

Knowledge and attitudes of early school teachers regardless of alveolar-dental trauma first aid management.

Conhecimento e atitudes de professores de educação infantil frente a Traumatismo alvéolo-dentário.

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Abstract

Alveolar-dental trauma occurs with high incidence during childhood and the elementary school is identified as a place where most of this type of trauma occurs. Considering that school teachers are the ones who provide immediate emergency aid, the present study aimed to verify the knowledge about alveolar-dental trauma and attitudes of teachers of early childhood education in the municipality of Araçatuba, Brazil. All municipal elementary schools (32) were invited to participate in this study, the instrument of data collection was a semi-structured, self-administered questionnaire. The data obtained from questionnaires completed by 126 teachers was tabulated, calculated and statistically analyzed using Epi Info™ 6.04 Software. The results showed that 26% of teachers would not know how to perform an emergency treatment in case of alveolar-dental trauma and when asked about what would they do in case of the avulsion of a tooth and how would they preserve it, the approach of 28% teachers would lead to unfeasibility to immediate replantation of the tooth, only 2.2% of the teachers said they had received instructions on emergency procedures in case of dental trauma and 96.8% did not feel prepared to act in such situation. The study revealed that most teachers had little knowledge about the studied subject and felt unprepared to face dental trauma emergencies.

Keywords: Tooth Injuries; health education; school Health; tooth avulsion.

Resumo

O traumatismo alvéolo-dentário ocorre com grande incidência na infância e a escola é identificada como um local com alta frequência nesse tipo de traumatismo, sendo que muitas vezes o atendimento imediato da criança nesse local é feito pelo professor. Assim se fez necessário

um estudo para verificar o conhecimento e atitudes dos professores de educação infantil no município de Araçatuba-Brasil, frente a traumatismo alvéolo-dentário. Todas as escolas (32) de educação infantil da rede municipal de ensino foram convidadas a participar desse estudo, o instrumento de coleta de dados foi um questionário semiestruturado, autoaplicável. Os dados obtidos a partir de 126 questionários respondidos pelos professores foram tabulados, apurados e analisados estatisticamente através do software Epi Info 6.04. Os resultados demonstraram que 26% dos professores não saberiam como realizar um pronto atendimento em caso de traumatismo alvéolo-dentário e quando questionado no caso de avulsão de um dente, em que meio eles acondicionariam o dente 28% respondeu de forma que o tecido dentário seria inviabilizado para um reimplante imediato, somente 2,2% dos professores da amostra afirmaram ter recebido instruções sobre procedimentos de urgências em trauma alvéolo dentário e 96,8% não se sentem preparados para atender tal emergência. Sendo assim verificou-se que os professores possuem pouco conhecimento sobre o tema abordado, e estão insatisfeitos e despreparados para atender urgências em trauma alvéolo dentário.

Descritores: Traumatismos dentários; educação em saúde; saúde escolar; avulsão Dentária.

INTRODUCTION

The school is a place where children are confined in a relatively small space, facilitating the occurrence of accidents^{1,2}. A large number of severe dental injuries from accidents occur more frequently in schools than elsewhere and the high percentage of alveolar-dental trauma at ages of 02 to 04 years may be due to poorly developed motor skills when the child is learning to walk and explore.

Because most alveolar-dental injuries occur at school and teachers are the first to have contact with the child, is important that these professionals have knowledge about emergency situations management^{4,5,6}.

The lack of knowledge of teachers on the subject and the need to learn more about emergency procedures in alveolar-dental trauma have been cited in previous studies^{7,4}. Thus, it is of fundamental importance to evaluate teacher's knowledge and their attitudes on emergency alveolar-dental trauma treatment once improperly

handled teeth fragments or avulsed teeth might jeopardize tooth reimplantation leading to future treatment failure⁸.

MATERIAL AND METHODS

This is a cross-sectional quantitative research study with kindergarten teachers registered in the Education Department of the Municipality of Araçatuba-SP, Brazil. The study was approved by the Ethics and Research Committee of the Faculty of Dentistry of Araçatuba (process FOA 2007-01843).

A semi-structured, self-administered questionnaire was used to verify teacher's knowledge regardless emergency procedures in case of alveolar-dental trauma.

Data was collected and tabulated using Epi Info™ 6.04 software. A quantitative analysis of closed questions and a qualitative analysis of open questions were performed using the categorization recommended by Bardin⁹.

The term of consent used was clear and

easy to understand, it provided information about the purpose of the research, the procedures, risks, discomforts and benefits, it also guaranteed the confidentiality of data.

RESULTS

All teachers (210) registered in the Early

Childhood Education Department of Araçatuba-SP were invited and 60% (126) agreed to participate.

The entire sample (100%) were female, with age ranging from 20 to 60 years. The length of professional experience and training of participants is presented in Table 01.

Table 1. Frequency distribution according to length of experience and level of training of school teachers from Araçatuba-SP.

Professional experience	Frequency (%)
<10 years	67.53%
11 a 20 years	40.32%
21 a 30 years	16.13%
>31 years	3.2%
Professional training	
Graduation	87.69%
Postgraduation	34.27%
High School	5.4%

The majority (97.8%) of teachers reported that they had no training in emergency dental-alveolar

trauma and (96.8%) did not feel prepared to assist in an emergency situation (Figure 1).

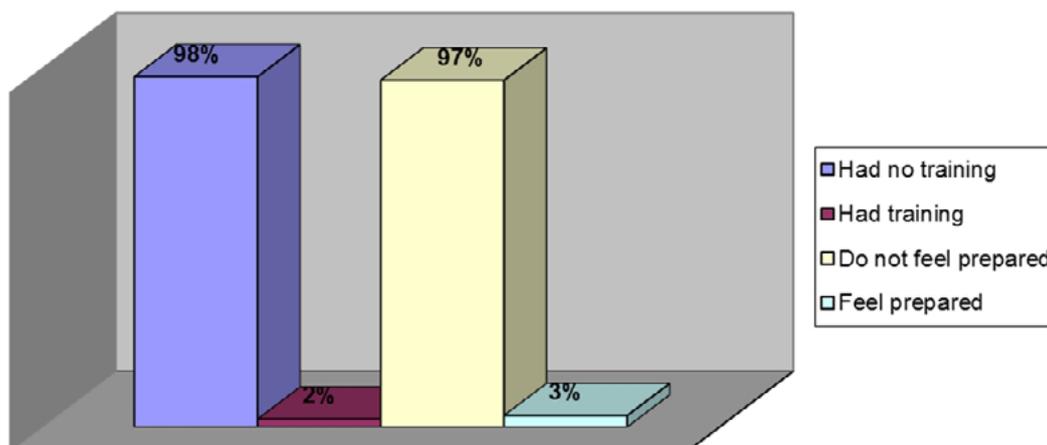


Figure 1. Sample distribution according to the training and preparation of teachers in attending a student on a dental-trauma emergency

Regardless the attitude of teachers in case of a tooth avulsion, 52% said that would take the student to the dentist, 22% would take the student

to their parents and 26% did not know what to do. Regardless tooth storage media, the teacher's choice is presented in Figure 2.

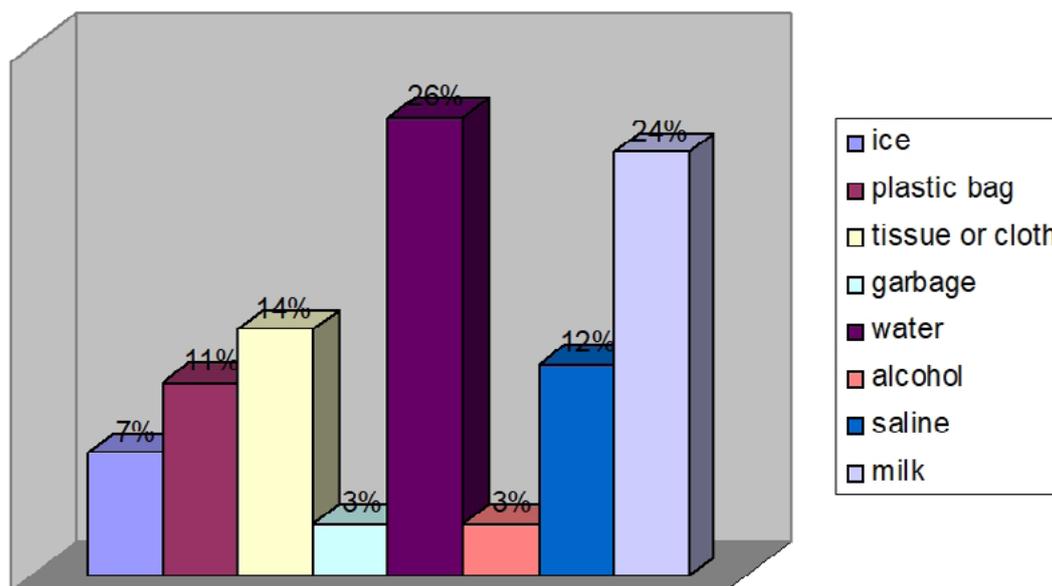


Figure 2. Sample distribution according to the storage media used for avulsed tooth.

DISCUSSION

According to Kahabuka, Plasschaert and Van't Hof³ and Caldas Jr Burgos¹¹, the poorly developed motor skills of children can contribute greatly to the occurrence of dental-alveolar trauma.

When analyzing the data, it was noteworthy that teacher's years of experience and the level of training had no influence on the answers given since 26.8% had post-graduate education, 69.1% had higher education (Table 1), and most of them had between 06 and 20 years of professional experience.

Hamilton Hill and Mackie¹² found that among all teachers who are supposed to be responsible for first aids in schools in England, only 61.8% had first aids training and only 8.1% had specific training for alveolar-dental trauma care. Subsequently, the study of Blakytyn et al¹³ showed that in the United Kingdom 48.5% of teachers attended first aid courses and 29.3% of

these also participated in alveolar-dental trauma first aid training.

In Hong Kong, according to the study of Chan, Wong and Cheng¹⁴, 99.4% of participating teachers received training in first aids, however, only 4.8% received instructions on emergency procedures for alveolar-dental trauma. The present study found that only 2.2% of Brazilian teachers from Araçatuba had received instructions on emergency procedures in dental trauma and 96.8% did not feel prepared to meet such an emergency situation.

Blinkhon² stated that a dental consult is essential after any kind of dental-alveolar trauma, not only those associated with pain or esthetic reasons, and it should be done immediately after the trauma incident in order to maximize the possibility of tissue regeneration¹⁵.

The method of tooth storage after avulsion is directly related to the integrity of the periodontal ligament. Milk, saline, distilled

water, saliva are examples of the ideal storage media for preserving the tooth before dental reimplantation^{16,17}. However, this study showed that 26% of teachers would not know how to proceed in case of alveolar-dental trauma and in regardless tooth avulsion, 28% would choose to store the tooth in a media that would hamper an

immediate reimplantation.

CONCLUSION

The study concluded that most teachers who participated in the survey had little knowledge and were unprepared to face dental-alveolar trauma emergencies.

REFERÊNCIAS

1. Ravn JJ. Dental Injuries in Copenhagen school children, school years 1967-1972. *Community Dent Oral Epidemiol* 1974;(2):231-45.
2. Blinkhorn FA. The aetiology of dento-alveolar injuries and factors influencing attendance for emergency care of adolescents in the North West of England. *Endod Dent Traumatol* 2000;(16):162-5.
3. Kahabuka FK, Plasschaert A, Van't Hof M. Prevalence of Teeth with untreated dental trauma among nursery and primary school pupils in Dar es Salaam, Tanzania. *Dent Traumatol* 2002;(17):109-13.
4. Pacheco LF, Garcia Filho PF, Letra A, Menezes R, Villoria GEM, Ferreira SM. Evaluation of the knowledge of the treatment of avulsions in elementary school teachers in Rio de Janeiro, Brazil. *Dent Traumatol* 2003;(19):76-8.
5. Panzarini SR, Pedrini D, Brandini DA, Poi W, Santos MF, Correa JP. Physical education undergraduates and dental trauma knowledge. *Dent Traumatol* 2005;(21):234-38.
6. Kramer PF, Zembruski C, Ferreira SH, Feldens CA. Traumatic Dental injuries in Brazilian preschool children. *Dent Traumatol* 2003;(19):299-303.
7. Sae-Lim, Lim LP. Dental trauma management awareness of Singapore pre-school teachers. *Dent Traumatol* 2001;(17):71-6
8. Andreasen JO. Challenges in clinical dental traumatology. *Endod Dent Traumatol* 1985;(1):45-55.
9. Bardin L. *Análise de Conteúdo*. Lisboa: Edições 70; 1979.
10. Bastone EB, Freer TJ, McNamar JR. Epidemiology of dental trauma: a review of the literature. *Aust Dental J* 2000;(45):2-9.
11. Caldas Jr AF, Burgos MEA. A retrospective study of traumatic dental injuries in a Brazilian dental trauma clinic. *Dent Traumatol* 2001;(17):250-3.
12. Hamilton FA, Hill FJ, Mackie IC. Investigation of lay knowledge of the management of avulsed permanent incisors. *Endod Dent Traumatol* 1997;(13):19-23.
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 Paediatric Dentistry* 2001;(11):321-32.
14. Chan Awk, Wong TKS, Cheung GSP. Lay Knowledge of physical education teachers about the emergency management of dental trauma in Hong Kong. *Dent Traumatol* 2001;(17):77-85.
15. Andreasen JO, Andreasen FM, Skeie A, Hjorting-Hansen E, Schwartz O. Effect of treatment delay upon pulp and periodontal healing of traumatic dental injuries – a review article. *Dent Traumatol* 2002;(18):116-28.
16. Boyd D, Kinirons MJ, Gregg TA. A prospective study of factors affecting survival of replanted permanent incisors in children. *Inter J Paediatr Dent.* 2000;(10):200-5.
17. Trope M. Clinical management of the avulsed tooth: present strategies and future directions. *Dent Traumatol* 2002;(18):1-11.

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