

STUDYING THE KNOWLEDGE AND BEHAVIOR OF PARENTS IN DEALING WITH CHILDREN'S DENTAL INJURIES

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ABSTRACT

Among the most common dental problems in children, we can mention dental injuries that have a significant effect on the child's mental and physical health. Considering the special role of parents in this case, their awareness of emergency measures has a significant effect on the prognosis of this issue. The purpose of the present study was to evaluate the knowledge and performance of parents in dealing with children's dental injuries. In this cross-sectional descriptive study, standard questionnaires were distributed among children's parents. This questionnaire included 4 sections: demographic information, social information, emergency oral and dental injuries, and trauma prevention and control. T-test was used to investigate the relationship between average awareness and gender, and with the ANOVA test, the relationship between the average awareness score of parents with each of the variables of age, education, and number of children was investigated. The average score of parents' awareness was calculated as 3.3 out of 13, and there was no significant difference between mothers and fathers. Also, no significant difference was found between the age of parents and the number of their children with their knowledge. A significant direct relationship was observed between the educational status of parents and the score of awareness of dental injuries (p -value < 0.05). 48% of the parents had not obtained any information about dental injuries, and 88% of the parents wanted to learn first aid about oral and dental injuries. Based on the obtained results, parents' information about dental injuries is insufficient. Providing conditions for parents' training in the field of traumatic injuries can lead to timely and correct action at the scene of the accident, improve the prognosis of treatment and, as a result, reduce possible complications and costs.

Key words: Parents, Children, Dental injuries, Knowledge, Behavior.

Introduction

Dental injuries are one of the most important problems related to oral health in children, which can lead to pain and discomfort. Also, this issue causes fractures, displacement of teeth, or separation and crushing of supporting tissues such as gums and bones. Sudden tooth trauma is very common, and the prevalence of oral dental injury in children up to the age of 15 is reported to be 50-7% [1-3]. According to the studies, oral injuries are the fourth rank of physical injuries among the age group of 7 to 30 years [4-6].

Most of the injuries to the front teeth, especially the front teeth of the upper jaw. Also, due to increased movement and more sports activity in the male gender, boys are twice as vulnerable to injuries as girls [7, 8]. The most common cause of injury is falls and accidents during sports and games. The most common type of injury is crown fracture and the most common traumatized teeth are the maxillary incisor teeth. It has also been stated that the most important place for dental accidents and injuries is the home environment [9-11].

The prevalence of negative effects of injuries on the quality of life of children and their families has been reported as 31.1% and 24.7%, respectively. Among the most important of these effects, we can mention pain, difficulty in drinking hot and cold liquids, difficulty in eating, not attending school

classes, word pronunciation disorder, sleep problems, etc. in children. Also, the most important effects of dental injuries on children's families include feelings of discomfort and guilt, and job and financial problems [12-14].

Parents' understanding of dental trauma and considerations after it leads to the acceleration of treatment, the result of which is the prevention of further complications in milk and permanent teeth [15]. Considering that parents, children's nurses, and teachers are usually the first witnesses of children's dental injuries, they can play an important role in improving the prognosis of treatment success and reducing the complications caused by their correct actions when facing these injuries [16-18].

The purpose of this study was to evaluate the awareness and performance of parents in the face of dental injuries of children referred to the pediatric department. Having information if the level of awareness of the parents is sufficient, it is possible to address the deficiencies and weaknesses in a targeted manner.

Materials and Methods

This cross-sectional descriptive study was conducted on 225 parents of children. On working days, the first 5 parents who came to the clinic were included in this study. After

providing explanations and obtaining their consent, a standard questionnaire was used to collect the desired information, the questions of which were taken from a questionnaire whose validity and reliability were confirmed. The inclusion criteria included parents of 7-12-year-old children who were literate and willing to cooperate in filling out the questionnaire.

The questionnaire that was filled out by the parents on the same day and delivered to the researcher included 32 multiple-choice questions; 6 demographic information questions (parent's age, gender, education level, number of children, and child's age), and 4 social information questions related to dental trauma have been investigated. Also, 16 questions have evaluated the emergency information of oral and dental injuries and 6 questions have measured the information of prevention and control of dental traumas. From the total number of questions, 11 questions were used to evaluate parents' knowledge and for scoring, 1 score was given to correct choices and zero score to wrong choices. Questions 19 and 25, which have two correct answers, are considered 2 points, and the minimum and maximum awareness scores were 0 and 13. The rest of the questions were presented in the form of a report.

After collecting and entering the data, they were analyzed and described in SPSS 16 software, and through statistical analyses ANOVA-Tukey and t-test, the relationship between the average knowledge score with parents' gender, age, education, number of children, and the experience of encountering trauma were examined ($\alpha = 0.05$).

Results and Discussion

Out of a total of 225 participating parents, 166 people (73.8%) were women and 59 people (26.2%) were men. 83 people (36.9%) of the parents witnessed tooth trauma and 76 people (33.8%) themselves or their children experienced tooth trauma. 117 people (52%) of the parents had obtained information about dental damage and its control. According to the results, 96.9% of parents mentioned that they need more training to control dental injuries. Among them, 88% of parents wanted to be trained in first aid related to blows to the mouth and face, and 90.7% considered it necessary to be trained in the prevention of these injuries.

The mean and standard deviation of the knowledge score for the studied subjects was calculated as 3.3 ± 1.9 out of a total of 13 scores, and the minimum and maximum obtained were 0 and 10. There was no significant difference between fathers and mothers in the average score of parental knowledge (P-value=0.26). Also, no significant difference was found between different ages (P-value=0.86). In addition, no significant relationship was found between the average score of parental awareness and the number of children (p-value=0.39).

Table 1. The results were obtained from the statistical analysis of the data.

	Variables	Awareness score	Test result
Gender	Mother	3.3	P = 0.26
	Father	3.08	
Age range	< 30	3.3	P = 0.86
	30-39	3.2	
	40-49	3.4	
	≥ 50	3.07	
Level of Education	Elementary	2.8	P = 0.04
	Diploma/ Associate degree	3.2	
	Bachelor's and higher degree	4.2	
Number of children	1	3.2	P = 0.32
	2	2.01	
	≥ 3	1.9	
The experience of encountering trauma	Yes	3.6	P = 0.03
	No	3.1	

A direct and significant relationship was found between parents' knowledge status and their education level (P-value = 0.04) so the average knowledge score increased with the increase in parents' education. In examining the results of the relationship between parents' awareness and previous dental trauma experience, a significant relationship was found (p-value = 0.03), so the average score of awareness in parents with dental trauma experience is higher than in parents who have no previous experience (**Table 1**).

According to the results obtained in the present study, among parents' sources of information about dental injuries, television with 23%, followed by dentists (22.2%), had the highest percentage.

In the upcoming study regarding the decision about child tetanus vaccination, 46.6% went to health centers, 14.2% went to the doctor and 8.5% went to the dentist; Meanwhile, 30.7% of the parents were not aware of the appropriate action regarding tetanus vaccination and stated that they do not take any special action in this regard.

In the question related to the assessment of parents' awareness of the critical time for placing a tooth removed from the alveolar cavity, 57.8% of parents said more than 30 minutes, and only 16.9% of them gave the correct answer.

The question that assessed the awareness of the parents regarding the appropriate storage location for the tooth to be transferred to the dentist, water with 31.1%, was the most frequently asked option. It was from the parents. After that, napkins were mentioned by 20% and only 17.4% of the parents were aware of the proper dental care environment.

This cross-sectional descriptive study was conducted on 225 parents of children referred to the dental school, to evaluate their knowledge and performance in the face of dental injuries. In this study, a questionnaire containing 32 questions was used. In this research, the average score of parents' awareness according to the questions was 3.13 out of 13 points, the minimum and maximum of which are 0 and 10. In Shahnaseri's study [19], the average score of parental awareness was 5.26 out of 15. In the present study, the demographic factors of age, gender, and number of children were found to not affect the level of awareness of parents regarding dental trauma. Ozer *et al.* [16] also found the mentioned factors to be ineffective on the level of parents' awareness. It can be said that the level of education is the only effective demographic factor in this field.

In the upcoming study, a direct and significant relationship was reported in the investigation of the relationship between parents' awareness and their education, so with the increase in parents' education, their awareness of dental injuries increased. This finding is consistent with the results of Jabarifar *et al.* [20] and Murali *et al.* [7] studies in India. However, a different result was reported in the studies of Ozer *et al.* [16] in Türkiye; according to which no statistically significant relationship was found between parents' knowledge and education. This difference can be caused by the difference in the investigated area.

In the investigation of the relationship between dental trauma experience and parents' awareness score in the present study, a significant relationship was observed, so that the average awareness score of parents who experienced dental trauma in themselves or their children was higher than parents who did not experience these incidents. In the studies of Quaranta *et al.* [21] in Italy, the results were similar, and a significant relationship was reported. Contrary to the current research in Murali *et al.*'s study [7] among 150 Indian parents, no association was found between previous experience of dental trauma and awareness of injuries. This difference in the results may be due to the difference in the investigated areas and the sample size of the study.

According to the results obtained in the present study, among parents' sources of information about dental injuries, television with 23%, followed by dentists (22.2%), had the highest percentage. This was even though in Quaranta *et al.*'s study [22] which was conducted in Milan among 900 parents, the most source of information mentioned by parents was the dentist (72%), followed by the family doctor (8%) and television (3 %) were mentioned. The reason for this difference can be due to the difference in the sample size of the investigated region, the cultural differences of the countries, and the role of social media such as television in different societies.

In the upcoming study regarding the decision about child tetanus vaccination, 46.6% went to health centers, 14.2% went to the doctor and 8.5% went to the dentist; Meanwhile,

30.7% of the parents were not aware of the appropriate action regarding tetanus vaccination and stated that they do not take any special action in this regard. Also, in Al-Obaida's study [23] in Riyadh, Saudi Arabia, 30.7% of men and 41.2% of women did not know about tetanus vaccination. Nevertheless, in Kaul *et al.*'s study [24] in Calcutta, India, out of 2000 participating parents, 77.5% answered this question correctly and considered the need to check the child's tetanus vaccination after dental damage. This difference in the results can be caused by the difference in the size of the examined sample and the difference in awareness in different areas.

In the question related to the assessment of parents' awareness of the critical time for placing a tooth removed from the alveolar cavity, 57.8% of parents said more than 30 minutes, and only 16.9% of them gave the correct answer. Similar to this result in Abdellatif and Hegazy's study [25] in Egypt, it was reported that 50% of parents ignored the time factor and stated more than 30 minutes as an appropriate answer. Different from the results of the above studies, in the study of Quaranta [21] in Italy, who distributed a questionnaire to 900 parents, 41 gave correct answers. As a result, this difference can be caused by the difference in the size of the sample and the geographical area of the study. According to the results of Kaul's study [24] in India, only 20.6% of the parents transferred the tooth to the dentist in a suitable environment.

The question that assessed the awareness of the parents regarding the appropriate storage location for the tooth to be transferred to the dentist, water with 31.1%, was the most frequently asked option. It was from the parents. After that, napkins were mentioned by 20% and only 17.4% of the parents were aware of the proper dental care environment. Contrary to the above findings, in Kamali *et al.*'s study [26] which examined the knowledge of elementary school health educators, 45% of the participants chose milk and saliva as the appropriate liquid for tooth transfer. The reason for this difference can be due to the difference in the studied population.

Many of the parents who participated in this study did not have the appropriate level of knowledge and practice regarding the emergency management and treatment of dental trauma. It seems that the low level of parents' awareness of proper methods of managing damaged teeth has also affected their performance [27]. Therefore, it seems necessary to inform parents about the correct action in dealing with children's dental injuries.

Conclusion

The results of the present study showed that the level of awareness of parents in facing dental injuries is very low according to the average score of awareness obtained, and the willingness of parents to learn and undergo first aid training is high. Since children's access to health care and

treatment depends a lot on their parents, parents' awareness about the necessity of following up on dental injuries plays an important role in children's health and oral hygiene. Therefore, educating parents and regular and periodic information through mass media, posters, and training classes, as well as informing them about the methods of preventing dental injuries, will all improve the prognosis of damaged teeth; In addition, it improves the quality of life related to oral and dental health in children.

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