Comparing Parental and Provider Prediction of Child Behavior During Bitewing Radiographs at Initial or Periodic Dental Examination

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Introduction

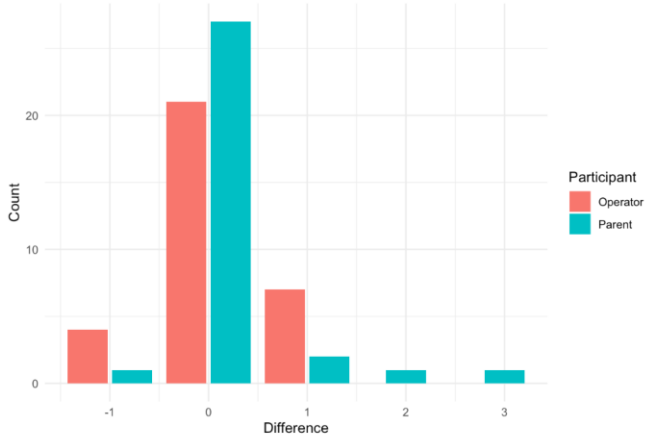
Pediatric dentistry relies on cooperation from the parents, children, and treatment team. Dental caries is one of the most prevalent diseases of childhood, affecting an estimated 85% of children (1). At the heart of a successful pediatric dental appointment is behavior-management. Therefore, it is important to be able to predict a child's behavior prior to invasive treatment, to best manage each child so that they can have a positive experience. Previous literature has shown a relationship between child tolerance of bitewing radiographs and tolerance of restorative visits.

Purpose

Dental anxiety has been found to be one of the most significant factors in determining child behavior during treatment (1). To better understand their dental anxiety, one can look at family and parental factors such as parental dental anxiety which has been studied as a significant risk factor for child dental anxiety (2). Parental opinion of treatment and child behavior is important in providing a positive treatment experience. Therefore, it is important to understand the relationship between parental prediction and provider prediction during treatment appointments in pediatric dentistry. Understanding this, the aim of the study is to determine if the provider or parent can predict the child's behavior at pediatric dental office.

Methods

The research visit consisted of either a new patient exam or periodic exam, without including follow up appointments. The patients included were between 4-10 years old, healthy, normal development. Parents were given a demographic survey with information on Frankl scores with examples. All participants received instructions on what bitewings entail, with demonstration from stuffed animal (right). They were allowed to ask questions if they had any concerns. The provider and the parent documented their Frankl scores of their prediction of the child's behavior at this time. After documentation, parents stepped out of operatory to watch the procedure through a window. After the completion of the radiographs, the 'actual' Frankl score of both parent and provider were documented. The radiographs were uploaded into the chart.



Results

A paired t-test was performed to compare the actual minus predicted scores among parents and operators. There was not a significant difference between difference in operators (mean= 0.094, sd=0.588) and parents (mean=0.188, sd=0.693); T =0.68248, df=31, p=0.500.
Many of the participants (48 of 64, or 75%) correctly predicted the patients' score. 27 of 32 (84%) of parents and 21 of 32 operators (66%) correctly predicted the patients' score. A two-sample test for equality of proportions with continuity correction was performed to compare the percentage of parents and operators correctly guessing the patients' score. There was not a significant difference between parents and operators, $\Xi 2=2.0833$, df= 1, p =0.1489.

Conclusion

It was found there was no significant difference in the prediction of the operator scores compared to the parent prediction scores. There was no significant correlation to age of parent, education level of the parent, type of exam, presence of previous radiographs, child number in birth order, or presence of parental dental anxiety.

References

1 Kopczynski K, Meyer BD. Examining parental treatment decisions within a contemporary pediatric dentistry private practice. Patient Preference and Adherence. 2021;Volume 15(15):645-652. doi:https://doi.org/10.2147/ppa.s300684
2 Desai SP, Shah P, Jajoo SS, Smita P. Assessment of parental attitude toward different behavior management techniques used in pediatric dentistry. Journal of Indian Society of Pedodontics and Preventive Dentistry. 2019;37(4):350. doi:https://doi.org/10.4103/jisppd.jisppd_138_18