

Original Research

Knowledge, attitude, and practical behavior of parents regarding their child's oral health

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ABSTRACT:

Objective: The objective of this study was to determine the knowledge, attitude, and practical behavior of parents regarding their children's oral health. **Material and methods:** A study involved 300 parents of 3- to 4-year-old children. A 40-item questionnaire was developed from the Theory of Planned Behavior, Health Belief Model and the Health Locus of Control model, and parental attitudes toward dental caries in their children were analyzed. **Results:** A total of 300 filled-in questionnaires were collected. Parents with good own oral hygiene skills significantly more often understood the importance of brushing their children's teeth ($\chi^2=29.8$; $df=1$; $P<0.001$). Study results highlighted also significant differences in importance to prevent tooth decay ($\chi^2=3.9$; $df=1$; $P=0.051$), importance to control sugar snacking ($\chi^2=10.6$; $df=1$; $P=0.001$), and parental perceived seriousness of tooth decay in children ($\chi^2=9.2$; $df=1$; $P=0.003$) comparing parents with poor and good oral hygiene skills. Differences in parental efficacy to control proper toothbrushing and parental efficacy to control sugar snacking in children were not significant comparing both groups. **Conclusions:** More than half (61%) of the parents have reported appropriate own oral hygiene skills. Parental attitudes toward children's oral health were significantly associated with their own oral health behavior and understanding the importance of development of oral hygiene skills in their children. **Keywords:** Child oral health, oral hygiene practice, parental attitude

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INTRODUCTION

Poor oral hygiene and frequent consumption of sugars is known for many years as key behavioral risk factors for oral diseases, such as dental caries and periodontal disease.¹⁻³ Dental caries occur because of demineralization of enamel and dentine by organic acids produced by bacteria in dental plaque through the metabolism of sugars derived from diet.^{4,5}

Dental caries also affects preschool age children's growth and well-being (7, 8). Behaviors adopted by individuals can make a negative or positive contribution to health. Parental knowledge and attitudes toward oral health can promote appropriate oral hygiene skills in their children.^{3,6,7}

There is evidence that good parental knowledge and oral hygiene positively affects children's dental health.^{8,9} Tooth-brushing less than twice daily and sugar snacking between meals have been identified as

key behavioral factors explaining the presence Oral health is the mirror of general health and cannot be isolated. Although there have been improvements in the oral health of children over the last 50 years due to widespread exposure to fluoride, dental caries remains a serious public health problem disproportionately affecting individuals from low- income and minority status. Chronic pain from decayed teeth can have a significant impacts on a child's well- being and that of their family. It affects their ability to learn, thrive, and develop, as a result of interrupted sleep and difficulty in eating due to pain.of dental caries in children.^{2,6,10}

Children are more likely to be caries free if their teeth are brushed from an early age, twice daily with fluoride toothpaste, with parental involvement and in an environment in which the frequency of sugar intake is controlled.¹¹ In contrast to this parenting

skills approach, health education models have dominated in the majority of caries prevention strategies.¹²

The objective of this study was to determine the knowledge, attitude, and practical behavior of parents regarding their children’s oral health.

METHODOLOGY

300 patients were included in this study, and the sample selection was done using random sampling technique.

The questionnaire of 20 questions was developed using existing questions from validated survey tools

(Oge and Douglas¹³ 2018; Gold and Tomar¹⁴ 2016; and Kowash and Pinfield 2000).¹⁵

Parent’s participation in this study was voluntary, free of constraint, and in fully informed manner. The questionnaire was delivered on a face-to-face interview basis. Data were analyzed using the Statistical Package for Social Sciences 21.0 version (IBM corporation, Java, Chicago,USA) for descriptive and multivariate analysis, and the level of statistical significance used in this study was chosen at P < 0.005.

RESULTS

Table1: Descriptive characteristics of parents who responded to questionnaire

Characteristic	Good own oral hygiene skills		Poor own oral hygiene skills	
	N	%	N	%
Gender				
Male	80	40	30	30
Female	120	60	70	70
Age				
<29 years	100	52.63	60	54.54
30-40 years	50	26.31	30	27.27
>40 years	40	21.06	20	18.19
Education				
Primary	15	9.37	10	7.15
Secondary	25	15.63	30	21.42
College	50	31.25	40	28.57
University	70	43.75	60	42.86

Table 2: Associations between parental oral hygiene skills and attitudes toward children’s oral health

Attitude	Good own oral hygiene skills (n=200)		Poor own oral hygiene skills (n=100)		χ ²	P-value
	n	%	n	%		
Understood importance to brush teeth in children					29.8	<0.001
Good	120	60	65	65		
Bad	80	40	35	35		
Parental efficacy to control proper tooth-brushing in children					2.1	0.062
Good	130	65	75	75		
Bad	70	35	25	25		
Importance to prevent tooth decay snacking in children					3.9	0.051
Good	110	55	55	55		
Bad	90	45	45	45		
Importance to control sugar					10.6	0.001
Good	140	70	80	80		
Bad	60	30	20	20		
Parental efficacy to control sugar snacking in children					0.2	0.373
Good	150	75	70	70		
Bad	50	25	30	30		
Perceived seriousness of tooth decay in children					9.2	0.003
Good	120	60	60	60		
Bad	80	40	40	40		

Of the 300 respondents, 120 (60%) were females and 80 (40%) were male. The age ranged from 21 to 65

years (mean age, 33.1±6.94 years). Average household incomes per capita in families with

self-reported good and poor parental oral hygiene skills were 511.65 ± 270.21 Lt and 466.71 ± 263.11 Lt, respectively.

Regarding parental skills in own oral hygiene, our study showed that more than half (52.6%) of the parents use an appropriate toothbrush. Altogether, 69.7% of the parents were brushing their teeth twice a day or more often as it is recommended. Most of parents (77.7%) reported inappropriate use of sugar snacks. The mean number of children in families with good and poor parental oral hygiene skills was 1.56 ± 0.6 and 1.59 ± 0.7 children per family, respectively. All other descriptive characteristics are shown in Table 1.

Study results highlighted that most of the parents (71.5%) had visited an oral hygienist at least once during the last year.

Using Pearson's test, associations between parental attitudes toward tooth decay in their children and own oral hygiene skills were analyzed (Table 2). Parents with good own oral hygiene skills significantly more often understood the importance of brushing their children's teeth ($\chi^2=29.8$; $df=1$; $P<0.001$). Study results also highlighted significant differences in importance to prevent tooth decay ($\chi^2=3.9$; $df=1$; $P=0.051$), importance to control child sugar snacking ($\chi^2=10.6$; $df=1$; $P=0.001$), and parental perceived seriousness of tooth decay in children ($\chi^2=9.2$; $df=1$; $P=0.003$) comparing the parents with poor and good oral hygiene skills. Parental efficacy to control proper toothbrushing and parental efficacy to control sugar snacking in children was higher in the group of parents with good oral hygiene skills; however, the differences were not significant.

DISCUSSION

The present study was aimed at evaluating the current oral health knowledge and attitudes of parents of children. The role of the mother in her child's oral health habits and status received a special emphasis. Despite changing roles and areas of responsibility within the family, the mother still seems to play the key role in the child's oral health-related lifestyle. In this study, there was no statistical significance between males and females in any point. However, females seem to have better knowledge and attitudes regarding their children's oral health. A vast majority of the respondents knew that primary teeth are important and most of them correctly identified that problems in primary teeth could affect the permanent ones.

This study showed that more than half of the parents reported appropriate own oral hygiene skills; 52.6% of the parents use an appropriate toothbrush.

Altogether, 69.7% of the parents were brushing their teeth twice a day or more often as it is recommended. According to parental habits, our study results are in accordance to earlier study on Lithuanian population¹⁶ which showed that half of the parents brush their teeth

irregularly and only 14% of the parents brushed their children's teeth.

Our study revealed that parental attitudes toward their children's oral health were significantly associated with positive parental oral health behavior. According to this, parental attitudes toward oral health should be considered an essential factor influencing the development of positive health-related behavior in children. Oral diseases are clearly related to the behavior, and it is expected that the prevalence of dental caries and periodontal disease would decrease with the improvements in attitudes and oral hygiene skills. This also could have an influence on decreasing the prevalence of dental caries in child teeth (29). The most common and effective way to promote children's oral hygiene is parental supervision and development of child skills for regular toothbrushing together with parental control of sugar consumption; therefore, brushing is recommended to be adopted as a habit, which should be repeated every morning and evening, at least twice a day. Earlier studies demonstrated a high correlation between the frequency of toothbrushing and OHI-S (by Green-Vermillion) index.¹⁸ Therefore, special emphasis on parental own attitudes, skills, and knowledge of why and how often toothbrushing should occur and why sugar should be controlled should be placed in the development of healthy lifestyle behaviors in their children. When parents improve their oral hygiene skills by themselves, their children accept this healthy behavior more easily. Further research is needed to evaluate in prospective studies whether parental attitudes is more favorable in establishment and maintenance of positive oral health behaviors in children. Furthermore, it would be an advantage to repeat a cross-sectional survey, with the same target population and sampling frame, as it is the most appropriate and straightforward design for providing a series of survey estimates by which changes in a population can be monitored over periods of time.¹⁹ Trend studies of oral health-related behaviors, using a repeat cross-sectional design, have previously been reported in testing the changes in oral health and lifestyle.²⁰

CONCLUSION

More than half (61%) of the parents reported appropriate own oral hygiene skills. Parental attitudes toward children's oral health were significantly associated with their own oral health behavior and understanding the importance of development of oral hygiene skills in their children.

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