

ORIGINAL RESEARCH



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Knowledge and interest of north-central Romanian mothers regarding children oral health prevention - A questionnaire based study.

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Abstract

Introduction: The development and eruption of teeth should be followed by the dentist, which is why periodic check ups are required.

Aims of the study: This study aims to evaluate the knowledge of the mothers regarding the dental hygiene of the children and the importance of presenting them in the dental office, as well as the knowledge related to the prevention of dental caries.

Material and Methods: A questionnaire comprising 15 questions was developed and handed to 290 mothers in Tirgu Mures. The questions targeted the knowledge related to the dental hygiene of the child, and decay prevention.

The data obtained were processed electronically. 51.7% of the mothers stated that the visit to the dental office should be done every 6 months, and 58.6% opted for a first contact with the dentist at the age of 3 years. 98.2% of mothers consider dental prevention to be important or very important. 75% consider that the child's hygiene must be done twice daily, and 89% said that they use the toothbrush in the child's hygiene process. 68% of the mothers know the term of dental sealing, but only 20% resorted to this method of treatment.

Conclusions: The study demonstrates the urgent need to take the lack of interest and information of parents seriously and to develop programs primarily to inform and raise awareness of the population and then to apply different preventive methods.

Keywords: child, mother, dental hygiene, prevention, questionnaire.

Introduction

According to the American Association of Dentistry (ADA) and the American Academy of Pediatric Dentistry (AAPD) more than 40% of children presently have dental caries [1,2].

The first examination is recommended when the first temporary tooth appears and not later than one year. The development and eruption of teeth need to be followed by a dentist, which is why regular check ups are required [3]. Early detection of a possible future condition in the oral cavity and early caries treatment may improve not only oral health, but general health as well [4]. The number and cost of dental procedures are lower for those who show up early and regularly to the doctor, thus proving that dental prevention increases the chances of easier, fewer or simple periodic check-ups in the future [5,6]. Failure to diagnose in time can lead to increased conditions, pain, loss of dental substance, and the treatment of these conditions is itself more expensive, more time and energy consuming. It also raises the

question of how the child perceives the visits to the dentist. If these are done early, when the baby's mouth does not have exacerbated conditions, he perceives the interaction with the dentist as pleasant, painless, even jovial [7,8]. In contrast, in the conditions in which the child meets the dentist only against the background of emergencies, the treatment will be carried out under conditions of stress, pain, for which the child will associate the visit in the dental office with something unpleasant, traumatizing [9]. Thus, phobias related to presentation to the dentist can develop, with serious repercussions on oral and general health [10].

The aim of study was based on the completion of a questionnaire, in order to evaluate the mothers' knowledge regarding the dental hygiene of the children, the awareness-raising the importance of presenting the child in the dental office and the knowledges related to the prevention of the dental caries.

Material and methods

The research group was represented by 290 mothers from Tirgu Mures city of Romania, who showed their willingness to complete the questionnaire, answering the asked questions. The questions were conceived in simple, easy-to-understand terms to avoid confusion or misunderstanding of words. The 15 questions were chosen with the purpose of obtaining information on how the research group mothers treat this subject and on their practice until then. Twelve of the questions required one answer, while three other questions were completed or not, depending on previous answers.

In the first part of the questionnaire we tried to evaluate the general knowledge related to the importance of presenting the child to the dentist, the frequency of visits to the office and to study the level of education regarding the role of the dentist in the child's life. Through these questions we also wanted to draw an alarm signal and raise constructive questions to the parents who participated in the study. We considered that before asking questions about more complex procedures, such as sealing and fluoridation, it is important to check the general health education of these mothers regarding the basic principles of oral hygiene. Thus, the following questions deal with the knowledge related to the dental hygiene of the child, the methods used, the age from which the hygiene began, the frequency, finally pointing us to the specific prevention. We wanted too, to find out what is the level of knowledge of mothers regarding the methods of prevention of dental caries in children, if the terms are known, if there have been sealing and fluoridation treatments, if they see results and if they intend to also perform such treatment on other teeth or another child.

Table 1.

1. How often do you think the child should be taken to the dentist?
 - a) Every 6 months
 - b) Every year
 - c) Every 2 years
 - d) When needed
2. At what age do you think the child should first be brought to the dentist?
 - a) At 6 months old
 - b) At 1 year old
 - c) At 3 years old
 - d) At 7 years old
 - e) When needed

In the following, the questions contained in the questionnaire will be presented in detail (Table 1). The questionnaire included an item with a free answer, namely the question "From what age did you start cleaning the child's mouth?"

The data obtained were recorded and processed electronically.

Results

The first two questions dealt strictly with the aspect of the first visit to the dentist and the frequency of visits. 51.7% of the mothers reported that the visit to the dental office should be done every 6 months. We note that only a little more than half of them have the correct information, in the context where prevention plays such an important role in the subsequent oral health of their child. 17.9% of the mothers considered that the presentation to the dentist "when needed" is sufficient. It is considered that the appearance of the first tooth signals the moment of the first meeting between the dentist and the small patient.

Only 3.7% of the mothers considered that the first visit to the dentist should be at the age of 6 months.

The majority (58.6%) opted for a first contact with the dentist at the age of 3 years. It may also be related to the fact that at 3 years old the child is taken to the kindergarten and experiences the first socialization outside the family setting. However, this is not a solid enough excuse.

Too many mothers (17.9%) considered, again, the option to go with the child to the dentist when "needed". This variant of response is itself incriminating precisely because it signals the visit is made in the case of an illness that could have been prevented.

3. How many times a day is the child's hygiene performed?

- a) Never
- b) Occasionally
- c) Once
- d) Twice

4. What methods did you use?

- a) Embrocating with chamomile tea (baby)
- b) Toothbrush
- c) Floss
- d) Mouthwash
- e) Irigator

5. When did you introduce the toothbrush in the hygiene process?

- a) With the eruption of the first teeth
- b) At 1 year old
- c) At 2 years old
- d) At 7 years old

6. How important do you think oral prevention is?

- a) Very important
- b) Important
- c) Not important
- d) I don't know what the term refers to

7. What methods of preventing tooth decay are you familiar with?

- a) Fluoridation
- b) Sealing
- c) I do not know any

8. Do you know the term "dental sealing"?

- a) Yes
- c) No

9. Do you have a child with sealed teeth?

- a) Yes
- b) No

10. Have you noticed any difference between the appearance of tooth decay on sealed teeth vs. the unsealed ones?

- a) The difference is significant
- b) Yes, a small one
- c) There is no difference

11. Are you planning to use this method to prevent the onset of decay?

- a) Yes
- b) No

12. Do you know the term "dental fluoridation"?

- a) Yes
- b) No

13. Have you performed this type of treatment on any of your children?

- a) Yes
- b) No

14. Are you planning to use this method of treatment again?

- a) Yes
- b) No

A fairly large percentage of mothers consider dental prevention to be important or very important, namely 98.2% and only 1% of them, which represents in fact a number of 3

mothers out of 290 surveyed, say they do not know the term of oral prevention.

We report 75% mothers who have recognized the correct answer and consider that the hygiene of the child must be done

twice daily and only 2% consider that the hygiene of the oral cavity of the child is done occasionally.

Another question referred to the hygiene methods used by the respective mothers. As expected, most mothers (89%) said they use a toothbrush in the child's hygiene process.

As for the additional methods, the results are quite worrisome as this proves to be an overlooked area. 0.34%, the equivalent of a single mother, said she uses dental floss as an adjuvant method, 1.7%, the equivalent of 5 mothers said they use mouthwash and 2.4%, the equivalent of 7 mothers chose the oral irrigator. 51.7% introduced the toothbrush in the process of hygiene with the appearance of the first teeth, 27.5% introduced the brush at the age of one year and 19% at the age of 2 years.

Regarding the method of hygiene used during the infant's period, 2.7% of the mothers chose hygiene by embrocating with chamomile tea.

Given the extremely small number of mothers who have hygienize the baby's mouth cavity during infancy and the fact that only half of them consider that the toothbrush is introduced with the appearance of the first teeth, we have a sufficient number of mothers who do not clean in any way the oral cavity of children up to the age of one or two years old.

Most of the mothers (68%) know the term of dental sealing, so implicitly its role in the dentition of the child. However, only 20% of mothers resorted to this method of treatment. The percentage of mothers who said they saw a difference between the appearances of decay in sealed vs. unsealed teeth (significant or small

difference) is 51.7%. This is also reflected in the number of mothers willing to resort to this method of treatment or to repeat it, the percentage being 65.5%.

Another topic addressed in this study is topical dental fluoridation. We again raised the problem of the knowledge related to this subject, the number of mothers who requested this treatment, but also of the mothers who did not use this method of treatment. The percentage of mothers who know the term is relatively equal to that of mothers who do not know it. Noteworthy is the fact that more mothers are familiar with the term dental seal than fluoridation. The percentage difference is 16.2%, in favor of sealing. 14.4% of the participants in this study state that they have children who had teeth subjected to topical fluoridation and less than half of them plan to use this method. 85.5% of them do not have children who present this treatment.

Overall, although more than half of the mothers know the specific methods of preventing tooth decay (sealing and fluoridation), a very small percentage of them have children who have preventive treated teeth or wish to request such an intervention.

Discussion

A statistical study (How often do children visit the dentist for a routine check-up in the UK?) in 2016, shows that 62% of children show up at controls every 6 months, 25% once a year, 4% a given to 2 years and 2% of them in case of pain (when needed) [11].

The comparative results between UK and Romania are presented in table 2.

Table 2. Comparative results between UK and Romania

Answer options	Romania	UK
a. Every 6 months	51.7%	62%
b. Every year	28.6%	25%
c. Every 2 years	1.8%	4%
d. When needed	17.9%	2%

The major difference is found in the answer "when needed", this fact suggesting the presentation in the cabinet only in case of an emergency. The percentage of mothers who have opted for this answer is high enough to

worry about, given its seriousness. We would have expected this answer to be out of the equation because of the serious consequences that follow this way of thinking.

Following a study in England (Dental Care in the United Kingdom - Statistics & Facts)

[12], it was found that most children have first contact with the dentist by the age of two. This fact puts us at a disadvantage, given that we have a percentage of 19.7% of mothers who take this aspect into consideration.

Another study conducted in the UK (Share of age of children at first visit to the dentist in the United Kingdom) in 2016 [13], shows that 19% of children had their first visit to the dental office before 1 year old, 37% had one between 1 and 2 years old and 22% of them between 3 and 4 years old. The results obtained in our study: 3.7% for the period up to one year old, 19.7% for the period between 1 and 2 years old, 58.6% at 3 years old and 17.9% “when needed” place us in a lower position of the English, with fewer controls properly performed.

The fact that almost half of mothers claim that they see absolutely no difference between sealed and unsealed teeth is surprising given the results of many studies conducted in the field that support the exact opposite, in a rather unanimous opinion. The efficacy of these treatments has been proven, and the results are accompanied by studies and the parents' statements that they are satisfied with the results. This may be related to the fact that these children did not, by their nature, have an increased risk of caries, which is why the difference between sealed and unsealed teeth is insignificant.

After Gorard et al [14], children are obviously influenced by the environment in which they belong, and part of the parents' beliefs and attitudes inevitably become their attitudes. The study was aimed at mothers, in general, and did not specifically target mothers who have children at increased risk of caries. This may indeed be a weakness of the present study.

A study conducted at the University of Tel Aviv by Blumer et al [15], that aims to evaluate parents' attitude to these issues claims that 78.1% of parents said they were satisfied with the sealings and with the effects on their children's teeth. The number of mothers who stated that they did not heard of the term “sealing” represents about one third of the mothers who completed this questionnaire. The percentage, in this case, is worrying

considering the level of development reached and the ease of accessing such information.

The problem arises as follows: either the respective parents do not regularly attend a dental practice, or the respective doctor does not consider informing the parents about this procedure. We would go, rather with the first option, considering that, in Romania, periodic dental checks are not mandatory, and the costs of treatments often keep patients away from the dental office. Such a problem could be solved by establishing a national information program and also state programs to cover the expenses linked to oral prevention. This is the example of developed countries such as America, Belgium, Switzerland and others, and the results speak for themselves.

Conclusions

This study denotes an acute lack of information in this area and of knowledge of the severity of carious disease, a severity that will cause parents to resort to any treatment method that would solve this problem to some extent. We consider that a realistic presentation of the gravity of the dental caries and their consequences on the functionality and the dental-maxillary morphology would raise in them a greater interest to action.

Conflict of interest: None to declare.

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