

Knowledge and Awareness regarding Traumatic Dental Injuries in Undergraduate Dental Students of Rajnandgaon Chhattisgarh.

Dr. Saloni Devendrasingh Gautam¹ (Corresponding author) Dr. Anushka Deoghare²
Dr. Nagarathna PJ³ Dr. Sravanthy Busi⁴ Dr. Neha Chhatani⁵ Dr. Malladi swati⁶

Dr. Saloni Devendrasingh Gautam¹ (Corresponding author)

Post Graduate resident,

Department of pediatrics and preventive dentistry,
Chhattisgarh dental college and research institute sundra, rajnandgaon, chattisgarh
salonigautam04@gmail.com

Dr. Anushka Deoghare²

Reader, Department of pediatrics and preventive dentistry
Chhattisgarh dental college and research institute sundra, rajnandgaon, chattisgarh
dranushkadeoghare@gmail.com

Dr. Nagarathna PJ³, Professor and HOD

Department of pediatrics and preventive dentistry, Chattisgarh Dental College and research
institute, rajnandgaon, chattisgarh

drsiddu4@gmail.com

Dr. Sravanthy Busi⁴, post Graduate resident,

Department of pediatrics and preventive dentistry,
Chhattisgarh dental college and research institute, rajnandgaon, chattisgarh
dr.sravanthypedo@gmail.com

Dr. Neha Chhatani⁵

Postgraduate resident Department of pediatrics and preventive dentistry,
Chhattisgarh Dental College and Research Institute sundra, Rajnandgaon, Chhattisgarh
nehachhatani1995@gmail.com

Dr. Malladi swati⁶, Post Graduate resident,

Department of pediatrics and preventive dentistry,
Chhattisgarh Dental College and Research Institute sundra, Rajnandgaon, Chhattisgarh
malladis.jhansi19@gmail.com

Submitted: 13 April 2023; Accepted: 17 May 2023; Published: 29 June 2023

RESEARCH ARTICLE

DOI: 10.47750/jptcp.2023.30.17.01



ABSTRACT

Introduction: Trauma to primary and permanent teeth and their supporting structures is common in children. The long-term prognosis of an injured tooth depends on the measures taken at the time of the injury, the location and the type of injury. For some types of trauma, the prognosis largely depends on proper emergency management and prompt attention from a dental professional immediately following the traumatic event. **Aim and Objective:** This study aimed to assess the knowledge and awareness of dental trauma among dental students in Rajnandgaon Chhattisgarh. **Materials and methods:** All preclinical (1st - 2nd years) and clinical (3rd - 4th years) dental students enrolled in the 2020-2021 academic year were included in the study, and a questionnaire containing 12 questions in English was distributed by the students. **Results:** Of 114 preclinical students, 12.2% and of 135 clinical dental students, 59.2% had good knowledge. While 52.7% of preclinical dental students and 80% of dental clinic students were aware of traumatic dental injuries. When, comparing preclinical and preclinical knowledge, a statistically significant difference was found ($P = 0.00$). Undergraduate clinical dental students were observed, while a statistically significant difference was found when comparing levels of awareness between preclinical and clinical dental students ($P = 0.042$). **Conclusions:** This study demonstrates that preclinical dental students have less knowledge and awareness of dental trauma than clinical students. It is therefore important to develop activities and courses, especially in the preclinical years, to increase knowledge of undergraduate dentistry. student.

INTRODUCTION

Trauma to primary and permanent teeth and their supporting structures is common in children.

⁽¹⁾ Ranging from minor dental fractures to extensive pitting injuries involving displacement or avulsion of supporting structures and teeth ⁽²⁾ Dental trauma is an event with multiple consequences; it can physically and psychologically affect a child's behavior and significantly affect their quality of life. ⁽³⁾ The goals of the management of traumatic dental injuries are to maintain aesthetics, mastication and speech, and to prevent adverse psychological and social effects, since the maxillary central incisor is the tooth most affected by traumatic dental injuries. One of the most important goals is to keep the pulp alive so that normal tooth development can continue. ⁽⁴⁾ The long-term prognosis of an injured tooth depends on the



measures taken at the time of injury, the location of the injury, the nature of the trauma and the type of injury. ⁽⁵⁾ However, technical knowledge and clinical experience are also essential to establish an accurate diagnosis and propose an appropriate treatment. For some types of trauma, the prognosis largely depends on proper emergency management and prompt attention from a dental professional immediately following the traumatic event. ⁽⁶⁾ previous studies assessed dental trauma knowledge among all dental clinic students. ^(7,8,9) However, studies involving all preclinical and clinical students have not been reported. Therefore, this study aimed to assess oral hygiene knowledge and dental trauma awareness among all pre-clinical and clinical dental students in Rajnandgaon district through a questionnaire survey.

MATERIALS AND METHODS

This study included a cross-sectional survey of dental students from Chhattisgarh Dental College and Research Institute Sundra Rajnandgaon. All preclinical (1st -2nd years) and clinical (3rd -4th years) dental students enrolled in the 2020-2021 academic year were included in a study to assess knowledge and awareness of dental trauma, a 12 question The questionnaire in English is distributed among the students after 15 minutes. The questionnaire was divided into three parts. Part 1: Personal information questions, Part 2: (6) questions based on awareness of dental students on traumatic dental injuries. Part III: Contains (6) questions based on the dental student's knowledge on dental trauma.

d) All of the above

7) Trauma to primary teeth results in intrusion, how long does it usually take for the teeth to erupt again?

a) 30 days

b) 3 months

c) 6 months

d) 12 months

8) Did you know that if a permanent tooth is completely lost, it can be replaced?

a) yes

b) no

9) If a tooth is lost, do you know that it is important to protect the lost tooth?

a) yes

b) no

10) What do you do before going to the dentist?

a) Wrapped in paper

b) Use tap water

c) Rinse with antiseptic

d) Store in storage medium

11) Which storage medium best preserves the cell viability of an avulsed tooth?

a) Hank's balanced salt solution

b) Milk

c) Distilled water

d) Saliva

12) When is the ideal time to reimplant an amputated tooth?

a) 30 minutes

b) 3 hours

c) 6 hours

d) 24 hours

RESULT

Out of 272 undergraduate students, 249 undergraduate dental students completed the questionnaire and the results are expressed in frequency and percentage distribution of knowledge level and awareness of dental trauma among dental students. Tables were analyzed

using the Statistical Package for the Social Sciences (SPSS) 22.0 trial version. Data is summarized as mean \pm sd (standard deviation), while discrete data (categorical data) is presented graphically as frequencies and percentages. table number1 shows the frequency and percentage distribution of preclinical and clinical knowledge level of dental students about dental trauma. Good knowledge of dental trauma was found in 12.2% of the 114 preclinical students and 59.2% of the 135 clinical dental students. Meanwhile, 52.7% of preclinical dental students and 80% of clinical dental students are aware of traumatic dental injuries. There was a statistically significant difference ($P = 0.00$) in knowledge level between preclinical and clinical undergraduate dental students. Similarly, there was a statistically significant difference in perceptions of dental trauma between preclinical and clinical undergraduate dental students ($P = 0.042$). Discussion Traumatic dental injuries are very common from infancy through adolescence, causing changes in the child's facial development and psychological changes in behavior, among other complications. ⁽⁶⁾ If managed and treated quickly and effectively, a good functional and aesthetic prognosis can be achieved with less physical impact on the child. Proper emergency management and treatment planning are essential to the success and good prognosis of dental trauma. Guidelines for the treatment of dental trauma are needed to help dentists and other health care professionals provide appropriate and effective care to children in the event of trauma. ⁽¹⁾ The study of dentistry at most universities is done through a 4-year program that includes basic, preclinical, and clinical science courses. First, second- years may not have had the education, training, or experience necessary to deal with dental trauma. Although the early management of dental trauma, especially dental avulsion, is crucial for a good prognosis, there seems to be a lack of education on the management of dental trauma. ⁽⁸⁾ Therefore, it is important to raise awareness and update information about dental trauma among these professionals. Applying these guidelines immediately after a trauma will improve both short-term and long-term outcomes. ⁽¹⁾ This questionnaire-based study aimed to assess

knowledge and awareness of dental trauma among undergraduate dental students. As can be seen from student responses to this questionnaire, there is insufficient knowledge and awareness of traumatic dental injuries among preclinical dental students (1st - 2nd years). Although undergraduate clinical students (3rd and 4th years) were more aware than preclinical students (1st and 2nd years), knowledge of dental trauma was low. Similar results were obtained by Azmi MA and Awooda EM ⁽⁸⁾ who assessed and compared the knowledge and practice of undergraduate students in grades two through five and concluded that grade five students had knowledge adequate information about avulsion injuries and their emergency management, and that second graders rarely have a good understanding of the management of dental avulsions. Fujita et al. ⁽⁷⁾ I did a study in Japan where 6th graders had a much higher percentage of correct answers on all questions than 1st graders and found that they equated 1st graders with those who did not. without management knowledge. About half of 6th graders in elementary school have basic knowledge about dental damage in children. Al Shamiri et al. ⁽¹⁾ To evaluate the level of knowledge and attitudes of dental students in Saudi Arabia regarding the treatment of dental injuries in children. We found a lack of knowledge about tooth damage treatment among dental students in Saudi Arabia. It highlights the need to use various educational methods to improve dental students' knowledge of dental trauma and its management, such as problem-based learning and driving lessons around the topic of dental trauma.

CONCLUSION

As a student, a future dentist. Dental students should have good knowledge and skills about traumatic dental injuries and also should be able to handle emergencies properly because dental injuries are unpredictable and can happen to anyone anywhere at any time, it is therefore important to have activities and courses, not only clinically, but also to deepen the knowledge of dental students during the pre-clinical year.

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Knowledge Level	Score	Percentage Score	Pre-Clinical		Clinical	
			Frequency(f)	Percentage(%)	Frequency(f)	Percentage(%)
Good	12-19	70-100%	14	12.2%	80	59.2%
Average	09-11	36.6-66.6%	45	39.4%	45	33.3%

Poor	0-8	0 - 33.3%	55	48.4%	10	7.5%
Total	19	100%	114	100%	135	100%

Table no. 1.1 shows frequency distribution of pre-clinical and clinical for level of knowledge of undergraduate dental students regarding traumatic dental injuries.

Table		Groups	Sample no	Mean	Std. Deviation
1.2	Knowledge Level	Pre- clinical	114	14.28	2.33
and		Clinical	135	13.72	1.94

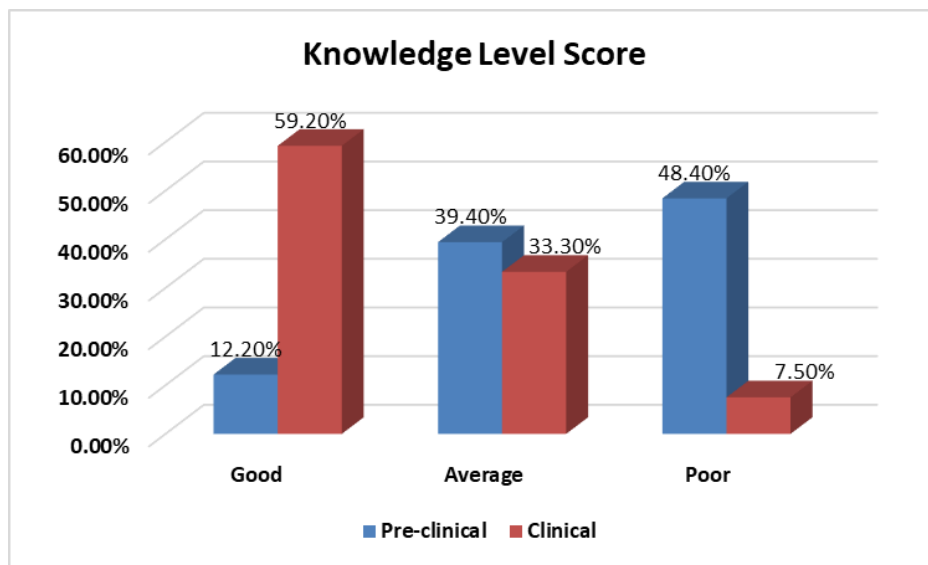
Shows mean

standard deviation of pre-clinical & clinical undergraduate dental students for level of knowledge regarding traumatic dental injuries

Knowledge level	Mean	SD	Unpaired t- value	Effectiveness by p value

Pre Clinical	14.28	2.33	3.808	0.000<.05
Clinical	13.72	1.94		Highly Significant

Table 1.3 Comparison of the pre-clinical & clinical undergraduate dental students for level of knowledge regarding traumatic dental injuries



Graph 1. Shows percentage distribution of pre-clinical and clinical for level of knowledge of undergraduate dental students regarding traumatic dental injuries.

Awareness level	Score	Pre-Clinical		Clinical	
		Frequency(f)	Percentage (%)	Frequency(f)	Percentage(%)
No	0-10	54	47.3%	27	20%
Yes	11-17	60	52.7%	108	80%
Total	17	114	100%	135	100%

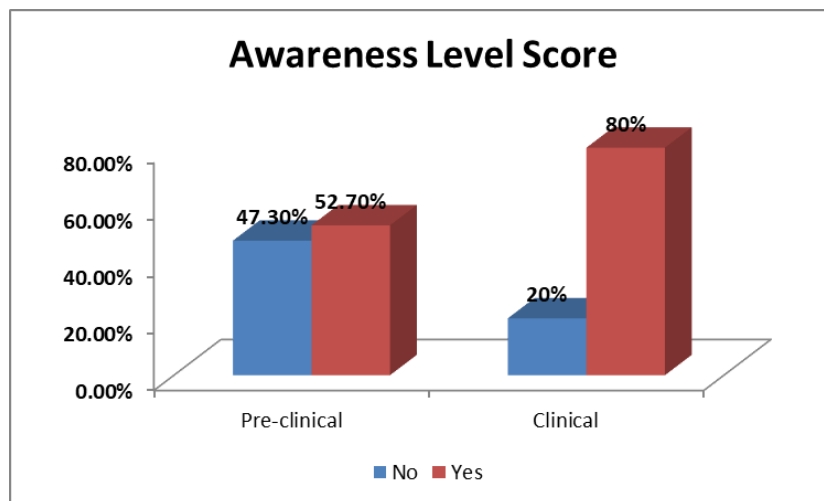
Table no. 2.1 shows frequency distribution of pre-clinical and clinical undergraduate dental students for awareness regarding traumatic dental injuries.

	group	Samples	Mean	Std. Deviation
Awareness level	Pre-clinical	114	13.21	2.263
	Clinical	135	12.207	1.893

Table 2.2 mean and standard deviation of pre-clinical & clinical undergraduate dental students for awareness regarding traumatic dental injuries.

AWARENESS	Mean	SD	Unpaired t- value	Effectiveness by p value
Pre -Clinical	13.21	2.263	2.045	0.042<.05
Clinical	12.207	1.893		Significant

Table 2.3 Comparison of the pre-clinical & clinical undergraduate dental students for awareness regarding traumatic dental injuries.



Graph 2 shows percentage distribution of pre-clinical and clinical undergraduate dental students for awareness regarding traumatic dental injuries.