

Brief Communication

Knowledge of Primary School Teachers about the Management of Dental Trauma in Kermanshah, 2012

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Abstract

Timing and the performance are important factors in the management of dental trauma. The present study was conducted to determine knowledge and effect of demographic factors of primary school teachers in Kermanshah on the management of dental trauma. In this descriptive cross-sectional study, 145 randomly selected primary school teachers were investigated. A self-administered questionnaire was used to collect the data. Data were analyzed by SPSS 17 software. Findings of this study indicated that knowledge of the primary school teachers about the management of dental trauma was insufficient and no significant relationship was observed between gender, experience, academic rank, the number of exposures to dental trauma and the teachers' knowledge regarding the management of the avulsed or fractures teeth ($P>0.05$). We recommend in-service training courses and updating the teachers' information for the management of dental trauma.

Keywords: Tooth fracture, Emergency treatment, Knowledge

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Introduction

Occurrence of dental trauma during daily activities is abundantly increasing. Effective preventive and therapeutic measures have been taken in developed countries. Dental trauma are classified as very painful trauma and is the main cause of referral to dental emergency room, regardless of gender and age (1).

The most serious traumatic dental injury is dental avulsion. It is estimated that dental avulsion includes 0.5-16 percent of all dental traumas (2). Dental trauma can result in remarkable physiological, psychological and financial problems, which consequently lead to negative

impacts on the quality of people's life, especially among children (3).

About half of all dental traumas in children happen during school hours (4, 5). Marcense et al. (6) reported that from every five school children, one suffers from dental trauma. It is necessary for the teachers to be aware of such happening. Thus, the school staff, especially teachers should be knowledgeable about the management and primary treatment of dental trauma. The present study was intended to investigate the knowledge and effect of demographic factors of primary school teachers in Kermanshah regarding the management of dental trauma.

Methods

In this descriptive cross-sectional study, we included 145 primary school teachers of Kermanshah in 2012 that were randomly selected. To collect the data, a self-administered questionnaire was applied. To assess the validity of the questionnaire we calculated content validity. Based on the scientific references and the views of five faculty members of School of Dentistry, we formulated the questionnaire that was included all objectives of the study. To assess the reliability of the questionnaire, a sample of 40 teachers answered the questionnaire. Chronbach's alpha coefficient was 0.66 which indicated an acceptable index.

The questionnaire for the demographic information of the teachers included age, sex, experience, academic level, the number of exposures to dental trauma, source of obtaining information as well as technical questions that were classified into three groups of fracture with pulp involvement, fracture without pulp involvement and dental avulsion. The number of correct responses were considered as the criteria for evaluation of knowledge; less than 5 correct responses (poor knowledge), 5 to 8 correct responses (moderate knowledge) and more than 8 correct responses (good knowledge).

All the participants signed the written consent. Data were analyzed by SPSS 17 using descriptive statistics, including frequency, mean, standard deviation, t-test and one-way ANOVA. $P < 0.05$ considered as significant.

Results

Out of 145 primary school teachers, 73 (50.5%) of them were female. The mean age of the male and female teachers was 38.2 ± 9.3 and 36.1 ± 6.6 years, respectively. 50 (34.5%) of the teachers had associate degree, 71 (49%) had bachelor degree and 24 (16.5%) had master or higher degree. 69 (47.6%) of the teachers had 1-10 years experience, 57 (39.3%) 10-20 years of experience and 19 (13.1%) had 20-30 years of experience. Less than 40% of the teachers answered 8 questions out of 12 questions correctly.

103 teachers reported history of exposure to dental trauma; 30 (20.7%) cases once, 41 (28.3%) twice and 32 (22.1%) three times or more. Moreover, 117 (80.7%) of the teachers reported that they had previously acquired some information about dental trauma, 42 (36%) through attending training courses, 34 (29%) via newspaper and 41 (35%) via radio or television. However, no significant association was found between sex, having children, academic degree, experience, the number of exposures to dental trauma and management of the avulsed tooth ($P > 0.05$).

Discussion

In present study, we examined knowledge of primary school teachers regarding dental traumas and management of these types of occurrences. Our finding was in line with the results of other studies of same objective (4, 7). In the present study, no significant association was observed between demographic factors of the teachers and their knowledge. Also, other studies did not show any significant association between demographic factors of the teachers and their knowledge and performance regarding dental trauma (5, 7).

Furthermore, 71% of the teachers had exposure to dental trauma at least once. In a study conducted by Raouf et al. (8), 61% of the primary school teachers in Kerman reported exposure to dental trauma. Previous exposure to dental trauma is important because a large number of teachers in Kermanshah had the direct experience of dental trauma due to high incidence rate in children (9).

Approximately 80.7% of the teachers in the present study had information about dental trauma. 36% of them acquired this knowledge through the training course held by the education department of Kermanshah province. However, our findings showed that previous information had no effect on the knowledge of the teachers regarding the management of the avulsed or fractured teeth with and without pulp involvement.

Speed in the replacement of the avulsed teeth is the most important factor in preserving the avulsed teeth (10). In this study, 33.8% of the participants considered speed in dental replacement as a pivotal factor. In the study carried out by Hashim (11) on the teachers in Jordan, a high percentage (75%) of the teachers regarded speed in the management of dental trauma as a necessary element.

Moreover, 24.1% of the participants in this study knew that keeping the avulsed teeth in a liquid medium like milk is an appropriate method. This was in line with the results of other studies. Preserving the tooth in a proper liquid medium is vital to save periodontal ligament cells in case it is not possible to rapidly replace the avulsed teeth (8, 9, 12).

Conclusion

Knowledge of teachers about the management of dental trauma was not enough despite their common exposure to dental trauma. Therefore, we suggest that the ministry of health in collaboration with the ministry of education hold in-service training courses for the teachers to enhance their knowledge and performance in emergency dental trauma.

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References

1. Santos ME, Habecost AP, Gomes FV, Weber JB, de Oliveira MG. Parent and caretaker knowledge about avulsion of permanent teeth. *Dent Traumatol.* 2009; 25(2): 203-208.
2. Wilson S, Smith GA, Preisch J, Casamassimo PS. Epidemiology of dental trauma treated in an urban pediatric emergency department. *Pediatr Emerg Care.* 1997; 13(1): 12-15.
3. Traebert J, Peres MA, Blank V, Boell Rda S, Pietruza JA. Prevalence of traumatic dental injury and associated factors among 12-year-old school children in Florianopolis, Brazil. *Dent Traumatol.* 2003; 19(1): 15-18.
4. 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 Soc Pedod Prev Dent.* 2009; 27(4): 242-248.
5. 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(2): 77-85.
6. Marcenes W, Murray S. Changes in prevalence and treatment need for traumatic dental injuries among 14-year-old children in Newham, London: A deprived area. *Community Dent Health.* 2002; 19(2): 104-108.
7. Al-Jundi SH, Al-Waeili H, Khairalah K. Knowledge and attitude of Jordanian school health teachers with regards to emergency management of dental trauma. *Dent Traumatol.* 2005; 21(4): 183-187.
8. Raoof M, Zaherara F, Shokouhinejad N, Mohammadalizadeh S. Elementary school staff knowledge and attitude with regard to first-aid management of dental trauma in Iran :a basic premise for developing future intervention. *Dent Traumatol.* 2012; 28(6): 441-447.
9. Al-Obaida M. Knowledge and management of traumatic dental injuries in a group of Saudi primary schools teachers. *Dent Traumatol.* 2010; 26(4): 338-341.
10. Souza BD, Luckemeyer DD, Reyes-Carmona JF, Felipe WT, Simoes CM, et al. Viability of human periodontal ligament fibroblasts in milk, Hank's balanced salt solution and coconut water as storage media. *Int Endod Journal.* 2011; 44(2): 111-115.
11. Hashim R. Dental trauma management awareness among primary school teachers in the Emirate of Ajman, United Arab Emirates. *Eur J Paediatr Dent.* 2011; 12(2): 99-102.
12. Toure B, Benoist FL, Faye B, Kane A, Kaadioui S. Primary school teachers' knowledge regarding emergency management of avulsed permanent incisors. *J Dent (Tehran).* 2011; 8(3): 117-122.