

Original article

Attitudes of Health Workers Towards Management of Hepatitis B Infection in General Hospitals in Kwara State, Nigeria

Abdulrasaq Onaolapo¹, Abdulraheem Mojisola^{1*}, Jamiu Oluwatosin¹, Ijaodola Kikelomo², Jidda Adeola¹, Onobumeh Margaret³

¹Department of Health Promotion and Environmental Health Education, Faculty of Education, University of Ilorin, Ilorin, Nigeria

²Department of Health Education College of Health Technology, Offa, Nigeria

³Department of Health, Safety and Environmental Education, University of Benin, Nigeria

ARTICLE INFO

Corresponding Email. elias.am@unilorin.edu.ng

Received: 14-11-2023

Accepted: 29-12-2023

Published: 12-01-2024

Keywords. Hepatitis B, Infection, Health Workers, Attitude, Virus.

Copyright: © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>

ABSTRACT

Hepatitis B is one of the most dangerous diseases in the world and it has become a serious threat to public health. Health workers are mostly at risk of contracting the disease as they remain the first point of call to the victims. This study examined the attitudes of health workers towards management of HBV infection and the difference in attitudes of health workers based on area of specialization. An ex-post facto research design sampling 412 health workers across different areas of specialization which include doctors, nurses, laboratory scientists and laboratory technicians. Majority of the health workers had negative attitudes towards HBV patients. However, doctors (mean score=3.72) and nurses (mean score=3.54) had mild negative attitudes towards HBV patients, while laboratory scientists (mean score=3.02) and laboratory technicians (mean score=3.04) had the poorest attitudes towards HBV patients. There is need to improve the attitudes of the different cadres of health workers in the state, in order to improve the quality of life of HBV patients and reduce stigma which may impact negatively on patients' mental health.

Cite this article. Onaolapo A, Mojisola A, Oluwatosin J, Kikelomo I, Adeola J, Margaret O. Attitudes of Health Workers Towards Management of Hepatitis B Infection in General Hospitals in Kwara State, Nigeria. *Alq J Med App Sci.* 2024; 7(1):44-49.

<https://doi.org/10.54361/ajmas.2471008>

INTRODUCTION

The burden of exposure to blood-borne pathogens such as Hepatitis B Virus, (HBV) cannot be overemphasized among health workers. Percutaneous exposure to blood-borne infections from infected needles, scalpels, broken glasses, ends of dental wires, or other sharps is relatively high among health care workers. Health workers (HWs) are faced with the unique challenge of protecting themselves and the general population from these blood-borne infections. According to [1] HBV transmission requires a non-immune host, a contaminated source and skin or mucous membrane injury. These three aspects are the main fields for prevention interventions against the infection.

Transmission of HBV from patients to HWs has been known for many years. However, the roots of transmission have not been recognized completely [4]. Findings from case studies conducted in several European countries including France, Italy, Spain, United Kingdom and Switzerland showed that HBV transmission among HCWs was significantly correlated with factors such as the type of procedure, severity of injury and the gender of the HWs. Contact with patients whose viral loads were high also increased the transmission risk 11 folds compared to a lesser viral load [11].

It is worthy of note that discriminatory behaviour and attitude is common towards patients with hepatitis B infection due to the highly infectious nature of the infection. Attitudes are directly under the influence of knowledge levels; therefore, it is necessary to increase the level of understanding of the disease management strategies in order to bring about positive attitudes among the healthcare workers to prevent discrimination and prejudice towards the infection and the patients [10].

A study found that attitude and self-reported behaviour scores were similar among the professional groups except dentists who were more negative overall [9]. Self-reported compliance with infection control guidelines indicated that HWs often treated patients with hepatitis differently from other patients to prevent hepatitis transmission. For example, 79 per cent believed people with hepatitis should be identified for safety reasons. Several participants indicated that they identified patients with hepatitis by placing alert notes in their medical files. Forty-eight per cent of participants indicated that they used additional infection control precautions when they knew patients had hepatitis. For example, 60 per cent of them double gloved when they treated a bleeding person with hepatitis. Responses to the open questions suggested that HPs used additional precautions to reduce their risk of exposure to infectious blood.

Another study regarding hepatitis B and C revealed that HWs who were weak in knowledge were more Attitudes of the clinician play a key role in prevention of spread of infection [8]. A study on assessment of knowledge, attitudes and practices of HWs including, dental interns, medical interns, and nursing interns in Odisha revealed negative attitudes of HWs, however, those who were knowledgeable were more likely to show positive attitudes [12]. Regarding attitude statements it was found that, 95.8 per cent of the HWs surveyed believed that hepatitis patients should be identified for infection control purposes, 82.8 per cent of the participants indicated that they used additional infection control precautions when they knew patients had hepatitis, 74.4 per cent double-gloved when they treated a bleeding person with hepatitis. 48.5 per cent of the participants indicated that patients with hepatitis C should be given the last appointment of the day. Among the HCWs, 92.1 per cent felt compassion when hepatitis was acquired through a blood transfusion, compared with 55.6 per cent when it was contracted through injection drug use. Participants' willingness to care for people with hepatitis was identified by responses to three questions [3]. Among HWs, 82.8 per cent believed that they liked to treat these patients and 15.5 per cent said that they did not like treating these patients. Regarding attitudes toward intravenous (IV)-drug users, 78.7 per cent showed fear toward IV-drug users, while 77 per cent said that they were worried they might contract a disease from the patients. 35.6 per cent agreed that IV-drug users deserved the disease and 40.2 per cent indicated that they did not want to treat IV-drug users [3].

Studies on occupational exposure and infection control among healthcare workers in Nigeria have been conducted predominantly among dental professionals in south-western Nigeria and also among dental students [6]. The physiological and psychological differences between the sexes reflect in their health behavior and are also characterized by gender differences in the prevalence of certain kinds of occupational hazards [8].

In a study on attitudes towards hepatitis B infection among healthcare students in a private medical college in Odisha, it was revealed that attitude toward hepatitis B infection were higher in MBBS students than in dental and nursing students, whereas behavior of dental students toward the disease was quite satisfactory than MBBS and nursing students [7]. Much work has been carried out to assess occupational exposure and compliance with infection control practices among the healthcare professionals. However, there is paucity of data on the assessment of attitudes of HWs in Kwara State towards HBV infection in the literature [2].

There is paucity of literature on attitude towards Hepatitis B management among HCWs in Kwara State, so there is no evidence to show that HCWs in the state have positive attitudes to the management of the infection. Some of the HCWs may also not be abiding by the guidelines for prevention of hepatitis B transmission which is directed towards prevention of transmission of the infection from patients to HWs in order that HWs may have positive attitude towards their patients. Since attitude of HWs will go a long way in the prevention of hepatitis B virus transmission and reducing stigmatization of patients suffering from the infection, the researcher carried out a study on assessment of HCWs' attitudes toward management of hepatitis B infection in general hospitals in Kwara State. The study answered the following questions; i) What is the attitude of health workers towards the management of hepatitis B infection in general hospitals in Kwara State? ii) Is there any difference in the attitude towards HBV infection among health workers in Kwara State, Nigeria based on cadre? The study also tested the following hypothesis; there is no significant difference in the attitude of healthcare workers towards the management of hepatitis B infection based on cadre in general hospitals in Kwara State?

METHODS

The design for this study is an ex-post facto research design. All healthcare workers in general hospitals in Kwara State, Nigeria was the target population for this study. Specifically, doctors, nurses, laboratory scientists, and laboratory technicians were used for the study. According to Kwara State Ministry of Health (2019), there were eight

hundred and twenty-four (824) health personnel in general hospitals in Kwara State, Nigeria as at the time of this study. Four hundred and twelve (412) respondents which amounts to 50% were used for the study. The sample was selected using a multi-stage sampling technique. The study area was stratified into the three existing senatorial districts of Kwara Central, Kwara North, and Kwara South. Simple random sampling was used to select two general hospitals from each senatorial district with the use of simple random sampling technique, while doctors, nurses, laboratory scientists, and laboratory technicians were randomly selected using systematic sampling to select every 3rd personnel as they were arriving at the hospitals.

A researchers structured questionnaire tagged Questionnaire on Attitude Towards Hepatitis B infection among Health Workers (QATHBIHW) was used for the study. Three experts in the field of Health Education validated the instrument. The instrument was administered on the respondents at the selected hospitals on daily basis. Consent of the respondents was sought at an appropriate section of the instrument. Respondents who declined were exempted from the study. The data was analysed using a descriptive statistical tool of bar chart, frequency counts and percentages to analyse the demographic characteristics of the respondents and answer the research questions raised for the study. While ANOVA was used to test the hypothesis se for the study at 0.05 alpha level of significance.

RESULTS

This is because, 400 (97.1%) of the respondents believed that every patient that comes to the hospital should be tested for HBV before they receive health care, 398(96.6%) felt that patients with HBV infection should always be given the last appointment for the day, 412(100%) believed that healthcare workers who are HBV positive should not be allowed to give health care services to patients. 350 (85.0%) will be willing to manage HBV patient any time they seek for treatment. Again, 375 (91.0%) always felt worried that they might contract the disease from HBV patients any time they are around them. 412 (100%) agreed that, more occupational diseases prevention programme should be organized in order to reduce HBV infection among healthcare worker, 250 (60.7%) always feel that HBV vaccines are not potent enough to prevent them from contracting the infection. 403 (97.8%) have more sympathy for people suffering from HBV infection, 412(100%) expressed that an alert note should be placed in the case file of an HBV patient so that they will quickly know how to be extra careful when treating such patient. However, only 40(9.7%) often have some kind of hatred towards HBV patients, 4(1.0%) of the respondents think stigma should be attached to HBV patients. Furthermore, 395(95.9%) of the respondents do not find it difficult to hug HBV patients, while 405(98.3%) would like to get their patients tested before giving any serious attention to them. However, 390 (94.7%) disagreed that testing outpatients for HBV is not necessary.

Table 1. Frequency Counts, Percentages on the attitude towards Hepatitis B Virus infection among health workers

S/N	Attitude Towards Hepatitis B Infection	Yes	No
1	Every patient that comes to the hospital should be tested for HBV before they receive health care	400(97.1%)	12(2.9%)
2	Patients with HBV infection should always be given the last appointment for the day	398(96.6%)	14(3.4%)
3	Healthcare workers who are HBV positive should not be allowed to give health care services to patients	412(100%)	0(0%)
4	I will be willing to manage HBV patient anytime they seek for treatment	350(85.0%)	62(15.0%)
5	I am always worried that I might contract the disease from HBV patients anytime I am around them	375(91.0%)	37(9.0%)
6	More occupational diseases prevention programme should be organized in order to reduce HBV infection among healthcare workers	412(100%)	0(0%)
7	I always feel that HBV vaccines are not potent enough to prevent me from contracting the infection	250(60.7%)	162(39.3%)
8	I have more sympathy for people suffering from HBV infection	403(97.8%)	9(2.2%)
9	An alert note should be placed in the case file of an HBV Patient so that I will quickly know how to be extra careful when treating such patient	412(100%)	0(0%)
10	I often have some kind of hatred towards HBV patients	40(9.7%)	372(90.3%)
11	I think stigma should be attached to HBV patients	4(1.0%)	408(99.0%)

12	Testing outpatients for HBV is not necessary	22(5.3%)	390(94.7%)
13	I do not find it difficult to hug HBV patients	395(95.9%)	17(4.1%)
14	I would like to get my patients tested before giving any serious attention to them	405(98.3%)	405(1.5%)

Table 2 show that doctors have better attitudes (3.72 ± 0.427) towards HBV infection compared to their nurses' counterparts (3.54 ± 0.403). Poor attitudes are reflected among laboratory scientists (3.02 ± 0.403) while the poorest attitude (3.04 ± 0.387) was found among the laboratory technicians. This implies that the health workers differ in their attitudes towards Hepatitis B infections based on area of specialization. This may be as a result of doctors being at the highest level of health workers and they seem to be the first point of call for hepatitis B patients.

Table 1. Attitude of Health Workers on HBV Infection based on Area of Specialization

Area of Specialization	N	Attitude	
		Mean	Standard Deviation
Doctors	50	3.72	0.427
Nurses	127	3.54	0.403
Laboratory scientist	21	3.02	0.382
Laboratory technicians	06	3.04	0.387

Table 3 shows that the calculated value is 752 while the critical F-value is 0.99. The significant F-value is 0.10 which is greater than 0.05 alpha level. This implies that the attitude of health workers towards HBV infection is significant.

Table 3. ANOVA results comparing attitudes towards Hepatitis B Virus Infection among Health Workers in Kwara State, Nigeria

Source	SS	df	MS	Cal. Value	Critical F-value	Decision
Between Groups	205	3	4.576	752	0.99	0.10
Within Groups	549	408	3.993			

(*t* -critical = 1.972, *P* value > 0.05)

DISCUSSION

Health workers in Kwara State Nigeria were found to have significantly poor attitude towards HBV infection at the general hospital in the State. It is important to note that, attitudes of health workers play a key role in prevention of spread of infection and mental health of patients. This finding is in line with a study on assessment of knowledge, attitudes and practices of HWs in Odisha, which revealed that, dental interns, medical interns, and nursing interns are likely to show negative attitudes and those who were knowledgeable were more likely to show positive attitudes [10]. Regarding attitude statements, another study found that 95.8 per cent of the HWs surveyed believed that hepatitis patients should be identified for infection control purposes, 82.8 per cent of the participants indicated that they used additional infection control precautions when they knew patients had hepatitis, 74.4 per cent double-gloved when they treated a bleeding person with hepatitis. 48.5 per cent of the participants indicated that patients with hepatitis C should be given the last appointment of the day [10]. Among the HWs, 92.1 per cent felt compassion when hepatitis was acquired through a blood transfusion, compared with 55.6 per cent when it was contracted through injection drug use. Participants' willingness to care for people with hepatitis was identified by responses to three questions. Among HWs, 82.8 per cent believed that they liked to treat these patients and 15.5 per cent said that they did not like treating these patients. Regarding attitudes toward intravenous (IV)-drug users, 78.7 per cent showed fear toward IV-drug users, while 77 per cent said that they were worried they might contract a disease from the patients. 35.6 per cent agreed that IV-drug users deserved the disease and 40.2 per cent indicated that they did not want to treat IV-drug users by [13]. Doctors were also found to have better attitudes towards HBV infection compared to their nurses' counterparts. This shows that, a negative attitude was reflected among laboratory scientists and laboratory technicians. This implies that the health workers differ in their attitudes towards Hepatitis B infection based on area of specialization. This finding is

further explained by the findings of a study which revealed that in Pakistan, doctors had experienced the most injuries, while blood collection was the activity that accounted for most of their exposure to blood-borne microorganisms. In addition, majority of HCWs had been exposed to blood at least once. Needle recapping after administering intravenous injections and line was responsible for most of the finger injuries among them [12].

Previous study opined that it is worthy of note that discriminatory behaviour and attitude is common towards patients with hepatitis B infection due to the highly infectious nature of the infection. Attitudes and practices are directly under the influence of knowledge levels; therefore, it is necessary to increase the level of understanding of the disease management strategies in order to bring about positive attitudes among the healthcare workers to prevent discrimination and prejudice towards the infection and the patients [10]. However, another study found that attitude and self-reported behaviour scores were similar among the professional groups except dentists who were more negative overall. Self-reported compliance with infection control guidelines indicated that HWs often treated patients with hepatitis differently from other patients to prevent hepatitis transmission. For example, 79 per cent believed people with hepatitis should be identified for safety reasons [9].

Several participants indicated that they identified patients with hepatitis by placing alert notes in their medical files. Forty-eight per cent of participants indicated that they used additional infection control precautions when they knew patients had hepatitis. For example, 60 per cent of them double gloved when they treated a bleeding person with hepatitis. Responses to the open questions suggested that HWs used additional precautions to reduce their risk of exposure to infectious blood. The findings of this study are a little bit surprising because, health workers are generally assumed to have better attitudes towards the management of HBV as they have more knowledge of how to prevent its transmission without prejudice or stigmatization of the victims.

CONCLUSION

It was concluded based on the findings that, health workers in Kwara State, Nigeria generally have negative attitudes towards the management of hepatitis B infection. Moreso, doctors have better attitudes towards the management of HBV infection, followed by nurses, laboratory scientists and laboratory technicians respectively in Kwara State, Nigeria. Hence, there is need to improve the attitudes of the different cadres of health workers in the state, in order to improve the quality of life of HBV patients and reduce stigma which may impact negatively on patients' mental health.

Recommendations

Based on the conclusions drawn from this study, the following recommendations were made; health workers in Kwara State, Nigeria should try as much as possible to prevent themselves from being infected by getting vaccinated against the virus by using surgical gloves while dealing with patients, avoiding needle-stick injuries and take all other preventive measures available so as to make them have better attitudes towards HBV infections. Moreso, health workers in Kwara State, Nigeria should be trained and retrained by health educators, superior officers, and non-governmental organizations, in form of workshop and seminars on transmission of HBV infection and importance of not stigmatizing their patients while managing HBV infections. They should be able to prevent themselves from getting infected while giving quality services and support to HBV patients.

Limitations

The data retrieved did not include years of experience of the clients and as such, limited the researcher's ability to determine if health professional with higher years of experience would have better attitudes towards HBV management.

Conflict of interest

There is no conflict of interest on this study.

Author Contributions

Q.O. Abdulrasaq, is the lead author, who was involved in planning, execution, and data collection. A.M. Abdulraheem is the corresponding author and assisted in the data collection and editorial. J.O. Abdulqudus played a role key role in writing significant portions of the paper and served as research assistant. T.K. Ijaodola assisted data collection. K.A. Jidda also assisted in editorial and data collection. While, M. Onobumeh implemented, and edited a significant section of the paper. All the authors individually contributed to the article and gave their approval to the submitted version.

REFERENCES

1. Askarian M, Shaghaghian S, McLaws ML. Needle- stick injuries among nurses of Fars province, Iran. *Ann Epidemiol* 2007;17:988-92.
2. Chukwuka J. O., Ezechukwu C. C., Egbuonu I. Cultural Influences on Hepatitis B Surface Antigen Seropositivity in Primary School in Nnewi. *Nig J Paed* 2023; 30 :140-2
3. Farahnaz J, Fariborz MG, Fatemah S & Panah M. Knowledge and attitudes of health care workers towards patient with Hepatitis C Infection. *World J Gastroenterol*. 2012;18(18):2238-2244
4. Hussain MJ, Smith HM, et al. The increasing prevalence of hepatitis delta virus (HDV) infection in South London. *J Med Virol*. 2018;80(2):277–82.
5. Jonas MM., The liver and Bile ducts In, Rudolph C. D., Rudolph A. M., Hosteller M. K et al (eds) *Rudolph's Paediatrics*. New York: Me Graw Hill Companies 21 st ed 2013:1497-517
6. Nagao Y, Matsuoka H. HBV and HCV infections in Japanese dental care workers. *Int J Mol Med* 2008;21:791
7. Priyadarshini C, Silpiranjan M, Srinivas K, Sangamesh NC, Purnendu R, and Rajat P. Awareness of hepatitis B infection among healthcare students in a private medical college in Odisha: *J Int Soc Prev Community Dent* 2015; 5(2): S63-S67
8. Richardus JH. Needlestick injury and accidental exposure to blood: the need for improving the hepatitis B vaccination grade among health care workers outside the hospital. *Am J Infect Control* 2016;34:610-2.
9. Richmond JA, Dunning TL, Desmond PV. Health professionals' attitudes toward caring for people with hepatitis C. *Journal of Viral Hepatitis* 2017.14:624–632.
10. Setia S, Gambhir R, Kapoor V, Jindal G, Garg S and Setia S. Assessment of knowledge, attitudes and practices of HWs in Odisha. 2015. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4756569/>.
11. Yazdanpanah Y, Carli GD, Miguere B, et al. Risk factors for hepatitis C virus transmission to health care workers after occupational exposure: a European case-control study. *Clin Infect Dis* 2015;41:1423-30
12. Zafar A, Habib F, Hadwani R. Impact of infection control activities on the rate of needle stick injuries at a tertiary care hospital of Pakistan over a period of six years: an observational study. *BMC Infect Dis* 2009;29:9-78

مواقف العاملين الصحيين تجاه إدارة عدوى التهاب الكبد الوبائي ب في المستشفيات العامة في ولاية كوارا، نيجيريا

عبد الرزاق أونالابو¹، عبد الرحيم موجيسولا^{1*}، جاميو أولواتوسين¹، إيجودولا كيكيلومو²، جدة أديولا¹، أونوبومه مارغريت³

¹قسم تعزيز الصحة والتثقيف في مجال الصحة البيئية، كلية التربية، جامعة إيلورين، إيلورين، نيجيريا
²قسم التربية الصحية كلية التكنولوجيا الصحية، أوفاء، نيجيريا
³قسم الصحة والسلامة والتعليم البيئي، جامعة بنين، نيجيريا

المستخلص

يعد التهاب الكبد الوبائي (ب) من أخطر الأمراض في العالم وأصبح يشكل تهديداً خطيراً للصحة العامة. العاملون في مجال الصحة معرضون في الغالب لخطر الإصابة بالمرض لأنهم يظلون نقطة الاتصال الأولى للضحايا. تناولت هذه الدراسة مواقف العاملين الصحيين تجاه إدارة عدوى فيروس التهاب الكبد B والاختلاف في مواقف العاملين الصحيين على أساس مجال التخصص. تم تصميم بحث بأثر رجعي لأخذ عينات من 412 عاملاً صحياً عبر مجالات التخصص المختلفة والتي تشمل الأطباء والممرضات وعلماء المختبرات وفنيي المختبرات. غالبية العاملين في مجال الصحة لديهم مواقف سلبية تجاه مرضى فيروس التهاب الكبد الوبائي. ومع ذلك، كان لدى الأطباء (متوسط النتيجة = 3.72) والممرضات (متوسط النتيجة = 3.54) مواقف سلبية معتدلة تجاه مرضى فيروس التهاب الكبد B، في حين كان لدى علماء المختبرات (متوسط النتيجة = 3.02) وفنيي المختبرات (متوسط النتيجة = 3.04) المواقف الأكثر فحراً تجاه مرضى فيروس التهاب الكبد B. هناك حاجة إلى تحسين مواقف الكوادر المختلفة من العاملين الصحيين في الولاية، من أجل تحسين نوعية حياة مرضى فيروس التهاب الكبد B والحد من الوصمة التي قد تؤثر سلباً على الصحة العقلية للمرضى.

الكلمات الدالة: التهاب الكبد ب، العدوى، العاملين في مجال الصحة، الموقف، الفيروسات.