

# Pattern Of Risk Behaviour For HIV Infections Among Undergraduates In A University

G D Mukoro, U Ogbuku, B Tabowei

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## Abstract

HIV/AIDS prevalence is highest among young people between the ages of 20 and 24. Over 60% of new HIV infections in Nigeria are in the 15-24 year age range.

The study done in at a tertiary Institution in Nigeria, examined the pattern of risk factors for HIV infection, knowledge of HIV/AIDS, sexual behavior, life style, stigma and discrimination among the undergraduates, whose VCT uptake has been evaluated and reported.

It was a cross-sectional study. A semi-structured, self-administered, pre-tested questionnaire was used among undergraduate students. Student size was estimated using sample size formula. Hostels selected by ballot method while room was selected by abridge table of random sample. Data was summarised into simple frequencies, and percentages. Cross tabulations were made, further analysis done, using Microsoft-Excel 2007 Version for Pearson's product correlation coefficients.

A total of 378 students were recruited. Most participants were single 366(96.83%), with male to female ratio at 1:1.33 and 63.49% were within the 20–24 years of age. Data showed persistence of risk behaviors among undergraduates despite sound knowledge of HIV route of transmission and preventive measures. Newly emanating social risk behavior such as sharing of hair dressing needles was discovered among the studied participants.

Further-analysis revealed that independent frequencies of self Perception of contracting HIV infection correlate to those who have multiple sexual partners and inconsistent use of barrier contraceptive such as condom at correlation co-efficient of ( $p=0.9965$  and  $0.4487$ ) respectively.

Pre and post-counseling sessions with emphasis on abstinence might influence risk behaviors among these vulnerable age group that was studied.

## INTRODUCTION

For HIV to be transmitted from one person to another, there must be an exit point for the virus to pass out of the infected person and an entry point into the body of the uninfected person<sup>1</sup>. HIV is transmitted through the following ways: unsafe sexual intercourse (heterosexual and homosexual, intercourse without the use of a condom) with an infected person, injection or transfusion of contaminated blood<sup>2</sup> or blood products and through the sharing of unsterilized infected needles/other sharp objects, from an infected mother to her child during pregnancy, childbirth or breastfeeding<sup>3</sup>. Less commonly, HIV infection is also known to occur through artificial insemination, skin graft and organ transplant<sup>4</sup>. There may be occupational exposure through which health care workers are exposed to injuries from needles or other sharp objects.

There are concerns that there may be other routes of

transmission of the virus, but currently, it is known that HIV is NOT transmitted through mosquito<sup>5</sup> or other insect bites, sweat, saliva<sup>6</sup>, tears<sup>6</sup>, urine, faeces or everyday casual contact. Such casual contacts include sharing lecture rooms and other facilities like sanitary conveniences as well as shaking hands and hugging. People giving or receiving tattoos, piercings, and scarification are theoretically at risk of infection but no confirmed cases have been documented.<sup>7</sup> Factors contributing to the spread of HIV in Nigeria include lack of sexual health information, education and HIV testing, as well as Cultural practices and poor health system<sup>8</sup>. Up until recently there was little or no sexual health education for young people and this has been a major barrier to reducing rates of HIV and other STDs. UNAIDS estimate that only 18 percent of women and 21 percent of men between the ages of 15 and 24 could correctly identify ways to prevent HIV<sup>9</sup>. Lack of accurate information about sexual health has meant there are many myths and misconceptions

about sex and HIV, contributing to increasing transmission rates as well as stigma and discrimination towards people living with HIV/AIDS. Another contributing factor to the spread of HIV in Nigeria is the distinct lack of voluntary and routine HIV testing. In a 2003 survey, just 6 percent of women and 14 percent of men had ever been tested for HIV and received the results<sup>10</sup>. In 2005, only around 1 percent of pregnant women were being tested for HIV<sup>10</sup>. Over the last two decades, Nigeria's healthcare system has deteriorated as a result of political instability, corruption and a mismanaged economy <sup>8</sup>. A large parts of the country lack basic healthcare facility, making it difficult to establish HIV testing and prevention services, Sexual health clinics providing contraception, testing and treatment for other STDs are also few and far between<sup>11</sup>. This makes it difficult to keep the spread of the epidemic under control.

Risk behaviors associated with HIV infection have long been established, and more are yet to be investigated even as human civilization advances . Some behaviors are wrongly perceived due to stigmatization of the disease by the society. Over-enthusiasm to prevent the disease has lead to the poor perception<sup>15</sup> towards PLWHA.

**Methodology:**

The research was conducted in a tertiary Institution (University) of Nigeria. Few hostels were selected at random by ballot method. The student rooms which the questionnaires was applied was selected by random sampling method using the Abridge table of sampling, between the month of February to August 2009. The University lies along the east west road. The Youth-friendly centre is located in the delta campus, opposite the main administrative block, the centre provide services such as VCT service for HIV, recreation and internet service.

A semi-structured, self-administrable, Pre-tested questionnaires was designed and used to collect information on the knowledge of HIV/AIDS identified risk behaviors, and VCT uptake among undergraduates. Student size was determined by the formula

**Figure 1**

Student size was determined by the formula

$$n = \frac{t^2 \times p(1-p)}{m^2}$$

Description:  
n = required sample size

t = confidence level at 95% (standard value of 1.96)  
p = estimated prevalence of malnutrition in the project area  
m = margin of error at 5% (standard value of 0.05)

Individual consents were sought from participants by pre-consent statement before the questions were answered in the questionnaire. 378 questionnaires were used, 162 (43%) males and 216 (57%) females' undergraduates, who were in the hostel on campus, eventually were included.

The study was a descriptive cross sectional survey. Random sampling method was employed; a sample frame was drawn containing comprehensive list and hostels was selected by balloting method.

Data collation was done manually by sorting, and some variable recounted and cross-checked for errors. Summary statistics, simple frequencies, percentages, cross tabulations, were all computed.

**RESULTS**

**SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS**

A total of 378 proposed undergraduate students from University of PortHarcourt community were enrolled in the study. There were 162 (43%) males and 216 (57%) females, giving a sex ratio of 1:1.33. Most of the students were single 366 (96.83%). 240 (63.49%) were within the 20–24 years of age, 372 (98.4%) were Christians followed by Muslims 4(1.06%) and few 2 (0.53%) belonged to other denomination. The distribution of students is shown in Table 1

**TABLE 1**  
Socio-Demographic characteristics of participants

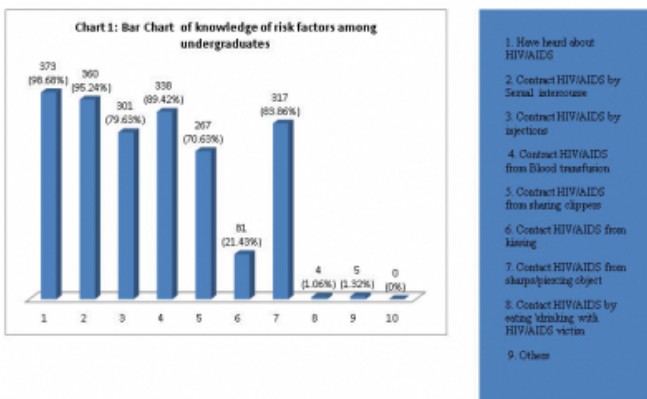
	FREQUENCY	Percentage (%)
<b>Age (years)</b>		
15-19	57	15.08
20-24	240	63.49
25-29	76	20.11
30-34	4	1.06
>35	1	0.27
<b>TOTAL</b>	<b>378</b>	<b>100</b>
<b>Marital status:</b>		
single	366	96.83
married	4	1.06
divorced	4	1.06
cohabit with Boyfriend or girl friend off campus	3	0.79
separated	1	0.27
<b>Religion:</b>		
Christian	372	98.4
Muslim	4	1.06
Pagan	2	0.53
Others	0	0
<b>Total</b>	<b>378</b>	<b>100</b>

**KNOWLEDGE OF RISK FACTORS FOR HIV INFECTION AND PERCEPTION OF PREVENTIVE MEASURES AMONG UNDERGRADUATES**

378 (98.68%) have heard about HIV/AIDS while 1.32% claimed ignorance. Furthermore, 360 (95.24%) agreed that HIV is contracted via sexual intercourse with infected individual, while greater than 70% of the total populations have the knowledge that the virus could be transmitted thru injections, blood transfusion, sharing clippers, and sharps/piercing objects respectively. 81 (21.43%) believed ,it could be contracted from kissing while only 4persons(1.06%) thinks ,it could be transmitted by eating and drinking with infected persons. Among the studied group only 155 (41.01%) have knowledge about VCT as preventive measure. Abstinence (85.9%),use of condom (50.26%),being faithful to one partner (65.43%) were the most perceived measures of prevention. See chart 1,and 2. Questions giving rise to chart 1& 2 were multiple answer questions.

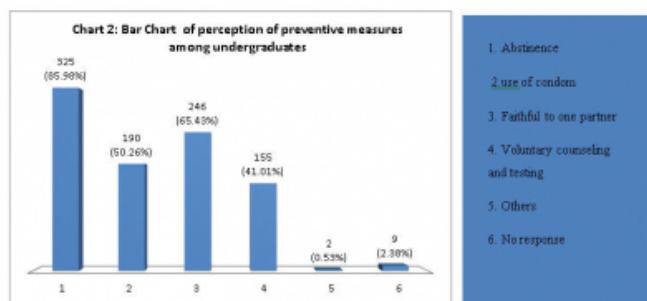
**Figure 2**

Chart 1: Bar Chart of knowledge of risk factors among undergraduates



**Figure 3**

Chart 2: Bar Chart of perception of preventive measures among undergraduates



**RISK ASSESSMENT AND PERCEPTION OF CHANCE OF CONTRACTING HIV AMONG UNDERGRADUATES**  
 Prevailing risks factors practiced among undergraduates students in the past six months were sharing of hair dressing

needles, had tattoo or skin marks with sharp object, had received blood transfusions or had sexual activity under alcohol influence with rates at 48.41%, 5.03%, 14.81% and 9.26% respectively. Among the 378 students, 17 (4.50%) of them felt they have a good chance of contracting HIV, 68 (17.99%) felt moderate chance, while 266 (70.37%) feels there was no chance of contracting HIV .see table 2 & 3  
 39 (33.91%) have multiple sexual partner table 3, 28 (24.35%) do not use condoms at all , 47 (40.87%) of them uses condom sometimes, while 38 (33.03%) used condom always See table 4 . The level of sharing information about VCT between sexual partners was high 61(53.04%), however only 48(41.74%) knew their partners sero-status see table 2.

More 'so, statistic analysis revealed that the frequency of multiple sexual partners which is independent to their perception of contracting HIV correlates but to a lesser degree in terms of consistency in the use of condom. See table 4

**Table 2**

SHOWS SCENARIO OF SOME OF THE BEHAVIOURS OF UNDERGRADUATES THAT PUTS THEM AT RISK OF CONTRACTING HIV/AIDS.

RISK BEHAVIOR	Yes freq	Percent (%)	No freq	Percent (%)	No response	Percent (%)
Told sexual partner about VCT	61	53.04	53	46.09	1	0.85
Knows sexual partner HIV status	48	41.74	66	57.39	1	0.85
Taken blood transfusion in past six months	56	14.81	312	82.54	10	2.65
Shares hair dressing needles in past six months	183	48.41	177	46.83	18	4.76
Had tattoo or skin marks with sharp object in past six months	19	5.03	341	90.21	18	4.76
Had sexual activity under alcohol influence in the past six months	32	8.44	320	84.66	23	6.08

Note: 3" indicated to have had sexual activity under alcohol influence but had no sexual partners in the past 6 month

**Table 3**  
SEXUAL BEHAVIOURS AND SELF PERCEPTION TO CONTRACTING HIV

<i>No of sexual partners in past six months</i>	<i>freq</i>	<i>Percent (%)</i>
>3	9	2.38
3	16	4.23
2	14	3.70
1	76	20.10
<i>Total</i>	115	30.42
<i>None</i>	254	67.20
<i>No response</i>	9	2.38
<b>Frequency of condom use</b>		
<i>Not at all</i>	28	24.35
<i>Some times</i>	47	40.87
<i>Always</i>	38	33.04
<i>No response</i>	2	1.71
<i>Total</i>	115	100.00
<b>Self perception contracting HIV</b>		
<i>Good chance</i>	17	4.50
<i>Moderate chance</i>	68	17.99
<i>No chance</i>	266	70.37
<i>No response</i>	27	7.14
<i>Total</i>	378	100.00

**Table 4**  
SEXUAL BEHAVIOR AND SELF PERCEPTION OF CONTRACTING HIV

<i>Frequency of condom use</i>	<i>Frequency</i>	<i>Self perception contracting HIV</i>	<i>Frequency</i>
Not at all	28	Good chance	10
Some times	47	Moderate chance	32
always	38	No chance	62
Person correlation coefficient (r) =0.4487			
<i>No of sexual partners in past six months</i>	<i>Freq</i>	<i>Self perception contracting HIV</i>	<i>Freq</i>
≥3	25	Good chance	17
1-2	90	Moderate chance	68
None	254	No chance	266
Person correlation coefficient (r) =0.9965			

**DISCUSSION**

HIV pandemic is worst among youth as a result of

persistent risk behavior practiced among them as depicted by the results of this study and also confirmed by other studies 12,

The study showed that students have some knowledge about HIV and its routes of transmission. This fact have also been reported by other studies13,14 .Although some students perceive kissing as a means of transmission of the disease while quite a few believed eating and drinking with HIV/AIDS victim as means of transmission of the virus. Misconceptions13 are abound to occur in health issues associated with stigmatization. False believe such as eating and drinking with HIV victim as a mean of transmission could be due to poor perception 15 towards PLWHA.

Most of the students believe that HIV is contracted through sexual intercourse. However, among the HIV preventive strategies abstinence is held in high esteem while only a handful of students. Worthy of note from the study, two out of every five students consider VCT as a way of preventing transmission of HIV virus16 . The drawback aforementioned showed the fact that important benefits of VCT services have not been appreciated by students as buttresses by Mgosha et al 17. The study also revealed that less than halve of these students with sexual partner knows their partner status. Attitude such as this could be a setback for faithfulness to one partner. A little above fifty percent told their partner about VCT.

A third portion 115 (30.42%) of the studied population had sexual partners in the past 6 months, 39:33.91% of them had multiple sexual partners when compared with higher proportion of 196 (65.3%) reported among Tanzania health care professional students 17. Risky behaviors in regards to their sexual life style appears to be at low level in this studied population when compared to the aforementioned Tanzania study. There is a frequency correlation between the degree of self perception of contracting HIV and number of sexual partners as well as frequency of use of condom see table4. The level of sharing information about VCT service between sexual partners is high but, less than half of those who had a sexual partner(s) in the past 6 months have knowledge about their sexual partners HIV sero- status. See table 2

Approximately half believed in condoms as a preventive means to HIV/AIDS. Almost a third of the students have sexual partners. Two-third of these group either inconsistently or do not use of condom. This fact undermine the strategic effect of pre and posttest-counselling sessions which was to in-still or re-enforce non-risky behaviors .

The prevailing risks factors among undergraduates students in the past six months were sharing of hair dressing needles, had tattoo or skin marks with sharp object, blood transfusions or sexual activity under alcohol influence with rates of these risks among 378 students at 48.41%, 5.03%, 14.81% and 8.44% respectively. Therefore more work is yet to be done to internalize the consequence associated with these risks behavior into the mind of the students. A high proportion of the sampled students perceive themselves to have no chance of contracting HIV. Mgosha et al 17 noted that only few students mentioned benefits such as change of behavior, getting support, early treatment for infected. Its worthy to note that the relationship between knowledge and awareness and other behavioral factors is complex since there is no direct relationship. However this study showed that there is some degree of correlation between risk perception for contracting HIV to risk behavior but not individualized, even if their knowledge appears adequate to a large extent.

Further analysis of results showed that despite the education status and sound knowledge about HIV/AIDs among the studied group there was still risk behaviors practiced among them. This might have been influenced possibly by the kind of social interactions and practice. An example of such was sharing of hair dressing needle. Other risks behaviors are sexual activity under-alcohol influence and use of sharp object for inscribing tattoo. If this social activities are investigated further they may be contributing significantly to the transmission of the virus significantly without notice.

To sustain preventive behaviors and attitude — such as delayed sexual debut by youth, UNAIDS advocates a mix of mutually reinforcing approaches including youth-friendly services, sexual health education, and social mobilization.18

### CONCLUSIONS

Conclusively, society and nongovernmental organizations and governments of every nation need to act urgently to secure the future of youth thereby protecting leaders of tomorrow through re-enforcing practice of good behaviors, enacting policies that would culminate in reduction of HIV burden among youths.

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**Author Information**

**George Duke Mukoro, B.Sc MBBS,MCS0,HSE**

Niger-Delta University Teaching Hospital , Okolobiri, Yenogua  
Bayelsa State , Nigeria

**Uzoma Ogbuku, B.SC MBBS**

Department of community medicine, University of Portharcourt  
Portharcourt , Nigeria

**B.I Tabowei, MBBS,FMCS.**

Niger-Delta University Teaching Hospital , Okolobiri, Yenogua  
Bayelsa State , Nigeria