KNOWLEDGE ATTITUDE AND RISK PERCEPTION AS PREDICTORS OF HEPATITIS B RISK BEHAVIOUR AMONG UNDERGRADUATES IN THE UNIVERSITY OF IBADAN

Seun Ewaola Olaledanmi, & DR. S. A. Famuyiwa
[1]Ministry of Women Affairs and Social Inclusion, Secretataria Ibadan[1]
[2]Department of Health Education, University of Ibadan, Ibadan[2]

Abstract
The study investigated knowledge, attitude and risk perception as predictors of HBV risk behaviour among undergraduates in the University of Ibadan. The descriptive survey design was used with all accommodated undergraduates in the University of Ibadan as the population. The instrument used was a questionnaire with a reliability of .74 Cronbach alpha. The sample size for the study was 439 respondents drawn through a multi-stage sampling technique. Descriptive statistics and regression analysis were used to analyze the data collected, all at a 0.05 alpha level. The results revealed that there was a considerate level of HBV risk behaviour, a low level of knowledge of HBV, positive attitude but a low-risk perception of HBV. Findings equally showed that all the independent variables, individually and collectively, predicted HBV risk behaviour among the respondents. Mass sensitization, awareness and intervention were recommended to address the modifiable factors of HBV.

Key Words: *HBV, Undergraduates, Knowledge, Risk Behaviour, Perception, attitude*

Introduction
Adolescents and young adults in the university are susceptible to myriads of health and lifestyle challenges. This is not unconnected with the fact that university education, due to the perceived freedom it confers on students, allows them to leave their lives the way they want. Madeleine (2021). Since the basic knowledge required to shape positive attitudes toward a healthy lifestyle may be lacking among this population, health risk behaviours are generally high. Moreover, it is equally important to state that even if a considerable level of knowledge is present, the absence of requisite life skills to contain the excesses of youthfulness and university life might be lacking. How well an adolescent deals with excesses of youthfulness and university life is decided by a host of factors that include their personality, psychosocial support from the environment (that includes parents, teachers and peers), and the life skills that they possess (Garima, 2015)

Any nation's adolescent and youth population remain an inestimable asset for national development and sustainability. The health of this population becomes an issue of great concern mainly because of the peculiarities and uniqueness of this age stage of development. According to Falaye (2012), the intricacies of adolescent health could make the adolescent an “endangered species” if adequate attention is not given to adolescent health in any nation. Adolescents and young people suffer from chronic ill health and disability. In addition, many serious diseases in adulthood have their roots in adolescence (Ajuwon, 2013). For example, tobacco use, sexually transmitted infections including HIV, and poor eating and exercise habits lead to illness or premature death. Hepatitis B virus,

due to the nature of the disease and its spread, is one of the most common health challenges that young people's lifestyle can predispose them to.

The World Health Organization, (WHO) (2001) stated that hepatitis B virus (HBV) has been estimated to be the cause of up to 80% of all cases of hepatocellular carcinoma worldwide, second only to tobacco, among known human carcinogens. HBV shares similar routes of transmission with HIV (Willey, Sherwood and Woolverten, 2008). Notable routes of transmission as documented in literature include blood and blood products transfusion, intravenous drug abuse, unsafe injections and sexual activity, shared needle, other body fluids such as semen, vaginal fluid and breast milk; from mother to child, needle stick injury, ear piercing, tattooing and other tribal ceremonies (scarification), barbers' razors etc. ((Umolu, Okoro and Orhue,2005; Agbede, Iseniyi, Kolawole and Ojuawo, 2007; Cavalleiro, Santos, Melo, Merimistus and Barone, 2008; Chen, Liu, Fan, Gao, Wong, Wu and Wen, 2009; Pennap, Yakubu, Oyige, and Forbi 2010).

All HBV infections are non-symptoms, meaning people risk being infected without knowing it (Weinbaum, Mast and Ward 2009; WHO, 2012). However, some people may experience acute symptoms like jaundice, fatigue, loss of appetite, nausea or abdominal pain. In most cases, 90% of adults recover from the infection and become healthy, but for infants and young children, there is a 90% and 30-50% risk respectively that the infection leads to chronic hepatitis B (WHO, 2012). This provides an increased risk, approximately 25% that they will later in life suffer from liver cirrhosis and/or liver cancer, if the infection is not medically managed (Chao, Chang and So, 2010; WHO, 2012). The patients who are diagnosed with acute hepatitis B will receive symptomatic treatment since there is no cure available. However, patients diagnosed with chronic hepatitis B can be treated with interferon, which suppresses the HBV and helps the immune system to enhance the protection against HBV (WHO, 2012).

According to the World Health Organization, the prevalence of HBV infection in Nigeria is estimated to be 8-10%, which is one of the highest rates in the world. It is important to note that the prevalence of HBV varies by location and demographic group within Nigeria. Agbor, Ihejirika, Ibekwe and Akpan, 2017 found that the prevalence of HBV among undergraduates was 5.3%. Enitan, Ademoye, Agagu and Gaji,2017 found the prevalence of HBV among undergraduates at the Federal University of Agriculture, Abeokuta in Ogun State to be 7.1%. Onyekwere, Ugwuanyi, and Uzonwanne 2015, found that the prevalence of HBV among undergraduates in the University of Nigeria was 10.4%. Mohammaed, Lawal, Salisu, and Mahmood 2018 found a prevalence of 8.9% among undergraduates at Usmanu Danfodiyo University in Sokoto, Nigeria. Finding out the drivers and determinants of this high prevalence level of HBV across all strata of Nigerian society as shown from studies is therefore a serious issue for research.

The place of knowledge in regulating human behaviour cannot be overemphasized. Although possession of scientific and sound knowledge on health issues does not guarantee desirable health behaviour, it is however central to desirable health behaviour. Almost all the interventions targeted and tailored towards addressing risky behaviour among young people are knowledge-based. This is because possession of scientific and accurate knowledge would form the pedestal upon which a positive attitude is built to foster desirable

health behaviour. One can therefore infer that sound knowledge of HBV especially as regards its adverse effect on health and well-being is central to reducing if not eradicating HBV risk behaviour.

It has been observed that young people lack accurate and sound knowledge on various health issues and this has been largely implicated in high-risk behaviour. Ma, Shive, Toubeh, Tan and Wu (2008) reported low knowledge levels of HBV risk factors and screening and vaccination rates among Chinese university student respondents. Poor levels of knowledge limit the chances and drive of young people to refrain from risky behaviours and take up health protective behaviours like vaccination and screening. *Nde, Assob, Okeke, Kamga, Luma, Mumah, Ngounou, and Monekosso (*2013) also reported a high level of hepatitis B risk behaviour among their Cameroonian respondents and attributed this high-risk behaviour to a low level of knowledge of HBV among other factors that are still important constructs in this study. It is important to state that any effort aimed at addressing HBV risk behaviour among young people must therefore be largely tailored towards improving their knowledge as sound and accurate knowledge is germane to the reduction of HBV risk behaviour.

Apart from knowledge, the influence of attitude and risk perception on health behaviour is also enormous. Attitude towards a particular health issue also significantly affects health behaviour direction. Attitude as a dispositional factor defines the disposition one has towards an object, a subject or a concept. An individual who has a poor attitude towards HBV screening and vaccination which are protective behaviours towards HBV might be less concerned with taking practical steps to avoid getting infected. Religious and cultural beliefs might act as strong obstacles leading to developing poor attitudes towards HBV. This is based on the fact that some religious tenets might inculcate the notion that parents are not susceptible to getting infected with such infections as they are for infidels. This low-risk perception therefore might push them to take up amoral risk behaviour like needle sharing. Risk perception and attitude therefore act as strong predictors of health behaviour. When an individual perceives his/her vulnerability to a particular health issue like HBV as low or non-existent, such an individual might take up high-risk behaviour. Therefore, this study was designed to examine the predictive influence of HBV knowledge, attitude and risk perception on HBV risky behaviours among undergraduate students of the University of Ibadan. Three hypotheses were tested at a 0.05 level of significance which were:

1. Knowledge of HBV will not significantly predict HBV risk behaviour among undergraduates in the University of Ibadan.
2. Attitude towards HBV infection will not significantly predict HBV risk behaviour among undergraduates in the University of Ibadan.
3. Risk perception on HBV will not significantly predict HBV risk behaviour among undergraduates in the University of Ibadan.

Methodology

A descriptive survey research design was adopted in the study. The population of this study consisted of all undergraduates accommodated in the University of Ibadan halls of residence. The sample size for this study consisted of 439 undergraduates drawn from the

halls of residence at the University of Ibadan. A multi-stage sampling technique was employed in selecting this size. At the first sampling stage, all the undergraduate halls in the university were stratified into male and female halls because of the lopsidedness in the number of female halls compared to male halls. At the second sampling stage, a simple random sampling technique of Fishbowl without replacement was used to select 4 out of the 6 male halls and 2 out of the three female halls. In the third stage, proportionate and purposive sampling technique was used to select 10% of the students from each of the selected halls. The research instrument for this study was a questionnaire titled HBV Risk Behaviour Questionnaire (HBVRBQ). The instrument comprises six sections and five different scales. The instrument's reliability was established by administering the research instrument to thirty (30) accommodated undergraduates in Obafemi Awolowo University, Ife-Ife, Osun State. The data obtained was analysed to obtain an overall reliability coefficient of r .74. The research instrument was administered with the help of six (6) trained research assistants. The statistical tools of descriptive statistics of frequency counts and percentages were used to describe the socio-demographic characteristics of respondents, while regression analysis was used to test hypotheses at a 0.05 level of significance.

Results and Discussion

Ho1: Knowledge of HBV will not significantly predict HBV risk behaviour among University of Ibadan undergraduates.

Table 1: Regression Showing Predictive Effect of HBV Knowledge on HBV Risk Behaviour

	Sum of Squares	Df	Mean Square	F	R	R^2	Adjusted R^2	Sig.
Regression	705.748	1	705.748	31.364	.263[a]	.069	.067	0.000
Residual	9495.648	422	22.502					
Total	10201.396	423						
a. Predictors: (Constant), HBV Knowledge								
b. Dependent Variable: HBV Risk Behaviour								

The study's finding as shown in the table, revealed the predictive effect of HBV knowledge on HBV risk behaviour among respondents ($r = 0.263$, $p=0.000<0.05$). The findings of the study further revealed that 6.7% (Adj. $r^2 = 0.067$) of the variance in HBV risk behaviour among the respondents was accounted for by knowledge. The regression analysis results showed a significant predictive effect of HBV knowledge on HBV risk behaviour; $F (1, 422) = 31.364$, $p=0.000<0.05$. Consequently, the research hypothesis, which states that knowledge of HBV will not significantly predict HBV risk behaviour among University of Ibadan undergraduates, is therefore rejected. This result corroborates the earlier findings

by Ma, shive, Toubeh and Wu (2008), which reported that knowledge levels of HBV are low among Chinese university students, complementing the above, Samir, Abubakir and Nazar (2013) stated that knowledge about HBV among Undergraduates was relatively poor, with important gap which need to be strengthened but contradict the findings of Hwang, Hwang and Yi (2010) which reported high level of knowledge among Asian American undergraduates.

Ho2: Attitude towards HBV will not significantly predict HBV risk behaviour among University of Ibadan undergraduates.

Table 2: Regression showing predictive effect of attitude towards HBV on HBV risk behaviour

	Sum of Squares	Df	Mean Square	F	R	R^2	Adjusted R^2	Sig.
Regression	1545.495	1	1545.495	75.347	.389[a]	.151	.149	0.000
Residual	8655.901	422	20.512					
Total	10201.396	423						
a. Predictors: (Constant), attitude towards HBV								
b. Dependent Variable: HBV Risk Behaviour								

The study's finding, as shown in Table 2, revealed the predictive effect of attitude towards an HBV risk behaviour among respondents (r = 0.389, p=0.000<0.05). The study's findings further revealed that their attitude towards HBV accounted for 15.1% (Adj. r2 = 0.151) of the variance in HBV risk behaviour among the respondents. The regression analysis results showed a significant predictive effect of attitude towards HBV on HBV risk behaviour; F (1, 422) = 75.347, p=0.000<0.05. Consequently, the research hypothesis, which states that attitude towards HBV will not significantly predict HBV risk behaviour among University of Ibadan undergraduates, is therefore rejected. A positive attitude provides optimism that the respondents could embrace HBV prevention strategies if they are exposed to them. This result is in line with Nde-fon *et al.* (2013), which reported poor attitudes among undergraduates in Cameroun, and Kosisochi *et al.* (2017) who reported that above 60% of the total attitude, scores were categorized as having positive attitudes and that out of the 360 respondents, 10% were in positive attitudes.

Ho3: HBV risk perception will not significantly predict HBV risk behaviour among University of Ibadan undergraduates

Table 3: Regression showing predictive effect of HBV risk perception on HBV risk behaviour

		Sum of Squares	Df	Mean Square	F	R	R^2	Adjusted R^2	**Sig.**
	Regression	1345.740	1	1345.740	64.129	.363[a]	.132	.130	0.000
	Residual	8855.656	422	20.985					
	Total	10201.396	423						
a. Predictors: (Constant), HBV RISK PERCEPTION									
b. Dependent Variable: HBV RISK BEHAVIOUR									

The study's finding, as shown in Table 3, revealed the predictive effect of HBV risk perception on HBV risk behaviour among respondents ($r = 0.363$, $p=0.000<0.05$).

The findings of the study further revealed that 13.2% (Adj. $r^2 = 0.132$) of the variance in HBV risk behaviour among the respondents was accounted for by knowledge. The regression analysis results showed a significant predictive effect of HBV risk perception on HBV risk behaviour; $F (1, 422) = 64.129$, $p=0.000<0.05$. Therefore, the research hypothesis which states that HBV risk perception will not significantly predict HBV risk behaviour among University of Ibadan undergraduates is rejected. It is, however, saddening to say that the respondents reported a low-risk perception. With low-risk perception, an individual fails to see him/herself as being vulnerable to a particular health problem, low-risk perception predisposes one to risky behaviour based on the principles of the health belief model upon which this study was based. The findings further agree with Gonzales et al (2006) whose findings revealed that most young adults do not perceive themselves to be at risk for Hepatitis B but perceive other people to be at risk. Complementing this, Slonim et al. (2005) findings revealed that Adolescents and young adults know very little about vaccinations in general or hepatitis B in particular. Adolescents exhibit low perceived susceptibility, severity, response efficacy, and self-efficacy toward hepatitis B and the hepatitis B vaccine.

The low-risk perception reported by respondents might attributed to the religious stance of positive confessions. Since religious tenets, especially the Christian religion, dominated the respondents, religion teaches that one confesses positively. It is crucial to adduce that the low-risk perception reported in the study might be attributed to this belief.

Conclusion

i. This study concluded that HBV risk behaviour among undergraduates at the University of Ibadan calls for serious concern. It was also concluded that knowledge, attitude and risk perception are predictors of HBV risk behaviour among

undergraduates at the University of Ibadan.Based on the findings and conclusions of the study, the following were recommended:

ii. There is a need for mass mobilization and sensitization campaigns to increase HBV awareness among undergraduates at the University of Ibadan.

iii. Concerted effort should be made to educate university community members on the dangers of HBV and the best ways to lead a protective life against the infection. All channels of communication, face-to-face, mass media like the community radio, social media, handbills and every other possible avenue must be exploited to educate the community members on HBV

iv. Religious leaders should learn to draw the line between religious teachings and health awareness. A strong and enduring partnership must be formed between health educators and other healthcare delivery system members and religious bodies to stem the tide of infectious diseases by preaching a harmonized message. Discordant tunes from sides of the divide will not help the fight against public health concerns regarding infectious diseases. Religious leaders must, therefore, be at the forefront in the calls to take positive health behaviour.

v. Intervention strategies targeting knowledge and risk perception of undergraduates in the University of Ibadan should be designed and evaluated periodically to address the issue of low knowledge and risk perception found in the study.

References

Ajuwon, A.J. 2013. Adolescence: The excitement, complexities and challenges. *An Inaugural Lecture Delivered at the University of Ibadan,* Ibadan on June 27, 2013.

Cavalleiro, N.P., Santos, A.C.O., Melo, C.E., Morimitsu, S.R., and Barone, A.A. 2008. Hepatitis C virus detection in the serum of infected patients. *Brazilian Journa of Infectious Diseases* 12(5): 358-361.

Chen, L., Liu, F., Fan, X., Gao, J., Chen, N., Wong, T., Wu, J., and Wen, S.W. 2009. Detection of hepatitis B surface antigen, hepatitis B core antigen and hepatitis B virus DNA in parotid tissues. *International Journal of Infestious Diseases*. 13: 20-23.

Falaye, A.O. 2012.Adolescent Health - A valued national asset. A Keynote paper presented at the 15th Annual Workshop of the Public Health Nursing Department, University College Hospital, Ibadan, 1st May- 5th May 2012.

Gonzales, R.M., Glik, D.C., Prelip, M., Bourque, L., Yuen, J., Ang, A.and Jones, M.C. 2006. Risk perceptions and behavioural intentions for Hepatitis B: how do young adults fare? *Health Education Research*, 21(5): 654-661.

Garima S 2015. The importance of life skills for adolescents https://www. whiteswanfoundation.org/author/garima-srivastava retrieved 14/8/2024

Hwang, J., Huang, C-H.and Yi, J. 2010. Knowledge about hepatitis B and predictors of hepatitis B vaccination among Vietnamese American College Students. *Journal of American College Health,* 56(4), 377-382.

Kosisochi Chinwendu Amorha, Martin Ifeanyi Chiebue, Ebere Emilia Ayogu, Onyinye Blessing Ukoha-Kalu, Mathew Jegbefume Okonta .Knowledge, Attitudes and

Practice of Undergraduate Students in the University of Nigeria Enugu campus (UNEC) towards Hepatitis B.*IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS)e-ISSN:2278-3008, p-ISSN:2319-7676. Volume 12, Issue 3 Ver. VI (May – June 2017), PP 66-71 www.iosrjournals.org*

Madeleine Cho. 2021 What Independence Really Means in College (mheducation.com)

*Nde-Fon, P., Assob, J.C.N., Okeke, M.C., Kamga, H.L.F., Luma, D., Mumah, H.N., Ngounou, E., and Monekosso, G. 2013.*Prevalence, knowledge, sexual behaviour and risk of transmission of hepatitis B virus amongst students of the University of Buea, Cameroon.*Scientific Journal of Microbiology* 2(8).

Pennap, G.R., Yakubu, A., Oyige, O., and Forbi, J. 2010. Prevalence of hepatitis B and C virus infection among people of a local community in Keffi, Nigeria. *African Journal of Microbiology Research* 4 (4): 274-278.

Slonim, A.B., Roberto, A.J., Downing, C.R., Adams, I.F., Fasano, N.J., Davis-Satterla, L.and Miller, M.A. 2005. Adolescents' knowledge, beliefs, and behaviours regarding hepatitis B: Insights and implications for programs targeting vaccine-preventable diseases. *Journal of Adolescent Health,* 36(3): 178–186.

Sujay R. 2009. Premarital Sexual Behaviour among Unmarried College Students in Gujarat, India.*Health and Population Innovation Fellowship Programme Working Paper*, No. 9, New Delhi: Population Council.

Umolu, P.I., Okoro, L.E., and Orhue, P. 2005. Human immunodeficiency virus (HIV) seropositivity and hepatitis B surface antigenemia (HBsAg) among blood donors in Benin City, Edo state, *Nigeria. African Health Sciences*, 5 (1): 55-58.

Weinbaum, C.M., Mast, E.E. and Ward, J.W. 2009.Recommendations for identification and public health management of persons with chronic hepatitis B virus infection. *Hepatology,* 49(5), 35-44. doi:10.1002/hep.22882

Willey, J.M., Sherwood, L.M., and Woolverton, C.J. 2008. Prescott, Harley and Kleins *Microbiology* (4th Edition). McGraw Hill Publishers, New York; 936-972.

World Health Organization. 2001. Introduction of hepatitis B vaccine into childhood immunization services. Geneva.

World Health Organization. 2012. *Hepatitis* B. World Health Organization. Collected 9th of January, 2013, from http://www.who.int/mediacentre/ factsheets/fs204/en/index.html