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Exploring Hepatitis B Vaccination Compliance, Knowledge, and Attitudes among Preclinical Medical Students: A Study at Kampala International University Western Campus

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ABSTRACT

This study delves into the hepatitis B vaccination landscape among preclinical medical students at Kampala International University Western Campus, aiming to illuminate compliance, knowledge, and attitudes toward vaccination. Employing a robust cross-sectional study design and quantitative data collection methods, 296 participants were randomly selected and surveyed. Results unveiled a concerning low compliance rate of 46.28%, indicative of potential gaps in vaccination coverage within this high-risk cohort. Nonetheless, a notable 69.81% expressed willingness to receive the vaccine, hinting at a latent potential for heightened compliance. While 66.22% of students demonstrated adequate knowledge, a significant 33.78% exhibited knowledge gaps, underscoring the need for targeted educational initiatives. Despite apprehensions regarding side effects and cost, attitudes toward vaccination remained largely positive, with 90.54% affirming its safety and effectiveness. These findings spotlight the imperative for tailored interventions to bolster vaccination rates, rectify knowledge deficits, and mitigate barriers to compliance among preclinical medical students

Keywords: Hepatitis B virus infection; Vaccination compliance; vaccinated students; Hepatitis B vaccine; and medical students.

INTRODUCTION

Hepatitis B is a highly infectious viral liver disease caused by the hepatitis B virus. Hepatitis B is transmitted through contact with the body fluids of an infected person[1]. The World Health Organization (WHO) estimates that 296 million people across the globe were living with chronic hepatitis B infection in 2019, leading to more than 820,000 deaths, mostly from cirrhosis and hepatocellular carcinoma [2, 3]. The WHO African region shares a large burden of the disease, with over 81 million people chronically infected with hepatitis B infection. According to the Uganda Population-Based HIV Impact Assessment (UPHIA) survey, Uganda is one of the most highly endemic countries for hepatitis B, with a 52% lifetime exposure rate of the population [4]. Vaccination against hepatitis B is one of the most successful interventions that has proven effective in controlling hepatitis B infections. According to the WHO, the hepatitis B vaccine is safe and readily available, offering up to 98% protection against hepatitis B infection [4]. Due to the increased risk of the disease among healthcare workers, recommendations favour increasing the utilization of the hepatitis B vaccine in this population group. Similarly, preclinical students represent a more at-risk population due to their increased occupation exposure coupled with their limited knowledge of appropriate infection prevention and control (IPC) protocols. Furthermore, preclinical students are less familiar with working in active healthcare environments, which makes them vulnerable to hepatitis B infection exposure [5]. This therefore makes the hepatitis B vaccine a gold standard to protect preclinical medical students against hepatitis B infection ([5] Despite evidence supporting the effectiveness of the hepatitis B vaccine, its uptake remains low among medical students and the general population at large [6–8]. According to findings from a US-based study, adherence and completion rates for all hepatitis vaccine series were low, especially for males and younger adults [9]. In Brazil, de Souza & Teixeira [10] reported that less than half (48.9%) of the medical students at a public university had received ≥ 3 doses of the vaccine, 31.6% had not received 0, 1, or 2 doses, and 19.6% did not know their vaccination status. In Nigeria, Adenlewo et al. [11] reported that only 64.9% of doctors and 35.1% of students had received the hepatitis B vaccine. In Uganda, a study among medical students showed that only 44.3% of the students reported full vaccination [7]. Additional evidence has also indicated that students' knowledge and attitude play a critical role in influencing their behaviours towards compliance with the hepatitis B vaccine. According to findings from a study by Naqid et al. [12], students with good knowledge are likely to have completed the hepatitis B vaccination. Similarly, students with a good attitude were twice as likely to complete their vaccination [11]. As such, good knowledge and attitude are important predictors of hepatitis B uptake among medical students. To minimize the hepatitis B infection, the Uganda Ministry of Health, through its

public awareness programs, emphasizes mandatory screening and vaccination against hepatitis B for all healthcare workers as a safety precaution. In the same vein, medical students at Kampala International University are frequently encouraged to screen and receive complete doses of the hepatitis B vaccine early before their clinical placements. The hepatitis vaccination program however remains optional for students and yet little is known about its uptake. Additionally, there are no studies that have examined the preclinical students' knowledge and attitudes towards the uptake of the hepatitis B vaccine. It is against this background that we aim to address these gaps by assessing the knowledge, attitude, and vaccination compliance of hepatitis B among preclinical medical students at Kampala International University.

Occupational exposure to Hepatitis B virus infection continues to pose a significant risk to many healthcare workers worldwide. Pre-clinical medical students are particularly at risk due to their unfamiliarity with working in an active healthcare environment coupled with their poor understanding of appropriate IPC protocols [13]. The Uganda Ministry of Health (MoH), through its public awareness campaigns and clinical care protocols, encourages vaccination against hepatitis B as a safety measure for all healthcare workers. At Kampala International University, hepatitis B vaccination support and awareness programs are available, but there are no policies to ensure mandatory vaccination for all medical students before their clinical placements. Vaccination is thus entirely voluntary, and as such, some students with little knowledge, a poor attitude, or other limiting factors end up starting their clinical placement before receiving the vaccine. Significantly, vaccination against hepatitis B is the safest and most effective method to prevent hepatitis B infection [14, 15]. There is therefore a need for interventions directed towards pre-clinical medical students that will help improve their knowledge, attitude, and eventually uptake of the hepatitis B vaccine. However, little is understood about the knowledge, attitude, and compliance rates for the uptake of the hepatitis B vaccine among pre-clinical medical students. It is on this background that we aimed to conduct this study among preclinical medical students at Kampala International University. The study was designed to assess the knowledge, attitude, and vaccination compliance of hepatitis B among preclinical medical students at Kampala International University.

METHODOLOGY

Study Design

The study involved the use of a cross-sectional study design employing quantitative methods of data collection. The cross-sectional method was chosen because it is carried out at a specific point in time and does not require a lot of time.

Area of Study

The study was conducted at the Kampala International University Western Campus. The university is found in the western part of Uganda, in Ishaka town, Bushenyi District. The University is one of the biggest international private universities in Uganda and offers a wide range of health science courses both at undergraduate and graduate levels.

Study Population

The study population in this study included all pre-clinical medical students at Kampala International University Western Campus.

Sample Size Determination

The sample size was estimated using the Morgan and Krejcie tables [16], as shown in the appendix. Based on the average number of preclinical students (1300), the required sample size was 297 study participants. The number of students successfully enrolled in the study was 296.

Sampling Procedure

The researcher used a simple random sampling procedure to select the participants for the study. This method was chosen because it gave every student an equal opportunity to participate, thus eliminating selection bias. The procedure involved establishing a list of all pre-clinical medical students with their respective email addresses. Every student was then assigned a number. A random number generator tool was then used for the selection of the study participants. Successful participants were then contacted through their emails and invited to fill out the questionnaire on their knowledge, attitude, and compliance with the hepatitis B vaccination. Students were then sent daily reminders until the required sample was obtained.

Inclusion criteria

The study included all pre-clinical medical students at Kampala International who consented to participate in the study.

Exclusion criteria

The study excluded all pre-clinical medical students who did not consent to participate in the study, those who were too sick, and those with compromised mental states from providing informed consent.

Data Collection

Data were collected using quantitative methods, where the researcher used predetermined questionnaires to collect data from respondents.

Data Collection Tools

A self-administered survey questionnaire was used to collect data from the respondents. The questionnaire was used as a relevant research tool to gather data from the study participants. The

A study questionnaire was developed based on the current literature for similar studies related to the study topic [7, 11]. The items in the questionnaire were closed-ended questions based on the research objectives. The questionnaire was designed in a way that captures information on each of the variables in the conceptual framework. The questionnaire consisted of questions inquisitive about the participant's knowledge, attitude, and compliance with the Hepatitis B vaccine. The questionnaire also

comprised questions on the participants' social demographic characteristics.

Data Collection Procedure

Before data collection, an approval letter was obtained from the research and ethics committee of Kampala International University. The letter was used to introduce the researcher to the heads of departments. The researcher then reached out to the respondents who met the inclusion criteria through their respective email addresses, where he introduced himself, and the purpose of the study, and obtained informed consent for participation in the study. The respondents were then asked to give their responses as per the questionnaire.

Data Management

After data collection, study questionnaires were subjected to a thorough check for errors immediately to ensure completeness. Data were then entered twice in a data Excel sheet and then to STATA, where data analysis was done. This was to ensure the accuracy and consistency of the data entered. In addition, data was stored under strict lock and key both in manual forms on paper and in electronic forms as soft copies of data entry sheets.

Data Analysis

For the knowledge of participants, the participant's knowledge of hepatitis B vaccination was obtained on a scale of 6 questions. Each correct response to the questions was awarded a score of 1 point, making a total score of 6 points. The overall knowledge score was then obtained categorically as "adequate knowledge" or "inadequate knowledge." Adequate knowledge included all participants with a score of 50% or higher on the total score, while inadequate knowledge included scores less than 50%. The participants' attitudes and descriptive statistics were used to establish the attitudes towards hepatitis B vaccination. This was evaluated using a Likert scale consisting of nine attitude statements, to which participants gave responses as strongly agree, agree, neutral, disagree, or strongly disagree. Proportions of these were computed and presented using tables. Compliance with the hepatitis B vaccination was established using descriptive statistics. Students who had completed hepatitis B vaccine doses as per schedule were considered compliant, while those who had not received any single dose of the vaccine or had not completed their respective doses as per schedule were considered non-compliant. The effect of the student's knowledge and attitude on compliance with the Hepatitis B vaccination was established using the Chi2 test. The significance of the association was set at p value<0.05 and a 95% confidence interval. The strength of the relationship was established using odds ratios.

Quality Control

The data collection tool was submitted to the research supervisor for further guidance as well as to colleagues to criticize. These made corresponding recommendations to guide necessary changes. The tool was then given to experts in the study topic to evaluate the questions to see if the answers were relevant to the research questions. In addition, the questionnaire was subjected to a pilot study on about 10% of the study sample size. Students who participated in the pilot were not included in the final study. Necessary corrections were made and unnecessary questions removed, while questions that required further capture of relevant data were added or retained.

Ethical Considerations

This proposal was submitted to the research and ethics committee of Kampala International University for ethical clearance and approval. The approval letter from the university was then used to introduce the researcher to the heads of departments to seek permission to conduct the study. Furthermore, informed consent was obtained from all the study participants. Participation in the study was out of free will; participants had a right to withdraw from the study at any time, and there were no monetary benefits. In addition, identifiable information such as participant's names was collected, and maximum confidentiality of the information gathered was ensured for all the participants throughout the study.

RESULTS

Demographic Characteristics of the Respondents

The study enrolled a total of 296 pre-clinical medical students. The average age of the students was 23.08 years, with a standard deviation of 3.23. The majority of the participants (76.69%) fell within the age range of 21–25 years, indicating that the study predominantly involved young adults. A smaller proportion of participants were either 20 years of age or below (9.12%) or above 26 years of age (14.19%). Regarding gender distribution, the study had a slight majority of male participants, accounting for 60.14% of the total sample, while females constituted 39.86%. This gender distribution ensured a relatively balanced representation of both males and females in the study. In terms of marital status, only a small percentage (8.45%) reported being married or cohabiting. This indicates that the majority of the pre-clinical medical students who participated in the study were not married or in a cohabiting relationship. Additionally, the highest proportion of participants were in their third year, comprising 57.09% of the sample. Year two students constituted the second-largest group, accounting for 32.43% of the participants, while Year one had the smallest representation with 10.47%. These findings suggest that the majority of the participants were in the later stages of their pre-clinical medical education. Furthermore, the results showed that private sponsorship was the most common source of tuition, with 59.80% of participants being privately sponsored. Self-sponsorship accounted for 20.27% of the sample, while the student loan scheme represented the remaining 19.93% of the participants. Details of the results are reflected in Table 1 below.

Table 1: Shows Demographic Characteristics of the Respondents

Participant Demographics	Frequency (N)	Percentage (%)
Age		
Mean± SD	23.08±3.23	
20 years and below	27	9.12
21-25 years	227	76.69
Above 26 years	42	14.19
Gender		
Male	178	60.14
Female	118	39.86
Marital Status		
Married/Cohabiting	25	8.45
Divorced/Single	271	91.55
Year of Study		
Year One	31	10.47
Year Two	96	32.43
Year Three	169	57.09
Tuition Source		
Self-sponsorship	60	20.27
Private sponsorship	177	59.80
Student loan scheme	59	19.93

The level of vaccination compliance for hepatitis B among preclinical medical students at Kampala International University

Overall, the results revealed that only less than half (46.28%) of the pre-clinical students had received the vaccine, indicating a relatively low compliance rate. This finding further suggests that a considerable number of preclinical medical students at the university had not undergone Hepatitis B vaccination, highlighting a potential gap in vaccination coverage. Furthermore, the majority of the vaccinated students, 59.85%, had received three doses, 24.82% had received two doses, and only about 15.33% had received one dose of the hepatitis B vaccine. Regarding the students' intention to vaccinate, 69.81% expressed a positive intention to receive the Hepatitis B vaccine. This indicates a relatively high willingness to get vaccinated among preclinical medical students. However, 30.19% of the participants stated that they did not intend to vaccinate. These results imply that while a significant majority expressed a willingness to get vaccinated, there is still a noteworthy proportion of students who may have reservations or concerns regarding the Hepatitis B vaccination. Details of the results are reflected in Table 2 below.

Table 2 shows the level of vaccination compliance for hepatitis B among preclinical medical students.

Number of Doses Received	Frequency (N)	Percentage (%)
One	21	15.33
Two	34	24.82
Three	82	59.85
Received Hepatitis B Vaccine		
Yes	137	46.28
No	159	53.72
Intend to Vaccinate		
Yes	111	69.81
No	48	30.19

The level of knowledge regarding hepatitis B vaccination among preclinical medical students at Kampala International University

The results show that the majority, about two-thirds (66.22%) of the respondents, had adequate knowledge of the hepatitis B vaccination. Worth noting is that the proportion of students with inadequate knowledge of hepatitis B vaccination among pre-clinical students is also significant (33.78%). The results indicate that the majority of preclinical medical students (96.96%) are aware of or have heard about the hepatitis B vaccine. Significantly, the majority of respondents (80.74%) correctly recognized that hepatitis B vaccines can prevent HBV infection. Furthermore, a significant proportion (76.35%) of the students acknowledged that healthcare workers had an increased risk of hepatitis B infection. On the other hand, only slightly more than half of the students (54.05%) correctly identified that three doses of the hepatitis B vaccine are needed for one to gain complete immunity against hepatitis B infection. In terms of the duration of protection provided by the vaccine, the majority of respondents (62.16%) correctly identified that it lasts for 30 years or more. Finally, when asked about the effectiveness of the hepatitis B vaccine, a considerable percentage of respondents (49.66%) expressed uncertainty. Details of the results are reflected in Figure 1 below.

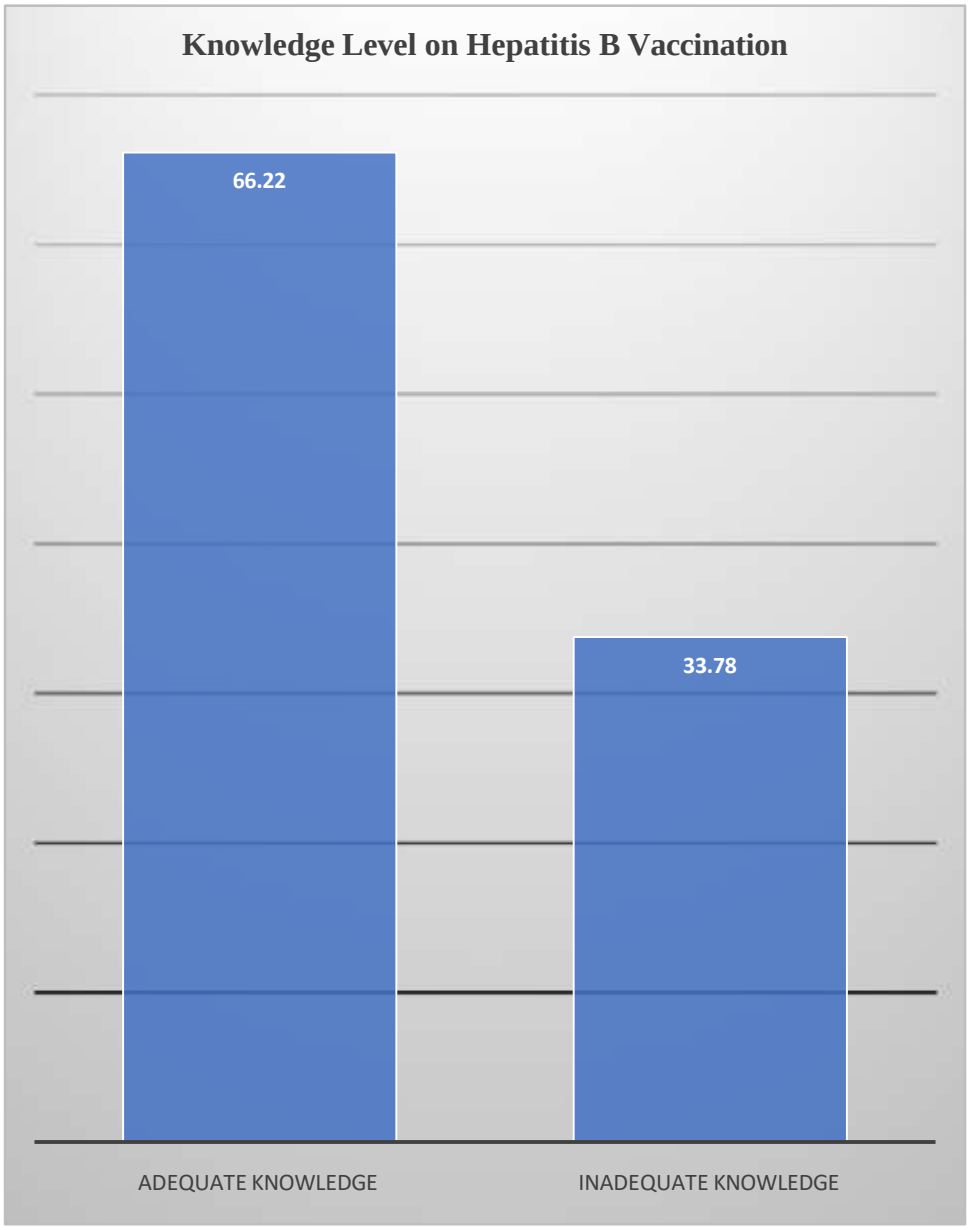

Figure 1 Bar Chart Showing Knowledge Level on Hepatitis B Vaccination

Table 3: Shows Pre-Clinical Medical Students' Knowledge of Hepatitis B Vaccination

Variable	Frequency (N)	Percentage (%)
Do you know/ have you heard about the vaccine of hepatitis B?		
Yes	287	96.96
No	9	3.04
Hepatitis B vaccines can prevent HBV infection?		
True	239	80.74
False	49	16.55
Not sure	8	2.70
Healthcare workers are at an increased risk for hepatitis B infection?		
True	226	76.35
False	46	15.54
Not sure	24	8.11
How many doses of hepatitis B must be Received to attain complete immunity?		
Single dose	5	1.69
Two doses	52	17.57
Three doses	160	54.05
Not sure	79	26.69
After how long does someone remain protected from hepatitis B infection from the time, they get the vaccine?		
30 years or more	184	62.16
10-20 years	105	35.47
21-29 years	7	2.36
How effective is the hepatitis B vaccine?		
98%-100%	50	16.89
80-95%	77	26.01
50-80%	22	7.43
Not sure	147	49.66

The attitudes of preclinical medical students towards hepatitis B vaccination at Kampala International University

Regarding the effectiveness and safety of the Hepatitis B vaccine, the majority of preclinical medical students (90.54%) agreed, indicating their confidence in the vaccine's efficacy and safety.

However, a small percentage (7.43%) remained neutral, possibly reflecting some level of uncertainty, while an even smaller proportion (2.03%) disagreed, suggesting reservations or concerns about the vaccine's effectiveness and safety. Regarding the perceived need for hepatitis B vaccination among medical students, a significant majority (89.5%) agreed that all medical students need the hepatitis B vaccine. They acknowledged the importance of universal vaccination for medical students. On the other hand, a smaller percentage (7.77%) remained neutral, possibly indicating a lack of clear consensus or a need for further information. Meanwhile, a minority (2.70%) disagreed, suggesting differing opinions on the necessity of vaccination for all medical students. Regarding personal risk perception, a small number of participants (3.72%) expressed the belief that they did not need the Hepatitis B vaccine because they considered themselves not at risk. In contrast, a significant proportion (73.31%) disagreed with this statement, recognizing the potential risk and emphasizing the need for vaccination. A notable percentage (22.97%) remained neutral, highlighting the need for further education and awareness regarding personal risk factors. Participants also demonstrated varying attitudes towards relying solely on other infection prevention and control (IPC) measures to avoid Hepatitis B. While some participants (27.70%) expressed confidence in alternative measures, a slightly higher proportion (34.46%) disagreed, emphasizing the importance of vaccination as a primary preventive measure. A significant number of participants (37.84%) remained neutral, indicating a lack of clear conviction or a need for more information on the topic. When it came to fear and perception of risk, a minority of participants (10.81%) stated that they were not afraid of hepatitis B infection. However, a larger proportion (68.24%) disagreed, indicating a recognition of the seriousness of the disease. A moderate percentage (20.95%) remained neutral, suggesting a need for further information or a balanced viewpoint. Concerns about the side effects of the vaccine were also highlighted. A substantial percentage of participants (46.62%) expressed fear of the vaccine's potential side effects. A smaller proportion (29.05%) remained neutral, possibly indicating a lack of strong concern, while. Another segment (24.32%) disagreed, suggesting a lesser degree of apprehension or fear regarding the side effects. Factors such as cost and trust in the vaccine were also considered. While a minority (16.89%) agreed that the high cost of the Hepatitis B vaccine was a barrier to vaccination, a majority (54.05%) disagreed, suggesting that cost was not a significant deterrent for them. Similarly, a relatively small proportion (12.50%) expressed a lack of trust in the protection provided by the Hepatitis B vaccine, while a larger percentage (54.05%) disagreed, indicating their trust in the vaccine's effectiveness. A significant proportion (33.45%) remained neutral on this issue, reflecting a need for further information or clarification. Details of the results are reflected in Table 4 below.

Table 4 Shows The attitudes of preclinical medical students towards hepatitis B vaccination

Variable	Agree, N (%)	Neutral, N (%)	Disagree, N (%)
I believe the hepatitis B vaccine is effective and safe	268(90.54)	22(7.43)	6(2.03)
I believe all medical students need hepatitis B vaccine	265(89.5)	23(7.77)	8(2.70)
I don't need the hepatitis B vaccine because am not at risk	11(3.72)	68(22.97)	217(73.31)
I can rely on other IPC measures to avoid getting hepatitis B	82(27.70)	112(37.84)	102(34.46)
I'm not afraid of hepatitis B Infection	32(10.81)	62(20.95)	202(68.24)
I'm afraid of the side effects of the vaccine	138(46.62)	86(29.05)	72(24.32)
Because the hepatitis B vaccine is very expensive	50(16.89)	86(29.05)	160(54.05)
I don't trust the protection of the hepatitis B vaccine	37(12.50)	99(33.45)	160(54.05)
Hepatitis B is a very serious a disease that causes death	259(87.50)	23(7.77)	14(4.73)

DISCUSSION

Level of hepatitis B vaccination compliance among preclinical medical students

The study revealed that only less than half (46.28% of the pre-clinical students had received the vaccine, indicating a relatively low compliance rate and highlighting a potential gap in vaccination coverage. The low compliance rate is concerning since medical students face a high risk of hepatitis B infection due to their constant contact with high-risk environments and patients. Our findings are, however, comparable with results from a study among Makerere medical students, where only 44.3% of the medical students reported full vaccination [7, 17]. Similarly, a Brazilian-based study also reported a low compliance rate, with only less than half of medical students, 48.9%, being fully vaccinated against hepatitis B (received ≥ 3 doses of the vaccine) [10, 18]. Consistently, results from related studies have also reported low compliance rates with the hepatitis B vaccination among medical students [9, 11]. Regarding the intention to vaccinate, the findings indicate a relatively high willingness (69.81%) among preclinical medical students to receive the hepatitis B vaccine. This positive intention to vaccinate aligns with the literature that suggests healthcare professionals generally have a favourable attitude toward vaccination [19, 20]. It is encouraging that a majority of the students expressed a willingness to get vaccinated, as this suggests the potential for improved compliance rates in the future.

The level of knowledge regarding hepatitis B vaccination among preclinical medical students

The level of knowledge among preclinical medical students regarding hepatitis B vaccination is a crucial aspect to consider when examining their compliance rates and intention to vaccinate. The findings of this study indicate that a majority of the respondents (66.22%) had adequate knowledge of hepatitis B vaccination. This suggests that a significant portion of the preclinical medical students possess the necessary knowledge regarding the vaccine, its benefits, and the importance of vaccination in preventing hepatitis B transmission. Our findings are in line with results from studies conducted in the Democratic Republic of the Congo and Sierra Leone, where Participants were also reported to have adequate knowledge [21]. Contrastingly, Knowledge levels were comparably lower in two other studies conducted in Saudi Arabia and Nepal, where less than half of the participants were reported to have good knowledge [22]. The observed variations can be attributed to the differences in the methods used to assess the knowledge levels. Notably, it is noteworthy that a considerable proportion (33.78%) of the respondents in our study had inadequate knowledge of hepatitis B vaccination. This finding raises concerns as it suggests a gap in knowledge among a significant number of preclinical medical students. Insufficient knowledge about the vaccine can lead to misconceptions, concerns, or hesitancy regarding its safety or efficacy. These misconceptions can influence vaccine compliance and may contribute to the observed low vaccination rates and intentions found in this study [23, 24].

The attitudes of preclinical medical students towards hepatitis B vaccination

Regarding the students' attitudes, the majority (90.54%) believed the vaccine was safe and effective, indicating their confidence in the vaccine's efficacy and safety. This finding aligns well with results from related studies, which showed a high level of confidence in the safety and effectiveness of the vaccine among medical students. For example, a Nepalese-based study revealed that 86.7% of the participants believed the hepatitis B vaccine was safe and effective [25]. Similarly, an Ethiopian-based study indicated that more than three-quarters of the participants believed that the HBV vaccine was effective and safe [26]. The findings are, however, contrary to the results of a study in Uganda by Razid and Swaibu (2021) in which more than half of the respondents (62.23%) believed the vaccine was not effective. The differences could be because the study by Mukunya et al [27] was done among the general population, unlike the studies by Abdela et al. [26] which were conducted among medical professionals. Regarding the perceived need for hepatitis B vaccination among medical students, the majority (89.5%) agreed that all medical students need the hepatitis B vaccine. This is similar to findings from a study.

Among medical students in Nepal, where 92.8% of the participants acknowledged that healthcare workers should be vaccinated because they are at high risk of contracting HBV[28]. A cross-sectional study conducted in eastern Uganda also reported that the majority (92%) of the respondents believed all healthcare workers needed to be vaccinated because they were at high risk [29]. Regarding personal risk perception, a small several participants (3.72%) expressed the belief that they did not need the hepatitis B vaccine because they considered themselves not at risk. This is in line with findings from the study in Cameroon, where nearly 4% of healthcare workers believed they were not at risk of contracting the virus compared to the general

population [30]. On the other hand, a significant proportion (73.31%) of the students in this study recognized the potential risk and emphasized the need for vaccination. Participants also demonstrated varying attitudes towards relying solely on other infection prevention and control (IPC) measures to avoid Hepatitis B. While some participants (27.70%) expressed confidence in alternative measures, a slightly higher proportion (34.46%) disagreed, emphasizing the importance of vaccination as a primary preventive measure. A significant number of participants (37.84%) remained neutral, indicating a lack of clear conviction or a need for more information on the topic. When it came to fear and perception of risk, a larger proportion (68.24%) believed they were at risk of contracting the virus, indicating a recognition of the seriousness of the disease. This finding concurs with the results of a study in Saudi Arabia among dentists, in which the majority (82.9%) perceived that they were at high risk of contracting and spreading HBV [31]. Concerns about the side effects of the vaccine were also highlighted. A substantial percentage of participants (46.62%) expressed fear of the vaccine's potential side effects. This was similar to a study by Peterson et al [32] which reported fear of side effects as a major reason for non-vaccination. Additionally, factors such as cost and trust in the vaccine were also significant in this study. While a minority (16.89%) agreed that the high cost of the Hepatitis B vaccine was a barrier to vaccination, a majority (54.05%) disagreed, suggesting that cost was not a significant deterrent for them. Similar to the current study Biset Ayalew & Adugna Horsa, [33] noted some of the reported reasons for not being vaccinated among healthcare workers as high costs and the unavailability of the vaccine.

CONCLUSION

Hepatitis B vaccination compliance among preclinical medical students at Kampala International University is relatively low. This indicates a potential gap in vaccination coverage and raises concerns, considering the high-risk environment and patient contact that medical student's experience. Despite the low compliance rate, there is a relatively high willingness (69.81%) among preclinical medical students to receive the hepatitis B vaccine. This suggests the potential for improved compliance rates in the future, as healthcare professionals generally hold a favourable attitude toward vaccination. A majority of the preclinical medical students (66.22%) possess adequate knowledge of hepatitis B vaccination. Likewise, the attitudes of preclinical medical students toward hepatitis B vaccination are generally positive, with a majority (90.54%) believing that the vaccine is safe and effective.

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