



# Assessing Oral Health and Nutrition Education and Confidence Amongst Pediatricians

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## INTRODUCTION

Dental caries is the most prevalent chronic childhood disease in the United States, with diet serving as its most significant modifiable risk factor (AAP, 2014). Excess sugars and fermentable carbohydrates drive demineralization, while adequate calcium, phosphorus, and vitamins C and D support enamel integrity (Marshall, 2023). Because early dietary patterns, including prolonged bottle use and frequent snacking, establish habits during the most critical window for preventive intervention, the first years of life represent a key opportunity for action (AAP, 2014; Marshall, 2023). Recognizing this, the American Academy of Pediatrics recommends that pediatricians conduct oral health risk assessments and provide dietary guidance beginning at first tooth eruption (AAP, 2014).

American Academy of Pediatrics. (2014). Maintaining and improving the oral health of young children. *Pediatrics*, 134(6), 1224–1229.  
Marshall, T. A. (2023). Diet and nutrition to prevent dental problems. In *StatPearls*. StatPearls Publishing.

This study assessed the oral health and nutrition education pediatricians receive during and after residency, and their confidence in providing related counseling. We examined:

- Training scope and perceived adequacy across diet and nutrition (D&N), oral health (OH), and combined domains
- Counseling confidence in each domain
- Barriers to counseling and gaps in training
- Associations between training characteristics, confidence, and counseling behavior
- Strategies to strengthen interdisciplinary collaboration between pediatricians and dentists

## METHODS

### Study Design

Cross-sectional survey of active AAP-member primary care pediatricians, distributed nationwide via peer-to-peer professional networks.

### Survey Domains

A 20-question instrument covering:

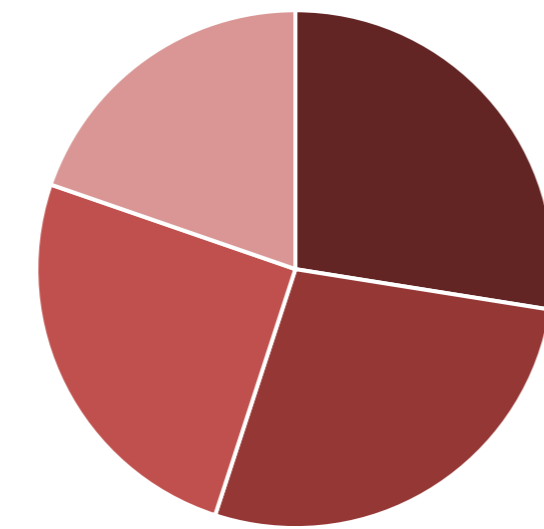
- Professional background & practice setting
- Residency and post-residency training in D&N, OH, and D&N as it pertains to OH
- Counseling confidence and perceived adequacy of training
- Current counseling practices including barriers and needed resources

### Statistics

Descriptive statistics summarized sample characteristics and training exposure. Fisher's exact tests (two-tailed,  $p < .05$ ) were used to examine associations between training variables and outcomes, given the small sample size.

## RESULTS

Sample Characteristics: N=19 active AAP-member primary care pediatricians in the U.S.



**Region of Practice:** East 74% (n=14) | West 26% (n=5)  
**Practice Location:** Urban 74% (n=14) | Non-urban 26% (n=5)  
**Residency Type:** University 68% (n=13) | Hospital 32% (n=6)  
**Years of Practice:** ≥11 yrs 53% (n=10) | ≤10 yrs 47% (n=9)

- 100% who received OH or combined D&N/OH training got <5 hours
- Physicians with ≤10 yrs: 0% OH CE
- Doctors from hospital-based programs rated their nutrition training as more adequate than those from university-based programs (100% vs. 31%),  $p < .05$
- Physicians with ≥11 years of experience were significantly more confident in OH counseling (80% vs. 22%) and more likely to pursue OH CE (60% vs. 0%),  $p < .05$
- No training variables were statistically associated with combined D&N/OH counseling confidence or frequency, highlighting the gap in integrated training

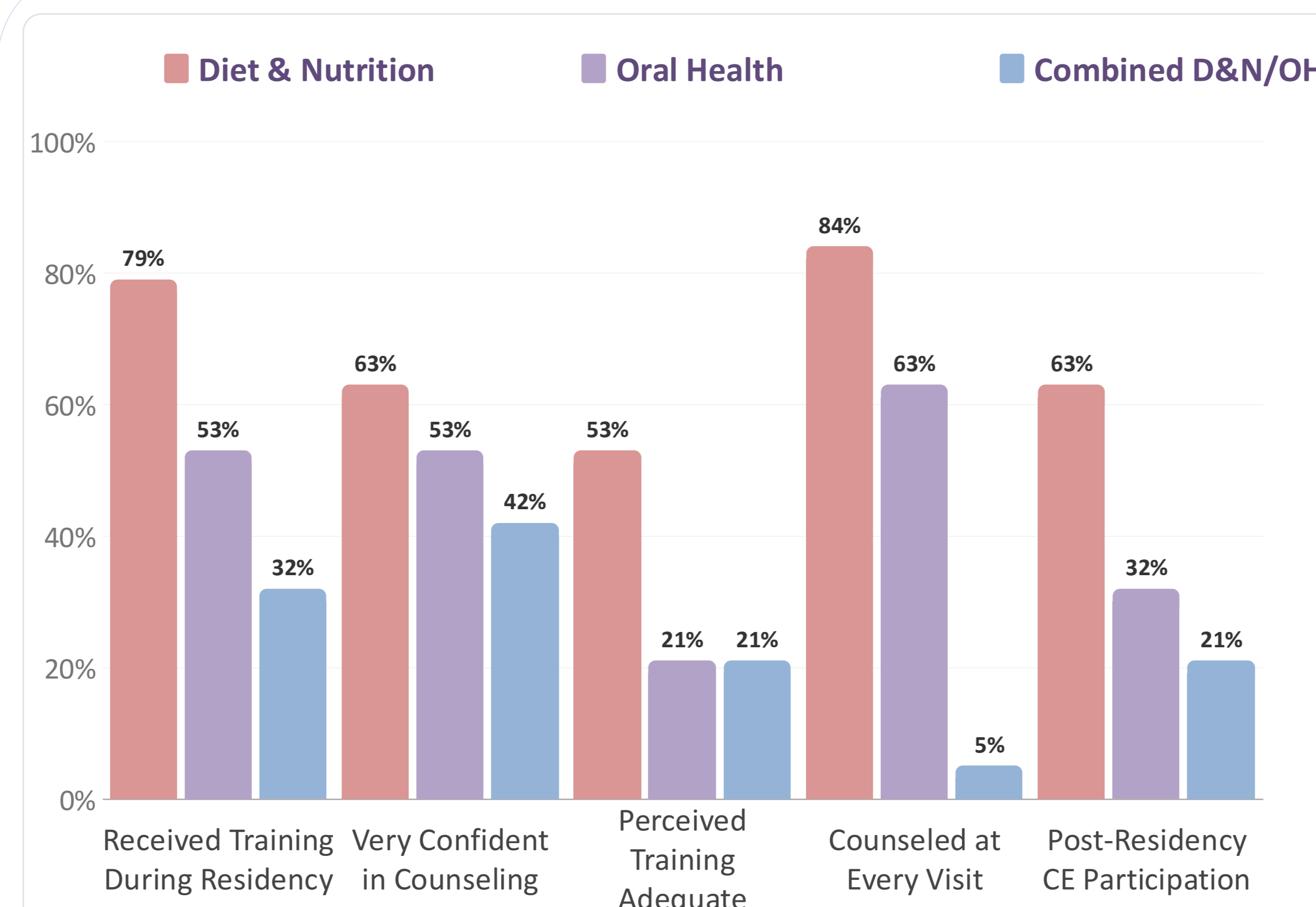
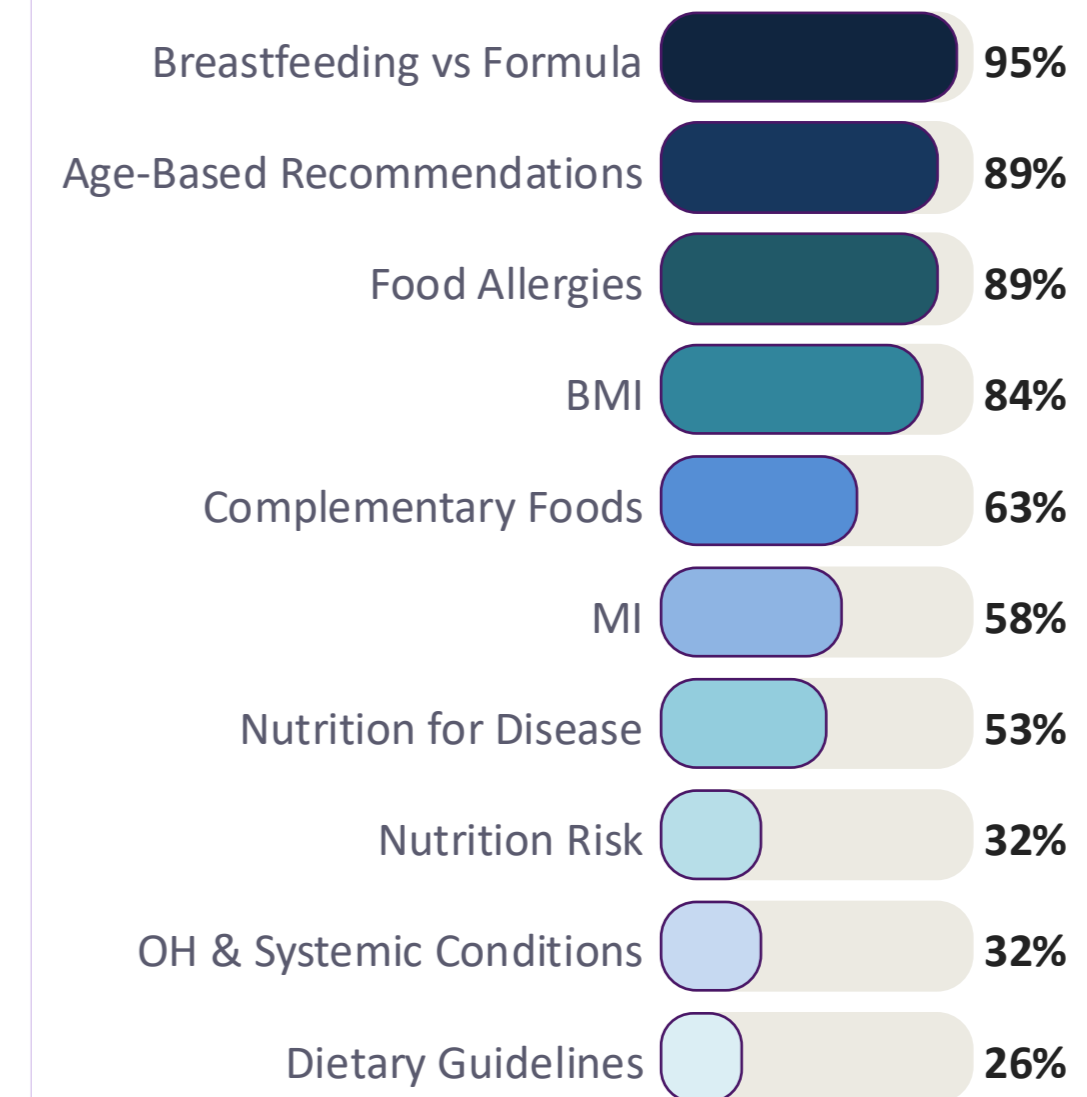


Figure 1: Physician Training & Counseling Overview

| Diet & Nutrition   | Oral Health   | Combined D&N/OH   |
|--|---|---|
| <b>TOP BARRIER</b><br>• Lack of patient interest (n=2)                           | <b>TOP BARRIERS</b><br>• Limited training/knowledge (n=4)<br>• Lack of time (n=3)           | <b>TOP BARRIERS</b><br>• Lack of time (n=8)<br>• Limited training/knowledge (n=5) |
| <b>RESOURCES NEEDED</b><br>• Support staff (n=7)<br>• Continuing education (n=6) | <b>RESOURCES NEEDED</b><br>• Patient education materials (n=9)<br>• Referral networks (n=5) | <b>RESOURCES NEEDED</b><br>• Patient education materials (n=11)                   |

Table 1: Barriers To Counseling & Needed Resources

## Nutrition Topics



## OH Topics

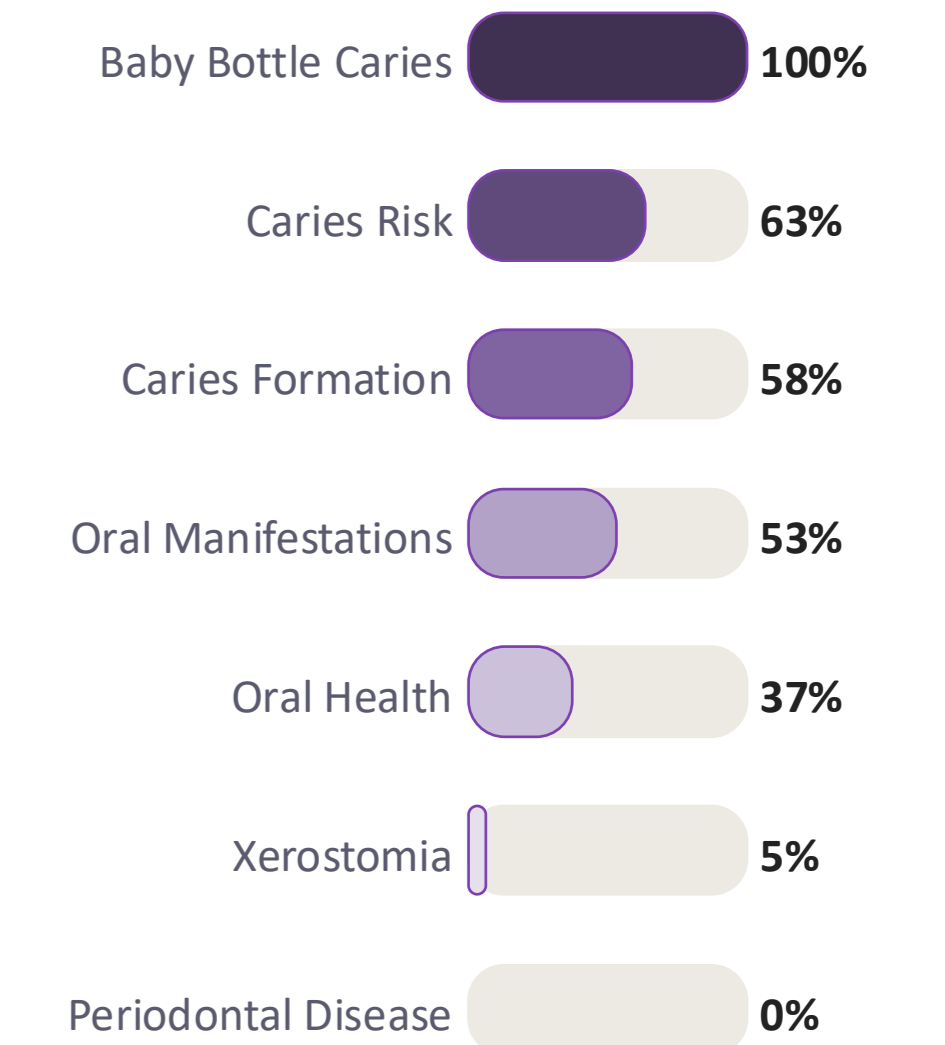


Figure 2: Topics Taught During Residency

## CONCLUSION

This study's respondents displayed substantial gaps in oral health and combined D&N/OH training among pediatricians, with residency type and years of experience statistically associated with perceived adequacy of nutrition training and OH counseling confidence respectively ( $p < .05$ ). Closing these gaps will require standardized interdisciplinary curricula, accessible point-of-care resources, and stronger pediatric dental partnerships, though the small sample size and self-reported data warrant cautious interpretation.