



## COMPARATIVE STUDY OF KNOWLEDGE LEVEL OF DENTAL STUDENTS ABOUT VARIOUS KINDS' VIRAL HEPATITIS.

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### ABSTRACT

The Hepatitis B virus (HBV) is an extremely infectious yet, preventable blood borne pathogen, with an estimated 350 million chronic carriers worldwide and a prevalence of 10-18 percent in surgeons. In comparison to other viruses, such as HIV, HBV differs mainly in its higher infectivity and preventability. In the clinical setting, it has been an emerging topic heated with debate specifically, over the policies governing infected health care workers who frequently perform exposure-prone procedures. In the context of dentistry, exposure-prone procedures refer to the "major cutting or removal of any oral or perioral tissue, including tooth structures. An undergraduate medical & dental students' knowledge about hepatitis is small. The medical staff providing services must be familiar with treatment as well as with epidemiological aspects of diseases (transmission, prevention and control). Therefore, it is essential to study the level of information of this group in different fields including hepatitis. A survey of the students' knowledge about viral hepatitis was conducted in Chandra Dental College & Hospital, Safedabad, and Barabanki. UP. India. This is a detailed study done in cross-sectional method. All the students enrolled in different academic year were selected by stratified sampling method. Questionnaire was designed to get information about their knowledge in hepatitis. The mean scores were 36.7 and 59 of 100 regarding knowledge about hepatitis and prevention of the disease, respectively. Students had more information about hepatitis prevention than about other aspects of the disease such as mode of transmission and symptoms. There were statistically significant differences between the knowledge of hepatitis by age, academic year. This study showed no significant association between knowledge of hepatitis and sex, job, parents' education. This study showed that students' knowledge of hepatitis was very weak. Their knowledge with respect to the prevention of the disease was higher than other aspects.

**Key Words:** Knowledge Level, Hepatitis B, Dental students

### INTRODUCTION

Hepatitis Virus (HBV) infection is a public health problem all over the world. Over 1.5 billion people in the world have been acutely infected by this infection. [1] Out of 300 million at least one million die annually from this disease including HBV-related chronic liver disease, including cirrhosis and liver cancer.[2] Viral hepatitis is one of the causes of premature death in the world. About two billion patients are suffering from hepatitis B, and about 350 million carriers in the world [3]. However, it may vary from country to country. The occurrence of HBV ranges between 7-10% in Asia. It is 70 times more infectious than HIV. [4] In India, about four per cent Of the population was estimated to be HBV carriers.[5] High rate of HBV infection occurs in females and young adult, sexual licentious individuals, persons who require

repeated transfusion, health care personnel exposed to blood and the through shared needles used for injection drug use. Hepatitis is a preventable disease and the students of medical sciences play an effective role in its prevention. A study conducted by Al-jabar AA, et al. (2004) showed that the undergraduate medical & dental students' knowledge about hepatitis is small.[6] The medical staff providing services must be familiar with treatment as well as with epidemiological aspects of diseases (transmission, prevention and control). Therefore, it is essential to study the level of information of this group in different fields including hepatitis. General knowledge of medical staff about viral hepatitis and its transmission and prevention can stop the spread of this disease in hospitals and in society. Since medical students are in constant contact with

hepatitis patients during their studies and afterwards, they are in danger of acquiring viral hepatitis especially types B and C. The aim of this study is to determine the knowledge of students of Chandra Dental College & Hospital and educational problems involved.

### Methods

In an analytical study, 350 students from BDS 1st year to BDS IV (Final) year were selected by proportional stratified random sampling method. The total number of students in different years of Chandra Dental College & Hospital was 410. Of all these students, based on ratio of the number of students of that first to Final year to the total number of students of the whole college, a number of students were randomly chosen. A questionnaire containing 16 items about different aspects of hepatitis was distributed among students. The questions of the questionnaire were multiple choices and based on the most reliable books & journals. The questionnaire started with questions asking the sex, age, field of studies and the academics. The rest of the questions were specific and related to hepatitis its symptoms transmission and prevention. The questions in this study were about:

1. General knowledge about hepatitis
2. Knowledge about prevention, symptoms and transmission of hepatitis A, B, C & D. The grades were calculated out of 100. The validity of the questionnaire was set by specialists. The reliability was determined by Cronbach alpha test. Data and statistical analysis (SPSS 11.5 software). The mean age of the participants in this study was 21. The ages were 25 maximum and 18 minimum, respectively. Detailed results are presented in [table 1](#).

Senior students' i.e. BDS final year level of information was higher than that of others. Grade difference in the first to the second and the third to the final year was not statistically significant, but there was a significant difference between the second to the final year.

### Table 2

There was no significant connection between sex and knowledge of students about hepatitis. The knowledge of students about hepatitis B, C and D was more than that about hepatitis A ([Table 3](#)). There was no significant difference between knowledge rate of hepatitis B, C, D and educational degree. But in other aspects of hepatitis such as symptoms, prevention and

mode of transmission, there was a significant difference in educational degrees.

**Table 1.** Descriptive results for sex and academic year

Variables	Frequency	Score of knowledge Mean
<b>Sex</b>		
Male	240(68.57%)	48.5
Female	110(31.43%)	35.3
<b>Semester</b>		
1 <sup>st</sup> year	50(14.29%)	28.8
2 <sup>nd</sup> year	50(14.29%)	33.6
3 <sup>rd</sup> year	125(35.71%)	39.7
4 <sup>th</sup> year	125(35.71%)	52.6

**Table 2.** Connection between students' knowledge by age and academic year

Aspects of hepatitis	Variables	connection
General knowledge	Age	0.346
	year	0.365
Hepatitis A	Age	0.414
	year	0.408
Hepatitis B	Age	0.357
	year	0.351
Hepatitis C	Age	0.264
	year	0.328
Hepatitis D	Age	0.376
	year	0.413
Prevention	Age	0.199
	year	0.223

The results from this study showed that the knowledge of students of dental & medical sciences with respect to the type of hepatitis (A, B, C & D) was very weak. Their knowledge with respect to the prevention of disease was higher than other aspects. The present study shows that there was an important relationship between knowledge of hepatitis and age, educational level and major. There was no significant difference between sex, marital status and knowledge of hepatitis. In a study conducted by Ayyat, et al (2000) done on all the nursing students and nurses of Bilharz hospital in Theodore showed that they needed to be educated in washing their hands, avoiding common syringe in order to control hepatitis B,

Table 3 The Mean score of the students by sex

<i>aspect of hepatitis</i>	<i>Sex</i>	<i>Mean</i>
<i>General knowledge</i>	<i>Male</i>	45.7
	<i>Female</i>	43,5
<i>Hepatitis A</i>	<i>Male</i>	35.5
	<i>Female</i>	28.2
<i>Hepatitis B</i>	<i>Male</i>	70.6
	<i>Female</i>	67.4
<i>Hepatitis C</i>	<i>Male</i>	63.2
	<i>Female</i>	58.5
<i>Hepatitis D</i>	<i>Male</i>	51.7
	<i>Female</i>	48,8
<i>Prevention</i>	<i>Male</i>	38.7
	<i>Female</i>	36.3

C (3). In the same study in Taiwan, it was shown that knowledge of hepatitis B and C in dental students was 75% and 70%, respectively, which is much higher than that in dental students (4). The knowledge of hepatitis B was more than that of other types of hepatitis in dental students. But the knowledge of hepatitis B, C and D is equal among all the students. A study done on junior and senior high school students of Australia has shown that they had very little information about hepatitis C and could not differentiate between the three types A, B, C (5). Habra, et al (2005) on medical students of Delhi to measure their level of information about hepatitis A and B, a questionnaire including information on hepatitis B vaccine, its transmission, symptoms and prevention, was distributed among the first, third and last year students. The results showed that senior students had the highest level of information compared with other two groups. On the whole, however, they had little information about vaccine dose, transmission via personal objects and precautions and prevention. This result is

identical to the results we have obtained in our study. Billinger and Stoke (1992) believe that the following: age, occupation, race, socio-economic status, information about the disease can influence health habits of individuals and the level of health education that an individual receives (6). All of the students in our survey had heard about hepatitis, but to senior students had the most and students of BDS first year had the least information about hepatitis. Information level of the students in higher academic year was much more than that of the students in juniors. On the whole, all of the students surveyed were more familiar with hepatitis B than with other types of this disease. Since the students of medical & dental sciences play an important role in prevention of this disease, it is essential that medical & dental universities pay more attention in update and educating them. Although educational system of all the medical & dental colleges in India is the same and they use the same syllabus, so it is essential that the information level of students be studied to give them more training and to design new methods for them. Another research is essential to study the reasons to know why information level of the students of medical & dental sciences is low, so that suitable ways can be chosen to increase this level of knowledge. The best steps to take are to have a better system of education and increase the training time related to epidemiology of this diseases.

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