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## Research Article

### KNOWLEDGE AND ATTITUDE OF STUDENTS OF ALBAHA UNIVERSITY TOWARDS HEPATITIS B & C VIRUS INFECTION

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Albaha, Knowledge, Attitude and practice.

#### ABSTRACT

**Background:** Viral hepatitis is a global public health problem that affects millions of people every year, causing disability and death. In Saudi Arabia, HBV and HCV are major causes of hepatocellular carcinoma and liver diseases requiring liver transplantation, causing an increase in the need for considerable healthcare resources. University students are also susceptible to acquire this infection. **Methods:** A descriptive cross-sectional study carried out among 197 undergraduate students of Albaha University during July-August 2016, aimed to assess their knowledge, attitude and practice using a standardized questionnaire. **Results:** almost all of the participants (n=192; 97.5%) had heard of viral hepatitis and the main source of this information were school/college (n=126; 64.0%), students of Faculty of Medicine show an excellent overall knowledge about hepatitis B & C in all variables. the overall knowledge of preventive measures to Hepatitis B and C virus infection was moderately low. 52.3% of our respondents were willing to be screened for hepatitis infection, and the same number (52.8 % and 50.3%) agreed that at risk people should be vaccinated and blood transfused must be screened for hepatitis respectively. A significant relationship was found between students who study at Faculty of medicine had a history of training on universal precautions and knowledge about post needle stick injury ( $P < 0.01$ ).

**Conclusions:** The students of both, Faculty of Medicine and Faculty of Medical Science had a satisfactory knowledge on the nature of viral hepatitis, the causative agents, and they were aware of route of transmission but misconception of the preventive measures. Intensive health educational programs are required and included in the curriculum of the faculties.

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#### INTRODUCTION

Viral hepatitis is a global public health problem that affects millions of people every year, causing disability and death.<sup>1</sup> The global burden of disease due to acute hepatitis B and C and to cancer and cirrhosis of the liver is high (about 2.7% of all deaths) and is forecast to become a higher ranked cause of death over the next two decades. An estimated 57% of cases of liver cirrhosis and 78% of cases of primary liver cancer result from hepatitis B or C virus infection.<sup>2</sup>

Saudi Arabia and Jordan were classified by the WHO as areas of high endemicity for hepatitis B in the Middle East.<sup>3</sup> In Saudi Arabia, HBV and HCV are major causes of hepatocellular carcinoma and liver diseases requiring liver transplantation,

causing an increase in the need for considerable healthcare resources.<sup>4,6</sup>

Health-care workers including university students are vulnerable for exposure and spreading HBV and HCV because their activities involve contact with patients or blood or other body fluids in healthcare, laboratories or public-safety settings.<sup>7,8</sup>

Lack of awareness of the risk of HBV and its consequences are recognized as a major deterrent to immunization among HBV high risk groups.<sup>9</sup> Our present study aimed to assess the knowledge, attitude and practice among the anticipated health-care workers i.e. medical and allied health students, regarding hepatitis B and C.

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**Subjects and Methods**

This was a descriptive cross-sectional study carried out among 197 undergraduate students of Albaha University during July-August 2016. The study targeted students from faculty of Medicine and faculty of Medical sciences as study population. All the subjects were interviewed using a self-administered questionnaire, the objectives of the study were explained to participants and questions were explained for all students included in the study, and they were informed that their participation was voluntary. Data were collected regarding knowledge, attitude and practice of hepatitis Band C. The data obtained was coded, entered, and analyzed using the Statistical Package for Social Science (SPSS) version 16.0 (SPSS, Chicago, IL, USA).

The study was approved by ethical committee of institution.

**RESULTS**

Out of 210 questionnaires, total of 197 questionnaires with completed data were analyzed with a respondent rate of 93.8%. About two thirds of the study participants were male (65.5%) and those of the age group less than 20 year constitute 56.3% as shown in table (1&2) respectively. According to the study field, 49.7 % of the participants were from Faculty of Applied Medical Sciences and 50.3% were from Faculty of Medicine, female participants constitute about two thirds of those from Faculty of Medicine (58.6%) while constitute only 10.2% among participants from Faculty of Applied Medical Sciences (Fig 1).

**Source of Information**

Source of information was significantly associated with the academic affiliation of the respondents (p=0.000). In this regard almost all of the participants (n=192; 97.5%) had heard of viral hepatitis and the main source of this information were school/college (n=126; 64.0%), followed by family and friends (n=48; 24.4%), health services (n=18; 9.1%), and media (n=5; 2.5%). (Fig. 2&3). School/college was the most common source of information (93.9%) among students of Faculty of Medicine, while those from Faculty of Applied Medical Sciences showed mixed source of information.

**Knowledge of hepatitis B & C**

As shown in table (3) and Fig.(3), students of Faculty of Medicine show an excellent overall knowledge about hepatitis B&C in all variables, while participants from Faculty of Applied Medical Sciences showed an accepted level of knowledge about hepatitis B& C in some of the variables (hepatitis is caused by Virus B &C, hepatitis is contagious and hepatitis is caused by Virus B &C) but showed low levels of knowledge in others such as inquiry about hepatitis infection can lead to liver cirrhosis and cancer (44.0% ) and hepatitis infection spread easily (35.7%).

**Knowledge of Transmission of Hepatitis B and C**

Regarding transmission of hepatitis B&C, our study as shown in table (4) reveal a variable knowledge among the respondents, some show a good level of knowledge of transmission in cases of spread by blood, during childbirth, by surgical operations and during dialysis (83.2%, 63.5%, 58.9%, and 61.4% respectively) while transmission by sexual contact

(42.6 %), or by reused sharp objects (43.1%) show a low level of knowledge among our respondents.

**Knowledge of preventive measures to Hepatitis B and C virus infection**

With respect to the preventive measure towards infection by hepatitis B&C (table (3), the overall knowledge was low as only 51.3% and 52.8 % of the respondents knew that obeying standard precautions and safe hospital waste disposal can reduce hepatitis transmission respectively. While just 41.6% said that hepatitis can be prevented with vaccine and 37.6% of the respondents knew that hepatitis B confer long life immunity.

**Attitude and practices towards Hepatitis B and C virus infection**

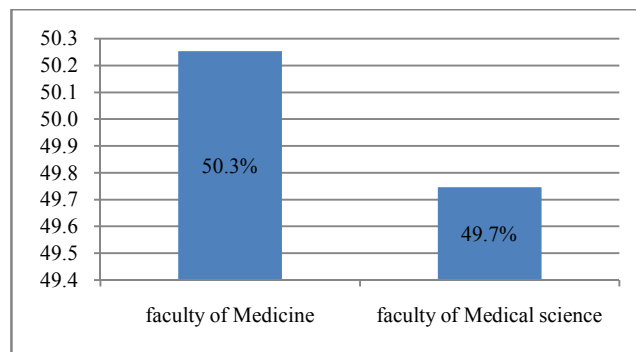
Regarding attitude and practices of our respondents towards hepatitis B&C infection as shown in table (4) and Fig. (5) below, 52.3% of them were willing to be screened for hepatitis infection, and about the same number (52.8 % and 50.3%) agreed that at risk people should be vaccinated and blood transfused must be screened for hepatitis respectively.

**Table 1** Sex of the Respondents'

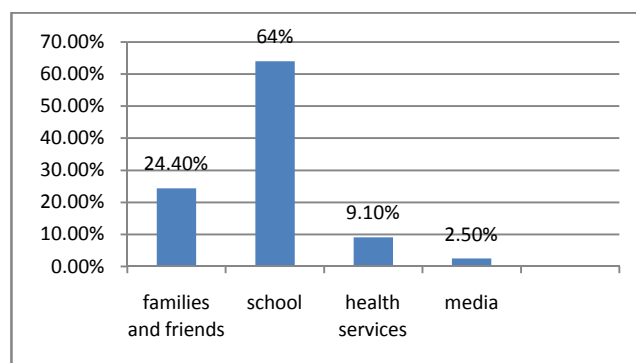
Item	Frequency	Percentage
Male	129	65.5 %
Female	68	34.5 %
Total	197	100%

**Table 2** Age Distribution of the Respondents'

Item	Frequency	Percentage
Less than 20 years	111	56.3%
20 years or more	86	43.7%
Total	197	100%



**Figure 1** Academic background of the Participants



**Figure 2** Source of Information

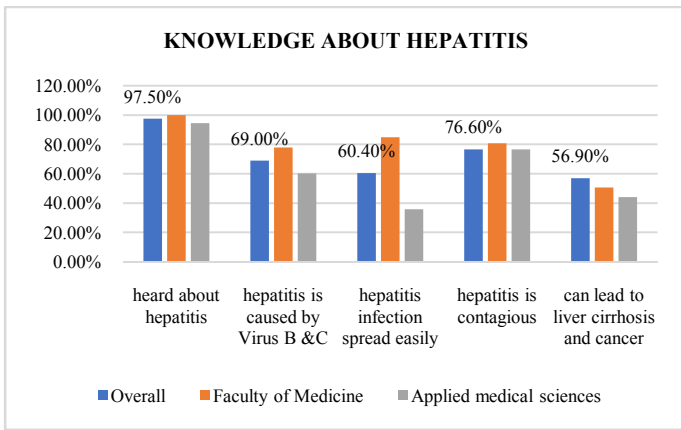


Figure 3 Overall Knowledge regarding Hepatitis B and C virus variables with academic background of the participants

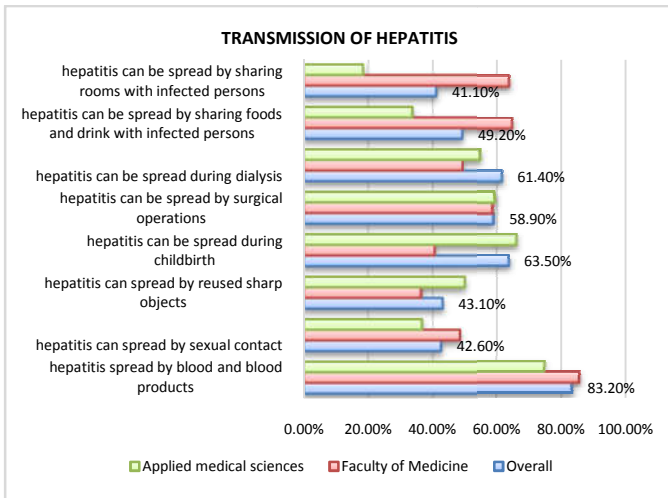


Figure 4 Overall Knowledge of Transmission of Hepatitis B and C virus variables with academic background of the participants

Table 3 Association of Knowledge of preventive measures to Hepatitis B and C virus infection variables with academic background of the participants

Item	Overall	Faculty of Medicine	Applied medical sciences	p-value
hepatitis can be prevented with vaccine	41.6%	42.4%	40.8%	P=0.431
hepatitis B confer long life immunity	37.6%	42.4%	32.7%	p=0.017
obey standard precautions can prevent transmission	51.3%	53.5%	49%	p=0.008
safe hospital waste disposal can reduce hepatitis transmission	52.8%	55.6%	50 %	p=0.327

Table 4 Association of Attitude and practices regarding Hepatitis B and C virus variables with academic background of the participants

Item	Overall	Faculty of Medicine	Applied medical sciences	p-value
welling to be screened for hepatitis	52.3%	55.6%	49 %	P=0.367
at risk people should be vaccinated	52.8%	52.5 %	53.1 %	p=0.093
blood transfused must be screened for hepatitis	50.3%	55.6%	44.9 %	p=0.065

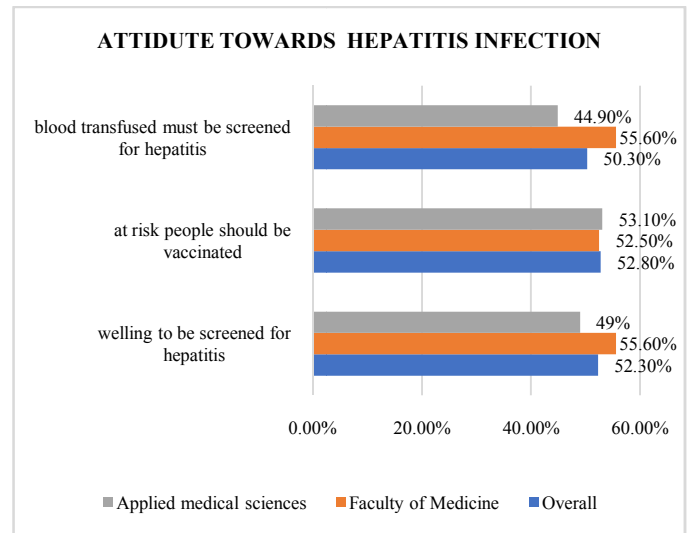


Figure 5 Overall Attitude and practices regarding Hepatitis B and C virus variables with academic background of the participants

## DISCUSSION

Our study aimed to assess the knowledge and awareness of hepatitis B among students of health-related faculties i.e. Medicine and Medical sciences at Albaha University. Regardless of being able to break the cycle of horizontal and childhood transmission of HBV, and controlling the risk posed by HCV by implementing safe clinical practices, the Saudi healthcare system is still confronted with approximately 50,000 viral hepatitis-related cirrhotic patients.<sup>10</sup> In this study almost all of the participants (n=192; 97.5%) had heard of viral hepatitis and that it is caused by hepatitis B&C viruses. Similar finding was reported in the study conducted at Jazan University, Saudi Arabia<sup>11</sup>, Aljouf University Saudi Arabia<sup>12</sup> and King Khalid University, Riyadh, Saudi Arabia<sup>13</sup>

knowledge regarding modes of viral transmission is of countless value for medical students to enhance prevention.<sup>14</sup> Among our study students, awareness regarding Hepatitis B&C transmission routes reveal a variable knowledge among the respondents, some show a good level of knowledge of transmission in cases of spread by blood, during childbirth, by surgical operations and during dialysis (83.2 %, 63.5%, 58.9%, and 61.4% respectively) while transmission by sexual contact (42.6 %), or by reused sharp objects (43.1%) show a low level of knowledge among our respondents. Similar result was reported in the study conducted in Jazan University, Saudi Arabia<sup>11</sup>, Aljouf University Saudi Arabia<sup>12</sup> and Northwest Ethiopia.<sup>14</sup> In contrast with our findings, a study conducted among 4<sup>th</sup>-year medical students at Dammam University, on hepatitis C and possible associated factors.<sup>15,16</sup> reported that about 75% of students had a poor grasp of HCV transmission. Poor knowledge about the preventive measure towards infection by hepatitis B&C among our study participants, which showed unsatisfactory knowledge and awareness of preventive measures against hepatitis infection, (41.6% said that hepatitis can be prevented with vaccine and 37.6% of the respondents knew that hepatitis B confer long life immunity). These findings were contradicted to findings of a study<sup>12</sup> conducted at Aljouf University Saudi Arabia which reveal that the rate of perception among students on universal precautions was 70.8%.

Also, our result of the study revealed that attitude and practices of our respondents towards hepatitis B&C infection were moderately accepted as 52.3% of them were willing to be screened for hepatitis infection, and about the same number (52.8 % and 50.3%) agreed that at risk people should be vaccinated and blood transfused must be screened for hepatitis respectively.

The main source of information among our participant were school/college (n=126; 64.0%), followed by family and friends (n=48; 24.4%), health services (n=18; 9.1%), and media (n=5; 2.5%). School/college was the most common source of information (93.9%) among students of Faculty of Medicine, while those from Faculty of Applied Medical Sciences showed mixed source of information, not from their families or faculty. The prevention of hepatitis infection is a major global public health goal. The best way to prevent a disease which had no effective treatment is through education program.

## CONCLUSION

The students of both, Faculty of Medicine and Faculty of Medical Science had a satisfactory knowledge on the nature of viral hepatitis, the causative agents, and they were aware of route of transmission but misconception of the preventive measures. Intensive health educational programs are required and included in the curriculum of the faculties.

## Recommendation

Knowledge about life-threatening infections such as viral hepatitis need more and more education. Therefore, it is highly recommended that health related faculties make reforms to its educational curriculum to promote awareness among their students.

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