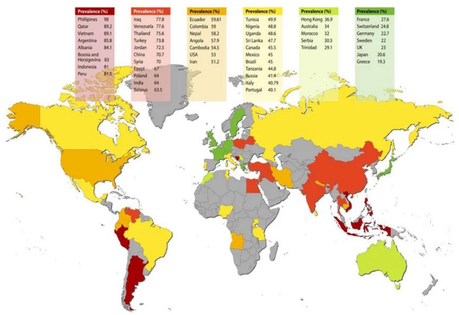
Caregiver Receptiveness to Nutritional Counseling Administered by Pediatric Dental Residents

Michael Wang DDS, Stan Li, Jillian Kaye MS RDN

Introduction

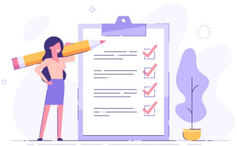
Nutrition is a common risk factor for both oral and systemic disease. Early childhood caries (ECC) is the most prevalent chronic childhood disease globally, affecting 514 million children.[1] Untreated decay leads to dental pain, poor nutrition, and compromised systemic health. Caries risk increases with the intake and frequency of fermentable carbohydrates. Pediatric dentists are positioned to provide frequent anticipatory guidance, supported by National Institute for Health and Care Excellence and American Dental Association guidelines. Nutritional counseling reduces ECC by 22% and severe ECC by 32% in randomized trials.[2] Factors affecting levels of engagement include language and cultural differences, socioeconomic barriers, fear of judgment, and conflicting advice.[1] Few studies examine receptiveness as a primary outcome in diverse clinical settings. This study assesses caregiver receptiveness to nutritional counseling in a postgraduate pediatric dental clinic, examining associations between language, demographics, food security, and measures of comprehension, helpfulness, trust, and intent to follow recommendations.

Global Prevalence of ECC – July 2024 [9]



Methods

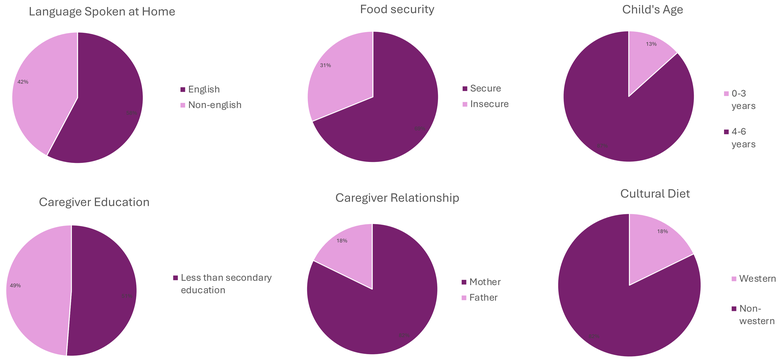
A cross-sectional study was conducted at New York University (NYU) College of Dentistry's postgraduate pediatric dental clinic. A 22-item survey was provided to English, Mandarin or Spanish speaking primary caregivers of children aged 0-6 years, who presented for a comprehensive or periodic dental examinations and received nutrition counseling from a postgraduate dental student. NYU pediatric postgraduate students receive standardized didactic training on nutrition counseling and complete a nutrition evaluation form in the electronic health record at each examination visit. The survey assessed receptiveness, comprehension, helpfulness, and trust of the nutrition counseling provided during the dental appointment.
Descriptive statistics summarized participant characteristics. Statistical significance was assessed using Independent samples t-tests ($p<0.5$).



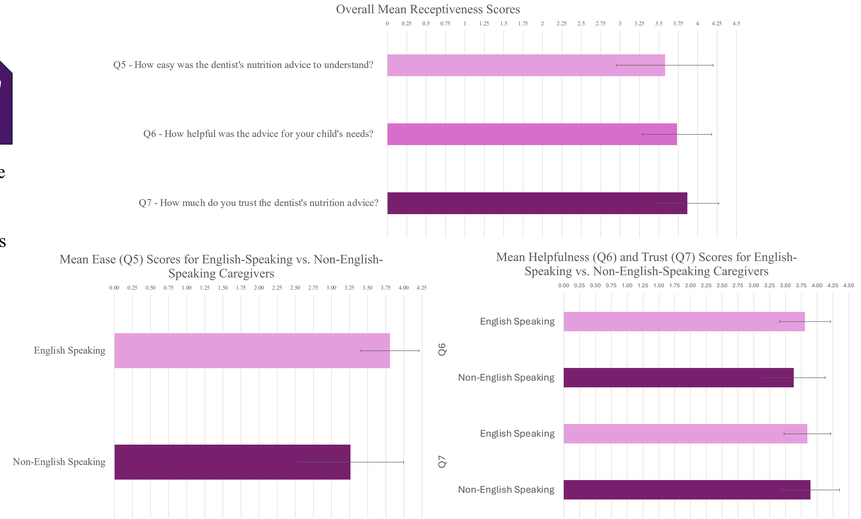
Results

In total, 52 primary caregivers and patient pairs were recruited. 7 were excluded due to incomplete responses or reporting no counseling received, yielding a final sample of 45 caregivers.
Overall receptiveness was high. Mean ease of understanding (Q5) was 3.58 (SD=0.62), mean helpfulness (Q6) was 3.73 (SD=0.45) and mean trust (Q7) was 3.87 (SD=0.40), all on 4-point scales with medians of 4. English-speaking caregivers reported significantly higher ease of understanding (mean=3.81, SD=0.40) compared to non-English-speaking caregivers (mean=3.26, SD=0.73; t(43)=2.84, p=0.007; Mann-Whitney U=345.0, p=0.007). No significant differences were observed for helpfulness or trust by home language (p>0.05).

Demographic Information



Primary Outcome Descriptive Statistics



Discussion

This study found high overall receptiveness to nutritional counseling across all measures, with English-speaking caregivers reporting significantly greater ease of understanding than non-English. Our data suggests language of counseling was not a significant influence. Among the non-English speaking caregivers, 42% received counseling in English, suggesting communication quality may influence comprehension more than language of delivery alone. [3] Food security, education and cultural dietary patterns did not have an impact on the patient's receptiveness to the nutrition counseling in this study.[4][1] Convenience sampling introduced selection bias and single-site design limits generalizability. Ceiling effects reduced associations. Standardization of counseling was assumed based on training structure but not verified formally. The survey was developed without formal validation and translations used coinvestigators with third-party verification rather than more traditional forward-backwards methods. Future research should employ multi-site samples with objective measures (direct observation, audio recording, etc.) and longitudinal study design. Qualitative studies exploring caregiver perspectives would assist in better understanding of quantitative findings. Examining health literacy, acculturation and interpreter quality could identify intervention targets to reduce disparities in comprehension and outcomes.

Conclusion

This study demonstrates that caregivers of young children report high levels of receptiveness to nutritional counseling provided by pediatric dental residents in a postgraduate training clinic. Language spoken at home was associated with ease of understanding, emphasizing the importance of accessible communication for linguistically diverse populations. These findings contribute to the growing literature on the feasibility and importance of integrating nutrition counseling into pediatric dental care while shedding light on the need for future research with larger, more diverse samples, longitudinal designs and attention to the multifactorial factors that influence receptiveness and encourage sustained behavior changes with improved oral health outcomes.

References

[1] Hallewell, L., Bescos, R., Brookes, Z., Witton, R., & Casas-Agustench, P. (2025). Exploring Barriers and Facilitators to Dietary Assessment and Advice in the Paediatric Population Attending Dental Clinics: A Scoping Review. Community dentistry and oral epidemiology, 53(5), 500–513. https://doi.org/10.1111/cdoe.13046; [2] Feldens, C. A., Giugliani, E. R., Duncan, B. B., Drachler, M.deL., & Vítolo, M. R. (2010). Long-term effectiveness of a nutritional program in reducing early childhood caries: a randomized trial. Community dentistry and oral epidemiology, 38(4), 324–332. https://doi.org/10.1111/j.1600-0528.2010.00540.x; [3] Srinivasan, Dr. K. (2020). "Nutritional Counseling: Perceptions, Perceived Competence, and Barriers to the Provision in the Dental Practice Setting." Saudi Journal of Oral and Dental Research, 05(02), 99–105. https://doi.org/10.36348/sjodr.2020.v05i02.003; [4] Toma, E., Fitzgerald, J.D., Nelson, D.S. et al. Perceptions, Barriers, and Strategies Towards Nutrition Counseling in Healthcare Clinics: A Survey Among Health Care Providers and Adult Patients. SN Compr. Clin. Med. 3, 145–157 (2021). https://doi.org/10.1007/s42399-020-00674-6