

# Health Education: Experience Report of Dental Traumatism Lectures for Brazilian Physical Educators

Carolina dos Santos Santinoni<sup>1\*</sup>, Henrique Augusto Banci<sup>2</sup>, Leandro Marcelo Soares Alves<sup>2</sup>, Nathália Evelyn da Silva Machado<sup>2</sup>, Rosana Leal do Prado<sup>2</sup>, Juliane Avansini Marsicano<sup>2</sup> and Graziela Garrido Mori Panucci<sup>2,3</sup>

<sup>1</sup>Dental Course, Federal University of Santa Catarina – UFSC, Brazil

<sup>2</sup>Dental Course, University of Western São Paulo – UNOESTE, Brazil

<sup>3</sup>Medical Course, Research Coordination, University of Western São Paulo – UNOESTE, Brazil

### ABSTRACT

Knowledge about how to deal with dental traumatism is essential for people involved in it, such as athletes and physical educators. Previous research has highlighted the lack of knowledge among physical educators about emergency care for dental trauma, especially tooth avulsion. Thus, the purpose of this study is to report an information campaign about dental trauma for a Brazilian physical education course. A lecture was carried out at University of Western São Paulo – UNOESTE for 132 students, highlighting important behaviors regarding emergency procedures, especially tooth avulsion. Research participants confirmed the importance of carrying out the information offered to prevent future tooth loss and promote oral health.

### \*Corresponding author

Carolina dos Santos Santinoni, Dental Course, Federal University of Santa Catarina – UFSC, Brazil.

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### Introduction

Dental trauma has widely known causes, such as: falls, collisions, car accidents, sports, violence, among others [1,2]. Paiva et al. associated falls as the main etiological factor [1]. The teeth most affected by dental trauma are the upper central incisors, representing 80% of the teeth that suffer trauma, followed by the lateral incisors, upper and lower central and lateral incisors [3-5]. Physical activities are healthy and promote health benefits. It can be performed by the entire population; however, during the practice, individuals are subject to suffering some type of dental trauma, which can cause damage to teeth and soft tissues. Some direct contact sports such as basketball, boxing, football, and volleyball are more exposed to the risk of dental trauma [6].

The most serious dental injury is when the tooth is avulsed, being completely removed from the socket. If tooth avulsion occurs, the tooth must be reimplanted into its socket as quickly as possible with the aim of limiting damage to the periodontal ligament and cementum cells [6-8]. The means of storing the avulsed tooth and the professional's conduct are also significant factors [8].

Dental trauma is one of the main emergencies in dentistry, some studies report that the first 15 to 20 minutes are recommended for reimplantation of the tooth in the socket and the clean tooth must be reimplanted with the root surface intact. If immediate reimplantation is impossible, care must be taken with how the tooth will be stored. Various packaging options according to studies are suggested: milk, saliva, or saline solution [6-10]. Storing the

tooth in water is not recommended due to low osmolarity, as it may cause rapid cell lysis, increasing inflammation after tooth reimplantation [3,11].

Milk has a favorable osmolarity for the viability of periodontal ligament cells, therefore, it is recommended for temporary storage of avulsed teeth before reimplantation. The prognosis is related to damage to the periodontal membrane during the period that the tooth is outside its socket. Dry storage of the tooth can cause irreversible damage to the periodontal ligament, resulting in the loss of the reimplanted tooth over the period [11].

Initial emergency procedures can be performed by anyone at the scene of the accident, not just dental surgeons [12]. For this reason, it is essential that people who have direct contact with sports know how to act if a dental trauma occurs in their presence [6,13-15]. Clarifying and guiding athletes and physical education professionals can be fundamental for promoting oral health in relation to dental trauma, as they are people who may be present in places where dental trauma occurs. These guidelines can be provided through educational campaigns, clarifying how to proceed appropriately and avoid losing the avulsed tooth.

The objective of this study is to report an information campaign on dental traumatism to promote oral health.

### Experience Report

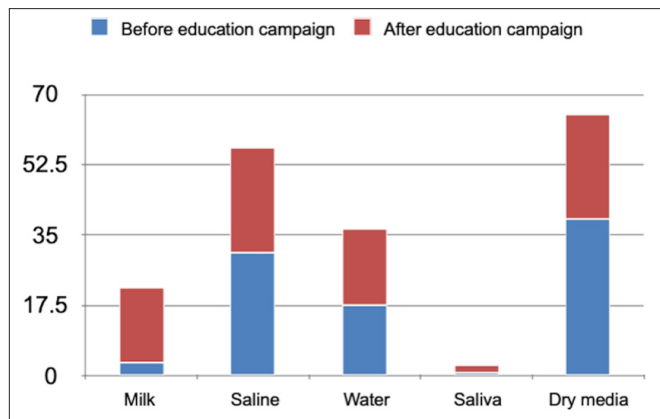
An information lecture was carried out on dental traumatism, addressing the main doubts and difficulties in relation to emergency care. The campaign was based on the use of banners, folders and

a lecture containing clarifying information regarding emergency care for dental trauma, mainly tooth avulsion, adapted from the published work by Mori et al. [12]. Participants were instructed on immediate reimplantation, the appropriate way to wash the avulsed tooth, as well as the means of conservation for this tooth and post-trauma management. Participants were encouraged to discuss their doubts and contribute to everyone's knowledge and learning. Some demographic data were collected for qualitative assessment of the population.

Most participants were male, mean age of 23 years old, cursing third semester at college and played football. Almost half population had experience with personal dental traumatism, with crown fractures being the most common injury. Third percent of the participants affected by dental trauma reported they did nothing about their problem, sought a dentistry professional the day after the dental trauma. Few participants reported they went to the dentist immediately after the accident. Almost all participants affected by trauma had no sequelae.

When asked about first aid training during the course, past 90% of participants responded positively. When asked about dental trauma training during first aid training, the percentage of affirmative responses was low (less than 20%). When asked what they would do if they witnessed a dental trauma, the majority responded that they would calm the victim and seek a health center (half of the participants). A third of the population assessed would take the injured person immediately to the dentist. Before the lecture, around 5% of participants reported that they would not know what to do in these situations, with this percentage dropping to zero after the educational campaign.

When asked about the possibility of reimplanting permanent teeth, more than half of the participants responded that it was possible. When asked what they would do before a tooth reimplant, 50% would not know what to do and around 30% would wash with running water. If reimplantation was not performed, the participant was asked about transporting the avulsed tooth to dental care in specific conversational formats. Suitable media include milk as the first choice, followed by saline, water and saliva. Dry media such as paper, cloth or plastic are not suitable. Below, you can check the percentages of participants' responses before and after the campaign.



**Figure 1:** Percentage of Conservation Means used before and after the Campaign

### Conclusion

Research participants confirmed the importance of carrying out the information offered to prevent future tooth loss and promote oral health.

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