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Research Article

Knowledge, Attitude, and Practice Regarding Hepatitis B Virus Infection and Vaccination Status Among Nursing Staff at Shaafi Hospital, Mogadishu, Somalia

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Abstract

Background: Hepatitis B virus (HBV) infection continues to be a significant global health issue, greatly impacting both the illness and death rates. Healthcare professionals, especially nurses, are at a heightened risk of contracting HBV due to their regular contact with blood and bodily fluids. Knowledge, attitudes, and practices (KAP) regarding HBV play a crucial role in shaping preventive actions; however, there is a scarcity of research on KAP levels among nurses in Somalia.

Objectives: This study sought to evaluate the KAP and vaccination status of nursing staff for HBV infection at Shaafi Hospital in Mogadishu, Somalia.

Methods: A cross-sectional study involving 89 nurses was conducted at the Shaafi Hospital from February to March 2025. Data were collected through a pretested structured questionnaire that evaluated the KAP and vaccination status. Statistical analyses were performed using SPSS version 25. Descriptive statistics were employed to summarize the data, and chi-square tests were used to examine the relationships between KAP levels and sociodemographic factors, with a significance level set at $p < 0.05$.

Results: Among the 89 participants, 66.3% had sufficient knowledge of HBV, 74.2% exhibited a positive attitude towards prevention, and 68.5% engaged in safe practices. However, the vaccination rate was inadequate, with only 69.7% of patients having received the complete three-dose HBV vaccination series. Chi-square analysis revealed no significant links between sociodemographic factors and levels of knowledge or practice (p > 0.05); however, there was a significant connection between department/unit and attitude ($p = 0.031$).

Conclusion: Although the levels of knowledge, attitude, and practice (KAP) are generally positive, significant gaps persist in both vaccination rates and the observance of preventive measures. To effectively reduce the risk of HBV infection, it is crucial to enhance training programs, make vaccination more accessible, and implement strict infection control policies.

Keywords: Hepatitis B virus, Knowledge, Attitude, Practice, Vaccination, Nursing staff, Somalia

1. INTRODUCTION

Hepatitis B virus (HBV) is a major global health issue that causes significant illness and death due to both acute and chronic conditions such as chronic hepatitis, cirrhosis, and liver cancer. [1] For those working in healthcare, hepatitis B is a serious occupational hazard because it can be transmitted through contact with blood and other body fluids. The rise in invasive diagnostic and therapeutic procedures has heightened the risk of infection for healthcare workers, making it two–four times higher than that of the general adult population. Each year, approximately 66,000 hepatitis B infections are caused by needlestick injuries. Therefore, it is crucial to adhere to universal precautions to prevent HBV transmission. [2]

Numerous epidemiological studies have demonstrated global disparities in hepatitis B endemicity, with Sub-Saharan Africa and East Asia exhibiting higher rates of chronic infection, affecting between 5% and 10% of the adult population. This is in stark contrast to Western and North America, where the chronic infection rate is < 1% [3]. In Sub-Saharan Africa, hepatitis B is a major health concern, responsible for 87,890 deaths annually, and contributes to 80% of hepatocellular carcinoma cases [4]. In Somalia, hepatitis B prevalence in the population is 20.9% [5]. In our healthcare setting, the transmission of

hepatitis B presents a significant challenge for both patients and healthcare workers, especially those frequently in contact with the blood. Contributing factors included the level of knowledge, attitudes, and practices regarding infection prevention and vaccination. A study conducted among medical students in India found that although they possessed good knowledge and attitudes towards hepatitis B vaccination, their vaccination rates were insufficient, with less than 33% unvaccinated [6]. Similarly, research in Bangladesh among nurses revealed that 67.3% had adequate knowledge of hepatitis vaccination, yet only 49.3% exhibited good vaccination practices [7]. In Ethiopia, a study indicated that over 80.0% of respondents were knowledgeable and had a positive attitude towards hepatitis B prevention, but only five (2.0%) students completed the full three-dose vaccination schedule [8]. Research from various regions has shown that vaccination coverage among healthcare workers remains inadequate, even when vaccines and PEPs are accessible. Barriers, such as high costs, limited on-site access, lack of education, and misconceptions about HBV, continue to impede vaccination efforts [9,10].

Although this issue is important, only a single study has been conducted in Mogadishu, Somalia, to evaluate the knowledge, attitude, and practice (KAP) related to HBV among nursing staff [11]. However, this study did not provide a comprehensive report on the HBV vaccination status of nurses, making it challenging to gauge their immunization levels. Furthermore, the study did not include an analysis by department, which is crucial for identifying differences in KAP across various units, such as the general ward, ICU, and emergency room. This is concerning because the current strategy for addressing this occupational hazard involves the effective immunization of all healthcare providers, including nurses, using available vaccines that are both efficient and safe. Therefore, this study aimed to evaluate the knowledge, attitudes, and practices concerning hepatitis B virus infection and vaccination status among nursing staff at Shaafi Hospital in Mogadishu, Somalia, as they are key healthcare workers at higher risk of contracting the virus and play a significant role in public education on hepatitis B prevention..

2. METHODS AND MATERIALS

Study Design, Period, Area, and Population.

This cross-sectional study, carried out in February and March 2025, targeted nursing staff at the Shaafi Hospital. Situated in Hodan District of Mogadishu, this private healthcare institution is part of the Benaadir Region in Somalia. It caters to a wide range of patients from the Benaadir Region and other parts of the country. Shaafi Hospital is highly regarded for its superior healthcare services in multiple specialties such as internal medicine, obstetrics and gynecology, pediatrics, and general surgery.

Sample Size and Sampling Technique

This study included 89 nurses, and the sample size was chosen based on the practicality and availability of the hospital's nursing staff. A simple random sampling method was applied to ensure equal representation of nurses from different departments.

Inclusion and exclusion criteria

Inclusion criteria: The study targeted registered nurses at Shaafi Hospital who had direct patient contact or handled clinical materials and voluntarily agreed to participate.

Exclusion criteria: Nurses who were on leave during the data collection period or had been employed at Shaafi Hospital for less than three months were excluded.

Data Collection and Analysis

In this study, data were obtained through a meticulously crafted digital survey to align with the objectives of the study. The survey began with a succinct introduction detailing the study's purpose and significance. The structured questionnaire, adapted from an instrument previously used in similar research, was developed electronically using Google Forms. The survey link was disseminated to nursing staff via social media platforms for data collection. Given that Somali was the primary language of the participants, the questionnaire was initially drafted in English, translated into Somali, and then back translated to ensure the accuracy and consistency of the content. A pilot study was conducted in both languages with a randomly selected group of nurses from the Shaafi Hospital to test the clarity and acceptability of the questions. The data from this pilot study were excluded from the final analysis. The questionnaire was divided into four sections to gather pertinent information about participants. Section A gathered demographic data, including age group, sex, highest educational attainment, and years of work experience. Section B evaluated knowledge concerning hepatitis B virus (HBV), covering topics such as etiology, transmission, symptoms, complications, prevention, and post-exposure prophylaxis (PEP). Section C assessed the participants' attitudes towards HBV, focusing on their beliefs about the importance of sterilizing instruments, wearing gloves, vaccination, and PEP. Section D examined participants' practices related to HBV prevention and control, such as receiving the hepatitis B vaccine, sterilizing instruments, wearing gloves, adhering to safe injection practices, following hospital procedures in the event of needlestick injuries, and promoting routine HBV screening among patients and colleagues. Participants without a history of needlestick injuries were instructed to skip the relevant questions. The response options for these questions were "yes" and "no." The questionnaire comprised five questions on demographic characteristics, 12 on knowledge, four on attitude, and five on practice. A scoring system was implemented to assess the participants' KAP, awarding one point for each correct or positive response. In the Knowledge section (12 items), scores of 0–4 indicated inadequate knowledge, 5–8 indicated moderate knowledge, and 9–12 indicated adequate knowledge. In the attitude section (four items), scores of 0–2 reflected a poor attitude, while scores of 3–4 reflected a good attitude. In the practice section (five items), scores of 0–

2 were classified as unsafe practices, whereas scores of 3–5 were considered safe practices.

Data were analyzed using Statistical Package for Social Sciences (SPSS) software, version 25. Descriptive statistics, including frequencies and percentages, were used to summarize the findings. Chi-square tests were used to explore the connections between levels of knowledge, attitude, practice, and specific demographic variables. A p-value of less than 0.05 was considered to indicate statistical significance in all analyses.

Ethical approval:

This study was approved by the ethical committee of Shaafi Hospital. The participation of nurses from the hospital was contingent upon obtaining informed written consent. Throughout the study, the confidentiality and anonymity of all participants was meticulously protected.

3. RESULTS

3.1 Sociodemographic Characteristics

This study included 89 participants. A demographic breakdown indicated that a significant portion of the nurses were young, with 65 individuals (73.0%) falling within the 18 to 25 age bracket and 22 individuals (24.7%) aged between 26 and 35 years. Only two participants (2.2%) were aged between 36 and 50 years. In terms of sex, the majority were female, with 52 (58.4%) women compared to 37 (41.6%) men. When examining educational backgrounds, most participants held a bachelor's degree in nursing, totaling 77 (86.5%), while a smaller segment had a Diploma 10 (11.2%), a master's degree 2 (2.3%), or other qualifications 11 (12.4%). Regarding work experience, 29 participants (32.6%) had less than one year of experience, 50 (56.2%) had between 1 and 5 years, and 10 (11.2%) had between 6 and 10 years. Participants were drawn from various hospital departments, with the largest group working in the General Ward (40, 44.9%), followed by the Emergency Room (20, 22.5%), Outpatient Department (12, 13.5%), Intensive Care Unit (ICU) (6, 6.7%), Maternity Ward (6, 6.7%), and Surgical Ward (5, 5.6%) (Table 1).

Table 1: Sociodemographic Characteristics of Nurses (N = 89)

Variable / Item	Category / Response	Frequency (N)	Percentage (%)
Age Group	18–25 years	65	73.0%
	26–35 years	22	24.7%
	36–45 years	1	1.1%
	46–50 years	1	1.1%
Gender	Male	37	41.6%
	Female	52	58.4%
Highest Level of Education	Bachelor's Degree in Nursing	77	86.5%
	Diploma in Nursing	10	11.2%
	Master's Degree in Nursing	2	2.3%
Years of Work Experience	Less than 1 year	29	32.6%
	1–5 years	50	56.2%
	6–10 years	10	11.2%
Department/Unit	General Ward	40	44.9%
	Emergency Room	20	22.5%
	OPD (Outpatient Department)	12	13.5%
	ICU	6	6.7%
	Maternity Ward	6	6.7%
	Surgical Ward	5	5.6%

3.2 Knowledge, Attitude, and Practice (KAP) Levels Regarding HBV Infection Among Nurses

The findings of this study revealed that the majority of nursing staff demonstrated adequate knowledge regarding Hepatitis B Virus (HBV) infection. Of the total, 59 nurses (66.3%) demonstrated sufficient knowledge, 26 nurses (29.2%) possessed moderate knowledge, and 4 nurses (4.5%) had insufficient knowledge. Additionally, 67 participants (75.3%) indicated that they had undergone training related to HBV prevention and control. Most (82 nurses, 92.1%) correctly identified HBV as a viral infection. However, the understanding of HBV infection complications varied among the participants. While 56 nurses (62.9%) understood that HBV could cause only acute hepatitis, 71 (79.8%) and 77 nurses (86.5%) were aware that HBV could lead to chronic hepatitis and liver cirrhosis, respectively. Furthermore, 68 participants (76.4%) recognized that HBV infection could result in hepatocellular carcinoma, and 79 participants (88.8%) accurately identified the risk of HBV-related mortality. Regarding the transmission methods, most participants showed a strong understanding. A notable portion (84 nurses, 94.4%) identified infected blood transfusion as a primary transmission route, 77 nurses (86.5%) acknowledged sexual contact, 80 nurses (89.9%) recognized mother-to-child transmission, and 82 nurses (92.1%) identified needle-stick injury as a potential source of HBV infection. However, only 56 participants (62.9%) correctly reported that HBV did not spread through casual contact with infected individuals, and 65 nurses (73.0%) were aware that HBV is not airborne.

Most nurses displayed good attitudes towards HBV prevention. Among the respondents, 84 nurses (94.4%) demonstrated a positive attitude, whereas only 5 nurses (5.6%) displayed a negative attitude. Importantly, 83 nurses (93.3%) acknowledged the significance of properly sterilizing instruments to prevent HBV transmission and 84 nurses (94.4%) concurred with the effectiveness of wearing gloves as a protective measure. In addition, 85 participants (95.5%) recognized the essential role of vaccination in preventing HBV transmission. Regarding post-exposure management, 81 nurses (91.0%) advocated the use of post-exposure prophylaxis (PEP), immunoglobulin (IG), and vaccination for those exposed to hepatitis B virus (HBV).

Regarding practice levels related to HBV prevention, most nurses adhered to safe practices. Of the total participants, 87 individuals (97.8%) confirmed that they followed safe infection control measures, while only 2 nurses (2.2%) acknowledged engaging in unsafe practices. Specifically, 81 nurses (91.0%) consistently sterilized the instruments prior to use, and 85 nurses (95.5%) regularly wore gloves during the procedures. Moreover, 82 nurses (92.1%) practiced safe injection techniques. Additionally, 84 participants (94.4%) promoted regular Hepatitis B screening among patients and colleagues. Despite these positive practices, only 62 nurses (69.7%) completed the entire three-dose HBV vaccination series, leaving 27 participants (30.3%) either partially vaccinated or not vaccinated at all (Table 2).

Table 2: Summary of Knowledge, Attitude, and Practice Levels Towards HBV among Nurses (N = 89)

Variable / Item	Category / Response	Frequency (N)	Percentage (%)
Knowledge Items			
Have you ever attended training on Hepatitis B prevention and control?	Yes	67	75.3%
	No	22	24.7%
Hepatitis B is a viral infection	Yes	82	92.1%
	No	7	7.9%
Hepatitis B can cause acute hepatitis	Yes	56	62.9%
	No	33	37.1%
HBV can cause chronic hepatitis	Yes	71	79.8%
	No	18	20.2%
Hepatitis B can cause liver cirrhosis	Yes	77	86.5%
	No	12	13.5%
Hepatitis B can cause hepatocellular carcinoma	Yes	68	76.4%
	No	21	23.6%
HBV infection can cause death	Yes	79	88.8%
	No	10	11.2%
HBV doesn't cause peptic ulcer	Yes	54	60.7%

	No	35	39.3%
HBV can be transmitted via infected blood transfusion	Yes	84	94.4%
	No	5	5.6%
HBV can be transmitted by unprotected sexual intercourse	Yes	77	86.5%
	No	12	13.5%
HBV can be transmitted from mother-to-child.	Yes	80	89.9%
	No	9	10.1%
HBV can be transmitted via needle-stick injury (NSI)	Yes	82	92.1%
	No	7	7.9%
HBV is not transmitted through air	Yes	65	73.0%
	No	24	27.0%
Post-exposure prophylaxis includes IG & vaccination	Yes	74	83.1%
	No	15	16.9%
Attitude Items			
Believe sterilization is important to prevent transmission	Yes	83	93.3%
	No	6	6.7%
Believe wearing gloves is important in prevent HBV transmission	Yes	84	94.4%
	No	5	5.6%
Believe vaccination can prevent HBV transmission	Yes	85	95.5%
	No	4	4.5%
Recommend PEP for those exposed to HBV	Yes	81	91.0%
	No	8	9.0%
Practice Items			
Always sterilize instruments	Yes	81	91.0%
	No	8	9.0%
Always wear gloves	Yes	85	95.5%
	No	4	4.5%
Practice safe injection techniques	Yes	82	92.1%
	No	7	7.9%
Encourage routine screening among patients and colleagues	Yes	84	94.4%
	No	5	5.6%%
Completed the full three-dose Hepatitis B vaccination series	Yes	62	69.7%
	No	27	30.3%

Note: Knowledge, attitude, and practice levels were computed based on the scoring system described in the Methods section.

3.3 Association between Socio-Demographic Characteristics and Knowledge, Attitude, and Practice Levels

This study explored the relationship between sociodemographic characteristics and the knowledge, attitudes, and practices of nursing staff at Shaafi Hospital regarding Hepatitis B Virus (HBV) infection. Analysis of knowledge levels revealed that nurses aged 18–25 years predominantly had sufficient knowledge (n=43), followed by those aged 26–35 years (n=15). However, no significant association was observed between age and knowledge (p=0.618). Similarly, knowledge levels were not significantly influenced by gender (p=0.789), educational qualifications (p=0.907), work experience (p=0.161), or department/unit

(p=0.543), although those with a bachelor's degree and those working in general wards and emergency rooms exhibited higher knowledge levels (Table 3)
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Table 3: Association between socio-demographic characteristics and the level of knowledge among nursing staff at Shaafi Hospital

socio-demographic variables		Level of Knowledge n			*P*-value
		Inadequate Knowledge	Moderate Knowledge	Adequate Knowledge	
Age	18–25 years	4	18	43	**0.618**
	26–35 years	0	7	15	
	36–45 years	0	0	1	
	46–50 years	0	1	0	
Gender	Male	1	11	25	**0.789**
	Female	3	15	34	
Education level	Bachelor's Degree in Nursing	4	22	51	**0.907**
	Diploma in Nursing	0	3	6	
	Master's Degree in Nursing	0	1	1	
Experience years	Less than 1 year	2	4	23	**0.161**
	1–5 years	1	18	31	
	6–10 years	1	4	5	
Department/Unit	General Ward	1	13	26	**0.543**
	Emergency Room	0	5	15	
	OPD (Outpatient Department)	1	3	8	
	ICU	1	3	2	
	Maternity Ward	1	1	4	
	Surgical Ward	0	1	4	

In terms of attitudes, most nurses across various age groups showed a positive attitude towards HBV prevention, with no significant association with age (p=0.582), gender (p=0.314), educational qualifications (p=0.688), or work experience (p=0.705). Nevertheless, a significant association was found between department/unit and attitude levels (p=0.031), with nurses from the emergency room, OPD, and surgical ward demonstrating good attitudes, whereas some from the ICU, maternity ward, and general ward exhibited poor attitudes. (Table 4)

Table 4: Association between socio-demographic characteristics and the level of Attitude among nursing staff at Shaafi Hospital

socio-demographic variables		level of Attitude		*P*-value
		Poor Attitude	Good Attitude	
Age	18–25 years	5	60	**0.582**
	26–35 years	0	22	
	36–45 years	0	1	
	46–50 years	0	1	
Gender	Male	1	36	**0.314**

	Female	4	48	
Education level	Bachelor's Degree in Nursing	5	72	**0.688**
	Diploma in Nursing	0	9	
	Master's Degree in Nursing	0	2	
Experience years	Less than 1 year	2	27	**0.705**
	1–5 years	2	48	
	6–10 years	1	9	
Department/Unit	General Ward	2	38	**0.031***
	Emergency Room	0	20	
	OPD (Outpatient Department)	0	12	
	ICU	2	4	
	Maternity Ward	1	5	
	Surgical Ward	0	5	

Regarding practice levels, the majority of nurses reported engaging in safe practices across all sociodemographic categories, with no significant associations found with age (p=0.860), gender (p=0.807), educational level (p=0.166), work experience (p=0.805), or department/unit (p=0.718). (Table 5).

Table 5: Association between socio-demographic characteristics and the level of Practice among nursing staff at Shaafi Hospital

socio-demographic variables		level of Practice		*P*-value
		Un-safe Practice	Safe Practice	
Age	18–25 years	2	63	**0.860**
	26–35 years	0	22	
	36–45 years	0	1	
	46–50 years	0	1	
Gender	Male	1	36	**0.807**
	Female	1	51	
Education level	Bachelor's Degree in Nursing	1	76	**0.166**
	Diploma in Nursing	1	8	
	Master's Degree in Nursing	0	2	
Experience years	Less than 1 year	1	28	**0.805**
	1–5 years	1	49	
	6–10 years	0	10	
Department/Unit	General Ward	1	39	**0.718**
	Emergency Room	0	20	
	OPD (Outpatient Department)	1	11	
	ICU	0	6	
	Maternity Ward	0	6	
	Surgical Ward	0	5	

4. DISCUSSION

This study explored the knowledge, attitude, and practice (KAP) related to hepatitis B virus (HBV) prevention among nursing personnel at the Shaafi Hospital in Mogadishu, Somalia. The study indicated that 66.3% of the nurses had a solid understanding, 74.2% maintained a positive attitude, and 68.5% adhered to safe practices. These findings offer crucial insights into how prepared health care professionals tackle HBV risks, particularly in areas with a high prevalence of the disease and limited resources.

In this study, the knowledge level of 66.3% was similar to that found in tertiary care hospitals in South India (64.7%) [12] and Ambala, India (64.89%) [13]. This is higher than the levels reported in Addis Ababa, Ethiopia (57.0%) [14], Lahore, Pakistan (46%) [15], Bangladesh (45%) [16], and Bahir Dar, Northwest Ethiopia (53.8%) [17]. However, it does not reach the higher levels seen in Mangaluru, India (86%) [18], and Northern Nigeria (74.6%) [19]. The differences in knowledge levels across these studies can be attributed to variations in healthcare education systems, availability of professional training, and level of exposure to HBV-related information. Institutions that offer continuous education, robust infection control programs, or prioritize awareness of blood-borne diseases tend to have higher knowledge scores. Conversely, lower scores may reflect limited training opportunities, outdated information, or reduced emphasis on HBV prevention within institutions. Additionally, inconsistencies in research methodologies and scoring systems can affect the evaluation and reporting of knowledge, leading to observed differences across studies.

The 74.2% positive attitude rate among Somali nurses is promising and aligns closely with the 72% rate observed in Ambala, India [1]). This rate is notably higher than that recorded in Bangladesh (43.3%) [16], Ghana (42.9%) [20], and Bahir Dar, Northwest Ethiopia (30%) [17]. Nevertheless, it falls short of the rates reported in tertiary care hospitals in South India (86.5%) [12] and Lahore, Pakistan (76.5%) [15], yet it still serves as a strong basis for providing safe and compassionate care. Interestingly, a separate study from the Services Hospital in Lahore, Pakistan, indicated a lower positive attitude rate of 55.6% [21]. These variations could be attributed to several factors. Aspects such as the workplace environment, experiences with patients suffering from infectious diseases, and focus on infection prevention during training play a role in shaping these attitudes. Nurses are more likely to develop positive attitudes when they work in supportive settings, engage in ongoing education, and have first-hand experience with HBV cases, which deepens their understanding of the importance of safe and compassionate practices. Conversely, nurses may show less favorable attitudes if they lack adequate information, have fears or stigmas about HBV, or do not receive sufficient professional development. In addition, differences in research methodologies, such as the use of various surveys and scoring systems, can result in diverse attitudes.

In this study, 68.5% of the participants reported following safe preventive measures, a percentage that was higher than those observed in Bangladesh (56.7%) (16), Northern Nigeria (59.0%) [19], Services Hospital Lahore, Pakistan (54.2%) [21], and Bahir Dar, Northwest Ethiopia (29.5%) [17]. However, it is slightly lower than the rate documented in a Tertiary Care Hospital in South India (77.6%) [12]. These variations could be due to differences in institutional support, availability of protective equipment, and enforcement of infection control protocols. The findings highlight the necessity of enhancing the practical application of HBV preventive knowledge through workplace training and monitoring.

In Mogadishu, 69.7% of the nurses successfully completed a three-dose series of the HBV vaccine. This figure is higher than the 36.9% reported in Addis Ababa, Ethiopia [14] and 65% observed at a Tertiary Care Hospital in South India [12]. This is also close to the 77.3% vaccination rate in Ghana [20]. While Bangladesh reports a vaccination rate of 70.8 % [16], it is uncertain if this reflects full coverage, complicating direct comparisons. Disparities in hepatitis B virus (HBV) vaccination rates among nurses across different countries can be attributed to several factors. Key influences include the availability and accessibility of the vaccine, the presence of institutional policies that mandate vaccination, and financial implications for healthcare workers. Additionally, the level of awareness and education are crucial, as nurses with a better understanding of HBV are more likely to complete the full vaccination series. Furthermore, challenges such as vaccine hesitancy, misconceptions about personal risks, and inadequate follow-up systems for administering all three doses contribute to lower coverage. Differences in the definition and reporting of vaccination data further complicate the accurate comparisons across various settings.

The study found no significant association between sociodemographic factors and knowledge, attitude, and practice (KAP), as variables such as age, gender, education, and experience did not show a correlation with levels of knowledge or practice. This finding is consistent with results from Mangaluru, India [18], where no significant associations were observed. In contrast, research conducted in Middle Iraq [22], Ghana [20], and Bangladesh [16] revealed that demographic factors including age, gender, education, and experience were significantly associated with knowledge, attitude, and practice. The present study identified a significant association between department/unit and attitude ($p = 0.031$), suggesting that work environment and exposure may influence perceptions and responses to HBV prevention. This result contrasts with studies from Ambala, India [13], and Pakistan [15], where educational qualifications and marital status were more strongly correlated with attitudes. A notable strength of this study is its focus on nurses, a high-risk group within a major Somali hospital, thus addressing a research gap in the region. The use of a validated questionnaire and high participation rate enhanced the reliability of the study.

CONCLUSION

This study explored the knowledge, attitudes, and practices (KAP) of nursing staff in relation to hepatitis B virus (HBV) prevention at Shaafi Hospital in Mogadishu, Somalia. The study found that a significant proportion of the nurses demonstrated adequate knowledge (66.3%), maintained positive attitudes (74.2%), and practiced safe measures (68.5%) for HBV prevention. Despite these positive findings, only 69.7% of the nurses received the complete three-dose HBV vaccination, indicating a considerable gap in vaccination coverage. Chi-square analysis showed no significant correlation between sociodemographic variables and the levels of knowledge or practice, but there was a significant association between department allocation and attitude.

Recommendations

Based on the results of this study, it is advisable to enhance hepatitis B virus (HBV) prevention among nursing personnel by implementing mandatory policies for complete vaccination coverage and ensuring easy access to vaccines. Ongoing education on HBV transmission, vaccination, safe injection techniques, sterilization, hand hygiene, and the use of personal protective equipment (PPE) is crucial. There is a need to foster better attitudes toward infection prevention through targeted behavior-change strategies. At the national level, the Ministry of Health should incorporate HBV vaccination, screening, and infection control training into health care worker safety policies. Additional multicenter research is needed to inform national strategies for HBV prevention among healthcare workers in Somalia.

Study Limitations

This study has several limitations. The cross-sectional design limits the ability to infer causal relationships between variables, and the use of self-reported data may have introduced biases such as recall or social desirability. Moreover, the research was conducted in a single healthcare facility, which restricts the generalizability of the results to other hospitals or regions in Somalia. Additionally, due to resource limitations, observational assessments were not conducted to corroborate self-reported practices, which could have affected the accuracy of the reported compliance with infection prevention protocols.

Declarations

Authors' Contributions: The author takes full responsibility for the following tasks: conception and design of the study, gathering data, analyzing and interpreting the results, and preparing the manuscript.

Ethics Approval and Consent to Participate: The study received approval from Shaafi Hospital. Nurses' participation was contingent on their informed consent. The confidentiality of all participants was maintained.

Consent for Publication: This section does not apply to this study.

Availability of Data and Materials: Data supporting the study's findings can be requested from the corresponding author provided that the request is reasonable.

Conflict of interest: The authors declare that they have no conflicts of interest regarding the content of this study.

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