



## EBD spotlight: Global parental knowledge of dental trauma



**Manas Dave<sup>1</sup>**  
explores  
topics  
covered

in our sister journal  
*Evidence-Based Dentistry*.

**G**lobal status of knowledge of parents for emergency management of traumatic dental injuries: a systematic review and meta-analysis<sup>1</sup> was published in *Evidence-Based Dentistry* this year.<sup>1</sup>

### Background

Traumatic dental injuries (TDI) are highly common with an estimated 22.7% in primary teeth and 15.2% in permanent teeth.<sup>2</sup> The two peak ages of TDI incidence are at 2–3/4 and 9–10 years of age. The International Association of Dental Traumatology (IADT) guidelines<sup>3</sup> outline the diagnostic and management steps for TDI of permanent<sup>4,5</sup> and primary teeth.<sup>6</sup> Initial management (such as re-implantation of an avulsed permanent

### Author information

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tooth, minimising soft tissue injury bleeding and urgently seeking dental care) relies on education of the parents/guardians of the child. As TDIs can occur anywhere, education of the parents/guardians is especially important as their initial assessment and management of the situation could have a substantial impact on the child's long term sequelae following the TDI.

The aim of this systematic review was to evaluate the global status of parents' knowledge regarding emergency management of TDIs.

- Parents had been recruited from outpatient departments, health care centres, dental specialty centres and directly from the community. There was a mixture of stratified random clustering, convenience and simple random sampling
- For data collection, studies used a mixture of questionnaires and interviews
- 32.9% (95% CI: 22.7–44.9) of parents had witnessed TDIs in any form and 25–40% of parents had received information about TDI in the past
- The appropriateness of immediate action

*‘Given the high global incidence of dental trauma in the population, public health interventions to identify trauma and seek appropriate emergency management should be a high priority to mitigate future morbidity and lengthy dental treatment.’*

### Methods

An electronic database search of PubMed, Web of Science, Scopus, Lilacs, Embase and Cochrane was conducted up to July 2022. There were no date nor language restrictions. Additionally, the grey literature was searched through Google Scholar and OpenGrey. References of included studies were also manually screened. Only primary studies that included parents and assessed their knowledge, attitude and/or awareness of prevention and/or emergency management of TDIs were included. Case reports and series, letters to the editor and secondary research were excluded. Quality assessment was undertaken using the Joanna Briggs Institute (JBI) critical appraisal checklist.

### Results

- Eight studies (six cross-sectional, one cohort and one not mentioned) were included in this systematic review and were published between 2014–2020 in five countries
- All studies assessed the knowledge of parents except one which evaluated the perception of parents with respect to TDIs

after tooth avulsion including cleaning a soiled tooth was correctly responded by 25–75% of parents. In the meta-analysis, the authors reported 54.5% (95% CI: 50.2–58.8) knowing what to do in the case of avulsion. However, only 25–50% of parents reported they would be able to perform reimplantation of an avulsed tooth and 21.3% (95% CI: 16.8–26.5) were aware of the correct storage medium for an avulsed tooth

- 25–75% of parents were able to correctly identify an injured tooth
- The strength of the evidence was graded to be very low using GRADE.

### Conclusions

The authors concluded:

‘...The knowledge of the parents regarding the emergency management of TDI was found to be inadequate...’

### Commentary

This systematic review and meta-analysis pooled results from multiple studies in different countries. Parental knowledge and perception of dentistry, particularly for dental

trauma, would vary substantially between the different populations. Moreover, there was substantial methodological variability (eg interview vs questionnaire), hence the results of this study should be interpreted with caution. However, given the high global incidence of dental trauma in the population, public health interventions to identify trauma and seek appropriate emergency management should be a high priority to mitigate future morbidity and lengthy dental treatment. A robust population-based survey and analysis of record keeping for delayed presentation or incorrect immediate management of dental trauma would provide the evidence needed to identify this gap in knowledge in the population.

### References

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