



## **Awareness and Attitude Regarding Hepatitis B Vaccine among Undergraduate Dental Students: An Institutional Study**

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**Conflicts of Interest:** Nil

### **Abstract**

**Objectives:** to evaluate awareness and attitude regarding hepatitis b vaccine among undergraduate dental students

**Materials and Methods:** A cross-sectional study was conducted to evaluate the knowledge regarding hepatitis B among dental students and interns. Participants were requested to fill the structured questionnaire.

**Results:** study included 370 undergraduate students. 273 participants had taken hepatitis B vaccine. 11% participants had checked the antibody titre after taking hepatitis B vaccine. 45% participants have no knowledge regarding post exposure prophylaxis for hepatitis B.

**Conclusion:** Participants had good knowledge regarding hepatitis B. There was certain gap in the knowledge as well which has to be filled.

**Keywords:** Hepatitis B, Vaccination, Viral infections

### **Introduction**

Hepatitis B infection is a major public health issue worldwide and is a leading cause of mortality and morbidity. <sup>1</sup>WHO has set a goal of eliminating viral hepatitis as a major public health threat by 2030.<sup>2</sup> Since hepatitis B infection can be acquired through needle stick injury health care professionals are at high risk of attaining this infection. This makes it very important that all the health care professionals should be protected from this through immunization. This study aims at creating awareness among undergraduate dental students regarding hepatitis B.

### **Materials and method**

**Study design:** Cross Sectional Questionnaire Study

### Inclusion criteria

Students of first, second, third and fourth year BDS who are willing to participate in the study.

Interns who are willing to participate in the study

### Exclusion criteria

Students who are not willing to participate in the study.

Interns who are not willing to participate in the study.

### Sample size estimation

$$N = \frac{p(1-p)}{E^2} (Z_{\alpha})^2$$

$Z_{\alpha}$  = constant set by convention according to accepted  $\alpha$  error (0.05)

P = proportion of population from published data\*

E = Desired margin of error

$$N = \frac{p(1-p)}{E^2} \times (Z_{\alpha})^2$$

$$= \frac{0.597(1-0.597)}{(0.05)^2} \times (1.96)^2$$

$$= 369.5 \approx 370$$

The study requires a Total sample size of **N=370** study participants at 95% confidence level.

### Data collection

Undergraduate students of dental college in South India, who were willing to participate in the study were enrolled after obtaining institutional ethical committee clearance. An informed consent was obtained from each participant. Participants were asked to fill the questionnaire which constituted 13 questions.

### Result

Study was done on 370 undergraduate students. This included 70 students from 1<sup>st</sup> year, 71 from 2<sup>nd</sup> year, 72 from 3<sup>rd</sup> year, 84 from fourth year and 70 interns. Out of these 12 participants (3%) did not have any knowledge regarding hepatitis. 273(74%) participants had taken hepatitis B vaccine, 97 (26%) had not. Only 41(11%) participants had checked the antibody titre after taking hepatitis B vaccine. Surprisingly 26(7%) participants think hepatitis B vaccination does not give protection

against hepatitis B infection. 12 percent participants had come across hepatitis B positive patients in the past. 78(21%) participants said they would refrain from treating patients infected with hepatitis B. 166(45%) participants had no knowledge regarding post exposure prophylaxis for hepatitis B. 37(10%) participants had concerns regarding safety of the vaccine. 318(86%) participants thought that the mode of transmission of hepatitis is through blood. 229(62%) participants believed that hepatitis B could be transmitted through saliva. 266(72%) participants thought hepatitis B could be transmitted from mother to foetus. 292(79%) participants believed transmission can happen through sexual transmission. 11(3%) participants incorrectly perceived that hepatitis B could be transmitted through hugging. 115(31%) participants thought hepatitis could be transmitted through sneezing and coughing. 344(93%) participants believed it is their moral responsibility to treat hepatitis B positive patients.

### Discussion

Viral infections such as hepatitis B had become major burden for public health. Though vaccination is easily available for hepatitis B, still it contributes to a major portion of this burden. Health care workers are under high risk of occupational exposure to hepatitis B.<sup>3</sup>

Hence this study aimed at understanding the knowledge regarding hepatitis B among undergraduate students and spread awareness regarding the same.

The result from present study suggest that undergraduate students have basic knowledge regarding hepatitis B but this is not sufficient since hepatitis B is one of the major occupational diseases seen in health care professionals.

45(12%) participants were unaware of the risk factors associated with hepatitis B, this could be due to the fact that 1<sup>st</sup> year students are not still exposed to classes

regarding hepatitis unlike other students and interns.

This is in accordance with the study conducted by R Kathiresan Ravichandran where 60% participants were aware of the risk factors associated with hepatitis B.<sup>4</sup>

In present study 74% participants had taken hepatitis B vaccination. This is in contrast to the study done by Alhowaish MA et al where only 38% participants had received hepatitis B vaccination.<sup>5</sup>

In a study done by Shamiri HM 91.4% participants had taken all the doses of hepatitis B vaccination.<sup>6</sup>

In present study only 11% participants had monitored antibody titre after taking hepatitis B vaccine. In a study done by Gaurav Mishra only 4 % dental students have monitored antibody titre following vaccination<sup>7</sup>

In present study 21% participants said they would refrain from treating Hepatitis B positive patients. This negative attitude can be decreases by imparting awareness regarding the precautions to be taken while treating hepatitis infected patients and importance of vaccination. 74% participants were aware of universal protective measures and were strictly abiding to it. This is more compared to the study conducted by Santhosh Kumar MP *et al.* where 59% participants were aware of these protective measures.<sup>8</sup>

### Conclusion

The study aimed at evaluating the knowledge of dental students regarding hepatitis B and spreading awareness regarding the same. A vast majority of students had undergone vaccination. This study showed that overall knowledge regarding hepatitis B among students were good. A gap in knowledge was noted in certain areas which need to be filled.

### Questionnaire <sup>9,10</sup>

1. Do you know about hepatitis-B <sup>6</sup>

a. Yes

b. No

2. Did you receive HBV vaccine <sup>6</sup>

a. Yes

b. No

3. Do you know the risks with HBV<sup>6</sup>

a. Yes

b. No

4. Did you measure antibody titre for HBV after vaccination<sup>6</sup>

a. Yes

b. No

5. Do you think Hepatitis-b vaccination protects against HBV<sup>6</sup>

a. Yes

b. No

6. Have you ever come across a hepatitis-B patient <sup>6</sup>

a. Yes

b. No

7. Are you willing to treat a hepatitis-B patient<sup>6</sup>

a. Yes

b. No

8. Do you have the knowledge of post exposure protocol <sup>6</sup>

a. Yes

b. No

9. Do you think hepatitis-B vaccine is safe <sup>7</sup>

a. Yes

b. No

10. What are the modes of transmission for hepatitis-B( may choose multiple options) <sup>7</sup>

a. Blood

b. Saliva

c. Mother to fetus

d. Sexual transmission

e. Hugging

- f. Sneezing and coughing
  - g. Drinking from same cup
11. Do you think you have moral responsibility to treat patients with hepatitis-B <sup>7</sup>
- a. Yes
  - b. No
12. Do you use personal protecting methods while treating each patient <sup>7</sup>
- a. Always
  - b. Mostly
  - c. Rarely
  - d. Never
13. Your designation
- a. 1<sup>st</sup> year students
  - b. 2<sup>nd</sup> year students
  - c. 3<sup>rd</sup> year students
  - d. 4<sup>th</sup> year students
  - e. Intern

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