Parental Knowledge, Attitude, and Practice Regarding Children's Dental Health

Abstract

Parent-targeted oral health awareness campaigns should place a strong emphasis on issues like the value of deciduous teeth and how to treat them, frequent dental checkups, and dietary habits. The current study's objective is to evaluate parents' knowledge, behaviors, and attitudes regarding their children's oral health and how those factors affect the prevalence of dental caries in 5- to 10-year-old children in Riyadh, Saudi Arabia. Parents of school-aged children aged 5 to 10 who came to our hospital were the subjects of a cross-sectional questionnaire survey. The study included 209 children in all, together with their parents. Utilizing DMFT and the deft index, clinical examinations of children were conducted. Parents were given a self-designed questionnaire to evaluate their understanding, attitudes, and practices about their children's dental health. SPSS version 24 was used for the statistical analysis. A p-value of 0.05 or less was regarded as statistically significant when using the ANOVA test to examine the relationship between dental caries status and KAP.The mean deft and DMFT were 6.46 ± 1.6 and 1.56 ± 2.8, respectively. Most parents (72.2%) demonstrated adequate knowledge, behaviors, and attitudes. Parental KAP and mean DMFT/DEFT did not differ significantly. The study's participants had reasonable KAP for the oral health of their children. The significance of deciduous teeth and their treatment, frequent dental appointments, and dietary behaviors are among the knowledge gaps in oral health.

Key words: children, oral health, dental caries, parents, knowledge, attitude, practice

Introduction

Tooth decay, sometimes referred to as caries, is one of the most prevalent chronic disorders affecting children. Untreated cavities may result in pain and infections that make it difficult to eat, speak, play, or learn. Children with poor dental health may skip more school days and score lower than their peers. More than half of children between the ages of 6 and 8 have at least one cavity in the (primary) tooth. More than half of teenagers between 12 and 19 years have at least one cavity in a permanent tooth. When compared to children from higher-income households (11%), children aged 5 to 19 from low-income families have a double risk (25%) of having cavities(1).

A range of risk factors, including dietary practices, oral hygiene routines, nutritional deficiencies, imbalances in salivary flow and composition, usage of fluorides, etc. are linked to dental caries, a complex illness. The likelihood of dental caries is also influenced by parental education, socioeconomic level, poverty, and lack of knowledge about dental problems (2). Children's oral health behaviors are significantly influenced by their mothers as well as by the rest of the family(3). Parents can have a significant impact on preventing oral illnesses in children by being directly accountable for the dental health of their children (4). The majority of their choices about the health of their children are influenced by their understanding of health, especially oral health(5).

When it comes to their children's health and healthcare, parents make the decisions. Because this influences the dental care that children receive at home and their access to professional dental services, it is crucial to investigate their knowledge, attitude, and habits. Oral health awareness initiatives may target young children and their mothers as a key target audience for oral health education(6).

One of the major contributors to dental caries transmission is the bad hygiene practiced by the parents or the caregivers(7).So in the current study we are trying to emphasize this wrong knowledge, attitude and behaviors which are frequently practiced by parents or child caretakers.

Method

Parents of children aged 5 to 10 who visited KSMC Dental Hospital in Riyadh, Saudi Arabia, participated in a cross-sectional questionnaire survey for 3 months. The Institutional Review Board granted ethical approval, and the parents provided their informed permission. The study included 209 children in all, together with their parents. Children's dental caries status was evaluated clinically utilizing the DMFT and DFT index. Prior to the trial, the recording assistant and examiner were taught and calibrated to minimize intra-examiner variability [Kappa coefficient = 0.81].

Parents were given a self-made questionnaire to evaluate their understanding of, attitudes, and practices regarding their children's dental health. The questionnaire has two parts: a section with demographic information and another with 15 multiple-choice, closed-ended questions about knowledge (six), attitude (five), and habits (four) relevant to children's dental health. The questionnaire's reliability was pretested and determined to be acceptable [Kappa coefficient = 0.89]. The study did not include any surveys that were not completely filled out.

A score system was created to evaluate the questionnaire results. Scores were based on how many parents provided accurate or favorable answers. A value of 1 is assigned to the right or favorable response, while a value of 0 is assigned to the wrong or unfavorable response. KAP score was calculated by adding the scores for each component of the Knowledge, Attitude, and Practice (KAP) test. This was illustrated in table 1.

Table1. Criteria for evaluating the knowledge, attitude, and practice components

	Poor	Fair	Good
Attitude	Less than or = 2	3	More than or = 4
Knowledge	Less than or = 2	3-4	More than or = 5
Practice	Less than 2	2	More than or = 3
Overall (K+A+P)	Less than or = 6	7-10	More than or = 11

With the aid of the DMFT Index for permanent teeth and the deft Index for primary teeth, clinical examination for the existence of carious lesions was conducted. SPSS v24 was used for the statistical analysis. A p-value of 0.05 or less was regarded as statistically significant when using the ANOVA test to examine the relationship between dental caries status and KAP.

Research was approved by SaudiArabia ministry of health under IRB number (H1RI-07-Aug22-03). All information were kept confidential and no personal information was exposed, our team only can access the data and information. Informed consent was obtained from each participant.

Results

The study included 209 children aged 5 to 10 and their parents, of which 115 (or 55%) were males and 94 (or 44.9%) were females.

Knowledge

The majority of parents (56.1%) believed that children should clean their own teeth, while 43.9% thought that parents should do It. 2.8% of parents indicated that the child should only brush once a day, while 78.6% stated they should brush twice. Almost 84.5% of parents believe that toothbrushes and toothpaste should be used to clean teeth, whereas 4.1% of parents believe toothpowder should be used. In the survey population, 60% of parents believed that a child should only see a dentist if they have a toothache, and 21.2% said they should do so if they have tooth rot. Only 12.2% of parents believed that going to the dentist after the eruption of the first deciduous teeth was necessary. Dental caries is an illness that requires treatment, according to over 61.7% of parents who responded. About 20.5% of parents believed that dental caries was a discoloration that would go away with brushing. Approximately 80% of parents lacked knowledge on the care for primary teeth.

Attitude

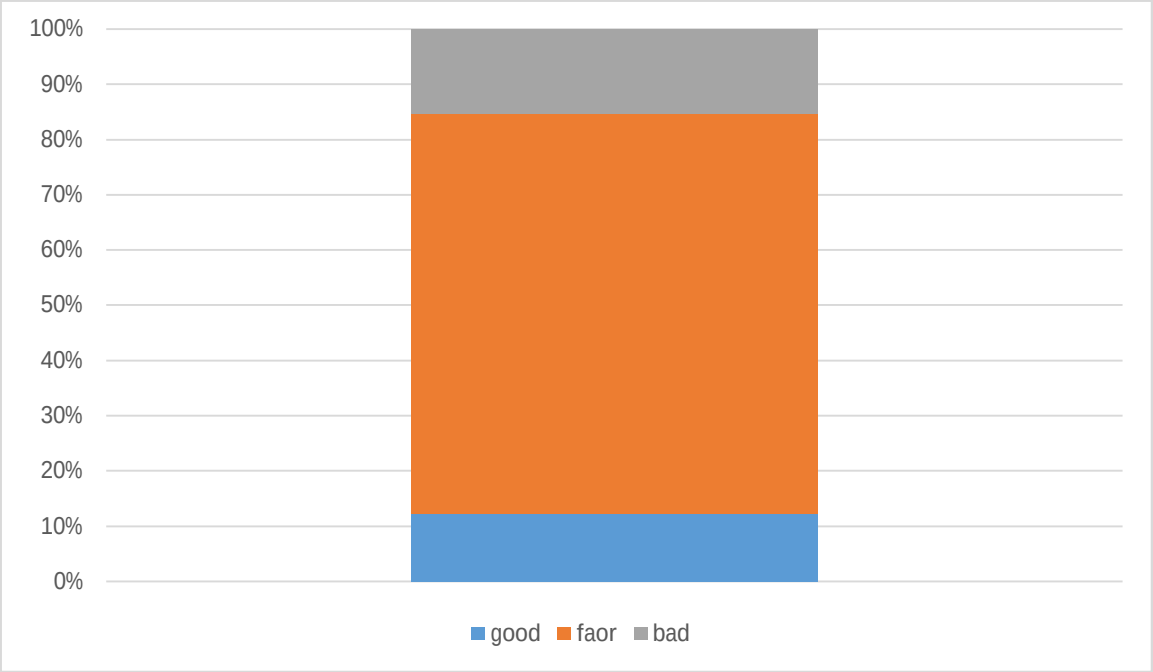
In the entire survey population, 89% of parents said they wanted their children' teeth to be free of decay. According to 51% of parents, deciduous teeth are necessary for eating, speaking, and maintaining the mouth space until permanent teeth grow. Almost 31% of parents are unaware of the significance of baby teeth. Only 4.9% of participants don't think dental care is as important as other medical illnesses, compared to 89.4% of parents who gave dental care and other medical illnesses the same weight. Parents reported that they would follow a pedodontist's advice if they encountered oral disorders in about 50.5% of cases. Parents said that ordinary dentists can also treat youngsters in around 12.4% of cases. About 31.5% of parents are unaware about pedodontists and dental care.

Practice

Out of 209, 49% of the parents had never been to the dentist, compared to 51% of the parents who have. Only 34.2% of parents took their children to the dentist on a regular basis, as opposed to 65.8% of parents who did not. In the research population, 69.1% of parents provide their children chips, candy, soda, and sweets.

According to scoring criteria, it was discovered that 12.4% [26] of parents displayed good KAP, 72.2% [151] displayed fair KAP, and 15.3% [32] displayed bad KAP, Figure 1.

Figure1. Based on KAP scores, the percentage distribution of the research population



Clinically

According to the DMFT index, 59.2% of the permanent tooth had dental cavities. The prevalence of dental caries was the same in both boys and girls. Children aged 9 and younger had the highest prevalence of DMFT (79.4%).

According to the Deft Index, 95.9% of the primary teeth had dental caries. Boys had somewhat higher dental cavities in their primary teeth (97%) than females (96%) did. The frequency of dexterity was high across all age groups.

Table 2 mentions the correlation between mean DMFT and deft values and KAP scores.

Table2. KAP score correlation with the mean DMFT and DEFT indices.

KAP	Deft (SD)	DMFT (SD)
Poor	6.41 (± 3.3)	1.66 (±1.4)
Fair	6.65 (± 2.7)	1.43 (±1.7)
Good	6.32 (± 2.6)	1.59 (±1.7)
P-value	0.31	0.69

Discussion

The majority of a child's time is spent at home with their parents or other adult guardians. Instilling healthy oral habits in children is largely the responsibility of their parents. If parents are properly motivated and educated, oral illness, especially dental caries in young children, can be greatly avoided. Several research have shown a favorable correlation between parental knowledge and children's dental caries status(8,9). However, there is still a significant lack of parental knowledge regarding these baby teeth in poor nations like India(10).

The initiative taken by Saudi parents to provide their children with preventive dental treatment is not well documented. The aim of this study was to check the parents of 5- to 10-year-old children enrolled at KSMC dental hospital with regard to their knowledge, attitudes, and practices regarding oral health and to determine the impact of these factors on children dental caries level.

209 parents and their children, who are all between the ages of 5 and 10, were included in the current cross-sectional study. 43.9% of parents said that children should get help brushing their teeth not far away from to Kaur, (2009) [57%] and Dikshit et al., (2018) [77%] finding that the majority of parents help their children wash their teeth. Children under the age of six may not be capableofbrushing their own teeth due to a lack of physical dexterity. Therefore, it is advised that parents direct and watch over their children when they clean their teeth. According to Gokhale N, (2015), children whose parents helped them brush their teeth found considerably less carious teeth(6).

78.6% of parents in the current study agreed that children should wash their teeth twice a day. These findings accord with other studies' findings that 70.5%(Akpabio et al., 2008), 71%(14), 78.5%(Neupaul and Mahomed, 2020), and 80.5%(16) of parents said children should brush their teeth twice a day.The fact which may be attributed to the parents' greater educational background—the majority of whom were educated in the current research. According to our data, 84.5% of parents believe that brushing and toothpaste should be used to clean teeth. In other research, toothbrushes and toothpaste were used by 56.5%(12), 82%(17), and 93% of participants. Compared to children who used toothbrushes and toothpaste in cleaning teeth, children who did not had 1.56 odds of getting dental caries(3).

According to our study 51% knew the value of deciduous teeth which is high percent if compared to other studies such asNagaveni, (2011)[18%] and Gokhale & Nuvvula, (2015)[22.6%]. According to Shetty et al., [71.7%] of parents agreed that deciduous teeth need to be taken care of even though they will fall out. According to Suma&Anisha, (2017)(3), children whose parents did not value their deciduous teeth had 1.67 times the likelihood of developing dental caries as compared to other children.

According to the DMFT index, dental caries prevalence in the research population's permanent teeth was 59.2%, which was lower than the study conducted by Casanova-Rosado et al., (2005) [82%](18). According to the deft index, dental caries prevalence in the study population's primary teeth was 95.9, which was comparable to the study conducted by Begzati et al., (2014) [94.4%], as well as Casanova et al., (2005)[90.2%](18,19). The mean deft in our study was greater than the mean deft in the study by Joshi et al., (2005)(20). The current investigation revealed that primary teeth had a greater caries prevalence than permanent teeth. This might be explained by the permanent teeth's decreased susceptibility to dental caries.

Conclusion

The participants in the current study had a reasonable KAP on their children' oral health. No significant association between KAP and DMFT or KAP and DEFT was detected. Poor dental caries status in the children's primary teeth was a reflection of inadequacy in various aspects of oral health awareness. The significance of deciduous teeth and their treatment, frequent dental appointments, and dietary behaviors are among the knowledge gaps in oral health.

References

1. Children's Oral Health | Basics | Children's Oral Health | Division of Oral Health | CDC [Internet]. [cited 2022 Nov 10]. Available from: https://www.cdc.gov/oralhealth/basics/childrens-oral-health/index.html

2. Ann S, John J, Yen W, Mastura N. Early Childhood Caries: Parent's Knowledge, Attitude and Practice Towards Its Prevention in Malaysia. In: Oral Health Care - Pediatric, Research, Epidemiology and Clinical Practices. InTech; 2012.

3. Suma G AP. Evaluation of the Association of Parent's Oral Health Knowledge and Development of Dental Caries in their Children. Austin J Dent. 2017;1092(1092).

4. Baginska J RE. Knowledge and practice of caries prevention in mothers from Bialystok, Poland. Int J Collab Res Intern Med Public Heal. 2012;4(04):257–266.

5. Oredugba F, Agbaje M, Ayedun O et al. Assessment of Mothers' Oral Health Knowledge: Towards Oral Health Promotion for Infants and Children. Health (Irvine Calif). 2014;6(10):c.

6. Gokhale N NS. Knowledge, Attitudes and Practices of Parents Regarding Oral Health and Its Correlation with Dental Caries Status of Their Children. Bhavnagar Univ J Dent. 2015;5(1–5):1–5.

7. Anil S, Anand PS. Early Childhood Caries: Prevalence, Risk Factors, and Prevention. Front Pediatr. 2017 Jul 18;5.

8. ABIOLA ADENIYI A, EYITOPE OGUNBODEDE O, SONNY JEBODA O, MORENIKE FOLAYAN O. Do maternal factors influence the dental health status of Nigerian pre-school children? Int J Paediatr Dent. 2009 Nov;19(6):448–54.

9. Nuca C, Amariei C, Badea V et al. Relationships between Constanta (Romania) 12-year-old children's oral health status and their parents' socioeconomic status, oral health knowledge and attitudes. OHDMBSC. 2009;VIII(4)(44):52.

10. Nagaveni. Knowledge, Attitude and Practices of Parents Regarding Primary Teeth Care of their Children in Davangere city, India. Pesqui Bras Odontopediatria Clin Integr. 2011 Mar 30;11(1):129–32.

11. Kaur B. Evaluation of oral health awareness in parents of preschool children. Indian J Dent Res. 2009;20(4):463.

12. 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. Birat J Heal Sci. 2018 Sep 5;3(2):447–52.

13. Akpabio A, Klausner CP, Inglehart MR et al. Mothers'/Guardians' Knowledge about Promoting Children's Oral Health. J Dent Hyg. 2008;82(01)(1–11).

14. Blinkhorn, YM W-S, PJ. HA. Dental health knowledge and attitudes of regularly attending mothers of high-risk, pre-school children. Int Dent J. 2001 Dec;51(6):435–8.

15. Neupaul P MO. Influence of Parents' Oral Health Knowledge and Attitudes on Oral

Health Practices of Children (5-12 Years) in a Rural School in KwaZulu Natal, South Africa. Preprints. 2020;2020050335.

16. Shetty R, Deoghare A, Rath S, Sarda R, Tamrakar A. Influence of mother′s oral health care knowledge on oral health status of their preschool child. Saudi J Oral Sci. 2016;3(1):12.

17. Hans R. Oral Health Knowledge, Attitude and Practices of Children and Adolescents of Orphanages in Jodhpur City Rajasthan, India. J Clin DIAGNOSTIC Res. 2014;

18. Casanova-Rosado AJ, Medina-Solís CE, Casanova-Rosado JF, Vallejos-Sánchez AA, Maupomé G, Ávila-Burgos L. Dental caries and associated factors in Mexican schoolchildren aged 6-13 years. Acta Odontol Scand. 2005 Aug;63(4):245–51.

19. Begzati A, Bytyci A, Meqa K, Latifi-Xhemajli B, Berisha M. Mothers' behaviours and knowledge related to caries experience of their children. Oral Health Prev Dent. 2014;12(2):133–40.

20. Joshi N, Rajesh R, Sunitha M. Prevalence of dental caries among school children in Kulasekharam village: a correlated prevalence survey. J Indian Soc Pedod Prev Dent. 2005;23(3):138–40.