

ORIGINAL ARTICLE

KNOWLEDGE, ATTITUDE AND PRACTICE OF MOTHERS REGARDING THEIR OWN AND CHILDREN'S DENTAL HEALTH—A TERTIARY CARE HOSPITAL BASED STUDY

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Background: Mothers play a basic role in the dental health of children. They decide whether their children need dental treatment or not. The aims of this study were to assess mothers' knowledge and practices regarding children's dental health and to determine association of mothers own attitude and their attitude towards children's dental health. **Methods:** A cross sectional study was conducted in the Aga Khan University Hospital (AKUH), Karachi, Pakistan in which 207 mothers completed a self-administered structured questionnaire. Inclusion criteria were respondents having children between 2 and 5 years of age and exclusion criteria were respondents having physical or mentally handicapped children. SPSS-16 was used for data analysis. Chi Square test was used to determine association between maternal own dental attitude and their attitude and knowledge about children dental health with $p \leq 0.05$ as statistically significant. **Results:** Majority of the mothers used to visit dentists for themselves in the case of problems and they thought the same for their children ($p < 0.001$). A statistically significant association also existed between mothers and children tooth brushing frequency ($p < 0.001$). **Conclusions:** Mothers visiting Aga Khan University Hospital, lack sufficient knowledge regarding timings of the children's first dental visit and the importance of limiting frequency of in-between meals snacks consumed by their children.

Keywords: Mothers' dental health, children dental health, dental visit, knowledge

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INTRODUCTION

Mothers play a central role in general as well as dental health of children. Their attitude and knowledge about dental health directly affects children's dental health outcomes. Exploration of parental perception about children dental health is therefore important as these perceptions can directly influence the preventive dental care children receive at home and their use of professional dental services.¹ Children who commenced oral hygiene practices early experience less decay than those who started later.²

American Academy of Paediatric Dentists (AAPD) and American Dental Association (ADA) has made guidelines for prevention of dental caries and maintenance of good oral hygiene in children.^{3,4} These include first dental visit of child within six months of eruption of first primary tooth, twice daily tooth brushing and limited in between meal snacks.^{3,4} Studies have also shown that health habits and nutritional patterns develop early in life and reflect those of the caretakers and their socioeconomic status.⁵⁻⁷ Many studies have been carried out in the developed countries regarding parental knowledge and attitude towards children dental health. But to our knowledge no such study has been conducted in Pakistan. This study was an attempt to explore maternal knowledge and attitude towards children dental health. The study objectives were to assess mother's knowledge of children dental health and to

determine association of mother's own oral hygiene practices with their attitude towards children dental health.

MATERIAL AND METHODS

This study was carried out in the consultant clinics of Aga Khan University Hospital, Karachi after approval from Hospital Ethical Review Committee (1222-Sur/ERC-09). Non-probability purposive sampling technique was used. Sample size was calculated on the basis of responses obtained from a pilot study and it turned out to be minimum of 172. A structured, self-administered questionnaire was distributed among 255 mothers having children between 2 and 5 years of age. Those having mentally and physically handicapped children were excluded from the study. Written consent was obtained from participants. The first part of questionnaire addressed participants' details. The questions asked were:

- Mothers' demographic details (age, education and monthly income of family)
- Mothers' dental attitude (frequency of tooth brushing and dental visits).

The second part consisted of questions about children dental health. Following questions about children dental health were asked.

- What should be the time of child first dental visit?
- What is the tooth brushing frequency of respondents' children?

- What is the frequency of in-between meals snacks taken by children?

A total of 255 questionnaires were distributed among participants. Incomplete forms were excluded so there were 207 questionnaires that were included. (Figure-1)

SPSS-16 was used for data analysis. Statistical significance was determined at $p \leq 0.05$.

RESULTS

Age of majority of respondent mothers 112(54.1%) was between 31–40 years with mean age of 35.52 years. Forty-six percent mothers were graduates. Monthly income of 76 (36.6%) respondents' families was 583.31 USD (equivalent of 50,000 Pakistani rupees) and 74 (35.7%) respondents was 351.19 USD.

Majority of mothers used to visit dentist when they had some dental problem. They were also of the opinion that children should visit dentist (first time) in case of dental complaint. Thus there was a statistically significant association between mothers' own dental visit frequency and their knowledge about child first dental visit ($p < 0.001$). (Table-1)

There was also a statistically significant association between mothers and children tooth brushing frequency ($p < 0.001$). (Table-2)

A significant association ($p < 0.019$) was observed between maternal dental visit regularity and frequency of snacks in-between meals taken by their children. According to majority of mothers 93(44.9%), their children used to eat as much in-between meals snacks as they wanted. Thirty three percent answered that their children ate one snack per day and 46 (22.2%) reported two snacks per day. (Table-3)

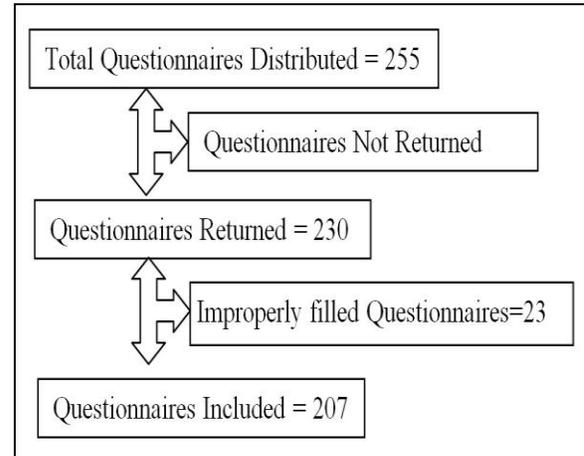


Figure-1: Schematic presentation of data collection procedure

Table-1: Association between Mothers' Dental Visit Frequency and their knowledge about timings of Child First Dental Visit

Mothers' own dental visit frequency	Timings of First Dental Visit of Child (n=207)					P*
	Within 1 st year of life	Within 2 nd year of life	Within 3 rd year of life	When there is a problem	Total	
6 monthly	9	3	5	3	20 (9.7%)	<0.001
6–12 monthly	6	3	5	4	18 (8.7%)	
Every 2 years	1	1	2	2	6 (2.9%)	
When there is some problem	17	13	31	102	163 (78.7%)	
Total	33 (15.9%)	20 (9.7%)	43 (20.8%)	111 (53.6%)	207(100%)	

*Chi square (Fisher exact) test

Table-2: Association between Maternal and Children Tooth Brushing Frequency

Mothers' own tooth brushing frequency	Tooth Brushing Frequency of Children				p*
	Twice Daily	Once Daily	Irregular/I don't know	Total	
Twice Daily	85	36	8	129 (62.3%)	<0.001
Once Daily	2	44	5	65 (31.9%)	
Occasionally	2	6	4	12 (5.7%)	
Total	104 (50.2%)	86 (41.5%)	17 (8.2%)	207 (100%)	

*Chi square (Fisher exact) test

Table-3: Association between Mothers' dental visit regularity and snacks taken by their Children

	One Snack/day	Two snack/day	As much as child wants/ I don't know
6 monthly	5.30	2.40	1.90
6–12 monthly	3.40	3.40	1.90
2 yearly	1.50	1.00	0.50
In case of problem/don't know	22.80%	15.00%	40.80

DISCUSSION

An early first dental visit serves as a preventive measure. The parents can be educated about home oral hygiene measures like quantity of tooth paste to be used by children and timings of tooth brushing, eating habits

and treating and seeking help in traumatic injuries. Unfortunately, even in developed countries a little attention is paid for preventive visit within first 12 months of life. The results of current study show that only 15.9% of mothers think that first dental visit of child should be within first year of life with majority of them (53.6%) thinking that first dental visit should be at the time of a dental problem. Our result are in agreement with those of Nainar and Straffon who stated that in the United States only 32% of children aged 2–4 years had a dental visit in the past 12 months.⁸ Similarly a recent survey⁹ by American Association of Paediatric Dentistry found

that 97 percent of respondents didn't know that their children needed to visit a paediatric dentist in the first year of life, leaving a large number of infants potentially vulnerable to tooth decay and disease. Additional survey findings included 26% of parents who felt that children only needed to see a dentist in the case of a serious health problem. Similarly, Al Shan and colleagues in their study showed that only 23.8% of Saudi parents were of the opinion of having first dental visit in first year of life.¹⁰ In another study, it was reported that majority of parents independently thought ages 3 or 6 years were the best ages for first dental visit.¹¹ Slayton and colleagues in their cohort study about dental visit and professional fluoride application in Iowa reported that only 2% of parents had taken their children for dental visit by one year of age, 11% by two years of age and 31% by three years of age.¹² Blinkhorn and colleagues stated that 71% mothers used to brush their children teeth twice daily (n=268).¹³ The results of our study showed that according to 50.2% of participants their children used to brush twice daily. Koerber *et al* in their study concluded that oral health knowledge and parental influence were not significant factors associated with tooth brushing frequency in metropolitan African American preadolescent children.¹⁴ Most of the studies in this respect support that positive attitude of parents towards dental health, higher education and higher social class increases the likelihood of their children tooth brushing frequency.^{15,16} The results of our study also supported that tooth brushing frequency of children are directly associated with their mother brushing frequency. Parental attitudes have a significant impact on the establishment of habits favourable to oral health like twice daily tooth brushing and controlling sugar snacks.¹⁷ Kalyvas and colleagues in their study reported that 31% of parents said that their children ate sweets more than once per day between meals.¹⁸ A far more number of mothers in our study (44.9%) reported that their children could consume as much in-between snacks as they could. This finding combined with unawareness about timings of first dental visit can lead to high level of dental decay.

CONCLUSION

Within the limitations of this study it is concluded that mothers visiting our hospital lack sufficient knowledge about timings of children first dental visit and importance of limiting frequency of in between

meal snacks consumed by their children.

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