Students' Knowledge and Attitude about Hepatitis B and C Viruses in Baghdad University

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Abstract

Introduction: Hepatitis B and C is a serious global public health problem that causes chronic liver disease and accelerates high risk of death from cirrhosis of the liver and liver cancer. **Objectives:** To determine the knowledge and attitude of nonmedical students at Baghdad University toward HBV and HCV infections and to find out the relationship between demographic characteristics. **Materials and Methods:** The study was undertaken among nonmedical students of five colleges of Baghdad University colleges. A descriptive design study was undertaken. In total, 250 undergraduate students were approached for the study to assess the level of knowledge and attitude toward HBV and HCV among students. **Results:** The findings of the present study demonstrate that more than half (51.2%) had inadequate knowledge, whereas the rest (48.8%) had sufficient knowledge. Regarding students' attitudes, the findings indicated that students had positive attitudes toward HBV and HCV based on the overall total mean score of 2.37. **Conclusion:** This study indicates that students had positive attitudes and a lack of knowledge about HBV and HCV.

Keywords: Attitude, hepatitis B and C viruses, knowledge, students

INTRODUCTION

Hepatotoxic viruses like the hepatitis B virus (HBV) can infect people and survive for a long time. It is a hepatotropic DNA virus that contains a segment of double-stranded DNA. One of the most pressing public health issues today is chronic HBV infection, which has the potential to become hereditary. Some people who carry the virus will develop liver cancer or cirrhosis, both of which are fatal.^[1,2] In addition to sexual and parenteral transmission, HBV can also be spread during pregnancy and breastfeeding (perinatal transmission). HBV genomic components can be detected, quantified, and analyzed with a variety of molecular biology methods.^[3,4] Both HBV and hepatitis B virus (HCV) are transmitted by bodily fluids, making it important to understand how they are spread and what can be done to protect against contracting them. In addition, HBV's effects can be mitigated, and HCV can be cured with the use of medical therapy.^[5] HCV infections are thought to affect 71 million persons worldwide, which can cause both acute and chronic hepatitis. It's a major reason why people develop cirrhosis, which can then lead to complications like cancer of the liver cells or the need for a liver transplant.^[6]

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Inadequate education regarding HBV and HCV can have devastating effects on society. Patients who have inaccurate information about HBV and HCV may be ill-equipped to make decisions that are protective of their health, such as following medical treatment regimens. Patients' lack of awareness may also cause them to unwittingly infect their loved ones with HBV or HCV.

MATERIALS AND METHODS

A descriptive design study was carried out among the third- and final-year of Arts College, Languages College, Administration and Economics College, Law College, and Fine Arts College. This study involved 250 students with a simple random selection from each class during the period of December 2020 to April 2021. In total, 50

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students were selected from each college. Three sections of a questionnaire with 52 items in the Arabic language were utilized to collect the data. In addition to the demographic data, 42 questions for knowledge and 10 questions for attitude were designed to assess knowledge and attitude among nonmedical college students. The first section dealt with sociodemographic variables; age; gender, faculty, academic year, marital status, and residence; the second was made to assess students' understanding of the methods or hazards of contracting and/or transmitting, symptoms and signs, treatments, immunization, and preventative measures. The third sections contained questions related to participants' attitudes toward perception of the risk of acquiring HBV and HCV infection, preventive measures and control from viral infection. The data were analyzed using Statistical Package for Social Science (SPSS) version 22. Descriptive statistics were used in this study (e.g. mean, standard deviation, frequency, and percentage) and inferential statistical approach (standard deviation and one-way ANOVA). The P-value was considered significant, if it was equal to or less than 0.05.

RESULTS

Demographic information about the respondents is shown in detail in Table 1. In total, 94 females and 156 males made up the study's overall population. The average age was 22.11

Table 1: Distribution of the studied sample according to

student	aphical characteristics	variables <i>n</i>	= 100
SDCv.	Groups	Frequency	Percent
Gender	Male	156	62.4
	Female	94	37.6
	Mean + SD = $22.11 (1.680)$		
	Total	250	100.0
Age (groups)	20-24 years	141	56.4
	25–29 years	109	43.6
	Total	250	100.0
Faculty	Arts	50	20.0
	Languages	50	20.0
	Administration and economics	50	20.0
	Law	50	20.0
	Fine arts	50	20.0
	Total	250	100.0
Academic year	Third stage	130	52.0
	Fourth stage	120	48.0
	Total	250	100.0
Marital status	Single	219	87.6
	Married	31	12.4
	Total	250	100.0
Residence	Urban	221	88.4
	Rural	29	11.6
	Total	250	100.0

Frequency, percent

age. 20% study participated for each college of total study sample. 52% of them were third stage. Majority, 87.6% of the students were single and the remainder was married. According to their place of residence, 88.4% belongs to rural area and 11.6% belongs to urban area. The knowledge questions used to measure knowledge focused on general knowledge, signs and symptoms, transmission, treatment, and prevention. The results are shown in Table 2, along with the percentage of respondents who gave the correct answer and the incorrect response. Each response was given a yes/no score. The questionnaire has a 42 (highest) to 0-point score range (smallest). A cutoff level of ≤21 was seen as inadequate, whereas ≥21 was regarded as having sufficient knowledge about hepatitis B (HB) and hepatitis C (HC). To determine the overall knowledge score, the knowledge scores for each participant were calculated and added. Of the 250 participants, 128 (51.2%) had inadequate knowledge, while 122 (48.8%) had adequate knowledge. Regarding to their general knowledge, it revealed that 88.4% of them were aware that hepatitis B&C is caused by a virus., 41.8% considered hepatitis B & C is a seriousness of the disease, 30.8% knew that hepatitis C can lead to cirrhosis. Only 58.8% of students were aware that HB and HC might affect people of any age, and only about 43.2% recognized that having HC increased the risk of developing liver cancer. The internet was the most common source of information for both groups. About 78% and 76.8% in that order, followed by books, posters, 67.2% of the general public's access to mass media (radio and TV), and finally, magazines and newspapers (66.8%). When asked about the modes of transmission, 47.2% of respondents said that HB is spread by dental equipment, 44% said that it is transmitted through sexual contact, and 41.6% said that it is transmitted through kissing. In terms of risk factors, 44% indicated that stopping dialysis is a danger factor for HBV and HCV blood, and 41.2% said that sharing needles is a risk factor for HB and HC. Assessing the knowledge about signs and symptoms of HB and HC, 46.4% of the total participated answer most common symptom of viral hepatitis is jaundice, 45.2% of students stated that nausea, vomiting, and loss of appetite are common symptoms of viral hepatitis, 47.2% answers that most patient no have symptoms of HB, 47.2% of students said that patient infected with viral hepatitis feeling tired and 46% dark urine. Knowledge regarding diagnosis and treatment for HB and HC. Only 45.2% of the students correctly responded that a test for hepatitis markers could diagnose HB and HC. Only 100 students (40%) knew that hepatitis was curable/treatable, 49.2% knew that specific medication for treating HB and HC, 59.6% knew that HB is vaccine-preventable, and 130 students (52%) believed HC could be prevented by vaccination and 64% know that needed special diet for the treatment of hepatitis. Students' knowledge about control and prevention methods, 71.6% answered vaccination first-line protection from HB, only

(SD = 1.680) years, ranging between 20 and 24 years of

37.6% of students avoided direct contact with patients,

Table 2: Responses of the study participants to hepatitis B and C kno	wledge items			
Questions	Yes	No	Ms (SD)	Ass
	Fre (%)	Fre (%)		
General knowledge about hepatitis B and C virus				
Hepatitis B and C are due to a virus	221 (88.4)	29 (11.6)	0.88 (0.321)	Good
Hepatitis B and C is a seriousness of the disease	103 (41.2)	147 (58.8)	0.41 (0.493)	Poor
Hepatitis C can lead to cirrhosis	77 (30.8)	173 (69.2)	0.31 (0.463)	Poor
HCV causes liver cancer	108 (43.2)	142 (56.8)	0.43 (0.496)	Poor
HCV causes liver cancer	147 (58.8)	103 (41.2)	0.59 (0.493)	Good
Can hepatitis B and C affect any age group?	168 (67.2)	82 (32.8)	0.67 (0.470)	Good
Mass media (radio, TV)	192 (76.8)	58 (23.2)	0.77 (0.423)	Good
Books, posters	167 (66.8)	83 (33.2)	0.67 (0.472)	Good
Magazines and newspapers	195 (78)	55 (22.0)	0.78 (0.415	Good
Internet	.61		0.61	Good
Mode of transmission				
Dentist's equipment	118 (47.2)	132 (52.8)	0.47 (0.500)	Poor
Sexual intercourse	110 (44)	140 (56)	0.44 (0.497)	Poor
Kissing	104 (41.6)	146 (58 4)	0.42(0.494)	Poor
Needles and sharps injury	103 (41.2)	140 (58.8)	0.42(0.494) 0.41(0.493)	Poor
Hemodialusis	110 (44)	140 (56)	0.44 (0.497)	Poor
Blood transfusion	116 (46 4)	134 (53.6)	0.44(0.497)	Poor
Sharing sharp instruments	108(43.2)	142 (56.8)	0.43 (0.496)	Poor
Sharing toothbrush	116 (46.4)	134 (53.6)	0.46 (0.500)	Poor
Sharing shaving tools	77 (30.8)	173 (60 2)	0.31 (0.463)	Poor
Frace oral route	108(43.2)	1/3 (09.2)	0.31 (0.405)	Poor
Vertically from mother to child	110 (44)	142(50.8)	0.43 (0.490)	Poor
Parbara	117 (46.8)	140(50)	0.44(0.497)	Poor
Tattaging	117 (40.8)	135(53.2) 136(54.4)	0.47 (0.300)	Poor
Total	114 (43.0)	130 (34.4)	0.40 (0.499)	Poor
Signs and symptoms	4370		0.45	1001
Is it one of the tunical signs of hematitis journaice?	116(464)	124 (52 6)	0.46 (0.500)	Deer
Neusee vomiting and loss of appetite are common symptoms of henetitis	112 (40.4)	134(53.0) 137(54.8)	0.40 (0.300)	Poor
Forly signs are similar to those of the common cold and fly (favor)	115 (45.2)	137 (54.6)	0.45(0.499)	Poor
Another and summaries of the protision of the common cold and hu (level)	110 (40.4)	134 (55.0)	0.40 (0.300)	Pool
Failing tined (fatigue)	110 (47.2)	132 (52.8)	0.47 (0.300)	Pool
Deele series	118 (47.2)	132 (32.8)	0.46 (0.499)	Poor
	115 (40)	133 (34)	0.48 (0.301)	Poor
Total	46		0.46	Poor
IPU and HCV can be discussed in most laboratory	112 (45.2)	127 (54.9)	0.45 (0.400)	Deen
HBV and HCV can be diagnosed in most laboratory	115 (45.2)	157 (54.8)	0.43 (0.499)	Poor
	100 (40)	130 (60)	0.40 (0.491)	Poor
Specific medication for treating HBV and HCV	123 (49.2)	127 (50.8)	0.49 (0.501)	Poor
Is vaccination available for hepatitis B	149 (59.6)	101 (40.4)	0.60 (0.492)	Good
Medication available for hepatitis C	130 (52)	120 (48)	0.52 (0.501)	Good
Is a specific diet required for the treatment of hepatitis	160 (64)	90 (34)	0.64 (0.481)	Good
Total	51		0.51	Good
Prevention and control				~ .
Vaccination protects from HBV infection	179 (71.6)	71 (28.4)	0.72 (0.452)	Good
Avoid hugging an infected individual	94 (37.6)	156 (62.4)	0.38 (0.485)	Good
Sure, of sterilized equipment with dental care	140 (56)	110 (44)	0.56 (0.497)	Good
Avoid needles/Sharp injury/used razors	186 (74.4)	64 (25.6)	0.68 (0.469)	Good
Proper screening of blood and blood products	186 (74.4)	64 (25.6)	0.74 (0.437	Good
Sterilize needles and medical equipment	165 (66)	85 (34)	0.66 (0.475)	Good
Safer sex practices	188 (75.2)	62 (24.8)	0.75 (0.433)	Good
Hepatitis B and C test is done before marriage	248 (99.2)	2 (.8)	0.99 (0.089)	Good
Total	68		0.68	Good

A.D.: assessment degree, M.s = mean of score [(0-0.49) = poor(F); (0.5-1) = good(P)]

about 56% students said confirmed sterilized with dental care, 74.4% avoided sharing infected needles or razors as a way of mode prevention, 74.4% responders said by the screening of blood and blood products, 66% by sterilize needles and surgical instruments, 75.2% by safer sex and 99.2% blood test before marriage. Ten questions shown in Table 3 were used to gauge attitudes toward HB and HC. The options for each question ranged from "Strongly Agree" to "Disagree," and respondents could select just one answer. With a maximum score range of 30 and a minimum score of 0, a score of 1 was awarded for disagreement, a score of 2 for agreement, and a score of 3 for strong agreement. A cutoff is ranked into three levels; 1–1.66 are negative, 1.67–2.33 are

accepted, and 2.34–3 are positive. The overall total mean score (2.37) indicated that students had a positive attitude toward HBV and HCV. Tables 4 and 5 show a significant correlation between students' knowledge score and gender and academic year at a P value of 0.05 but no significant association with the other analyzed variables (age groups, faculty, marital status, and domicile) at the same level of significance. Tables 6 and 7] describe that there is an association between sociodemographic factors (gender and academic year) with students' attitudes about organ donation. The association between students attitudes and demographic variables is not statistically significant (age groups, faculty, marital status, and residence).

Tab	Table 3: Respondents' attitude regarding hepatitis B and C viral infection							
No	Items	Strong agree	Agree	Disagree	Ms (SD)	A.D		
		No (%)	No (%)	No (%)	-			
1	Vaccinations should be required for all medical personnel who come into touch with blood or other bodily fluids	135 (54)	79 (31.6)	36 (14.4)	2.40 (0.728)	High		
2	Protection against hepatitis B and C virus infection is necessary	154 (61.6)	74 (29.6)	22 (8.8)	2.53 (0.653)	High		
3	The disease can be prevented with the hepatitis vaccine	126 (50.4)	76 (30.4)	48 (19.2)	2.31 (0.775)	Mod		
4	Have you done the screening for hepatitis	110 (44)	92 (36.8)	48 (19.2)	2.25 (0.757)	Mod		
5	The hepatitis B vaccine is excellent at warding off disease	113 (45.2)	95 (38)	42 (16.8)	2.28 (0.736)	Mod		
6	Usually feel cautious when dealing with sharp objects	150 (60)	77 (30.8)	23 (9.2)	2.51 (0.660)	High		
7	Vaccination protection community from infection	105 (42)	96 (38.4)	49 (19.2)	2.22 (0.754)	Mod		
8	Avoid sharing other equipment such as teeth breach, scissors, razor	179 (71.6)	56 (22.4)	15 (6)	2.66 (0.589)	High		
9	Hepatitis is a serious disease	128 (51.2)	90 (36)	32 (12.8)	2.38 (0.703)	High		
10	Prior to receiving healthcare, all patients should undergo HBV and HCV testing	157 (62.8)	75 (30)	18 (7.2)	2.56 (0.626)	High		
	Total				2.37	High		

Table 4: Association between demographic characteristics (gender and academic year) studied sample knowledge scores (N = 250)

Demographic variabl	es	F.*	Mean	t value	df	Sig (two-tailed)
Gender	Male	156	1.38	44.826	249	0.000
	Female	94				
Academic year	Third	130	1.48	46.745	249	0.000
	Fourth	120				

Table 5: Association between stud	ents' knowledge and various	s factors (age, faculty	. academic vear. and residence)
			,

Demographic varia	bles	Sum of squares	df*	Mean square	F	Sig.
Age groups	Between groups	49.825	22	2.265	0.787	0.740
	Within groups	653.039	227	2.877		
	Total	702.864	249			
Faculty	Between groups	52.732	22	2.397	1.216	0.235
	Within groups	447.268	227	1.970		
	Total	500.000	249			
Marital status	Between groups	2.824	22	0.128	1.198	0.251
	Within groups	24.332	227	0.107		
	Total	27.156	249			
Residence	Between groups	2.354	22	0.107		
	Within groups	23.282	227	0.103	1.043	0.413
	Total	25.636	249			

Table 6: Association between demographic characteristics (gender and academic year) studied sample attitudes scores $(N = 250)$								
Demographic variabl	es	F.*	Mean	t value	df	Sig (two-tailed)		
Gender	Male	156	1.38	44.826	249	0.000		
	Female	94						
Academic year	Third	130	1.48	46.745	249	0.000		
	Fourth	120						

Sum of squares, Degree of freedom, *t* value, Significant *: $P \le 0.05$

Table 7: Association between student's attitudes and various factors (age, faculty, marital status, and residence)									
Demographic varia	bles	Sum of squares	df*	Mean square	F	Sig.			
Age groups	Between groups	2.582	2	1.291	0.455	0.635			
	Within groups	700.282	247	2.835					
	Total	702.864	249						
Faculty	Between groups	10.677	2	5.339	2.695	0.070			
	Within groups	489.323	247	1.981					
	Total	500.000	249						
Marital status	Between groups	0.307	2	0.153	1.411	0.246			
	Within groups	26.849	247	0.109					
	Total	27.156	249						
Residence	Between groups	0.129	2	0.064					
	Within groups	25.507	247	0.103	0.623	0.537			
	Total	25.636	249						

DISCUSSION

A total of 250 nonmedical third- and fourth-year BSc Students took an active role in the research. Of them, 62.4% were men and 37.6% were women. The students' median age was 22.11 years; the bulk of them were between the ages of 20 and 24. Students from each college made up 20% of the participation, which is roughly equal. More than half (52%) from the third stage. The majority of the participants were single (87.6%), 88.4% of the population were from urban areas, and 11.6% belongs to rural areas. Studies in Madhya Pradesh, India, showed similar results.^[7,8] Other results in Rajasthan by Kumari,^[9] who reported that the majority of participants were mainly men between the ages of 20 and 21 (82.6%). The mean age for the subjects was 20.73 ± 0.77 , with the range of 19–23 years, and more than half (54.7%) were from urban areas. In the study conducted by Abdela et al.^[10,11], the majority of the students (91%) and 232 (72%) of the respondents were males in the 20-24age range. More than half of the responders (55.6%) and the majority of the 307 individuals in the research (95.3%)were unmarried and had never been married.

The results study demonstrated that 51.2% participants had inadequate knowledge, while 48.8% had sufficient knowledge. This study is comparable to many studies that showed that 57.9% of the population had little awareness about HB and inadequate understanding of HB,^[12] has also been documented in other nations, such as Asia,^[13] Saudi Arabia,^[14] and likewise health care workers (HCWs) knowledge of HBV and HCV was generally low in several studies.^[15–17]

Participants in this study were asked about their knowledge of HBV and HCV. The outcomes revealed that 88.4% of them understood that a virus causes HC infection, 41.2% thought HC was a dangerous disease, and 30.8% knew that HC could result in cirrhosis. Only 58.8% of people were aware that HB and HC could afflict people of any age, compared to about 43.2% who were aware that HC was linked to an increased risk of liver cancer. Additionally, resources for HB and HC information were mostly the internet (78%) and books and posters (76.8%). Overall, 57.8% of the population under study cited radio and television as sources of information. Newspapers and magazines were important in this regard (66.8%). According to the study's findings, 61.24% of participants knew enough about HB and HC to be considered as having good knowledge. This result is consistent with a study conducted by Atlam, who found that study participants learned the majority of what they knew about B and C viral hepatitis from family members and/or friends (62.7%) and the internet (62.2%), 57.8% of the population under study cited radio and TV as sources of information. A lesser percentage (55.7%) of people the source of knowledge were health care professionals. The least significant function in this was that of newspapers.^[18] In a different study, television ranked as the primary source of information, with the internet coming in second.^[19] A study was conducted by Mane et al.^[20], to evaluate dental undergraduates' knowledge, attitudes, and behaviors related to the prevention of HBV infection. However, 43.4% of the subjects had insufficient knowledge concerning the HB and HC method of transmission, through dentist's equipment (47.2%), sexual route (44%), kissing (41.6%) by used needles and syringes (41.2%), hemodialysis (44%), blood transfusion (46.4%), needle stick injury (43.2%). Correct knowledge about sharing toothbrushes and shaving tools as modes of transmission were 46.4% and 30.8%, respectively. However, nearly to half of the subjects had insufficient knowledge regarding mode of transmission of hepatitis B and transmission through vertical transmission (44%), razors by barbers (46.8%), and tattooing (45.6%). This is in keeping with a study that was done by Ghomraoui et al.^[21], who said that secondary school male students had poor knowledge regarding HB. There were varying deficiencies in most knowledge items, mainly related to HB transmission and complications. These findings agreed with the results of Atlam et al.^[22], who stated that knowledge about the diseases and their transmission methods was limited and that only 36.6% of respondents were aware that hepatitis could be spread through sharing shaving equipment. A study in Iraq reported that 49.3% of medical students and HCWs had an excellent understanding of HBV.[23] Studies have revealed a lack of understanding of HB. About 49.3% of medical students and health care workers, according to a survey done in Erbil, Iraq, had good knowledge about HBV. The study of Joukar et al.^[24-26] reported that the eight university teaching hospitals we studied had scores somewhat close to our own for knowledge and that their average scores were lower than our own. This conclusion might be the result of a lack of postgraduate training opportunities in a hospital setting. Previous survey results found unacceptable levels of knowledge among all HCWs, including medical students. Although most HCWs did well in educational institutions, their understanding of disease causes, transmission, symptoms, and prevention methods was inadequate. The majority of this study's findings regarding treatment knowledge for HB and HC were satisfactory. More than half of the respondents know that there is a vaccine against the disease (59.6%), 130 (52%) said they found treatment for HC, and two-thirds of students answered that patients infected with hepatitis required specific foods. The outcome is the same with Aslam et al.^[27], it revealed that about half of respondents were aware that injections are a kind of treatment for HBV. The same findings (50.8%) were reported by another study.^[28] A study done on medical students' shows that 85% of them appreciated the availability of treatment.^[29] Regarding prevention measures and control methods for HBV and HCV, students had fair knowledge. Vaccination is the most efficient way to prevent HBV infection (71.6%); 56% by sterilized dental equipment; 74.2% said protection from infection by avoiding unsafe blades for face or armpit shaving and screening blood; 66% by medical. Overall, 99.2% respondents who ticked yes to the question HB and HC tests were done before marriage and 975.2% by unsafe sex. These findings agreed with Alam^[30], who revealed among the respondents, most of the students (78.3%) said Knowledge and education is the prevention and control method. About 55.1%, 50.2%, 66.1%, 70.9%, and 57.1% marked condom use, remaining faithful to a single partner, avoiding needle share, blood tests before marriage, and avoiding casual sex, respectively, as the control and prevention methods. The findings from Hikma^[31], who made statements on the prevention of HBV infection, are corroborated by this research. Correct responses come from 391 (94.2%), 372 (89.6%), 384 (92.5%), and 349 (84.1%) of the respondents who were asked about preventing infection with the HBV through vaccination, basic workplace precautions, avoiding injuries from needles and sharp objects, as well as hazardous sex.

More than 75% of participants in the current study had a favorable attitude toward B and C viral hepatitis, according to the study results. Overall, 54% of the participants strongly agreed that their healthcare workers in a hospital whose close proximity to blood and bodily fluids requires vaccination, while 61.6% participants stated that they need protection from viral infection, 17% were uncertain. Fifty percent of students said that vaccine is an effective treatment to prevent the disease HB, 44% have screening tests for hepatitis viral, 60% of students take carefully when dealing with sharp objects, 71.6% avoid using share objects with others, half of the students said hepatitis virus is a serious disease. About 628% of the study population said that patients' attendance at the hospital to receive care should be screened for viral hepatitis. This finding is in good agreement with the study done at Sohag University/Egypt.^[9] These findings were similar with many findings obtained from many studies, which showed that more than 75% of participants had a favorable view regarding B and C viral hepatitis. Only a small percentage of the respondents were certain or had negative attitudes about taking an HB or HC screening, having additional testing and treatment if they tested positive, or being married to someone who had one of the viruses. The majority of participants in the study (81.6%) refused to accept or engage in sharing of syringes, toothbrushes, or razor blades with others.^[32,33] The relationship between sociodemographic variables and students' attitudes and knowledge at P < 0.05 significance level in Tables 4 and 6, there is a highly significant correlation between students' knowledge and attitude scores and their gender and academic year. These findings conflict with those of another study of medical students conducted by Khan et al.^[34,35], which found that female students demonstrated a much high level of awareness in this area than male students. In comparison to students of younger ages, those over the years demonstrated greater knowledge of the questions. Saini et al.[36], found that students had acceptable knowledge and perceptions of HB infection in the study conducted in a rural dental students' college in Maharashtra, India. This finding was in concordance with the results of Joukar et al.[37], who found that there was a significant correlation between HCW knowledge levels and attitudes. A study conducted on HCW in India revealed a similar favorable association between awareness level and attitude.^[38]

CONCLUSIONS

The students' knowledge of viral HB and HC was lacking, and they had a positive attitude toward the diseases. Insufficient understanding existed in a number of areas, including the routes of transmission and clinical manifestations of HB and HC, respectively. We recommended increasing the level of education about the disease, its prevention, management, and infection control between undergraduate students and increasing their interaction with hepatitis patients.

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Conflicts of interest

There are no conflicts of interest.

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