PEDIATRIC DENTAL PROCEDURES: A SURVEY OF KNOWLEDGE AND ATTITUDES OF PARENTS

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ABSTRACT:

Most parents are unaware of the role a pediatric dentist plays in their child's life, and the importance of dental visits at an early age is underestimated as most believe that the milk teeth are going to exfoliate and it not worth paying much attention to. Hence, the study was conducted with the objective to assess the parental knowledge of the importance they give to primary teeth and to evaluate their attitudes towards management of a symptomatic primary tooth, and acceptance of preventive procedures.

Materials and methods:

A Questionnaire was given to 1300 parents of children who were between the age group of 0-12 years. 1000 completed questionnaires were included in the study.

Statistical analysis: All data were entered in excel sheet and analysis was done using the IBM SPSS 22.0 software

Results: More than two-third of the participating parents (71.4%) felt that primary teeth were important but only 40% were aware about the treatment modalities available to save a decayed primary tooth. Most parents (74.3%) reported that they were aware that decay in primary teeth can be prevented, however only 49.8% of them were aware of existing preventive procedures.

Conclusion:From the results of the study, it was apparent that attitude and awareness among parents regarding regular dental visits and importance of accepting preventive dental procedures at an early age is limited. Improvement of knowledge in this regard is of utmost importance for long term maintenance and improvement of healthy dentition for children.

Key words: Primary dentition, Pediatric dentist, preventive dental procedures.

INTRODUCTION:

The notion that the 'baby teeth don't deserve care because you lose them anyway' has largely disappeared in the western world. In India, pediatric dentistry is yet an upcoming profession and awareness of this being a specialty is

less unlike the western countries where it is an accepted and established practice

In the US, Pediatric dentistry has been a specialty since the 1940's, however in India it was only in 1988, as per the dental council guidelines it got its due

importance and was treated as a separate entity. ^[1]

Indians have a low level of oral health awareness and practice as compared to the western people. Western children have been reported to be more aware of regular visits to a dentist because it is initiated either by their parents or dentists. Such an effort on the part of the parents is predominantly missing in the Indian scenario. ^[2]

Most parents are unaware of the role a pediatric dentist plays in their child's life, and the importance of dental visits at an early age is underestimated as most believe that the milk teeth are going to exfoliate and it not worth paying much attention to. In the first 6-7 years of a child's life, the primary teeth play an important role in development of speech, chewing, maintaining space and guiding the eruption of permanent teeth. Even if a parent is recommended to take the child to a pediatric dentist, many may not consider doing the same since awareness of importance of primary teeth is less. The knowledge, attitude and behavior of parents towards dental treatments influence their child to a great extent in building a positive dental attitude.

Against this background, the study was conducted with the objective to assess the parental knowledge of the importance they give to primary teeth and to evaluate their attitudes towards management of a symptomatic primary tooth, and acceptance of preventive procedures.

MATERIALS AND METHODS:

A cross sectional questionnaire study was conducted in Mumbai over a period of 3 months. Ethical clearance was obtained from the institutional ethical committee. А questionnaire was formulated to study the knowledge attitude and awareness, of parents on Pediatric dental procedures and importance of preventive procedures. A pilot study was conducted in the department of pediatric and preventive dentistry on parents of patients who attended clinics to test the validity and operational feasibility of the study. The questionnaire items were analyzed for difficulty in understanding, interpreting and answering correctly. А few modifications were done and the questionnaire was given to the same set of parents 2 weeks after the initial administration of the questionnaire and internal consistency was found to be good and the proforma was finalized.

The questionnaire was given to 1300 parents of children between the age group of 0-12 years who were willing to participate in the survey. Participants were asked to respond to each item of the questionnaire in the format provided. One of the investigators was always available during the completion of the questionnaire and participants were encouraged to approach the investigator for clarification if any. On completion of the questionnaire each participant was given educational handouts and guidelines on importance of maintaining healthy primary teeth.

Questionnaires with incomplete responses were excluded and final 1000 survey sheets with complete responses were included.

Statistical analysis

All data were entered in excel sheet and analysis was done using the IBM SPSS 22.0 software **RESULTS:**

The survey was conducted amongst 1300 parents in the city of Mumbai, and 1000 completed survey sheets were included for the study. The parents were selected equally, 500 of lower and 500 of higher socio economic status. A total of 20 questions were included in the survey. Questions 1 to 6 had an option of yes and no only, whereas Questions 6 to 15 had options of yes, no and maybe. Questions 15 to 20 had multiple options.

Table - 1

Sr.No	DEMOGRAPHIC DATA	Numbers (%)
1	Sex	
	• Female	293(29.3)
	• Male	707(70.7)
2	Educational qualification	
	Graduate	817(81.7)
	Illiterate	34(3.4)
	 Post graduate 	42(4.2)
	 Upto 12th grade 	107(10.7)
3	Occupation	
	Working	948(94.8)
	 Non- working 	52(5.2)
4	Family's annual income	
	 More than 2 lakhs 	500(50.0)
	 Less than 2 lakhs 	500(50.0)
5	Are you a working parent	
	• Yes	759(75.9)
	• No	241(24.1)

N o	Table -2 Question	YESno(%)	NOno(%)	MAY no(%)	BE
1	Do you know that we have 2 sets of teeth- Milk teeth and permanent teeth?	920 (92)	80 (8.0)	-	
2	Do you think milk teeth are important?	714 (71.4)	286 (28.6)	-	
3	Has your child ever been to the	536 (53.6)	464 (46.4)	-	

	Winnier J.et al, Int J De	nt Health Sci 2015; 2	2(5):1171-1182	
	dentist before?			
4	Do you know there is a specialty called Pediatric dentistry?	565 (56.5)	435 (43.5)	-
5	Are you aware that root canal treatment and capping can be done for milk teeth as well?	400 (40.0)	600 (60.0)	-
6	Do you know that only a Pediatric dentist is trained in Child Psychology and Behavior Management?	496 (49.6)	504 (50.4)	-
7	If you were referred by your family dentist to go to a Pediatric dentist, would you go?	713 (71.3)	127(12.7)	160 (16.0)
8	Do you feel that infection from a decayed milk tooth can spread to the permanent tooth lying under it and damage it?	547 (54.7)	256 (25.6)	197 (19.7)
9	Do you think that spaces between milk teeth are normal?	458 (45.8)	233 (23.3)	309 (30.9)
1 0	Are you aware that the right Pediatric dentistry treatment can help to prevent crooked teeth at a later stage?	517 (51.7)	240 (24.0)	243 (24.3)
1 1	Do you think tooth decay can be prevented?	743 (74.3)	91 (9.1)	166 (16.6)
1 2	Do you know that application of fluoride from a dentist every 6 months is going to make your child's tooth more resistant to decay?	498 (49.8)	250 (25.0)	252 (25.2)
1 3	If a dentist advises you for Preventive treatment like sealants and fluoride application to prevent decay in your child's teeth, will you do it?	555 (55.5)	145 (14.5)	300 (30.0)
1 4	Do you know that medicine syrups play a big role in tooth decay?	382 (38.2)	325 (32.5)	293 (29.3)
1 5	Would you like to receive more information about your child's teeth protection and oral hygiene maintenance?	848 (84.8)	75 (7.5)	77 (7.7)

Table – 3 FREQUENCY DISTRIBUTION OF RESPONSES FROM Q16 TO Q20

Sr.no	Options	High SES	Low SES	Total No (%)
16	If your child has a toothache, who			
	would you go to?			
	Family doctor	41(35)	76(65)	117(11.7)
	Family dentist	211(46.8)	240(53.2)	451(45.1)
	Pediatric dentist	248(57.4)	184(42.6)	432(43.2)
17	When do you think should be the			

	((iiiii)) (iii) (ii)			
	first dental visit? When your baby			
	is			
	6 months	106(50.5)	104(49.5)	210(21.0)
	One year	199(51)	191(49)	390(39.0)
	Only when there is pain	195(48.8)	205(51.2)	400(40.0)
18	If your child's milk tooth is decayed, what would you do?			
	Give medicines and try to manage it on your own	32(39)	50(61)	82(8.2)
	Get it treated by visiting the dentist	396(55.2)	322(44.8)	718(71.8)
	Will not treat it as it is anyways going to fall off	71(36)	128(64)	200(20.0)
19	If your child has a toothache & swelling in the mouth and after taking medicines, the toothache and swelling subsides, what would you do next?			
	• Still take him to the dentist to know the cause and treat cause	453(53.8)	389(46.2)	842(84.2)
	Wait for pain to recur and then take him	47(29.7)	111(70.3)	158(15.8)
20	If a dentist advises you for Preventive treatment like sealants and fluoride application to prevent decay in your child's teeth, will you do it? If no or maybe, why?			
	You think it is not going to help	99(42.3)	135(57.7)	233(23.3)
	Visits to dentist will increase	143(43.9)	183(56.1)	440(44.0)
	Cost factor	258(58.6)	182(41.4)	326(32.6)

Table – 4 COMPARISON OF ANSWERS GIVEN BY RESPONDENTS OF HIGHER AND LOWER SOCIOECONOMIC CLASS FROM Q1 TO Q15

	YES		NO		May be	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
Q.	Nos (%)	Nos (%)	Nos (%)	Nos (%)	-	-
No						
1	463(50.3)	457(49.7)	37(46.2)	43(53.8)	-	-
2	402(56.4)	311(43.6)	98(34.1)	189(65.9)	-	-
3	279(52.1)	257(47.9)	221(47.6)	243(52.4)	-	-
4	328(58.1)	237(41.9)	172(39.5)	263(60.5)	-	-
5	210(52.5)	190(47.5)	182(45.5)	218(54.5)	-	-

6	272(54.8)	224(45.2)	228(45.2)	276(54.8)	-	-
7	367(51.5)	346	57 (44.9)	70 (55.1)	76 (47.5)	84 (52.5)
		(48.5)				
8	280(51.2)	267(48.8)	114(44.7	141(55.3)	106(53.8)	91(46.2)
9	238(52)	220(48)	114(48.9)	119(51.1)	148(47.9)	161(52.1)
10	242(46.8)	275(53.2)	130(54.2)	110(45.8)	128(52.7)	115(47.3)
11	367(49.4)	376(50.6)	41(45.1)	50(54.9)	92(55.4)	74(44.6)
12	232(46.6)	266(53.4)	137(54.8)	113(45.2)	131(52)	121(48)
13	300(54.1)	255(45.9)	62(42.8)	83(57.2)	138(46)	162(54)
14	206(53.9)	176(46.1)	166(51.6)	156(48.4)	127(43.3)	166(56.7)
15	422(49.8)	426(50.2)	38(50.7)	37(49.3)	40(51.9)	37(48.1)

Table – 5 CHI SQUARE RATIO

Q.		Value	df	Asymp. Sig. (2-
1	Pearsons chi So	0.489	1	0.484
-	Likelyhood	0.490	1	0.484
	ratio			
2	Pearsons chi Sq	40.468	1	0.000
	Likelyhood	41.004	1	0.000
	ratio			
3	Pearsons chi Sq	1.946	1	0.163
	Likelyhood	1.947	1	0.163
	ratio			
4	Pearsons chi Sq	33.693	1	0.000
	Likelyhood	33.899	1	0.000
	ratio			
5	Pearsons chi Sq	5.520	2	0.063
	Likelyhood	5.526	2	0.063
	ratio			
6	Pearsons chi Sq	9.217	1	0.002
	Likelyhood	9.231	1	0.002
	ratio			
7	Pearsons chi Sq	2.349	2	0.309
	Likelyhood	2.352	2	0.309
	ratio			
8	Pearsons chi Sq	5.310	3	0.150
	Likelyhood	5.703	3	0.127
	ratio			
9	Pearsons chi Sq	1.362	2	0.506
	Likelyhood	1.362	2	0.506
	ratio			
10	Pearsons chi Sq	4.469	2	0.107
	Likelyhood	4.472	2	0.107
	ratio			
11	Pearsons chi Sq	2.951	2	0.229
	Likelyhood	2.956	2	0.228

	ratio			
12	Pearsons chi Sq	5.022	2	0.081
	Likelyhood	5.028	2	0.081
	ratio			
13	Pearsons chi Sq	8.610	2	0.014
	Likelyhood	8.627	2	0.013
	ratio			
14	Pearsons chi Sq	8.191	3	0.042
	Likelyhood	8.215	3	0.042
	ratio			
15	Pearsons chi Sq	0.149	2	0.928
	Likelyhood	0.142	2	0.928
	ratio			
16	Pearsons chi Sq	27.258	2	0.000
	Likelyhood	27.515	2	0.000
	ratio			
17	Pearsons chi Sq	21.816	2	0.000
	Likelyhood	22.015	2	0.000
	ratio			
18	Pearsons chi Sq	0.433	2	0.805
	Likelyhood	0.433	2	0.805
	ratio			
19	Pearsons chi Sq	30.789	1	0.000
	Likelyhood	31.553	1	0.000
	ratio			
20	Pearsons chi Sq	24.911	3	0.000
	Likelyhood	25.4003	3	0.000
	ratio			

Winnier J.et al, Int J Dent Health Sci 2015; 2(5):1171-1182

DISCUSSION:

To improve the oral health care access for children, there is a need to assess the oral health knowledge of their parents who are the primary care givers and decision makers for their children.^[3] It has been reported that the more positive the parent's attitude towards dentistry; the better will be the dental health of their children. ^[4] Hence, the present study attempted to understand the parent's perception about the importance of their child's primary teeth and their awareness on pediatric dental preventive and treatment modalities available. The survey was equally distributed among parents of the higher and lower socioeconomic class to assess whether the socioeconomic status played a role in the knowledge of parents about pediatric dentistry.

In the present study, 65.9% of the parents from the lower socioeconomic class did not feel that primary teeth were important. This finding is similar to the study conducted by Kaur et al, who reported that a lack of awareness regarding the importance of deciduous teeth is evident. ^[5] Unless the parents know the importance of milk teeth, they

will not know the benefits of saving them.

It has been reported that 40% of world's population fears dental treatment which be derived from can vexatious experiences a child faces during his childhood. ^[6]Dental phobias beginning in childhood often continue to adulthood, so it is of paramount importance that children have positive experiences in their early years. Hence it is essential that the child's first dental visit is a friendly and comfortable experience with a dentist trained in dealing with children. In our study only 59.6% of the parents were aware that a pediatric dentist is a specialist who is trained in the subject of child psychology and behavior management of which 54.8% of the parents were from higher and 45.2% were from lower socio economic classes. In the present study, 58.1% of the parents from the higher socio economic class were aware of the presence of a specialized branch of dentistry for children, however 60.5% of the lower socioeconomic classes were not aware of the same. It has been reported that lower socioeconomic class generally visited government hospitals for their dental treatment ^[7]. The lack of awareness as seen in our study is also possibly due to the fact that, people from lower socio economic classes visit government hospitals and most of such hospitals is Mumbai do not have a pediatric dentist.

In the present study 45.1% of the parents that were surveyed preferred to

visit their family dentist, if the child's tooth was symptomatic and 71.3% responded that if referred they would visit a pediatric dentist. This can be attributed to the fact that probably most parents are unaware that a special children's dentist exists or that they have more faith and trust in their family dentist and prefer to have their child treated under their care. It has been reported by McKnight et al, that general dental practitioners frequently recommend restoration of teeth whereas pediatric dentists recommend pulp therapy followed by stainless steel crowns.^[8] This is probably due to advanced education of pediatric dentist, awareness of limited time span of restorations and greater familiarity with pulp therapy and stainless steel crowns. Thus it is beneficial if the child is recommended to visit a pediatric dentist.

The first dental visit is an important milestone in the child's life and a timely visit should be an essential part of the child's general health care. ^[9]According to the American Academy of Pediatric Dentistry every child must visit the dentist by the child's first birthday. In the present study only 39% of the parents believe that the first dental visit should be at 1 year of age where as 21% reported it to be as 6 months. Alaa et al reported that most parents thought that the first dental visit should be between 3-6 years of age, maybe because they believe that at 1 year of age all teeth have not erupted. [10] Al Shan et al showed that only 23% of the Saudi parents were of the opinion of having the first visit by 1 year of age. ^[11] It was seen that 40% in our study believed that the first dental visit should be done only when there is pain. This finding is supported by several studies conducted [9,12,13,14] this regard. Since in pediatricians see the child on a more regular basis for vaccination, it would be recommended if they could advise the patients on importance of early dental visits. However, Hinze et al noted that 40% of the pediatricians referred a 1 year old child to a dentist and only 29% believed it was important. ^[15] All the above studies indicate that a great majority of the parents are unaware of the ideal age for their child's first dental visit and believe in taking their child to the dentist only when there is pain. Proper timing of early dental checkups reduces the stress, cost, improve oral health related quality of life and better manage the family's time. [10]

Dental caries in deciduous teeth can affect the child's growth, resulting in significant pain which can cause life threatening infections & diminish overall quality of life.^[16] A direct relationship between caries in the deciduous teeth and increased likelihood of caries development in the permanent teeth has already been established since long^[17]. 71.8% of the parents in our study stated that they would treat the decay in a primary tooth by visiting a dentist rather than wait for it to fall off or manage it on their own by giving medicines and 28.2% stated that they would give medicines and manage by themselves since the tooth will be lost eventually. It was concerning to see that 70.3% of the parents of the lower socioeconomic class would rather wait for the pain to recur before visiting a dentist. According to Alaa et al, 37% considered extraction as the best treatment choice for primary teeth. ^[10] Parents must be well educated about the consequences of early loss of primary teeth and the impact that could have on their child's overall health.

In the present study, about 60% of the parents were unaware that root canal treatment and crowns may be done for primary teeth. Comparable studies regarding the same were not available in the literature. In our study, most were aware that decay is preventable and about 50% were aware that fluoride prevents decay. This was contrary to the study conducted by Suresh et al, where mothers knowledge about fluoride was inadequate.^[18] When asked about the acceptance of preventive treatment if advised by the dentist, 45% were unsure or would not undertake preventive procedures for their children. Cost factor was cited to be the prime reason for their uncertainty amongst the 58.6% of the higher socioeconomic class and increase in the number of dental visits being the main reason among the lower socioeconomic class. This may be attributed to the fact that the higher socioeconomic class may be going to private dentists where the cost of dental treatment is high, whereas the lower socioeconomic might be going to the government hospitals where cost may be

low but waiting period for treatment and number of visits may be much more.

Only 54.7% of the parents were aware that infection from a primary tooth can spread to the permanent tooth lying underneath it and damage it. This finding is comparable to studies conducted by Al Zaharani who reported 71% ^[19] and Alaa et al, who reported that 60% were aware of the same. ^[10]

In the present study, 62% of the parents were unaware that medicated syrups may lead to dental decay. This finding is similar to other studies conducted by H Landt et al ^[20] and Mentes (2001) ^[21]. It has been reported that around 80% of the Pediatricians seem to be unaware regarding the association between liquid medicaments and their dental effects, and most of them did not recommend brushing after intake of medication. This indicates lack of knowledge amongst Pediatricians regarding the factors causing dental caries and its associated risks. ^[22,23]

In the present study, 85% of the study population responded that they would be interested in gaining more knowledge regarding the importance of maintenance and management of their children's dental health which signifies a

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 AvninderKaur, ManjitKaur, Deepak Bansa. Historical perspective of paediatric dentistry in india: a literature review. IJRID. Sep.-Oct 2013;3(5) genuine lack of awareness than an attitude of indifference towards importance of primary teeth. This indicates that improvement of basic knowledge and dental health education is mandatory in our population.

CONCLUSION:

The sole purpose of education is not just to impart knowledge but also to inculcate appropriate actions towards dental treatment. It has been reported that level of education plays an important role in determining the attitude and knowledge of parents towards dental caries which forms limitation to the present study. Within the foibles of the present study, it was apparent that attitude and awareness amongst parents regarding regular dental visits and importance and acceptance of preventive dental procedures at an early age is limited. Improvement of knowledge in this regard is of utmost importance for long term maintenance and improvement of healthy dentition for children.

Acknowledgements:Special thanks to Krupa Bambal for her contribution in collecting the data as well as for helping to edit the study.

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