

Perception of Saudi parents towards the problems related to primary dentition of their children residing in Riyadh city

Shahzeb Hasan Ansari¹, Abdullah Qurayti Alanazi², Mansour Alqahtani²,
Abdullah Obaid Alharbi², Fares Mohammed Hodan²,
Riyadh Abdullah Alshaye²

¹Faculty Preventive Dentistry, ²Dental Intern, College of Dentistry, Riyadh Elm University, Riyadh, Saudi Arabia

ABSTRACT

Background: The parental awareness and perceptions help in early recognition of problems in deciduous dentition, which will help us plan better preventive measures. Hence, the present study was conducted to evaluate the perceptions of Saudi parents residing in Riyadh towards the problems related to primary dentition of their children. **Materials and Methods:** A cross-sectional study was conducted on the patients attending private dental institution in Riyadh city. Information about demographic details, questions related to maintenance of primary teeth, and future implications of poor primary dentition health were collected. Descriptive statistics and Chi-square test were used for the analysis. The level of significance was set at $P < 0.05$. **Results:** A total of 1773 male and females filled up the survey form, which comprised of 28% males and 72% females, and maximum parents (68%) were university graduates. Overall better responses were in females and parents having more children. **Conclusion:** Over all mothers had a higher level of knowledge and positive attitude towards their children's oral health as compared to fathers. Developing and strengthening optimistic outlook among parents towards oral health especially primary dentition is utmost important.

Keywords: Caregivers, deciduous teeth, perception

Introduction

In developing and maintaining the fundamental life functions of the child-like phonetics and eating, an essential role is played by primary dentition. Regardless of its well-established importance, in majority of the population, the care of deciduous teeth is not considered crucial owing to the belief that primary teeth will eventually shed off with no harm to permanent dentition.

Address for correspondence: Dr. Shahzeb Hasan Ansari, Lecturer, Faculty Preventive Dentistry, College of Dentistry, Riyadh Elm University, Riyadh, Saudi Arabia.
E-mail: shahzebhasan@riyadh.edu.sa

Received: 25-06-2020

Revised: 05-09-2020

Accepted: 22-09-2020

Published: 30-11-2020

Access this article online

Quick Response Code:



Website:
www.jfmpc.com

DOI:
10.4103/jfmpc.jfmpc_1256_20

Recently, there has been an increase in the incidence of dental caries in primary dentition termed as early childhood caries. This might result in pain, decline in food intake, and consequently extend to malnutrition.^[1,2]

A child might also suffer from oral problems like pernicious habits of thumb sucking, tongue thrusting, and bruxism. These destructive habits if not stopped after certain time lead to malocclusion and might necessitate orthodontic management along with employment of habit breaking appliances.^[2]

Another problem related to primary dentition is majority of the parents are unaware of the correct protocol that should

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Ansari SH, Alanazi AQ, Alqahtani M, Alharbi AO, Hodan FM, Alshaye RA. Perception of Saudi parents towards the problems related to primary dentition of their children residing in Riyadh city. J Family Med Prim Care 2020;9:5559-63.

be followed if their children face dental trauma. The trauma to primary dentition might lead to disturbances with eruption, enamel hypoplasia, white spots, intrusion, and extrusion in permanent teeth.^[3,4]

Being dependent on the awareness, comprehension and the mind-set of the parents, the oral health of children might be compromised.^[5,6] There are evidences in the literature that least interest is given to dental problems and furthermore the primary dentition is additionally ignored.^[7] In growth and development of the child, parents especially mother plays a critical part since they are the chief decision makers of to their children’s health. Thus, their awareness about dental health is important so that they can be guided and instructed to prevent the development of various oral problems.^[8] A major disparity between medical opposed to oral health provision is that the caregivers usually offer *access* to medical services by taking the child to a professional, however for oral health, in addition to seeking professional aid; there is also partaking by parents during tooth brushing and ensuring that there is no excess intake of sugary foods.^[9]

However, in this workaholic era of the 21st century, most of the parents do not get sufficient time to dedicate to their family care.^[10] Several studies have taken place in order to measure the level of knowledge and attitude of parents towards the problems related to their children’s dentition and not much research is done in this area in Saudi Arabia.^[11,12] The parental awareness and perceptions help in early recognition of problems in deciduous dentition which will help us plan better preventive and interceptive orthodontics or other dental treatment modalities so as reduce or avoid adult oral problems, the time required for treatment, and thus decrease the economic burden which parents face for such treatments and improves the overall quality of life of the child.^[7]

Literature reveals that the attitude towards oral habits varies among different ethnic groups since they differ in culture, beliefs and awareness, as well as socioeconomic development and caring level and not much research is conducted in Saudi.^[8] Hence, the present study was conducted to evaluate the perceptions of Saudi parents residing in Riyadh towards the problems related to primary dentition of their children.

Materials and Methods

A cross-sectional study was conducted on the patients attending private dental institution in Riyadh city. A pilot study was conducted on 50 patients for the determination of sample size. These patients did not participate in the main study. The sample size was calculated with the help of Epi Info software, and it was found to be 1500. The nonresponse rate was assumed to be 15%, and the final sample size was adjusted by the formula: final sample size = effective sample size/(1-nonresponse rate anticipated), which gave the figure of 1764, keeping in mind the outliers the survey was conducted on 1773 participants.

The questionnaire was first prepared in the English and then translated to local language and again back translated to English for checking language reliability by a person expert in both languages. Analysis revealed that reliability and content validity of the questionnaire was acceptable (Cohen’s kappa statistics = 0.82 and Aiken’s V index = 0.83, respectively).

Permission for conducting the study was obtained from the Institutional ethical committee The study proposal was submitted to the research Centre of Riyadh Elm University ethical approval was obtained from Institutional Review Board [RC/IRB/2019/262] on 02-10-2019. The study procedure was explained to each participant and written informed consent was acquired. All the patients who have at present or had in past 2 years child/children of ≤5 years were included.

Parents were provided with a self-administered, close-ended questionnaire consisting of information about their demographic details, questions related to primary dentition, maintenance of oral health, oral habits of the child, parental experience of trauma management, and future implications of poor primary dentition health.

The data were entered into an MS Excel sheet. Descriptive statistics and Chi-square test were used for the analysis. The level of significance was set at $P < 0.05$. SPSS version 19 (IBM, Chicago, IL, USA) software was used to perform the statistical analysis.

Results

A total of 1773 male and females filled up the survey form, which comprised of 28% ($n = 495$) males and 72% ($n = 1278$) females, and maximum parents ($n = 1199$; 68%) were university

Table 1: Demographic distribution of study participants

Demographic variables	Number	Percentage
Gender		
Male	1277	72
Female	496	28
Education level		
≤Primary	89	5
High school	479	27
University	1206	68
Age group (in years)		
>18	53	3
18-30	408	23
31-45	833	47
>45	496	28
Number of children		
1-3	674	38
4-5	550	31
>6	230	13
None	337	19
Income		
Low	780	44
Moderate	993	56
High	0	0

graduates and from age group of 18–30 years ($n = 827$; 47%) with 38% ($n = 665$) having 1–3 children and 56% ($n = 977$) have moderate income [Table 1].

The distribution of responses with respect to gender showed slightly better responses in females than males related to health

of primary dentition, e.g., 24 females and 22 males had visited to dentist for fissure sealant. After the early loss of primary tooth, it should be replaced by space maintainer was rightly answered by 24 females and 18 males. Similarly, when parents were compared in terms of number of children, better responses were found in those who had more children compared to others [Table 2]

Table 2: (a) Comparison of the study participants based on gender and number of children

Item		M	F	P	1-3	3-5	>6	P
When should you start maintaining the oral hygiene for your child	Right after birth	7	1	0.184	8	10	7	0.001*
	When first tooth erupts	56	52	60	47	42		
	After first dental caries	37	47	32	43	51		
How many teeth there are in primary dentition	10	41	27	0.001*	31	24	26	0.001*
	16	28	32	32	34	28		
	20	25	30	30	28	36		
	32	62	11	7	9	8		
Maintenance of primary dentition is less important than permanent dentition	Definitely Yes	29	20	0.001*	20	24	28	0.030*
	Maybe	38	35	36	35	32		
	Definitely No	33	45	44	41	40		
Frequency of tooth brushing by your child?	Does not brush	14	11	0.001*	12	9	12	0.001*
	Once a day	42	51	51	53	49		
	Twice a day	27	30	32	28	28		
	Do not know	17	8	5	10	11		
Do you resist when your child asks for sweets and snacks?	Yes	9	11	0.001*	12	11	6	0.003*
	No	29	20	19	21	25		
	Sometimes	62	69	69	68	69		
Do you need more information about maintaining primary dentition?	Yes	90	84	0.001*	86	85	82	0.177
If your child lost a primary tooth early what of the following is important to do?	Brushing of the space	9	10	0.073	9	9	11	0.476
	Space maintainer device	18	24	21	24	21		
	Do nothing	73	66	70	67	68		
If your child has a trauma on his teeth what you do?	Wash the teeth with clean water	16	17	0.009*	19	16	12	0.062
	Wash it with salted water	20	27	22	27	27		
	Go to dentist	64	56	59	57	61		
	Extract at home	49	56	0.001*	48	61	64	0.001*
What do you usually do when a child's teeth start to be lose?	Visit a dentist	29	20	25	17	17		
	Do nothing	22	24	27	22	19		
	No, I have not heard about it	66	62	0.393	65	60	63	0.204
Have you ever heard about the fissure sealant?	Yes, I visited the doctor for it	22	24	21	28	25		
	Yes, I did not visit the doctor for it	12	14	14	12	12		

(b): Comparison of the study participants based on gender and number of children

Item		M	F	P	1-3	3-5	>6	P
Have you received instructions from dentist about maintaining health of primary dentition of your children?	Yes	43	51	0.002*	48	54	53	0.001*
	No	38	30		23	28	28	
	Do not know	19	19		29	18	19	
Has a family member/friend advised you to maintain health of primary dentition?	Yes	57	57	0.299	58	60	60	0.001*
	No	30	28		30	27	25	
	Do not know	13	15		12	13	15	
Poor health of primary dentition may affect permanent dentition in future?	Yes	65	74	0.002*	71	75	74	0.002*
	No	7	6		6	5	9	
	Do not know	28	20		23	20	17	
Spaces in teeth due to primary teeth shedding are important factor in determining future dental health.	Yes	46	54	0.003*	46	56	62	0.001*
	No	8	5		5	5	4	
	Do not know	54	41		49	41	34	
Abnormal oral habits like (thumb sucking and nail biting, etc.) may affect permanent dentition in future?	Yes	72	84	0.001*	80	83	84	0.004*
	No	10	6		7	5	4	
	Do not know	18	10		13	12	12	

Table 3: (a) Comparison of the study participants based on education

Item		<Primary	<High school	Graduate	P
When should you start maintaining the oral hygiene for your child	Right after birth	9	8	8	0.001*
	When first tooth erupts	38	47	57	
	After first dental caries	53	45	35	
How many teeth there are in primary dentition	10	32	33	29	0.321
	16	27	27	33	
	20	27	30	29	
	32	14	10	9	
Maintenance of primary dentition is less important than permanent dentition	Definitely Yes	34	28	20	0.001*
	Maybe	35	38	35	
	Definitely No	31	34	45	
Frequency of tooth brushing by your child?	Does not brush	11	12	11	0.955
	Once a day	49	49	49	
	Twice a day	31	28	29	
	Do not know	9	11	11	
Do you resist when your child asks for sweets and snacks?	Yes	11	10	11	0.831
	No	22	21	23	
	Sometimes	67	69	66	
Do you need more information about maintaining primary dentition?	Yes	90	88	85	0.104
If your child lost a primary tooth early what of the following is important to do?	Brushing of the space	12	10	9	0.51
	Space maintainer device	20	20	24	
	Do nothing	68	70	67	
If your child has a trauma on his teeth what you do?	Wash the teeth with clean water	17	17	16	0.502
	Wash it with salted water	20	28	25	
	Go to dentist	63	55	59	
	Extract at home	63	57	52	
What do you usually do when a child's teeth start to be lose?	Visit a dentist	20	24	23	0.136
	Do nothing	17	19	24	
	Yes, I visited the doctor for it	30	22	24	
Have you ever heard about the fissure sealant?	No, I have not heard about it	63	63	63	0.297
	Yes, I visited the doctor for it	30	22	24	
	Yes, I did not visit the doctor for it	7	15	13	

(b): Comparison of the study participants based on education

Item		<Primary	<High school	Graduate	P
Have you received instructions from dentist about maintaining health of primary dentition of your children?	Yes	53	45	50	0.118
	No	23	33	31	
	Do not know	24	22	19	
Has a family member/friend advised you to maintain health of primary dentition?	Yes	64	59	56	0.404
	No	22	26	30	
	Do not know	14	15	14	
Poor health of primary dentition may affect permanent dentition in future?	Yes	64	67	73	0.027*
	No	8	8	5	
	Do not know	28	25	22	
Spaces in teeth due to primary teeth shedding are important factor in determining future dental health.	Yes	54	50	52	0.730
	No	3	7	5	
	Do not know	43	43	43	
Abnormal oral habits like (thumb sucking and nail biting, etc.) may affect permanent dentition in future?	Yes	74	74	83	0.001*
	No	7	10	6	
	Do not know	19	16	11	

Table 3 shows that not much difference was found when parents were compared based on education level. For few items, response was better in graduates like importance of health of primary teeth, maximum correct answer was given by graduates ($n = 73$), followed by high school pass out ($n = 67$), and least by those were in those who educated till primary ($n = 64$), and this difference was significant responses were seen in compared to other ($P < 0.05$)

Discussion

This study aimed to assess the Saudi parents' knowledge about their children's primary dentition and related problems. Untreated primary teeth can cause various complications such as pain, infections, alterations in growth and development, problems in eating and sleeping, and malnutrition.

The gender comparison showed that overall results were better in females compared to males. This showed a positive knowledge and attitude level of mothers as compared to the fathers. Similar findings were reported by studies conducted by Rajab *et al.* and Chhabra & Chhabra.^[13,14] This could be attributed to the fact that in general the primary caregiver of the child is mother compared to father who plays part more in the financial support.^[15]

Furthermore, comparison on the basis of number of children showed that the parents having six or more children showed better knowledge than other parents. Other studies have supported the fact that having more children leads to a better attitude and knowledge towards the health of primary dentition of the children.^[16] The possible explanation for this could be the experience from previous child/children might have lead to the better understanding of importance of maintaining of health of primary teeth.

Educational levels have a great deal of effect on the oral health of people themselves as well as their children. Low educational groups have demonstrated a poor quality of oral health among the families.^[12] However, we did not find many significant comparisons when compared the survey responses on the basis of educational levels. Such inconsistencies in our results might be due to fact that study was conducted on parents attending dental institution and such parents might be better oriented towards oral health, thus diminishing the actual influence of socioeconomic status.

Although the validity and reliability of the questionnaire was tested, in-built limitations of the questionnaire studies should be based in mind and these results should be considered as preliminary. The homogenous sample of parents reporting to dental institutions only might have resulted in bias in the final outcomes and warrants further researches with more heterogeneous population.

Conclusions

Overall mothers had a higher level of knowledge and positive attitude towards their children's oral health as compared to fathers. Parents are ultimately responsible for their children's health care, including oral health. Promoting and strengthening optimistic outlook among parents towards oral health especially primary dentition is utmost important. There should be development of programs for parents oriented towards child oral health with active parental participation and by integrating even medical professionals in which information about importance of primary teeth and preventive care of these teeth should be conveyed.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- Clarke M, Locker D, Berall G, Pencharz P, Kenny DJ, Judd P. Malnourishment in a population of young children with severe early childhood caries. *Pediatr Dent* 2006;28:254-9.
- Ramakrishnan M, Banu S, Ningthoujam S, Samuel VA. Evaluation of knowledge and attitude of parents about the importance of maintaining primary dentition-A cross-sectional study. *J Family Med Prim Care* 2019;8:414-8.
- Bardellini E, Amadori F, Pasini S, Majorana A. Dental anomalies in permanent teeth after trauma in primary dentition. *J Clin Pediatr Dent* 2017;41:5-9.
- Güngör HC, Püşman E, Uysal S. Eruption delay and sequelae in permanent incisors following intrusive luxation in primary dentition: A case report. *Dent Traumatol* 2011;27:156-8.
- Crawford AN, Lennon MA. Dental attendance patterns among mother and their children in an area of social deprivation. *Community Dent Health* 1992;9:289-91.
- Grytten J, Rossow I, Holst D, Steele I. Longitudinal study of dental health behaviours and other caries predictors in early childhood. *Community Dent Oral Epidemiol* 1988;16:356-9.
- Deolia SG, Chhabra C, Chhabra KG, Kalghatgi S, Khandelwal N. Dental anomalies of the deciduous dentition among Indian children: A survey from Jodhpur, Rajasthan, India. *J Indian Soc Pedod Prev Dent* 2015;33:111-5.
- Deolia S, Mishra A, Pariyal P, Dhakte J, Kaloo V, Sen S, Vadnagra H. Mothers' attitude regarding digit sucking habit in their children in Wardha district using questionnaire. *JODRDMIMS* 2017;1:73-7.
- Daly JM, Levy SM, Xu Y, Jackson RD, Eckert GJ, Levy BT, *et al.* Changes in parental perceptions of their care of their children's oral health from age 1 to 4 years. *J Prim Care Community Health* 2019;10. doi: 10.1177/2150132719836908.
- Deolia S, Sen S, Ingole P, Gupta R, Anita W, Rathi S. Effects of conventional v/s game-based and app. based oral health education on children's oral health-related knowledge. *JODRDMIMS* 2017;1:78-81.
- Zhou Z, Liu F, Shen S, Shang L, Shang L, Wang X. Prevalence of and factors affecting malocclusion in primary dentition among children in Xi'an, China. *BMC Oral Health* 2016;16:91.
- Vittoba Setty J, Srinivasan I. Knowledge and awareness of primary teeth and their importance among parents in Bengaluru City, India. *Int J Clin Pediatr Dent* 2016;9:56-61.
- Rajab LD, Petersen PE, Bakaeen G, Hamdan MA. Oral health behaviour of schoolchildren and parents in Jordan. *Int J Paediatr Dent* 2002;12:168-76.
- Chhabra N, Chhabra A. Parental knowledge, attitudes and cultural beliefs regarding oral health and dental care of preschool children in an Indian population: A quantitative study. *Eur Arch Paediatr Dent* 2012;13:76-82.
- Han YS, Jun WP. Parental involvement in child's development: Father vs. Mother. *Open J Med Psychol* 2013;2:1-6.
- Kowash MB, Pinfield A, Smith J, Curzon ME. Effectiveness on oral health of a long-term health education programme for mothers with young children. *Br Dent J* 2000;188:201-5.