Relationship Between Caregiver Dental Health Literacy and Patient Dental Health

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Background/Introduction

Dental caries is one of the most common chronic diseases in children. The American Academy of Pediatric Dentistry (AAPD) defines it as an infectious, multifactorial disease caused by the interaction of bacteria, dietary sugars, and host factors like saliva and tooth structure. This leads to enamel and dentin demineralization, causing tooth damage, pain, and infection if untreated (AAPD, 2023).

Left untreated, caries can result in pain, difficulty eating and speaking, impaired growth, and reduced quality of life. It also creates emotional stress, financial burden, and time constraints for caregivers. Despite its prevalence, dental caries is preventable through education, early intervention, and routine dental care.

Methods

• This study assessed caregivers' knowledge and confidence in pediatric oral health and compared their responses to their children's Decayed, Missing, and Filled Teeth (DMFT) scores. • A total of 57 caregivers of pediatric dental patients participated. Inclusion required them to be the primary guardian responsible for the child's oral health decisions. • The survey had two main sections:

- Oral health knowledge Seven questions addressing common misconceptions and best practices.
- Caregiver confidence Questions on their ability to educate their child about oral health.

• Questions were in True/False or multiple-choice format. Surveys were completed during the child's dental visit, and responses were analyzed against the child's DMFT score. • Statistical analysis included:

Wilcoxon rank sum test for two-choice questions (e.g., True/False).

Kruskal-Wallis test for multiple-choice questions. . A significance level of p < 0.05 was used.

• Data analysis was conducted using appropriate statistical software.

Results

- No statistically significant difference in DMFT \bullet question.
- For some questions, those who answered incorrectly tended to have higher DMFT scores, suggesting a possible link between oral health knowledge and actual dental health.
- Although no strong statistical significance is found, trends suggest better oral health knowledge may correlate with lower DMFT scores.
- Dental education programs could help improve long term.
- No significant association between confidence in



scores between correct and incorrect answers for any

awareness and potentially lower DMFT scores in the

educating one's child and DMFT scores, as indicated by the similar means, medians, and the high p-value.

This study found no significant association between caregiver oral health literacy and DMFT scores in children. Despite this lack of statistical significance, oral health literacy remains a critical factor in promoting positive oral health behaviors and preventing dental disease. Caregivers play a central role in shaping their children's oral hygiene habits, diet, and access to dental care, all of which influence long-term oral health outcomes. While DMFT scores may be influenced by multiple factors such as socioeconomic status, access to fluoride, and genetic predisposition, improving caregiver oral health literacy can still lead to better preventive practices, earlier detection of dental issues, and overall improved oral health in children. Future research should explore additional factors that mediate the relationship between oral health literacy and dental caries, as well as interventions that may enhance caregivers' ability to positively impact their children's oral health. Ensuring that caregivers have the knowledge and resources to make informed decisions about dental care remains a key public health priority.

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Discussion / Conclusion / Future Directions

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