



**Research Article**

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## Primary teeth: Paediatrician's perspective— A survey

Jyothisna V Setty<sup>1</sup>, Ila Srinivasan<sup>2</sup>

<sup>1</sup> Professor, Department of Pedodontics and Preventive dentistry, M R Ambedkar Dental College and Hospital, Bangalore-560005, Karnataka, India

<sup>2</sup> Department of Pedodontics and Preventive dentistry, M R Ambedkar Dental College and Hospital, Bangalore-560005, Karnataka, India

### Abstract

**Context:** Pediatricians are very often the only health professionals whom children visit. Children less than 3 years of age are not seen routinely by the dentist and are at risk of developing dental caries. Pediatricians who see children from birth as a part of well-baby visit program are better placed to educate the parents about early oral preventive health care. Thus one of the important factors for the success of preventive dentistry and comprehensive dental care for children involves knowledge, awareness of importance of Primary teeth and also the attitude of these professionals towards these baby teeth. **Aim:** To assess the knowledge and awareness of Primary teeth amongst Pediatricians. And to assess the attitude towards these teeth. **Settings and design:** A cross-sectional questionnaire survey conducted among Pediatricians practicing in Bengaluru city and Bengaluru rural. **Statistical test:** Descriptive statistics and Chi-square test for comparison between the groups. **Results:** A total of 106 practicing Pediatricians participated in our study. Most of the Pediatricians in our study had good attitude towards the Primary teethcare but had moderate knowledge of Primary teeth and their importance. **Conclusions:** The results of our survey indicates that Pediatricians lack a good knowledge of Primary teeth and their importance. As familiarity and good knowledge of Primary teeth helps in promoting better care of these teeth suggesting continuing dental education programs for Pediatricians, interactions between the medical and dental societies, improvement in the curriculum of Paediatric courses including knowledge of Primary teeth and oral care of children.

**Keywords:** Pediatricians, Primary teeth, Knowledge, Awareness.

### INTRODUCTION

Lobular The primary teeth are very important asset of a child. In children these baby teeth play a vital role in eating, phonetics, aesthetics and also as a space maintainer for permanent teeth. Often problems in these baby teeth during these tender year of life in the form of pain and swelling can cause distress to the child leading to inability to chew or speak properly or even may affect the appearance of a child.

Paediatricians are very often the only health professionals whom children visit. Pediatricians definitely have the responsibility to take primary care of the child from birth to adolescence<sup>[1-3]</sup>. Since children less than 3 years are not seen routinely by the dentist, they are at risk of developing dental disease. Evidence increasingly suggests that for successful prevention of caries, preventive interactions must begin within first year of life. Pediatricians who see a child from birth as a part of well-baby visit programs can educate the parents about the early oral preventive health care<sup>[4]</sup>, they also can provide screening services for early detection of dental diseases, provide advice and the need to seek dental care and refer those children to the paediatric dentist.

Thus one of the important factors for the success of preventive dentistry and the comprehensive care for children involves the Pediatricians knowledge, awareness of importance of primary teeth and also the attitude towards teeth.

Since there is a limited literature on Pediatricians perspective of Primary teeth, the study was designed to evaluate knowledge, awareness and attitudes on Primary teeth among Pediatricians.

### MATERIALS AND METHODS

A cross-sectional questionnaire survey was conducted among Pediatricians of Bengaluru, Karnataka, India. A complete anonymous self-administered questionnaire was personally handed over to the Pediatricians by dental residents at the Paediatric society meetings. A total number of 106 Pediatricians voluntarily

**\*Corresponding author:**

**Dr. Jyothisna V Setty**

Professor, Department of Pedodontics and Preventive dentistry, M R Ambedkar Dental College and Hospital, 1/36, Cline Road, Cooke Town, Bangalore-560005, Karnataka  
Email:

jyothisnavsetty[at]yahoo.com  
jyothisnasrikanth[at]gmail.com

participated in the study. Each questionnaire was divided into 3 sections. First part was designed to collect the personal and demographic details such as name, age, sex, years of practice, address, type of practice. Second part of the questionnaire included the close ended questions to assess Pediatricians knowledge and awareness of Primary teeth and attitude towards saving these baby teeth. Third part of the questionnaire includes the questions to evaluate the satisfaction among the Pediatricians about the training received and willingness to undergo future training to acquire knowledge on dental health. The data thus collected was analysed using SPSS version 13.0.

## RESULTS

Out of total the 106 filled questionnaire collected, six of them were rejected as they were either with details not completely filled or more than one options ticked or few questions were un-attempted. So the response rate was 78.125%. Sample included 66% paediatricians practicing in metro (within Bangalore city) and 34% from non-metro areas (other than the Bengaluru city) with male and female participants in equal numbers. 38% of respondents were between 30-40 years and 40% had 6-10 years of clinical practice (Table 1). In Table 2 questions 1-6 show the knowledge of primary teeth among paediatricians. Only 39% of Paediatricians had clear knowledge about the replacement of Primary and Permanent teeth. Among the respondents 51% of Paediatricians were aware of all the function of the primary teeth. Most of the paediatricians knew about the importance of Primary teeth care (Q 8, 9 and 10) and showed good attitude towards saving infected primary teeth (Q11-14). However about 28% of Paediatricians were not interested in extractions of Primary teeth as they thought the extraction of Primary teeth may cause unnecessary pain/trauma to the children and also incurs additional expenditure, as any ways primary teeth will erupt and will be replaced by permanent teeth. Most of the paediatricians (69%, Table 3) were of the opinion that their training should include more detailed information about the Infant and child dental and oral health. The results of our study showed that there was no statistical significant difference between males and females (Table 4). Pediatricians practicing in metro areas fared better as compared to non-metro areas (table 5) and further practitioners with more than 15 years of experience responded more correctly in comparisons with lesser experienced Pediatricians (table-6).

**Table 1:** Personal details

Gender	
Male	50%
Female	50%
Age (in years)	
30-40	38%
41-50	32%
51-60	20%
>60	10%
Place of Practice	
Metro	66%
Non-metro	34%
Years of Experience	
Up to 5 years	16%
6-10 years	40%
11-15 years	17%
More than 15 years	27%
Type of Practice	
Individual	29
Group	26
Teaching institution	20
Hospital	25

**Table 2:** Responses received for each question

Question	Incorrect Response		Correct Response	
	n	%	n	%
1. What time do you think first milk tooth erupts	16	16%	84	84%
2. Do you think all primary teeth will shed?	37	37%	63	63%
3. How many teeth in the mouth of 3 years old are primary	29	29%	71	71%
4. By what age do you think all primary teeth will be replaced by permanent teeth	39	39%	61	61%
5. Do you think all the permanent teeth erupt by replacing their respective milk tooth	61	61%	39	39%
6. Total no of primary teeth	29	29%	71	71%
7. Primary teeth help in	49	49%	51	51%
8. Are you aware of Early Childhood Caries?	2	2%	98	98%
9. Do you feel it is important to intervene Early Childhood Caries?	2	2%	98	98%
10. Do you counsel the parents regarding care of Primary teeth	20	20%	80	80%
11. Do you think it is important to treat a decayed milk tooth?	0	0%	100	100%
12. If a Primary tooth is infected	6	6%	94	94%
13. If an infected Primary teeth in your child's mouth require extensive treatment probably requiring a few visits to the dental office and some expenditure	16	16%	84	84%
14. If an infected primary tooth require extraction which is the only possible treatment option.	28	28%	72	72%

**Table 3:** Willingness for Dental Training

Question	Yes	No
Need to receive more information	69%	31%
Willingness for oral health training	87%	13%

**Table 4:** Correct response received for each question according to gender: (Chi-squared test)

Question	Male (N=50)		Female (N=50)		$\chi^2$	P-Value
	n	%	n	%		
Q1	41	82%	43	86%	0.543	0.461
Q2	36	72%	27	54%	3.475	0.062
Q3	34	68%	37	74%	0.437	0.509
Q4	26	52%	35	70%	3.405	0.065
Q5	22	44%	17	34%	1.051	0.305
Q6	34	68%	37	74%	0.437	0.509
Q7	25	50%	26	52%	0.040	0.841
Q8	48	96%	50	100%	2.041	0.153
Q9	48	96%	50	100%	2.041	0.153
Q10	40	80%	40	80%	0.000	1.000
Q11	50	100%	50	100%	---	---
Q12	44	88%	50	100%	6.383	0.012*
Q13	36	72%	48	96%	10.714	0.001*
Q14	35	70%	37	74%	0.198	0.656

\*denotes significant association

**Table 5:** Comparison of mean score according to place of practice

Place of Practice	n	Mean	Standard Dev	SE of Mean	Mean Difference	t	P-Value
Metro	66	9.59	1.49	0.18	0.970	3.329	0.001*
Non-Metro	34	8.62	1.16	0.20			

\*denotes significant difference

**Table 6:** Comparison of mean score according to years of experience

Years of Exp	n	Mean	Std Dev	SE of Mean	95% CI for Mean		Min	Max	P-Value
					Lower Bound	Upper Bound			
Up to 5 yrs	16	8.88	1.75	0.44	7.94	9.81	6	10	0.201
6 - 10 yrs	40	9.45	1.20	0.19	9.07	9.83	8	12	
11 - 15 yrs	17	8.76	1.68	0.41	7.90	9.63	6	11	
More than 15 yrs	27	9.52	1.42	0.27	8.96	10.08	7	12	

## DISCUSSION

Dental caries is the single most common chronic childhood disease and is 5 times more common than Asthma<sup>[5]</sup>. Early dental screening is the key to improve infant oral health care and prevent ECC, as children less than 3 years of age are not routinely seen by dentist are at risk of developing dental disease. Though AAPD recognizes that infant oral health is the foundation upon which preventive education and dental care must be made to enhance the opportunity for the lifetime free from preventable oral disease. It has been proposed that there is an increase number of children with special care needs (mainly in minority populations), persisting number of children with nursing caries<sup>[6]</sup> and the inability of non-dental health providers to recognize dental caries and provide effective counsel for caries prevention mandate<sup>[7]</sup>. Most of the children under one year of age do not visit dentist especially poor and minority children suffer dis-appropriately from dental caries and have limited access to dental care<sup>[8]</sup>.

Our study focuses on the paediatricians who are link between the dentists and children. Paediatricians are in the best position to contribute to the dental health of the child as the children are brought to their offices at a very early age they can identify early dental diseases and parents will usually accept their recommendations<sup>[9,10]</sup>. An American study showed only 54% of Pediatricians examined the oral cavity of more than half of 0-3 year olds<sup>[11,12]</sup>. On an average children are seen 11 times for well-visits with physicians by 3 years of age. Thus paediatricians can best assess early dental problems, evidence increasingly suggest that for successful prevention of caries, preventive interactions must begin within the first year of life<sup>[13-15]</sup>. Thus Paediatricians with good knowledge of primary teeth and its importance will be able to guide the parents and children towards better oral and general health.

In our study we analysed the data from a sample of Pediatricians practicing in Bengaluru city (metro) and around the Bengaluru city (non-metro) to assess their knowledge about the Primary teeth, awareness of the importance of these teeth and also attitude towards saving these milk teeth. The results of our study shows that Pediatricians had good attitude towards the care of these teeth, but had some confusions regarding eruption, exfoliation and replacement of these teeth. Almost 49% of the participants were not completely aware of all the functions of the Primary teeth. About 28% of paediatricians were sceptical about the extraction of hopelessly infected decayed Primary teeth, the reasons for this were varied ranging from time, procedure incurring unnecessary additional expenditure, trauma to the child or simply because the infected primary tooth will shed and be replaced by its successor. Similar to previous studies in our study paediatricians were interested to acquire more information on Primary teeth.

As Pediatricians are those caregivers mainly responsible for the supply of information to parents and they have multiple opportunities to intervene on the issue of oral health among children and adolescents<sup>[16,17]</sup>. Pediatricians lacking adequate training and familiarity of issues<sup>[18]</sup> related to primary teeth will have incomplete knowledge of Primary teeth and its importance may not consider proper care for these teeth and prevention of dental disease in particular<sup>[19]</sup>. This in turn signals the parents (mothers) that care of these primary teeth is not something that they should value highly. Thus these communication gap may represent the important missed opportunities for preventive and comprehensive oral care for children<sup>[20]</sup>. Considering the frequency with which children encounter paediatricians, additional oral health related training in paediatric residency can be considered improving their knowledge and attitude towards dentition and oral health of children. Even the setting up of dental home along with medical home in health centres should be considered<sup>[21]</sup>.

## CONCLUSIONS

The results of our survey indicates that Pediatricians lack complete knowledge of Primary teeth and their importance. Familiarity and good knowledge of Primary teeth helps in promoting better care of these teeth. Thus suggests:

1. Continuing dental education programs for Pediatricians to improve their knowledge and awareness.
2. Interactions between the medical and dental societies promoting knowledge of Primary teeth and oral care of Children.
3. The findings of our study points out the importance of publishing articles on oral health directed at medical field as well as including these topic in post-graduate courses of Paediatric residency.
4. Advocating dentists to be a part of well child care, establishing dental home along with medical home.
5. Encouraging group practice with Paediatric dentists and also referral of case to paediatric residents regularly.

## Limitations

Our study also has certain limitations as any other survey. Since the study was close ended questionnaire based, we were unable to obtain complete awareness. Sample population is from one geographic area hence may not be representative of the entire country.

**Conflict of interest:** None.

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