

First Dental Visit of a Child - Perspectives of Parents / Guardians and Dentists / Paediatric Dentists in Saudi Arabia

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ABSTRACT

BACKGROUND

The appropriate timing of first dental visit has an influence on child's oral health care and determines the effectiveness of preventive dental care rendered. The present study assesses the attitudes and practices of parents / guardians as well as dentists / paediatric dentists towards the first dental visit of children and evaluate as to whether there is any difference in their perception.

METHODS

151 parents, 101 general dentists, and 53 paediatric dentists, were selected randomly from government and private institutions or hospitals across Saudi Arabia. Two separate close-ended, multiple-choice questionnaires were directed to evaluate the knowledge, attitude and practice of parents / guardians as well as general / paediatric dentists towards their child's first dental visit. Chi square test was used to find the association of variables.

RESULTS

Most parents preferred to take their children for first dental visit between 3 to 6 years, for the reason of pain (31.8 %) or prevention of caries (31.8 %). 98 % of parents were happy with their child's first dental visit and 84.8 % would surely go for follow - up visits for treatment. 86.8 % of paediatric dentists recommended first dental visit within 6 years of age when compared to 52.4 % of general dentists [$p = 0.001$]. Paediatric dentists were more frequently recording general health / growth, performing extra - oral & intra - oral examinations and evaluating developing-dentition, when compared to general dentists [$p = 0.001$].

CONCLUSIONS

There is an urgent need for the general dental practitioners as well as paediatric dentists to educate and motivate the parents regarding the first dental visit and its objectives.

KEY WORDS

First Dental Visit, Paediatric Dentist, General Dentist

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BACKGROUND

Intention of scheduling a dental visit at an early age in children is to introduce the preventive strategies to the parents so that the child's dental care can be appropriate and optimal oral health is achieved. Year one dental visit helps to accomplish an anticipatory guidance and establish dental home.¹ Early childhood caries is a significant health issue that can induce pain and cause psychological trauma to these children. Hence, the importance of prevention of dental caries in children should be targeted at a younger age so that maximum oral and general health related benefits can be reaped. The parent's attitude and practices of dental health and treatment could influence the oral health status of their children. It is observed that when parents have positive approach and seriousness regarding dental health, their children are more likely to exhibit better oral health.²

Parents who have limited knowledge related to the timing of first dental visit for their children, are likely to have negative consequences.³ Numerous risk factors have been documented for development of early childhood caries such as prolonged breastfeeding, frequent nocturnal bottle feeding, oral hygiene practices, diet, timing, and reason for the first visit of a child to the dentist which could be focused on if the parents arrive early for dental treatment.⁴

A child's behaviour during the first dental visit is reported to considerably influence the likelihood of future recall visits⁵ and hence, there is ample need to raise awareness among parents regarding the importance of taking oral health care of their children quite seriously during the early stage of their life.⁶

Hence, in light of the aforementioned facts and observations, a cross-sectional questionnaire-based study was planned and undertaken in order to adequately assess the attitudes and practices of parents / guardians as well as dentists / paediatric dentists towards the first dental visit of children and also to evaluate whether there is any difference in their perception.

METHODS

Study Design and Duration

A cross-sectional study was planned for a period of six months from 15th August 2019 to 15th February 2020 among 151 parents, 101 general dentists and 53 paediatric dentists. Two separate close-ended, multiple-choice questionnaires were prepared to evaluate the knowledge, attitude and practice of parents / guardians as well as general / paediatric dentists of Saudi Arabia towards child's first dental visit. The questionnaire for parents / guardians comprised of 10 questions whereas that for general / paediatric dentists consisted of 18 questions, 6 each pertaining to knowledge, attitude and practice. Both questionnaires were validated, and their construct, face, and content validities were carried out with the help of 5 randomly selected dentists with vast clinical and teaching experience. The difficulty in understanding each question, its interpretation, and its correctness were critically analysed. The modifications were accordingly, carried out and the proforma was finalized.

Ethical Approval

The institutional ethical committee of Ibn Sina National College for Medical Studies, Jeddah approved the ethical clearance for the study. The participants who consented for the study were ensured that their participation would be kept confidential.

Inclusion and Exclusion Criteria

The parents / guardians who had accepted to participate in the study and those children who would visit the dentist for the first time were included in the study. Any mental / physical disability among the parent, guardian or children lead to their exclusion from the study. The general dentists and paediatric dentists were selected randomly from government and private institutions and / or hospitals across Saudi Arabia.

Data Collection

The questionnaire for parents was translated into local (Arabic) language for ease of understanding by the participants. The questions were targeted to obtain information regarding the child's first dental visit such as: child's age, the accompanying person, reasons for visit, preference of doctor, children's behaviour, the experience rating and treatment suggested / rendered, and likelihood of attending the future dental visits.

The questionnaire for the parents / guardians as well as general dentists / paediatric dentists were mailed. They were asked to choose their preferred option for each question.

Statistical Analysis

The responses were received, entered on Microsoft Excel (Microsoft, Redmond, WA, USA) and analyzed using IBM SPSS version 20. Descriptive statistics was performed and the variables in the questionnaire were tested using χ^2 - test to determine their association.

RESULTS

Response rates from parents, general dentists and paediatric dentists were 93.20 %, 92.66 % and 94.64 % respectively. Table 1 shows the demographic data of the parents who had participated in the study. Majority of the parents were of the age range 30 to 39 years and their educational status was diploma / postgraduate (66.9 %). 63.6 % of them had monthly income of more than 5000 Saudi Riyals and 66.2 % of them were employed. 91.9 % of them had visited a dentist before.

Relationship between the parental factors and first dental visit was analysed using Pearson's Chi square test and described in table 2. The parental factors that had a positive correlation with the child's first dental visit were their education status, opinion regarding appropriate child's age for first dental visit, and knowledge / awareness regarding first dental visit.

Parent's preferences and their relation to child's first dental visit has been shown in table 3. Only 6.6 % of parents brought their child for dental visit within 1 year.

Parent's Demographic Data	Frequency (n)	%
Parent's Age At The Time Of Their Child's First Dental Visit		
< 20 years	6	4
20 to 29 years	36	23.8
30 to 39 years	62	41.1
> 40 years	47	31.1
Marital Status of Parent		
Married	135	89.4
Divorced	11	7.3
Widowed	5	3.3
Education Status of Parent		
Diploma / Postgraduate	101	66.9
Primary / Middle / Secondary School	43	28.5
Uneducated	7	4.6
Parent's monthly Income in Saudi Riyals		
Less than 2000	33	21.9
2000 to 4000	22	14.6
5000 to 9000	34	22.5
More than 10,000	62	41.1
Frequency of Visit to Dentist		
Sometimes or when there's an emergency.	97	64.2
Routinely for examination or when a dental problem arises	39	25.8
Never, I generally avoid visiting a dentist.	15	9.9
Parents Profession		
Professional (Doctor, Engineer...)	30	19.9
Administrative work	67	44.4
Craft work (Carpenter, Tailor...)	3	2
Unemployed	51	33.8

Table 1. Demographic Data of Parents / Guardians

Variables	Correlation with First Child's Dental Visit	
	Pearson's Chi Square Value	P Value
Parent's age	12.326	0.055
Marital Status	7.632	0.118
Education Status of parent	10.147	0.038
Parent's Profession	7.440	0.282
Monthly Income	10.608	0.101
Parent's opinion regarding Appropriate child's age for first Dental Visit	94.021	0.001
Knowledge / awareness regarding first Dental visit	9.775	0.044

Table 2. Relationship between the Parental Factors and First Dental Visit

*Significant at p < .05.

Most parents preferred to take their child for first dental visit between 3 to 6 years. The common reasons that force them to take their child to dentist are either pain (31.8 %) or prevention of caries (31.8 %) followed by decayed teeth (17.9 %). Most parents preferred paediatric dentists (45 %) over general dentists (29.1 %) for their child's first dental visit. The reason for the choice was either based on their previous personal experience with the dentist (33.1 %) or belief that the treatment would be better (28.5 %) or influence by friends / peers (21.2 %). 98 % of parents were happy with their child's first dental visit and 84.8 % of them were of the opinion that they would surely go for follow - up visits. This was because they believed that dental treatment was either important (38.4 %) or needed to be completed (35.8 %). 27.8 % of parents believed that there were no barriers for the first dental visit of their child. However, when their child was not complaining of any problem (17.9 %) or their belief that primary teeth are not as important as permanent ones (13.2 %) or that child would not cooperate during dental treatment (11.9 %) were barriers for dental visit. Most of parents (41.7 %) believed that they had adequate knowledge of the first dental visit for their child.

The demographic details of the dentists who participated in the study is given in table 4 described under the variables such as work profile, gender, sector of work, and years of experience. Table 5 shows that there were statistically

significant differences between practices followed by paediatric dentists and general dentists such as recommendation of time of visit, the child's age at and the treatment provided during first dental visit of the child. 86.8 % of paediatric dentists had recommended first dental visit within 6 years of age when compared to 52.4 % of general dentists [p = 0.001]. None of the dentists had recommended first dental visit of children within 1 year. With regard to the treatment provided during the visit, most of general dentists (70.3 %) made sure that the chief complaint of the child is treated, when compared to paediatric dentists (56.6 %) [p = 0.048]. There were no statistically significant differences in behaviour of the child encountered by paediatric dentist and general dentist during the first dental visit [p = 0.079]. When any invasive dental treatment was performed during first visit, the behaviour of the child in future dental visit did not vary significantly [p = 0.079]. However, there was a minor increase in negative behaviour observed.

Variables	Frequency (n)	%
Child's age During First Dentist Visit		
Less than 1 year	10	6.6
1 to less than 3 years	42	27.8
3 to < 6 years	55	36.4
6 to < 9 years	26	17.2
9 years and above	18	11.9
Reason for First Dental Visit		
As advised by schoolteacher / relatives / friends	12	7.9
As recommended by child's paediatricians during check - ups	4	2.6
Prevention of caries	48	31.8
Pain	48	31.8
Decayed teeth or its filling	27	17.9
Late eruption of permanent due to over - retained milk tooth	4	2.6
Treatment of crowded teeth	3	2
Trauma to teeth, soft tissues of oral cavity or jaws	5	3.3
Preference of Doctor for Consultation for Child's First Dental Visit?		
General Dentist	44	29.1
Paediatric Dentist	68	45
Family physician	8	5.3
Others	31	20.5
Reason for Choosing the preference of Doctor - GD or PD		
Based on my previous experience with the dentist	50	33.1
I believe the quality of the treatment is better.	43	28.5
His clinic is near my house.	20	13.2
My friends / relatives advised me	32	21.2
Other reasons	6	4
Parents' Overall Experience First Dental Visit		
Good	107	70.9
Satisfactory	41	27.2
Bad	3	2
Based on Experience of First Dental Visit, the Likelihood of Attending Next Appointment?		
Yes	128	84.8
May be	19	12.6
No	4	2.6
If Answer to Previous Question was Yes, Why?		
Behaviour of dental professionals	19	12.6
For completing my treatment	54	35.8
Importance of dental treatment	58	38.4
The treatment provided relieved my problem	14	9.3
Others	6	4
Parents Perception Regarding Barrier for Child's First Dental Visit		
No, I can take my child to the dentist	42	27.8
Yes, because I am very busy	5	3.3
I believe primary teeth are not as important as permanent teeth.	20	13.2
There is no real need to go to the dentist at a young age	11	7.3
Lack of transportation	3	2
Lack of appointments	13	8.6
My child will be uncooperative with the dentist	18	11.9
My child is not complaining from dental problem	27	17.9
I am afraid of dentists	12	7.9
Parent's Self - Perception Regarding Knowledge of First Dental Visit for their Child		
Yes, I do have required knowledge	63	41.7
I don't know whether I have the knowledge	52	34.4
I do not have the knowledge	36	23.8

Table 3. Parent's Preferences and Knowledge Related to Child's First Dental Visit

Variable	Frequency (n)	%
Work Profile of Dentists		
General Dentists	101	65.6
Paediatric Dentists	53	34.4
Gender of the Dentists		
Male	83	53.9
Female	71	46.1
Sector of Work		
Government	81	52.6
Private	73	47.4
Type of Work		
Academician	51	33.1
Clinician	103	66.9
Number of Years of Experience		
Less than 5 years	80	51.9
5 to < 10 years	38	24.7
10 to < 20 years	28	18.2
≥ 20 years	8	5.2

Table 4. Demographic Data of Dentists

Variables	General Dentist N (%)	Paediatric Dentist N (%)	Chi Square Value	p - Value
Dentists Recommendation of First Dental Visit of the Child				
Less than 1 year	0 (0)	0 (0)	20.251	0.001
1 to < 3 years	06 (5.9 %)	09 (17 %)		
3 to <6 years	47 (46.5 %)	37 (69.8 %)		
6 to <9 years	37 (36.6 %)	07 (13.2 %)		
9 years and above	11 (10.9 %)	0 (0)		
Treatment Provided During Child's First Dental Visit				
Chief complaint of the child is treated	71 (70.3 %)	30 (56.6 %)	7.915	0.048
Only Dental examination / x - ray is done	12 (11.9 %)	15 (28.3 %)		
Only medication is prescribed	3 (3 %)	0 (0)		
Only advice is given	15 (14.9 %)	8 (15.1 %)		
Behaviour of the Child Observed During First Dental Visit				
Definitely positive	5 (5 %)	0 (0)	6.789	0.079
Positive	38 (37.6 %)	28 (52.8 %)		
Negative	52 (51.5 %)	25 (47.2 %)		
Definitely negative	6 (5.9 %)	0 (0)		
If any Invasive Dental Treatment is Performed, the Behaviour of the Child in Future Dental Visit				
Definitely positive	5 (5 %)	0 (0 %)	6.789	0.079
Positive	30 (29.7 %)	9 (17.0 %)		
Negative	54 (53.5 %)	38 (71.7 %)		
Definitely negative	12 (11.9 %)	6 (11.3 %)		
Behaviour Management Technique Performed during First Dental Visit that is Believed to be most Promising in that Instills Positive Child Behaviour at Future Visits				
Tell show do	36 (35.6 %)	31 (58.5 %)	10.11	0.018
Positive reinforcement	34 (33.7 %)	16 (30.2 %)		
Communication	28 (27.7 %)	6 (11.3 %)		
Voice control	3 (3.0 %)	0 (0 %)		
Knowledge regarding successfully managing child during first dental visit				
I am having required knowledge and expertise	31 (30.7 %)	28 (52.80 %)	8.801	0.01
I believe that regular updating with continuing dental education is required	64 (63.4 %)	25 (47.2 %)		
I am not having the knowledge and expertise.	6 (5.9 %)	0 (0 %)		

Table 5. Dentists' Practices Regarding First Dental Visit of the Child

*Significant at p < .05.

Tell show do technique of behaviour shaping was believed to be most promising in instilling a positive dental attitude by 58.5 % of paediatric dentists and 35.6 % of general dentists [p = 0.018]. Positive reinforcement was the second commonly preferred technique. Voice control technique was seldom used by paediatric dentists. Most paediatric dentists [52.8 %] were of the opinion that they had enough knowledge and expertise for successfully managing a child during first dental visit whereas most general dentists [63.4 %] believed that they need to update themselves by continuing dental education [p = 0.01].

Table 6 describes the clinical examination or tasks performed by dentists during first dental visit. The paediatric dentists were more frequently recording general health /

growth [p = 0.001], performing extra - oral & intra - oral examinations [p = 0.001] and evaluating developing dentition [p = 0.001] when compared to general dentists. Whereas both groups had similar preferences regarding evaluating caries risk and performing invasive dental treatment.

Clinical Examination or Tasks Performed	Dentist Groups	Frequency of Performing the Task				Chi Square Value	p - Value
		Always	Most of the Times	Rarely	Never		
Record General Health / Growth	General Dentist N (%)	21 (20.8 %)	58 (57.4 %)	18 (17.8 %)	04 (4 %)	26.677	0.001
	Paediatric Dentist N (%)	19 (35.8 %)	77 (50 %)	01 (1.9 %)	01 (1.9 %)		
Perform Extra oral Examination	General Dentist N (%)	17 (16.8 %)	25 (24.8 %)	36 (35.6 %)	23 (22.8 %)	25.859	0.001
	Paediatric Dentist N (%)	21 (39.6 %)	22 (41.5 %)	10 (18.5 %)	0 (0)		
Perform Intra - Oral soft & hard Tissues	General Dentist N (%)	47 (46.5 %)	37 (36.6 %)	11 (10.9 %)	06 (5.9 %)	23.006	0.001
	Paediatric Dentist N (%)	45 (84.9 %)	08 (15.1 %)	0 (0)	0 (0)		
Perform Invasive Dental Treatment	General Dentist N (%)	0 (0)	02 (2 %)	73 (72.3 %)	26 (25.7 %)	4.429	0.109
	Paediatric Dentist N (%)	0 (0)	01 (1.9 %)	46 (86.8 %)	06 (11.3 %)		
Evaluate Developing Occlusion	General Dentist N (%)	33 (32.7 %)	35 (34.7 %)	25 (24.8 %)	08 (7.9 %)	28.073	0.001
	Paediatric Dentist N (%)	37 (69.8 %)	16 (30.2 %)	0 (0)	0 (0)		
Evaluate Caries Risk	General Dentist N (%)	54 (53.5 %)	35 (34.7 %)	09 (8.9 %)	0 (3 %)	5.936	0.115
	Paediatric Dentist N (%)	38 (71.7 %)	13 (24.5 %)	02 (3.8 %)	0 (0)		

Table 6. Clinical Examination or Tasks Performed by Dentists during the First Dental Visit

*Significant at p < .05.

DISCUSSION

It is appropriate to consider the first dental visit of a child as an important milestone after understanding the fact that a child can succumb to dental caries as early as less than 12 months.⁷ By the time a child reaches kindergarten, it has been reported that 28 % of them could have caries.⁸ 89 % of children aged one year have been reported to visit their physician when compared to only 1.5 % who visited dental.⁹ Hence, these findings make such studies necessary to understand the perspectives of parents' as well as general / paediatric dentists' point of view to battle the dental diseases at grass root level.

It has been recommended that the first dental visit should be scheduled as early as 6 months from the time first primary tooth has erupted but no later than one year.¹⁰ This early visit helps in gaining the advantages of early preventive care

thereby promoting better cost - effective oral health maintenance.¹¹

Yet reports across many developing countries such as India suggest that first dental visit is common between 7 and 9 years.¹² On the contrary, countries such as Saudi Arabia¹³ and USA¹⁴ suggests an early timing of 3 - 5 years and 2 - 4 years respectively which is in accordance to the present study. Most children prior to preschool in Australia rarely get to see the dentist before the age of 5.¹⁵ Only 2 % of children living in USA belonging to less than 3 years of age group have the privilege of dental visit during their first year of life.¹⁶

The present study has shown that pain and / or prevention of caries were the reasons for the first dental visit; which is in accordance to data obtained from similar studies.^{12,13,17} A contrary Bulgarian study suggests that dental caries (59.8 %) followed by pain (16.2 %) were the reasons for the dental visit.¹⁸ The perception among the masses that primary teeth will eventually shed off and hence do not need treatment unless there is pain may be the reason for delaying treatment.¹³

It is reported that parents would take their children to a physician / paediatrician rather than their dentist during the preschool age for preventive dental care.^{19,20} The majority of paediatricians and general dentists are not referring their patients to the paediatric dentists by 1 year of age which implies that it is the need of the hour to educate them regarding infant oral health care.²¹ In the present study, parents chose to consult either a paediatric dentist or a general dentist for their child's first dental visit rather than other health care personnel. However, their awareness needs to be improved regarding the importance of the first dental visit at age one, especially among physicians / paediatricians and also other non - dental professionals.

It has been reported that the reason for not availing early dental care was that the child did not have any dental problem which could be attributed to the decreased awareness among parents regarding dental caries disease dynamics and its prevention. Parents of these very young children were of the opinion that their child would not cooperate. This was coupled by the fact that the 42 % parents were not aware of the specialty of paediatric dentistry that was available for dental care of their children.²² In the present study, parents past dental experience was found to be determining where they would prefer their child to undergo their first dental visit. It has been reported that whatever may be the educational status of parents, most of them were unaware regarding the timing of first dental visit.²³

Children have been reported to exhibit positive behaviour (39.67 %) during their first dental visit, similar to the results of the present study. This could be due to the conducive environment during treatment or the age group involved, as 3 - 6 years age group children tend to be more cooperative than their younger counterparts. The probability of increasing the negative behaviour was found to be high, if invasive treatment was performed during first visit, as observed in the present study.¹³

Behaviour shaping techniques such as tell - show - do, reinforcement, distraction, and parental involvement have been used by dentists for achieving better cooperation during present and future dental visits. However, more aggressive techniques like voice control and hand over mouth exercise would be sometimes required to reduce the potential

inappropriate child behaviour, although they are less accepted by parents / children.²⁴

The experience during first dental visit enables the parent to decide the likelihood of attending next appointment, as shown in the present study. A study revealed that majority of children were happy regarding the dental treatment for which they came to dentist, and hence their parents were reported to be satisfied with overall experience of their child's first dental visit. Around 84.8 % of the parents in the present study had suggested they would report to next appointment which suggests that they were satisfied with the dental treatment of their child during the first visit. This was because they believed that dental treatment was either important (38.4 %) or had to be completed (35.8 %).

It is also imperative that all dentists must recommend to parents regarding the establishment of dental home by one year of age,¹⁰ and perform a thorough examination along with a good history taking. It is at this age that a paediatric dentist should try to foresee the caries risk in an infant and plan an appropriate age specific treatment plan. This would require good parent compliance and motivation as it necessitates multiple dental visits.

However, many dentists suggest to parents that as the child's ability to cooperate is less owing to the younger age, it would be an advantage to postpone the treatment till the child is old enough. Such suggestions could influence the decision making regarding postponing the treatment.²⁵ Parents in UK preferred that dentists should make these decisions reflecting the existing confusion between parents and dentists. Parents have limited understanding of disease conditions and cannot decide on treatment options that would be better.²⁶ Hence, the dentist should be educating such parents regarding the pros of early dental visit for their children so that they willingly give consent for treatment.

CONCLUSIONS

Only 6.6 % of parents take their children for first dental visit within first year of their child's life. Most of the paediatric dentists and general dentists recommend the first dental visit in children between 3 to 6 years. However, none of them recommended the dental visit before 12 months of age.

Findings of this study should alert the dental professionals, paediatricians, gynecologists and other health workers to work as a team to increase awareness among the public regarding importance of early dental visits before 12 months of age. During the dental visit, the dentist should proactively counsel parents / care givers of the child and educate them regarding oral hygiene maintenance, correct feeding practices, trauma to teeth, benefits / appropriate use of fluoride and diet counseling. Socioeconomic and clinical indicators play an important role in determining the use of dental services, which necessitates the need for instituting dental education focused at community as well as school levels to facilitate better reach in increasing the awareness.

Data sharing statement provided by the authors is available with the full text of this article at jemds.com.

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