

PARENTS' ATTITUDE AND BEHAVIOR FOR ORAL HEALTH OF 0-3-YEAR OLD CHILDREN

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INTRODUCTION

Parental knowledge is very important in the formation of a behavior that supports or not children's dental and oral hygiene. Such knowledge can be acquired naturally or in a planned manner through the process of education. Parents with low knowledge regarding dental and oral hygiene are predisposing factors of behavior that does not support dental and oral hygiene of children, so that it can increase the risk of dental caries in children [1].

Young children are very susceptible to oral diseases, which could be prevented if their parents or caregivers were sufficiently informed about causes and treatments and motivated to engage in adequate oral health promotion [5]. The family unit, as a whole, has an important role in children's oral health. Research suggests that regular family routines and practices that promote good oral health and establishing positive behaviors in early life are important for promoting a child's oral health. Parents' behaviors, beliefs, knowledge, perceptions, and self-efficacy play an important role in the extent to which other family members, especially young children, experience health-related behaviors. Furthermore, the importance of parental modeling has been shown to continue into adolescence for several oral health behaviors [6].

One of the strategies of the World Health Organization is to give priority to disease prevention and control programs in order to minimize the need for treatment, giving particular importance to the implementation of preventive measures in children. Dental caries, being the most common condition found in children, has an imposing impact on health and quality of life [7]. The new philosophy that proposes dental care for the child claims that the child needs the initiation of care before the first birthday. In this way, preventive actions at home, such as cleaning the oral cavity, controlling the milk bottle at night, balanced sugar consumption and topical application of fluoride can be easily achieved [2]. Twice-daily brushing with a fluoride-containing product is the most effective preventive measure for early childhood caries (ECC), with toothpastes containing 1000–1500 µg/g (ppm) fluoride being recommended [3].

AIM: The aim of the paper was to evaluate the knowledge, attitudes and practices of parents regarding the oral health of children aged 0-3 years old in order to propose interventions to intensify the prevention procedures to increase the oral health of children. This research was conducted to provide an overview of parents' views on children's oral health, which can serve as an impetus to improve early childhood health services and enhance education efforts in the context of child maintenance programs in oral health.

MATERIALS AND METHODS. The type of study – mixed, transversal, descriptive with analytical elements. The quantitative research was carried out by surveying 423 parents with children aged 0-3 years old, citizens of the Republic of Moldova, in the period November-March 2021-2022. The questionnaire was created in Google Forms and distributed online. Study methods – historical, epidemiological, sociological, statistical, data transfer, comparative, graphic. The qualitative part included 3 interviews with representatives of state structures that influence the opinion of decision-makers.

RESULTS. Most of the study participants were in the 29-39 age group, most of them being female. The residence environment of the majority of respondents was urban, most frequently indicating a higher level of education (bachelor's and/or master's degree). Using the Pearson test, there were statistically significant associations between parents' knowledge regarding the initiation of tooth brushing in children ($p < 0.01$) and the first visit to the dentist ($p < 0.01$).

CONCLUSIONS. The results of this study suggest that an oral health promotion program is needed to fill the gaps in parents' knowledge and encourage healthy practices regarding young children's oral health.

Keywords: children, parents, oral health attitude, oral health behavior.

ECC can be quite dangerous, because the teeth become porous, empty, can even break, so that the child loses the power to chew, which affects the digestion. In addition, tooth decay can cause pain in the teeth, so it will interfere with the absorption of food and affect the growth of the child. This also influences the child's ability to speak. The impact caused by dental caries experienced by children will also hinder children's development, which, in the long term, will have consequences on the quality of life of the community. The improvement of dental and oral health should be started as early as possible because it is a very important factor for the further regulation of dental growth in young and preschool children [1].

Health-related behaviors are influenced by knowledge and awareness, and oral health is no exception. There is an association between parents' oral health knowledge, age and education level, which are directly related to their children's oral health status. Oral health is an integral component of general health, which plays an essential role in a child's life [4]. Knowledge about children's dental health affects parents' attitudes and actions in maintaining dental health and determining the child's dental health status, because parents need to teach their children how to brush their teeth properly, when it is the right time to brush their teeth and, routinely, bring them to the dentist to check the health of their teeth [1]. Parents' knowledge, attitude

and practices can have an impact on children's oral health because children under the age of five generally spend most of their time with their parents and guardians. These early years involve "primary socialization", during which the routines and habits of early childhood are acquired [4].

Through this research, we aimed to determine the oral health attitude and behavior of parents with children aged 0-3 years from the Republic of Moldova with the aim of establishing the level of parental abilities of inducing dental skills and behaviors in young children, in order to develop some practical recommendations regarding the intensification of prevention procedures.

MATERIALS AND METHODS

A cross-sectional, descriptive study with analytical elements, was conducted by surveying 423 parents of children aged 0-3 years old, citizens of the Republic of Moldova, in the period November 2021-March 2022. The questionnaire was created in Google forms and was applied and distributed online. Study methods – historical, epidemiological, sociological, statistical, comparative, graphic.

The qualitative study included 3 interviews with representatives of state structures that influence the opinion of decision-makers. The statistical analysis of the quantitative study data was performed in MS Excel and SPSS. The SPSS program was used to generate descriptive statistics by calculating frequencies and Pearson correlation. At the same time, they were used to obtain crosstabs of frequencies useful in the study of the association between variables, at a confidence level of 95%.

RESULTS AND DISCUSSION

Quantitative study

The results of this study focused on the attitudes and practices of parents towards the oral health of children aged 0-3 years old from the Republic of Moldova. Most of the participants in the study belonged to the 29-39 age group (67%), most of them being female (81%). In the majority of cases, the respondents' place of residence was urban (79.67%), with a higher level of education (bachelor's and/or master's degree) being indicated most frequently (81%).

According to the results of the research, most respondents have higher education, and most of them believe that the initiation of tooth brushing should be performed when the first tooth erupts and after 1 year (Figure 1) ($p < 0.01$).

According to specialist recommendations, the initiation of tooth brushing must begin when the first tooth erupts; thus, the age of 1 year is a late period in the prevention of children's oral diseases, and parents frequently encounter the appearance of caries in children and its complications.

Regarding the first visit to the dentist (Figure 2), the opinion of the parents balanced between the options *1 year* (24.35%) and *When the first cavity appears* (22.70%), followed by *At the age of 2 years* (15.13%), *At the eruption of the first tooth* (12.06%), *After 6 months and up to 1 year* (11.35%). The proportion of those who were undecided constituted 7.80%, and the parents who indicated the age of 3 years for the first visit to the dentist constituted

6.62%. Following the correlation analysis, we identified that respondents with higher educational level are more informed about children's oral health ($p < 0.01$).

Table 1 reflects the associations between the parents' level of knowledge and the period of initiation of tooth brushing, respectively the first visit to the dentist. Most of the respondents have higher education and most of them believe that teeth brushing should be started when the first tooth erupts and after 1 year; for the first visit to the dentist, they most frequently have chosen for the options *1 year* and *when the first cavity appears* ($p < 0.01$).

Analyzing the results in figure 3, we notice that the frequency of tooth brushing in adults alternates between the variants *Once/day* (46.10%) and *Twice/day* (43.26%). A similar situation is revealed in the case of children: *Twice/day* - 34.99%, *Once/day* - 34.52%. The answer *Never* was selected in 24.59% of cases for children.

Notwithstanding the above results reflect sufficient knowledge of parents in terms of ensuring and maintaining oral health in children, we observe in figure 4, that 42% of respondents confirmed the experience of dental caries in their child.

Qualitative study

In the qualitative study, the decision-makers referred to the implementation issues of the pediatric oral health policy:

Decision-maker 1: *"Every year we identify which are the priority actions to be financed from the National Medical Insurance Company's Prophylaxis Fund. One of the priority actions was the information campaign regarding oral health and the dental exam among students in the republic."*

Decision-maker 2: *"Programs to promote oral health for children remain on paper, without being implemented or applied sufficiently. In addition, an important aspect is funding: if it is the program, the mechanism - then they work". "Taking the example of Western countries such as Austria in terms of local decision-making. This would facilitate and streamline decision-making and implementation. The collaboration between the Ministry of Health, the Departments of the Faculty of Dentistry of the State University of Medicine and Pharmacy "Nicolae Testemițanu", the collaboration between state dental institutions and private practices - is a strong point in promoting pediatric oral health policies in the republic."*

Decision-maker 3: *"Regarding health education - I would opt for training expectant mothers in the last trimester of pregnancy regarding children's oral health."*

Figure 1. Initiation of brushing (parents' opinion)

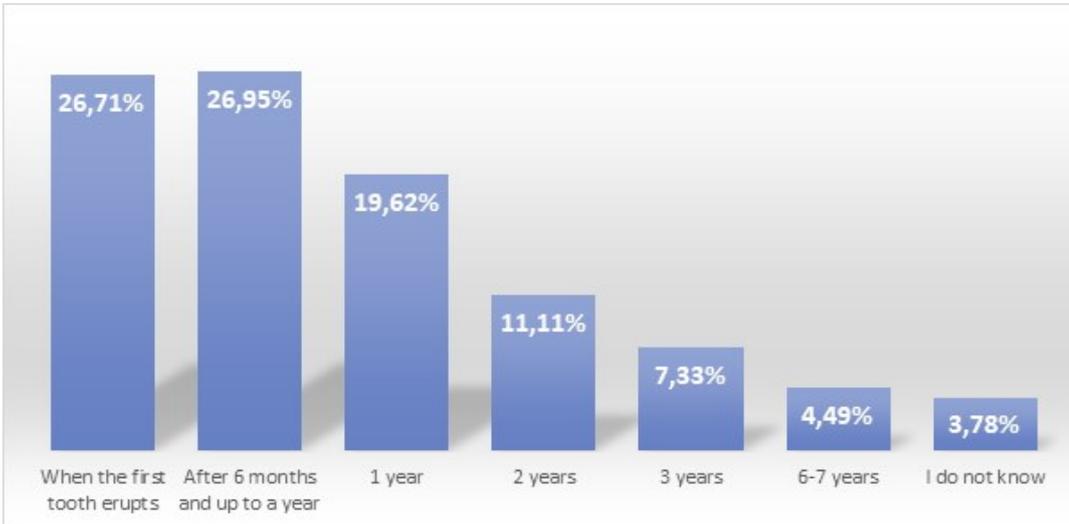


Figure 2. First visit to the dentist

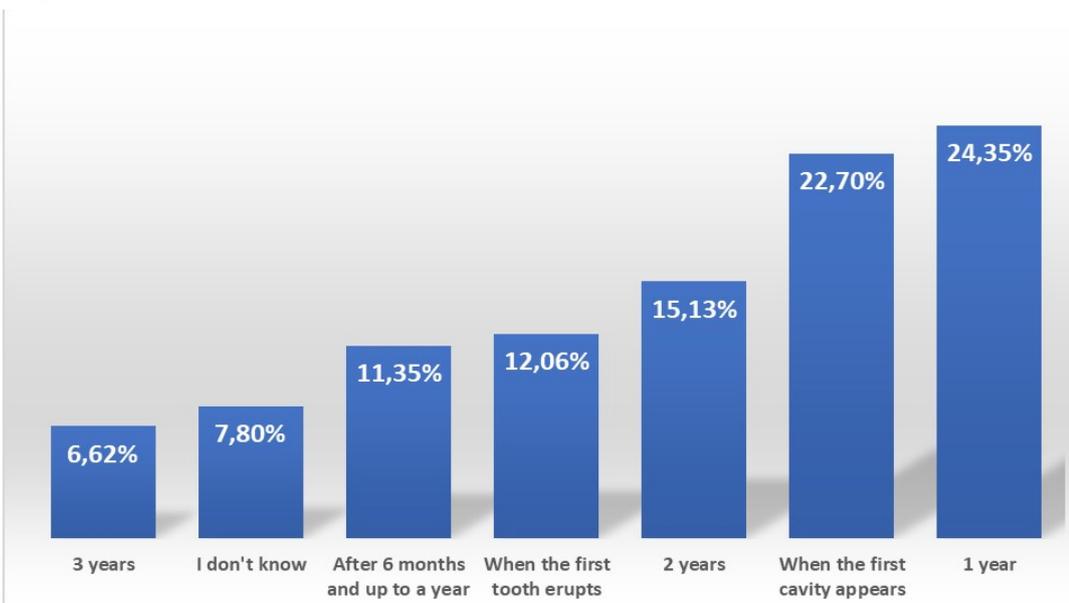
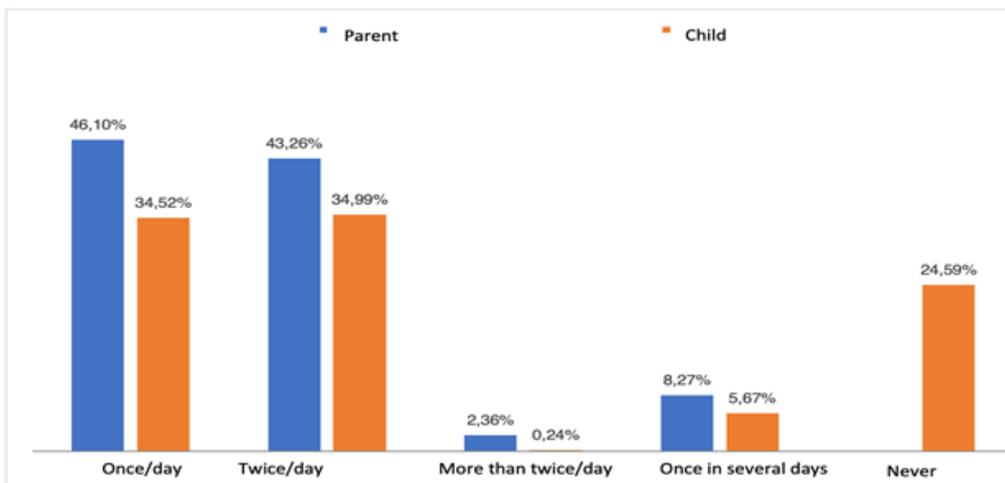


Figure 3. Tooth brushing frequency in parents and children



CONCLUSIONS
The results of this study suggest that there is a need to implement an oral health promotion program to fill the gaps in parents' knowledge of young children's oral health. Notwithstanding parents possess an optimal level of knowledge regarding the frequency of tooth brushing, their practices are inadequate, both in terms of initiating brushing and making the first visit to the dentist. These results call into question the effectiveness of parents' behaviors regarding children's oral hygiene practices. In this sense, it is necessary to carry out supervised parental guidance programs by dentists in order to ensure the dexterity of tooth brushing in children. In order to educate and promote the oral health of young children, it is advisable to educate parents both in the postnatal and prenatal periods.

According to the opinions of the decision-makers, in order to develop, promote and implement the pediatric oral health policy, an intrasectoral collaboration is needed, more precisely between: the Ministry of Health, the representatives of the dental academic environment, the medical institutions (state and private) that provide dental services.

Table 1. Correlation between the level of parents' knowledge regarding the initiation period of use of oral hygiene objects and the visit to the dentist

	Completed studies				Sig. (2-Si Exact T
	0	1	2	3	
Initiation of dental brushing					
1 year	3 (0.7)	7 (1.7)	98 (23.2)	5 (1.2)	0.000
2 years	0 (0)	13 (3.1)	67 (15.8)	3 (0.7)	
When the first tooth erupts	2 (0.5)	7 (1.7)	100 (23.6)	5 (1.2)	
Don't know	1 (0.2)	10 (2.4)	8 (1.9)	0 (0)	
After 6 months and up to a year					
3 years	0	12 (2.8)	19 (4.5)	0 (0)	0.000
6-7 years	0	10 (2.4)	6 (1.4)	0 (0)	
Total	6 (1.4)	61 (14.4)	341 (80.6)	15 (3.5)	
First visit to the dentist					
1 year	1 (0.2)	11 (2.6)	88 (25.8)	3 (0.7)	0.000
2 years	0 (0)	7 (1.7)	54 (15.8)	3 (0.7)	
When the first tooth erupts	2 (0.5)	1 (0.2)	45 (13.2)	3 (0.7)	
Don't know	2 (0.5)	11 (2.6)	20 (5.9)	0	
After 6 months and up to a year					
3 years	0 (0.5)	7 (1.7)	20 (5.9)	1 (0.2)	0.000
When the first cavity appears	1 (0.2)	23 (5.4)	71 (20.8)	1 (0.2)	
Total	6 (1.4)	61 (14.4)	341 (80.6)	15 (3.5)	

** . Correlation is significant at the 0.01 level (2-tailed).
Note - Completed studies:
 0 = High school
 1 = Secondary school
 2 = Superior
 3 = Doctorate

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Figure 4. The child has already experienced tooth decay

