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Intervention Programmes for Enhancement of Voluntary Counselling and Testing For Hiv/Aids among Students in Tertiary Institutions in Ekiti State, Nigeria

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Abstract
Nigeria has the second largest HIV epidemic in the world and one of the highest rates of new infection in Sub-Saharan Africa. Students in tertiary institutions fall within the vulnerable group of HIV infection. Based on this background, the study investigated the effects of intervention programmes for enhancement of voluntary counselling and testing for HIV/AIDS among students in tertiary institutions in Ekiti State, Nigeria. It assessed the knowledge and attitude of students towards counselling and testing for HIV/AIDS. In addition, the study determined the attitude of students towards stigmatization and discrimination against people living with HIV/AIDS. The study adopted pre-experimental one group pretest posttest research design. The population for the study comprised students' leaders in Ekiti State University, Ado-Ekiti. The sample consisted of volunteered students' leaders in Ekiti State University. A total of 60 students (male = 25, Female=35) consented to be part of the study. A self-developed questionnaire based on Minimum Prevention Package Intervention (MPPI) was used by the researchers to gather data for the study. The face and content validity of the instrument were ascertained by experts in the field of Health Education, Guidance and Counselling, Sociology and Tests and Measurement in Education. The reliability of the instrument was estimated using Cronbach's alpha reliability method. A reliability coefficient of 0.80 was obtained. The data collected were analyzed using descriptive statistics of frequency counts, percentages, mean scores and standard deviation to answer the research questions while inferential statistics of t-test was used to test the hypotheses at 0.05 level of significance. The findings revealed that the participants had adequate knowledge of HIV/AIDS, most especially in the aspects of mode of transmission and prevention. Majority of the participants were willing to go for voluntary counseling and testing, exhibited a low level of stigmatization and discrimination against people living with HIV/AIDS but were at greater risk to HIV infection. However, the differences observed in the pre-test and post-test mean scores of participants were not statistically significant. Based on the findings of the study, it was recommended that family life and human sexuality education with emphasis on comprehensive HIV knowledge and prevention should be integrated into the General Studies in tertiary institutions in Ekiti State, Nigeria.

Keywords: Stigma, Risk, Behaviour, Intervention, Testing

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I. INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is caused by Human Immunodeficiency Virus (HIV) which breaks down the body immune system, leaving the person vulnerable to a host of life threatening opportunistic infections, neurological disorders and cancer of various types. Among the special features of HIV infection is that once infected, it is likely that the person will be infected for life. Human Immunodeficiency Virus (HIV) has been recognized as the most serious public health problem in many parts of the world, including Nigeria.

The global situation and trends in the HIV prevalence revealed that since the beginning of the epidemic, 75 million people have been infected and about 32 million people have died (WHO, 2018). The report further revealed that about 37.9 million (32.7 – 4.40 million) people were living with HIV out of which an estimated 0.8% of adults aged 15 – 49 years would be living with HIV by the end of 2018. However, African region remains most severely affected with nearly 1 in every 25 adults (3.9%) living with HIV and accounting for more than two-third of the people living with HIV worldwide. The prevalence of HIV/AIDS in Nigeria necessitated the urgent need for adolescent reproductive health issues. For instance, since the first case of HIV/AIDS was reported in Nigeria (NACA, 2006), it has continued to rise at an alarming rate.

A capsule review of literature showed that in 2018, Nigeria has the second largest HIV pandemic in the world with the prevalence rate of 1.9 million people living with HIV and the adults (ages 15 – 49) account for 1.5% HIV prevalence while 130,000 new infections were screened with 53,000 AIDS – related deaths (UNAIDS Data, 2019). Epidemic evidences from the National Agency for the Control of AIDS (NAIIS, 2019) revealed that all states in Nigeria have prevalence of 0.3% and above including Federal Capital Territory, Abuja. The report indicated that people living with HIV/AIDS in Nigeria differs from state to state and appears to be higher in South-South zone with the prevalence at 3.1% among adults aged 15 – 49 years; North Central zone (2.0%); South East zone (1.9%). However, HIV prevalence is lower in the South West zone (1.1%), the North East zone (1.1%) and the North West zone (0.6%). The result of the current survey indicated that Nigeria has an HIV prevalence of 1.4% and Ekiti State which is among the States in Southwest zone has a prevalence rate of 0.7% (NAIIS, 2019).

Gender differences in the prevalence of HIV infection have been reported in literature. The studies of Awofala and Ogundele (2016) revealed that the prevalence of infection is higher for females than male across all age groups except for the 35 – 39 years and the 40 – 44 years age groups. Similar, differences in the number of new HIV infection between men and women showed that new infection among young women (aged 15 – 24 years) were 44% higher than men in the same age group (Joint United Nations Programme on HIV/AIDS, 2017). In addition, the difference in HIV prevalence between women and men is greatest among young adults, with young women aged 20 – 24 years more than three times as likely to be living with HIV as young men in the same age group (UNAIDS, 2019). Young people in the age bracket of 15 and 24 years were vulnerable to new HIV infection (Joint United Nations Programme on HIV/AIDS, 2017). Students in tertiary institutions fall within the vulnerable group of HIV infection.

In-school adolescents are vulnerable like any young people despite their educational background. Evidences indicated that adolescents in tertiary institutions are vulnerable and at risk to HIV infection due to sexual risk practices which include unprotected casual sex and multiple sexual partners, premarital sex, drug abuse, cohabiting among students, sharing blood piercing objects, sexual exploitation and abuse and lack of comprehensive knowledge about HIV/AIDS (FMH, 2011;Waithera, 2010 & WHO, 2015). However, significant efforts have been made in recent years to stop new HIV infections among the vulnerable groups especially children and young people (UNAIDS, 2019). The Joint United Nations Programme on HIV/AIDS (2017) inspired the world to achieve its shared vision of zero new HIV infections, discrimination and AIDS – related death.

Available evidence shows that HIV testing is the key entry point for HIV prevention interventions and is essential for access to care and treatment (WHO, 2013). Unfortunately, many people living with HIV in Nigeria were unaware of their status and testing rates were low as only 15.1% of people between the ages of 15 – 49 had tested and knew their status (UNAIDS Data, 2019).

Prevention programmes are interventions that aim to halt the transmission of HIV. They are implemented to protect an individual and their community. Over the years, HIV interventions which have focused primarily on the ABC approach – Abstinence, Be faithful and Condom use have been found to be inadequate in response to the growing epidemics, hence the Minimum Prevention Package Intervention (MPPI) was introduced as HIV preventive measure to replace ABC – type approaches. Effective HIV prevention programmes require a combination of behavioural, biomedical and structural intervention (UNAIDS, 2016).

Behavioural interventions seek to reduce the risk of HIV transmission by addressing risky behaviours. For instance, a behavioural intervention may aim to reduce the number of sexual partners individual have; improve treatment adherence among people living with HIV; increase the use of clean needles among people who inject drugs or increase the consistent and correct use of condoms. Examples of behavioural interventions include information provision (such as sex education), counseling and other forms of psycho-social support, safe infant feeding guidelines, stigma and discrimination and cash transfer programme.

Biomedical interventions use medical approaches to reduce HIV transmission. The approaches include male and female condoms, sex and reproductive health services, antiretroviral drugs for the prevention of mother-to-child transmission, HIV testing and counseling, testing and treatment of sexually transmitted infections and blood screening (UNAIDS, 2016). Structural intervention seeks to address underlying factors that make individuals or groups vulnerable to HIV infection. This approach of interventions focuses on socio-economic issues such as poverty, gender inequality, social marginalization, political and environmental influences. The three prevention interventions (Behavioural, Biomedical and Structural) approaches constitute the Minimum Prevention Package Intervention (MPPI). However, it seems reasonable to suggest that the behavioural intervention approach is more appropriate and relevant to promote and encourage students to go for HIV counseling and testing. Targeting HIV prevention interventions to youths who are students in tertiary institutions could serve as a strategy that will have a considerable effect in building their confidence towards HIV counseling and testing. There is no doubt that students in tertiary institutions may be vulnerable to HIV

infection due to the high rate of sexual promiscuity, rape and casual sex with wealthy men who HIV status is not known.

Changing behaviour and attitude is a fundamental process that may involve in determining one's HIV status through counseling and testing which is recognized as a priority in national programming because it forms the gateway to HIV prevention, treatment and support interventions (WHO, 2016). Knowledge of one's HIV status is the first step to facilitate, accessing care and preventing further infections, thereby controlling the HIV epidemics.

The decline in students' response to counseling and testing in tertiary institutions has been a serious concern for the researchers (Mbamara, Obiechina & Akabuike, 2013 & Arodiwe, Arodiwe, Okeke & Onwasigwe, 2018) and other agencies working of HIV/AIDS. The researchers observed that, in spite of the efforts of governments (Federal and State) and all other agencies working on HIV/AIDS for making screening services free and screening centres available, easy access to HIV counselling and testing, people are not responding well to determining their HIV status. It is not out of place to reason that lack of adequate knowledge of students in tertiary institutions may make them disregard HIV preventive measure such as making themselves available for counselling and testing for HIV. Based on this background, the present study examined the effects of exposure to HIV prevention package as intervention programme for enhancing counselling and testing among students in tertiary institutions in Ekiti State, Nigeria.

II. RESEARCH OBJECTIVES

The study was designed to mobilize and sensitize students' leaders towards voluntary counseling and testing for HIV/AIDS. Specifically, the objectives of the study are to:

2.1 investigate the knowledge of HIV/AIDS of students in tertiary institutions in Ekiti State;
2.2 determine the attitude of students towards voluntary counselling and testing for HIV/AID;
2.3 determine the differences in the effects of exposure to HIV/AIDS prevention package on knowledge and attitudes towards voluntary counselling.

III. RESEARCH QUESTIONS

The following research questions were raised to guide the study:

3.1 What is the level of knowledge of HIV/AIDS possessed by students in tertiary institutions in Ekiti State?
3.2 What is the attitude of students towards voluntary counselling and testing for HIV/AIDS?

IV. RESEARCH HYPOTHESES

The following hypotheses were formulated for the study:

4.1 Exposure to prevention package will not have any significant effect on knowledge of HIV/AIDS among the students in Ekiti State University, Ado-Ekiti.
4.2 Exposure to prevention package will not have any significant effect on the attitude of students towards counselling and testing for HIV/AIDS.
4.3 There is no significant gender difference in the attitude of students towards voluntary counselling and testing for HIV/AIDS after exposure to prevention package.

V. METHODOLOGY

5.1 Research Design

The study adopted pre-experimental one group pretest posttest research design. The pattern of the design is as shown below:

0_1 X 0_2

Where 0_1 = Pretest
0_2 = Posttest
X = Treatment

5.2 Population

The population for this study consisted of students' leaders at Ekiti State University, Ado-Ekiti. The rationale for sampling this category of students was based on their exposure to other students which afford them the opportunity to mix and interact freely with other students. This contact presumably, might be the forum through which other students learn from their leaders' factual and basic information about HIV/AIDS.

5.3 Sample and Sampling Techniques

The participants for this study were students who hold leadership positions and volunteered to be part of the study. The students were stratified by their sex (either male or female) and by the type of office they hold

as students' leaders (students' Union Executive, Students Representative Council, Class Representative, Religions and Students' Association Officers). A total of 60 students' leaders participated in the study.

5.4 Research Instrument

Data for the study were collected using a structured questionnaire developed by the researchers. In constructing the instrument, the researchers reviewed the Minimum Prevention Package Intervention (FMH, 2011) booklet and literature relating to HIV/AIDS. Concepts from the literature review were used to design items for the questionnaire. The instrument which consisted of 56 items was arranged in five sections. Section A contained the bio-data of the participants which include age, gender and students' leadership position. Section B was designed to assess the level of HIV/AIDS knowledge possessed by the participants. The researchers adapted the HIV knowledge test developed by Ignatius and Lois (2008). The questionnaire items were modified in line with the Minimum Prevention Package Intervention (FMH, 2011) booklet. The final items consisted of 30 items on knowledge of HIV/AIDS related to its meaning, signs and symptoms, mode of transmission, prevention and control. The 30-item questionnaire was based on objective test of True or False in which the participants were asked to pick the correct answers. Section C contained information on attitude of participants towards voluntary counselling and testing for HIV/AIDS. The 5 items were developed to probe the participants' attitude on dichotomous response option of "Yes" or "No".

5.5 Validity of the Instrument

The validity of the instrument was determined by giving it to five experts in the fields of Health Education, Guidance and Counselling, Test and Measurement, Community Health and Sociology at Ekiti State University, Ado-Ekiti. Based on the comments of these experts, some items were modified while some were removed. Fifty-six items out of sixty that were presented for validation survived scrutiny and were used for data collection.

5.6 Reliability of the Instrument

The reliability of the instrument was established by giving the validated version to 10 students' leaders at the Federal Polytechnic, Ado-Ekiti who did not form part of the study. The Cronbach Alpha method was adopted to determine the internal consistency. A reliability coefficient of 0.72 was obtained. This value indicated that the instrument was appropriate for the study.

5.7 Procedure for Data Collection

A letter of introduction (Appendix 1) was obtained from the Dean, Faculty of Education to the Registrar, Ekiti State University, Ado-Ekiti for permission to carry out the study among the students' leaders in the University. Three trained research assistants were properly briefed about the purpose of the training. The selected trainees who had earlier completed and returned the consent forms were invited. The objectives of the training were explained to them. The researchers distributed the training manual (Appendix lll, refers) and other necessary materials to the trainees for the one-day programme.

5.8 Experimental Procedure

The training was conducted at the new conference room, Faculty of Education, Ekiti State University. The study was carried out in three phases.

Phase I: Pre-treatment Stage

Copies of pre-test questions on knowledge of HIV/AIDS were administered by the researchers. The test was used to determine the pre-entry knowledge of the participants. The participants were requested not to indicate their names on the question papers to maintain anonymity. They were informed not to interact with each other or compare their responses while filling the questionnaire. The participants were given 40 minutes to complete the questionnaire.

Phase II: Training Stage

The participants were taught the basic knowledge of HIV/AIDS, safer sex, counselling and testing drawn from HIV Minimum Prevention Package Intervention (MPPI). The participants were exposed to forty minutes of teaching and discussion on each of the modules as contained in the train-the trainers manual. Each module was handled by an expert and experienced facilitator with background in human sexuality and HIV/AIDS. Participants were actively involved throughout the training sessions.

Phase III: Post-training stage

At the end of the training sessions, the posttest was conducted on the participants. The same questionnaire used during the pre-test was administered to the participants.

5.9 Data Analysis

The pre-test and post-test scores were collated and analyzed using descriptive statistics of frequency counts, percentage, mean scores and standard deviation while inferential statistics of t-test was used to test the hypotheses at 0.05 level of significance.

VI. RESULTS

6.1 Research question 1: What is the level of knowledge of HIV/AIDS possessed by students in tertiary institutions in Ekiti State?

Four different areas of HIV/AIDS health knowledge were measured. A correct response to each item carries one point, thus, a participant could have a maximum score of 30 points. The percentages and mean scores for each aspect of health knowledge are presented in Table 1.

Table 1: Knowledge of HIV/AIDS

Aspect of HIV/AIDS	NO	%	$\overline{X}$	SD
Meaning of HIV/AIDS	60	80.8	3.3	.73
Signs and Symptoms	60	62.0	6.7	1.75
Mode of transmission	60	81.0	6.10	1.86
Preventive and control measures	60	70.0	4.8	1.42
Grand Mean			**5.2**	

Table 1 revealed that the participants scored high in almost all the aspect of HIV/AIDS knowledge except in the area of signs and symptoms (62.0%) where the performance was a little bit above the average score. Similarly, the mean scores vary for each aspect of HIV/AIDS knowledge. The mean score of all the participants was 5.2. These observations indicate that the participants possessed high level of knowledge in the meaning of HIV/AIDS ($\overline{X}$ =3.3), mode of transmission ($\overline{X}$ =6.1), preventive and control measures ($\overline{X}$ =4.8) and moderate in signs and symbols ($\overline{X}$ =6.7).

6.2 Research question 2: What is the attitude of students towards voluntary counselling and testing for HIV/AIDS?

Participants were asked if they knew their HIV status. More than half (61.7%) of the participants indicated that they were not aware of their HIV status while (80.0%) of the participants were willing to be tested after the training programme. Almost half (53.3%) of the participants claimed that their institution had no facilities for counselling and testing services for HIV/AIDS.

The scores relating to students' attitude towards counselling and testing for HIV/AIDS were computed. The mean score (7.81) was used as the cut-off point to distribute the participants into "positive" and "negative" attitude towards counselling and testing. Participants with scores above the criterion mean were categorized into positive attitude while those who had scores below the criterion mean were categorized into negative attitude towards counselling and testing for HIV/AIDS. The results are presented in Table 2.

Table 2: Attitude of Participants towards counselling and testing for HIV/AIDS

Source	No	%
Negative (5.00 – 7.80)	17	28.3
Positive	43	71.7
Total	60	100

Table 2 revealed that 43 (71.7%) of the participants had positive attitude towards counselling and testing while 17 (28.3%) participants had negative attitude. This implies that participants showed positive attitude towards counselling and testing for HIV/AIDS. Thus, a high percentage of participants would like to go for voluntary counselling and testing for HIV/AIDS.

6.3 Hypotheses Testing

6.4 Hypothesis 1: Exposure to prevention package will not have any significant effect on knowledge of HIV/AIDS among students in Ekiti State University, Ado-Ekiti

Table 3 presents the results of t-test on knowledge of HIV/AIDS among the students

Table 3: Summary of t-test on knowledge of HIV/AIDS

Source	N	$\overline{X}$	SD	df	t_{cal}	t_{table}
Pre-test	60	21.20	5.10	59	0.364	2.000
Post-test	60	20.90	4.40			

Table 3 showed that the t-calculated (0.364) was less than t-table value (2.000) at 0.05 level of significance. This indicated that there was no significant difference between the pre-test and post-test scores. Thus, the null hypothesis was not rejected.

6.5 Hypothesis 2: Exposure to prevention package will not have any significant effect on the attitude of students towards counselling and testing for HIV/AIDS.

Table 4 presents the results of t-test on the attitude of students towards counselling and testing for HIV/AIDS.

Table 4: Summary of t-test on attitude of students towards counselling and testing for HIV/AIDS

Source	N	$\overline{X}$	SD	df	t_{cal}	t_{table}
Pre-test	60	8. 05	1.63	59	0.223	2.000
Post-test	60	8.12	1.33			

Table 4 showed that the t-calculated (0.223) was less than t-table value (2.000) at 0.05 level of significance. This indicated that there was no significant difference between the pre-test and post-test scores. Thus, the null hypothesis was not rejected.

6.6 Hypothesis 3: There is no significant gender difference in the attitude of students towards voluntary counselling and testing for HIV/AIDS after exposure to prevention package.

Table 5 presents the results of t-test on attitude of students towards voluntary counselling and testing for HIV/AIDS.

Table 5: Summary of t-test on gender difference in the attitude of students towards counselling and testing for HIV/AIDS

Source	Gender	N	$\overline{X}$	SD	df	t_{cal}	t_{table}
Pre-test	Male	25	21.40	4.65	58	0.319	0.751
	Female	35	20.97	5.44			
Post-test	Male	25	19.93	5.32	58	1.714	0.092
	Female	35	22.20	4.73			

Table 5 revealed that there were differences in the mean scores of male and female students in the pre-test and post-test, respectively. In order to test for statistical significance of the differences, the t-test analysis was computed. The calculated t-values of 0.319 (pre-test; male & female) and 1.714 (post-test; male & female) obtained were less than the table value at $p>0.05$ level of significance. The results showed that there was no significant difference in the attitude of students towards counselling and testing for HIV/AIDS with respect to gender. Thus, the null hypothesis was not rejected.

VII. DISCUSSION

The HIV/AIDS epidemic is one of the major public health concerns in Nigeria, hence the findings of this study corroborated many of the findings of previous studies in this direction.

The findings of the present study revealed a high level of knowledge about HIV/AIDS among the participants. Regarding the specific aspects of HIV/AIDS, the participants had adequate knowledge about the meaning of HIV/AIDS, modes of transmission and preventive and control measures. On the other hand, the participants had moderate level of knowledge of signs and symptoms. These findings supported the studies of Mbamara, et al, (2013) and Arodiwe, et al (2018) who reported adequate knowledge of HIV/AIDS among their respondents. However, these findings are not consistent with those of Kejela, et. al (2015); Oginni, et al (2017) and Badru, et al (2020) who revealed a low comprehensive HIV knowledge among their respondents. The high level of knowledge of HIV/AIDS reported by participants in this study might have been influenced by various campaigns organized by the Non-governmental Organizations, radio and television drama and perhaps, the exposure of the participants to a one-day training programme on HIV/AIDS.

The attitude of participants towards voluntary counselling and testing found in this study was moderate as a high percentage of the participants showed positive attitude towards voluntary counselling and testing. However, more than half of the participants were not aware of their HIV status while a high percentage of the

participants were willing to be tested for HIV infection. These findings corroborated the earlier studies of Mbamara, et al (2013) who reported that about half of their respondents were not aware of their HIV status and unwilling to undertake VCT for HIV/AIDS. Similarly, the findings was in line with the submission of UNAIDS (2019) who noted that many people living with HIV in Nigeria are unaware of their HIV status.

The low level of percentage of young adults to undertake VCT for HIV/AIDS should be of concern as Nigeria has the second largest HIV epidemic in the world and one of the highest rates of new infection in sub Saharan Africa (NACA, 2017). There are a number of reasons why young people between the ages of 15 – 49 are not willing to go for HIV test. These may include false assumptions, misconceptions, lack of adequate and appropriate knowledge about HIV/AIDS and lack of knowledge of where to go for counselling and testing (Mbamara, et al, 2013 & Arodiwe, et al, 2018). It is not out of place to reason that the fear of being tested positive and face the stigma and discrimination from friends, family and peer group hold good for young people not to go for HIV test.

The findings of the study further showed that there were differences in the pre-test and post-test mean scores of participants with respect to knowledge of HIV/AIDS, attitudes towards voluntary counselling and testing, stigmatization and gender. However, the differences observed in the study were not statistically significant. These findings seem to suggest that one-day intervention training programme might not be adequate enough to enhance significantly the HIV/AIDS knowledge and attitudes of participants towards voluntary counselling and testing.

For all intents and purposes, a change in health knowledge and attitude is expected after instructions. The reasons for this outcome might be due to the short duration of the training programme as well as the one-group pre-test post-test pre-experimental design in which there was no comparison group to compare with the experimental group. However, previous studies carried out by Tenibiaje (2010), WHO (2015) and Adegboyega and Ebun (2016) reported enhanced knowledge of HIV/AIDS and improved attitude of their respondents towards counselling and testing after exposure to HIV prevention training programme. There is no doubt that many of the current interventions to prevent HIV/AIDS require people to know their status and hence require HIV testing (Mbamara, et al, 2013). This approach may be a vital point of entry to the HIV/AIDS services and prevention.

VIII. CONCLUSION

The increase in HIV infections among young adolescents necessitates the need for increased prevention intervention programmes towards this vulnerable group. Based on the findings of this study the participants had adequate knowledge of HIV/AIDS, most especially in the aspects of mode of transmission and prevention. Majority of the participants were willing to go for voluntary counselling and testing. There was no significant gender difference in the attitude of participants towards voluntary counseling and testing.

IX. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. Family life and human sexuality education with emphasis on comprehensive HIV knowledge and prevention as contained in the Minimum Prevention Package Intervention (MPPI) should be integrated into the General Studies Course in tertiary institutions in Ekiti State.
2. Tertiary institutions in Ekiti State should make adequate provision for voluntary counselling and testing services for HIV/AIDS to facilitate free access for the students to determine their HIV status.
3. Testing for HIV must be a compulsory exercise for students in tertiary institutions and carried out at the beginning of each session.

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Competing interest

The authors declare that they have no competing interests.

REFERENCES

[1]. Adegboyega, J. A. & Ebun, O. (2016). Environmental and personality factors influencing the exposure to HIV and AIDS prevention message among the students in public tertiary institutions in Ondo State. *International Journal of Research in Engineering and Social Science*, 6 (6) l 1 – 6.

[2]. Arodiwe, I, Arodiwe, E.; Okeke, T. & Onwasigwu, C. (2018). Knowledge, attitude, willingness of HIV counselling and testing and factors associated with it, among long distant drivers in Enugu, Nigeria: an opportunity in reduction of HIV prevalence. *African Health Sciences*, 18 (4), 1088 – 1097.

[3]. Badru, T, Nwaisaka, J.; Khomofu, H.; Agbakwuru, C.; Adedokun, O.; Raj Pandey, S.; Essiet, P.; James, E.; Chen-Carrington, A.; Mastro, T.; Aliyu, S. &Torpey, K. (2020). HIV comprehensive knowledge and prevalence among young adolescents in Nigeria: evidence from AkwaIbom AIDS indicator Survey, 2017 *BMC Public Health*, 20: 45.

[4]. Federal Ministry of Health (2011). HIV prevention package: MARPS and Vulnerable Groups. Federal HIV/AIDS Prevention and Control Office. Addis Ababa, Ethiopia.

[5]. Ignatius, N. & Lois, O. (2008).Knowledge and sources of information of HIV/AIDS among Secondary School Students in Imo State, Nigeria. *Research in Health, Physical Education, Recreation, Sports & Dance*, 3 (2), 46 – 50.

[6]. Joint United Nations Programme on HIV/AIDS (2017). Ending AIDS progress towards the 90 – 90 – 90 targets. Geneva Aids.

[7]. Kejela, G.; Oljira, L.; Dessie, Y. & Misker, D. (2015).Comprehensive HIV/AIDS knowledge level among out-of-school youth in Wayu Tuka District, Western Ethiopia. *European Journal of Preventive Medicine*, 3(1), 11-16

[8]. Mbamara, S.; Obiechina, N. & Akabuike, J. (2013).Awareness and attitudes to voluntary counselling and testing (VCT) for human immunodeficiency Virus/acquired Immune Deficiency Syndrome (HIV/AIDS) among law undergraduates in tertiary institutions in Anambra State, Southeast, Nigeria. *International Journal of Medicine and Medical Sciences*, 5 (6), 290 – 294.

[9]. NAIIS (2019). Revised National HIV & AIDS Strategic Framework. 2019 – 2021. https://NACA.gov.ng/revised.

[10]. National Agency for the Control of HIV/AIDS (NACA) (2017). National Strategic Framework on HIV and AIDS, 2017 – 2021.

[11]. National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF) (2017). Multiple Indicator Cluster Survey 2016 – 2017. Survey Findings Report

[12]. National Committee on HIV/AIDS (NACA) (2006). Annual Report, Abuja.

[13]. Oginni, A.; Adebayo, S. Ahonsi, B. (2017).Trends and determinants of comprehensive knowledge of HIV among adolescents and young adults in Nigeria, 2003 – 2013.*African Journal of Reproductive Health*, 21(2), 26 – 34.

[14]. Tenibiaje, D. (2010). Attitude of youth towards voluntary counselling and testing for HIV/AIDS. *Journal of Advance Food Science and Technology*, 4(2), 4 – 6.

[15]. UNAIDS (2016). Combination HIV prevention: tailoring and coordinating Biomedical, Behavioural and Structural Strategies to reduce new HIV infections. HIV prevention programmes overview – AVERT 1 – 7.

[16]. UNAIDS (2019). HIV and AIDS in Nigeria. Global Information and education on HIV and AIDS, https://www.avert.org/professional/hiv-around-world/sub-saharan.

[17]. Waithera, S. (2010).Female Bodies Gender inequalities, Vulnerability, HIV and AIDS in Kenya. *Advancing Women in Leadership*, 30, 17.

[18]. World Health Organisation (2015).Global Statistics; HIV/AIDS in Nigeria. https://en.wikipedia.org.wiki

[19]. World Health Organisation (2016). Global Statistics; HIV/AIDS in Nigeria. https://en.wikipedia.org.wiki

[20]. World Health Organisation (2018).Global Health Observation (GHO) data. HIV/AIDS. https://www.who.int/gho/hiv/en.

[21]. World Health Organisation (WHO, 2013).Adolescent HIV testing and counselling; a review of the literature. Guidance for HIV Testing and Counselling and care for Adolescents living with HIV; Recommendations for Public Health Approach and Considerations for Policy-makers and Managers. Geneva.