Oral and maxillofacial surgery studies reveal dental anxiety linked with adverse childhood experiences

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Dental anxiety is a widespread issue that affects countless people globally, causing them to avoid dental care and suffer from poor oral
health. A study by the Division of Oral and Maxillofacial Surgery (OMFS), Faculty of Dentistry, the University of Hong Kong (HKU) revealed both dental-related factors and non-dental factors: adverse childhood experience, attributed to dental anxiety.

By combining insights from two academic papers, OMFS researchers probed into both dental-related and non-dental factors, particularly adverse childhood experiences (ACEs) (Definition according to World Health Organization, 2020), which contribute to dental anxiety.

Oral and Maxillofacial Surgery Clinical Professor Mike YY Leung, who led the project, said, "Our aim is to enhance awareness of the significance of these factors in evaluation and addressing dental anxiety, inspire more research, and foster interdisciplinary cooperation to help individuals conquer their fears and get the essential dental care they need."

**Dental-related factors leading to dental anxiety**

The first study by the OMFS research team, published in December 2022 in the *International Journal of Environmental Research and Public Health*, titled "Qualitative Evaluation of YouTube Videos on Dental Fear, Anxiety, and Phobia," analyzed 145 YouTube videos to assess their quality and content.

The study discovered that these videos, produced by various sources, covered numerous factors, symptoms, and interventions but lacked information on defining or diagnosing dental fear, anxiety, and phobia. Many videos had high view counts, including patient testimonials.

The etiology of dental fear, anxiety, and phobia mentioned in the videos can be broadly categorized into two groups: cognitive and behavioral factors.
Cognitive factors, such as perceived lack of control, were evident in testimonials like, "The dentist made me feel powerless." Behavioral factors, including direct trauma and conditioning through modeling and verbal instructions, contributed to dental anxiety with statements like, "My sister was crying on the dental chair" and "My parents told me that my uncle died at the dentist."

### Adverse childhood experience correlates to dental fear

While patient testimonials from the first study have been extensively documented in prior research, exploring the causes of dental anxiety requires going beyond dental-related factors. In the recent study "Adverse Childhood Experiences and Dental Anxiety Among Chinese Adults in Hong Kong: A Cross-sectional Study," published in *Frontiers in Psychology*, the researchers investigated the correlation between adverse childhood experiences (ACEs) and dental anxiety.

In this study, 171 participants completed online questionnaires (using the Adverse Childhood Experiences International Questionnaire—ACE—IQ) assessing their ACEs and dental anxiety levels (using the Modified Dental Anxiety scale—MDAS and Dental Fear Survey—DFS).

The results revealed a significant association between ACEs and dental anxiety, with higher cumulative ACEs positively correlating with increased dental anxiety scores. Specific ACEs, such as emotional and physical neglect, sexual abuse, and household substance abuse, were found to significantly influence the likelihood of experiencing heightened dental anxiety.

### Implementation of comprehensive assessment and treatment
Dental fear, anxiety, and phobia are common concerns that significantly impact individuals' oral health and overall well-being. The two studies' findings shed light on the importance of considering both dental-related and non-dental factors when examining the causes of dental anxiety. The analysis of YouTube videos revealed a need for accurate information and collaboration between dental professionals and mental health experts to ensure reliable content is available to the public.

On the other hand, to address the significant associations between dental anxiety and adverse childhood experiences, it is essential for dental professionals to consider early life experiences when examining the causes of dental anxiety and adopt a more comprehensive approach to assessment and treatment, considering both dental-related and non-dental factors.

In addition, working with mental health experts may facilitate the development of targeted interventions addressing both dental and psychological aspects. Raising awareness and promoting education on dental anxiety, including its potential causes, are also vital.

The project's co-investigator Ms Natalie Wong stated, "Dental anxiety is a complex issue with numerous contributing factors. There are various ways to mitigate the causes of dental anxiety, even simple measures like parents not scaring their children can be helpful."

The research team encourages further research on the underlying mechanisms linking ACEs to dental anxiety and evaluating the effectiveness of interventions addressing both dental and non-dental factors. Taking these steps will aid in managing dental anxiety and enhancing patient care.

**More information:** Natalie Sui Miu Wong et al, Adverse childhood experiences and dental anxiety among Chinese adults in Hong Kong: a

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