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KNOWLEDGE OF TRANSMISSION PATTERNS OF HIV/AIDS AMONG STUDENTS OF TERTIARY INSTITUTIONS IN KWARA STATE, NIGERIA

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Abstract
This study investigated knowledge of transmission patterns of HIV/AIDS among students of tertiary institutions in Kwara State, Nigeria. A proportionate sampling technique was used to select 700 students from five tertiary institutions in Kwara State. The hypotheses formulated were tested using Chi-square and analysis of variance (ANOVA) at oc = 0.05 level of significance. In the findings, calculated X^2 value of 124.69 revealed that the students have adequate knowledge about HIV/AIDS transmission through sexual contacts, also calculated x^2 value of 67.83 revealed that students have adequate knowledge that HIV/AIDS can transmit through mother to child and the ANOVA result of 3.52 showed that students of various tertiary institutions in Kwara State have varied knowledge about HIV/AIDS transmission in health care setting. Fisher least significance difference was used as multiple range comparison test to identity where the significant difference between and within the group of students. Based on the findings, it was recommended that AIDS education to include STDs, sexuality and reproductive health education should be made compulsory and be

incorporated into the syllabi and curricula from primary, secondary and tertiary institutions in Nigeria among others.

Key words: Accidental exposure to blood (AEB), Blood splash (B/splash), Needle stick injury (NSInj), Percutaenous exposure (PE), Viral load.

Introduction

To date, epidemiological studies from throughout the world have documented that HIV transmission is manly implicated through blood, semen and vaginal secretions. The etiological agents of AIDS are transmitted in the following ways: **Sexual Contact**. Sexual contact with an infected individual sexual contact is the main mode of HIV transmission. Although AIDS seems to have started among homosexuals, it is not restricted to them. Infected men can infect their female sex partners as well and infected women can similarly infect men. Transmission occurs through anal, vaginal and oral sex intercourse, although the relative efficiency of each route is not known. Anal intercourse which frequently results in slight ruptures of the rectum is though to be a frequent mode of transmission. Through these rupture, semen containing virus can enter the blood stream of the sexual partner (Mann, 1997).

Mother to Child Transmission (MTCT)

HIV can also pass from mother to child during pregnancy, labour and delivery or through breastfeeding (Rosser, 2010). If a woman who is infected with HIV become pregnant, there appears to be about a 50% chance that her child will be infected with HIV. Mother to child transmission may occur in utero during childbirth or shortly after birth (Mann, 1997).

Baggaley et al, (2009) said that, mother to child transmission is also called vertical transmission and that mother to child transmission in pregnancy and

childbirth is also called perinatal transmission. In developing countries, between one in three babies or one in four babies bora to HIV positive women are born with HIV themselves. Some of these babies become infected during pregnancy, but not infected during the birth itself. There appears to be a greater risk of HIV transmission during pregnancy and childbirth if the mother has a high viral load or if her immune status is poor. Her viral load will be higher if she is HIV positive just before or during her pregnancy, and if she is continuing to be exposed to the HIV through unprotected sex in pregnancy and has symptomatic HIV (Olaitan, 2002, Rosser, 2010).

Exposure of fetus to the virus in cervico-vaginal secretion is though to play a role. In addition, recent reports have indicated that mode o delivery may affect the transmission rate. Caesarean section whether elective or emergency has been shown to decrease transmission in some studies (ECS, 1994). Landesman et al, (2006) concluded that, prolong rupture of membranes (more than four hours) increase the risk of transmission.

Transmission of HIV in Health Care Settings.

Bouvet and Laporte (2008) discussed on the transmission of HIV infection through exposure to blood and blood products. This occurs as a result of the receipt of infected blood or blood products, the blood-contaminated needles or equipment by drug abusers, or the use of inadequately sterilized needles or other skin-piercing instruments.

Accidental exposure to blood (AEB), percutaneous exposure (PE), needle stick injury and blood splash have been discovered as the ways through which hospital workers may be infected with HIV following exposure (Bouvet and Laporter, (2008), Olaitan (2004) opined that viral transmission due to percutanous exposure to blood in a hospital occurs in three ways:

1. Exposure of hospital workers to blood of patients
2. Exposure of patients to blood of health workers

3. Exposure of patients to blood of other patients.

In practice, exposure of hospital workers to the blood of patients is the major concern. The rate of transmission of HIV infection to hospital worker depends on the prevalence of infection in-patients, the frequency of exposure to blood, and the risk of transmission (Olaitan, 2004).

Research Questions:

1. To what extent do students of tertiary institutions in Kwara State have knowledge about sexual contact as a transmission pattern of HIV/AIDS?
2. What is the knowledge of students of tertiary institutions in Kwara State about mother to child transmission as a transmission pattern of HIV/AIDS?
3. Do students of various tertiary institutions in Kwara State have Knowledge about health care setting practices as transmission pattern of HIV/AIDS?

Research hypotheses

1. Students of tertiary Institutions in Kwara State will not significantly have knowledge about sexual contact as a transmission pattern of HIV/AIDS.
2. Students of tertiary Institutions in Kwara State will not significantly have knowledge about mother to-child transmission a transmission pattern of HIV/AIDS.
3. Students of tertiary various Institutions Kwara State will not have significant difference in their knowledge about health care setting practices as transmission patterns of HIV/AIDS.

Methodology

A descriptive survey research method was used to achieve the purpose of the study. The population comprised all the students in tertiary

institutions in Kwara State. In order to avoid interference and bias proportionate sampling techniques was used to select a total number of seven hundred students. This number represents 10.2% of the target population of the year three students of all selected tertiary institutions which was 6,850. The researchers constructed the instrument which seek to elicit information from respondents on their knowledge of transmission patterns of HIV/AIDS.

Results

Table 1: Table: Age and Sex of Respondents

Age (in years)	Frequency		Total	Percentage (%)
	Male	Female		
16-20	39	32	71	10.1
21-25	65	57	122	17.4
26-30	107	85	192	27.4
31-35	99	68	167	23.9
36-40	44	40	84	12.0
41 & above	36	28	64	9. 2
TOTAL	**390**	**310**	**700**	**100**

Table 1 showed that 390 male and 310 female participated in the study by responding to the questionnaire. In the age of respondents, 10.1% of the respondents are within ages 16-20years, 17.4% (21-25years), 27 .4% (26-30years), 23.9% (31-35yeras), 12.0% (36-40years) and 9.2% (41years and above). This depicts that highest number of respondents' ages are within 26-30years.

Table 2: Chi square Analysis of Students' Knowledge about Sexual Contacts as a Transmission Pattern

S/No	Sexual Contact through	SA	A	D	SD	χ^2	DF	Cal. X^2
1.	Man and woman (Heterosexual)	152	268	83	—	124.69	15	25.00
2.	Man and man (homosexual)	319	28	261	—			
3.	Woman and woman (lesbianism)	77	296	115	—			
4.	Man/woman and animal (Bestiality)	315	212	109	—			
5.	Male multiple sexual partners (Polyandry)	372	106	98	—			
6.	Female multiple sexual partners (Polygamous)	359	123	101	—			

P< 0.05

In table 2, since the calculated value of 124.69 was greater than the critical value of 25.00 at 0.05 level of significant, the null-hypothesis was therefore rejected. This means that students in tertiary institutions in Kwara State have significant knowledge about sexual contacts as a transmission pattern of HIV/AIDS.

Table3: Chi square results on knowledge about mother-to-child as a transmission pattern of HIV/AIDS

S/N	Mother-to-child-transmission through	SA	A	D	SD	X^2	DF	Cal.χ^2	REJECT
1.	MTC during pregnancy (Antenatal transmission)	89	280	360	—	67.83	9	16.9	
2.	MTC during labour/childbirth (parinatal transmission)	101	421	219	—				
3.	MTC during breast feeding (postnatal transmission)	216	150	305	—				
4.	MTC during Cesarean (sectional transmission)	92	389	115	—				

P< 0.05

Table 3 shows that calculate value of 69.83 was gather than the critical value of 16.92 at 0.05 level of significant, the null-hypothesis was therefore rejected. This means that students in tertiary institutions in Kwara State have significant knowledge about mother-to-child-transmission as a transmission pattern of HIV/AIDS.

Table 4: Percentage Performance of Health Care Setting Practices as Transmission Patterns of HIV/AIDS

S/N	Variables	Age	PE	NSINj	B/Splash	X
1.	Unilorin	38.8	39.6	71.9	50.1	50.1
2.	Fed.Poly Offa	57.1	47.3	68.5	39.9	53.2
3.	COE, Oro	41.4	36.8	70.7	28.6	44.4
4.	Nursing Sch. Ilorin.	62.2	60.7	82.5	51.4	64.2
5.	COE, Lafiaji	32.3	41.6	63.4	12.5	37.5

Table 4 showed the percentage performance of students of various tertiary institutions in Kwara State on their knowledge about ways HIV/AIDS can be transmitted in the health care setting. They are, through accidental exposure to blood (AEB), percentage exposure (PE) needle stick injury (NSInj) and blood splash (B/splash) on the overall analysis, students of college of nursing Ilorin have performance score of 64.2% followed by Federal Polytechnic Offa (53.2) Unilorin (50.1) while students of COE Oro and COE Lafiaji have below average knowledge with performance scores of 44.4% and 37.5% respectively.

Table 5: ANOVA results on Health Care Setting (HCS) Practices as Transmission Patterns of HIUV/AIDS

Source	Ss	Df	Ms	F-Ratio
Between	7277.2414	41	819.31035	3.52
Within	7760.1661	15	517.34440667	
Total	15037.4075	19		

Crit value @ $0.05F_4,i_5$ =3.06 Decision on the hypothesis = rejected.

In table 5, since the calculate value of 3.52 was gather than the critical value of 3.06, at 0.05 level of significant, the null-hypothesis was therefore rejected, i.e. there existed significant differences in the knowledge about the

health care setting practices as means of transmission partterns of HIV/AIDS. Hence the need for multiple comparison test to know where the significant difference lies.

Table 6: Multiple Range Comparison Tests (Fiser's LSD)

Main effect	COE Lafiaji	COE, Oro	Unilorin	Fedpoly	Nursing Sch
_	5	3	1	2	4
Means (X)	37.5	44.4	50.1	53.2	64.2

Conclusion: 5 is significantly different from 3, 1,2, and 4
3 is significantly different from 1. 2-r-afld 4
1 is significantly different from 4=
The results showed that there existed significant differences in the knowledge about health care setting practices as means of transmission of HIV/AIDS among students of various Tertiary Institutions in Kwara State as stated in the conclusion above.

Discussion

The analysis revealed that students had knowledge about the transmission patterns of HIV/AIDS. Even through their knowledge varied from one Institution to the other. The students were knowledgeable that HIV/AIDS can transmit by sexual contact through heterosexual, homosexual, lesbianism, bestiality, polyandry and polygamy practices. This corroborates the findings of Mann, (1997) who also found that transmission occurs through anal, vaginal and oral sexual intercourse. However, it is imperative that one who has sexual contact would in one way

or the other involve in any of the sexual practices above. The students were knowledgeable about the transmission of HIV from mother to the child antenatally, perinatally, postnatally, and sectionally, this is in line with Mann (1997), Baggaley et al. (2009) and Rosser, (2010) that HIV can also pass from mother to child during pregnancy labour and delivery or through breastfeeding. Some of the subjects knew that HIV cannot pass to another person through swimming pool, this is in line with WCTO/WHO/UNESCO/ILO (2005) that AIDS is not transmitted by insect, food, water, swimming, etc.

The students were knowledgeable that a person may contact HIV by sharing syringes and needles, and piercing instrument with AIDS patient, this is in line with Bouvet & Laporte (2008), Olaitan (2004) and Achalu (1993) that needle stick injury and blood splash have been found as the ways through which hospital workers may be infected with HIV following exposure an not sharing needles, syringes razors or other skin piercing instruments respectively. They also have knowledge about transmission of HIV/AIDS through semen, vaginal fluid and blood, this is in support of Mann (1997) that the sexual contact is the main mode of HIV transmission, i.e. transmission occurs through anal, vaginal, and oral sex intercourse, semen containing virus can enter the blood stream of the sexual partner.

According to Bouvet and Laporte (2008), and Olaitan (2002) and Marcus et al (1999) transmission of HIV can and does occur in health care settings. They further stressed that, the rate of transmission of HIV infection to hospital worker depends on the prevalence of infection in patients. This is to support the responses of the subjects who said that, in the health care setting HIV transmission is more likely from the patient to health care worker. They knew that HIV/AIDS cannot be transmitted through mosquito bite, this is in line with WCTO/WHO/UNESCO/ILO (2005) that there is

considerable evidence to show that HIV is not transmitted by insects, food, water, sneezing, coughing, toilet, urine, swimming pools, sweat, tears, shared eating and drinking utensils, or other items such as protective clothing, telephone, shared toys, books furniture or athletic clothing.

Conclusions

From the result of the study and within its limitations, the following conclusions were drawn:

1. Students of tertiary institutions in Kwara State have adequate knowledge that HIV/AIDS can be transmitted by sexual contacts through heterosexual, homosexual, lesbianism, polyandry and polygamy practices.
2. Students of tertiary institutions in Kwara State have adequate knowledge that HIV/AIDS can be transmitted through mother to child, antenatal, perinataly, postnataly and Caesarean sections.
3. Students of various tertiary institutions in Kwara State have varied knowledge about the ways HIV/AIDS can be transmitted in health care setting. The students of college of Nursing in Ilorin, Federal Polytechnic Offa, and University of Ilorin have quite above average knowledge, while students from Colleges of Education, Oro and Lafiaji have below average knowledge. This may be due to the exposure of these categories of students to health care setting practices and their knowledge about HIV/AIDS transmission patterns.

Based on the above findings and conclusions, the following recommendations were made:

1. More and adequate information on knowledge of HIV/AIDS transmission patterns should be made available to the students and the entire population regardless of age, sex, religion, groups, occupation, etc.
2. AIDS education to include STDs, sexuality and reproductive health

education should be made compulsory and be incorporated into the syllabi and curricula from primary, secondary and tertiary institutions in Nigeria

3. Federal and State Ministries of Health and Education should lay more emphasis on campaign against HIV/AIDS and should make students have access to posters, handbills, billboards, mass media both printed and electronic on the possible transmission patterns of disease.

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