

Evaluation of Parents' Awareness and Satisfaction about Preventive Dental Care in Jordan

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Abstract: *Aims:* This study aims to evaluate parents' awareness and satisfaction regarding preventive dental care for their children, such as fluoride application, dental sealants, and routine dental recall visits in the Jordanian population. A cross-sectional questionnaire was provided for the parents of pediatric patients attending Royal Medical Services Hospital. Our study showed a high awareness of dental preventive measures among participants, with fluoride being the most known. Nevertheless, there is a significant possibility of enhancing public knowledge about all the effective dental preventive strategies, such as pit and fissure sealants, particularly among the population with less than high school education.

Keywords: preventive measures, fluoride, fissure sealant, parents' education, awareness

1. Introduction

Dental health preventive care is essential for the well-being of pediatric patients. Many factors play a role in a child's dental health care; parents are the most important, so their awareness about dental care is crucial, and preventive measures can significantly impact long-term dental health outcomes. Preventive dental care includes various practices, including check-ups and follow-ups, fluoride treatments, and dental fissure sealants, to prevent oral diseases such as dental caries. Early childhood caries (ECC) is one of the most common preventable chronic childhood diseases, higher than pediatric diseases in developed countries even with the widespread dental programs for its prevention. Early childhood caries is still a significant dental condition occurring in the first three years of life, with prevalence ranging from 12 to 70% worldwide. (1) ECC has negative consequences on children and their families, including growth and development problems. In addition to oral health-related quality of life issues, there is the financial burden of treating the disease. (2) In Jordan, it was reported the prevalence of dental caries in pediatric patients was higher than that in developed countries but lower than in other Arab countries of the Middle East. (3) Most researchers have found that inadequate knowledge and attitudes of parents about oral health are the primary reasons for the poor oral health status of their children. (4) Many behavioral and socioeconomic caries risk factors have been identified: insufficient oral hygiene, lack of preventive treatments such as topical fluoride application, sugary foods and drinks consumption, long-term bottle-feeding, frequent snack consumption, low income, and low health literacy. (5) The importance of a parent's knowledge of health, including oral health, cannot be overemphasized because most of their decisions regarding the health of their children will be based on their knowledge. (6) Parents or caregivers have a direct influence on their children's oral health maintenance. (7) The first visit to a dental clinic for an oral health assessment for the child should be in the first year of birth as the Academy of Pediatric

Dentistry (AAPD) recommends. (8) Childhood marks a crucial period in oral health management as it involves the transition from primary dentition to permanent dentition, known as the mixed dentition phase. Children's oral health is closely linked to their nutritional intake, overall growth, and development. (9) Awareness of how to care for teeth and maintain oral health is a prerequisite for proper care and promotion of oral health. (10) Therefore, a routine visit alone is not enough to maintain oral health, and it is necessary to have a regular plan developed for each person to take care of oral health. (10) In Jordan, several factors influence preventive dental care, including socioeconomic status, educational level background, and cultural beliefs. This article evaluates parental awareness and satisfaction regarding preventive dental care in Jordan to identify gaps and opportunities for improvement of preventive dental care for children in Jordan.

2. Materials and methods

Cross-sectional study of the parents of 384 children attending pediatric dental clinics in the Royal Medical Services were asked a structured questionnaire. Questions included both closed-ended (e.g., yes/no, multiple-choice) and open-ended formats and were designed and asked for the participants, to assess awareness and knowledge of dental preventive measures, the utilization of preventive measures for their children, and the perceived impact of preventive measures on children's oral health. And the commitment to follow-up appointments. Statistical analysis with descriptive analysis, including frequencies and percentages to summarize data, gender distribution, awareness levels, and a Chi-square test to evaluate the relationship between awareness levels and education levels were used to evaluate the parent awareness level.

3. Results

Of the 384 participants, 54% were female, and 45% were male, showing a slight female prevalence. A significant majority of the parents (72%) reported awareness of dental preventive measures, while 28% were unaware of any of the dental preventive measures. Among those who acknowledged knowing preventive measures, 44% recognized fluoride as a preventive measure, 26% identified pit and fissure sealants, and 26% reported no knowledge of any preventive measures. 63% of participants utilize one of the preventive measures for their children, whereas 37% reported no utilization. For those using preventive measures, 76% observed improvements in their child's oral and dental health, while 24% did not report any changes. Most respondents 75% expressed willingness to attend follow-up appointments, while 25% were reluctant due to different reasons. Awareness was significantly associated with education level, with higher education levels corresponding to having greater awareness. The detailed results showed parents with a below-high school education level were 63% aware of the preventive dental measures. Parents with a high school degree were 100% aware, and parents with university degrees showed also a 100% level of awareness. The chi-square test showed a statistically significant association between education level and awareness of preventive dental measures ($\chi^2 = 108.742$, $p < 0.0001$). And observed frequencies indicated a lack of awareness primarily among those with lower education levels.

4. Discussion

The gender distribution of the participants in this study showed that women were more than men with 54%. Despite the small difference, it may suggest that women are more engaged in the health-related aspects of their children. The result of the analysis of this study implies that a significant majority 72% of participants are aware of dental preventive measures. However, 28% are nevertheless unaware of such measures. In terms of specific knowledge about preventive measures, 44% of participants who already know preventive measures are aware of fluoride as a method for caries prevention. Other studies in Saudi Arabia showed higher levels of awareness about fluoride with 50.3% and 68%. (15, 20), which are more comparable with other study results in India 66.35%. (8)

On the other hand, a study in Iran showed poor awareness of fluoride in two different studies with 16% and 32%. (22, 24) This may be explained by different factors, like socioeconomic factors and cultural differences, and implies the needs for further attention and research. While the 26% are aware of pit and fissure sealants in this current study, which was comparable to the results published in India (29%). (14) But again, in Saudi Arabia, there were higher levels of awareness about fissure sealants (42%). (15) And in the US (46.3%) were aware of fissure sealant, and even higher knowledge in Pakistan (80%). (17)

This indicates that fluoride is well recognized as a preventive measure for the people in question and worldwide. The fact that 28% of participants do not know any preventive measures is notable, indicating gaps in public health education. To

reduce these gaps, dental health programs should focus on promoting all the methods of caries prevention measures beyond fluoride alone. The study shows that 63% of parents report utilizing preventive measures for their children, which is encouraging and reflects a proactive approach to children's dental health. However, the 37% who have not used preventive measures may face barriers such as lack of access to dental services, insufficient awareness, or financial limitations. Addressing these barriers is essential, as they may impede access to preventive dental care. Future interventions could explore ways to reduce these barriers, such as offering subsidized or community-based preventive care options. Of those who implemented preventive measures, 76% showed a positive effect and observed improvements in their child's oral health, suggesting a generally positive effect of preventive practices, which was consistent with a study in India as 71% of parents stated that dental preventive measures have positive consequences. (13) Other studies in Saudi Arabia and Iran showed less satisfaction with the dental preventive measures (39.8% and 46%). (20, 24) The results of this study reinforce the efficacy of preventive care in improving pediatric dental health outcomes. However, the remaining 24% who did not notice any improvement may point to specific conditions or cases where preventive measures do not yield immediate results, highlighting the importance of setting realistic expectations and the need for consistent follow-up to see gradual improvements over time. The high level of commitment to follow-up appointments (75%) of the participant who knows preventive dental measures shows a strong parental understanding of the importance of continuous dental care for their children. Nevertheless, the 25% who were unwilling or unable to commit to follow-up care may face logistical or financial challenges, or they may lack an understanding of the long-term benefits of ongoing preventive care. Educational programs and policies that reduce financial and logistical burdens could help increase adherence to follow-up appointments for pediatric dental preventive care. The educational background appears to have a substantial impact on awareness of dental preventive measures. The chi-square test results (chi-square value = 108.742, p -value < 0.0001) indicate a statistically significant association between education level and awareness. Specifically, individuals with a high school or university education showed a complete absence of "No" responses regarding awareness, while those with lower educational attainment had a higher proportion of "No" responses. This result shows a strong correlation between education level and parents' dental preventive measure awareness. The frequency observed in the contingency table shows that participants with lower than a high school education were less aware of preventive dental measures, suggesting the need for more targeted educational programs within this category. This program could improve overall awareness of preventive dental practices, potentially narrowing the gap in oral health knowledge across different educational backgrounds. Globally, this finding was supported, particularly by the level of education and awareness of dental preventive measures, with two studies in Jordan (16, 20), but one study in Iran finds that higher awareness and knowledge of preventive measures didn't correlate with the level of education. (24) Our study showed a high awareness of dental preventive measures among participants, with fluoride being the most known. Nevertheless, there is a significant possibility of enhancing

public knowledge about all the effective dental preventive strategies, such as pit and fissure sealants, particularly among the population with less than high school education. The noticeable association between education level and awareness highlights the need for more focused educational programs to ensure that all individuals, regardless of their educational background, have access to all the needed information about preventive dental care.

5. Conclusion

Commitment to follow - up visits was mostly strong and positive by parents who know preventive dental care, indicating a promising attitude toward long - term oral health care and commitment. To further improve parents' compliance with these measures, public health programs could consider focusing on financial and logistical issues that some parents may have. Improving awareness of the importance of all dental preventive measures other than fluoride, especially in undereducated populations, probably will lead to more compliance and adherence to dental preventive care. In conclusion, this study points to the high levels of awareness of the preventive dental measures but also underlines defect areas for improvement. By addressing this difference in knowledge, mostly related to different preventive methods and among lower educational groups, public health programs can aid the community in improving oral health outcomes for all pediatric patients.

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