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Effect of HIV and AIDS capacity building programme on pupils' HIV and AIDS knowledge and positive attitude

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Abstract
The study aimed to find out the effect of HIV & AIDS capacity building programme on pupils' HIV & AIDS knowledge and positive attitude in North Central Nigeria. The study was guided by two research purposes with two corresponding research questions and hypotheses. The study adopted quasi experimental (non – equivalent control groups) research design. The population for the study was made up of 3,049,810 upper public primary school teachers in the Zone. A sample of 400 public primary school pupils, was drawn from 40 primary schools using non-proportionate stratified simple random sampling techniques. The instruments used for data collection were HIV& AIDS Knowledge Test (PHAKT) and Pupils HIV & AIDS Attitude Scale (PHAAS). Data collected were analyzed using mean and standard deviations to answer the research questions, analysis of covariance (ANCOVA) was used to test the null hypotheses. The findings of the study showed that teachers' exposure to HIV & AIDS capacity building programme increased Pupils' HIV & AIDS Knowledge; and positive attitudes towards preventing the spread of HIV & AIDS; that there was significant difference in HIV & AIDS knowledge scores of pupils taught by teachers exposed to HIV & AIDS Capacity Building Programme (HACBP) and those that were not. Also, there was a significant difference in HIV & AIDS positive attitude scores of pupils taught by teachers exposed to HACBP and those that were not. Based on the findings and implications of the study, it was recommended among others that primary school teachers should be exposed to HACBP.

Keywords: HIV and AIDS, positive attitude

Introduction

Human Immunodeficiency Virus (HIV) is a virus that attacks the immune system; the body's natural defense system (Mongkuo, Lucas & Taylor, 2012) [16]. It infects and destroys certain white blood cells called CD4+T cells, leaving the body of the infected persons prone to infections when too many CD4+ T cells are destroyed (Ho, Cohen & Mehandru, 2014) [8]. Also Maduekwe (2007) [14] described Human Immunodeficiency Virus (HIV) as virus which weakens the body's ability to fight off infections such as tuberculosis. It makes the body immune system weak and less able to fight sickness. Hence, people living with Human Immunodeficiency Virus become sick with many diseases. Human Immunodeficiency Virus is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). while Acquired Immune Deficiency Syndrome (AIDS) according to Spector (2009) [21] is one infection that leads to immunodeficiency, leaving the human body at the mercy of opportunistic diseases which take advantage of the weakened human immune system to attack human body. Operationally, Human Immunodeficiency Virus (HIV). While Acquired Immune Deficiency Syndrome (AIDS) is a state of total wreck of the human immunity accompanied by signs of sicknesses of various -order that are resistance to treatment.

HIV and AIDS is a world problem. Thomas (2010) [22] estimated that about 23 million are in Africa, one million in North America, one million in Latin America, seven million in Asia, and one million in Europe. The author equally observed that the number has not stop increasing and lamented that presently nobody can claim to be free from the menace cause by Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome epidemic. This is because it is believed that everybody is affected either directly or indirectly. Worrisome, UNAIDS in 2017 [23] reported outbreak of new HIV infection predominance among young girls of 12-59 years of age, leading to increase in the national HIV & AIDS prevalent rate from 3.1% to 3.2%. Related to the above, the National Agency for the Control and AIDS (NACA) (2016) [17] reported, National HIV prevalence rate at 3.4% while 3.4 million people are estimated to be living with Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome in Nigeria. The Agency further revealed that many States are still battling with high HIV & AIDS prevalence rate. Among these states are Nasarawa, FCT and Benue all within the North Central States with high prevalence rates of 8.1%, 7.5% and 5.6% respectively which are far above the National average, thus, North Central Nigeria rages highest in the HIV &AIDS prevalent rate (NACA, 2016) [17]. This may be as a result

of high HIV and AIDS risk behaviors which is abated by poor knowledge and negative attitude to HIV and AIDS.

However, Lyons (2008) [13] opined that it is possible to reduce these behaviors. Bandura (2002) [2] argued that these processes of HIV risk reduction behavior may require the acquisition of interpersonal skills necessary for one to making decisions, communicate effectively, develop coping, and self-management skills that will enable such individuals practice safer-sex. This may go a long way in mitigating effects of HIV& AIDS on the society mostly the children of primary school age. This therefore suggests that the acquisition of this interpersonal skills could only be achieved through laying a good foundation at the primary school by educating teachers through intervention programmes that will help them impact the positive knowledge of HIV &AIDS into the pupils. Besides, the required risk reduction behaviors as suggested by Bandura seems difficult if not impossible without HIV and AIDS capacity building programme for primary school teachers.

Primary school is the education given to children aged 6 to 12 years. According to National Policy on Education (2013), Primary school "is that education given to children aged 6 to 12 years". Its objectives include: inculcation of permanent literacy and numeracy and the ability to communication effectively; lay a sound basis for scientific, critical and reflective thinking; promote patriotism, fairness, understanding and national unity; instill social, moral norms and values in the child; develop in the child the ability to adapt to the changing environment and provide opportunities for the child to develop life manipulative skills that will enable the child function effectively in the society within the limits of the child's capacity. Primary school in the context this study, primary school is synonymous to primary education. Hence can be used interchangeably in the context of this study. Primary school is therefore perceived by the researcher as the first level of formal education given to children within the age bracket of 6 to 12 years. It is the basic foundational level of formal education where other levels of education are built on, which aimed at inculcating the requisite knowledge, skills, abilities to function effectively in the society and a system where the required change in ideologies, behaviors, attitudes and health cultures are loaded.

Its strategic position as a level of education that precedes adolescence age of learners informs its usefulness as a tool for attitudinal, ideological, behavioural change. Schenkar & Nyirenda (2002) [20] identified primary school as key setting for educating children about HIV & AIDS and for halting the further spread of the HIV & AIDS infections. Hence researchers indicated that primary education may be the single most effective weapon against the spread of HIV & AIDS. For instance, data from high zero prevalence countries show that the better educated countries have lower rates of HIV and AIDS infections (Kelly 2002; Vandamoortele & Delamonica 2000 [30]; Gregson, Waddell, & Chandiwana 2001) [7]. This observation was in agreement with the report of UNICEF in 2009 [25] that countries with high primary school dropout rate are observed to have high HIV& AIDS prevalence rate. This attests that primary school is imperative to the war against HIV & AIDS in Nigeria and should act as a key setting for educating children about HIV & AIDS so as to halt the further spread of the infections. Success in carrying out this function however depends upon using Primary school teachers as the agent of its perpetuation and renewal as well as the architect of its change for the better.

While, primary school teachers in Nigeria as stipulated in the National Policy of Education by the Federal Republic of Nigeria (FRN, 2014) refer to trained teachers with minimum qualification of National Certificate in Education (NCE). Operationally, primary school teacher refers to any individual with certified teaching qualification from reputable collages of education or universities in and aside Nigeria, employed to teach in primary school. Marget, Valene & Janetta, (2014) [15] opined that primary school teacher is employed either by the public or the private primary education institutions saddled with the functions or responsibilities of impacting knowledge or guiding the pupils to learn and develop their potentials in formal setting. Hence, for an effective HIV & AIDS programme at the primary school level to be accomplished, primary school teachers need to be empowered by building their capacity. Therefore, one of the main tools that will be used to achieve reduction in HIV & AIDS rate in the country is the empowerment of teachers at primary schools level by developing an HIV & AIDS capacity building programme.

Capacity building programme refers to the creation, expansion or upgrading of a stock of desired qualities and features called capabilities to achieve a set objective (Horton *et el*., 2003) [9]. LaFond and Brown (2003) [12] refers to capacity building programme as the empowerment which encompasses the ability, will and skills to initiate, plan, manage, undertake, organize, budget, supervise and evaluate project activities. The authors further opined that capacity building programme is nothing but a process for improving the ability of persons, groups, organizations or systems to meet their objectives, address stakeholders' needs to ultimately, perform better. According to UNICEF (2012) [27], capacity building programme is seen as an ongoing process through which individuals, groups, organizations, and societies enhance their ability and skills to identify and meet development challenges. In the context of this study, capacity building programme is a conceptual approach to development that focuses on understanding the obstacles that inhibit an organization from realizing their set goal while enhancing their abilities that will allow them to achieve the expected outcome.

It generally involves a systematic and planned process with measurable performance objectives, defined outcomes, implementation strategies and yardstick of measuring its outcomes and performance over time which aims at improving the capability of participants (UNICEF, 2012) [27]. It is driven by clearly defined objectives that state what the initiative is intended to achieve and how it will accomplish its objectives, the strategic plan, and the expected outcomes (President's Emergency Plan for AIDS Relief (PEPFAR), 2012). United Nations Development Programme (UNDP, 2014) [28] identify skill development is a major part of every capacity

building, hence it focuses on series of actions directed at helping to increase the skills, knowledge, and attitude needed to bring about desired developmental changes among participants, organizations and teachers.

Capacity building programme for teachers, therefore refers to any planed training given to teachers in order to increase their capability, skills, knowledge and attitude for effective teaching. UNDP, opined that capacity building programme for primary school teachers focuses on series of actions directed at helping participants to increase their knowledge, skills, and to develop the attitude needed to bring about desired developmental changes in them. In the context of this study, capacity building programme for primary school teachers is a conceptual approach to development that focuses on understanding the obstacles that inhibit primary school teachers from realizing their set goal while enhancing abilities and skills that will facilitate the achievement an expected outcome. For primary school teachers to be effective in the teaching of Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV & AIDS) they may need to acquire a repertoire of relevant skills and competencies for delivering lessons on HIV and AIDS. These may include competencies and skills in making use of primary school HIV and AIDS curriculum to inculcate among the pupils positive attitude towards prevention of the spread of HIV & AIDS.

Positive attitude towards HIV & AIDS refers to those behaviors and life styles that reduces the chances of one to be infected with HIV & AIDS. It is the function of good knowledge of HIV &AIDS, its modes of infection, symptoms, preventive measures, life styles that make one to be prone to HIV &AIDS infection and life styles that protects one from being infected. Such positive attitude include abstinence from sex, sticking to one faithful sex partner, effective use of condom, avoidance of stigmatization, drug abuse and alcoholism of people living with HIV &AIDS (PLWHA), and voluntary HIV &AIDS test and counselling.

In line with the above, Bandura's social - cognitive theory (1963) [3] identified that social settings in which individuals live, work, and play has powerful influences on behavior, attitudes and beliefs about oneself and the world. The primary mechanism here is that individuals learn or develop from observing the behavior of others and the social consequences of those actions. Hence primary school teachers are more or less models to the pupils and should have the require skills not only to give knowledge on HIV&AIDS but also to influence positive HIV &AIDS attitude on pupils.

Though, Nigeria has made tremendous improvement in the fight against the spread of HIV & AIDS as indicated by the UNAIDS press release (2019) [24], however, north central Nigeria is one of the two geo political zones with high HIV& AIDS prevalence rate of 2.0% as against national prevalence rate of 1.4% of young people within the ages of (15 -49). Thus, the high prevalence rate in north central may not be unconnected with level of skills, capacity and competences needed to impact HIV & AIDS knowledge in primary school pupils possess by primary school teachers in North Central Geo- political Zone of Nigeria being the level of education that precedes adolescence stage were sexual organs are fully developed. For instance in 2009, Federal Capital Territory Education Resource Centre reported that some teachers employed lack the training, skills, knowledge and methodology required for effective implementation of primary school HIV & AIDS curriculum. The above statement was confirmed by the focus group discussion conducted by the researchers for primary school teachers in the North Central Geopolitical Zone of Nigeria on HIV & AIDS, which informed on the major capacity gap for effective implementation of HIV and AIDS curriculum at primary school level. In view of the above, the researchers tend to determine the effect of HIV and AIDS Capacity Building Programme on pupils in North Central Geopolitical Zone of Nigeria with emphasis on pupils' HIV & AIDS knowledge and positive attitude or behaviors that reduce the spread of HIV & AIDS.

Purpose of study

The purpose of the study was to determine the effect of HIV and AIDS Capacity Building Programme on pupils' HIV and AIDS knowledge and positive attitude to HIV and AIDS in North Central Nigeria.

Specifically, the study seeks to determine:

1. Determine the mean HIV & AIDS knowledge scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Knowledge test.
2. Determine the mean HIV & AIDS positive attitude scores of pupils taught by teachers exposed to the developed HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Attitude scale.

Research Questions

The following research questions were posed to guide the study:

1. What are the mean HIV & AIDS knowledge scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Knowledge test?
2. What are the mean HIV & AIDS positive attitude scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Attitude scale?

Two null hypotheses were formulated to guide this study and were tested at 0.05 level of significance:
Ho_1: There is no significant difference between the mean HIV & AIDS knowledge scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Knowledge test.
Ho_2: There is no significant difference between the mean HIV & AIDS positive attitude scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Attitude scale.

Method
Quasi experimental research design was adopted for the study. Nworgu (2015) [18] referred to quasi experimental research design as a type of experimental research design, where the researcher did not observe randomization in the assigning of the research subjects into treatment and control group. The researcher employed the use of non – equivalent control groups involving pre-test and post- test on both the treatment and the control group. The choice of non – equivalent control groups with pre- test and post-test was to restrict the impact of extraneous variables, such as school location, pupils': intelligence, gained experience, exposure; and teacher factor on the outcome of the test. The population of the study comprised 3,049,810 upper primary school pupils in North Central Nigeria (Universal Basic Education Commission (UBEC) 2019) [29], while the sample size of the study comprise 400 upper class (primary 5) pupils drawn from 40 primary schools using non-proportionate stratified simple random sampling techniques to draw 10 pupils (five from class A five from class B) from each of the 40 selected primary schools which amounted to 100 pupils from each of the four states that amounted to 400 pupils that formed the sample size of the study. In each of the sampled primary schools, the researchers randomly assigned the primary five A and B classes into experimental and control group.
The researchers during the holidays, with the permission of the headmasters of the selected primary schools, conducted HIV & AIDS capacity building training for the 20 primary school teachers teaching the experimental group which lasted for one week in Abuja using HIV & AIDS Capacity Building programme package (HACBPP) developed and validated by Igbokwe (2019), while those teaching the research subjects (primary school pupils) assigned to control group where left untrained.
HACBPP comprises of eight parts. Parts 1, covers the basic concept of HIV and AIDS; Parts 2, deals with knowledge on mode of HIV transmission; Parts 3, covers HIV & AIDS counselling and testing; Parts 4, covers information HIV and AIDS prevention; part 5, contains information on HIV and AIDS management; part 6, dealt with information on nutritional support for people living with HIV and AIDS (PLWHA); part 7, covers information stigmatization of PLWHA; and part 8, covers right attitude to people living with HIV and AIDS. Each part of the HACBPP for primary school teachers is organized to cover specific objectives, instructional content, instructional methods, resource persons' (instructors) activity, instructional materials, evaluation strategies and evaluation questions.
Data was collected using two instruments, Pupils' HIV& AIDS Knowledge Test (PHAKT) and Pupils HIV and AIDS Attitude Scale (PHAAS). PHAKT for primary school pupils seeks information on pupils' knowledge on HIV & AIDS. While PHAAS seeks information on pupils attitude towards people living with HIV & AIDS. Both instruments comprised of two sections A and B. while Section A of PHAKT and PHAAS seek information on demographic data of respondents. Section B of PHAKT is made up of 12 objective structured questions that seek information on pupil's knowledge of HIV & AIDS. PHAKT was scored dichotomously, one mark for a correct option; and zero for the wrong option.
While section B of PHAAS is made up 9 items structured into 2 point attitude scale that seeks information on attitude of pupils toward people living with HIV& AIDS rated using 2 points scale, rated as follow Agree (A) = 2 and Disagree (D) = 1, ticking Agreed to the positive structured items attracts 2points while ticking Disagreed attracts 1point. Thus, the reverse is the case for negative structure items. The 2 point attitude scale adapted was in consideration of educational level of pupils, it may be difficult to differentiate between strongly agreed, agreed and strongly disagreed and disagreed. The instruments were face validated by four experts, one lecturer in Childhood education, one expert in Educational Psychology, one expert in Health Education and a Measurement and Evaluation specialist in department of Science Education all from the Faculty of Education, University of Nigeria Nsukka. The experts were requested to thoroughly examine and scrutinize the items in the instruments to correct ambiguous statements; check the coverage of dimensions; and relevance of items for the collection of data. They were also requested to delete irrelevant and supply missing items that could help to improve the quality of the instruments. For proper guide to the experts in the validation exercise copies of the topic for the study, purpose of the study, research questions and research hypotheses together with the draft instrument were given to the experts. The comments, corrections and suggestions of the experts such as relating the items to HIV & AIDS and separating double barrel items among others, were used to improve the quality of the final instruments for data collection.
Furthermore, to establish reliability coefficients of the instruments, the researchers administered the instruments to 20 pupils (primary five) North central geopolitical zone of Nigeria who were not part of the sampled size. PHAKT that was scored dichotomously which had its reliability established using Kudar-Richason reliability formular (K-R20) at 0.96 reliability coefficient. While PHAAS that was scored polytamously was tested using Cronbach Alpha satistics to determine the internal consistency of the instrument yielded reliability coefficient of 0.91

PHAKT and PHAAS were administered to the sampled 400 (experimental group 200 and control group 200) pupils before and after treatment. 20 research assistance employed by the researchers with the help of classroom teachers were used to collect data from pupils. pre-test was administered to the sampled pupils at the first week of resumption. Three months letter, the same instruments were re-administered to the same pupils both in experimental group taught by teacher exposed to HIV & AIDS capacity building Programme and control group taught by teachers that are not exposed to the HIV & AIDS capacity building Programme. An interval of three months was observed between the pre- test and post-test as in line with the advice of Nworgu (2015) [18] that the time interval between pre-test and post- test should neither be too short nor too long to avoid retained learning and knowledge gain due to maturity thus, suggested an ideal space of two to three months. Hence the researchers' interest was to establish the extent of pupils' HIV and AIDS knowledge and right attitude to people living with HIV and AIDS gained as a result of the improvement in the competency of teachers in implementing HIV and AIDS curriculum in primary school, given the HIV and AIDS Capacity Building Programme organized for the selected primary school teachers from the four sampled states in the North Central Geo-political Zone of Nigeria.

The data collected from the pupils taught by these two set of teachers using Pupils' HIV & AIDS Knowledge (PHAKT); and Attitude Scale (PHAAS) were analyzed using mean, standard deviation and ANCOVA to determine the effect of HIV & AIDS Capacity Building Programme base on the mean performance of the two categories of pupils: those taught by teachers exposed to the developed HIV & AIDS Capacity Builing Programme and those that were not.

Result

Research Question one: What are the mean HIV & AIDS knowledge scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by PHAKT?

Table 1: Pretest and posttest difference in the mean scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme (TECBP) and those taught by teachers unexposed (TUCBP) as measured by PHAKT

Variable		Pre-test		Post-test		
Instructional Strategies	**N**	$\bar{x}$	**SD**	$\bar{x}$	**SD**	**Mean Gain**
TECBP	200	4.97	1.76	8.96	1.27	3.99
TUCBP	200	4.94	1.99	7.13	1.65	2.19

The result in Table 1 shows the difference in the knowledge mean scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme (TECBP) and those taught by teachers unexposed (TUCBP) as measured by Pupils' HIV & AIDS Knowledge. The result shows that pupils taught by teachers exposed to the developed HIV & AIDS capacity building programme (TECBP) which was the treatment /experimental group had a pretest mean score of 4.97 with a standard deviation of 1.76 and a posttest mean score of 8.96 with a standard deviation of 1.27. The difference between the pretest and posttest mean scores was 3.99. Whereas, pupils taught by teachers unexposed to HIV & AIDS capacity building programme (TUCBP) which was the control group had a pretest mean score of 4.94 with a standard deviation of 1.99 and a posttest mean score of 7.13 with a standard deviation of 1.65. The difference between the pretest and posttest mean scores was 2.19. For both groups, the posttest mean scores of the pupils were greater than the pretest scores, with pupils taught by teachers exposed to the developed HIV & AIDS capacity building programme (TECBP) having a higher mean gain than those taught by teachers unexposed (TUCBP) as measured by Pupils' HIV & AIDS Knowledge. This therefore implies that teachers' exposure to the developed HIV &AIDS capacity building programme seems to increase Pupils' HIV & AIDS Knowledge than when they are unexposed to such programme.

Research Question Two: What are the mean HIV & AIDS positive attitude scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by PHAAS?

Table 2: Pretest and posttest difference in the mean scores of Pupils taught by teachers exposed to the developed HIV & AIDS capacity building programme (TECBP) and those taught by teachers unexposed (TUCBP) as measured by PHAAS.

Variable		Pre-test		Post-test		
Instructional Strategies	**N**	$\bar{x}$	**SD**	$\bar{x}$	**SD**	**Mean Gain**
TECBP	200	8.66	1.66	13.90	1.61	5.24
TUCBP	200	7.89	1.92	10.12	1.72	2.23

The result in Table 2 shows the difference in the mean scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme (TECBP) and those taught by teachers unexposed (TUCBP) as measured by

Pupils' Attitude scale. The result shows that pupils taught by teachers exposed to HIV & AIDS capacity building programme (TECBP) which was the experimental group had a pretest mean score of 8.66 with a standard deviation of 1.66 and a posttest mean score of 13.90 with a standard deviation of 1.61. The difference between the pretest and posttest mean scores was 5.24. While, pupils taught by teachers unexposed to HIV & AIDS capacity building programme (TUCBP) which was the control group had a pretest mean score of 7.89 with a standard deviation of 1.92 and a posttest mean score of 10.12 with a standard deviation of 1.72. The difference between the pretest and posttest mean scores was 2.23. For both groups, the posttest mean scores of the pupils were greater than the pretest scores, with pupils taught by teachers exposed to HIV & AIDS capacity building programme (TECBP) having a higher mean gain than those taught by teachers unexposed (TUCBP) as measured by Pupils' Attitude scale. Therefore, teachers' exposure to HIV & AIDS capacity building programme seems to improve Pupils' HIV & AIDS positive attitude.

Hypothesis 1

Ho_1: There is no significant difference between the mean HIV & AIDS knowledge scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by PHAKT.

Table 3: Analysis of Covariance (ANCOVA) of the significant difference in the mean scores of primary school pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers not exposed as measured by PHAKT.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	394.378	2	197.189	97.270	.000
Intercept	2474.712	1	2474.712	1220.734	.000
PreKnow	59.488	1	59.488	29.345	.000
Group	332.615	1	332.615	164.073	.000
Error	804.812	397	2.027		
Total	27088.000	400			
Corrected Total	1199.190	399			

a. R Squared =.329 (Adjusted R Squared =.325)

The result in Table 3 shows that an F-ratio of 164.073 with an associated probability value of 0.000 was obtained with respect to the difference in the mean scores of primary school pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers not exposed as measured by Pupils' HIV & AIDS Knowledge. Since the associated probability of 0.000 when compared with 0.05 set as the level of significance for testing the hypothesis was found to be significant, the null hypothesis 1 (H_{01}) was therefore rejected. Hence, it was concluded that there was a significant difference in the mean scores of primary school pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers not exposed as measured by Pupils' HIV & AIDS Knowledge test (PHAKT).

Hypothesis 2

Ho_2: There is no significant difference between the mean HIV & AIDS positive attitude scores of pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by Pupils' HIV & AIDS Attitude scale.

Table 4: Analysis of Covariance (ANCOVA) of the significant difference in the mean scores of primary school pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers unexposed as measured by PHAAS.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1832.991	2	916.495	518.312	.000
Intercept	973.828	1	973.828	550.736	.000
PreAttitude	400.368	1	400.368	226.423	.000
Group	1075.296	1	1075.296	608.120	.000
Error	701.987	397	1.768		
Total	60207.000	400			
Corrected Total	2534.977	399			

a. R Squared =.723 (Adjusted R Squared =.722)

The result in Table 4 shows that an F-ratio of 608.120 with an associated probability value of 0.000 was obtained with regard to the difference in the mean scores of primary school pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers not exposed as measured by Pupils' Attitude scale. Since the associated probability of 0.000 when compared with 0.05 set as the level of significance for testing the hypothesis was found to be significant, hence the null hypothesis 2 (H_{02}) was rejected. Hence,

inference drawn was that there was a significant difference in the positive attitude mean scores of primary school pupils taught by teachers exposed to HIV & AIDS capacity building programme and those taught by teachers not exposed.

Discussion

The findings of this study showed that teachers' exposure to HIV & AIDS capacity building programme increased Pupils' HIV & AIDS Knowledge. This implies that teachers' exposure to HIV & AIDS capacity building programme would likely result to improvement in Pupils' HIV & AIDS Knowledge. Affirming the above, the test of null hypothesis 1 as presented in Table 3 revealed that there was a significant difference in the mean scores of primary school pupils taught by teachers exposed to the developed HIV & AIDS capacity building programme and those taught by teachers not exposed as measured by Pupils' HIV & AIDS Knowledge. The findings of this study is also is some worth in agreement with the finding of Donkor (2012) [4] which revealed that majority of respondents (students) (81%) had heard of VCT, while (19%) denied previous knowledge of counselling and testing (VCT) for HIV. However, findings of the study is in disagreement with that of Ojo (2011) [19] that reported that fresh undergraduates of tertiary institution in Ekiti-State, Nigeria had good knowledge of HIV/AIDS and also exhibited high HIV/AIDS positive behaviour. Similarly, a study carried out by Alued, Imhonde, Maliki and Alutu (2005) [1] that assess Nigerian University students' knowledge on HIV/AIDS revealed that university students had high knowledge about HIV/AIDS. This implies that primary school in North Central Nigeria may have suffered neglects in terms of HIV & AIDS capacity building.

Furthermore, the findings of the study indicated that teachers' exposure to HIV & AIDS capacity building programme improved Pupils' HIV & AIDS positive attitude than those unexposed to such programme. This means that exposure of primary school teachers to the HIV & AIDS capacity building programme would consequently result to improvement in Pupils' HIV & AIDS positive attitude. In agreement with the above submission, the test of null hypothesis 2 as presented in Table 4 revealed that there was a significant difference in the mean scores of primary school pupils taught by teachers exposed to the HIV & AIDS capacity building programme and those taught by teachers not exposed as measured by Pupils' HIV & AIDS Attitude scale.

Somehow consistent with this finding, is a study by Agarwal and Sushma (2013) on knowledge, attitude and sources of information for awareness of HIV/AIDS revealed that there was significant positive correlation between the knowledge students have about HIV/AIDS and their attitude towards people with HIV/AIDS. In addition, a study conducted by Donkor (2012) [4] on knowledge, attitudes and practices of voluntary counselling and testing (VCT) for HIV among university students in Ghana indicated that eighty-eight percent (88%) of the respondents had positive attitude towards HIV & AIDS due to awareness and education with regards to VCT. This implies that exposure of people to HIV/AIDS education would likely promote their positive attitude towards HIV & AIDS. In essence, teachers' exposure to HIV & AIDS capacity building programme would increase their knowledge and competencies for educating pupils about HIV & AIDS which will in turn improve pupils positive attitude towards avoiding HIV & AIDS risk behaviors which will lead to effective prevention of the spread of HIV mostly at this time carriers are not easily identified due to availability of HIV retroviral drugs.

Conclusion

The following conclusions were drawn based on the findings of this study:

Primary school teachers in the North Central Geopolitical Zone of Nigeria need adequate capacity programme building on HIV & AIDS to be equipped for effective teaching and implementation of HIV and AIDS curriculum in primary schools in North Central Geopolitical Zone of Nigeria. Thus, teachers' exposure to HIV & AIDS capacity building programme improves Pupils' HIV & AIDS knowledge and positive attitude (behavior) towards prevention spread of HIV & AIDS.

Educational Implication of the Findings of the Study

The findings of this study have education implications.

One of the implications of the findings of the study is that when primary school teachers are exposed to HIV &AIDS capacity building programme, it will addressing the identified HIV &AIDS capacity building needs of primary school teachers' in North Central Geo-Political Zone of Nigeria. Hence, teachers' ability for effective teaching and learning of HIV &AIDS in primary schools will be enhanced. This will also bring about greater improvement in pupils' HIV &AIDS knowledge and positive attitude towards preventing the spread of HIV &AIDS.

Another is that when primary school teachers' in North Central Geo-Political Zone of Nigeria are exposed to HIV & AIDS capacity building progamme package, teachers will be equipped with the required HIV & AIDS knowledge, attitude, skills and methods required for effective HIV &AIDS teaching. This will improve the veracity of information given to pupils by teachers on HIV &AIDS and reduce the spread of HIV &AIDS, since right information will be given to pupils.

Recommendations

Government and stakeholders in education should organize HIV & AIDS capacity building programme for teachers in North Central geopolitical zone of Nigeria and by extension all primary school teachers in Nigeria.

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