

Original article:

Study of assessment of knowledge and attitude of school teachers regarding the emergency management of avulsed permanent teeth

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Abstract:

Introduction: Awareness amongst general public regarding traumatic dental injuries have been assessed by number of studies. As the age range for avulsion of permanent incisors varies from 7 to 9 years, a period in which children are mainly supervised by parents and school teachers, most research are carried on them. Immediate attention is required to improve the prognosis for tooth re-implantation. Most often such injuries happen to children at school premises, the role of supervising persons, mainly teachers become crucial in successfully managing the tooth avulsion victim.

Methodology: Public and private school teachers with more than 10 years of teaching experience were selected from schools present in Pimpri Chinchwad was our data source.

Results: 54% private school teachers and 60% public school teachers say the option 1 that is napkin. And 26% of private and 14% of public school teachers select the option two that is tap water. (P=0.017) not significant.

44% of private school teachers and 20% public school teachers gives the option one. That is, they inform the family and immediately arrange for the transfer of the child to a dentist and 52% of public school teachers prefer the answer two that is they inform the family and immediately arrange for the transfer of child to home. (P value=0.36) not significant. Majority of school teachers were not aware about first aid treatment. 98% of private and 98% of public school teachers says no. (P value=1.00) the value is significant.

Conclusion: Our research reveals that there is insufficient awareness on tooth avulsion in teachers from Pimpri Chinchwad City.

Introduction:

Awareness amongst general public regarding traumatic dental injuries have been assessed by number of studies. As the age range for avulsion of permanent incisors varies from 7 to 9 years, a period in which children are mainly supervised by parents and school teachers, most research are carried on them. Immediate attention is required to improve the prognosis for tooth re-implantation. Most often such injuries happen to children at school premises, the role of supervising persons, mainly teachers become crucial in successfully managing the tooth avulsion victim. Based on the need for immediate actions intended for better tooth reimplantation prognosis, the main purpose of this research was to evaluate, by a questionnaire format pattern the knowledge and attitude of school teachers in Pimpri Chinchwad in managing the child with traumatic tooth avulsion at the earliest. ¹

Methodology:

Public and private school teachers with more than 10 years of teaching experience were selected from schools present in Pimpri Chinchwad was our data source.

Method of data collection

- ❖ Sampling technique – Not applicable.
- ❖ Sample size – 100
- ❖ Inclusion criteria:
 - School teachers teaching the children in the age group of 7 to 12 years.
 - School teachers belonging to both the gender.
 - School teachers having teaching experience 10 or more than 10 years.
- ❖ Exclusion criteria:
 - School / school teachers who do not wish to participate in the survey.
- ❖ Formation of questionnaire:(Annexure 6 page no 57)
 - The questions in the survey were broadly classified under the knowledge and attitude category.
 - The questions were initially drafted using studies mentioned in literature.
 - The questions were then modified to get the best comprehension with related option to suit the Indian scenario.
 - The validations of the questions were further carried out in the following manner
 - Face validation from 2 to 3 experts
 - Content validation (from 10 experts)

After validation, final questionnaire consisted of 13 questions

 - Translation of questionnaire in Marathi
 - Back to back translation
 - Pre-testing on 5 twelve-year subjects.
 - Pilot study on 10 teachers.

Assessment scale for the knowledge and attitude towards dental avulsion of school teacher was done with standard questionnaire. The data will be analyzed using SPSS ver. 15 software (statistical package for social sciences).

CORRECT ANSWER	KNOWLEDGE SCALE
Up to 2	Poor
2 to 4	Fair
More than 4	Good

CORRECT ANSWER	ATTITUDE SCALE
Up to 3	Bad
More than 3	Good

Results:

Questionnaires were given to a total of 100 school teachers selected by random sampling method. 50 teachers each from public and private schools all of them teaching the children in the age 7 to 12 age group. The data so collected was subjected to statistical analysis.

Response of school teachers when asked if the tooth falls on the ground and gets dirty what should they do. In that majority of school teachers prefer the option one wash with tap water. 38% of private and 40% public school teachers uses tap water. 48% of public school teachers says do not wash and store it dry. (P value=0.024 not significant)

Response when asked what they think a tooth that is knocked out can be replanted.

Response of school teachers when asked what they think a tooth that is knocked out can be replanted. In that 28% of private school teachers and 12% of public school teachers says yes, and 30% of private and 70% of public school teachers says no. Also 22% of private and 18% of public school teachers don't know about replantation. (P value=0.001 significant)

30% private school teachers and 58% public school teachers prefer the option 3 that is within few hours. 32% of private and 16% of public school teachers says the option one that is immediately. (P value=0.012) that is significant.

54% private school teachers and 60% public school teachers say the option 1 that is napkin. And 26% of private and 14% of public school teachers select the option two that is tap water. (P=0.017) not significant.

44% of private school teachers and 20% public school teachers gives the option one. That is, they inform the family and immediately arrange for the transfer of the child to a dentist and 52% of public school teachers prefer the answer two that is they inform the family and immediately arrange for the transfer of child to home. (P value=0.36) not significant

Majority of school teachers were not aware about first aid treatment. 98% of private and 98% of public school teachers says no. (P value=1.00) the value is significant.

Discussion:

Tooth avulsion in 7-12 years-old can be a relatively common occurrence. Since children spend most part of their day in school, teachers are the most likely responsible adults to first manage dental trauma cases. Some studies have discussed the academic teacher's knowledge on first-aid procedures in cases of teeth avulsion. while others have specifically discussed the knowledge of physical education teachers.^{2,3} This is because, during their classes, the student could be more exposed to oral and facial trauma. Past studies have demonstrated that teachers have insufficient knowledge of first-aid care for dental avulsion. This study is designed to compare and assess the attitude and knowledge of both public and private school teachers of Pimpri Chinchwad in managing the child with

traumatic tooth avulsion at the earliest and to compare the awareness among public and private elementary school teachers. A questionnaire of total 13 questions written in English and local language (Marathi), was distributed amongst school teachers of public and private schools of Pimpri Chinchwad city. Then the school teachers were asked to choose the most appropriate option from their point of view in the list of options given and filled questionnaires were collected. Response obtained was then tabulated and analyzed statistically.

The present survey included 100 school teachers equally divided from private and public sector. Theoretically better qualified teachers (teachers with post-graduation) and teachers with longer service records have higher probability of witnessing dental avulsion cases and may know the correct procedure to be followed. In present study 90% of private school teachers and 80% of public school teachers gave history of witnessing tooth avulsion. But teachers from both the groups told that they were unable to differentiate between the deciduous and permanent teeth. A similar study conducted by Gisele AH et al.³ in 100 elementary school teachers at Curitiba, capital city of the state of Parana, Brazil has reported that 39% of private school teachers and 15% of public-school teachers reported tooth avulsion in school children. Few other studies reported 23-25% exposure to dental avulsion by school teachers.^{4,5} Pacheco et al.⁶ who have reported that 11.7% of school teachers in Rio de Janeiro, Brazil had an experience of dental avulsion. When the study sample was asked whether they had completed training course in emergency management of dental trauma in a child, the response was disappointing. 85% of teachers in the present study had not received any information about training course in emergency management of dental trauma in a child. In 2005, Caglar et al.⁷ conducted study in two cities of South Europe and he reported that 74% of teachers had not received any training course in emergency management of dental trauma in a child. This data is indicative of lack of awareness in school teachers. Contradictory results have been obtained in the Studies conducted in Hong Kong by Chan AWK et al. (2001), United Kingdom by Blakytyn C et.al. (2001) and Bangalore by Mohandas U et al.^{8,9} (2009). It was seen that 99.4%, 57.8% and 95% teachers received the training course in emergency management of dental trauma in the respective studies. This promising finding is because of the fact that these studies were done on physical education teachers and first aid training is the part of their curriculum.

Both private school teachers and public-school teachers, had not received the training course in emergency management of dental trauma in a child. But compared to private school teachers public school teachers are more enthusiastic for taking training in the management of dental trauma.

Outcomes of this research revealed that the level of knowledge of school teachers from Pimpri Chinchwad to do emergency management of dental trauma is not sufficient. Gisele AH et al.³ also reported the similar results with 73% private and 95% public school teachers did not know how to proceed in dental avulsion cases respectively. In a study conducted in the city of Cardiff, only one third of the teaching staff had received training course in emergency management of dental trauma in 31 institutes having a total of 388 teachers.¹⁰ In 1989, community dental services landed a campaign to distribute posters to various venues involving schools too. Over 2 lakh posters were distributed around 1996.

The ideal management of avulsed teeth is generally thought to be immediate reimplantation, as it will result in very little damage to root surface cells.⁵³ Before reimplantation, the tooth should be cleaned with saline solution and some authors also prefer running tap water only when visible dirt is observed at the site of accident.

Conclusion:

Our research reveals that there is insufficient awareness on tooth avulsion in teachers from Pimpri Chinchwad City.

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