

Perception and Preparedness of Dental Students Towards Handling Medical Emergencies in Oral Surgery: A Cross-Sectional Study

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ABSTRACT

Background: Medical emergencies are not uncommon in dental practice, particularly in oral surgery. Assessing the perception and preparedness of dental students is essential to strengthen training and curriculum.

Objective: To evaluate the perception, knowledge, and preparedness of dental students towards handling medical emergencies in oral surgery.

Methods: A cross-sectional questionnaire-based survey was conducted among 100 dental students using a structured Google Form. Data on demographics, perception, training, preparedness, and knowledge were collected and analyzed using descriptive statistics.

Results: Among the 100 respondents, the majority were female and most were in 4th year or internship. Only about half had received formal training in emergency management. Nearly all respondents agreed that managing emergencies is an essential skill, and 87% supported making it mandatory in the curriculum. Confidence levels varied: students were most confident in managing syncope, moderately confident in handling anaphylaxis, and least confident in cardiac arrest.

Conclusion: Dental students recognized the importance of emergency management but exhibited limited preparedness, especially for life-threatening situations like cardiac arrest. Curriculum strengthening with hands-on simulation and mandatory modules is recommended.

Keywords: Dental students, Oral surgery, Medical emergencies, Preparedness, Perception, Curriculum, CPR

INTRODUCTION

Medical emergencies are unpredictable but potentially life-threatening events that may occur in dental practice, particularly in oral surgery settings where invasive procedures, anesthesia, and patient stress increase the risk. The preparedness of dental professionals is crucial for timely and effective management.

Previous studies across various countries have reported limited confidence and inadequate training among dental students in managing emergencies such as syncope, anaphylaxis, and cardiac arrest. In India, where oral surgery procedures are a routine part of dental training, systematic assessment of students' perception and preparedness is limited.

This study aimed to evaluate the perception and preparedness of dental students towards handling medical emergencies in oral surgery, with the goal of identifying curriculum gaps and suggesting reforms.

MATERIALS AND METHODS

Study design: Cross-sectional descriptive study.

Participants: 100 dental students (3rd year, 4th year, and interns).

Instrument: A structured, pretested Google Form consisting of 25 items (demographics, perception, preparedness, knowledge questions, and open-ended suggestions).

Data analysis: Descriptive statistics (frequencies and percentages) were used.

RESULTS

Demographics: The majority of respondents were female (Figure 1)

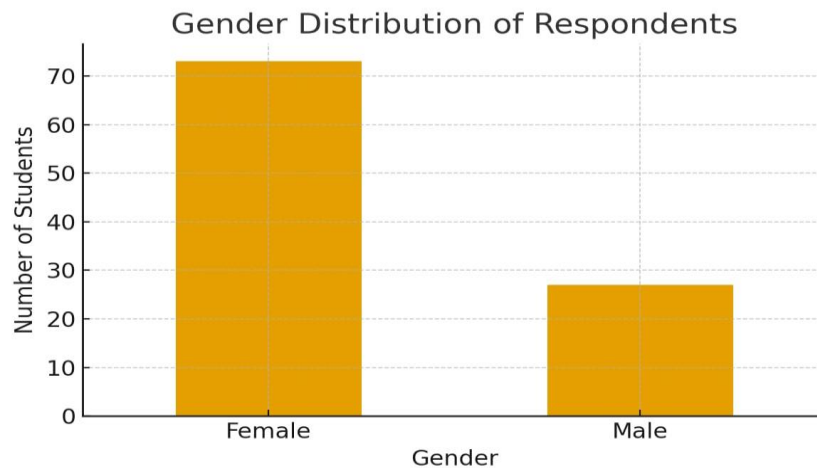


Figure 1. Gender distribution of respondents

and most were from 4th year and internship (Figure 2).

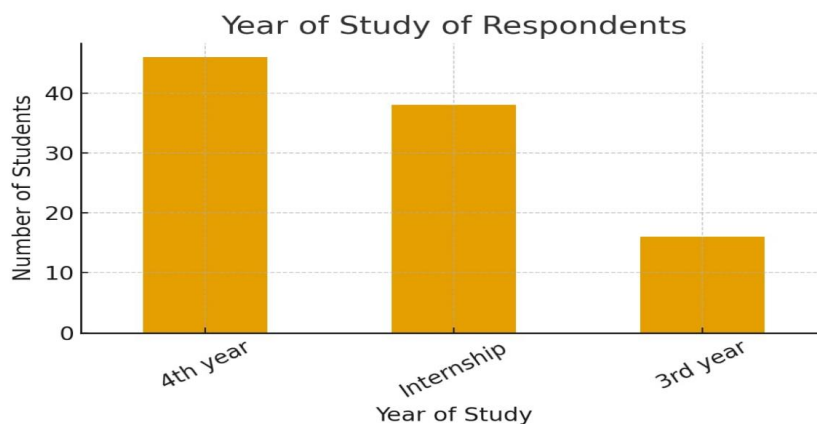


Figure 2. Year of study of respondents

Training: About half of the respondents reported receiving formal training in medical emergency management (Figure 3).

Formal Training in Emergency Management

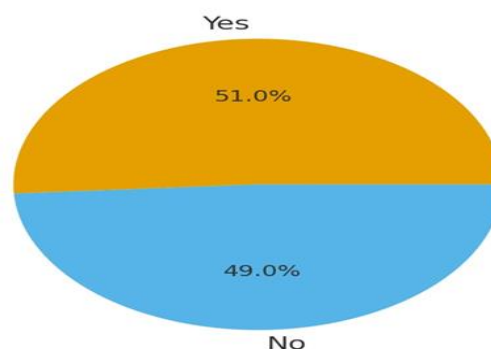


Figure 3. Formal training in emergency management

Perception: Nearly all students agreed that managing medical emergencies is an essential skill, and 87% supported making it a mandatory module in the curriculum (Figure 4). Only about 44% felt their current curriculum adequately covered emergencies.

Perception: Should Emergency Management Be Mandatory?

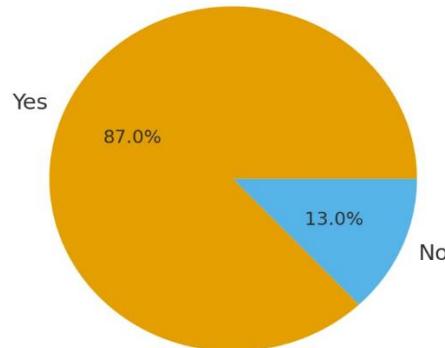


Figure 4. Student perception on making emergency management mandatory

Preparedness: Syncope: Confidence was highest, with most students reporting being confident or very confident (Figure 5).

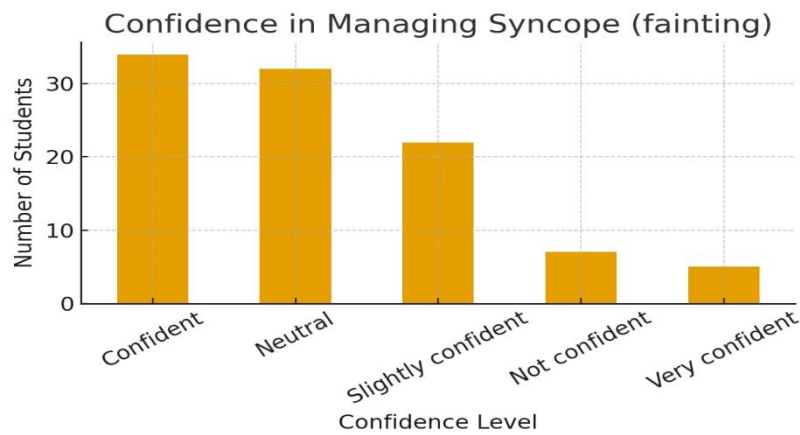


Figure 5. Confidence in managing syncope

Anaphylaxis: Confidence was moderate, with many reporting “neutral” or “slightly confident” (Figure 6).

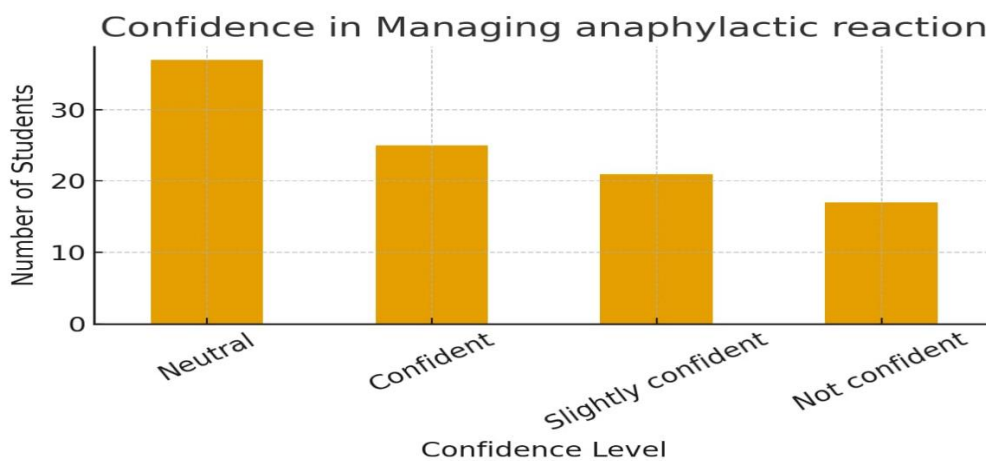


Figure 6. Confidence in managing anaphylaxis

Cardiac arrest: Confidence was lowest, with the majority reporting neutral or not confident (Figure 7).

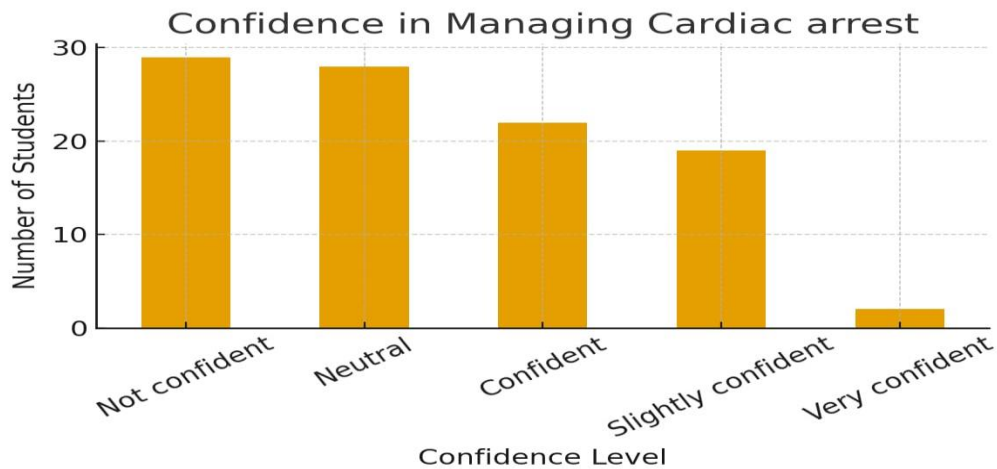


Figure 7. Confidence in managing cardiac arrest

Suggestions: Open-ended responses highlighted the need for more hands-on training, frequent workshops, simulation-based exercises, and practical demonstrations.

DISCUSSION

This study revealed a gap between dental students' recognition of the importance of emergency management and their actual preparedness. While most acknowledged the likelihood of encountering emergencies and supported curriculum reform, their confidence in managing life-threatening events such as cardiac arrest remained poor.

The findings are consistent with international studies reporting that dental students often lack practical exposure to emergency simulations. Simulation-based training, repeated CPR certification, and integration of structured modules into the curriculum are strongly recommended.

CONCLUSION

Dental students perceive emergency management as highly important but demonstrate inadequate preparedness, particularly for cardiac arrest. Strengthening dental curricula through mandatory modules, hands-on workshops, and simulation-based training is essential to improve readiness and ensure patient safety.

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