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Knowledge and Attitude Towards Hepatitis B Virus Infection Among Nurses in Banadir Hospital, Mogadishu, Somalia

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Abstract: Hepatitis B (HBV) causes potentially fatal liver infection and associated significant morbidity and mortality. It is a public health problem that increases the risk of liver and bile duct carcinoma. This study aimed to assess knowledge and attitude regarding HBV infection among nurses working in Benadir hospital Mogadishu, Somalia. Methods: Descriptive hospital-based cross-sectional study design was conducted on nurses working at Benadir Hospital, Mogadishu, Somalia. A representative sample of 92 nurses working in Benadir hospital was recruited for this study in 2020, and a structured questionnaire was used to obtain and collect in-depth information on the nurse's knowledge and attitude toward HBV infection. Results: Of the 92 total respondents, the majority, 66 (72%), were females, and 47 (51%) were young and between the age of 21-30 years. Regarding the educational level, about 51 (55.4%) had a bachelor's degree. The study found that most nurses, 76 (82%), had good knowledge about HBV infection and a positive attitude of 78 (85%) towards this infection. Conclusion: The study concluded that most of the nurses working at Benadir hospital had average knowledge regarding hepatitis Virus infection and had a positive attitude regarding it. There was no significant association between levels of knowledge with selected demographic variables in the study. The study encouraged ongoing training for nurses to enhance their knowledge periodically. Also, the study suggests doing the same research but increasing the number of Nurses involved in that study to determine their level of knowledge about HB infection.

Keywords: Knowledge, Attitude, Hepatitis B Virus, HBV, Benadir Hospital, Somalia

1. Introduction

Hepatitis B virus (HBV) infection creates a global health burden with significant morbidity and mortality from both acute infection and chronic complications, including chronic hepatitis, cirrhosis, and hepatocellular carcinoma [1]. It is a highly infectious virus in the blood of both symptomatic and asymptomatic patients; chronically infected individuals pose a serious threat to all healthcare workers, and immunization of such individuals is generally required [2].

Hepatitis B virus (HBV) infection is a major infectious hazard for healthcare personnel. Healthcare workers (HCWs) are at high risk of HBV infection in healthcare settings. Hepatitis infection is one of the major public health problems globally and is the tenth leading cause of death [3].

The transmission of infectious HBV is present in all body fluids of an infected individual. Therefore, blood, semen, saliva, and mother's milk, for example, serve as sources of infection, and also it is spread by needle stick injury [2, 4]. The risk of acquiring HBV infection from occupational exposures is dependent on the frequency of percutaneous and per mucosal

exposures to blood or body fluids containing blood [5, 6].

Healthcare workers (HCWs) are at high risk of HBV infection because they directly contact HBV infected blood and body fluids in their work. HBV is infected incidentally by direct contact with HBV infected blood or body fluids through the skin or mucosal membranes [7, 8]. Compared to the general population, HBV infection rate among HCWs is four times higher [9, 10]. Among 35 million HCWs worldwide, about 3 million are exposed to pathogens through blood every year [11]. Approximately 5.9% of them are infected with HBV every year [10]. The HBV infection rate among HCWs varies from 0.8% to 74.4%, depending on the region where they work [12].

HBV vaccination is the cornerstone of HBV infection control and has been very effective, safe, and provides lifelong protection [12]. Other effective approaches include improving health education for both infected and non-infected high-risk groups, implementing standard precautions such as regular personal hygiene, proper use of gloves and other equipment, adequate sterilization of medical equipment, and proper disposal of body fluids and other clinical waste in medical facilities [13].

In the study setting, nurses and midwives have an important role in the care of people with HBV infection. They provide support during treatment and education about the nature of the disease, diagnosis, prevention, and timely administration of immunoglobulins. To implement an effective management plan, nurses and midwives should have a basic understanding of the disease and its various implications for the patients [14]. Therefore, the study aimed to assess knowledge and attitude regarding hepatitis B infection among nurses at Benadir hospital.

2. Methodology

A descriptive hospital-based cross-sectional study design was used to conduct this study at Benadir Hospital in Mogadishu, Somalia, between December 23, 2021, and May 4, 2020.

2.1. The Target Population of the Study

The study recruited nurses working at Benadir Hospital, Mogadishu, Somalia, through representative sampling.

2.2. Sample Size and Technique

The sample size was calculated based on SLOVENE's formula

$$n=N/(1+N(e)2)$$

Where:
n = sample size
N= total number population
E = a margin of error which is 5%

$$n=120/(1+120(0.05)2)$$

The calculated sample size (n) was 92.

2.3. Data Collection Methods and Tools

Data collection was done through a structured questionnaire, and This questionnaire was developed concerning the existing researches conducted, and it contains questions related to demographic variables, knowledge, and attitude about hepatitis B infection. Knowledge scores were categorized as good, Poor, and Average, while the attitude section was categorized as positive and Negative.

2.4. Data Analysis

SPSS was used to analyze the descriptive data statistics to describe the variables in this study; Chi-square was used to compare variables.

2.5. Ethical Consideration

The faculty of medicine and health sciences, Jamhuriya University of Science and Technology, granted permission to conduct this study. The study also obtained permission from Benadir hospital administration. The Nurses in Benadir hospital were recruited for this study only after agreeing with informed consent. The respondent's confidentiality was secured.

3. Results

Table 1. *Demographic information (N=92) of nursing working in Benadir hospital, Mogadishu.*

Variable	Frequency	Percentage (%)
Age		
21-30	47	51.1
31-40	35	38.0
41-50	6	6.5
Above 50	4	4.4
Sex		
Male	26	28.3
Female	66	71.7
Marital status		
Single	54	58.7
Married	29	31.5
Divorced	5	5.4
Widow	4	4.4
Education		
Diploma	24	26.1
Bachelor	51	55.4
Master	17	18.5

Table 1: a total of 92 nurses were participated in this study, out of 47 (51.1%) were 21-30, and 66 (71.7%) of respondents were female. The majority of participants had a bachelor's degree.

3.1. Assessment of Knowledge Towards HBV

Table 2 revealed that the majority of nurses, which is 76 (82%) had average knowledge of HBV infection, 11 (12%) of participants had good knowledge, and 5 (5.4) of respondents had poor knowledge.

Table 2. *Shows the level of knowledge (N=92) of nursing working in Benadir hospital, Mogadishu.*

Knowledge level	Frequency	Percentage (%)
Good	11	12
Average	76	82.6
Poor	5	5.4

3.2. Assessment of Attitude Toward HBV Infection

Table 3 of this study showed that most participants, 78 (84.8%), had a positive attitude.

Table 3. *Shows the level of attitude (N=92) of nursing working in Benadir hospital, Mogadishu.*

Attitude level	Frequency	Percentage (%)
Positive	78	84.8
Negative	14	15.2

Table 4 of this study revealed that there is no significance association of knowledge with selected demographic variables (P< 0.05).

Table 4. *Association of knowledge with selected Demographic variables.*

Variables	Level of knowledge			Total	X^2	P-value
	Poor	Average	Good			
Sex						
Male	1	23	2	26		
Female	10	53	3	66	2.484	0.289
Total	11	76	5	91		
Age						
21-30	4	39	4	47		
31-40	6	28	1	35		
41-50	1	5	0	6	3.810	0.702
>50	0	4	0	4		
Total	11	76	5	92		
Education						
Diploma	3	21	0	24		
Bachelor	6	43	2	51	6.577	0.160
Secondary	2	12	3	17		
Total	11	76	5	92		

4. Discussion

As the study objective is to assess knowledge and attitude regarding hepatitis B infection among nurses at Benadir hospital. Overall, most of participants had average knowledge. Eighty two percent had knowledge, according to this conducted in Khartoum, Sudan 58.2% of nurses had good knowledge with HB infection [15]. The findings revealed that majority of participants 86 (93.5%) knew that the HBV can be transmitted through infected blood. Another study conducted among a group of health care workers in Yaoundé, Cameroon showed that forty seven percent (47%) of healthcare workers had good level of knowledge of HBV infection [16], which is slightly different the findings of this study.

5. Conclusion

The findings of this study revealed that most of the nurses working at Benadir hospital had average knowledge regarding HB infection. There was no significant association between the level of knowledge with selected demographic variables in the study. Therefore, Nurses' knowledge toward prevention of the HB infection can be improved through continuing nursing education (CNE) and periodically assessed for their practice and follow infection control measures such as wearing gloves and vaccinated. Also I suggest doing the same research but increasing the number of Nurses involved in that study to determine their level of knowledge about HB infection.

Conflict of Interests

All the authors do not have any possible conflicts of interest.

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References

[1] Badawi MM, Atif MS, Mustafa YY. Systematic review and meta-analysis of HIV, HBV and HCV infection prevalence in Sudan. Virol J. 2018; 15 (1): 1–16.

[2] Engelkirk PG, Duben-Engelkirk JL, Burton GRW. Burton's Microbiology for the Health Sciences [Internet]. 2011. 433 p. Available from: https://books.google.com/books?id=RaVKCQI75voC&pgis=1

[3] Jacob A, Joy TM, Mohandas S, Lais H, Paul N. Assessment of knowledge, attitude, and practice regarding hepatitis B among medical students in a private medical college in Kochi. 2019.

[4] Petrick JL, McGlynn KA. The changing epidemiology of primary liver cancer. Curr Epidemiol reports. 2019; 6 (2): 104–11.

[5] Abdela A, Woldu B, Haile K, Mathewos B, Deressa T. Assessment of knowledge, attitudes and practices toward prevention of hepatitis B virus infection among students of medicine and health sciences in Northwest Ethiopia. BMC Res Notes. 2016; 9 (1): 1–7.

[6] Fufore MB, Cook PA, Kirfi AM. Health workers' knowledge, attitude and practice towards Hepatitis B infection in Northern Nigeria. Int J Caring Sci. 2016; 9 (3): 955–65.

[7] Auta A, Adewuyi EO, Kureh GT, Onoviran N, Adeloye D. Hepatitis B vaccination coverage among health-care workers in Africa: A systematic review and meta-analysis. Vaccine. 2018 Aug; 36 (32 Pt B): 4851–60.

[8] Global hepatitis report, 2017 [Internet]. [cited 2022 Dec 29]. Available from: https://www.who.int/publications/i/item/9789241565455

[9] How do vaccines work? [Internet]. [cited 2022 Dec 29]. Available from: https://www.who.int/news-room/feature-stories/detail/how-do-vaccines-work?adgroupsurvey=%7Badgroupsurvey%7D&gclid=CjwKCAiAkrWdBhBkEiwAZ9cdcKGy4yz85KnEmRr9Vcp_Ti2pORfraAsjz_elMd-5Gkg5GNAL1O2RFxoCOPwQAvD_BwE

[10] Yuan Q, Wang F, Zheng H, Zhang G, Miao N, Sun X, et al. Hepatitis B vaccination coverage among health care workers in China. PLoS One. 2019; 14 (5): e0216598.

[11] Sharps injuries : assessing the burden of disease from sharps injuries to health-care workers at national and local levels / Elisabetta Rapiti, Annette Prüss-Üstun, Yvan Hutin [Internet]. [cited 2022 Dec 29]. Available from: https://apps.who.int/iris/handle/10665/43051

[12] Malewezi B, Omer SB, Mwagomba B, Araru T. Protecting health workers from nosocomial Hepatitis B infections: A review of strategies and challenges for implementation of Hepatitis B vaccination among health workers in Sub-Saharan Africa. J Epidemiol Glob Health. 2016 Dec; 6 (4): 229–41.

[13] Harte JA. Standard and transmission-based precautions: an update for dentistry. J Am Dent Assoc. 2010 May; 141 (5): 572–81.

[14] Boehme T Lou. Hepatitis B the nurse-midwife's role in management and prevention. J Nurse Midwifery. 1985; 30 (2): 79–87.

[15] Mursy SM elbager M, Mohamed SOO. Knowledge, attitude, and practice towards Hepatitis B infection among nurses and midwives in two maternity hospitals in Khartoum, Sudan. BMC Public Health. 2019; 19 (1): 1–7.

[16] Tatsilong HOP, Noubiap JJN, Nansseu JRN, Aminde LN, Bigna JJR, Ndze VN, et al. Hepatitis B infection awareness, vaccine perceptions and uptake, and serological profile of a group of health care workers in Yaoundé, Cameroon. BMC Public Health [Internet]. 2016; 16 (1): 1–7. Available from: http://dx.doi.org/10.1186/s12889-016-3388-z