



Original Article

Knowledge, Attitude and Practice Regarding Hepatitis B among Preclinical Medical Students and Their Vaccination Status at a Private Medical College in Sylhet

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ABSTRACT

Hepatitis B is a worldwide disease that affects millions of people. Vaccination and preventive knowledge are crucial for all, especially health care professionals. This study was aimed at evaluating the hepatitis B vaccination status of preclinical medical students and their knowledge, awareness and practice regarding hepatitis B infection. This was a descriptive type of cross-sectional study that was conducted in Jalalabad Ragib-Rabeya Medical College, Sylhet, from January 1, 2022, to June 30, 2022. The data was collected using a semi-structured questionnaire. The statistical analysis was done using SPSS version 20. Among the total of 192 preclinical students in the study, 51% were female and the rest were male. The percentages of students belonging to the 1st and 2nd academic years of MBBS were almost equal (49% and 51%, respectively). Less than half of the participants (48.4%) were vaccinated, whereas only 23.9% were fully vaccinated against the hepatitis B vaccine. The study found that lack of knowledge was the main reason for not getting vaccinated among the non-vaccinated students (51%). Only 31.2% of preclinical students had good knowledge, attitude, and practice regarding hepatitis B. Those who had more knowledge regarding hepatitis B were practicing more preventive measures (Spearman's correlation coefficient=0.209, $p<0.05$). The present study showed that there is a lack of knowledge, attitude, and practices towards hepatitis B infection among preclinical medical students that make them vulnerable to acquiring the disease. Moreover, the vaccination status is also not satisfactory, which should be taken seriously.

Keywords: Hepatitis B, Knowledge, Attitude, Practice, Vaccination status.

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INTRODUCTION

The hepatitis B virus (HBV) is responsible for the potentially fatal liver infection known as hepatitis B. It is a major global health problem. HBV has partially double-stranded circular DNA and belongs to the

family Hepadnaviridae. Hepatitis B can cause acute and chronic liver diseases. This virus primarily targets the liver. The chronic infection puts people at high risk of death as it may lead to serious complications such as cirrhosis of the liver and hepatocellular carcinoma. As per the latest World Health Organization (WHO) report for 2021, globally, by the end of 2019, an estimated 296 million people were living with chronic hepatitis B infection, with 1.5 million new infections each year. WHO estimates that hepatitis B resulted in 820,000

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deaths, mostly from cirrhosis and hepatocellular carcinoma (Primary liver cancer), in 2019. Hepatitis B can be prevented by vaccines that are safe, available, and effective and offer 98% to 100% protection against hepatitis B^{1,2,3,4}. The hepatitis B virus (HBV) infection is the most contagious blood-borne pathogen transmitted by percutaneous or mucosal exposure to infected blood, semen, or other bodily fluids. The most common routes of transmission of this virus are the use of contaminated needles for injections, blood transfusion, sexual contact, and vertical transmission from mother to foetus^{5,6,7}. There are 35 million health care workers (HCWs) worldwide and percutaneous injuries have been estimated to result in approximately 66,000 hepatitis B viral infections per year⁸. The rate of hepatitis B virus infection among health professionals is about 2 to 10 times higher than that of the general population due to occupational exposures⁹. Health-care workers and medical students in clinical years are at the highest risk of acquiring the infection because they come in contact with patients and their potentially infectious materials, such as blood and other body fluids, so they should be protected¹⁰. A study conducted in Munich showed that the lifetime prevalence of needle stick injuries among medical students, especially during blood-taking practices in clinical years, is 23 percent⁵. The risk might be even greater if the HCW is a trainee, intern, or just a student, as they have a lack of experience, insufficient training, or plain carelessness¹¹. Medical students must have proper knowledge of modes of transmission, clinical features, complications, and preventive measures for hepatitis B infection which will help them take the necessary precautions to prevent the disease. As they form an integral part of the health-care system, proper knowledge also helps them spread awareness about hepatitis B infection among the public, patients, and other health-care professionals¹². On the other hand, inadequate knowledge regarding HBV infection may affect the behavioural pattern towards vaccination and safety measures among HCWs¹³. Hepatitis B infection transmission chains can be interrupted through vaccination, the use of safety precautions while handling infectious material, proper sterilisation of medical equipment, and legit waste handling¹⁴. There is no alternative to vaccines for effective protection. The HBV vaccines have been in existence since 1992 and are available as monovalent formulations for birth doses or for vaccination of at-risk adult populations^{6,13}. The vaccine regimen that has been identified as very effective in yielding immunity against HBV is a standard three-dose vaccine regimen, with the second and third doses given 1 month and 6 months apart, respectively, from the initial dose^{1,15}. HBV vaccination

is considered highly effective for preventing the infection among HCWs and other healthy adults. Therefore, WHO has recommended HBV vaccination as a primary preventive strategy for the control of the infection among HCWs^{15,16,17}. All health-care workers and medical students are advised to get the recombinant hepatitis B vaccine¹⁸. In resource-limited settings in low- and middle-income countries, the current World Health Organization (WHO) guidelines advocate implementing hepatitis B vaccination coverage programmes to be tailored within the existing facilities and platforms of medical institutions, national programmes, workplaces, government schools, offices, etc., for opportunistic vaccination drives^{16,19}. Hepatitis B vaccination was integrated into the national Expanded Programme on Immunization (EPI) schedule of Bangladesh in 2003²⁰. It is very important for medical students to get vaccinated against the infection before getting into clinical training. The estimation of the hepatitis B vaccination status of medical students is also important to provide a basis for the implementation of hepatitis B vaccination programmes. However, there are very few adequate studies in Bangladesh assessing the vaccination status of the preclinical medical students and their knowledge, attitude, and practice regarding hepatitis B infection. With this background, the present study was conducted to assess the knowledge, attitude, and practice regarding hepatitis B infection and to know the vaccination status of hepatitis B among the first and second year MBBS students of Jalalabad Ragib-Rabeya Medical College of Sylhet.

MATERIALS AND METHODS

This was a descriptive cross-sectional study done among the preclinical year (1st and 2nd year) students of the Jalalabad Ragib-Rabeya Medical College in Sylhet. A total of 192 students (First year: 94, second year: 98) were selected by using the total population sampling technique. The data for the study were collected by face-to-face interview from January 1, 2022, to June 30, 2022. Students who were no longer attending classes and were not in contact were excluded from the study.

A semi-structured questionnaire containing 21 items was used for the study. It contained 3 items for demographics, 5 for the knowledge section, 5 for attitude, 5 for practise, 1 for vaccination status, 1 for total dose taken, and 1 for the reason for not getting vaccinated. The questionnaire was developed in the English language after an extensive literature search. The questionnaire included baseline exposure variables like age (20 years and below, 21 years and above), sex, vaccination status, and academic year (1st year, 2nd

year). The Institutional Review Committee of Jalalabad Ragib-Rabeya Medical College and Hospital gave its approval to the study. All the participants were informed about the study and its objective and the consent form was filled by the individual participants.

The internal consistency of knowledge, attitude, and practice questionnaire was assessed using Cronbach's α . To quantify the response on knowledge, attitude, and practise, a five-point Likert scale was used, with 5 being the most acceptable response (For that particular question based on available scientific understanding) to the item asked and 1 being the least acceptable response to that item. The questions were scored 1-5 from strongly disagree to strongly agree, while reverse scoring was used in selected questions of the knowledge section [Questions 2(d), 2(f), 2(g), 5(b), and 5(d)] and attitude section (Question 1 and 5). There were 15 questions out of the overall 25 questions in the questionnaire attributed to knowledge related to hepatitis B with subquestions, giving a possible score range of 15-75, and 5 questions for the attitude and practise sections, giving possible score ranges of 5-25 for each. The total KAP score ranged from the lowest 25 to the highest 125, and if a person answered all questions correctly, 100-125 scoring points were awarded. Those respondents who obtained a KAP score of 100 and above were considered good, while scores below 100 were considered inadequate.

The collected data were analysed using Statistical Package for Social Sciences (SPSS) version 20. Continuous data were presented as mean and standard deviation and categorised data as frequency and

percentage. A Chi-square test was used to check the association between variables. Spearman's rho was used to check the correlation between total scores of knowledge and attitude, knowledge and practise, and attitude and practise. The p-value of <0.05 was considered statistically significant.

RESULTS

This descriptive cross-sectional study was conducted among 192 first and second year preclinical medical students at Jalalabad Ragib-Rabeya Medical College, Sylhet.

General characteristics and vaccination status:

The general characteristics of the respondents in this study (Table-I) showed that the mean age of the study participants was 20.68 ± 1.78 years, ranging from 18-23 years. Male and female students were almost equal (Male: 49%, female: 51%) among the respondents. Among 192 preclinical medical students, 94 (49%) were from the first year, and 98 (51%) from the second year. The hepatitis B vaccination status of this study showed that more than half of the students did not receive any hepatitis B vaccine (51.6%). Out of the 93 vaccinated students, 46 (49.5%) received at least 3 doses of the hepatitis B vaccine, while the rest of them (50.5%) received less than 3 doses. Lack of awareness about the vaccination was answered as the reason for not being vaccinated by the majority (52.6%) of non-vaccinated students (Figure-1).

Table-I: General characteristics and hepatitis B vaccination status of the respondents, n= 192

Variables		Frequency	Percentage
Age (Years)	Mean \pm SD		20.68 \pm 1.78
	20 and below	68	35.4
	21 and above	124	64.6
Sex	Female	98	51
	Male	94	49
Academic year	1 st year	94	49
	2 nd year	98	51
Vaccinated against hepatitis B	No	99	51.6
	Yes	93	48.4
Doses of hepatitis B vaccine received	One	12	12.9
	Two	35	37.6
	Three	46	49.5

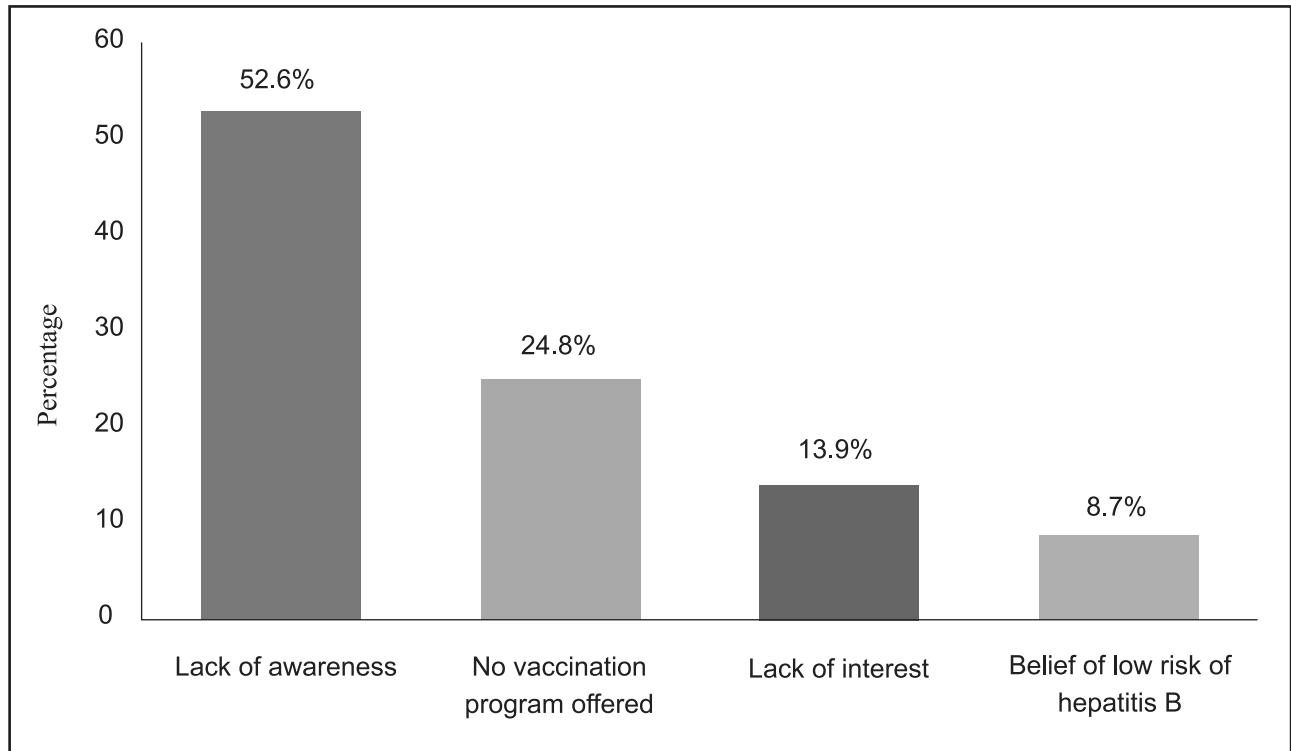


Figure-1: Distribution of reasons for not being vaccinated, N=99

Assessment of knowledge related to hepatitis B:

Regarding the knowledge related to hepatitis B, the majority of the study participants know that hepatitis B is caused by a virus (60.9% strongly agreed, 21.4% agreed) and that it can cause liver cancer (30.7% strongly agreed, 39.1% agreed). More than one third of the respondents strongly agreed on infected mother-to-fetus transmission (39.1%), contaminated blood and body fluids (45.3%), unprotected sex (33.9%), and unsterilized syringes/needles (42.7%) as the mode of transmission of hepatitis B. Regarding casual contact (Like shaking hands) as a modes of transmission for hepatitis B, most of the respondents disagreed (48.4% strongly disagreed, 28.1% disagreed). However, only about one-fourth of the participants strongly disagreed on cough/sneeze (28.2%) and contaminated food/water (23.5%) as modes of transmission for hepatitis B.

Similarly, the majority agreed on the fact that healthcare workers are at increased risk of getting hepatitis B (35.4% strongly agreed, 38.0% agreed). In terms of knowledge on prevention of hepatitis B infection, the majority of the respondents agreed with vaccination (59.9% strongly agreed, 30.7% agreed), avoiding sharp needles/syringes (30.7% strongly agreed, 41.7% agreed), and using gloves when handling body fluids (28.6% strongly agreed, 38% agreed). Regarding antivirals as a preventive measure for hepatitis B, 20.3% strongly disagreed while 27.1% were not sure, and only 6.2% strongly agreed. However, about half of the participants disagreed on the fact that avoiding contaminated food/water can prevent hepatitis B infection (17.2% strongly disagreed, 31.2% disagreed) (Table-III).

Table-II: Knowledge of the respondents related to hepatitis B, N = 192

Questions for response	Strongly disagreed	Disagreed	Not sure	Agreed	Strongly agreed
	n (%)	n (%)	n (%)	n (%)	n (%)
1. Hepatitis B is caused by a virus.	9 (4.4)	13 (6.8)	12 (6.4)	41 (21.5)	117 (60.9)
2. Hepatitis B can be transmitted by:					
a. Infected mother to foetus	8 (4.2)	8 (4.2)	21 (10.8)	80 (41.7)	75 (39.1)
b. Contaminated blood and body fluids	6 (3.1)	3 (1.6)	18 (9.4)	78 (40.6)	87 (45.3)
c. Unprotected sex	32 (16.7)	15 (7.7)	18 (9.4)	62 (32.3)	65 (33.9)
d. Casual contact (Shaking hands)	93 (48.4)	54 (28.2)	22 (11.5)	11 (5.7)	12 (6.2)
e. Unsterilized syringes/needles	14 (7.3)	9 (4.7)	12 (6.2)	75 (39.1)	82 (42.7)
f. Coughing/sneezing	54 (28.1)	48 (25.0)	28 (14.6)	47 (24.5)	15 (7.8)
g. Contaminated food/water	45 (23.5)	40 (20.8)	42 (21.9)	44 (22.9)	21 (10.9)
3. Hepatitis B can cause liver cancer.	12 (6.3)	11 (5.7)	35 (18.2)	75 (39.1)	59 (30.7)
4. Healthcare workers are at increased risk of getting hepatitis B than general population	8 (4.2)	15 (7.8)	28 (14.6)	73 (38.0)	68 (35.4)
5. Hepatitis B can be prevented by:					
a. Vaccination	10 (5.2)	5 (2.6)	3 (1.6)	59 (30.7)	115 (59.9)
b. Antivirals	39 (20.3)	72 (37.5)	52 (27.1)	17 (8.9)	12 (6.2)
c. Avoiding sharp needle/syringe injury	10 (5.2)	16 (8.3)	27 (14.1)	80 (41.7)	59 (30.7)
d. Avoiding contaminated food/water	33 (17.2)	60 (31.2)	39 (20.3)	39 (20.4)	21 (10.9)
e. Using gloves when handling body fluids	13 (6.8)	25 (13.1)	26 (13.5)	73 (38.0)	55 (28.6)

Assessment of attitude towards hepatitis B:

The majority agreed on feeling uncomfortable while sitting with a hepatitis B positive person (27.6% agreed, 22.4% strongly agreed). Showing a positive attitude, about 46.9% of respondents don't mind shaking hands with a person positive for hepatitis B, whereas only 12% strongly disagreed with this attitude. More than half of the respondents (56.2%) strongly

agreed that hepatitis B vaccination is safe and effective, while only a few of them (2.6%) strongly disagreed. Most of the respondents (66.7%) strongly believe that healthcare workers should receive hepatitis B vaccination, while the majority of them (47.9%) strongly agree that they do not need hepatitis B vaccination because they are not at risk (Table-III).

Table-III: Attitude findings of the respondents related to hepatitis B, N = 192

Questions for response	Strongly disagreed	Disagreed	Not agreed nor disagreed	Agreed	Strongly agreed
	n (%)	n (%)	n (%)	n (%)	n (%)
1. I feel uncomfortable sitting with a hepatitis B infected person.	20 (10.4)	32 (16.7)	44 (22.9)	53 (27.6)	43 (22.4)
2. I don't mind shaking hands/hugging with a hepatitis B infected person.	23 (12)	38 (19.7)	41 (21.4)	56 (29.2)	34 (17.7)
3. I believe the hepatitis B vaccine is safe and effective.	5 (2.6)	2 (1)	13 (6.8)	64 (33.4)	108 (56.2)
4. I believe healthcare workers should receive hepatitis B vaccination.	5 (2.6)	4 (2.1)	2 (1)	53 (27.6)	128 (66.7)
5. I don't need hepatitis B vaccination because I am not at risk	13 (6.8)	9 (4.7)	17 (8.8)	61 (31.8)	92 (47.9)

Assessment of practice towards hepatitis B:

The majority of the respondents always practice asking for a new blade while cutting or shaving hair (61.5%) and a new syringe before injection (74%). Among the respondents, 35.9% always reported their needle-prick injury. A large number of students were sometimes

The mean total KAP score was 95.09±9.81 SD (Table-V). Figure-2 showed that the majority of the participants (68.8%) had inadequate KAP scores (100 and below scored), whereas 31.2% scored well.

Table-IV: Practice findings of the respondents related to hepatitis B, N = 192

Questions for response	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)	Always n (%)
1. I ask/use a new blade for shaving/hair cutting or ask for sterilized equipment for ear/nose piercing	10 (5.2)	7 (3.6)	8 (4.2)	49 (25.5)	118 (61.5)
2. I ask for a new syringe before injection.	2 (1)	2 (1)	3 (1.6)	43 (22.4)	142 (74)
3. I always report for needle prick/sharp injuries	4 (2.1)	13 (6.8)	36 (18.7)	70 (36.5)	69 (35.9)
4. I attend hepatitis B related awareness programs.	16 (8.3)	24 (12.5)	60 (31.2)	53 (27.7)	39 (20.3)
5. I advocate hepatitis B vaccination to my relatives and friends	14 (7.3)	21 (10.9)	84 (43.8)	31 (16.1)	42 (21.9)

attending any hepatitis B awareness programme (31.2%) and advocating hepatitis B vaccination to relatives and friends (43.8%). However, 20.3% and 21.9% were always attending such programmes and advocating for relatives and friends about hepatitis B vaccination, respectively (Table-IV).

Table-V: Knowledge, attitude, practice and KAP score of the participants, N = 192

Score	Mean	SD
Knowledge	55.81	±6.85
Attitude	19.55	±2.96
Practice	19.72	±2.97
Total KAP score	95.09	±9.81

Categorization of knowledge, attitude and practice (KAP) score:

The mean scores for knowledge, attitude, and practice were 55.81±6.85 SD, 19.55±2.26 SD and 19.72±2.97 SD, respectively.

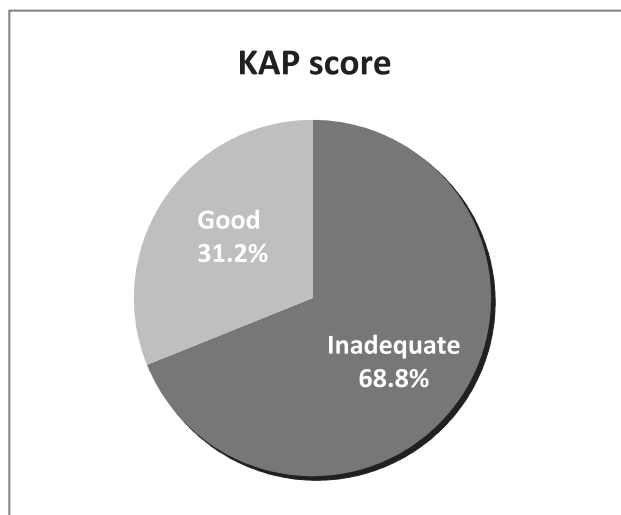


Figure-2: Category of KAP score among the respondents

Association of knowledge, attitude and practice (KAP) score with baseline characteristics:

There was no statistically significant association found between KAP score and baseline characteristics like gender, academic year, or vaccination status (Table-VI).

Table-VI: Association of KAP score with baseline characteristics

Variables		KAP score category		p- value
		Inadequate (<100)	Good (>100)	
Gender	Male	67	27	0.534
	Female	65	33	
Academic year	1st Year MBBS	67	27	0.534
	2nd Year MBBS	65	33	
Hepatitis B vaccination status	No	73	26	0.161
	Yes	59	34	

Table-VII: Correlation of knowledge, attitude and practice score

Variables	Spearman's correlation coefficient	p- value
Knowledge-attitude	0.334	0.000
Knowledge-practice	0.209	0.004
Attitude-practice	0.215	0.003

*Correlation is significant at $p < 0.05$ level (2-tailed).

Correlation of knowledge, attitude, and practice score:

A weak positive correlation was found between knowledge and attitude ($r=0.334$, $p=0.000$) and knowledge and practice ($r=0.209$, $p=0.004$) and also between attitude and practice ($r= 0.215$, $p=0.003$), which were statistically significant (Table-VII).

DISCUSSION

The medical students are expected to be involved with patients at the beginning of clinical training, and the risk of exposure to hepatitis B infection among them is the same as, if not greater than, that of other healthcare workers. This emphasises the importance of getting preclinical students vaccinated against hepatitis B and acquiring adequate knowledge, showing a proper attitude, and doing correct practices towards the hepatitis B infection before getting into clinical training. So, this study was conducted among preclinical medical students of the 1st and 2nd years of Jalalabad Ragib-Rabeya Medical College, Sylhet to find out the vaccination status and their knowledge, attitude, and practice (KAP) in relation to hepatitis B infection among them.

Our study found that about 48% of preclinical medical students were vaccinated. Another study of Bangladesh done among the undergraduate medical students ranging from first to fifth year found that 41.4% were vaccinated properly against hepatitis B²¹. This difference in result may be due to the fact that our

study participants were from the 1st and 2nd years. In their study, Giri et al. showed that among the first-year MBBS students, 51.8% were vaccinated and 15.4% were incompletely vaccinated²². Another study found that 37% of the preclinical medical students were fully vaccinated against hepatitis B²³. A similar study was done among the 1st and 2nd year medical students in India, where only 8% of participants received a completed course of hepatitis B vaccination in the past²⁴. The finding of another study is also nearly similar to ours, showing 40.2% of the participants were vaccinated, and out of that, 23.5% of students were fully immunised with three doses of vaccine²⁵. These findings justify a need to find out the vaccination status of preclinical medical students before going into clinical years to ensure high vaccination rates during their clinical training.

The main reasons for non-vaccination among the non-vaccinated participants in this study were lack of knowledge (51.58%), no vaccination programme offered (24.84%), lack of interest (13.87%), and belief in a low risk of hepatitis B (8.69%). A similar study from Nepal showed no vaccination programme offered (74.6%), a low risk of hepatitis B (8.5%) and lack of knowledge (5.6%) as the major reasons for non-vaccination²³. These findings sufficiently shed light on the urgent necessity to arrange hepatitis B vaccination awareness programmes for medical students.

Regarding knowledge about hepatitis B infection, the majority of participants in this study (82.4%) were

aware that hepatitis B is caused by a virus. Other studies done among preclinical medical students also revealed that the majority of the participants were aware of the cause of hepatitis B infection^{23,26}. While assessing the knowledge regarding the mode of transmission, the majority knew about infected mother-to-foetus transmission (80.8%), transmission through contaminated blood and body fluids (85.9%), unprotected sex (66.2%), and unsterilized needles/syringes (81.8%). The findings of our study are parallel to the findings of the study from Nepal²³. Another study showed that 69% of participants were aware of the correct modes of transmission²². In their study, Sannathimmappa et al. found that 81.06% and 74.1% of the preclinical medical students had the correct knowledge that it is transmitted through blood transfusion and by the use of contaminated syringes and needles, respectively²⁵. While very few participants strongly agreed (6.2%) that hepatitis B infection is transmitted via casual contact like shaking hands, more than thirty percent of participants knew that this infection is transmitted by coughing/sneezing and contaminated food/water. Shrestha et al. showed similar findings, where very few participants strongly agreed with the mode of transmission of hepatitis B infection via casual contact, coughing/sneezing, and contaminated food/water²³. The result of this study also showed that about seventy percent of respondents (69.8%) were aware that the hepatitis B virus can cause liver cancer. This finding is comparable with the studies from Nepal and Saudi Arabia, which showed that 80.6% and 81.3% of the participants agreed that hepatitis B causes liver cancer, respectively^{23,27}. About sixty percent (59.9%) of participants in this present study strongly agreed that hepatitis B infection can be prevented by vaccination, while 31.2% knew that hepatitis B can be prevented by avoiding contaminated food/water. Another study showed that 96.1% of the study participants agreed that the vaccine prevents hepatitis B²³.

Regarding attitude related to hepatitis B infection and vaccination, about half of the respondents didn't feel uncomfortable sitting with a hepatitis B positive person (50%) and didn't mind shaking hands or hugging with a hepatitis B infected person (46.9%), which is similar to the study from Nepal²³, but higher than the finding from Saudi Arabia, which indicates that students responding to the present study showed a more acceptable attitude²⁸. Most of the students responding to this study (89.6%) thought that the hepatitis B vaccine was safe and effective, which is similar to findings from Nepal²³. Another study from Saudi Arabia showed that only 63% considered the vaccine safe, which is lower as compared to our study²⁸. The majority of our participants (94.3%) believed that

healthcare workers should be vaccinated. Another study also showed similar finding²³. The medical students should be well aware that they need to be vaccinated because they are the part of healthcare delivery system and are always at risk of contracting and spreading the hepatitis B infection. As the higher proportion of medical students responding in our studies didn't think that they were at risk and need to be vaccinated against hepatitis B as compared to other findings, it needed to be addressed.

In our study, 87% of participants requested a new blade for shaving/hair cutting or sterile equipment for ear/nose piercing. There is another study that showed a similar finding in the case of participants asking for a new blade for shaving/hair cutting, or sterile equipment for nose/ear piercing²³. In this study, 96.4% of respondents reported that they asked for a new syringe for injection, but this proportion is higher than that in India and Ethiopia^{24,29}. These higher proportions of practices reflect the good safety practices among the participants against hepatitis B infection. In the present study, 72.4% of participants responded that they always report needle prick/sharp injury, which is higher than studies done in Nepal and Saudi Arabia showing 64.4% and 68% will report needle stick injury, respectively^{23,27}. About forty-eight percent (47.9%) of our study participants responded that they attend hepatitis B-related awareness programmes, which is higher than the finding from Ethiopia, which showed that only 23.9% of participants agreed with that²⁹.

Regarding the KAP score, no statistically significant difference was found between males and females or between 1st and 2nd year students in our study. Our study also found that the percentage of respondents having a good KAP score was higher among vaccinated students than non-vaccinated students, which was not statistically significant. Another similar study also found that those who had been vaccinated had better KAP scores than those who hadn't²³. Regarding the correlation among the knowledge, attitude, and practice scores of respondents, positive weak correlations were found between knowledge and attitude and also between attitude and practice. Weak positive correlations between knowledge and practice were also found in the present study. This result is similar to the correlations found in a study from Nepal and Malaysia^{23,30}.

CONCLUSION

Our study showed that less than half of the respondents were vaccinated and nearly one fourth completed the doses against hepatitis B infection despite it's being a

vaccine-preventable disease. Majority of the participants had inadequate knowledge, attitude and practices regarding hepatitis B infection and the lack of awareness about the vaccination programs was the major reason for not getting vaccinated.

RECOMMENDATION

There is need to provide vaccination programs for all healthcare workers and medical students to ensure 100% vaccination of medical students at least before the start of their clinical years as there is a continuous threat of being affected by hepatitis B virus in hospital set up. The other necessary measures should be taken to increase knowledge, attitude and practices towards this virus infection among them. So, they can protect themselves from the hazards of this infection. Though Bangladesh is devoted to the Sustainable Development Goals, there is national plan to combat hepatitis B and hepatitis B vaccine is already incorporated in our national immunization schedule. So, the free vaccination program can be administered to all students coming into the hospital before they enter clinical years.

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