

SURVEY

Knowledge and Awareness of Primary Teeth and Their Importance among Parents in Bengaluru City, India

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ABSTRACT

Introduction: Often people responsible for the oral care of children feel or believe that since primary teeth will eventually shed, it is not worthwhile to spend time/money on providing good oral health to children. Parents are the ones who take care of their children and make decisions for them. Hence, they should have knowledge about primary teeth, their health and caring in order to build confidence in their children through tiny teeth.

Aim: To assess the knowledge of primary teeth and their importance among parents with children below 12 years.

Materials and methods: A total of 1,000 questionnaires containing questions written both in English and in the local language (Kannada) were prepared for data collection and were personally distributed to parents visiting dental clinics for their children's dental treatment.

Statistical analysis: Both descriptive statistics and Chi-square test were used.

Results: Complaints related to dental caries constituted 82% of children visiting dental clinics among children in Bengaluru city. Only 39% of respondents were aware of all functions of primary teeth.

Conclusion: The present study revealed that the parents of Bengaluru city had superficial or partial knowledge of primary teeth and that there is a need to improve this awareness.

Keywords: Awareness, Knowledge, Parents, Primary teeth.

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INTRODUCTION

Primary teeth are the valuable assets of a child. In children, milk teeth/primary teeth play a vital role for eating, phonetics, esthetics and also as a space maintainer for

permanent teeth. Often problems in milk teeth 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.

Young children's dental environment is complex as parental knowledge, attitudes and beliefs affect the child's oral health.^{1,2} As parents are the primary caregivers of their children they should have knowledge about the primary teeth, its health and caring in order to build confidence in their children.³ Parents are decision makers for their children. Sarnat et al⁴ reported that at the age of 5–6 years, the more positive the mother's attitude toward dental health the better is the child's oral hygiene. Therefore, it is important to examine the attitudes and also the knowledge of the parents, as these may affect their behavior toward their child's oral health.

There has been a significant decline in the prevalence of dental caries in children in most of the industrialized countries on account of a conscientious effort on their part to promote oral health care of children. Children from low-income and disadvantaged families have been found to have high caries prevalence and poor oral health.⁵ In developing countries like India, there is limited documented research on parental awareness of primary teeth. So, the present study was undertaken to assess the knowledge, attitude and perceptions of parents of primary teeth in Bengaluru city, India.

AIMS AND OBJECTIVES

- To assess the knowledge of primary teeth and their importance among parents with children below 12 years of age.
- To compare the influence of socioeconomic status on the knowledge, awareness and importance of primary teeth.

MATERIALS AND METHODS

The study was conducted among parents of Bengaluru city, Karnataka, India. Prior approval for the study was obtained from the Institutional Ethical Committee, Mathrushri Ramabai Ambedkar Dental College and Hospital, Bengaluru. All parents of children aged up to 12 years who reported to the Department of Pedodontics and Preventive dentistry of Mathrushri Ramabai

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Ambedkar Dental College were invited to participate in the study. Voluntariness and strict confidentiality were assured; 1,000 questionnaires both in English and in the local language (Kannada) were personally distributed for data collection. Assistance was offered for those who desired help in understanding the questions.

The demographic details were collected from the parents, such as name, age, sex, educational qualification, address, monthly income, child's age, number of children and the reason for visit to dental clinic. The responders were then asked to indicate the most appropriate correct answer from the given list of options in order to assess their knowledge, awareness and perception regarding importance of primary teeth.

The questionnaire assessed the parental knowledge and awareness about primary teeth, their location, number, functions, shedding and effects on permanent teeth. Further assessments of parents' attitude toward treatment of decayed, traumatized or infected primary teeth and their willingness to comply with the treatment options for such teeth and also beliefs or taboos associated with extractions were made.

All over the world, social scientists have considered occupation as the most important determinant of the level of social standing of an individual in society. In India, Prasad's classification of 1961, further modified in 1968 and 1970, is based on per capita income. Prasad's classification has been used in most Indian studies and has been found to be effective in its task. The income limits emphasize only the need for updating this classification with time. Realizing this need, Kumar⁶ linked Prasad's classification with the All India Consumer Price Index, as both of them shared the same base year of 1961. Thus, using the above method, the recent update of Prasad's

classification was used in our study.⁷ We considered classes I and II as high socioeconomic groups, class III as middle and classes IV and V as low socioeconomic groups.⁸

A total of 1,000 questionnaires were completed by the participants; 100 of them were excluded because they were either incomplete or someone other than the parent had completed the questionnaire or more than one option in the answers was ticked.

Collected data were tabulated and subjected for statistical analysis using Statistical Package for Social Sciences (SPSS) version 13.0. Frequency distribution which includes number and percentage was calculated. Chi-square analysis was used for comparison between different socioeconomic groups. The level of significance was set at $p < 0.05$.

RESULTS

It was observed that mothers (58%) accompanied their children more than fathers (42%) for dental treatment (Table 1). Caries-related conditions, such as, pain/food impaction/sensitivity constituted 82% of reasons for the visit to dental clinic.

Results of the questionnaire are tabulated in Table 2.

The answers to questions regarding what parents pursue milk teeth/primary teeth showed ignorance among almost half of the participating parents (questions 1, 2 and 4 in Table 2).

Table 1: Gender distribution among parents accompanying children for dental treatment

Gender	n	Percentage
Male	324	36
Female	576	64
Total	900	100

Table 2: Responses to the questions by parents

Question	Options	Responses in numbers (n)	Percentage
Q1	What are milk teeth/primary teeth/deciduous teeth?		
	Teeth which are present in the children drinking milk	234	26
	Present in all children	144	16
	First set of teeth which will be replaced by permanent teeth	468	52
Q2	None of these	54	6
	How many milk teeth/primary teeth are present totally?		
	All front teeth	189	21
	All teeth in the mouth of 4-year-old children	459	51
Q4	Don't know	180	20
	All upper teeth	72	8
	How many teeth in the mouth of 3-year-old are primary?		
	50%	225	25
	25%	234	26
	None	90	10
	All	351	39

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Question	Options	Responses in numbers (n)	Percentage
Q7	Total no. of primary teeth present		
	8	180	20
	12	162	18
	18	135	15
	20	270	30
	4	153	17
Q3	Do you think all primary teeth will shed?		
	Yes	549	61
	No	153	17
	Only front teeth	189	21
	Only back teeth	9	1
Q5	By what age do you think all primary teeth will be replaced by permanent teeth?		
	4 years	108	12
	6 years	189	21
	12 years	477	53
	18 years	126	14
Q6	Do you think all the permanent teeth erupt by replacing their respective milk tooth?		
	Yes	423	47
	No	153	17
	Some of them	324	36
Q8	Primary teeth help in:		
	Chewing	225	25
	Appearance of child	54	6
	Speech	18	2
	Maintains the space for permanent teeth/guides the eruption of permanent teeth	63	7
	I and ii	45	5
	i, ii and iii	126	14
	i, ii and iv	18	2
	All of the above	351	39
Q9	Do you think it is important to treat a decayed milk tooth?		
	Yes	774	86
	No	826	14
Q10	If a primary tooth is infected		
	It is important to save infected primary teeth if possible	684	76
	It is unnecessary, since anyway tooth is going to fall	216	24
Q11	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		
	You will agree for treatment	540	60
	You will not agree for treatment	360	40
Q11	Reasons		
	Time	105	29
	Economically difficult/expenditure	104	29
	Unnecessary to spend time and money for a tooth which is anyway going to shed	151	41
Q12	If an infected primary tooth require extraction which is the only possible treatment option		
	You will agree for extraction	666	74
	You will not agree for extraction	234	26
Q12	Reasons		
	Eyes will get affected	63	27
	Brain will get affected	28	12
	As the tooth will shed there is no need for extraction	63	27
	Will cause pain/trauma in child	52	23
	Expenditure	28	12

Only 30% of parents were aware of total number of primary teeth present (question 7 in Table 2).

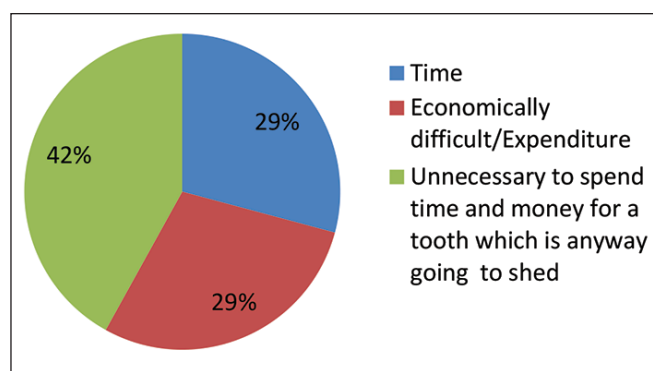
Knowledge regarding shedding of primary teeth and eruption of permanent teeth was not clear at least among half of the parents who participated in the study (questions 3, 5 and 6 in Table 2).

Among the respondents, only 39% of the parents were aware of all the functions of primary teeth (question 8 in Table 2).

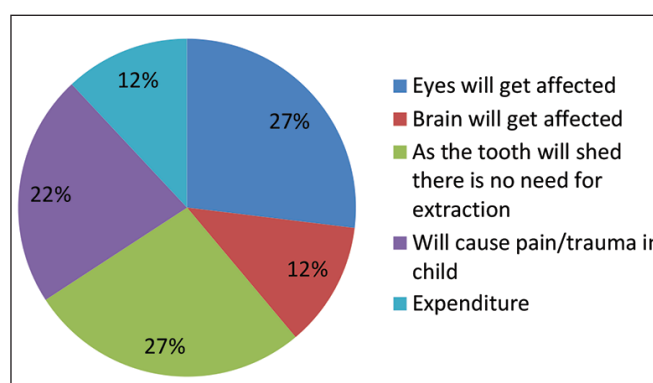
When asked about the importance of treating a decayed or infected primary tooth, majority of the parents (86 and 76%, questions 9 and 10 of Table 2) felt it is important to treat such teeth, although about 40% of them were not ready to spend time and money for treatment since they felt it is unnecessary as these teeth will shed (question 11 – Reasons; Table 2, Graph 1).

Willingness to comply with extraction as the only option left to treat the infected tooth was agreed by majority of them (74%) and only about 26% were not willing. This unwillingness was due to varied reasons like taboos associated with extraction, misconceptions like eyes and brain of the child may be affected, expenditure, procedures that might cause pain and trauma to the child or simply because primary tooth will anyway shed (question 12 – Reasons; Table 2, Graph 2).

The results of the questionnaire when compared between different socioeconomic groups showed no statistical significance (Table 3). The knowledge of primary teeth was relatively less among low socioeconomic groups as



Graph 1: Reasons not willing for treatment



Graph 2: Reasons not willing for extraction

compared with middle and high socioeconomic groups. Their willingness to comply with different options for treatment was also less, probably because of their socioeconomic status.

Table 3: Responses according to socioeconomic status

Question	Options	Class I (n=270)		Class II (n=216)		Class III (n=333)		Class IV (n=9)		χ^2	p-value
		n	%	n	%	n	%	n	%		
Q1	Teeth which are present in the children drinking milk	72	27	36	17	81	24	5	56	12.642	0.179
	Present in all children	49	23	9	4	63	19	1	11		
	First set of teeth which will be replaced by permanent teeth	108	40	153	71	180	54	3	33		
	None of these	27	10	18	8	9	3	0	0		
Q2	All front teeth	54	20	63	29	63	19	1	11	18.083	0.034
	All teeth in the mouth of 4-year-old	180	67	99	46	153	46	3	33		
	Do not know	18	7	54	25	63	19	5	56		
	All upper teeth	18	7	0	0	54	16	0	0		
Q3	Yes	153	57	135	63	207	62	6	67	2.875	0.969
	No	54	20	36	17	54	16	1	11		
	Only front teeth	54	20	45	21	72	22	2	22		
	Only back teeth	9	3	0	0	0	0	0	0		
Q4	50%	81	30	36	17	99	30	1	11	5.247	0.812
	25%	98	30	54	25	72	22	3	33		
	None	9	3	36	17	36	11	1	11		
	All	99	37	90	42	126	38	4	44		
Q5	4 years	45	17	9	4	36	11	2	22	10.809	0.289
	6 years	27	10	36	17	90	27	4	44		

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Question	Options	Class I (n=270)		Class II (n=216)		Class III (n=333)		Class IV (n=9)		χ^2	p-value
		n	%	n	%	n	%	n	%		
Q6	12 years	162	60	126	58	162	49	3	33	8.003	0.238
	18 years	36	13	45	21	45	14	0	0		
	Yes	153	57	108	50	126	38	4	44		
	No	54	20	36	17	36	11	3	33		
Q7	Some of them	63	23	72	33	171	51	2	22	10.812	0.545
	8	81	30	18	8	72	22	1	11		
	12	54	20	35	21	54	16	1	11		
	18	45	17	36	17	36	11	2	22		
	20	81	30	63	29	108	32	2	22		
Q8	24	9	3	54	25	63	19	3	33	17.856	0.658
	Chewing	72	27	45	21	90	27	18	22		
	Appearance of child	0	0	27	13	18	5	9	11		
	Speech	0	0	0	0	9	3	9	11		
	Maintains the space for permanent teeth	18	7	18	8	27	8	0	0		
	I and ii	32	13	0	0	9	3	0	0		
	i, ii and iii	32	13	27	13	54	16	9	11		
	i, ii and iv	9	3	0	0	9	3	0	0		
All of the above	99	37	99	46	117	35	36	44			
Q9	Yes	234	87	207	96	261	78	72	89	3.786	0.286
	No	36	13	9	4	72	22	9	11		
Q10	It is important to save infected primary teeth if possible	243	90	135	63	252	76	54	67	6.054	0.109
	It is unnecessary, since anyway tooth is going to fall	27	10	81	38	81	24	27	33		
Q11	You will agree for treatment	243	90	198	92	243	73	63	78	5.130	0.163
	You will not agree for treatment	27	10	18	8	90	27	18	22		
Q12	You will agree for extraction	198	73	189	88	207	62	72	89	6.012	0.111
	You will not agree for extraction	72	27	27	13	126	38	9	11		

DISCUSSION

Maintaining healthy primary teeth is essential to a child's overall oral and general development.⁹ Parents and family members are considered the primary source for knowledge about child rearing and health habits for children, which undoubtedly have a long-term influence in determining a child's oral health status.¹⁰ They are considered the key persons in achieving the best oral health outcomes and assuring well-being for children.

Frequently in pediatric dental practice we find parents ignorant about the primary tooth, its function and importance. They often question the necessity of treatment to save and maintain the milk tooth in function.

There is no good reason for leaving primary teeth decayed and untreated in a child's mouth. No other branch of medicine would willingly leave disease untreated.¹¹

Untreated carious primary tooth can give rise to different complications, such as pain, oral infection, problems in eating and sleeping, malnutrition and alterations in growth and development¹²⁻¹⁵ and probably early loss of teeth, which might lead to short-term effects like problems in eating and speaking and long-term effects like malalignment of permanent teeth and increased risk of malocclusion later on.¹⁶

In the present study, 82% of parents visited the dental clinic only after their child had complaints of untreated carious teeth; 39% of parents were aware of all the functions of primary teeth. The reason for poor knowledge among parents and low value about primary teeth might be due to cultural-based opinions or the fact that these are temporary teeth and they will shed and be replaced by a new set of secondary teeth. Some authors have reported that certain cultures place little value on primary teeth and that caries and early loss of the primary dentition is an accepted occurrence.¹⁷

A qualitative study of caregivers in Saipan found that the low value attributed to baby teeth was an obstacle to developing effective preventive program.¹⁸ In another qualitative study, Finnish caregivers of preschool children gave less importance to primary teeth when compared with general health.¹⁹

Conversely a Canadian study indicated that parents who believed baby teeth were important had children with significantly lower caries rates than those who believed otherwise.²⁰ Thus, parental knowledge of primary teeth appears to have a direct effect on the oral health of the child.

CONCLUSION

The present study revealed that the parents of Bengaluru city had superficial or partial knowledge and awareness of primary teeth and importance. There is a need to cultivate and reinforce positive attitude among parents and substantially raise their dental awareness through child dental health-oriented programs with active parental involvement. Such awareness programs should be developed for parents imparting knowledge about primary teeth, their function and preventive primary care of these teeth. To achieve this, young and prospective parents should be directed by the medical professionals, obstetricians, gynecologists and pediatricians to seek professional oral health counseling.

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