Orthodontic Treatment Provision by Pediatric Dentists: A Study of Comfort Levels, Experience, and Residency Program Influence

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INTRODUCTION

Pediatric dentists, specializing in children's oral care, prioritize prevention and restoration. While basic orthodontic procedures are part of their repertoire, complex cases often warrant referral to orthodontists. This study addresses gaps in understanding how pediatric dentists align orthodontic treatments with their residency training, focusing on three objectives:

Frequency of Orthodontic Treatments: Investigating the extent to which pediatric dentists, from novice to experienced practitioners, administer orthodontic treatments.

Comfort Levels and Expertise: Assessing practitioners' comfort and expertise in providing orthodontic interventions, considering variations in their training and experience.

Correlation Between Training and Treatment Outcomes: Exploring whether extensive orthodontic training during residency correlates with higher success rates in delivering orthodontic treatments.

This research aims to shed light on the practical application of orthodontic training in pediatric dentistry, offering insights into treatment frequency, practitioner comfort, and connections between training and treatment success.

The implications of this study could significantly influence pediatric dental residency programs. Understanding these correlations may lead to improvements in curriculum development, training methodologies, and clinical practice guidelines. Ultimately, the goal is to bridge the gap between theoretical education and its real-world application in pediatric dentistry, advancing patient care and refining professional development in this specialized field.

METHODS

The study design is a cross sectional study which consisted of a 10-item questionnaire sent out via email to members of AAPD (American Academy of Pediatric Dentistry) including residents, practicing pediatric dentists, academics, etc. The questionnaire assessed participants providing orthodontic treatments.

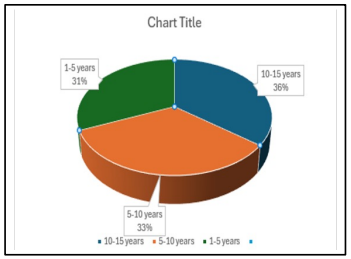
It was hosted by SurveyMonkey to meet security standards for the transmission of online data.

Transport layer security protocol was used to encrypt and transmit data which are frequently backed up in an encrypted storage. To ensure anonymous responses, no IP addresses were collected. The statistical analysis plan included an independent logistic regression analysis. Frequencies for each of the 10 questions were collected and summarized into relevant bars graphs. Cross tabulation and statistical significance were calculated to analyze each objective individually.

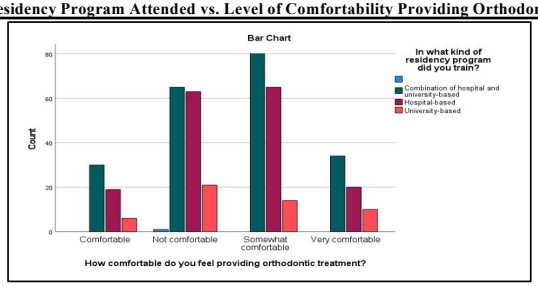
RESULTS

*The total number of responses received for the 10-item survey was 428 (**4.6%**).Findings revealed **61.7%** of pediatric dentists engage in **Phase I** interceptive orthodontics, and **38.4%** in **Phase II** interventions. Educational backgrounds varied, with **48.8%** attending programs combining hospital and university elements, **39%** solely hospital-based, and **11%** university-based. Differences in providing orthodontic treatment among practitioners did not reach statistical significance. Comfort levels across institutions were reported at **70%**, **62%**, and **65%**, with no significant disparities.*

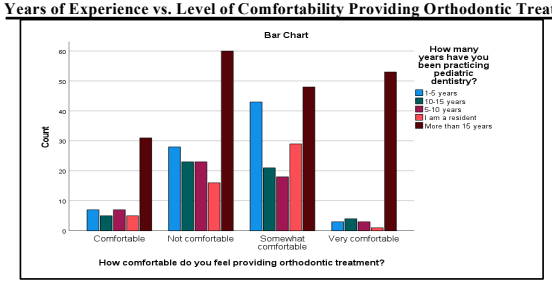
*Additionally, among pediatric dentists with over 15 years of practice, **68.7%** felt comfortable providing treatments, compared to **45%** with less than 10 years of experience.*



Type of Residency Program Attended vs. Level of Comfortability Providing Orthodontic Treatments



Years of Experience vs. Level of Comfortability Providing Orthodontic Treatments



DISCUSSION & CONCLUSIONS

The survey results, based on **428** distributed surveys with a **4.6%** response rate, offer valuable insights into the orthodontic practices and comfort levels of pediatric dentists. Notably, a substantial majority of respondents **61.7%** engage in **Phase I** interceptive orthodontics, while only **38.4%** are involved in **Phase II** interventions.

The diverse educational backgrounds, ranging from programs combining hospital and university elements **48.8%** to solely hospital-based **39%** and university-based **11%** programs, underscore the varied training experiences within the pediatric dentistry community.

Despite these differences, statistical significance was not observed in the provision of orthodontic treatment among practitioners, suggesting a degree of consistency in clinical practices.

A key highlight emerges from the analysis of comfort levels across institution types, reporting percentages of **70%, 62%, and 65%** with no significant disparities. This uniformity suggests that, despite variations in educational backgrounds, pediatric dentists generally share a comparable level of comfort in administering orthodontic treatments across different practice settings.

Moreover, the study draws attention to a significant correlation between experience levels and comfort. Pediatric dentists with over **15 years** of practice demonstrated notably higher comfort levels **68.7%** compared to their counterparts with less than **10 years** of experience **45%.**

The conclusion challenges the notion that residency program choice significantly influences comfort levels, emphasizing the pivotal role of accumulated professional experience in enhancing both comfort and proficiency in orthodontic care provision.

In **conclusion**, the survey outcomes offer a comprehensive view of orthodontic practices and comfort levels among pediatric dentists, highlighting the intricate relationship between experience and confidence. The findings have implications for both the ongoing professional development of practitioners and the design of training programs, emphasizing the value of accumulated experience in fostering competence in orthodontic care provision.

REFERENCES