimental than among the control group although 309 of young persons who used HCT services in the experimental groups did

so due to the counselling from the PEs. Similar increase in utilization of HCT services due to promotional efforts have been reported among university students in Nigeria (YES, 2009). The effectiveness of the PEs to influence their peers to use HCT services is exhibited by three factors. The first is the participatory method of recruitment of trainees. Those selected were persons who were interested and showed enthusiasm in taking up the responsibility of PE. Secondly, the inclusion of visits of the PEs to the HCT centres as a component of their training afforded them the opportunity to take the tests themselves and this in turn increased their effectiveness in influencing the behaviour of their peers. Thirdly, HCT services were offered free of charge to young persons.

Contrary to expectation more young persons were served in the Egbeda LGA than that in Ibadan North. One possible explanation is the fact the HCT centre in Egbeda is more proximal to the potential users than in Ibadan North. As a result, it might have been easier for the PE in the Egbeda LGA to convince their peers to walk into the centres and take the test. Two, it is possible that the health workers in the Egbeda centre adopted a more youth-friendly approach in serving young clients than those in the latter. Services are termed "Youth-Friendly" if they have and implement policies and attributes that are attractive to youths, guarantees confidentiality, and provides a comfortable setting for meeting the needs of the young people and encouraging them to repeat their visits (Ajuwon et al, 2007).

Overall student PE performed better than their apprentice counterparts with regards to proportion of persons reached and attendance of follow-up meetings. This finding is not new because similar studies have identified the challenges involved in use of peer education programs among apprentices in Nigeria. Some of the challenges are high attrition, heavy workload, and lack of cooperation from instructors (Ajuwon et al, 2002). By contrast students PEs work in a more stable environment, have a more captive population to influence, and greater opportunities to conduct educational sessions during free periods, break-time and at non-curricular activities (Spiezer, Heller and Brieger, 2000). As Ajuwon and colleagues have suggested, use of paid professionalized outreach workers recruited from apprenticeship may help overcome these challenges in this population (Ajuwon et al, 2002).

We have learnt two lessons from this project which have implications for HCT promotion for young persons. First, when well trained and adequately supervised, young person's can serve as effective change agents to influence the behaviour of their peers. Despite the sensitivity and potential stigma associated with HCT, PEs successfully influenced many of their peers to use

this service. The initial training coupled with the continue education and supportive supervision provided by instructors, teachers and project team during monthly meetings sustained the interest and enthusiasm of the PE from the beginning until the evaluation of the project. The implication is that Peer education should to be implemented as a complement to other interventions used to promote this service among young persons. Secondly, HCT promotional activities will succeed when this is complemented by accessible and affordable services. Due to the promotional efforts of the PEs, the HCT centre in Egbeda became overwhelmed by unanticipated high demand for the service. To avoid a situation where high promotional efforts will be met by lack of service, the project team provided funds for the purchase of reagents for testing. This initiative ensured that the HCT service was not only available but also offered free of charge to users. The implication is that promotional services must never be undertaken when service will not be available.

### Conclusions

Innovative approaches are required to promote use of HCT services among young persons in Nigeria. Result s from this study confirms that it is feasible to empower young people with knowledge and skills to influence use of HCT services. Records from HCT centres confirmed that the activities of PEs resulted in increase in the use of HCT services. Contributory factors to the success of the project include use of participatory method of recruitment and training, supportive supervision, and free HCT services. There is a need to scale up this project to cover many more schools and workshop in the country.

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