

SAUDI FATHERS' KNOWLEDGE AND ATTITUDE TOWARD ORAL HEALTH BEHAVIOR OF THEIR CHILDREN

*ARHAM NAWAZ CHOCHAN BDS, BSc, MSc, FPFA, FADI

ABSTRACT

The purpose of the study was to determine fathers' knowledge and attitude about the oral health behavior of their children. A convenient sample of fathers was collected who accompanied their children to King Saud University, College of Dentistry (KSUCD), Pediatric Dentistry clinics, Riyadh. The information about oral health behavior of their children was obtained through a specially designed questionnaire. A total of 173 (86.5%) questionnaires were returned out of the 200 distributed among the fathers. Majority (89%) of the fathers responded that their children were using toothbrush; only 1.7% children were using miswak. Regarding dental care habits, 38.2% of the children brushed their teeth twice- and 36.4% once-daily. Fluoridated tooth paste was utilized by 83.8% of the children. Less than one-fifth (16.8%) of the fathers were helping their children in tooth brushing. Majority (76.9%) of the fathers were very well aware about the harmful effects of decayed primary teeth on permanent successors, however most (61.8%) of them took their children for the first dental visit at the age of 3 years. Although 70.5% of the fathers responded that routine dental check-up visit of their children should be every six months, most (77.5%) of them took their children to a dentist only due to a dental problem. Although a large percentage of the children was consuming healthy foods, the consumption of sugary products were also higher in the children. In conclusion, majority of the fathers were well versed with the oral health behavior of their children. However, there were shortcomings in the areas of attitude and practice.

Keywords: Oral health behavior, knowledge, attitudes, children, fathers.

INTRODUCTION

Parents are considered as valuable resource in fostering optimal health in their children. The oral health behavior patterns are shaped early in life, which when formed have proven to be beneficial^{1,2}. Therefore, parents can play a major role in developing behavior pattern of their children. According to Bandura³, socialization to dental health behaviors may be considered a modeling process in which children imitate the behavior of their parents, who are available and are valued role models for their offspring. Parental modeling has been proven to be a powerful mean for establishing novel behaviors among children such as tooth brushing behavior⁴. So, it is evident that parents transfer their own oral health care habits to their children.

There have been several studies about oral health behavior of school children in Europe⁵⁻⁷, but very few such studies have been conducted in Middle East countries^{8,9}. In Saudi Arabia, oral epidemiological studies on children have been conducted, but data on the oral

health behaviors of school children are scarcely available⁸. It is worth mentioning that fathers were never targeted in such studies. The studies conducted in the Middle Eastern countries reported a clear discrepancy between knowledge, attitude and practices⁸⁻¹². So, it is important that parents should learn the preventive oral habits early, which later be transferred to their children, in order to have beneficial effect on their dental health¹³. Therefore, the purpose of the present study was to assess fathers' knowledge and attitude to the oral health behavior of their children.

SUBJECTS AND METHODS

The selected study sample consisted of fathers accompanying their children to KSUCD pediatric dentistry clinics. The information about oral health behavior of their children was collected through a specially designed self-administered questionnaire which was translated into Arabic for the convenience of the fathers. The questionnaire was pre-tested among a group of ten Saudi fathers. The fathers provided their demo-

* Lecturer/Specialist, Division of Pediatric Dentistry, Department of Preventive Dental Sciences, College of Dentistry, King Saud University, Riyadh, Saudi Arabia.

Correspondence: Dr. Arham Nawaz Chohan, P.O.Box: 60169, Riyadh: 11545, Kingdom of Saudi Arabia. [Email: arhamchohan@hotmail.com](mailto:arhamchohan@hotmail.com)

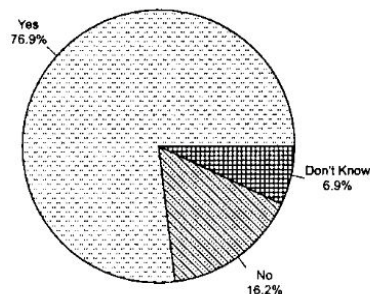


Fig 1a. Percentage of fathers knowledge about harmful effect of decayed primary teeth on their successors.

graphic information and educational level. The information about oral health behavior of the children included; oral hygiene aids used, frequency of brushing, supervision of child's tooth brushing, dental check-up visits and consumption of healthy and sugary foods.

The data were entered into a computer using FOXPRO program. Statistical Package for Social Sciences (SPSS) Version #10 was used for statistical analysis. Descriptive statistics in form of percentages were obtained.

RESULTS

A total of 200 questionnaires were distributed to the fathers; 173 were completed and returned with a response rate of 86.5%. The mean age of the fathers was 39.9 (SD 8.2) years. Eighty two percent of the fathers had secondary or higher education with 53.7% university education (Table 1).

The dental care habits of children reported by the fathers are summarized in Table 2. Among those children who had their teeth cleaned, 89.0% used tooth brush, 7.6% used both toothbrush and miswak while a very low percentage (1.7%) of children used miswak only. As shown in the Table 3, relatively fewer fathers (16.8%) were helping their children in tooth brushing, whereas almost two third (64.7%) reported that their children brush their teeth independently.

It was good to find out that four out of five fathers knew the possible bad effects of decayed primary teeth on their permanent successor, but on the other hand a majority (61.8%) took their children for first dental visit at the age of 3 years (Figures 1a & 1b). Most of the fathers (70.5%) were well aware that the routine dental check-up visit for their children should be every six months, but a great majority (77.5%) brought their children to dental clinic only with some dental problem (Table 4). As reported by fathers, healthy foods were often consumed frequently by their children (Table 5) whereas the consumption of sugary items was also high in children, particularly with respect to soft drinks, chocolates/candies and confectionaries (Table 6).

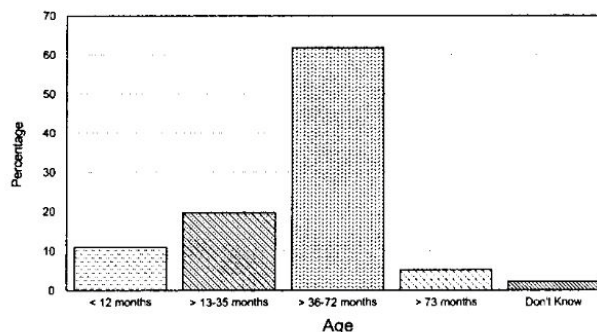


Fig 1b. Percentage of child's age at first dental visit.

DISCUSSION

The present study has provided an overview of fathers' knowledge and attitude towards the oral health behavior of their children. Parents play an important role in forming healthy oral habits in their children and their good oral health knowledge and attitude is considered a valued role model for their children^{1,2}. Therefore, the information gathered by this study will enable us to identify the weak areas that need to be addressed for better and improved dental health in young children. Only fathers were included in the present study because it was conducted in the all-male campus of KSUCD. Due to social and cultural factors, fathers accompany most of the children who are brought for dental treatment to the all-male campus. Previous studies conducted in Saudi Arabia targeted the mothers⁸, whereas the same information was not available for fathers.

A convenient sample was used in the present study. Since this study relied on self-reported data, the response might be biased through under-and/or-over-reporting. Although, it is difficult to assess the reliability of self-reported dental health behaviors, previous research has shown such self-reports to be quite accurate¹⁴. The benefit and usefulness of questionnaire surveys in exploring parental attitude has been reported¹⁵. However, the results of such questionnaire surveys should always be viewed with caution¹⁶. The possibility of bias could not be ruled out because the fathers who responded to the questionnaire were possibly the ones with more positive attitude.

The educational level of the parents also has a direct relation with grooming healthy habits in chil-

TABLE 1: EDUCATIONAL LEVEL OF THE FATHERS

Factor		No.	%
Educational level	Masters and above	39	22.5
	Baccalaureate	54	31.2
	Technical (Diploma)	14	8.1
	Secondary	35	20.2
	Primary	21	12.2
	Illiterate	10	5.8

TABLE 2: FATHERS' KNOWLEDGE AND ATTITUDE ABOUT CHILDREN'S ORAL HEALTH BEHAVIOR

Factor	No.	%
Oral hygiene aid	Tooth brush	154
	Miswak	3
	Tooth brush & Miswak	13
	Don't know	3
Tooth brushing frequency	At least twice a day	66
	Once a day	63
	Few times a week	29
	Don't know	15
Use of fluoride tooth paste	Yes	145
	Don't know	28
Tooth brushing	Complete supervision	29
	Partial supervision	32
	Independently	112
Routine dental check-up	Six months	122
	Yearly	15
	Two yearly	31
	Don't know	5
Reason of last visit to Dentist	Dental problem	134
	Routine treatment	26
	Recall exam	13

TABLE 3: FREQUENCY OF CONSUMPTION OF VARIOUS HEALTHY FOODS BY SAUDI CHILDREN

Items	Many times a day	Twice a day	Once a day	Once a week	Seldom/ Never
Yogurt	8 (5.0)	6 (3.7)	85 (52.8)	59 (36.6)	3 (1.9)
Cheese	25 (15.6)	36 (22.5)	83 (51.9)	12 (7.5)	4 (2.5)
Rice	15 (9.1)	16 (9.7)	124 (75.2)	8 (4.8)	2 (1.2)
Egg	14 (8.7)	10 (6.2)	91 (56.5)	40 (24.8)	6 (3.7)
Vegetables	28 (17.4)	16 (9.9)	82 (50.9)	28 (17.4)	7 (4.4)
Fruit juices	28 (17.1)	15 (9.1)	92 (56.1)	25 (15.2)	4 (2.4)
Milk	45 (26.9)	31 (18.6)	74 (44.3)	11 (6.6)	6 (3.6)
Fresh fruits	36 (22.5)	17 (10.6)	81 (50.6)	24 (15.0)	2 (1.3)

TABLE 4: FREQUENCY OF CONSUMPTION OF VARIOUS SUGARY ITEMS BY SAUDI CHILDREN

Items	Many times a day	Twice a day	Once a day	Once a week	Seldom/ Never
Biscuit	32 (20.3)	11 (7.0)	71 (44.8)	39 (24.7)	5 (3.2)
Cake/Pastry	12 (8.2)	8 (5.4)	55 (37.4)	68 (46.3)	4 (2.7)
Honey/Jam	12 (7.9)	7 (4.6)	65 (43.1)	45 (29.8)	22 (14.6)
Chocolate	46 (29.7)	15 (9.7)	55 (35.5)	35 (22.6)	4 (2.5)
Soft drinks	21 (13.4)	13 (8.3)	54 (34.4)	47 (29.9)	22 (14.0)
Ice cream	11 (7.2)	7 (4.6)	17 (11.1)	86 (56.2)	32 (20.9)

dren¹. In our study, most of the fathers had high educational level, but no significant difference was found in knowledge and attitude in relation to educational level. More than two-third of the children were brushing their teeth once or twice daily with fluoridated tooth paste. However, fathers' assistance and supervision in brushing teeth of their children was not adequate. Similar results were reported in Saudi⁸ and other Middle Eastern studies^{9,10,11,12}. It was surprising to know that study conducted in Zanzibar¹⁷ reported that almost two-third of the mothers of urban areas were assisting and supervising their children in brushing teeth. Most of the children performed tooth cleaning by means of tooth brush, however the use of traditional chew sticks (miswak) was infrequent. The chew sticks have been used in Muslims communities for hundreds of years and, and its use should not be discouraged⁸. The traditional miswak has been often suggested by parents for prevention of dental diseases. Not surprising that more than half of the Zanzibar children from rural areas were using miswak as cleaning aid and very few used tooth brush¹⁷.

The fathers were well versed with the bad effects of decayed primary teeth upon their permanent successors. But, in spite of this knowledge, a large majority of fathers took their children for first dental check-up visit at the age of 3-years, and only one in ten fathers took their child to a dentist at or before the age of 12 months. A similar behavior pattern of parents was reported by Wyne et al¹⁸ in Australia and by Al-Musa et al¹⁹ in Saudi Arabia. The American Academy of Pediatric Dentistry recommends that child's first dental visit should be made as soon as the first primary teeth erupt or by his/her first birthday²⁰. Significant proportion of the fathers emphasized that routine dental check-up visit of their children should be made every six months. However, majority of the children were brought to a dental clinic due to some dental problem such as pain or swelling. This shows that the attitude of fathers is visit a dentist only when an acute form of disease occurs, and is in agreement with the findings of the other studies⁸⁻¹². It is worth noting that most of the children were consuming healthy foods, however, the consumption of various sugary products especially cola drinks and chocolate was also higher than normal. The same pattern has been observed in other Middle Eastern countries⁸⁻¹² with the exception of study from Zanzibar¹⁷. Consumption of sugary products has been recognized as one of the parents' behavior which could be adopted by their children, and therefore sugar consumption is closely related to the characteristics of the parents".

ACKNOWLEDGEMENT

The author is thankful to all the fathers who participated in the study. This study was registered

(NF 1757) with the College of Dentistry, Research Center, King Saud University, Riyadh, Kingdom of Saudi Arabia.

REFERENCES

- 1 Sallis JF, Nader PH. Family determinants of health behaviors. In: Gochman DS, editor. Health behavior. Emerging research perspectives. New York: Plenum Press 1998; 107-124
- 2 Grytten J, Rossow I, Steele L, Holst D. Aspects of the formation of dental health behaviors in early childhood. *Dental Health* 1989; 28:6-10
- 3 Bandura A. Social foundations of thought and action: a social cognitive theory. Englewoods Cliffs (NJ): Prentice Hall, 1986.
- 4 Blinkhorn A. Influence of social norms on tooth brushing behavior in pre-school children. *Community Dent Oral Epidemiol* 1978; 6:222-226
- 5 Honkala E, Kamas L, Rise J. Oral health habits of schoolchildren in 11 European countries. *Int Dent J*. 1990; 40:211-217
- 6 Petersen PE. Oral health behavior among 6-year-old Danish children. *Acta Odontol Scand*. 1992; 50:57-64
- 7 Petersen PE, Danila I, Samoila A. Oral health behavior, knowledge and attitudes of children, mothers and schoolteachers in Romania in 1993. *Acta Odontol Scand* 1995; 53:363-368
- 8 Al-Tamimi S, Petersen PE. Oral health situation of schoolchildren, mothers and schoolteachers in Saudi Arabia. *Int Dent J* 1998; 48:180-186
9. Petersen PE, Hadi R, Al-Zaabi FS, Hussein JM et al. Dental knowledge, attitudes and behavior among Kuwaiti mothers and schoolteachers. *J Pedod* 1990; 14:158-164
10. Rajab LD, Petersen PE, Bakaeen G, Hamdan MA. Oral health behavior of schoolchildren and parents in Jordan. *Int J Paediatr Dent* 2002; 12:168-176
- 11 Kalaajieh WK, Rima AC. Oral health behavior in students in North Lebanon. *East Meditrr Health J*. 2000; Sept-Nov, 6:987-992
- 12 Vigild M, Petersen PE, Hadi R. Oral health behavior of 12-year-old children in Kuwait. *Int Dent J*. 1999; 9:23-29
- 13 Hood CA, Hunter ML, Kingdon A. Demographic characteristics, oral health knowledge and practices of mothers of children aged 5 years and under referred for extraction of teeth under general anesthesia. *Int J Paediatr Dent* 1998; 8:131-136.
- 14 Hirschman RS, Lewenthal H, Glynn K. The development of smoking behavior: conceptualization and supportive cross sectional survey data. *J Appl Soc Psychol* 1984; 38:1299-1305
- 15 Arnrup K, Berggren U, Broberg AG. Usefulness of a psychometric questionnaire in exploring parental attitudes in children's dental care. *Acta Odontol Scand* 2001; 59:14-20
- 16 Wyne AH, Al-Ghoraibi BM, Al-Asiri YA, Khan NB. Caries prevalence in Saudi primary school children of Riyadh and their teachers' oral health knowledge, attitude and practices. *Saudi Med J* 2002; 23:77-81
- 17 Petersen E, Mzee MO. Oral health profile of schoolchildren, mothers and school teachers in Zanzibar. *Community Dent Health* 1998; 15:256-262
- 18 Wyne AH, Spencer AJ, Szuster FS. Toothbrushing practices of 2-3-year-old children and their age at first dental visit: a survey in Adelaide, South Australia. *Int J Paediatr Dent* 1997; 7:263-264
- 19 Al-Musa B, Al-Khamis A, Al-Shalan T. Saudi parents' attitude towards children's first dental visit in College of Dentistry, King Saud University: A survey. An Internship Seminar 2002 January 22, Riyadh, KSA.
- 20 American Academy of Pediatric Dentistry. Reference Manual. *Pediatr Dent* 2000-2001 (Special Issue); 22:82-84
- 21 King JM. Pattern of sugar consumption in early infancy. *Community Dent Oral Epidemiol* 1984; 6:47-52.