

Dental Anxiety: Etiology, Health Repercussions, and Strategies for Prevention and Treatment

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Definition of Dental Anxiety

- A heightened fear of dental procedures.
- Person may experience feelings of unease, fear, or stress before or during a dental appointment.
- Less severe than dental phobia.



Definition of Dental Phobia

- A persistent & excessive fear of dental stimuli & procedures that results in *avoidance* or *significant distress*.
- The fear, anxiety, or avoidance may also cause impairment in social, occupational, or other important areas of functioning.
- Examples of stimuli: dental tools, dental room, sound of a drill, smell of tooth being drilled.



Prevalence Estimates

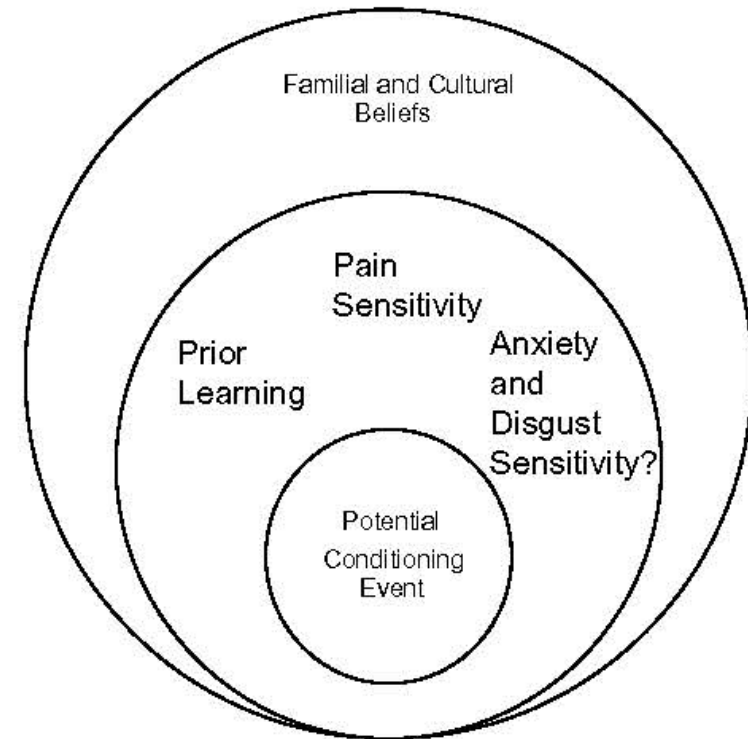
- For Children
 - Dental Anxiety: 5% to 20%
 - Dental Phobia: 1% to 5%
 - Estimated 3.6 million children in United States has dental phobia
- For Adults
 - Dental Anxiety: 10% to 20%
 - Dental Phobia: 1% to 5%
 - 9% to 15% with dental anxiety avoid dental care

Health Complications

- Tooth decay & gum disease.
- Lower social & emotional well-being.
- Bacterial infections (e.g., pneumonia, bronchitis).
- Systemic Inflammation → cardiovascular disease & diabetes.
- Gum disease → progression of dementia.
- Disruption of healthy gut bacteria → worsened Crohn's Disease, Inflammatory Bowel Disease, & Ulcerative Colitis.

Contributing Factors

- Classical & Operant Conditioning
- Modeling / Social Learning
- Fear of Pain
- Oral Disgust Sensitivity
- Culture & Ethnic Beliefs & Behavior
- Early Painful Dental Experiences



Prevention Strategies

- Provide early positive dental experiences.
 - Preventative Care
 - Virtual Reality
- Our Behavior Health Lab (behhealthlab.com) at UTRGV has an R01 Grant from NIH to inform the development of Virtual Reality Prevention Program. Please contact me for information about study and/or participation.

Common Treatment Strategies

- Common techniques include Tell-Show-Do; distraction (e.g., music, watching videos, magic tricks); nitrous oxide; putting patient to sleep.
- Previous research shows minimal effectiveness.
- Such techniques might help someone get through the session, but they aren't "cures."
- *Exposure and Cognitive Restructuring* are effective against numerous phobias but have yet to be fully examined, in a clinical trial, with children.

Proposed Treatment Strategies

- Our Behavior Health Lab has an NIH UG3/UH3 Grant to develop a one-session treatment for dental anxiety in children to be given by dental hygienists and dental assistants at dental offices.
- First two years is UG3 phase in which we are developing and "piloting" the treatments. Next five years will be UH3 in which we give the treatments.
- Treatment will be cognitive-behavioral and will include exposure, cognitive restructuring, relaxation, and educational components.
- We are currently recruiting dental offices to participate. Please contact me with information about study and/or participation.

Questions or Comments?