



# Effect of Case-Based Education on Medical Residents’ Oral Health Knowledge

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## Purpose

To assess the effectiveness of case-based oral health education in improving oral health knowledge, clinical assessment skills, and confidence in implementing oral health screenings of pediatric medicine residents.

## Introduction

Although the American Academy of Pediatric Dentistry (AAPD) recommends the first dental visit by 12 months, the majority of US children have not done so.<sup>1,2</sup>

90% under the age of 2 years attended a well child visit with their pediatrician in the year 2017.<sup>3</sup> Because children tend to visit the pediatrician earlier and more often than the dentist, they are key in the establishment of good oral habits, caries risk assessment and dental referrals. However, numerous studies have shown that pediatric medicine residents and pediatricians do not feel that they have had adequate dental education. Alshunaiber et al., found that approximately 70% feel that they do not have adequate dental training or education to comfortably incorporate dental screenings into their practice.<sup>4</sup>

Little information is currently available about methods to increase oral healthcare knowledge and screening skills of pediatric medicine residents.

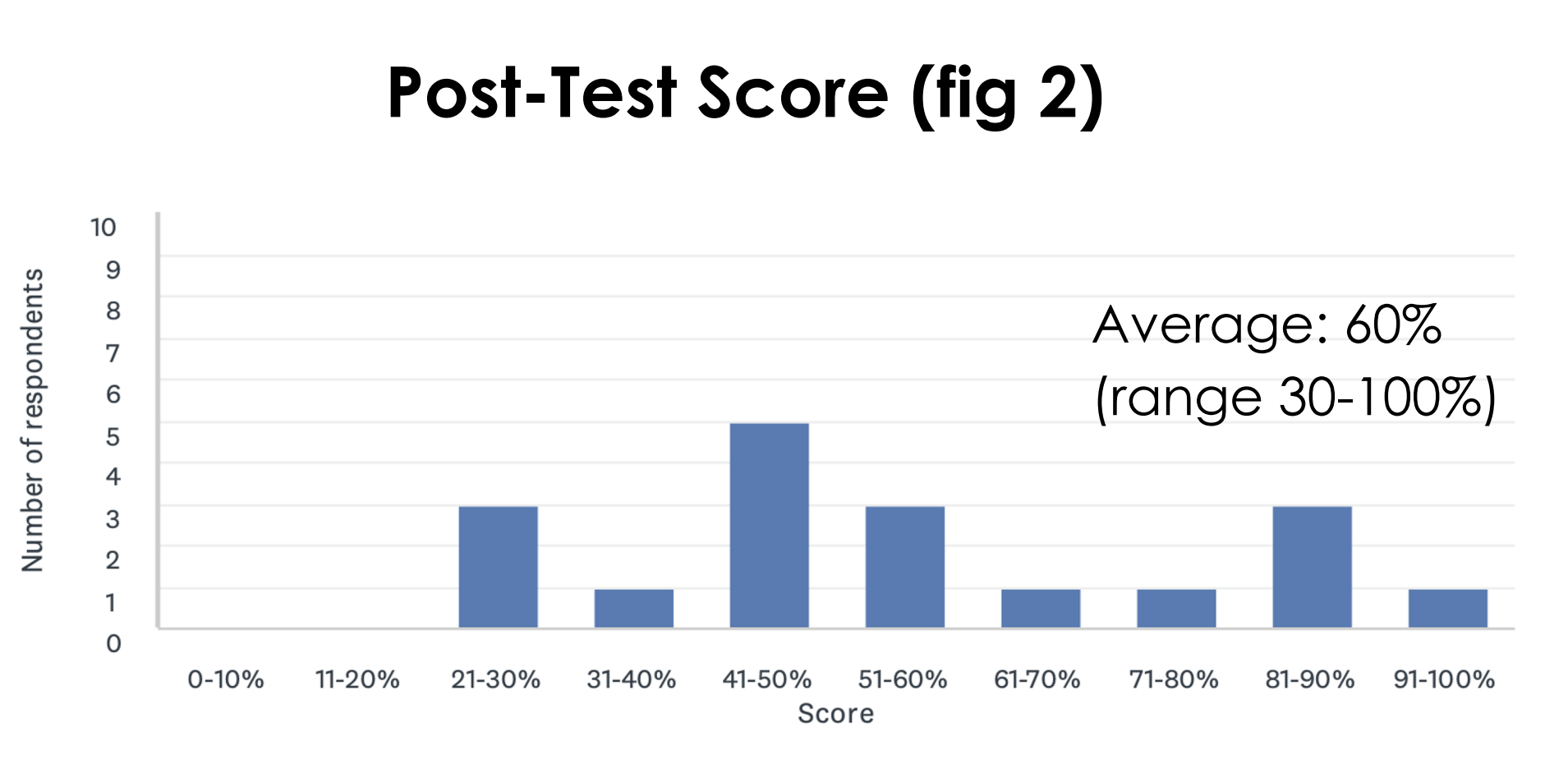
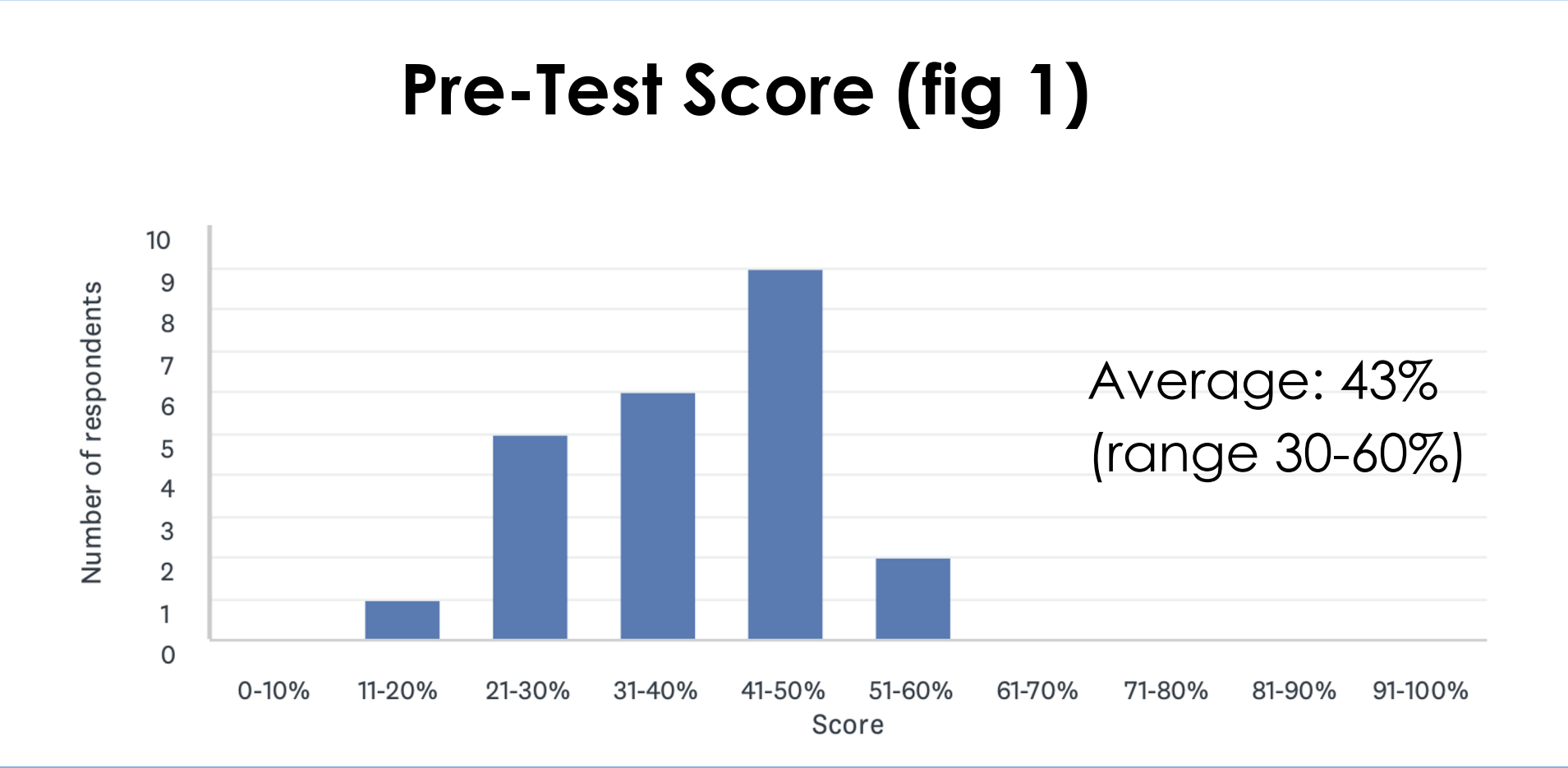
## Methods

- 35 Pediatric Medicine residents at BronxCare Health System were given a pre-test to assess their baseline oral health knowledge and self-reported confidence
- A dental seminar (in-person and Zoom) was given to residents after the pre-test
  - Clinical cases presented
  - Within each case, key concepts regarding preventive oral healthcare and caries recognition reviewed with residents.
- Residents were asked to aid in diagnosing caries, providing oral health counseling, and determining whether a referral to a pediatric dentist was warranted
- A post-test was given via SurveyMonkey 1 week post-seminar to assess changes in residents’ knowledge of preventive oral health and self-reported confidence in oral health practices

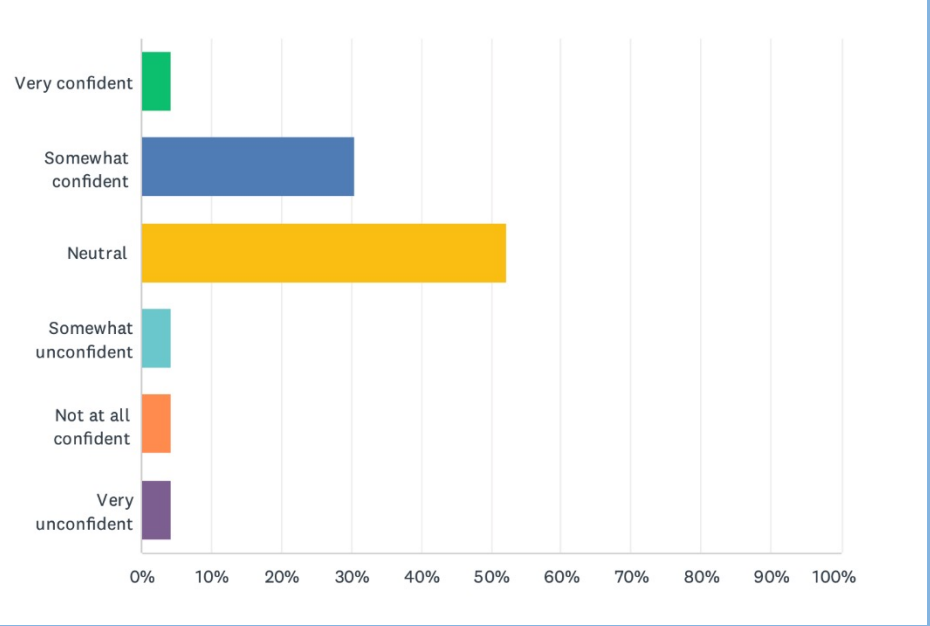
QUESTIONS (10)	DIFFICULTY
Q4 Which of the following would not automatically place a child in the "high caries-risk" category?	1
Q8 Infants 2 years and under should utilize how much toothpaste?	2
Q7 The greatest effect in caries prevention is obtained from ____.	2
Q6 Which of the following is not true?	2
Q2 A carious lesion initially presents as ____.	5
Q3 The goals of a caries risk assessment are to ____.	6
Q5 Juice intake should be limited to ____ or less for children ages 1-3 years.	7
Q9 The first primary teeth expected to erupt are usually ____.	8
Q10 When should a child receive his / her first dental exam?	8
Q1 The most common chronic disease experienced by children is ____.	10

## Results

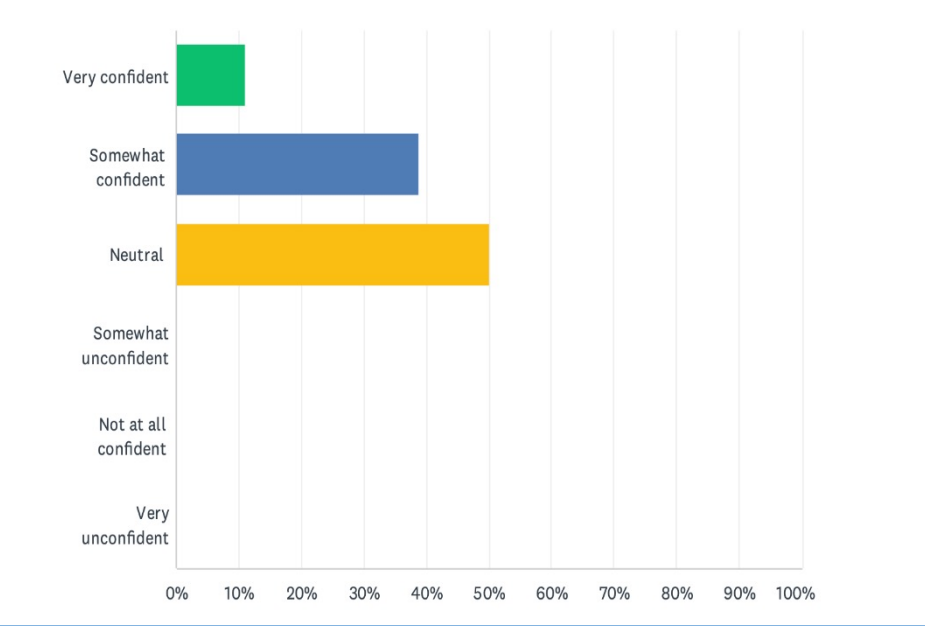
- 23/35 residents completed the pre-test
- 18/35 residents completed the post-test
- Majority of respondents were PGY-1
  - 56.5% of pre-test respondents
  - 55.5% of post-test respondents



### Pre-test Self-Reported Confidence (fig 3)



### Post-test Self-Reported Confidence (fig 4)



## Discussion

The higher post-seminar scores (fig.2) suggests improvement in oral-health knowledge of residents. The self-reported confidence in providing oral health screenings and preventive oral health care information to patients did not demonstrate improvement (figs. 3, 4).

The results of this study are consistent with those of previous research<sup>1</sup>, suggesting that medical residents do not receive adequate exposure to oral health information and do not feel comfortable providing dental screening and preventative oral health care information to patients.

Limitations of this study include: 1) small sample size, 2) amount of time elapsed between presentation and post-test completion (many were not completed in a timely manner). Further research with larger sample sizes and a more stringent time-frame for test completion is suggested.

## Conclusions

This study suggests case-based seminars may be useful in increasing the oral health knowledge-base of pediatric medicine residents.

Further research is needed to assess methods to increase resident comfort with oral healthcare information. This will in turn ensure that children receive adequate oral healthcare guidance at pediatrician visits.

## References

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