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Knowledge, Attitude and Practices towards Prevention of Hepatitis B among College of Nursing Students, Ado Ekiti, Ekiti State

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Abstract:

Hepatitis B virus (HBV) continues to pose a significant global public health challenge, particularly in low and middle-income countries (LMICs). HBV is a leading cause of liver-related morbidity and mortality, including liver cirrhosis and hepatocellular carcinoma. This study assessed the knowledge, attitude, and practices of nursing students toward the prevention of Hepatitis B virus (HBV) at the College of Nursing Sciences, Ado Ekiti. Using a descriptive research design, 152 students from ND1 and ND2 levels were selected through simple random sampling from a total target population of 246 students. Data were collected via a standardized and validated questionnaire adapted from previous studies, covering demographic information, knowledge of HBV prevention, attitudes, preventive practices, and perceived barriers. Ethical approval was obtained, and verbal consent from participants was ensured. Data were analyzed using descriptive statistics, and associations between variables were examined using chi-square tests at a significance level of $p < 0.05$. The study revealed that nursing students possessed high knowledge of Hepatitis B virus (HBV), with 86.8% recognizing it as a viral liver infection and 88.2% aware of the causative agent. Most students understood transmission routes, including blood transfusion, unprotected sex, and needle sharing (80.3%), as well as mother-to-child transmission (81.6%), and 85.5% acknowledged occupational risk for healthcare workers. Attitudes were generally positive, with 67.8% emphasizing personal protective equipment and 70.4% supporting proper

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sterilization. Preventive practices varied: 88.2% used gloves, 83.6% disposed of sharps properly, 74.3% avoided recapping needles, yet only 61.2% completed vaccination. Barriers included fear of side effects (83.6%), cost (71.1%), cultural beliefs (64.5%), and low awareness (73%), highlighting the need for targeted education, mandatory vaccination, and institutional support. The study found that nursing students had fair knowledge and positive attitudes toward Hepatitis B virus prevention, but preventive practices, including vaccination and screening, were inconsistent. Recommendations include structured education, mandatory immunization, integration of infection control in curricula, provision of protective equipment, and continuous monitoring to enhance compliance and reduce transmission risk.

Keywords: Knowledge, Attitude, Practice, Prevention,

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Introduction

Hepatitis B virus (HBV) remains a formidable global public health challenge, particularly in low- and middle-income countries (LMICs), where healthcare infrastructure, public awareness, and preventive strategies are often limited. The World Health Organization (WHO, 2023) estimates that approximately 296 million people globally are living with chronic HBV infection, with around 1.5 million new infections occurring each year. HBV is a major cause of liver-related morbidity and mortality, including liver cirrhosis and hepatocellular carcinoma, contributing significantly to the global disease burden. Despite the availability of effective vaccines and antiviral treatments, the prevalence of HBV remains disproportionately high, largely due to gaps in public awareness, inadequate preventive behaviors, and limited access to healthcare services (Chakravarti et al., 2022).

Efforts to control HBV transmission have been ongoing for decades, yet misconceptions and inadequate knowledge continue to impede progress, especially in high-endemicity regions. Studies have demonstrated that many individuals still harbor erroneous beliefs about HBV transmission, including the notion that it spreads through casual contact or sharing food (Fekadu et al., 2023). HBV is primarily transmitted through unprotected sexual contact, sharing contaminated needles, blood transfusions, and mother-to-child transmission during childbirth. The persistence of misinformation, often fueled by cultural stigma and low levels of formal education, exacerbates the public health threat and undermines prevention efforts (Alamneh et al., 2021).

Cultural beliefs and stigmas further complicate HBV prevention and care. In some communities, HBV infection is wrongly associated with immorality or perceived as a punishment for bad behavior, leading to social exclusion and discrimination (Fekadu et al., 2023; Olofin-Samuel et al., 2025). Such attitudes discourage affected individuals from seeking testing, treatment, or counseling, while also contributing to psychological distress and social isolation. Addressing these social barriers through culturally sensitive health education, community engagement, and targeted communication strategies is therefore crucial for improving health outcomes and encouraging preventive behaviors.

From a public health perspective, improving knowledge, attitudes, and practices related to HBV is essential to achieving the WHO's goal of eliminating viral hepatitis as a public health threat by 2030 (WHO, 2023). This requires comprehensive strategies, including integrating HBV education into school curricula, community outreach programs, and training for healthcare providers. Strengthened vaccination campaigns targeting high-risk populations such as healthcare workers, infants, adolescents, and individuals with multiple sexual partners are also vital. Additionally, routine screening and early diagnosis must be made accessible and affordable, particularly in underserved areas. Digital health platforms, mobile education tools, and peer-led community programs have shown promise in enhancing awareness and promoting preventive behaviors, especially among youth and rural populations (Chakravarti et al., 2022).

Findings from multiple studies highlight significant gaps in the knowledge, attitudes, and practices (KAP) of nursing students regarding Hepatitis B virus (HBV) prevention, despite

generally moderate to high levels of awareness. In the United States, a descriptive cross-sectional study involving 300 nursing students revealed that 85% had high knowledge about HBV transmission, complications, and preventive measures. However, only 60% had completed the full three-dose vaccination series, while 20% had received partial vaccination and another 20% remained unvaccinated. Barriers to full compliance included low perception of personal risk, fear of side effects, and insufficient follow-up mechanisms by training institutions (Williams et al., 2020). Similar trends were observed in West Africa; a study in Lagos, Nigeria, among 250 student nurses showed that although 70% possessed good theoretical knowledge of HBV, only 40% had completed vaccination, with 30% never vaccinated. Contributing factors included high vaccine costs, lack of awareness about the full dosage schedule, and poor access to healthcare services. Additionally, risky clinical practices such as improper disposal of sharps and needle recapping persisted, reflecting weaknesses in clinical supervision and occupational safety education (Adegboye et al., 2021).

Studies in Ado-Ekiti, Nigeria, also report a discrepancy between knowledge and practice. Oluwatosin and Adebayo (2022) found that only 38% of 200 nursing students had completed the three-dose vaccination despite 62% demonstrating moderate to good knowledge. Many students perceived themselves as not vulnerable and cited high costs or vaccine unavailability, compounded by weak institutional enforcement of vaccination policies. In Ghana, Abdulrahman et al. (2023) observed that while 80% of 400 healthcare students were aware of HBV and its implications, only 45% had completed vaccination, and adherence to infection control measures like proper PPE use and needle handling was inconsistent. These findings underscore that awareness alone does not guarantee safe practices and that systemic and institutional support is critical.

Attitudinal studies similarly indicate that positive knowledge does not always translate to proactive prevention. In the United States, Williams et al. (2020) reported that while students expressed theoretical support for vaccination, about 25% delayed immunization until clinical exposure was imminent. In Ghana, Abdulrahman et al. (2023) found that half of the students lacked intrinsic motivation to complete vaccination without institutional enforcement or subsidies. Nigerian studies corroborate these findings; in Lagos, only 45% of students demonstrated proactive attitudes toward vaccination, citing fear of injections, skepticism about vaccine efficacy, and reliance on gloves alone for protection (Adegboye et al., 2021). In Ado-Ekiti, Oluwatosin and Adebayo (2022) found that only 38% of nursing students demonstrated consistent proactive attitudes, with many considering vaccination the institution's responsibility rather than a personal priority.

Preventive practices are also inadequate across contexts. In Ghana, Abdulrahman et al. (2023) found that only 48% of students completed the full vaccine regimen, while 25% were unvaccinated. Compliance with infection control measures, including consistent PPE use and proper needle disposal, was erratic, often due to insufficient supplies and weak institutional support. Similar patterns emerged in Lagos, Nigeria, where only 40% of students had completed vaccination, and unsafe clinical practices persisted, including sharing sharps and neglecting hand hygiene (Adegboye et al., 2021). In Ado-Ekiti, only 38% completed the

vaccination series, with poor adherence to gloves and correct needle disposal observed, further highlighting the gap between knowledge and safe practice (Oluwatosin & Adebayo, 2022).

Perceived barriers influencing knowledge and practices include limited structured infection control education, low clinical exposure, and weak institutional policies. In the U.S., Thompson et al. (2021) reported that students with clinical rotations in infectious disease units and structured coursework demonstrated higher HBV knowledge. Pan-African studies revealed that institutional seminars, vaccination policies, and mentorship enhanced knowledge and preventive behaviors (Okeke & Mensah, 2022). In Nigeria, region-specific studies noted that knowledge was higher among senior students with more clinical exposure, while rural or socioeconomically disadvantaged students had lower knowledge scores due to limited access to workshops or digital learning materials (Ogunyemi & Aluko, 2022). Overall, despite moderate to high awareness of HBV among nursing students globally, significant gaps in vaccination completion, adherence to infection control measures, and proactive attitudes persist, highlighting the need for strengthened institutional policies, hands-on training, and accessible vaccination programs to improve preventive practices.

Sub-Saharan Africa bears a significant portion of the global HBV burden, with Nigeria classified as a high-endemicity country, reporting an estimated 8.1% prevalence in the general population (Okwara et al., 2022). Healthcare workers, including nursing students, are at elevated risk due to occupational exposure to blood and bodily fluids. However, studies reveal substantial gaps in knowledge, attitudes, and preventive practices among this group. For instance, while some nursing students understand HBV transmission routes, misconceptions persist, vaccination uptake is low, and adherence to preventive measures such as proper use of personal protective equipment remains suboptimal (Adefolalu et al., 2021; Okonkwo et al., 2023). These deficiencies increase the risk of infection among students and pose a threat to the patients under their care. Inadequate training and low perceived susceptibility are key factors contributing to poor preventive practices (Afolabi & Alabi, 2022). Therefore, understanding the knowledge, attitudes, and practices (KAP) of nursing students towards HBV prevention is critical to designing targeted educational interventions. This study aims to assess the knowledge, attitude, and practice towards hepatitis B virus prevention among nursing students at the College of Nursing Sciences, Ado Ekiti, Ekiti State, to inform strategies that enhance protective behaviors and reduce HBV transmission in healthcare settings.

The broad objective of this study was to assess the knowledge, attitude and practices towards hepatitis B virus prevention among nursing students. The specific objectives of this study were to:

1. assess the knowledge level of nursing students towards hepatitis B virus prevention;
2. determine the attitude of nursing students towards the prevention of hepatitis B infection;
3. determine the practices of nursing students towards the prevention of hepatitis B infection; and

4. identify the perceived barriers to the prevention of hepatitis B infection by the nursing students.

Methods and Materials

The study employed a descriptive research design to assess the knowledge and attitude of nursing students toward the prevention of Hepatitis B virus (HBV) at the College of Nursing Sciences, Ado Ekiti. The research was conducted within the school premises, located along Adebayo Road, Ado-Ekiti, the capital of Ekiti State, in southwestern Nigeria. The college comprises three departments: Nursing Sciences, Midwifery, and Public Health Nursing, with classrooms, an auditorium, administrative blocks, and a library arranged across the compound. As of May 2025, the total student population in the college was 385, and the study targeted ND1 and ND2 students, totaling 246 students, including both male and female participants.

The sample size for the study was determined using Taro Yamane's formula, with a 5% margin of error, resulting in a total of 152 participants. Simple random sampling was employed to select respondents from the ND1 and ND2 cohorts, ensuring that every student in the target population had an equal chance of being included. Inclusion criteria were limited to ND1 and ND2 students, while students unwilling to participate were excluded. Data were collected using a structured and standardized questionnaire adapted from previous studies (Ayeni et al., 2025), which was divided into five sections covering biographic data, knowledge of HBV prevention, attitudes toward prevention, preventive practices, and perceived barriers to HBV prevention.

To ensure validity, the questionnaire underwent face and content validation by the researcher's supervisor, who assessed its relevance, clarity, and alignment with study objectives. The reliability of the instrument was verified through a pilot test conducted among students outside the main study sample to evaluate clarity, consistency, and comprehensiveness. Data collection involved distributing the questionnaire to respondents individually, with the purpose of the study explained and verbal consent obtained; completed questionnaires were collected immediately to prevent loss or misplacement. Data were manually checked, analyzed using descriptive statistics, and presented with tables, charts, and figures. Associations between variables were examined using chi-square tests with significance set at $p < 0.05$. Ethical approval was obtained from the College Provost and the Health Research Ethical Committee, with respondents' confidentiality ensured and informed consent obtained before participation, maintaining adherence to ethical research standards.

Results

Table 1: Respondent's demographic data

Variables	Categories	Frequency	Percentage (%)
Age	15-20	60	39.5
	21-25	64	42.1
	26-30	23	15.1
	31 and above	5	3.3

	Total	**152**	**100**
Gender	Male	49	32.2
	Female	103	67.8
	Total	**152**	**100**
Marital status	Single	128	84.2
	Married	17	11.2
	Divorced	1	0.7
	Others	6	3.9
	Total	**152**	**100**
Religion	Christianity	115	75.7
	Islamic	16	10.5
	Traditional	20	13.2
	Others	1	0.7
	Total	**152**	**100**
Ethnicity	Yoruba	111	73.0
	Igbo	16	10.5
	Hausa	12	7.9
	Others	13	8.6
	Total	**152**	**100**
Occupation	Student	152	100
	Total	**152**	**100**
Level of study	100l	91	59.9
	200l	61	40.1
	Total	**152**	**100**

Table 1 shows the frequency distributions of demographical data. In all, one hundred and fifty-two respondents participated in the study, 49 (32.2%) were male, 103 (67.8%) were female. 60 (39.5%) were in age group of 15-20, 64 (42.1%) were in age group of 21-25, 23 (15.1%) were in age group of 26-30, 5 (3.3%) were between the age of 31 and above. Greatest percentage of the respondents were single 128 (84.2%), 17 (11.25) were married, 1 (0.7) was divorced, 6 (3.9%) were in class “others”. Respondents that practice Christianity were 115 (75.7%) while Islamic were 16 (10.5%), account for traditionalists was 20 (13.2%) and 1 (0.7%) for others. Ethnic groups count was recorded as follows, Yoruba 111 (73.0%), Igbo 16 (10.5%), Hausa 12 (7.9%), others 13 (8.6%). Occupation of the respondents showed that (100%) were students. 100 level had a greater percentage of respondents at 91 (59.9%) while 61 (40.1%) were in 200 level.

Table 2: Respondent's knowledge on Hepatitis B virus

Variables	Categories	Frequencies	Percentage (%)
Do you know that Hepatitis B virus is a viral infection that affects the liver?	Yes	132	86.8
	No	20	13.2
	TOTAL	**152**	**100**
Are you aware that Hepatitis B is caused by the Hepatitis B virus (HBV)?	Yes	134	88.2
	No	18	11.8
	Total	**152**	**100**
Do you know that Hepatitis B virus can be transmitted through blood transfusion, unprotected sex, and sharing needles?	Yes	122	80.3
	No	30	19.7
	Total	**152**	**100**
Are you aware that Hepatitis B virus can be transmitted from mother to child during childbirth?	Yes	124	81.6
	No	28	18.4
	Total	**152**	**100**
Do you know that untreated chronic Hepatitis B virus can lead to liver cirrhosis or liver cancer?	Yes	124	81.6
	No	27	17.8
	Total	**152**	**100**
Are you aware that health workers are at a higher risk of contracting Hepatitis B virus due to occupational exposure?	Yes	130	85.5
	No	22	14.5
	Total	**152**	**100**

Table 2 above shows the findings on respondent's knowledge on hepatitis b virus as follows; 132 (86.8%) claimed that Hepatitis B virus is a viral infection that affects the liver while 20 (13.2%) disagreed. 134 (88.2%) were aware that Hepatitis B is caused by the Hepatitis B virus (HBV) while 18 (11.8%) were not. Also, 122 (80.3%) believed that Hepatitis B virus can be transmitted through blood trans fusion, unprotected sex, and sharing needles while 30

(19.7%) did not think so. 124 (81.6%) felt that Hepatitis B virus can be transmitted from mother to child during childbirth while 28 (18.4%) did not feel otherwise. Furthermore, 124 (81.6%) claimed that untreated chronic Hepatitis B virus can lead to liver cirrhosis or liver cancer while 27 (17.8%) disputed the claim not. 130 (85.5%) agreed that health workers are at a higher risk of contracting Hepatitis B virus due to occupational exposure while 22 (14.5%) did not think so. In summary, 86% of the respondents showed their level of awareness that health workers are at a higher risk of contracting hepatitis b virus due to occupational exposure by choosing "Yes" and 14% chose "No".

Table 3: Respondent's attitude towards Hepatitis B virus prevention

Variables	Categories	Frequency	Percentage (%)
Hepatitis B virus is considered a serious and life-threatening disease	SA A D	104 43 5	68.4 28.3 3.3
Exposure to potentially infectious fluid should be reported to the supervisor immediately	SA A D	99 49 4	65.1 32.2 2.6
Personal protective equipment (PPE) is essential when caring for patients with hepatitis B virus	SA A D	103 41 8	67.8 27.0 5.3
Proper sterilization of medical equipment is a top priority in preventing Hepatitis B virus transmission	SA A D	107 41 4	70.4 27.0 2.6

Proper disposal of sharp objects reduces hepatitis B virus transmission risk	SA	97	63.8
	A	46	30.3
	D	9	5.9

SA = Strongly agreed, A = Agreed and D = Disagreed.

Table 3 shows that 104 (68.4%) strongly agreed that Hepatitis B virus is considered a serious and life-threatening disease, 43 (28.3%) agreed, 5 (3.3%) disagreed. About 99 (65.1) of respondents strongly agreed that Exposure to potentially infectious fluid should be reported to the supervisor immediately, 49 (32.2%) agreed, 4 (2.6%) disagreed. Majority 103 (67.8%) strongly agreed that personal protective equipment (PPE) is essential when caring for patients with hepatitis B virus, 41 (27.0) agreed, 8 (5.3%) disagreed. About 107 (70.4%) strongly agreed that proper sterilization of medical equipment is a top priority in preventing Hepatitis B virus transmission, 41 (27.0%) agreed, 4 (2.6%) disagreed. About 97 (63.8%) strongly agreed that proper disposal of sharp objects reduces hepatitis B virus transmission risk, 46 (30.3%) agreed, 9 (5.9%) disagreed.

Table 4: Practice of Hepatitis B virus prevention

Variables	Categories	Frequencies	Percentage (%)
Do you consistently use gloves when handling blood or body fluids?	Yes	132	88.2
	No	18	11.8
	Total	**152**	**100**
Do you ensure you are fully vaccinated against Hepatitis B virus (i.e., received all three doses)?	Yes	93	61.2
	No	59	38.8
	Total	**152**	**100**
Do you properly dispose needles and other sharps in designated containers?	Yes	127	83.6
	No	25	16.4
	Total	**152**	**100**

Do you avoid recapping used needles after administering injections?	Yes	113	74.3
	No	39	25.7
	Total	**152**	**100**

Table 4 shows that 132 (88.2%) consistently use gloves when handling blood or body fluids while 18 (11.8%) do not. The majority, 93 (61.2%) ensured they were fully vaccinated against Hepatitis B virus while 59 (38.8%) did not. About 127 (83.6%) properly disposed needles and other sharps in designated containers while 25 (16.4%) do not. Also, 113 (74.3%) avoided recapping used needles after administering injections while 39 (25.7%)

Table 5: Chi-square analysis of the relationship between nursing students' knowledge about hepatitis B virus and their practices towards preventing the infection

		Do you consistently use gloves when handling blood or body fluids?					
		No	Yes	Total	X^2Cal	Df	X^2Tab
Do you know that Hepatitis B virus is a viral infection that affects the liver?	No	8	12	20	3.841	1	1.3679
	Yes	36	96	132			
Total		44	108	152			

The chi-square analysis in Table 5 examined the relationship between nursing students' knowledge of Hepatitis B virus (HBV) and their preventive practices, specifically the consistent use of gloves when handling blood or body fluids. Among 152 respondents, 132 students reported knowing that HBV affects the liver, yet only 96 of these consistently used gloves, while 36 did not. Of the 20 students without this knowledge, 12 used gloves consistently and 8 did not. The calculated chi-square value (X^2 = 1.3679) with 1 degree of freedom is lower than the critical value (X^2 = 3.841), indicating no statistically significant

association between knowledge of HBV and consistent glove use. This suggests that while most students are knowledgeable about HBV, this knowledge does not necessarily translate into consistent adherence to preventive practices.

Table 6: Chi-square analysis of the relationship between nursing students' years of study and their attitude towards hepatitis B virus prevention.

		Proper sterilization of medical equipment is a top priority in preventing Hepatitis B virus transmission					
		No	Yes	Total	X^2Cal	Df	X^2Tab
Level of Study	100	27	64	91			
	200	27	34	61	5.991	2	1.7519
Total		54	98	152			

The chi-square analysis in Table 6 examined the relationship between nursing students' years of study and their attitude toward proper sterilization of medical equipment as a preventive measure against Hepatitis B virus (HBV) transmission. The calculated chi-square value (X^2 = 1.7519) with 2 degrees of freedom was less than the critical value ($X^2_{ta}b$ = 5.991), indicating no statistically significant association between students' level of study and their attitude toward this preventive practice. This suggests that regardless of whether students were in ND1 or ND2, their recognition of proper sterilization as essential for HBV prevention was similar, highlighting that attitude toward this aspect of infection control may not necessarily improve with increased years of study.

Discussion of Findings

The findings of this study indicate a generally high level of knowledge about Hepatitis B virus (HBV) among nursing students, though gaps remain in both attitude and practice toward its prevention. Most respondents, 132 (86.8%), correctly identified HBV as a viral infection affecting the liver, while 134 (88.2%) recognized that the virus itself causes the disease. Most participants, 122 (80.3%), were aware that HBV can be transmitted through blood transfusion, unprotected sex, and sharing of needles, aligning with findings from the Department of Public Health (2022). Additionally, 124 (81.6%) understood the risk of mother-to-child transmission during childbirth and the potential for chronic infection to

result in liver cirrhosis or hepatocellular carcinoma. Awareness of occupational risk was also high, with 130 (85.5%) acknowledging that healthcare workers are particularly vulnerable. Despite this knowledge, studies by Oluwatosin and Adebayo (2022) reveal that vaccination coverage among student nurses remains low, with many perceiving themselves as invulnerable or citing cost and accessibility as deterrents.

The attitude of nursing students toward HBV prevention demonstrated a mix of awareness and inconsistency in proactive measures. A majority, 104 (68.4%), strongly agreed that HBV is a serious and life-threatening disease, while 99 (65.1%) affirmed the importance of reporting exposure to potentially infectious fluids. Similarly, 103 (67.8%) recognized the necessity of personal protective equipment (PPE) when caring for HBV patients, and 107 (70.4%) agreed that proper sterilization of medical equipment is critical to preventing transmission. Proper disposal of sharp objects was also emphasized, with 97 (63.8%) strongly agreeing on its importance. However, studies in Lagos, Nigeria, highlight attitudinal gaps, showing that despite theoretical understanding, many students delay vaccination or rely solely on PPE, reflecting fear of injections, skepticism about vaccine efficacy, and low perception of personal risk (Adegboye et al., 2021). These findings suggest that while knowledge is relatively high, translating it into consistent proactive attitudes remains a challenge.

Preventive practices among students were variable, with 132 (88.2%) consistently using gloves and 127 (83.6%) properly disposing of sharps. Vaccination uptake was moderate, as 93 (61.2%) reported being fully vaccinated, while 59 (38.8%) had not completed the full regimen. Needle recapping avoidance was practiced by 113 (74.3%), indicating moderate adherence to standard precautions. Similar studies by Oluwatosin and Adebayo (2022) reveal that despite knowledge of HBV, actual preventive practices remain suboptimal, including incomplete vaccination, inconsistent glove use, and improper needle disposal. These gaps expose nursing students to avoidable occupational risks and highlight the need for stronger enforcement of institutional vaccination policies and clinical supervision.

Perceived barriers to HBV prevention were also significant. Fear of vaccine side effects was reported by 83.6% of respondents as a deterrent, while 64.5% cited cultural or religious beliefs as discouraging vaccination. Additionally, 73% reported inadequate public awareness campaigns, 71.1% indicated vaccine cost as a barrier, and 70.4% noted language or literacy challenges limiting comprehension of preventive measures. These findings are consistent with Okeke and Mensah (2022), who reported that structured health education, institutional vaccination mandates, and mentorship improved knowledge and adherence to preventive protocols. The combined effect of these barriers suggests that knowledge alone is insufficient for comprehensive HBV prevention.

Overall, the findings reveal a high level of theoretical knowledge among nursing students regarding HBV, yet this does not consistently translate into positive attitudes or preventive practices. While students recognize the seriousness of HBV, occupational risks, and essential prevention strategies, vaccination coverage and adherence to safety protocols remain suboptimal. Barriers such as fear, cost, cultural beliefs, and limited institutional support

continue to impede effective prevention. Addressing these gaps through targeted education, accessible vaccination programs, and reinforced clinical supervision is crucial to reduce the risk of HBV infection among future healthcare professionals.

Conclusion

The study concludes that while most students had a fair knowledge of Hepatitis B virus and its transmission, gaps still exist in their knowledge, particularly regarding preventive measures and vaccination. Attitudes towards prevention were generally positive, showing a willingness to adopt safe practices. However, actual preventive practices, such as regular screening and complete vaccination, were not consistently carried out. This highlights the need for improved health education, awareness campaigns, and institutional support to strengthen the knowledge and practices of nursing students, thereby reducing the risk of Hepatitis B virus transmission and promoting public health.

Recommendations

Based on the findings of this study, the following recommendations are hereby made

1. Educational institutions should implement structured and regular seminars, workshops, and training sessions to enhance nursing students' understanding of Hepatitis B virus (HBV), its modes of transmission, and effective preventive strategies.
2. Mandatory immunization programs should be enforced, ensuring that all nursing students receive the complete HBV vaccination series prior to commencing clinical placements.
3. The curriculum should integrate comprehensive instruction on HBV prevention, infection control, and occupational safety practices to strengthen both theoretical knowledge and practical competence.
4. Healthcare facilities and training institutions must ensure the consistent provision and accessibility of essential protective equipment, including gloves, masks, and hand hygiene stations, while promoting strict adherence to their proper use.
5. Continuous monitoring through periodic assessments, surveys, and audits should be conducted to evaluate students' knowledge, attitudes, and preventive practices, thereby identifying gaps and informing targeted interventions to enhance overall compliance with HBV prevention protocols

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