

## Parents' sources of information on caries prevention in temporary dentition

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### Summary

Studies conducted in the Pedodontics Department of Carol Davila University Bucharest during the past five years show that severe caries of primary teeth is maintaining high prevalence (about 30%). This shows a relatively low degree of parental concern regarding caries prevention in temporary dentition.

The *aim* of the present study was to reveal the parents' sources of information regarding dental care in temporary dentition.

*Material and method.* The study was conducted on a group of 240 mothers (mean age 29.71±5.13 years) of children with severe early childhood caries. The mothers answered a questionnaire on their degree of education and their sources of information on child dental care.

*Results.* The mothers stated they got information on child dental care from the following sources: dentist - 67 (27.91%), pediatrician - 42 (17.50%), books - 25 (10.41%), magazines - 24 (10%), general practitioner (family doctor) - 17 (7.08%), TV/radio programs - 11 (4.58%), leaflets received when checking out of the maternity hospital - 3 (1.25%), kindergarten teachers - 1 (0.4%). 80 mothers (33.33%) stated that they got no information on the subject. As to the degree of education, almost 50% of the mothers with a low education level (10 classes or less) had got no information at all on child dental care for temporary teeth.

*Conclusions.* 1. The source of information most commonly mentioned is represented by the medical staff (dentist, pediatrician, GP).

2. One third of the mothers got no information on temporary teeth care.

3. The lower the mothers' degree of education, the lower their knowledge on primary teeth care.

4. An increase of the role of media in informing parents regarding proper dental care habits for the young child is needed in order to increase addressability towards all population categories.

**Keywords:** sources of information, caries prevention, temporary teeth.

### Introduction

Severe early childhood caries (SECC) is defined as the presence of any sign of caries on smooth tooth surfaces in children younger than 3 years, one or more decayed missing or filled smooth surfaces in upper front teeth in children aged 3 to 5 years or a dmf-s score  $\geq 4$  for 3 years olds,  $\geq 5$  for 4

years olds or  $\geq 6$  for 5 years olds [1,2,3].

SECC is a serious public health issue [3,4]. Due to the young age the signs of disease emerge at, as well as to its rapid evolution, this type of pathology affects the child's quality of life, worries the parents and raises problems for the dentist because of the difficult cooperation and treatment complexity.

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SECC prevalence (IpSECC), as given in literature, varies widely, between 1 and 12% in developed countries, while in developing countries and disadvantaged populations it can affect up to 70% of preschool children [5]. IpSECC values are higher for children who seek treatment in dedicated clinics than for the general population [6].

A study conducted in Bucharest in 2001 showed a IpSECC value of 7.23% for the general population (children in kindergartens) [7], while a cross-sectional study on patients of the Pedodontics Department revealed a IpSECC of 31.66% [2].

As regards the trends of the SECC prevalence index, studies conducted between 2001 and 2004 in the Pedodontics Department of Carol Davila University Bucharest showed that IpSECC values maintain relatively high levels (about 29%). Although there has been a slight decrease trend during the last 3 years, differences are not statistically significant [8].

These studies also revealed the fact that, during all this period, most of the children with SECC were brought for treatment at the age of 3-4 years, when carious lesions are already complicated [8].

These results challenge the dentists' involvement in the prevention of this type of pathology, as well as the articles on the sub-

ject published in magazines and books and radio and television programs. Given these reasons, the **aim** of this paper is to reveal the parents' sources of information on child dental care and to find out whether these sources differ with respect to the educational level of the parents.

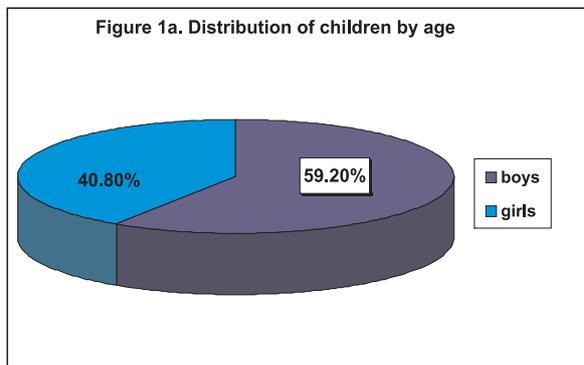
**Material and method**

The study was conducted on a group of 240 preschool children (142 boys) and their mothers. The children, aged between 1 and 6 years (mean age  $3.15 \pm 1.64$ ), were examined in the Pedodontics Department of the Faculty of Dental Medicine, Carol Davila University, between 2001 and 2004 and diagnosed with SECC. Age and sex distribution of the children is given in *Figure 1*.

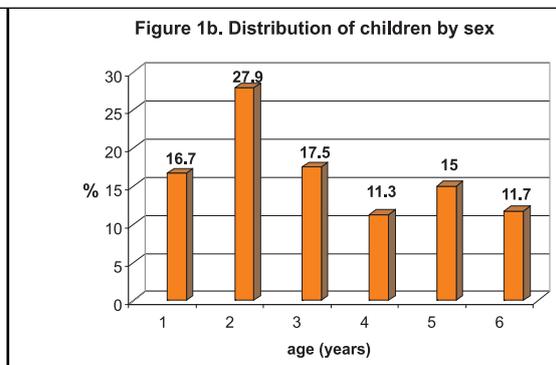
The mothers of the examined children are aged between 20 and 48 years (mean age  $29.71 \pm 5.13$  years). They answered a questionnaire on their education level and their sources of information on child dental care.

The mothers' answers were collected and data were processed using a dedicated statistics package. Mean values were calculated for the variables taken into account and statistical significance of differences was determined.

**Figure 1a.** Distribution of children by age



**Figure 1b.** Distribution of children by sex



**Results**

**I. Mothers' level of education**

Half of the mothers are high school graduates, one quarter only have 10 classes or less and about 20% have an academic degree (Table 1).

**II. Information on primary teeth care**

Of the 240 mothers that answered the questionnaire, only 160 (66.67%) stated that they had knowledge on primary teeth care from at least one source, while 80 mothers

(33.33%) answered that they had no information on the subject (Figure 2).

**III. Parents' sources of information**

Data regarding the parents' sources of information about primary teeth care show that 27.91% of the mothers stated that they got this kind of information from the dentist, 24.58% from other doctors, while 25% got information through media means (radio/TV broadcasts, books, magazines) (Table 2).

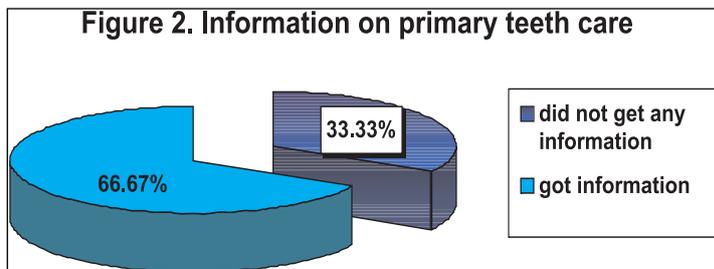
**Table 1.** Mothers' level of education (n = 240 answers)

<b>≤ 10 classes</b>		<b>12 classes (high-school graduates)</b>		<b>Academic degree</b>		<b>No answer</b>	
n	%	n	%	n	%	n	%
63	26.25	122	50.83	52	21.66	3	1.25

**Table 2.** Parents' sources of information about primary teeth care, (n = 240 mothers)

<b>Source of information</b>	<b>No. of answers</b>	<b>%</b>
At check-out from maternity hospital	3	1.25
Dentist	67	27.91
General practitioner	17	7.08
Pediatrician	42	17.50
Kindergarten teacher	1	0.4
Magazines	24	10.00
Books	25	10.41
TV/radio programs	11	4.58
None	80	33.33

**Figure 2.** Information on primary teeth care



**IV. Gathering information from one or more sources**

Most of the 160 mothers that stated they had information on primary teeth care (83.75%) mentioned only one source for this information. 13.75% of the mothers stated they got information from two sources, books and magazines being the most commonly mentioned. Only 2.5% of the mothers got information from 3 sources.

**V. Distribution of the sources of information with respect to the mothers' level of education**

With respect to mothers' education, 49.20% of the them that have low education degree (10 classes or less) declared that they had no information regarding primary teeth care, the corresponding figures for high school graduates and university graduates being 29.5% and 23% respectively. Chi-square test shows that these differences are statistically significant ( $p < 0.05$ ) (Figure 3).

As for the mothers that got information on primary teeth care, the main source of information was the medical staff. This represented 75% of the information sources for the mothers with 10 classes or less, 77.90% for the high-school graduates and 65% for the ones with an academic degree (Table 3).

As regards the mothers that got information from books and magazines, the highest percentage is that of mothers with an academic degree (37.5%), followed by high-school graduates (23.25%) and by those that have 10 classes or less (only 6.25%) (Table 3), but differences are not statistically significant (ns).

On the contrary, the order reverses for information received through TV or radio

broadcasts: 12.5% for mothers with a low education level (10 classes or less), 5.81% for high-school graduates and 5% for those with an academic degree (Table 3) (ns).

**Discussion**

Severe early childhood caries is a transmissible bacterial disease, with a complex multifactor etiology [9]. It appears as a result of the interaction of 3 factors: pathogenic bacteria in the oral cavity, fermentable carbohydrates and the quality of hard dental tissues. The moment of the interaction between these factors is of crucial importance [2,4].

SECC is associated with certain socio-demographic and behavioral factors. Among the socio-demographic factors, mothers' age [10], mothers'/parents' level of education [9], ethnic origin [11], one-parent families [10] and low family income [9] are cited. Breastfeeding after 1 year of age [12], night use of a nursing bottle with sweetened contents [10,13], introducing brushing after the age of 2 [13] as well as brushing less often than twice a day [6,14] are quoted among behavioral factors favoring SECC.

As regards the mother's level of education, Luca et al (2003) showed that mothers whose education does not exceed 12 classes represent a risk factor in producing SECC [15]. The level of education influences the degree of parents' conscience regarding proper child feeding and care practices, thus contributing to avoiding SECC favoring factors.

The results of the present study show that almost half of the mothers with a low education level (10 classes or less) have

**Table 3.** Distribution of the information sources with respect to the mothers' level of education

	≤ 10 classes (n=32)	High-school graduates (n=86)	Academic degree (n=40)
Medical staff	24 (75%)	67 (77.90%)	26 (65%)
Books/magazines	2 (6.25%)	20 (23.25%)	15 (37.5%)
TV/radio programs	4 (12.5%)	5 (5.81%)	2 (5%)

no information on primary teeth care. Moreover, the percentage of mothers that did get information on the subject increases with their education.

As concerns the sources of information on primary teeth care, the mothers with lower education degree obtain this kind of information with less effort, via audio-video means (radio/TV), while mothers that are at least high-school graduates are more likely to obtain information via published materials.

However, most of the mothers got information from medical staff, regardless of their level of education.

Table 4 compares the results of the present study to previously reported data concerning mothers' sources of information on child dental care.

We need to point out that 33.33% of the mothers possess no information on child dental care – most of these have an educational level of 10 classes or less.

This aspect evidences that means need to be found to increase the level of knowledge by implementing efficient information methods for different population groups. This could contribute to reducing risk factors for SECC.

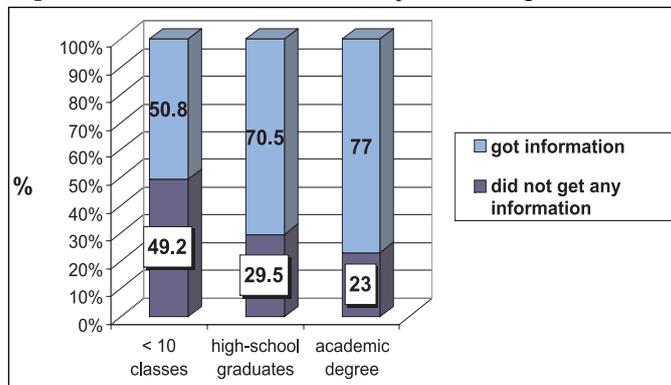
### Conclusions

1. The mothers' most commonly mentioned source of information on the subject of child dental care is represented by medical staff (dentist, pediatrician and GP).
2. One third of the mothers have no information on primary teeth care.
3. The lower the mothers' degree of education, the lower their level of knowledge on child dental care.
4. Media involvement in informing parents about proper child care habits needs to increase, thus improving addressability in most population groups.

**Table 4.** Mothers' answers regarding their sources of information on child dental care – comparison between the present study and previous ones

Authors, country, year	No of subjects	Children's age	Source of information on child dental care			
			Dentist	Other doctor	Mass-media	None
Petersen PE et al, Romania, 1993 [16]	322	7 years	67%	6%	55%	-
Petersen PE, Denmark, 1988 [17]	212	6 years	81%	-	26%	-
Present study	240	1-6 years	27.91%	24.58%	24.99%	33.33%

**Figure 3.** Information received with respect to the degree of education



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