

# Parents' Knowledge and Attitudes toward Preschool's Oral Health and Early Childhood Caries

Safeena Abdul K Saheb<sup>1</sup>, Mohammed Najmuddin<sup>2</sup>, Abdulaziz M Nakhran<sup>3</sup>, Nasser M Mashhour<sup>4</sup>,  
Mohammed I Moafa<sup>5</sup>, Alfadhli M Zangoti<sup>6</sup>

## ABSTRACT

**Aim:** The present cross-sectional study was done to evaluate the attitudes and knowledge of caregivers toward oral health and early childhood caries (ECC) in preschool children in the Jazan population.

**Materials and methods:** The present cross-sectional study was carried out on 105 study subjects, including parents of children, using a self-administered structured questionnaire. The demographic variables and information regarding the awareness and knowledge of caregivers were recorded. The data gathered were analyzed using statistical analysis using IBM Statistical Package for the Social Sciences (SPSS) version 20.0 software.

**Result:** Among 105 children, 66.7% were male, showing male predominance regarding ECC. Among parents, 52.4% were with a bachelor's degree. Most parents lack awareness in regard to dental caries affecting their children. Parents lack knowledge regarding various preventive and treatment options available.

**Conclusion:** The study revealed that caregivers had very less knowledge and clinical practice concern with the oral well-being of preschool kids. The study's results reveal that promotion programs in relation to oral health are required to cover the gaps of knowledge among mothers of kids related to the care of oral health in their young kids.

**Clinical significance:** Different health-concerned behaviors are being affected by awareness and knowledge, and the health of the oral cavity is not an exemption. It has been postulated that diseases of the oral cavity are affected by social factors. Thus, this study was conducted to find the connection between the knowledge of parents regarding their oral health and the status of the health of their children's oral cavities.

**Keywords:** Awareness, Caregivers, Early childhood caries, Jazan, Knowledge, Preschool children.

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## INTRODUCTION

Oral health is a vital part of the health and well-being of preschool children. But still, many children are being affected by dental caries at earlier stages of their lives, even those as young as 12 months.<sup>1</sup> ECC is proven as a major health issue of the oral cavity that affects the normal growth and development of young children. It is a severe public health issue, with varying prevalence rates in both developed and developing countries.<sup>2-4</sup> The rate of prevalence of oral diseases is higher in developing countries such as India because of poor access to treatment, inadequate primary oral health care, increased urbanization, and inadequate exposure to preventive therapies such as fluoride application, etc. Various behavioral risk factors, such as increased consumption of junk food, an unhealthy diet rich in free sugars, etc., play a significant role in escalating the threat of oral diseases.<sup>5</sup>

During the initial stages of children's lives, the most important role in maintaining oral health is played by parents and caregivers. Children spend most of their time with their parents or caregivers, especially mothers. Thus, maintaining good oral health in a young child is mainly affected by their parents.<sup>5,6</sup>

It has been advocated that the prevention of oral health diseases is more advisable and cost-effective rather than treating and rehabilitating oral conditions in young children. Maintaining primary teeth in the arch till the time of their exfoliation is crucial for the healthy growth and development of dental and skeletal structures. As young children are dependent on their parents, it

<sup>1</sup>Department of Orthodontics; Department of Preventive Dental Sciences, College of Dentistry, Jazan University, Jazan, Saudi Arabia

<sup>2</sup>Department of Oral Medicine; Department of Maxillofacial Diagnostic Sciences, College of Dentistry, Jazan University, Jazan, Saudi Arabia

<sup>3-6</sup>Intern College of Dentistry, Jazan University, Jazan, Saudi Arabia

**Corresponding Author:** Mohammed Najmuddin, Department of Oral Medicine; Department of Maxillofacial Diagnostic Sciences, College of Dentistry, Jazan University, Jazan, Saudi Arabia, Phone: +966535025357, e-mail: drsnaj@gmail.com

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is very important that parents should have adequate knowledge and awareness regarding various conditions affecting and maintaining their child's oral health, healthy dietary habits, and behaviors.<sup>7</sup>

Till now, there is a lack of studies that have been conducted in Saudi Arabia evaluating the knowledge, awareness, and attitude of parents regarding the oral health practices of their children. Thus, the present study was conducted to evaluate the awareness and knowledge of parents regarding health practices among young children concerning the oral cavity and factors

affecting oral health status among young children in Jazan, Saudi Arabia.

## MATERIALS AND METHODS

The current cross-sectional study was carried out on 105 study subjects, including parents of children, using a self-administered structured questionnaire. The study was conducted from January to June 2022. The well-structured and self-administered questionnaire was framed and utilized to analyze the demographic variables, as well as to assess the information related to signs and symptoms of computer vision syndrome. The validity of the questionnaire was evaluated and revealed to be suitable ( $\alpha = 0.85$ ). The research was done in agreement with the Declaration of Helsinki and was accepted by the University ethical committee College of Dentistry Jazan University (CODJU 21171). A conversant written consent was taken from all the study subjects before enrolling them in this study. The demographic data collected were age, gender distribution, monthly income of parents, and education status.

The study consisted of a total of 105 children of both genders. Children suffering from the incidence of dental caries were included in the study. To analyze the effect of awareness and knowledge of parents in relation to maintenance of health conditions of oral cavity in children, 22 well-framed questions were made, enquired from parents of affected children, and responses to all questions were noted. General characteristics, such as preventive measures, maintenance of oral hygiene, etc., were recorded by asking questions with different options and grades.

The demographic variables and information regarding the awareness and knowledge of caregivers were recorded. The data gathered were analyzed using statistical analysis using IBM SPSS version 20.0 software. Frequencies, as well as percentages, were computed for descriptive statistics.

## RESULT

A total of 105 children with their parents were included in the present study. A maximum of 74.28% of children were aged 5–10 months, followed by 19.05% of children who were <5 months and 6.67% who were >10 years of age. A total of 66.7% were males and 33.3% were females, showing male predominance regarding ECC. Among parents, 50.5% were females and 49.52% were males; the maximum (52.4%) were with bachelor's degrees, followed by diploma holders,

high school, and master's level education. A maximum of 55.24% of parents were with >10,000 SAR/monthly income, followed by 31.4% having monthly income of 5,000–10,000 SAR/monthly and 13.33% with <5,000 SAR/monthly (Table 1).

Although parents have identified the incidence of dental caries among their children, they still lack adequate knowledge regarding preventive measures for dental caries. Most parents lack awareness in regard to dental caries affecting their kids. Parents lack knowledge regarding various preventive and treatment options available (Table 2).

## DISCUSSION

Knowledge and awareness about oral health diseases are important factors in preventing various oral ailments such as dental caries. Poor health perceptions, lack of understanding of verbal and written instructions of self-care, and poor utilization of services are the results of a lack of awareness about oral health care.<sup>8</sup>

Parents incorporate healthy habits in their children, so children learn oral health practices by seeing their parents. We observed that parents have insufficient awareness of oral health practices. In our study, parents were aware of taking care of oral hygiene by cleaning teeth and tongue, using appropriate toothbrushes and interdental aids. But in contrast to our study, Balamurugan and Sahana<sup>9</sup> and Lone et al.<sup>10</sup> found that around 65.3% of parents mentioned that regular dental visits were not required and children should be taken to the dentist when they complained of pain. Thus, it is recommended to educate and motivate the parents on the importance of oral hygiene practices, regular dental checkups of their children, and awareness of dental ailments affecting children.

Our study revealed that parents were unaware of different preventive therapies available for preschool children, such as fluoride applications, pit and fissure sealants, etc. Similar results were observed in a study by Schroth et al.,<sup>1</sup> who also revealed unawareness among parents regarding preventive therapies available for children.

The present study reported that 64.8% of females breastfed their children for a maximum of 0–6 months. Still, many parents were unaware of the prolonged breastfeeding risk. Similar results were observed in the study by Nepal and Mahomed,<sup>5</sup> Shetty et al.,<sup>11</sup> and Dogra et al.,<sup>12</sup> who found that around 47–65% of mothers were unaware of the fact that prolonged breastfeeding leads to dental caries.

**Table 1:** Demographic variables

Parameters		Frequency	Percentage
Age group	<5 months	20	19.047
	5–10 months	78	74.285
	>10 months	7	6.667
Gender	Female	35	33.3
	Male	70	66.7
Monthly income	5,000–10,000 SAR/monthly	33	31.4
	<5,000 SAR/monthly	14	13.33
	>10,000 SAR/monthly	58	55.24
Parent educational level	Bachelor	55	52.4
	Diploma	17	16.2
	High school	27	25.7
	Master	6	5.7
Total		105	100

**Table 2:** Response to the questionnaire

<i>Parameters</i>		<i>Frequency</i>	<i>Percentage</i>
Is dental caries a contagious illness	Maybe	8	7.6
	No	76	72.4
	Yes	21	20.0
Do you think that vaccine to prevent dental caries could be developed	Maybe	33	31.4
	No	43	41.0
	Yes	29	27.6
Has your child ever had a case of dental caries	Maybe	8	7.6
	No	27	25.7
	Yes	70	66.7
Do you believe the decayed milk teeth should be treated	Maybe	6	5.7
	No	12	11.4
	Yes	87	82.9
Do all members of the family have their own toothbrush	No	6	5.7
	Yes	99	94.3
Do you use the same cutlery, spoons forks with your child during meals	No	64	61.0
	Yes	41	39.0
Do you give your child food that you have tasted	No	49	46.7
	Yes	56	53.3
Did you breastfeed your child for female	No	37	35.2
	Yes	68	64.8
How long did the lactation period last if you answered yes to the previous question?	0–6 months	35	33.3
	12–18 months	10	9.52
	6–12 months	13	12.38
	More than 18 months	8	7.6
When do you change toothbrush?	Every 3 months	47	44.8
	Every year	9	8.6
	From 3 to 6 months	37	35.2
	From 6 to 9 months	12	11.4
Do you know what interdental aids are?	Maybe	14	13.3
	No	15	14.3
	Yes	76	72.38
Do you clean your tongue?	No	20	19.0
	Sometimes	21	20.0
	Yes	64	61.0
Are you?	Female	53	50.5
	Male	52	49.52
Have you ever gone to the dentist before or during your pregnancy?	Maybe	5	4.76
	No	14	13.3
	Yes	36	34.3
If yes, Why did you say yes to the previous question?	Checkup	2	1.9
	Clean	6	5.7
	Pain	27	25.7
	To clean	3	2.9
	Maybe	3	2.9
Did your gynecologist recommend a dental examination as part of your routine first-trimester checkup?	No	44	41.9
	Yes	6	5.7
	Maybe	3	2.9
How old was your child when you first started brushing his or her teeth	6 months	26	24.76
	1 year	30	28.6
	2 years	49	46.67

*Contd...*

Contd...

Parameters		Frequency	Percentage
What brand of toothpaste does your kid use?	Biorepair	1	1.0
	Closeup	24	22.86
	Colgate	36	34.3
	Oral B	8	7.6
	Sensodyne	35	33.3
	Signal Colgate	1	1.0
Is your child's toothbrush in good condition?	Maybe	11	10.5
	No	2	1.9
	Yes	92	87.62
How important do you believe tongue hygiene is?	1	4	3.8
	2	4	3.8
	3	10	9.5
	4	12	11.4
	5	75	71.4
Do you know what a fissure sealant is?	Maybe	6	5.7
	No	87	82.9
	Yes	12	11.4
Have you ever given your child fluoride during his first 3 years of life?	Maybe	6	5.7
	No	88	83.81
	Yes	11	10.476

We also observed that sharing of food and cutlery among parents and children was common practice. This unawareness leads to an increased incidence of caries because of the transmission of bacteria from parents to the child's mouth. This unhealthy practice can cause an increased invasion of dental caries. In contrast to our study, Suresh et al.<sup>13</sup> observed that parents were aware of a healthy diet and dietary practices for their children. In accordance with our study,<sup>11-15</sup> Shetty et al.,<sup>11</sup> Abduljalil and Abuaffan,<sup>12</sup> and Peres et al.<sup>15</sup> revealed a lack of knowledge among parents regarding the transmission of bacteria on sharing the same utensils and food. In contrast to our study, Nepal and Mahomed<sup>5</sup> observed that the majority of parents had adequate knowledge about the transmission of bacteria while sharing utensils. Thus, it is highly important to make parents aware of the role of a healthy diet and dietary practices in Jazan, Saudi Arabia, by promoting the use of health promotion messages and awareness programs.

We observed that parents in our study were not much aware of the role of fluoride toothpaste in their children. Similar to our study, Shetty et al.<sup>11</sup> revealed inadequate knowledge among parents regarding the appropriate use of fluoridated toothpaste, the amount to be used, and the brushing technique by children.

In the present study, parents were aware of the use of oral hygiene measures to be used by children and the importance of good oral health. But they lack adequate knowledge about dietary practices, the availability of preventive therapies such as fluoride applications, and the use of sealants and fluoridated toothpaste.

Thus, it is highly essential to make parents aware of good oral hygiene practices, available preventive therapies, and the role of early diagnosis and treatment modalities for their children to decrease the burden of dental caries, psychological impact on children, and financial burden on society.<sup>16</sup>

## LIMITATIONS OF STUDY

- The present study was conducted on a limited sample size. Further studies should be conducted on a larger sample size.
- The study covered a limited population of the Jazan region, so results cannot be generalized to the whole population.
- We adopted purposive sampling by assessing knowledge of parents from a single center, which might have biased the results, leading to information bias.
- Our questionnaire lacks a section on the attitude of parents toward oral hygiene practices among preschool children. Thus, future studies should be conducted for the evaluation of knowledge, attitude, and practice among parents regarding the oral hygiene of their children.

## CONCLUSION

The present study indicates inadequate knowledge and awareness among parents and caregivers regarding the oral hygiene of children and preventive therapies available to prevent the incidence of dental caries among preschoolers. The study revealed that caregivers had very little knowledge and clinical practice concern with the oral well-being of preschool kids. The study's results reveal that promotion programs in relation to oral health are required to cover the gaps of knowledge among mothers of kids related to the care of oral health in their young kids.

## Clinical Significance

Children always observe and imitate their parents. So, to instill good oral hygiene practices among children, it is highly important to make parents aware of the preventive measures available and give them knowledge about the maintenance of good oral health care in their children, especially preschoolers. Thus, the present

study was conducted to evaluate the awareness and knowledge of parents regarding health practices among young children concerning oral cavities and factors affecting oral health status among young children in Jazan, Saudi Arabia. Our study revealed that it is essential to subject parents to awareness programs to make them more knowledgeable regarding oral health practices for their children so that a healthy oral environment among children can be established and the financial burden on society can be decreased.

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