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Research Article

Parent's Awareness of Primary Teeth Health: A Case Study in Riyadh and Dammam Dental Clinics

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Abstract

Parents spend considerable amount of time and money on their children's health. However, when it comes to oral health there is a common misconception that if permanent teeth replace primary teeth at the age of 7, then there is no benefit for treatment of primary teeth. However, untreated primary teeth may affect normal growth of permanent teeth and it is our hypothesis that parents are generally not aware of this. There could be other secondary reasons that make parents unconcerned about primary teeth treatment such as: lack of medical insurance and low income of parents/guardian. This study investigates the level of awareness of the importance of primary teeth health using a questionnaire method of data collection and analysis. Statistical analysis reveals lack of awareness among parents on the importance of conducting frequent dental visits for child teeth care, lack of awareness on bottle tooth decay and the adequate age to start using fluoridated toothpaste for children.

Keywords: *Primary Teeth Health; Riyadh; Dammam Dental Clinics*

Introduction

It is well known that untreated primary teeth may affect normal growth of permanent teeth [1-3]. However, there is a common misconception that if permanent teeth replace primary teeth during childhood, then there is no advantage of health expenses on primary teeth treatment.

Wapniarska [4] conducted an assessment of parents' knowledge concerning oral hygiene and prevention of dental caries in infants and young children using collected data from surveys from several hospitals located in Poland. Most of respondents to the questionnaire that was used (approximately 300) demonstrated awareness about, for example, the age at which milk and permanent teeth eruption. A total of 59% of the studied population correctly gave the number of deciduous teeth and 66% had heard of the "bottle tooth decay". The respondents, however, did not know the best time to start using the toothpaste with fluoride, for example. In [5] a questionnaire method conducted on 1000 subjects in hospitals located in Gujarat India assessed knowledge and awareness among parents and general practitioners regarding primary teeth care. The study showed 53% of parents did not know the importance of primary teeth and 73% parents also thought that no treatment is possible for pulpally involved primary teeth.

Another study [6] was carried out to find out the awareness and attitude of parents toward the pulpal treatment of primary teeth in dental hospitals located in Bangalore. A total of 685 parents were interviewed and a questionnaire was used to immediately compute their

responses. Results indicate that Urban populations seeking dental treatment are more in number as compared to the rural population. Pain and associated feature was the most common reason among both urban (71.92%) and rural (93.3%) patients visiting a dental office which reflects the level of awareness about the importance of primary teeth care.

In [7] a study was conducted to assess mothers' awareness and knowledge towards the primary teeth in Srinagar city, India. A questionnaire based study was conducted. Results indicated that 32.6% of the mothers (163) viewed primary teeth as very important and majority 67.4% were unaware of such importance. Only 24% of mothers agreed that primary teeth caries can affect child's permanent teeth.

Objective of the Study

The objective of this research study is to evaluate the level of awareness on the importance of child primary teeth health care among parents visiting dental 4 clinics in both Riyadh and Dammam City in Saudi Arabia (1 in Riyadh and 3 in Dammam) using a questionnaire method of data collection and analysis.

Materials and Methods

This study was carried out in dental clinics located in both Riyadh and Dammam area in Saudi Arabia (1 clinic in Riyadh and 3 clinics in Dammam) in order to obtain a combined opinion of various cultural variations across Riyadh and Dammam area. Hence, our analysis will be based on considering Riyadh and Dammam to be one geographical area. A multiple choice questionnaire comprising 11 questions were handed out to 302 parents in English as well as in Arabic. One of the principal investigators was always present during the filling of the form so as to answer any queries of the respondents. The questions used are shown in table 2. The questions try to gage the level of awareness of parents on the importance of primary teeth care in general. Responses with the underline answers in the Table represent high awareness. All the questionnaires were then compiled and statistically analyzed using Statistical Package for Social Sciences (SPSS) software.

Results

Table 1 displays the descriptive statistics for the respondents' salary and the number of children. The median salary and number of children was SR6000 and 3 children respectively. One hundred forty four (54%) had bachelor degrees followed by 39% (n = 105) with high school level education and only 7% (n = 18) had a master degree (Figure 1). The majority of relative relation was mother (50.8%, n = 123) followed by father (30.6%, n = 74), sister (9.1%, n = 22), brother (3.7%, n = 9) and others (5.8%, n = 14) (Figure 2).

	Salary (SR) (n = 137)	**Number of children (n = 287)**
Mean	6742.33	3.29
Standard deviation	5383.65	1.86
Median	6000.00	3.00
Range	29300.00	10.00
Mode	9000.00	3.00
Minimum	700.00	1.00
Maximum	30000.00	11.00

Table 1: *Descriptive analysis of the respondents' salary and number of children.*

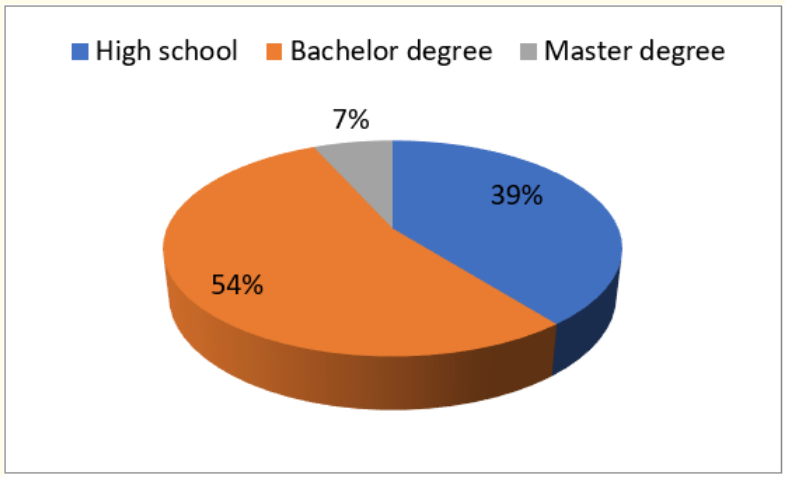

Figure 1: *: Educational level of the respondents (n = 267).*

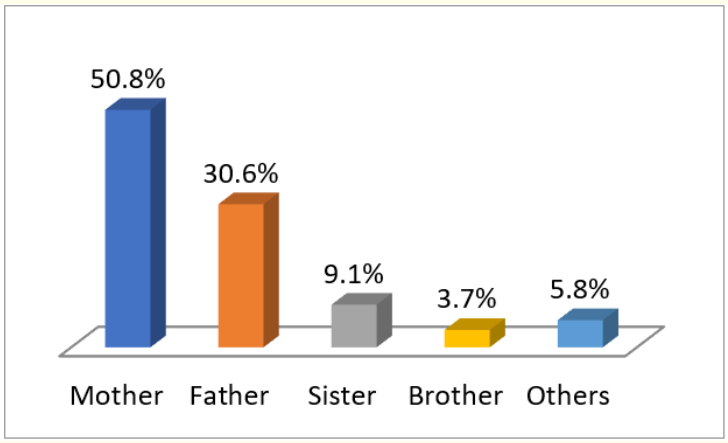

Figure 2: *Relation of the respondents (n = 242).*

The majority responded that they can afford a basic toothbrush and toothpaste for their child (84.5%, n = 256). Regarding at which age did their child started brushing his/her teeth, the response was approximately in equal proportion for 2 years (38.5%, n = 116) and 4 years (36.5%, n = 110) respectively. Over half the respondents take their child to the dentist only when there is a dental problem (56.1%, n = 169). The majority responded that milk teeth will erupt at 6 months (75.5%, n = 228) and permanent teeth at 7 years (47.3%, n = 141), respectively.

Around one-third and one-half responded that one should start taking care of child's oral hygiene (33.4%, n = 101) and first visit dental office with the child (55.6%, n = 164) at the age of 1 year. The majority responded that their child brush his/her teeth twice daily (45.7%, n

= 137) and consume sweet snacks thrice a day in between meals (42.8%, n = 128). Around seventy percent (n = 208) did not know about 'bottle tooth' decay. However, 81.3% (n = 244) were aware that the best time to start using fluoridated toothpaste for children is 6 years.

Variables		Frequency (n)	Percent (%)
Can you afford a basic tooth brush and tooth paste for your child? (n = 303)	Yes	256	84.5
	Sometimes	37	12.2
	No	10	3.3
At what age did your child start brushing his/her teeth? (n = 301)	2 years	116	38.5
	4 years	110	36.5
	6 years	75	24.9
How often do you take your child to the dentist? (n = 301)	Every 3 months	8	2.7
	Every 6 months	49	16.3
	Once a year	75	24.9
	Only when there is a dental problem	169	56.1
When do milk teeth start to erupt? (n = 302)	6 months	228	75.5
	10 months	58	19.2
	1 year	16	5.3
When do permanent teeth start to erupt? (n = 298)	5 years	38	12.8
	6 years	119	39.3
	7 years	141	47.3
When should we start taking care of child's oral hygiene? (n = 302)	At birth	42	13.9
	1 year	101	33.4
	3 years	85	28.1
	5 years	74	24.5
Ideally, when should you first visit the dental office with a child? (n = 295)	1 year	164	55.6
	3 years	118	40.0
	5 years	13	4.4
How many times does your child brush his/her teeth? (n = 300)	Once a day	105	35.0
	Twice a day	137	45.7
	Never	58	19.3
How many times does your child consume sweet snacks in between meals during the day? (n = 299)	Once a day (Never)	77	25.8
	Twice a day	94	31.4
	Thrice a day	128	42.8
Do you know about 'bottle tooth' decay? (n = 299)	Yes	91	30.4
	No	208	69.6
Best time to start using fluoridated tooth-paste for children (n = 300)	6 months	56	18.7
	6 years	244	81.3

Table 2: *Knowledge of the respondents.*

	p value	
	Education Level	Relative Relation
Can you afford a basic tooth brush and tooth paste for your child?	0.000*	0.397
At what age did your child start brushing his/her teeth?	0.000*	0.117
How often do you take your child to the dentist?	0.030*	0.015*
When do the milk teeth start to erupt?	0.017*	0.267
When do the permanent teeth start to erupt?	0.038*	0.329
When should we start taking care of child's oral hygiene?	0.000*	0.197
When should you first visit dental office with the child?	0.046*	0.024*
How many times does your child brush his/her teeth?	0.002*	0.004*
How many times does your child consume sweet snacks in between meals during the day?	0.001*	0.010*
Do you know about 'bottle tooth' decay?	0.021*	0.006*
Best time to start using fluoridated toothpaste for children	0.912	0.007*

Table 3: *Statistically significant.*

Two-way cross-tabulation and Fisher's Exact/Pearson Chi-Square were utilized to know the association between the variables and statistical significance. A p value of ≤ 0.05 was considered to be statistically significant. The results, shown in table 3, indicate that Bachelor/master's degree holders and mothers were more likely to have high awareness on the importance of primary teeth care.

In particular, bachelor and master degree holders were more likely to afford a basic tooth brush and tooth paste for their child; that their child start brushing teeth at 2 years; take their child to the dentist once in a year; are aware that milk teeth start to erupt at 6 months and permanent teeth at 7 years; start taking care of child's oral hygiene at 3 years; visit dental office with their child at 6 months; that their child brush teeth twice daily and consume sweet snacks once in between meals during the day and familiar with 'bottle tooth' decay. Moreover, all the associations were found to be statistically signification ($p < 0.05$). Furthermore, they were more likely to be aware that the best time to start using fluoridated toothpaste for children is 6 months. However, this association was not found to be statistically significant ($p > 0.005$).

On the other hand, fathers were more likely to agree that they can afford a basic tooth brush and tooth paste for their child, while mothers were more likely to: be aware that their child start brushing teeth at 2 years; take their child to the dentist once in a year ($p < 0.05$); are aware that milk teeth start to erupt at 6 months and permanent teeth at 6 years; start taking care of child's oral hygiene of their 1 year infants; visit dental office with their child at the age of 1 year ($p < 0.05$); that their child brush teeth twice daily ($p < 0.05$) and consume sweet snacks twice in between meals during the day ($p < 0.05$); that they are familiar with 'bottle tooth' decay ($p < 0.05$) and are aware that the best time to start using fluoridated toothpaste for children is 6 months ($p < 0.05$).

Discussion

In this study we focus on parents\guardians awareness of the importance of primary teeth care. It was found that mothers 50.8%, in general, exhibit more awareness for taking care of their children's primary teeth. A similar observation was found [7] in which it was found that mothers take care of their children primary teeth more than fathers and other relatives in Kashmir, India.

Also, we found that mothers are more likely to ensure that their children start brushing their teeth at 2 years which was also observed in the study of Wapniarska [4] in which 59.6% of mothers were found to be aware that their child should start brushing at an early age.

In this study it was also observed that mothers are in general more aware about the correct age in which permanent teeth erupt. This observation was also made in Wapniarska [4]. Our study also shows that the best time to start using fluoridated toothpaste for children is 6 years 81%, comparing to [4] which found that 68.5% parent's opinion is that fluoridated toothpaste be used before erupting the first tooth.

We have also found that the majority of parents 84.5% can afford a basic tooth brush and tooth paste for their children. In contrast [4], in Lodz found that the majority could not afford purchasing tooth paste and tooth brush. This could be related, however, to the financial condition of the people living in that city rather than lack of awareness.

Our study also revealed that 69.6% parents are not aware of bottle tooth decay. On the other hand [4], found that 62.3% of parents are aware of bottle tooth decay in Lodz. The study also showed that 55.6% parents in Riyadh start taking their children to the dental clinic about the age of one year comparing with [4] that showed that 60.3% parents in Lodz start dentist visits at age of 2 - 3 years.

The results also showed that 56% of parents take their children to the dentist only if they have any symptoms, pain or badly decayed tooth in contrast to [5] which 80% of parents did [8].

Conclusions

A questionnaire study was conducted on parents visiting Riyadh and Dammam dental clinics (1 clinic in Riyadh and 3 clinics in Dammam) to gage the level of awareness of the importance of primary teeth care of their children. The study reflected in general good awareness on the importance of brushing teeth and relatively good knowledge about the transition of teeth from primary to permanent. However, the study also showed some lack of awareness among parents on the importance of conducting frequent dental visits for child teeth care, lack of awareness on bottle tooth decay and best time to start using fluoridated toothpaste for children. Hence, efforts are needed to increase the awareness of parents on these important issues, like, for example distributing educational brochures, posting pictures and educational diagrams on social media, developing educational videos about primary teeth care that can be shown in dental clinic waiting areas. In addition, training and educational programs for parents can be conducted that talk about primary teeth care and prevention of oral disease, and caries. These training sessions should be conducted not only by dental clinic doctors, but also by pediatricians, family medicine doctors, health educators, and nurses to have stronger impact and more acceptance.

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