

KNOWLEDGE AND ATTITUDE OF DENTAL PRACTITIONERS ABOUT THE MANAGEMENT OF TRAUMATIC INJURIES IN RIYADH

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ABSTRACT

Traumatic dental injuries (TDIs) are common in children of all ages and can result in tooth breakage, displacement, or loss, severely impacting function, esthetics, and psychological well-being. Almost 25% of children experience dental trauma at school, with men being two times as likely as women, the upper central incisors are most often affected, with a high frequency between 8 and 10. A survey was used to perform this cross-sectional investigation of Riyadh's dental. A simple random sampling method was used to include 450 dentists in the research. A questionnaire method comprised of questions on demographics and awareness and understanding of oral traumatic injuries was developed as part of the study. The mean overall knowledge score was 7.11 ± 2.90 . The results showed that the presence of ongoing training sessions on dental trauma had a substantial impact on the mean knowledge ($P = 0.039$). The overall awareness of dentists towards the management of dental trauma is satisfactory, with their training having a significant impact.

Key words: Trauma, Knowledge, Management, Injuries.

Introduction

Traumatic dental injuries (TDIs) are common in children of all ages and can result in tooth breakage, displacement, or loss, severely impacting function, esthetics, and psychological well-being. Almost 25% of children experience dental trauma at school, with men being two times as likely as women, the upper central incisors are most often affected, with a high frequency between 8 and 10 [1].

Dentists may campaign for dental injury-preventative strategies during well-child visits, just as they promote other injury prevention messaging. To prevent dental trauma, parents and guardians must learn about appropriate sports and activities for their children's age and stage of development. They should also learn about basic safety precautions around the home, such as installing stair gates and eliminating trip risks [2].

According to research conducted in Germany, 63% of dentists assessed their understanding as significant or concise, whereas just 37% identified having a fragmented understanding of dental traumatology. Regardless of the self-assessment, 40% of the questions were answered accurately. Though it is not statistically significant, there was a tendency toward somewhat greater understanding among dentists with more recent graduates. Based on the outcomes of this study, it can be concluded that general

dentists in Germany have a low degree of knowledge about various dental traumatology situations, and their self-assessment is wrong [3].

Perceived restrictions to dental trauma therapy may impact the optimal management of dental trauma. According to the researchers, financial disincentives are the most significant obstacle to treating trauma. In the United Kingdom, most general dental practitioners (69 percent) believed that "involvement in the treatment of traumatic damage to adolescent permanent teeth is not cost-effective on the National Health System," and 85.6 percent of dentists thought treatment costs were inadequate. According to the survey, dentists are eager to provide trauma care despite the low price since it is their clinical duty. Most dentists will usually start treatment but will still refer patients to a dental trauma center if future difficulties arise due to perceived limitations [4].

Rationale of the study

The study findings will be useful in teaching dental students about the correct management of dental trauma.

Study hypotheses

Knowledge and awareness of Riyadh-based dentists regarding traumatic injuries are good.

Aims of the study

- To determine the knowledge and awareness of dentists towards dental traumatic injuries.

Materials and Methods

Study design

A survey was used to perform this cross-sectional investigation of Riyadh's dental

Study sample

A simple random sampling method was used to include 450 dentists in the research.

Study instrument

A questionnaire method comprised of questions on demographics and awareness and understanding of oral traumatic injuries was developed as part of the study.

Instrument validity and reliability

After conducting pilot research in which 20 participants were surveyed through the internet, the results were analyzed using SPSS version 22 to verify the accuracy of the findings using Chronbach's coefficient alpha. Changes were made to the questionnaire based on responses and

suggestions received from REU experts throughout the project's testing phase.

Statistical analysis

SPSS version 22 was used to analyze the collected data, including descriptive and inferential statistics. The statistical significance for all group comparisons was set at less than 0.05. The choice of statistical tests was made in light of the results of a normal test.

IRB approval

Before collecting data, this project was registered on the REU research center's online page, and IRB permission was granted.

Results and Discussion

For this study, researchers looked at feedback from 450 survey forms completed by participants aged 25–61 (190 women and 260 men). **Table 1** summarizes the overall population characteristics of the participants and the mean knowledge score for each element (part 1). The mean overall knowledge score was 7.11±2.90. The results showed that the presence of ongoing training sessions on dental trauma had a substantial impact on the mean knowledge (P = 0.039).

Table 1. The mean (SD) knowledge score of dentists regarding traumatic dental injuries (TDI) and demographic distributions

Variables		P-value	Mean (SD)
Gender	Male	0.233	7.12 (1.9)
	Female		7.41 (2.3)
Age	25-40	0.711	7.39 (2.1)
	40-60		7.61 3.5
The number of patients under study with TDI	Frequent	0.347	7.47 (2.6)
	Occasional		7.72 (2.9)
	Very rare		7.53 (2.4)
Participation in TDI-related educational programs	Yes	0.039*	7.11 (1.8)
	No		8.01 (2.2)
Desire to learn about the effective management of TDI.	Undergraduate courses	0.119	7.81 (2.4)
	Post-graduate courses		7.29 (1.9)
	Trauma fellowship courses		7.39 (2.8)
Assessment of dental professionals evaluating their expertise in TDI	Comprehensive	0.081	6.32 (1.9)
	Sufficient		8.66 (2.3)
	Fragmentary		7.32 (2.7)
Knowledge	Poor		7.11 (2.9)
	Moderate		
	Good		
	Excellent		

This research tested GDPs' knowledge of TDI examination, evaluation, and regulation. According to the findings of this research, therapists' understanding of complex crown fracture, extrusion, avulsed primary teeth, and the crucial time for replantation of avulsed permanent teeth was satisfactory. However, their understanding of straightforward crown fracture, root fracture, intrusion and avulsion of permanent teeth, and splinting time was inadequate.

Most students stated that they rarely faced traumatic events in their everyday work, similar to the findings of other research demonstrating that TDI occurs rarely and only when therapists are not ready to manage appropriately.

According to the authorized recommendations for the therapy of complex crown fractures in immature teeth, a partial pulpotomy is the treatment of choice for extensive pulp exposures (>2 mm) or when the pulp has been exposed

to the oral environment for more than 24 hours [5]. The current study revealed that dentists' education in addressing this case is sufficient. After complicated crown fractures in immature permanent teeth, partial pulpotomy has been shown to have a high success rate in preserving pulp vitality. This is consistent with the current International Association of Dental Trauma (IADT) recommended guidelines, but endodontic treatment is preferred for a complex crown fracture of fully grown teeth.

Time management is the most important component in treating various dental injuries, which might alter the prognosis of traumatic teeth. Most dentists accepted to replant the avulsed tooth at the accident spot rather than at the dental clinic. However, because unskilled people use improper replantation of the tooth might affect the replanted tooth's success, patients should seek urgent medical treatment at the place of the injury. The shorter the interval between avulsion and replantation, the lower the risk of replacement root resorption and external inflammatory root resorption [6]. Furthermore, in this survey, most GDPs would splint avulsed teeth for 7 to 10 days. This percentage is greater than prior research, which revealed that only 10–30% of doctors would splint their teeth for that period. Fifty percent of the dentists accurately said that endodontic therapy within 7 to 14 days following replantation of an avulsed tooth with full root development replanted in less than one hour is the optimal treatment technique. This procedure is compatible with the published guidelines. Most GDPs said they would not replant an avulsed deciduous tooth, which is consistent with the IADT's current standards and suggestions [7].

The current study's findings indicate that most experts classified their experience and understanding as fragmented, which is compatible with two earlier research papers. However, analyzing GDPs revealed a reasonable general depth of awareness. As a result, systematic measures to keep them up-to-date and increase their understanding of TDI appear to be required [8]. Different authorized recommendations can be prepared and presented to emergency and dental clinics through pamphlets and posters to improve doctors' and person's understanding. Furthermore, TDI centers with some trained dentists must be constructed in cities to provide 24-hour treatment, particularly for severe cases. These centers must be linked to the city's GDPs, and patients should be able to come to these centers with their issues. Patients can also be recommended to dentists to continue the therapy. Because of the importance of TDI primary prevention, which can considerably alter treatment results, all practitioners must be well skilled in tackling traumatic events. As a result, more research on the influence of trauma-management courses on clinician awareness is encouraged so that such training must be expanded to include all GDPs [9].

Conclusion

The overall awareness of dentists towards the management of dental trauma is satisfactory, with their training having a significant impact.

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Conflict of interest: None

Financial support: None

Ethics statement: This study was registered in the Riyadh Elm University research center portal and received the ethical approval.

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