Journal of Medicine in Scientific Research

Volume 5 | Issue 2 Article 13

Subject Area: Dentistry

Parents' knowledge, attitude and practices toward oral health of their children with primary dentition: A cross sectional study

Marwa Foad
Cairo University

Mennatallah Helal
El Galaa Teaching Hospital, new_dentist2011@hotmail.com

Soad Abdel Moneim
Cairo University

Recommended Citation

Foad, Marwa; Helal, Mennatallah; and Moneim, Soad Abdel (2022) "Parents' knowledge, attitude and practices toward oral health of their children with primary dentition: A cross sectional study," *Journal of Medicine in Scientific Research*: Vol. 5: Iss. 2, Article 13.
DOI: https://doi.org/10.4103/jmisr.jmisr_24_22

Parents' knowledge, attitude and practices toward oral health of their children with primary dentition: A cross sectional study

Mennatallah Helal[a], Soad Abdel Moneim[b], Marwa Foad[b]

[a]Department of Dentistry, El Galaa Teaching Hospital, [b]Department of Pediatric Dentistry and Dental Public Health, Faculty of Dentistry, Cairo University, Cairo, Egypt

Abstract

Objective

This cross-sectional study aims to assess parents' knowledge, attitude, and practices toward the oral health of their children with primary dentition.

Patients and methods

The study was performed in the Pediatric Dentistry and Dental Public Health Department, Faculty of Dentistry, Cairo University. Data were obtained through 301 questionnaires translated from English to Arabic, for the assessment of the parents' knowledge, attitude, and practices scores and via clinical examination of the children for the assessment of caries prevalence by calculation of their dmf scores.

Results

The majority of parents (90%) had adequate knowledge scores with a significantly strong negative correlation to dmf scores of their children. For attitude score, 100% of parents reported adequate attitude score, with insignificant weak negative correlation to dmf scores of their children. Finally, the practice score was adequate in only 44.52% of parents, with a significantly strong negative correlation to dmf scores of the children.

Conclusions

The majority of parents had adequate knowledge and attitude, although having inadequate practice. The mean dmf score of the children was significantly affected by parents' knowledge, but weakly affected by their beliefs and attitudes. The poor practice of parents revealed in the present study had a strong negative influence on their children's caries prevalence.

Keywords: Caries prevalence, children, oral health, parents and knowledge, attitude, and practices

Introduction

Dental caries is described as a multifactorial disease-causing local destruction of susceptible hard-tooth structure by the acidic by-products formed as a consequence of bacterial fermentation of dietary carbohydrates [1].

Dental caries is rapidly increasing in children compared with adults. Nearly about 60–90% of schoolchildren suffer from this chronic disease. Primary tooth decay was categorized as the 12th most predominant condition, affecting 500 and 60 million children [2].

Untreated dental caries in children increases the hazard of acquiring new carious decays in both the deciduous and permanent dentitions. Also, it can impair quality of life, causing eating troubles, bodyweight loss, sleeping disorders, and consequently growth decrease. It also leads to speech impairments, esthetic considerations, and low self-esteem [3].

It is critical to avoid oral disorders in infants as early as possible to guarantee long-term dental health. Dental caries is impacted not only by biological variables that interact with the pathogenic microorganisms, but also by socioeconomic, educational, and behavioral factors [4].

Correspondence to : Mennatallah Helal, Bsc, Faculty of Oral and Dental Medicine, Ain Shams University, El-Galaa Teaching Hospital, Resident Dentist, Dentistry Department El-Galaa Teaching Hospital, El Galaa Street, El Isaaf, Cairo 11432, Egypt.
Tel: +20 100 923 0087; Fax: 25756245 ;
E-mail: new_dentist2011@hotmail.com

Access this article online

Quick Response Code:

Website: www.jmsr.eg.net

DOI: 10.4103/jmisr.jmisr_24_22

Submitted: 07-Mar-2022 **Revised:** 27-Apr-2022 **Accepted:** 07-May-2022 **Published:** 09-Aug-2022

How to cite this article: Helal M, Moneim SA, Foad M. Parents' knowledge, attitude and practices toward oral health of their children with primary dentition: A cross sectional study. J Med Sci Res 2022;5:164-70.

Parents are the primary decision-makers for children and their first role models, their oral health knowledge, attitude, and practice (KAP) as well as habits influence their children. Family habits, especially those of mothers, directly influence their children [5].

In Egypt, there is a lack of data about parents' oral health KAP and their implications on their children. Therefore, this study was performed to acquire information about oral health KAP of parents and their relation to the caries prevalence of their children.

Patients and Methods

Study design

This study was a cross-sectional study performed to assess parents' KAPs toward oral health of their children with primary dentition.

Participants

Parents of children with primary dentition.

Eligibility criteria

(1) Inclusion criteria:
   (a) Apparently healthy children with primary dentition.
   (b) Aged between 3 and 6 years.
(2) Exclusion criteria:
   (a) Guardians other than parents (child's father or mother).
   (b) Parents that refused to participate.

Settings

The questionnaires were admitted to the parents in the waiting area of the Diagnostic Clinic of Pediatric Dentistry and Dental Public Health Department, Faculty of Dentistry, Cairo University.

Sample size

A power analysis was designed to have adequate power to apply a two-sided statistical test null hypothesis that there is no association between parents' oral health knowledge for children with primary dentition and the caries prevalence in their children. According to the results of Dikshit *et al*.[5] in which the proportion of parents with adequate knowledge was 0.732, and by adopting a confidence interval of 95%, a margin of error of 5% with finite population correction, the expected sample size (n) was a total of 301 cases. Sample-size calculation was performed using Epi info for Windows, Version 7.2. The sample size was revised and approved by the Medical Biostatistics Unit (MBU), Faculty of Dentistry, Cairo University, Egypt.

Ethics approval

This study has been approved by the Research Ethics Committee of the Faculty of Dentistry, Cairo University, Egypt, with an approval number: 171217. Verbal consent was taken from the parents of the children to agree with their participation in the study.

Data sources and management

Data were obtained through a written questionnaire for the assessment of the parents' KAP scores and via clinical examination of the children for the assessment of caries prevalence by calculation of their dmf scores. All collected data were saved on a computer with backup and finally statistically analyzed.

The questionnaire design and scoring

(1) A questionnaire based on the previous work of Dikshit *et al*.[5] was used in the present study. The questionnaire is formed of closed-structured binary and MCQ questions and was translated from English to the Arabic language for easy communication with the parents.
(2) The questionnaire consisted of two sections:
   (a) Section 1 the demographic data, which included five questions about name, sex, age, address, and educational level.
   (b) Section 2 consisted of 28 questions; 10 related to knowledge, six to attitude, eight to practice, and four general questions.
(3) The questions' responses were assessed by using a scoring system, based on the correct answers. For the knowledge and practice items, the right answer was coded as 1 and the wrong answer as 0. For the attitude items, a score 1 indicated a positive attitude, while a score 0 indicates a negative one. The individual scores were then summed up to yield a total score. The maximum scores were 10, 6, and 8 for KAP, respectively. Mean scores of less than 40% and more than or equal to 40% are considered as inadequate and adequate performance, respectively [5].

Clinical examination

(1) In addition to the questionnaire, data were also collected by clinical examination for evaluating the children's dental caries experience and prevalence by calculating their dmf score.
(2) The oral assessment of every child was done by a single operator under good lighting conditions using a mouth mirror and probe to detect the presence of carious (whether smooth or pits and fissure caries), missed (extracted), and filled teeth.

Statistical methods

Data were statistically analyzed by Microsoft Excel 2016 (Office 365, Microsoft Inc.,USA), Statistical Package for Social Science (SPSS, version 24, IBM, SPSS Inc.,USA), and Minitab statistical software, version 16 (Minitab, LLC, USA). For each question, descriptive statistics were used to calculate answers, which were then expressed as frequencies and percentages. The connection between different variables and oral health KAP was compared using a two-tailed independent t test. Data were revealed as counts and percentages for further analysis using the independent t test and Spearman's correlation coefficient. The level of significance was calculated at P value less than or equal to 0.05.

Results

Demographic data of the participants

The total sample of the parents was divided by age into four equal intervals: 20–29, 30–39, 40–48, and 50–53 years,

respectively. The highest-presented age interval was the 30–39 years. The male and female distribution was 82 (27.7%) and 219 (72.3%), respectively, with high females' predilection. Regarding the parents' address and educational level, the participant address was classified into three areas as follows: Cairo, Giza, and others. The majority of the participants were from Giza followed by Cairo. The educational level of the participants was divided into no, low, medium, and high. Most of the parents fell in the high educational-level category. Concerning the participating children, a total of 301 children aged from 1 to 6 years were examined. The majority of the examined children were 5 years old.

Caries prevalence

Caries prevalence of the children was calculated using the dmf caries index. The mean dmf scores in the selected-children ages were 13, 2, 6, 6, 7, and 8, respectively, as listed in Table 1.

Knowledge, attitude, and practices parameters

Knowledge

After analyzing the parents' responses to the questions, the answers were divided into correct and incorrect. The highest percentage of correct answers was revealed in questions: 'tooth alignment position' (83.72%), followed by 'How many milk teeth are there in child's mouth?' (79.07%) and 'Does the toothpaste contain fluoride?' (73.75%) as listed in Table 2.

Attitude

The parents' responses to the attitude questions were divided into positive and negative. All parents (100%) disagreed that 'Milk teeth do not require good care as it is going to fall,' 'Good oral health is related to good general health,' and 'Healthy milk teeth are essential to chew food properly.' About 99.34% of parents agreed that 'It is necessary to take the child for regular dental visits' and that 'Cleaning of child's mouth should be done or supervised by parents,' while the lowest percentage of positive attitude was revealed in 'It is necessary to clean the child's mouth after every meal' (91.69%), as listed in Table 3.

Practice

The parents' responses to the practice questions were divided into correct and incorrect. The highest percentage of correct answers was revealed in 'Which of the following are used to clean your child's teeth?' (100%), while the lowest percentage of correct answers was revealed in 'When do you take your child to visit the dentist?' (0%), as listed in Table 4.

General questions

Regarding the responses to the general questions, the most common source of information (71.29%) regarding oral health was the 'Dentist.' The majority of the parents rated their child's oral health as 'Fair' (54.79%) followed by 'Good' (35.64%), respectively. Most parents (65.35%) did not check their child's mouth for the presence of decayed teeth, however, they thought that their children's teeth are well-aligned (82.18%). The responses to the general questions are listed in Table 5.

Table 1: dmf scores in children

	Mean (dmf) score±SD
Children age	
1	13±1
2	2±3
3	6±3
4	6±3
5	7±4
6	8±3

Table 2: Responses to knowledge questions

	n (%)
How many milk teeth are there in the child's mouth?	
Correct answer	238 (79.07)
Does the toothpaste contain fluoride?	
Correct answer	222 (73.75)
What is the role of fluoride in the toothpaste?	
Correct answer	215 (71.43)
What is the most common dental disease in the child?	
Correct answer	217 (72.09)
Which of the food items can lead to tooth decay?	
Correct answer	194 (64.45)
Which do you think prevents tooth decay?	
Correct answer	185 (61.46)
Causes for gum disease?	
Correct answer	202 (67.11)
Which do you think prevents gum disease?	
Correct answer	197 (65.45)
Which can lead to irregular teeth?	
Correct answer	220 (73.09)
Can irregularly placed teeth be aligned in the correct position?	
Correct answer	252 (83.72)

Table 3: Responses to attitude questions

	n (%)
It is necessary to take the child for regular dental visits	
Positive	299 (99.34)
Cleaning of child's mouth done/supervised by parents	
Positive	299 (99.34)
It is necessary to clean the child's mouth after every meal	
Positive	276 (91.69)
Milk teeth do not require good care as it is going to fall	
Positive	301 (100.00)
Good oral health is related to good general health	
Positive	301 (100.00)
Healthy milk teeth are essential to chew food properly	
Positive	301 (100.00)

Knowledge, attitude, and practices scores

Mean scores of less than 40% and more than or equal to 40% were considered as inadequate and adequate performance, respectively. The number, percentages, and mean of KAP scores regarding adequacy and inadequacy are shown in Table 6.

Table 4: Responses to practice questions

	n (%)
When do you take your child to visit the dentist?	
Correct answer	0
When did you start cleaning your child's teeth?	
Correct answer	24 (7.97)
Which of the following are used to clean your child's teeth?	
Correct answer	301 (100.00)
How many times does your child brush his teeth?	
Correct answer	3 (1.00)
When do you change your child's toothbrush?	
Correct answer	113 (37.54)
What material does your child use to clean teeth?	
Correct answer	300 (99.67)
Does your child rinse the mouth after eating/drinking?	
Correct answer	79 (26.25)
When do you give the sugary food to your child?	
Correct answer	3 (1.00)

Table 5: Responses to the general questions

	n (%)
Source of information regarding oral health	
Dentist	216 (71.29)
Pediatrician	7 (2.66)
Newspapers and TV	8 (2.64)
All of the above	66 (21.78)
Any other	4 (1.63)
How do you rate your child's oral health?	
Good	108 (35.64)
Fair	166 (54.79)
Poor	27 (9.57)
How may teeth are decayed in your child's mouth?	
<3 teeth	32 (10.56)
3-6 teeth	35 (11.55)
>6 teeth	38 (12.54)
Have not checked	196 (65.35)
How are your child's teeth aligned?	
Well-aligned	247 (82.18)
Not aligned properly	31 (10.23)
Have not checked	23 (7.59)

Correlation statistics of the knowledge, attitude, and practices scores and dmf scores regarding inadequacy

Regarding knowledge score, inadequacy percentage was calculated of 40% of the total knowledge score and revealed as 92.69 and 7.31% for adequate and inadequate, respectively. Using Spearman's correlation coefficient, there was a significantly strong negative correlation between dmf score and adequacy percentage (r=−0.828), as listed in Table 7.

Regarding attitude score, inadequacy percentage was calculated of 40% of the total attitude score and revealed as 100 and 0% for adequate and inadequate, respectively. Using Spearman's correlation coefficient, there was an insignificant weak negative correlation between dmf score and adequacy percentage (r=−0.106), as listed in Table 7.

Regarding practice score, inadequacy percentage was calculated of 40% of total practice score and revealed as 44.52 and 55.48% for adequate and inadequate, respectively. Using Spearman's correlation coefficient, there was a significantly strong negative correlation between dmf score and adequacy percentage (r=–0.555), as listed in Table 7.

Discussion

In the present study, data were collected through a prestructured questionnaire. The American Academy of Pediatric Dentistry (AAPD) advises using validated questionnaires to measure parents' knowledge and attitudes to develop an effective child oral health promotion program.

Questionnaires are a low-cost, fast, and effective way to collect huge volumes of data from a big group of individuals. The KAP survey model is a quantitative approach (predesigned questions in standardized questionnaires) that records an 'opinion' and depends on declaration providing access to both quantitative and qualitative information. The KAP model evaluates three interrelated processes: knowledge acquisition, belief generation, and behavior formation.

The study included parents of children having only a primary set of dentition. Including children with only primary teeth in the study was to try to confine variables as much as possible, as the effect of parents' KAP on caries prevalence in children can be masked by the more susceptibility to caries due to crowding and gingivitis occurring in the ugly duckling and mixed-dentition stages starting from the eruption of the first permanent tooth by the age of 5–7 years [6]. According to the stages of children's psychological growth, during preschool age (3–6 years), the child is basically influenced by his parents matching the study goals. Starting the scholar age, the child is subjected to the extrafamiliar world, including friends and teachers with a gradual decrease in parents' dependency as age increases.

In addition to the data collection through the questionnaire, a clinical examination was performed for evaluating the children's dental caries experience and prevalence by calculating their dmf score. The examination was performed in the diagnostic clinic of the Pediatric Dentistry and Dental Public Health Department, Faculty of Dentistry, Cairo University. For assessing and comparing the experience of dental caries in communities, the WHO suggested using the dmf index. Because of the symmetry and bilateralism of dental caries, this index allows for quick and useful general understanding of the epidemiological circumstances of children's populations.

The simplicity, acceptability by the patients, and the worldwide use of dmf score provide acceptable historical records about dental caries prevalence allowing international comparison of data. Determining caries experience allows indirect

estimation of oral health [7]. The dmf index was also used by Gokhale *et al.* (2015) [8]; Hamid, Abuaffan (2017) [9]; Dikshit *et al*. [5]; and Mohamed [10] to assess caries prevalence in children with primary dentition.

A total sample of 301 parents participated in the study. They were divided by age into four equal intervals and the highest-presented age interval was the 30–39 years. This is similar to the results of Ashkanani and Al-Sane [7], Nagarajappa *et al*. [11], and Suma Sogi *et al*. [12]; Hamid and Abuaffan (2017) [13–15]; and Salama *et al*. [16], in which the age group ranging from 21 to 40 years was reported to be the most presented. There was a higher female predilection, parallel to Ashkanani and Al-Sane [7], Nagarajappa *et al*. [11], Suma Sogi *et al*. [12], and Liu *et al*.[15] and Dikshit *et al*. [5], indicating that more mothers accompany the child to the dentist.

The educational level of the participants was divided into no, low, medium, and high with the majority of the parents being highly educated. This is in accordance to Ashkanani and Al-Sane [7], Chala *et al*. [13], and Liu *et al*.[15] and Gurunathan *et al*. [17], while on the contrary to Nagarajappa *et al*. [11], Suma Sogi *et al*.[12] and Alkhtib and Morawala[14] where the higher predilection went to the high school educational level (medium level). This is probably because in Egypt, education is still the most cause of parents' motivation to take their children for dental care [16].

Analyzing the parents' responses to the knowledge questions clarified that the highest percentage of correct answers was revealed in the questions related to the tooth-alignment position, the number of milk teeth, and the presence of fluoride in the toothpaste. This is in line with the results of Dikshit *et al*. [5], where the percentages of the correct response to these questions were 87.5, 40.5, 70, and 89.3%, respectively.

Furthermore, the results showed that 71.43% of parents know the role of fluoride in the toothpaste, similar to Chala *et al*.[13] and Chandran *et al*. [18]; and contrary to Mohamed[10] and Salama *et al*.[16] and Nagarajappa *et al*.[11] who detected poor knowledge of parents regarding the role of fluoride in the prevention of dental caries. This is probably as parents usually do not care about the ingredients of the toothpaste [5].

The results of Hamid and Abuaffan (2017) and Alkhtib and Morawala[14] were in line with the present study, as their results showed that the majority of parents blamed chocolate for causing tooth decay. The results of Suma Sogi *et al*.[12] and Gurunathan *et al*.[17] and Chandran *et al*.[18] clarified that the majority of the parents knew that sugary food causes dental caries. However, Mohamed[10] revealed that more than half of the parents (60.9%) were unaware of the cariogenicity of sugary food.

Study results showed that all parents agreed that 'Good oral health is related to good general health' coming in line with Hamid and Abuaffan (2017). All parents disagreed that 'Milk teeth do not require good care as it is going to fall.' Contrary to these results, Dikshit *et al*.[5] and Hamid and Abuaffan (2017), who detected that only 47.6 and 13.0% of respondents respectively knew the importance of milk teeth.

Chala *et al*.[13] revealed that 53.3% respondents thought that primary teeth are unnecessary and that permanent teeth should be given greater attention. Ninety-nine percent of the parents agreed that it is valuable to take their child for regular dental checkups opposed to Dikshit *et al*. [5], where only 57.1% of parents agreed with that. Most parents agreed that cleaning of child's mouth should be done or supervised by parents similar to Dikshit *et al*. [5], Liu *et al*. [15], and Gurunathan *et al*.[17] and Chandran *et al*. [18], but different from Gokhale *et al.* (2015), where only 16.3% reported watching their children while brushing their children, and 52.9% reported no care.

Table 6: Number and percentages of knowledge, attitude, and practices scores regarding adequacy and inadequacy

	n (%)	Mean score
Knowledge score (out of 10)		
Adequate	279 (92.69)	7.12
Inadequate	22 (7.31)	
Attitude score (out of 6)		
Adequate	301 (100)	5.9 (0.307)
Inadequate	0	
Practice score (out of 8)		
Adequate	134 (44.52)	2.73 (0.943)
Inadequate	167 (55.48)	

Table 7: Correlation statistics of knowledge, attitude, and practices scores and dmf scores regarding inadequacy

	n (%)	Mean (dmf) score	SD	*r*	*P*
Knowledge score (out of 10)					
Adequate	279 (92.69)	8.3	3	−0.828	0.00**
Inadequate	22 (7.31)	16	4	Strong negative correlation	
Attitude score (out of 6)					
Adequate	301 (100)	10	5	−0.106	0.066*
Inadequate	0	–	–	Weak negative correlation	
Practice score (out of 8)					
Adequate	134 (44.52)	5	3	−0.555	0.00 **
Inadequate	167 (55.48)	10	4	Strong negative correlation	

r, Spearman's correlation coefficient. *Insignificant difference. **Significant difference

Regarding parents' responses to the practice questions, the highest percentage of correct answers was revealed in 'Which of the following are used to clean your child's teeth?' (100%), this question showed a lower positive response in Dikshit *et al*.[5] (56.5%). The second-highest score was found in the question 'What material does your child use to clean teeth?' (99.67%) in parallel with Gokhale *et al.* (2015) and Dikshit *et al*. [5]. The lowest response was in the question 'How many times does your child's brush his teeth?' and 'When do you give the sugary food to your child?' with a percentage of 1%, which comes parallel to Dikshit *et al*. [5], Ashkanani and Al-Sane [7], and Suma Sogi *et al*.[12] and Alkhtib and Morawala [14]. While the lowest percentage of correct answers was in 'When do you take your child to visit the dentist?' (0%), coming in line with Dikshit *et al*. [5], Chala *et al*. [13], and Alkhtib and Morawala[14] and Priya *et al*. [19].

According to Mohamed [10], parents usually ignore regular dental visits mostly because of financial limitations. Regarding the responses to the general questions, the most common source of information (71.29%) regarding oral health was the 'Dentist.' This is consistent with Liu *et al*.[15] and Gurunathan *et al*.[17] results but different from Chala *et al*. [13], where the primary sources of information provided by mothers were family members and other mothers, close to that, Salama *et al*.[16] found the main source of mothers' information regarding children oral health to be from relatives (72.3%). The study results also were contrary to Priya *et al*.[19] where newspapers and television were found to be the primary sources of oral health information. Also, Dikshit *et al*.[5] reported the most common source of information regarding oral health to be 'All of the above,' including dentists, pediatricians, and newspapers or TV (29.8%). The present study results might be due to the lack of dental literature outside the dental community in Egypt. Regarding the KAP scores, 92.69% of parents had adequate knowledge with a mean score 7.12, while 100% of parents had an adequate attitude with a mean attitude score 5.9. Practice score revealed that 44.52% of parents have adequate practice.

The results showed that parents had adequate KAP with the highest score in the attitude followed by knowledge than practice. This is in line with Ashkanani and Al-Sane[7] and Priya *et al*. [19], while different from Suma Sogi *et al*.[12] and Dikshit *et al*. [5], where the highest score was for knowledge followed by the attitude and practice that came at the end parallel to what was found in our study. This gap between practice and both knowledge and attitude scores, is probably due to the financial limitations of parents living in distant areas or even from other governorates, in addition to parents' lack of motivation regarding the importance of dental care, especially for the primary teeth [10].

There was a significantly strong negative correlation between dmf score and knowledge-adequacy percentage (r=–0.828), similar to Gokhale *et al.* (2015); Hamid Abuaffan (2017); and Dikshit *et al*.[5] and Salama *et al*. [16]. This illustrates how much the lack of knowledge and the wrong beliefs of the parents affect their guidance toward oral care of their young children [5]. There was an insignificant weak negative correlation between dmf score and attitude adequacy percentage (r=–0.106), opposite to Gokhale *et al.* (2015) and Dikshit *et al*. [5], who concluded that the attitude of the parents might have predisposed the child to higher caries. This can be explained by the different demographics of the parents participating in the study, which affected their level of knowledge and awareness that consequently differed in accordance with the question asked whose answer was sometimes biased by parents' embarrassment regarding the bad attitude [10].

There was a significantly strong negative correlation between dmf score and practice adequacy percentage (r=–0.555), which comes in line with Gokhale *et al*. (2015)[5] and Salama *et al*. [16]. That could be correlated to the cultural beliefs among patients with low socioeconomic levels who represented the majority of the sample [16]. The study results illustrate that a great number of parents have adequate knowledge and attitude, but inadequate practice. The mean dmf score of the children in this study was significantly affected by parent's knowledge but weakly affected by their beliefs and attitudes, as the dmf score in many children was high although the high attitude scores of their parents. The poor practice of parents revealed in this study might have a strong negative influence on children's caries prevalence.

Study limitations included length of the questionnaire. Parents also were suspicious about giving their personal information, this insecurity was minimized by explaining to them the effect and the importance of this information for the study. Another limitation was parents' embarrassment to mention their children's actual attitudes and practices.

Conclusion

Most of the parents had adequate oral health knowledge, while all of them had adequate oral health attitudes. Regarding practice, less than half of the parents showed adequate oral health practices. The study showed no considerable association between parents' age or sex or their KAP scores. There was also no association between parents' level of education and their children's oral health. Knowledge and practice adequacy had a strong negative correlation with the dmf score, while attitude adequacy had a weak negative correlation with it.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Giannattasio A, Poggi E, Migliorati M, Mondani PM, Piccardo I, Carta P, *et al*. The efficacy of Italian guidelines in promoting oral health in children and adolescents. Eur J Paediatr Dent 2015; 16:93–98.

2. Shalan HM, Abo Bakr R. Oral health status of preschool children in Egypt. Acta Sci Dent Sci 2018; 2:67–72.
3. Seif El-Nasr EM. Oral health intervention program among primary school children at El-Qalyubia Governorate. Egypt Nurs J 2017; 14:100–108.
4. Anil S, Anand PS. Early childhood caries: prevalence, risk factors, and prevention. Front Pediatr 2017; 5:157.
5. Dikshit P, Limbu S, Gupta S, Pradhan R. Evaluation of knowledge, attitude and practices of parents toward their children oral health compared with their dental caries status. BJHS 2018; 3:447–452.
6. Dhull KS, Dutta B, Devraj IM, Samir PV. Knowledge, attitude, and practice of mothers towards infant oral healthcare. Int J Clin Pediatr Dent 2018; 11:435–439.
7. Ashkanani F, Al-Sane M. Knowledge, attitudes and practices of caregivers in relation to oral health of preschool children. Med Princ Pract 2013; 22:167–172.
8. Hamid, H. M., and Abuaffan, A. H. (2017). Parental Oral Health Knowledge, Attitude, Practice and Caries Status of Sudanese Cerebral Palsy Children. Ped Health Res., 2:2.
9. Gokhale, N., & Nuvvula, S. (2015). Knowledge , Attitudes And Practices of Parents Regarding Oral Health and Its Correlation with Dental Caries Status of Their Children : A Cross Sectional Study.
10. Mohamed YS. Assessment of the knowledge and awareness among Egyptian parents in relation to oral health status of their children. Egypt Dent J 2020; 66:737–746.
11. Nagarajappa R, Kakatkar G, Sharda AJ, Asawa K, Ramesh G, Sandesh N. Infant oral health: knowledge, attitude and practices of parents in Udaipur, India. Dent Res J 2013; 10:659.
12. Suma Sogi H, Hugar S, Nalawade T, Sinha A, Hugar S, Mallikarjuna R. Knowledge, attitude, and practices of oral health care in prevention of early childhood caries among parents of children in Belagavi city: a questionnaire study. J Fam Med Primary Care 2016; 5:286.
13. Chala S, Houzmali S, Abouqal R, Abdallaoui F. Knowledge, attitudes and self-reported practices toward children oral health among mother's attending maternal and child's units, Salé, Morocco. BMC Public Health 2018; 18:618.
14. Alkhtib A, Morawala A. Knowledge, attitudes, and practices of mothers of preschool children about oral health in Qatar: a cross-sectional survey. Dent J 2018; 6:651.
15. Liu HY, Chen JR, Hsiao SY, Huang ST. Caregivers' oral health knowledge, attitude and behavior toward their children with disabilities. JDS 2017; 12:388–395.
16. Salama AA, Konsowa EM, Alkalash SH. Mothers' knowledge, attitude, and practice regarding their primary school children's oral hygiene. MMJ 2020; 33:11–17.
17. Gurunathan D, Moses J, Arunachalam S. Knowledge, attitude, and practice of mothers regarding oral hygiene of primary school children in Chennai, Tamil Nadu, India. IJCPD 2018; 11:338–343.
18. Chandran V, Varma RB, Joy TM, Ramanarayanan V, Govinda BS, Menon MM. Parental knowledge, attitude, and practice regarding the importance of primary dentition of their children in Kerala, India. JIAPHD 2019; 17:247–252.
19. Priya M M, Kumar P, Saraswathi S. Assessment of parental oral health knowledge, attitude, and behavior. J Pharm Res, 2018; 12:47–50.