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# Hepatitis B Awareness and Attitudes among Dental Students

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***Abstract: Objective: To assess the level of awareness and attitudes regarding Hepatitis B among dental students***
***Materials and Methods: A cross-sectional study was conducted at a private dental college in Chennai, involving dental students from various academic years, including postgraduates. The questionnaire was distributed anonymously via Google Forms through social media platforms. A total of 105 dental students participated.***
***Results: The study found that 72.4% of participants correctly identified the parenteral route as the mode of Hepatitis B transmission. Additionally, 77.1% mentioned preventive measures, 66.1% knew the Hepatitis-B vaccination schedule, and 80% recognized common symptoms.***
***Conclusion: Dental students exhibited commendable knowledge of Hepatitis B, particularly concerning transmission modes, vaccination, and symptoms. These findings underscore the effectiveness of educational campaigns***
***Keywords: Hepatitis B, dental students, awareness, transmission, prevention, vaccination, clinical features, precautions, treatment, symptoms.***

## I. INTRODUCTION

Hepatitis B, a viral infection caused by the Hepatitis B virus (HBV), remains a significant public health concern worldwide. It is a potentially life-threatening disease, primarily transmitted through contact with infected blood and other bodily fluids.[1] This viral infection primarily spreads through exposure to infected blood and various bodily fluids. While Hepatitis B affects millions of people worldwide, healthcare professionals, including dental students, are particularly vulnerable to occupational exposure due to the invasive nature of dental procedures, which often involve direct contact with patients' blood or oral fluids. Dental care procedures, ranging from routine examinations to complex surgical interventions, entail a notable risk of exposure to bloodborne pathogens.[2]

The use of sharp instruments, dental devices, and exposure to patients' oral secretions significantly heightens the potential for transmission. Hepatitis B's which is of highly infectious nature underscores the necessity for stringent infection control measures and a comprehensive understanding of preventive strategies among dental students.[3] The potential consequences of Hepatitis B infection for healthcare workers, including dental students, are substantial. Beyond the immediate health risks, occupational exposure can lead to long-term health complications, potentially impacting both the affected individual and the patients they serve. Therefore, recognizing the importance of a robust understanding of Hepatitis B transmission, prevention, and vaccination is vital to mitigate the risk of transmission in dental healthcare settings.[4] Healthcare professionals, including dental students, are at an elevated risk of occupational exposure to Hepatitis B due to the invasive nature of dental procedures, which may involve contact with patients' blood or oral fluids. Dental students, as future practitioners, play a vital role in the healthcare system, and their knowledge, attitudes, and practices regarding Hepatitis B prevention are of paramount importance.[5] While dental healthcare settings have implemented stringent infection control measures, it is essential to assess whether dental students possess the necessary awareness and attitudes required to minimize the risk of Hepatitis B transmission within their professional environment.[6] This study aims to evaluate the awareness and attitudes of dental students towards Hepatitis B. The findings of this study will not only shed light on the current state of Hepatitis B awareness among dental students but also offer insights into the potential need for targeted education and training programs to enhance their safety and the safety of their patients.[7]

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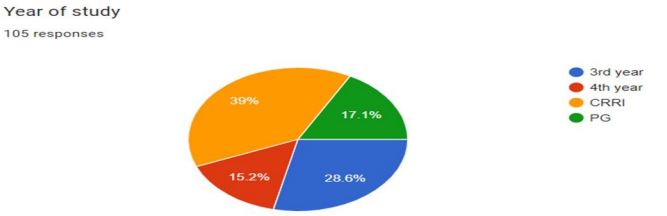
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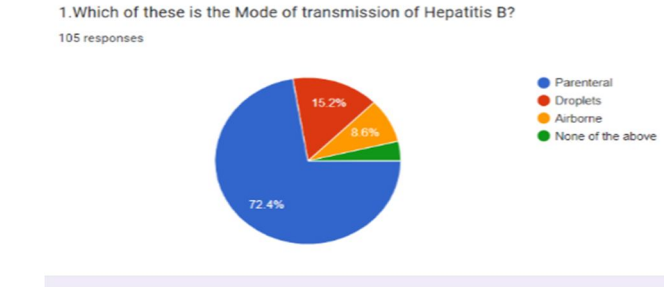
## II. MATERIALS AND METHODS

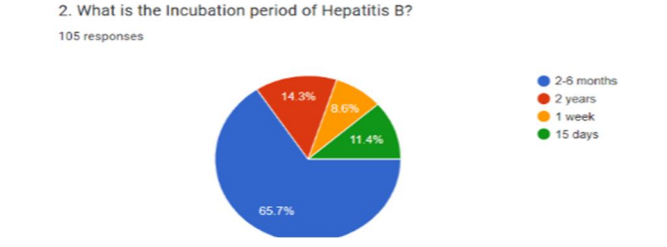
This research utilized a cross-sectional research design to assess the awareness and attitudes of dental students regarding Hepatitis B. The study was conducted at a private dental college in Chennai and included dental students from different academic years, including postgraduates. To collect data, a structured questionnaire (Table-1) consisting of 10 questions was developed to gather information about the students' awareness and attitudes towards Hepatitis B, in addition to recording their demographic information. The questionnaire underwent a thorough review and received approval from the department of oral medicine and radiology at the private dental college. Furthermore, the research obtained ethical clearance from the Institutional Review Board (IRB), and all participants provided informed consent, indicating their willingness to participate in the study, highlighting the voluntary nature of their involvement. Throughout the study, the anonymity of the participants and the confidentiality of their data were strictly upheld, with no collection of personally identifiable information. Data were collected by distributing the questionnaire via Google Forms through various social media platforms. A total of 105 dental students actively took part in this study. The data gathered from the questionnaires were transferred to Excel and subsequently analyzed for statistical purposes using Chat-GPT 3.5.

## III. RESULTS

In the study, 105 dental students participated, with an average age of 23. Among the participants, 39% were house surgeons (CRRI), 28.6% were third-year undergraduate students, 15.2% were fourth-year undergraduate students, and 17.1% were postgraduate students. Regarding their knowledge about Hepatitis B, 72.4% correctly identified the parenteral route as the mode of transmission. 65.7% accurately stated that the incubation period of Hepatitis B is 2-6 months. Additionally, 65.7% recognized that Hepatitis B is not transmitted through animals, skin contact, or droplet infection. Concerning preventive measures, 77.1% of the participants mentioned that these include screening for HBsAg, HBeAg before blood donation, immunization, health education, and awareness. 66.1% correctly identified the schedule for Hepatitis-B vaccination doses as 0, 1, and 6 months. In terms of recognizing the significant features of the icteric phase of Hepatitis B, 70.5% mentioned dark urine, pale stool, and yellowish discoloration of mucous membranes. However, there was some confusion, with 70.5% associating the icteric phase with unrelated conditions like Serum sickness, Gainotti Crosti Syndrome, and Papular acrodermatitis. When it came to dentist precautions for Hepatitis B, 79% acknowledged the importance of vaccination and the use of sterilized needles and syringes. Regarding treatment options for Hepatitis B, 66.7% correctly identified entecavir as one of the drugs used currently. Lastly, 80% accurately recognized the most common signs and symptoms of hepatitis B, which include abdominal pain, vomiting, and fever.



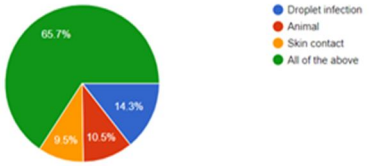




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3. Hepatitis B is not transmitted by

105 responses

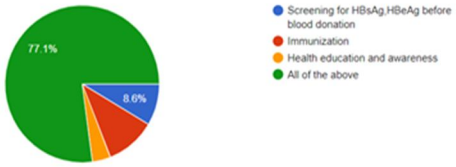
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4. Preventive measures of hepatitis B includes :

105 responses

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5. What is the schedule for Hepatitis-B Vaccination doses?

105 responses

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6. What are the significant features of icteric phase of hepatitis B?

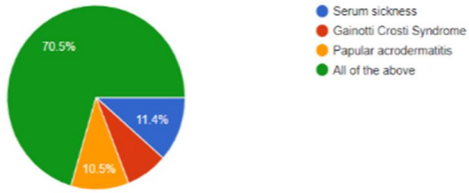
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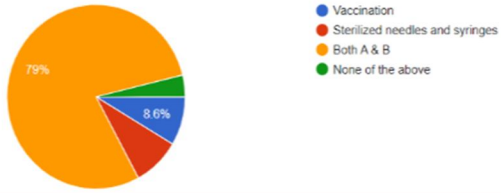

7. Extra hepatic manifestations of hepatitis B are:

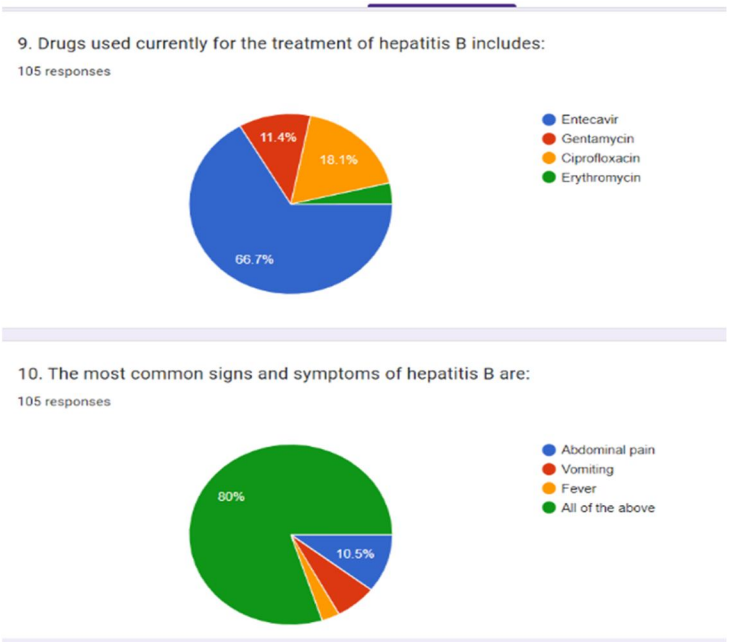
105 responses




8. Dentist precautions for Hepatitis B includes :

105 responses






## IV. DISCUSSION

In our study, we found that 72.4% of the participants correctly identified the parenteral route as the mode of transmission for Hepatitis B, indicating a relatively high level of knowledge. This stands in contrast to P Tirounilacandin et al's study, where only 39% of participants demonstrated very good knowledge about Hepatitis B, suggesting a lower level of awareness.[8] Additionally, Ghanaei et al's study reported that 86.3% of students answered positively regarding the spread of Hepatitis B via blood contact, and Hashem-Motahir Al-Shamiri et al's study found that 90% of participants answered positively regarding the spread of Hepatitis B through blood transmission and sexual transmission.[9,10] The knowledge about Hepatitis B transmission in our study appears to be significantly better than in P Tirounilacandin et al's study. This difference could be attributed to variations in study populations, educational backgrounds, or the effectiveness of awareness campaigns in the respective regions. Our study indicates that 77.1% of participants mentioned various preventive measures, including screening for HBsAg, HBeAg before blood donation, immunization, health education, and awareness. In contrast, Bhuvan Nagpal et al's study suggested that the level of awareness about Hepatitis B virus infection was less.[11] The higher awareness of preventive measures in our study is a positive outcome, suggesting that our educational efforts or the participants' background knowledge are effective in conveying the importance of these measures. Regarding knowledge about vaccination, our study reveals that 66.1% of participants correctly identified the schedule for Hepatitis-B vaccination doses as 0, 1, and 6 months. A similar level of awareness was reported in Monica Gayathri et al's study, where 70% of dental students were aware of vaccines.[12] Both studies indicate reasonable knowledge regarding Hepatitis B vaccination, which is encouraging given the importance of vaccination in preventing the disease. Moving to the understanding of the icteric phase, our study shows that 70.5% of participants mentioned dark urine, pale stool, and yellowish discoloration of mucous membranes as features of the icteric phase. However, there was some confusion, with 70.5% associating the icteric phase with unrelated conditions. While there is a good level of understanding about the icteric phase in our study, the confusion regarding unrelated conditions is a point of concern, suggesting the need for more precise education regarding the clinical features of Hepatitis B. In the context of dentist precautions for Hepatitis B, 79% of our participants acknowledged the importance of vaccination and the use of sterilized needles and syringes. This aligns with R Kathiresan Ravichandran's study,and Sudhakar Reddy's Study where 68.9% and 69.7% of participants respectively were aware of universal or standard precautions of Hepatitis B in a dental setup.[13] Both studies demonstrate relatively good awareness among dental students about precautions, which is essential in healthcare settings. Regarding knowledge about treatment, our study found that 66.7% of participants correctly identified entecavir as one of the drugs used currently. In contrast, Fortes Déguénonvo et al's study reported that only 21.1% were aware of entecavir. Our study shows a much better understanding of treatment options compared to the study by Fortes Déguénonvo et al, suggesting that our participants are more informed about available treatments for Hepatitis B.[15] Lastly, in our study, 80% of the participants accurately recognized the most common signs and symptoms of hepatitis B.

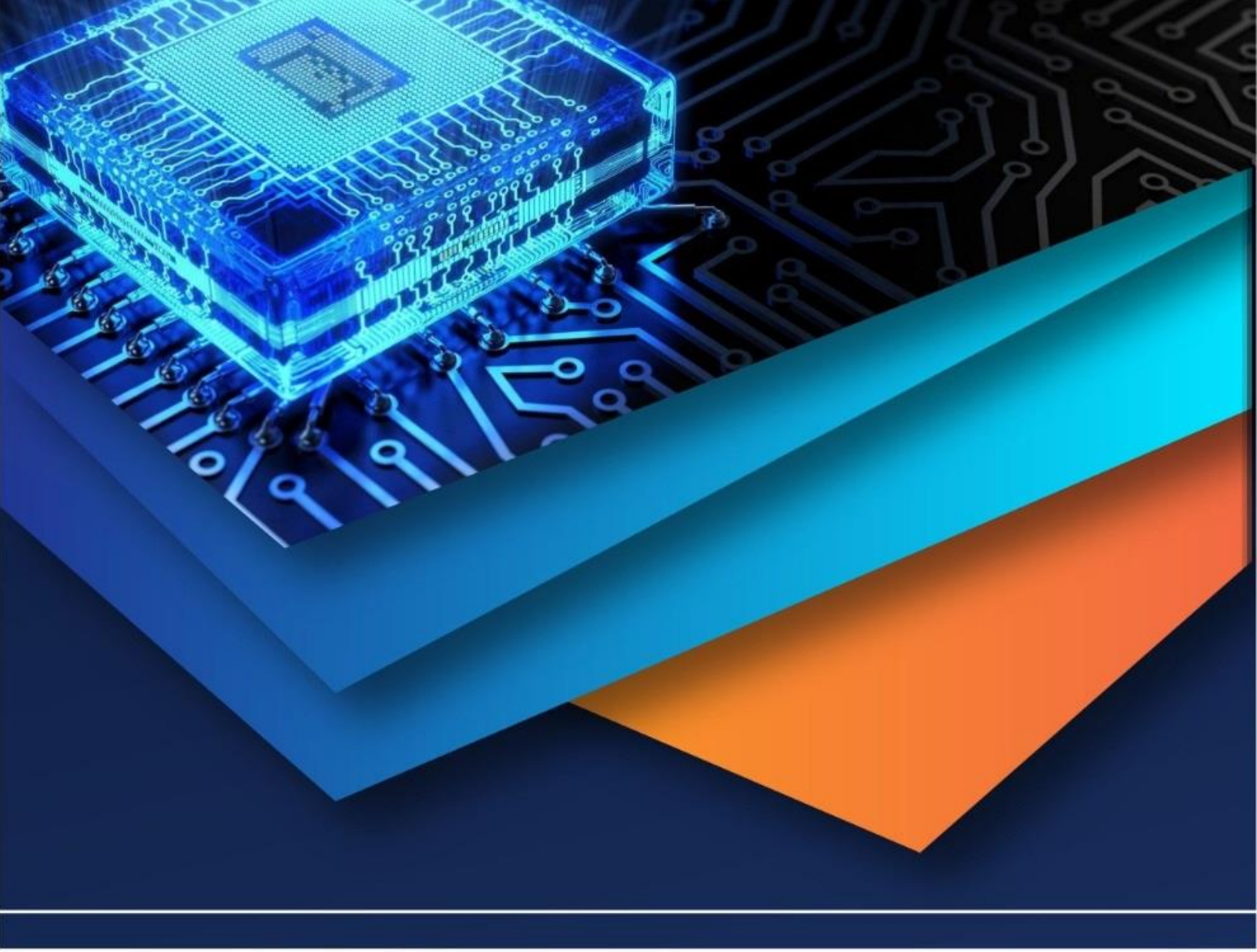
This indicates a relatively high level of awareness regarding Hepatitis B symptoms, which is crucial for early diagnosis and management. Our study generally demonstrates a good level of awareness and knowledge about Hepatitis B among the participants, with higher percentages of correct responses in various domains compared to some other studies. However, there are still areas of confusion and misconceptions that need to be addressed through targeted education and awareness programs. The comparative analysis emphasizes the importance of tailored educational interventions based on the specific needs of different populations.

## V. CONCLUSION

In conclusion, our study provides valuable insights into the knowledge and awareness of Hepatitis B among dental students. The findings reveal a generally positive trend in terms of understanding key aspects of Hepatitis B, including its transmission, preventive measures, vaccination, clinical features, and necessary precautions. These results indicate the effectiveness of educational efforts and the awareness campaigns in place. Our study underscores the importance of maintaining and strengthening educational initiatives to ensure that dental students and, by extension, healthcare professionals are well-informed about Hepatitis B. This knowledge is crucial not only for their safety but also for effectively contributing to the prevention and control of this infectious disease in healthcare settings and the broader community.

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