

Risk of Hepatitis among Undergraduates attending Primary Health Care Facility in Uyo

Ajulo Matthew Olugbenga, Ajulo Hephzibah Oluwatoyin, Etuk Ifiok Okon

ABSTRACT

Sexuality encompasses sexual intercourse and sexual contact in all its forms, as well as medical concerns about the physiological or even psychological aspects of sexual behavior. Aim of the study was to observe the relationship between sexuality, drug use and hepatitis infection among university students.

The study involved distribution of questionnaires and informed consent forms to 200 volunteer undergraduates after ethical approval was obtained from Primary Health Care Center, Uyo. The filled questionnaires were returned and blood samples were collected from the volunteers for hepatitis A and B screening tests.

The result showed that the majority (69.3%) of the volunteer undergraduates were in their penultimate and final year of study. More than half (58.2%) of the volunteer students have had sexual intercourse with one (69.39%) or more than one (7.14%) sex partners with the use of barrier method in most (91.23%) of the study population that had sexual activity while few (8.77%) failed to use barrier method. Rate of sexual activity varies among the volunteer undergraduates as once daily (4.08%), once weekly (17.35%), twice weekly (5.10%) and abstinence (22.45%). Among the volunteer undergraduates, few (19.4%) had viral hepatitis screening while majority (80.6%) had no awareness until the research study commenced. One unaware volunteer participant (1.28%) was detected to be positive to viral hepatitis B infection.

The study population which has 21 to 25 years, female (57.1%) and single (86.8%) were most actively involved in sexual activity. They lack substantial knowledge of the risk of being infected with viral hepatitis. The study population also reflected the indiscriminate use of drugs among students.

In conclusion, students are involved in risky sexual activity and indiscriminate use of nonprescription drugs that can lead to hepatitis infection and also its spread. Most of the students lack knowledge of hepatitis infection.

Keywords: Drug, Hepatitis A virus, Hepatitis B virus, Hepatitis, Paracetamol, Risk, Sexual behavior.

How to cite this article: Olugbenga AM, Oluwatoyin AH, Okon EI. Risk of Hepatitis among Undergraduates attending Primary Health Care Facility in Uyo. *Euroasian J Hepato-Gastroenterol* 2013;3(1):23-27.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

Sexuality of individuals has been linked with several infections in the body known as sexually transmitted infections such as hepatitis and HIV/AIDS. Human sexuality is the way in which human beings experience and express themselves as sexual beings.¹ The study of human sexuality

encompasses an array of social activities and an abundance of behaviors, sense of actions and societal topics. Biologically, sexuality encompasses sexual intercourse and sexual contact in all its forms, as well as medical concerns about the physiological or even psychological aspects of sexual behavior. Sociologically, it covers the cultural, political and legal aspects. Philosophically, it involves the moral, ethical, theological, spiritual or religious aspects. Factors that contribute to sexuality include the following:

- *Anatomic sex:* It refers to the sex with which one was born with.
- *Gender identity:* It relates to how one feels inside and whether one feels like a boy or a girl.
- *Sexual orientation:* At puberty, human beings start to have strong physical and emotional attractions to others of either same sex or opposite sex.²

But less concern has been drawn to organ damage effects of virus transmitted by sexual intercourse on liver. Hepatitis is an inflammation of the liver cause by virus and toxic substances. Liver is an internal organ on the upper right side of the abdomen; it performs several functions in the body. It cleans out poisons from the blood. It stores vitamins and minerals and makes sure body gets the right amounts. It produces the right amount of amino acids to build strong, healthy muscles. It keeps body fueled up with just the right amount of glucose. It helps regulate the levels of medicine you are taking. Before some drugs can work, the liver has to metabolize them. It also regulates hormones in the body. It produces an important digestive liquid called bile.

Hepatitis is an inflammation, a kind of irritation—or infection of the liver. The two most common forms are toxic hepatitis (occurs if someone drinks a lot of alcohol, takes certain illegal drugs or medications, or is exposed to poisons) and viral hepatitis (from hepatitis A virus to hepatitis G, they cause infection and inflammation that is harmful to liver cells).³

Hepatitis B virus (HBV) is the most common cause of chronic liver disease. HBV is a DNA virus that is transmitted primarily through blood exposure and sexual contact, and from mothers to their children. As HIV and HBV share transmission routes, about 90% of HIV-infected patients have evidence of previous or current HBV infection. Most people who become infected with HBV are able to clear the virus without treatment, and they subsequently become

immune to HBV. A small proportion of individuals infected with HBV (approximately 10% in the general population) develop chronic HBV infection. Chronic HBV can cause hepatic fibrosis and eventually cirrhosis, end-stage liver disease (ESLD) and hepatocellular carcinoma (HCC). HIV infection appears to increase the risk of developing chronic HBV infection after HBV exposure. Patients coinfecting with HBV and HIV also tend to have faster progression of liver disease, with associated morbidity and mortality.^{4,5}

The objective of the research study is to detect the relationship between sexual activity, drug use and hepatitis among undergraduates attending primary health care facility.

MATERIALS AND METHODS

Ethical approval was obtained from the Primary Health Care Facility owned by University of Uyo. The study was designed to involve filling of questionnaire and collection of blood sample from volunteered undergraduates for diagnostic investigation. Informed consent forms were provided to undergraduates attending the facility to read and those who met the criteria were allowed to collect the questionnaires. Both the questionnaires and the informed consent forms were distributed to qualified volunteers. The questionnaires contain five sections namely demographic details, sexuality, health status, life challenges and drug use. The criteria for selection to participate in the research study were first, the participant must be registered student of the institution. Second, the participant must be 15 years of age and above. Third, the participant must either be a male or female gender. Fourth, critically ill person were excluded from the research study. Fifth, the participant must understand, read, write and speak English language well.

Two hundred (200) questionnaires were given out to volunteered undergraduates to fill and return to the laboratory section of the Primary Health Care Facility. On returning the questionnaires, each questionnaire was assigned code and the participant donated 2 ml blood sample for hepatitis screening test. Information on the questionnaires and the screening test result were compiled and analyzed.

RESULTS

Table 1 showed that 45 (45.9%) of the study population fell within age range of 21 to 25 years, 27 (27.6%) of them fell in 26 to 30 years age range and 14 (14.2%) in 15 to 20 years age range respectively. The least distribution of proportion of age range was 31 to 35 years and >35 years with six (6.12%) participants each. In the research study population, female had the highest frequency of 56 (57.1%) volunteers followed by male with frequency of 42 (42.9%)

volunteers. Eighty-six (86.8%) of the study population were single while 12 (12.2%) of them were married.

The result showed that 31 (31.6%) of the study population were in 400 level, 20 (20.4%) of the study population were in 200 level and 500 level respectively while 17 (17.3%) of the volunteers were in 300 level. Only 10 (10.2%) of the volunteers were in first year (100 level) as shown in Table 2.

Table 3 showed that 57 (58.2%) of the study population had sexual intercourse while 41 (41.8%) did not. Seven (7.14%) of the study population had more than one sex partners, 68 (69.39%) declared that they did not have more than one sex partners while 23 (23.47%) did not comment on the question. Seventeen (17.35%) undergraduates of the study population was involved in sexual activity once per week, five (5.10%) of them were involved in sexual activity twice per week while four (4.08%) of them declared that they were involved in sexual activity once per day. Twenty-two (22.45%) of the study population confirmed that they abstain from sex while 50 (51.02%) of the study population failed to comment on the rate of their sexual activity. Fifty-two (91.23%) out of the 57 volunteered undergraduates that had sexual intercourse use barrier method during sexual activity while five (8.77%) of those that had sexual

Table 1: Demography of subjects

Age	Frequency (F)	Percentage (%)
15-20	14	14.2
21-25	45	45.9
26-30	27	27.6
31-35	6	6.12
>35	6	6.12
Total	98	
<i>Gender</i>		
Male	42	42.9
Female	56	57.1
Total	98	
<i>Marital status</i>		
Married	12	12.2
Single	86	87.8
Divorced	0	0
Widowed	0	0
Total	98	

Table 2: Educational status of the subjects

<i>Academic level</i>		
100	10	10.2
200	20	20.4
300	17	17.3
400	31	31.6
500	20	20.4
Total	98	

intercourse did not use barrier method. Forty (40.82%) volunteers of the study population declared that they did not have sex with same gender or animals nor used drugs to enhance sexual activity while 58 (59.18%) did not make any comment.

Table 4 showed that 19 (19.4%) of the study population had been screened for viral hepatitis in the past while 79 (80.6%) had never had screening test for viral hepatitis until the period of this research study. Seventy-eight (79.6%) of the study population indicated interest to participate in the viral hepatitis screening while 20 (20.4%) declined their interest. Forty-three (43.9%) of the volunteered undergraduates used drugs regularly, 48 (49%) did not while seven (7.1%) of the study population did not make comment. Paracetamol appeared to be the most commonly (83%) used

drug among the study population. Only one (1.28%) volunteer tested positive to viral hepatitis B among the study population that participated in viral hepatitis screening.

DISCUSSION

The proportion of distribution of the study population indicated that volunteers in the age range of 21 to 25 years appeared to have the highest frequency (45.9%) followed by 26 to 30 years (27.6%) which probably suggest the average age range of students in the institution that found the research interest most appealing. The 15 to 20 years age range (14.2%) suggests that many students gained admission into higher institution before they reach the age 20. The least in the proportion of age range of the study population were 31 to 35 and >35 with a frequency of six (6.12%) each suggesting those part of the study population that did not gain admission early in life or had academic problems that kept them beyond normal period of study. The female gender appeared to have the highest proportion of distribution (57.1%) in the study ahead of their male counterparts (42.9%). Eighty-six (86.8%) of the study population were singles which shows their level of relevance to this research study. Only 12 (12.2%) of the study population were married.

The majority (69.3%) of the study population were in their penultimate or final year of study implying that they were matured intellectually and emotionally to understand display of sexuality. Many of them have attended symposia and lectures in the institution gearing their minds toward prevention of transmissible sexual infections. The proportion of distribution of the study population belonging to 100 level (10.2%) and 200 level (20.4%) included those that had not relatively stayed long in the institution and how their sexuality was influenced by social life on campus.

Table 3: Sexual distribution

Sexual intercourse	Frequency (F)	Percentage (%)
Yes	57	58.2
No	41	41.8
Total	98	
<i>Sex partner (>1)</i>		
Yes	7	7.14
No	68	69.39
Unknown	23	23.47
Total	98	
<i>Frequency of sex</i>		
Once a day	4	4.08
Twice per week	5	5.10
Once per week	17	17.35
Abstinence	22	22.45
Unknown	50	51.02
Total	98	
<i>Use of barrier method</i>		
Always	52	91.23
Seldom	0	0
Not at all	0	0
Unknown	5	8.77
Total	57	
<i>Sex with same gender</i>		
Yes	0	0
No	40	40.82
Unknown	58	59.18
Total	98	
<i>Sex with animal</i>		
Yes	0	0
No	40	40.82
Unknown	58	59.18
Total	98	
<i>Drug for sex</i>		
Yes	0	0
No	40	40.82
Unknown	58	59.18
Total	98	

Table 4: Screening for hepatitis

Past screening for hepatitis (A and B) virus	Frequency	Percentage (%)
Yes	19	19.4
No	79	80.6
Total	98	
<i>Recent laboratory investigation participation</i>		
Yes	78	79.6
No	20	20.4
Total	98	
<i>Use of drugs</i>		
Yes	43	43.9
No	48	49.0
Unknown	7	7.1
Total	98	

The distribution of the study population showing that 57 (58.2%) of the volunteered undergraduates that participated in the filling of questionnaires had been involved in sexual activity stands as an indication of demonstrating their sexual identity and roles. Seven (7.14%) of the respondents declared that they had more than one sex partners while 68 (69.39%) showed that they did not have more than one sex partners. This sexual activity is usually demonstrated among young adults who are yet to make permanent relationship for family set up. The proportion of rate of sexual intercourse among the volunteers in the study population indicated that four (4.08%) respondents had sexual intercourse once per day, five (5.10%) had intercourse twice per week, 17 (17.35%) once per week (Fig. 1). Though the age ranges in the study population involve category of sexually active individuals, factors responsible for the rate of sexual activity among the study population could not be ascertained. However, correlation between those who had been involved with sexual intercourse and related common problems with students was made. Twenty-two (22.45%) of the volunteer undergraduates practiced sexual abstinence based on their awareness, moral dignity, self-esteem and belief. Fifty-two (91.23%) respondents of the study population that claimed that they had sexual intercourse used barrier method during sex which signifies the extent of awareness that have been created through HIV campaign programs on the transmission and prevention of HIV infection. As five (8.77%) of the respondents had been involved in sexual activity without the use of barrier method and no further information was provided either it was seldom or regular intension, it beckons on the need to still emphasize and diversify approach on awareness of HIV campaign programs on transmission and prevention of HIV infection among the young adults who have the opinion of losing the pleasure

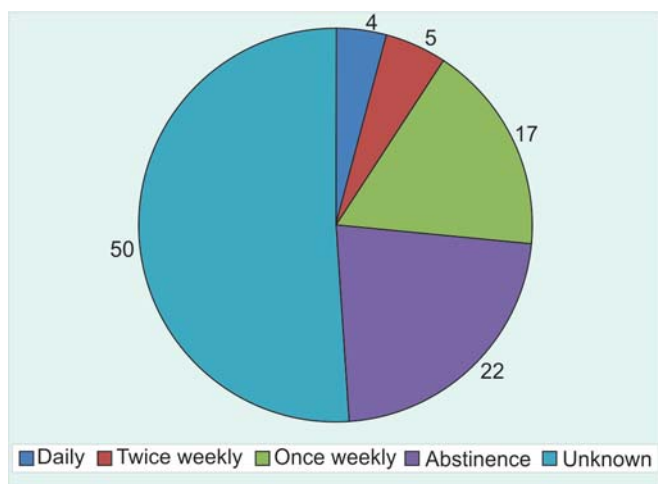


Fig. 1: Rate of sexual activity

of fun when barrier method is applied during sexual act. The susceptible group to sexual harassment like female adolescents who position themselves in a manner and places where they can be embarrassed sexually are usually victims of unprotected sex. Although nobody among the study population claimed to have had sex with same gender, animals or used drugs to enhance sexual activities, 40 (40.82%) volunteers responded that they did not have sexual activity with same gender, animals or used drugs for sexual activity while 58 (59.18%) volunteer undergraduates refused to comment on these aspects. It is observed that certain questions were left unanswered by the respondents either to keep the secret of their actions to themselves and their group so as to avoid exposure thereby preventing reactions from the society if such information is made public. The belief and concept of the society especially in a place that is thought to be religious and morally dignified usually hinders the disclosure of certain information that is assumed to be unacceptable even when such is in existence.

Nineteen (19.4%) volunteers of the study population had had viral hepatitis screening before the research study commenced while 79 (80.6%) did not. This simply shows from the study population that the awareness of viral hepatitis is very negligible as it does not contribute serious threat to the society due to the fact that it could be self-limiting in certain situations. However, the route of spreading viral hepatitis and cases of death should be of concern to prevent these soft but deadly diseases. Many infected persons became aware when they are planning to fly abroad or during hospitalization in this society.

Forty-three (43.9%) respondents from the study population used drugs regularly in the last 60 days most especially over the counter drugs while 48 (49%) confirmed that they had not been on drugs in the period. The most commonly used drugs among the respondents is paracetamol (83%), an over the counter drug that has potential to cause hepatitis. In this society, people purchase drugs indiscriminately either prescription only or over the counter drugs without taking notice of the caution label and the manufacturers' leaflets. As only one person was positive to the viral hepatitis B screening test, it shows that the rate of spread of the infection is not sporadic.

In conclusion, students are involved in risky sexual activity and indiscriminate use of nonprescription drugs that can lead to hepatitis infection and also its spread. Most of the students lack knowledge of hepatitis infection.

As death and other clinical signs of viral hepatitis can be preventable, urgent and consistent awareness program on transmission and prevention of viral hepatitis is therefore highly recommended for the policy makers in Tertiary Institutions and Government to start.

REFERENCES

1. Rathus AR, Nevid JS, Fichner-Rathus L, et al. Human sexuality in a world of diversity. Boston: Allyn and Bacon 1989.
2. Abrahamson PR, Pakinson SD. With pleasure: Thoughts on the nature of human sexuality. New York: Oxford University Press; 1995.
3. Soriano V, Puoti M, Bonacini M, et al. Care of patients with chronic hepatitis B and HIV coinfection: Recommendations from an HIV-HBV International Panel. *AIDS* 2005;18(19):221-40.
4. Thio CL. Management of chronic hepatitis B in the HIV-infected patients. *AIDS* 2004;14:122-29.
5. Association/Infectious Diseases Society of America. Treating opportunistic infections among HIV-infected adults and adolescents. *MMWR Recomm Rep* 2004;53(RR15):1-112.

ABOUT THE AUTHORS**Ajulo Matthew Olugbenga (Corresponding Author)**

Department of Clinical Pharmacy and Biopharmacy, Faculty of Pharmacy, University of Uyo, Uyo, Akwa Ibom, Nigeria, Phone: +234-7030262468, e-mail: matgbeng@yahoo.com

Ajulo Hephzibah Oluwatoyin

Faculty of Pharmacy, University of Uyo, Uyo, Akwa Ibom, Nigeria

Etuk Ifiok Okon

Department of Veterinary Public Health and Preventive Medicine
Faculty of Veterinary Medicine, University of Ibadan, Ibadan, Nigeria