

How to Cite:

Singh, P., Upadhyay, M., Agarwal, S., Ahmad, S., & Srivastava, M. (2022). Management of dental trauma by school teachers of private and government schools in Lucknow City. *International Journal of Health Sciences*, 6(S1), 12135–12143. <https://doi.org/10.53730/ijhs.v6nS1.8039>

Management of dental trauma by school teachers of private and government schools in Lucknow City

Dr. Pallavi Singh

Reader, Department of Public Health Dentistry, Saraswati Dental College, Lucknow.

Corresponding author email: Email-id: pallavirolisingh@gmail.com

Dr. Meenakshi Upadhyay

Reader, Department of Pediatric and Preventive Dentistry, Saraswati Dental College, Lucknow.

Dr. Shaifali Agarwal

Senior Lecturer, Department of Pediatric and Preventive Dentistry, Saraswati Dental College, Lucknow.

Dr. Shomaila Ahmad

Senior Lecturer, Department of Oral & Maxillofacial Pathology and Microbiology, Saraswati Dental College, Lucknow.

Dr. Madhulika Srivastava

Reader, Department of Pediatric and Preventive Dentistry, Manav Rachna Dental College, Faridabad.

Abstract--Introduction: Smile reveals an individual's self- confidence. It is also a means of socialization where teeth play a vital role in a pleasant smile. Dental trauma is described in the literature as a common problem among children and adolescents throughout the world where teacher plays a major role in managing dental trauma. Aim: The aim of this study was to evaluate school teacher's knowledge regarding emergency management of dental trauma in Lucknow city. Materials and Methods: The present study was conducted among the teachers of both private and government schools of Lucknow city, Uttar Pradesh and they were selected using cluster random sampling method. A pretested or predesigned questionnaire was used in the study which was divided into four parts. Statistical analysis of the study was done using SPSS software version 17.0 and the data was analysed using descriptive statistics. Results: It was found that 100% of the respondents had received first aid component in their teacher training but none of the respondents had covered the management of

traumatic dental injuries in their first aid course. 55.6% of the respondents had come across soft tissue injury in children while 44.4% had come across hard tissue injury. Conclusion: Based on the information collected from this study, it can be concluded that, there is lack of knowledge in the management of traumatic dental injuries in school teachers of Lucknow city.

Keywords--Traumatic Dental Injuries, School Children, School Teachers, Soft tissue Injuries, Hard Tissue Injuries.

Introduction

Smile reveals an individual's self-confidence. It is also a means of socialization where teeth play a vital role in a pleasant smile and also contributes to each individual's well-being and quality by positively affecting physical and mental well-being, appearance and interpersonal relationship. In every community or country, children play most important role as they are the heart of socioeconomic development. Children spend considerable period of time in the school right through childhood and adolescence. The school plays a vital role in the growth of young minds and also is an ideal place for learning new information.¹

Dental trauma is described in the literature as a common problem among children and adolescents throughout the world.^{2,3} Several epidemiological studies show that the majority of traumatic dental injuries in school-aged children occur at home or at school.^{4,5} The prognosis of an dental injury depends upon prompt and appropriate treatment which often relies on lay people such as the children's parents and their school teachers who are present when the accident happens.^{6,7}

Teachers represent a significant resource in implementing the recommendation for the use of alternative personnel in the struggle against preventable diseases such as oral diseases. However, they have limited knowledge regarding the recommended course of action in such situations.⁸ It is therefore of fundamental importance for teachers to be duly informed concerning the correct first-aid measures. Considering above points, the present study was undertaken with the aim to evaluate school teachers knowledge regarding emergency management of dental trauma in Lucknow city.

Materials and Method

The present study was conducted among the teachers of both private and government schools of Lucknow city, Uttar Pradesh. The school teachers were selected using cluster random sampling method. An individual teacher was a unit of analysis among all the teachers in the study. The survey was scheduled in the respective school premises in the month of May 2019.

Assuming 80% power and 5% significance level (Prasanna et al, 2011)⁹, the required sample size calculated was 292. The teachers available on the day of study were included in the study. The teachers not willing for the participation were not included in the study. The objectives of the study were explained to all

the school teachers who participated in the study and also informed consent was obtained from all teachers.

Permission for the study was obtained from the concerned authorities. The concerned authorities of the selected schools were appraised of the study before taking their permission. A pretested or predesigned questionnaire was used in the study. The questionnaire used in the study was similar to the questionnaire used in a study conducted by Pujita C et al (2013).¹⁰ The questionnaire was divided into four parts. The first part consisted of questions on personal and professional data including age, sex, teaching experience and first aid training background. The second part contained general questions assessing their previous knowledge on traumatic dental injuries. The third part contained four questions on soft tissue injuries. The fourth part contained hard tissue injuries which included questions on knocked out teeth, fractured crown, mobile teeth. All the questions used in the questionnaire were close-ended. The respondents were asked to tick the most appropriate answer from the given list of answers, in order to assess their knowledge and attitude. Filled questionnaire were collected on the same day.

A report was prepared and given to the Head of the school. The report comprised of survey findings, number of teachers involved and the observations of the examiner. The completed proformas was statistically analysed. Statistical analysis of the study was done using SPSS software version 17.0. Questionnaires were collected from school teachers and the data was analysed using descriptive statistics.

Results

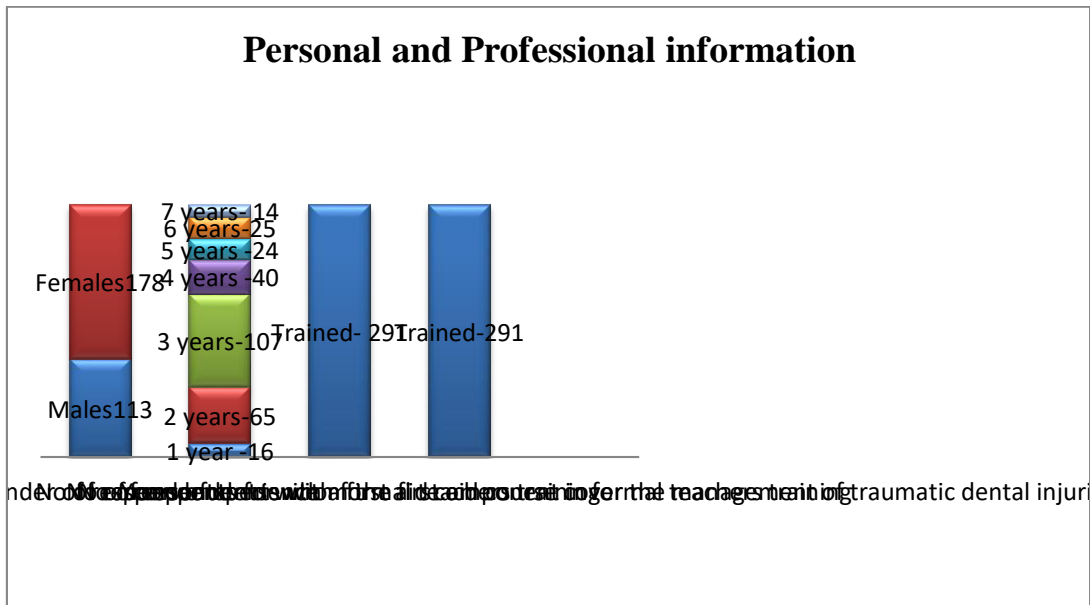
On examination Figure 1 represents that more than half (61.2%) of the subjects were females. Only 4.8% of the respondents were having experience of 7 years. 100% of the respondents had received formal teacher training but none of the respondents had covered the management of traumatic dental injuries in their first aid course. Figure 2 represents that 56.1% of the respondents had experienced in managing trauma cases while 43.9% did not experienced any trauma cases. In which 55.6% of the respondents had come across soft tissue injury in children while 44.4% had come across hard tissue injury.

Figure 3 represents that 45.0% of the respondents had found lip injury to be the most common soft tissue injury in which 67.0% of the respondents apply an ointment/ dettol/spirit on soft tissue tears while 33.0% visit a dentist.

Figure 4 a ,b represents that 60.1% of the respondents come across hard tissue injuries that is knocked out teeth at every 6 months followed by 24.4% of the respondents at every 9 months. 45.7% of the respondents do not know what to do with the knocked out tooth while 37.9% of the respondents rinse the tooth under the tap water when it has fallen into the ground and then replant a tooth back into its socket.

Figure 5 represents that 55.0% of the respondents had come across the fractured crown at every 6 months followed by 34.3% at every 9 months. 68.4% of the respondents thinks that fractured segment of the crown to the dentist is

beneficial. Figure 6 represents that 45.0% of the respondents come across this situation at every 12 months followed by 43.0% of the respondents come across at every 9 months in which 89.7% of the respondent contact parents and advice them to send child to the dentist and 10.3% of the respondents are not sure what to do.



nd No of people who know first aid procedure for the treatment of traumatic dental injury

Figure: 1

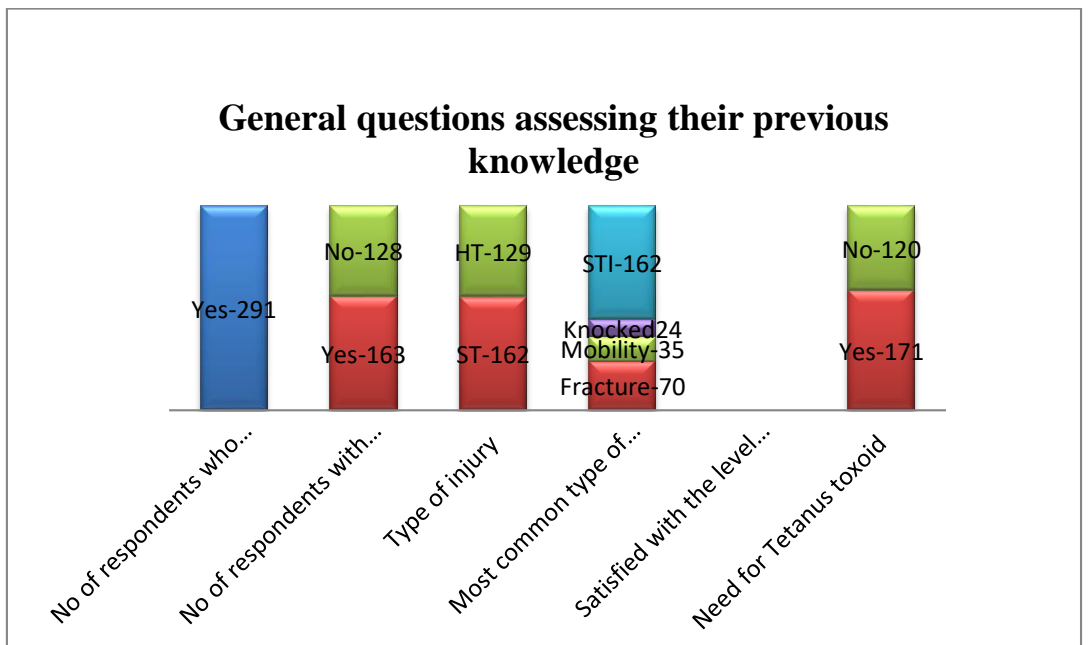


Figure: 2

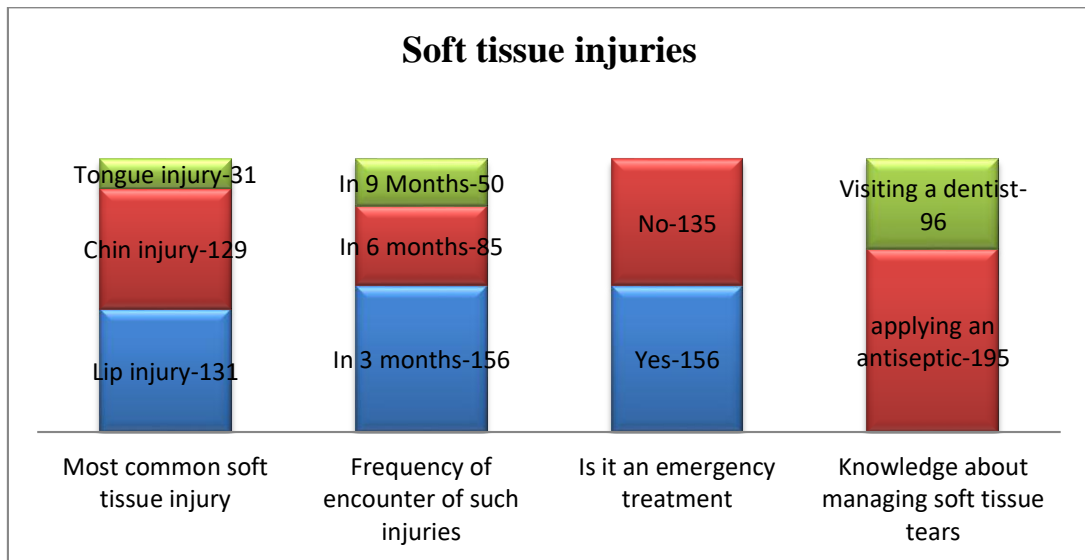


Figure: 3

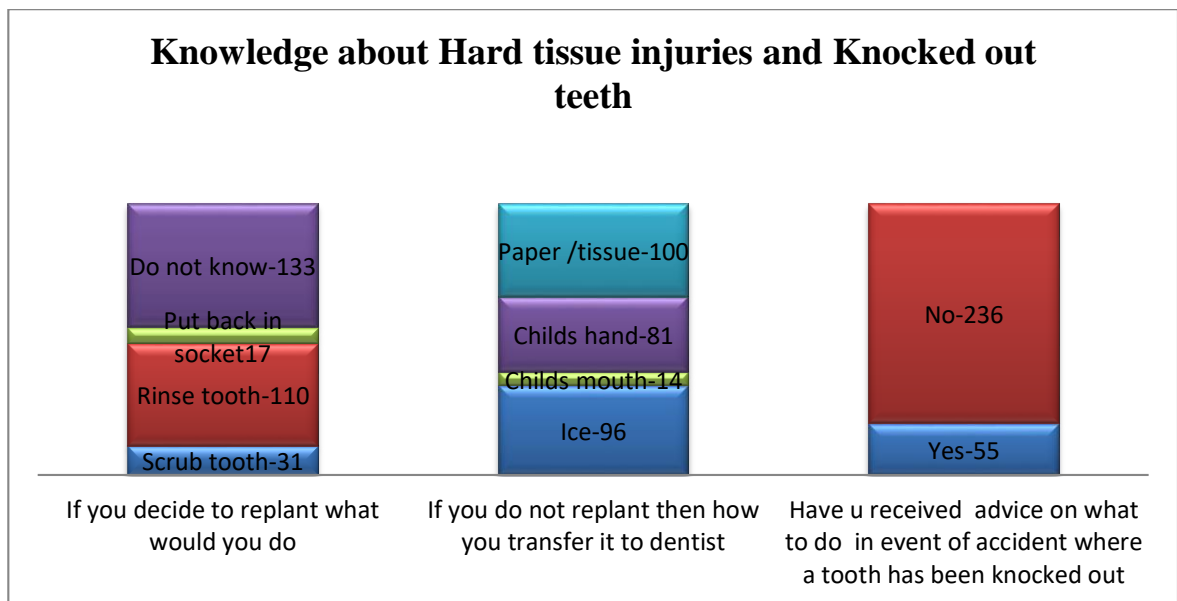


Figure: 4 (a)

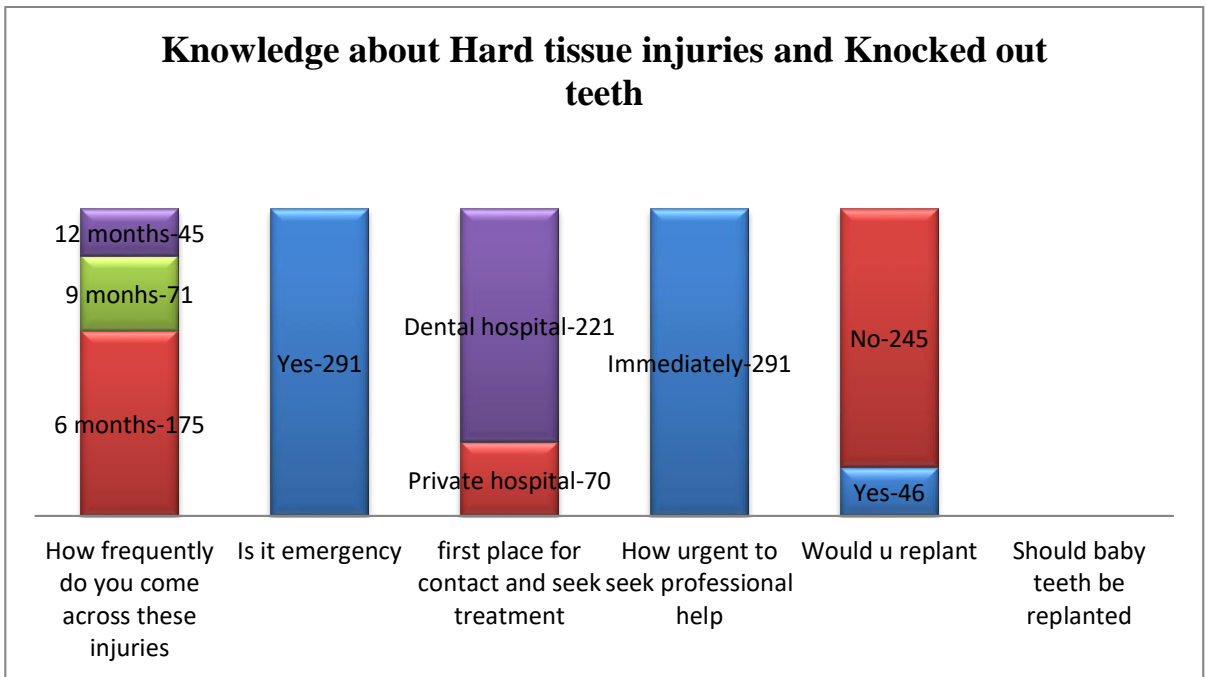


Figure: 4(b)

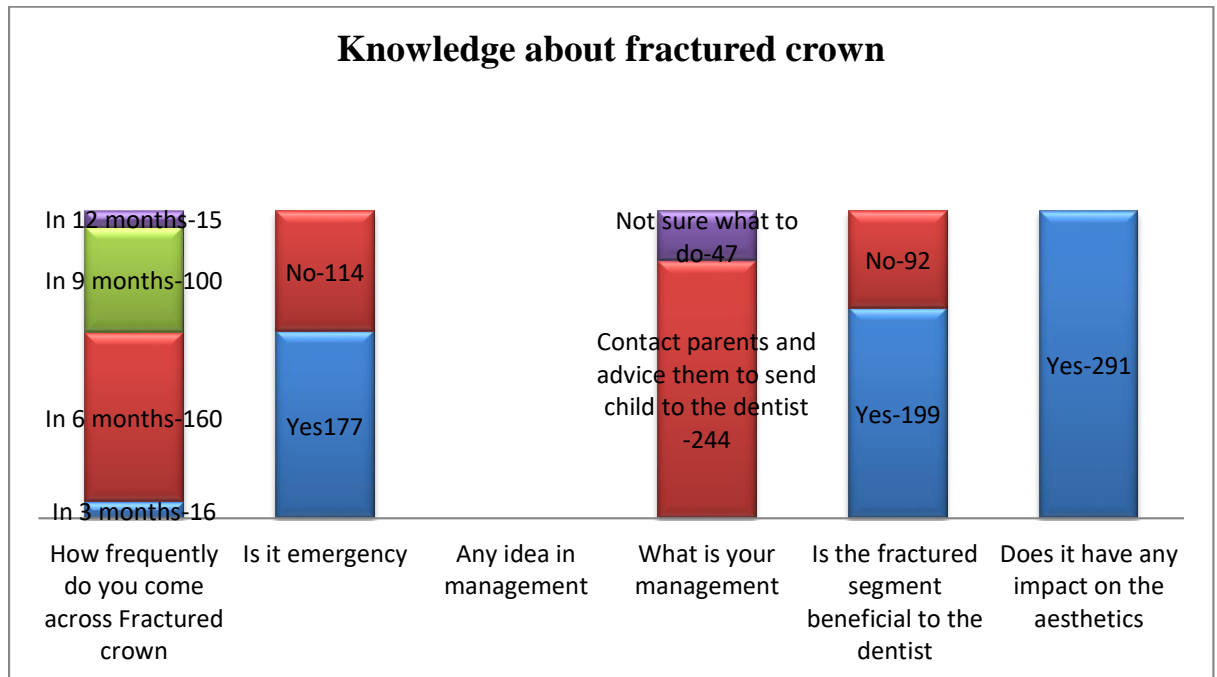


Figure: 5

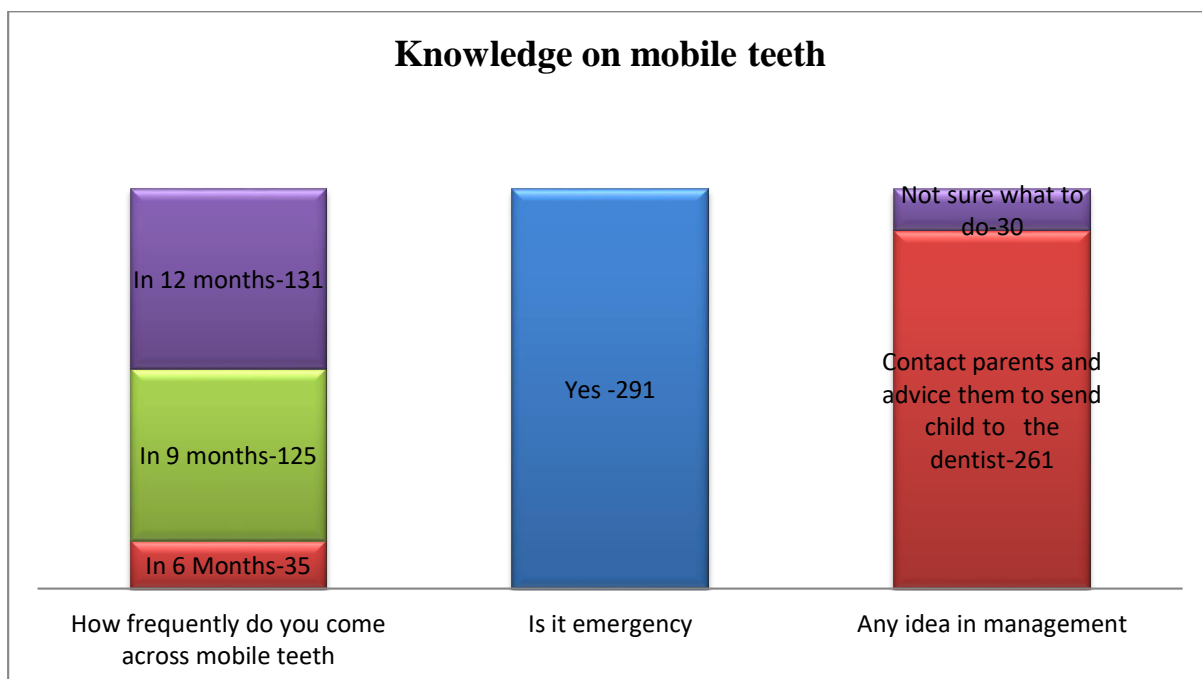


Figure: 6

Discussion

Majority of the respondents (86.3%) had less than 5 years of teaching experience. The results are similar to the results of a study conducted by Mohandas U and Chandan GD in Bangalore¹¹ (2009). All the teachers (100%) had received first aid training. In similar studies conducted in Hong Kong¹², United Kingdom¹³ and Bangalore¹¹, it was seen that the corresponding figures were 99.4%, 57.8% and 95% respectively. None of the respondents had covered emergency management of dental trauma in their first aid course which indicates that management of dental injuries is not given much importance in the curriculum which was similar with the study conducted by Subramaniam R et al in (2011).¹⁴

The present study found that 53.6% of the teachers knew the importance of emergency management of soft tissue injuries which is similar with the study conducted by Pujita C et al (2013).¹⁰ Though many teachers knew that knocked out (avulsed) teeth come under emergency treatment, the concept of management of avulsed teeth has not been fully understood. From the teachers interviewed, it was disappointing to find that very less percentage (15.8%) of teachers had knowledge for the replantation of knocked out permanent teeth. This is supported by a study done in Singapore, which stated that people have poor knowledge regarding the replantation of permanent and primary teeth.¹⁵

In the present study, only 4.8% teachers had the knowledge to store the avulsed tooth in appropriate media such as patients own saliva. A total of 33% responded that they will put the avulsed tooth in ice and 34.4% responded to put the tooth in paper/ tissue/clean hankerchief. In contrast, in another study teachers of

Porto Rico statistically had more correct answer for transportation media for avulsed tooth.¹⁶ In a study by Raphael and Gregory, only 5% respondents knew that milk was medium of choice for both washing and transporting avulsed tooth.¹⁷

In the present study, 100% of the respondents thinks that fractured teeth can really have an impact on the aesthetics and the possibility of reattachment of the fractured crown part which is analogous with the study conducted by Pujita C et al (2013).¹⁰ Our survey also showed that majority of teachers personally think that mobile teeth come under an emergency treatment, which is probably because the teachers knew that the mobile teeth may interfere with mastication frequently and is often painful which is supported by the study conducted by Pujita C et al (2013).¹⁰

Conclusion

The general conclusion of many international studies dealing with this topic is that school staff have little knowledge related to handling of Traumatic Dental Injuries. Based on the information collected from this study, it can be concluded that, there is a lack of knowledge in the management of Traumatic Dental Injuries in school teachers of Lucknow city. They do not feel capable of immediate management of Traumatic Dental Injuries by themselves.

Financial support and sponsorship

Nil.

Conflicts of interest

There is no conflicts of interest.

References

- 1) Mahmoud K, Ahed M, Khaled N. Oral health attitudes, knowledge and behaviour among school children. *J Dent Education* 2006; 70: 179-87.
- 2) Baghdady VS, Ghose LJ, Enke H. Traumatized anterior teeth in Iraqi and Sudanese children-a comparative study. *J Dent Res* 1981 Mar;60(3):677-80.
- 3) Ravn JJ. Dental injuries in Copenhagen schoolchildren, school years 1967-1972 *Community Dent Oral Epidemiol* 1974;2(5):231-45.
- 4) Sgan-Cohen HD, Yassin H, Livny A. Dental trauma among 5th and 6th grade Arab schoolchildren in Eastern Jerusalem. *Dent Traumatol* 2008 Aug;24(4):458-61.
- 5) Andreasen JO, Andreasen FM. Essentials of traumatic injuries to the teeth. 2nd ed. Copenhagen: Munksgaard Mosby; 2000. p. 115-31.
- 6) Adreasen JO. Effect of extra-alveolar period and storage media upon periodontal and pulpal healing after replantation of mature permanent incisors in monkeys. *Int J Oral Surg* 1981 Feb;10(1):43-53.
- 7) Andreasen JO, Kristerson L. The effect of limited drying or removal of the periodontal ligament. Periodontal healing after replantation of mature permanent incisors in monkeys. *Acta Odontol Scand* 1981;39(1):1-13.

- 8) Blakytyn C, Surbutis C, Thomas A, Hunter ML. Avulsed permanent incisors: knowledge and attitudes of primary school teachers with regard to emergency management. *Int J Paediatr Dent* 2001 Sep;11(5):327-32.
- 9) Prasanna S, Giriraju A, Narayan NL. Knowledge and attitude of primary school teachers toward tooth avulsion and dental first aid in Davangere city: A cross-sectional survey. *International journal of clinical pediatric dentistry* 2011; 4(3): 203-206.
- 10) Pujita C, Nuvvula S, Shilpa G, Nirmala S, Yamini V. Informative promotional outcome on school teachers' knowledge about emergency management of dental trauma . *J Conserv Dent* 2013;16:21-7
- 11) Mohandas U, Chandan GD. Knowledge, attitude and practice in emergency management of dental injury among physical education teachers: A survey in Bangalore urban schools. *J Indian SocPedodPrev Dent* 2009;27:242-8.
- 12) Chan AW, Wong TK, Cheung GS. Lay knowledge of physical education teachers about the emergency management of dental trauma in Hong Kong. *Dent Traumatol* 2001;17:77-85.
- 13) Blakytyn C, Surbutis C, Thomas A, Hunter ML. Avulsed permanent incisors: knowledge and attitudes of primary school teachers with regard to emergency management. *Int J Paediatr Dent* 2001 Sep;11(5):327-32.
- 14) Subramaniam R, Mittal S, Hiregoudar M et al- Knowledge of upper primary and secondary school physical education instructors in Davangere city, India, about emergency management of dental trauma: *J Educ Ethics Dent* 2011;1:18-23.
- 15) Sae-Lim V, Lim LP. Dental trauma management awareness of Singapore pre-school teachers. *Dent Traumatol* 2001;17:71-6.
- 16) Al-Jundi SH, Al-Waeili H, Khairalah K- Knowledge and attitude of Jordanian school health teachers with regard to emergency management of dental trauma. *Dent Traumatol* 2005:183-87.
- 17) Hu LW, Prisco CRD, Bombana AC. Knowledge of Brazilian general dentists and endodontists about emergency management of dentoalveolar trauma. *Dent Tramamol* 2006;22:113-17.