



Abstract

Objective: This study examines the relationship between parental oral health literacy and dental fear, and pediatric dental anxiety.

Subjects, Methods: A convenience sample of 88 caregiver-child dyads presenting at the ECU Pediatric Dental Clinic were recruited. Parents completed the REALMD-20 to assess oral health literacy and the Dental Fear and Avoidance Scale (DFAS) to measure dental fear and avoidance, while children's dental anxiety level was recorded using the Facial Image Scale (FIS).

Results: A statistically significant difference was observed between dental fear scores and FIS categories, while the association between dental avoidance scores and FIS categories was not statistically significant. No correlation was found from REALMD-20 scores across the FIS scores.

Conclusion: This study indicates that parental emotional responses to dental care have a substantial influence on pediatric dental anxiety.

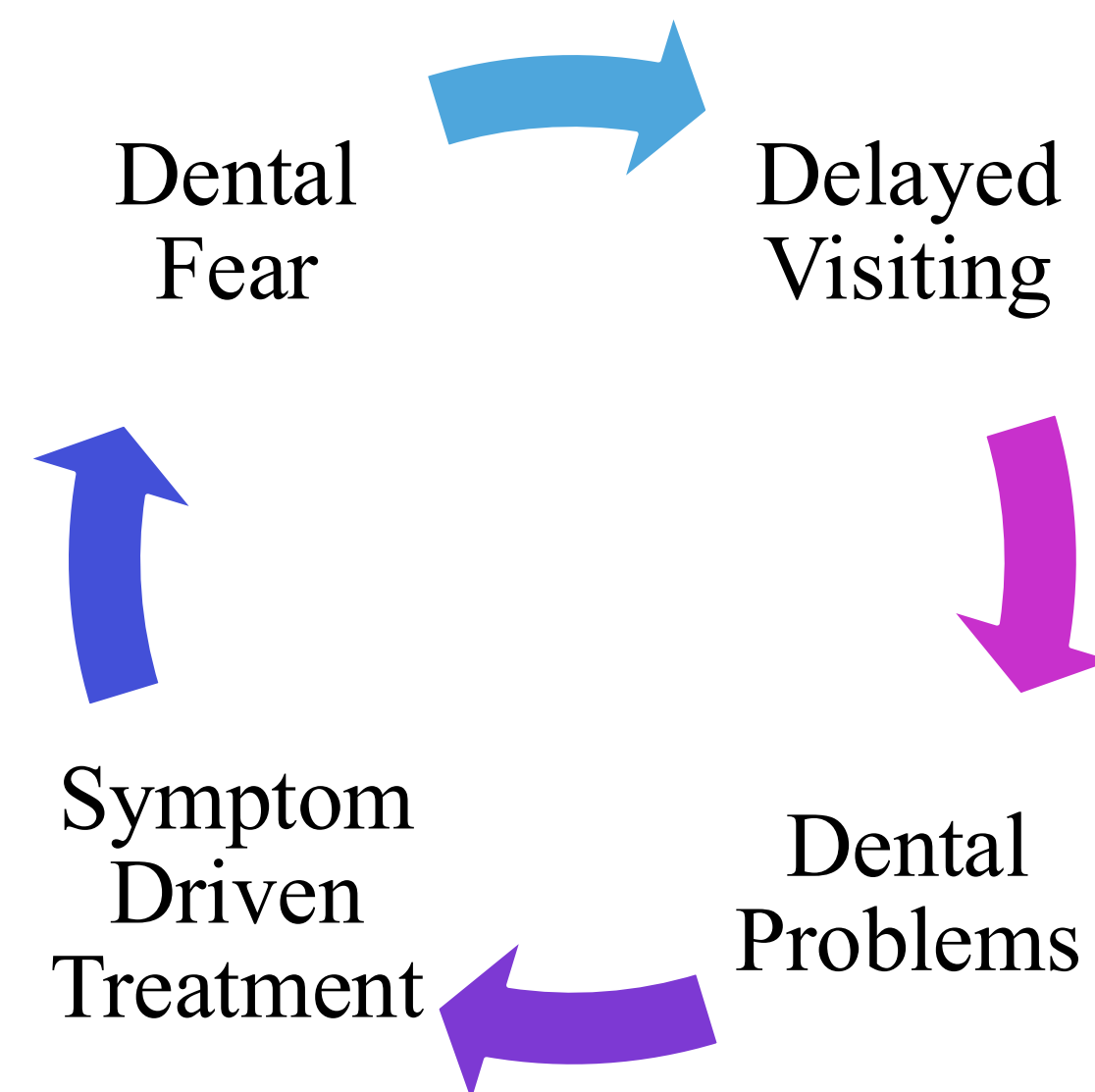


Figure 1. Cycle of Dental Fear⁵

Introduction

Dental fear and anxiety are common in pediatric dental patients and can impact diagnosis, treatment behavior, and outcomes. These issues can persist into adulthood. Parental oral health literacy and attitudes have been shown to significantly influence their child's dental behavior and access to care⁸. Individuals with limited oral health literacy may lack understanding of dental procedures, leading to misconceptions, heightened fear, and avoidance of dental care. While previous studies have explored links between parental oral health literacy, dental anxiety, and pediatric oral health, few examine the connection between parental literacy and pediatric dental anxiety.

Methods

- UMCIRB 25-000044
- Study completed with data collected from 88 parent-patient dyads
- Collected and stored data utilizing the Research Electronic Data Capture (REDCap) application
- Demographic information, REALMD-20 scores, and Dental Fear and Avoidance Scale (DFAS) scores was collected from parents.
- FIS scores were collected from pediatric patients.
- Data on demographics, socioeconomic status, and oral health education sources were also collected.

Dental Fear and Avoidance Scale									
How would you rate your fear of dental treatment on the following scale?									
1	2	3	4	5	6	7	8	9	10
No fear			Moderate fear				Extreme fear		
Rate the degree to which you avoid (for whatever reason) going to the dentist or dental hygienist?									
1	2	3	4	5	6	7	8	9	10
Do not avoid			Moderate avoidance				Extreme avoidance		

Figure 2. Dental Fear and Avoidance Scale²

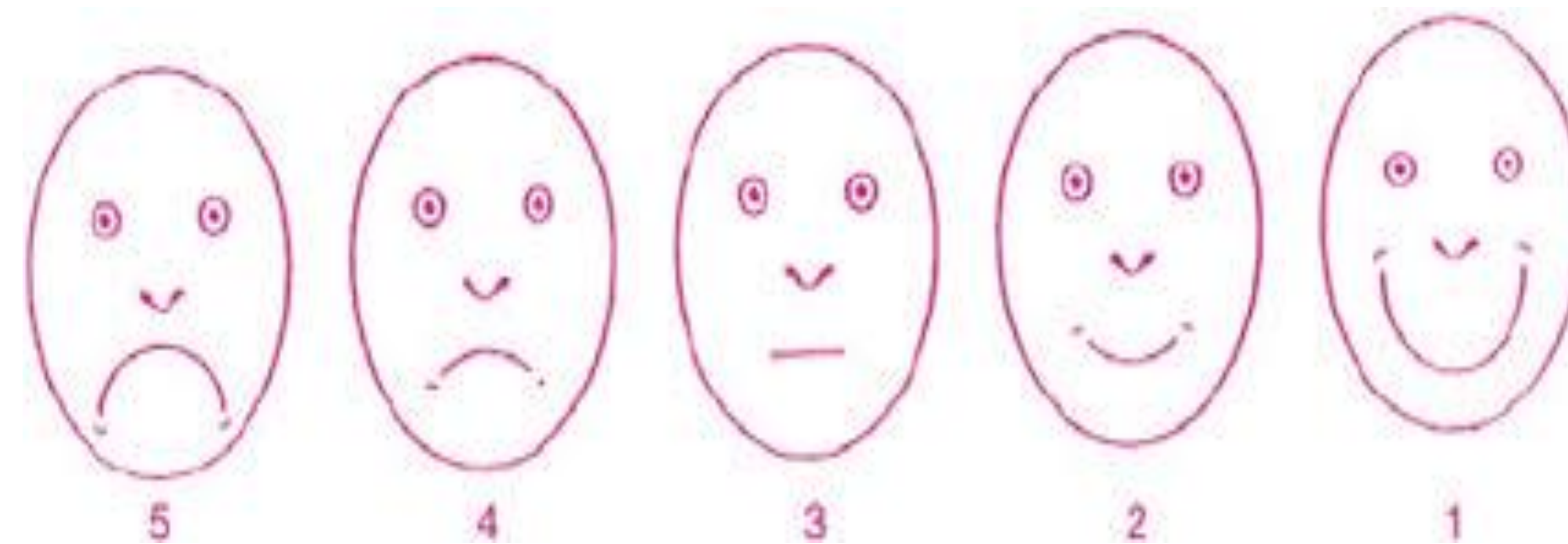


Figure 3. Facial Image Scale¹

Results

- A two sample t-test was completed to evaluate both portions of the DFAS and their relationship with the FIS scores.
- Fear score had a statistically significant difference ($p = 0.011$) between FIS scores of 1-3 (lower anxiety) and scores of 4-5 (high anxiety)
- Avoidance score had nearly a statistically significant difference ($p = 0.067$), but was not statistically significant.
- No statistical difference was found between REALMD-20 scores and the child's FIS scores ($P = 0.888$).

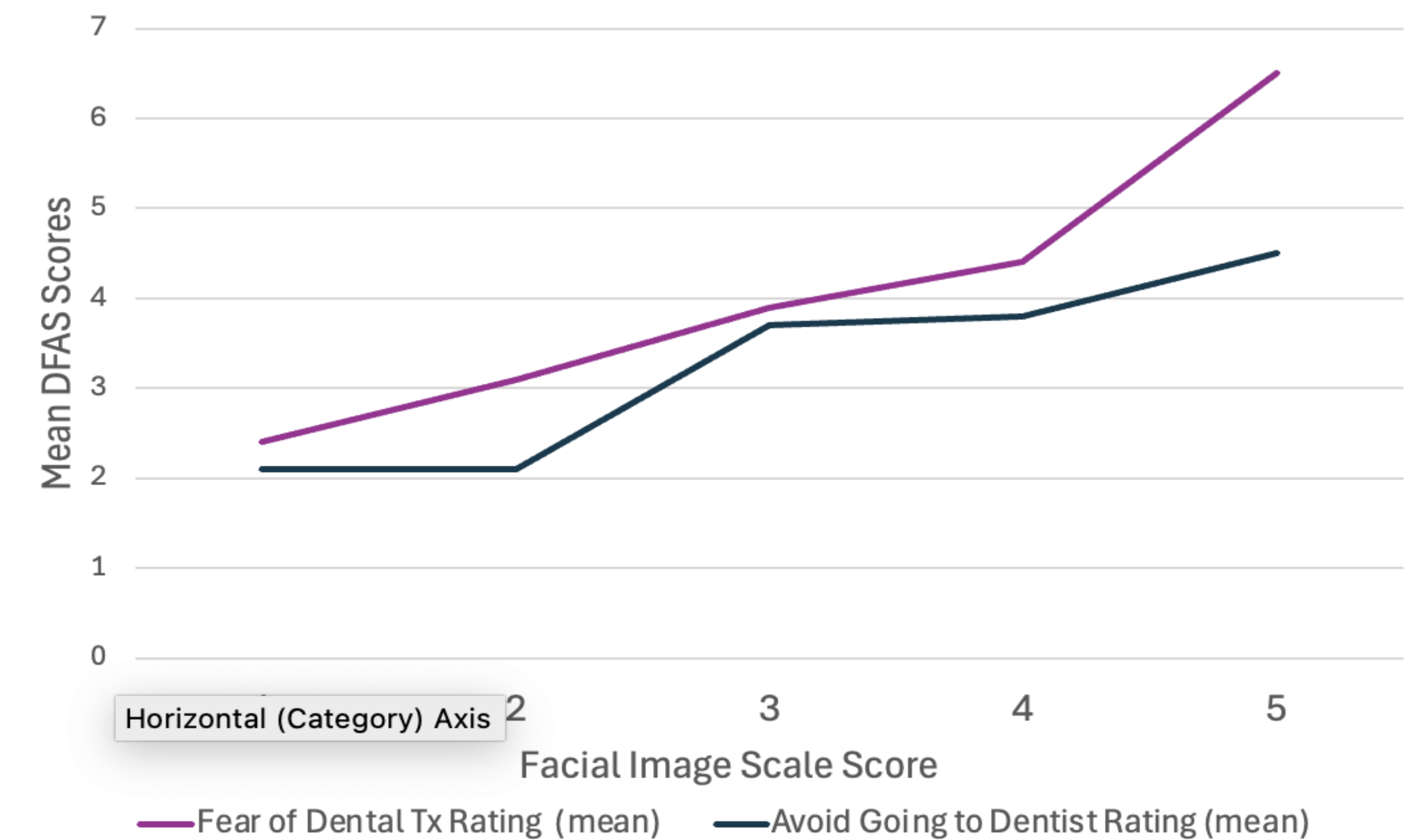


Figure 4. Relationship between parental dental fear and avoidance and pediatric dental anxiety.

Conclusion

- High levels of parental dental fear were associated with increased child dental anxiety, as supported by other studies⁹
- A parent's ability to correctly recognize and pronounce medical and dental words did not correlate with a child's dental anxiety level
- Study indicates that parental emotional responses to dental care have a substantial influence on pediatric dentistry
- Addressing parental dental fear through targeted interventions may be an important strategy for reducing dental anxiety in pediatric patients
- Further research should be completed with a larger sample size to evaluate the relationship.
- In future studies, a more comprehensive oral health literacy tool could be used to address associated complex factors¹⁰

Acknowledgements

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