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Article

Dental Anxiety: Understanding the Root Causes and Developing Effective Strategies to Overcome Fear of Visiting Dentists

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Abstract: Dental anxiety is a common psychological barrier that prevents people from seeking timely dental care, leading to the deterioration of oral and overall health. Despite advancements in modern dentistry, fear of the dentist remains prevalent across diverse age groups and cultural backgrounds. This study aims to investigate the underlying causes of dental fear and propose practical solutions for mitigating it, with a specific focus on the population of Kazakhstan. Inspired by a personal experience—when the author took her 3-year-old son to his first dental appointment—the research seeks to understand why some individuals remain calm, while others experience intense fear. Using a survey-based methodology, this study collected data from a diverse demographic to assess common fears, past dental experiences, and perceptions of dental professionals.

Keywords: dental anxiety; dental fear; patient communication; Kazakhstan; oral health; behavioral dentistry

Introduction

Fear of visiting the dentist, commonly known as dental anxiety, affects a significant proportion of the global population. Studies suggest that up to 80% of individuals experience dental anxiety to some degree, with severe anxiety causing avoidance of necessary dental care. This avoidance can exacerbate oral health issues, negatively affecting overall health and quality of life.

In Kazakhstan, this phenomenon remains underexplored despite its evident impact. Motivated by personal experience, the author—both a dentist and a mother—set out to explore the factors contributing to dental anxiety within this unique cultural context, particularly among younger individuals.

Literature Review

Dental anxiety is recognized as multifactorial, stemming from psychological, environmental, and past experiential influences. The Modified Dental Anxiety Scale (MDAS) highlights that individuals experiencing high anxiety levels are more prone to avoid routine dental visits, thereby increasing health risks and treatment costs. Parental attitudes and early childhood experiences significantly shape children's lifelong attitudes towards dentistry.

In regions like Kazakhstan, socioeconomic factors and healthcare accessibility further complicate this issue. Recent advancements, such as noise-canceling headphones and sedation dentistry, offer promising solutions, though the role of dentist-patient trust remains paramount.

Methodology

This research employed a quantitative, cross-sectional survey design conducted in April 2025 to examine dental anxiety among residents of Kazakhstan. A total of 167 participants voluntarily responded to an anonymous survey distributed via Google Forms through social media platforms.

The survey consisted of eight questions, including demographic information (age, gender), frequency of dental visits, presence of dental anxiety, reasons for anxiety, avoidance of dental care

due to fear, and potential strategies for reducing dental anxiety. Data analysis was conducted using Microsoft Excel.

Results

Key Findings:

- **Dental Anxiety Prevalence:** 61.7% of respondents (103 individuals) reported experiencing fear or anxiety regarding dental visits.

Figure 1: Prevalence of Dental Anxiety

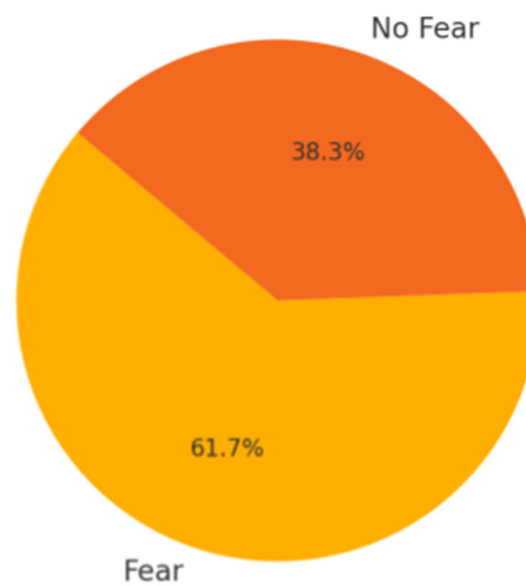


Figure 1. Prevalence of Dental Anxiety.

- **Age Distribution of Anxiety:**
 - Ages 26–35: 63 respondents
 - Ages 18–25: 16 respondents
 - Under 18: 11 respondents
 - Ages 36–45: 10 respondents
 - Ages 46 and above: 3 respondents

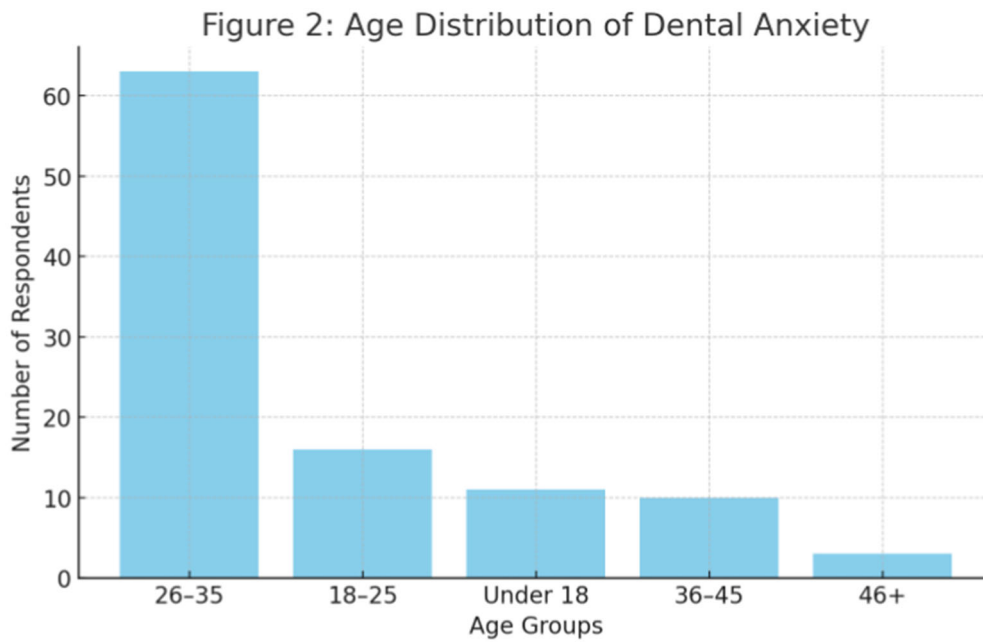


Figure 2. Age Distribution of Dental Anxiety.

- **Primary Causes of Dental Anxiety:**

1. Pain during treatment: 75 respondents
2. Sounds of dental instruments: 54 respondents
3. Cost of treatment: 52 respondents
4. Negative past experiences: 34 respondents
5. Embarrassment about oral health condition: 30 respondents

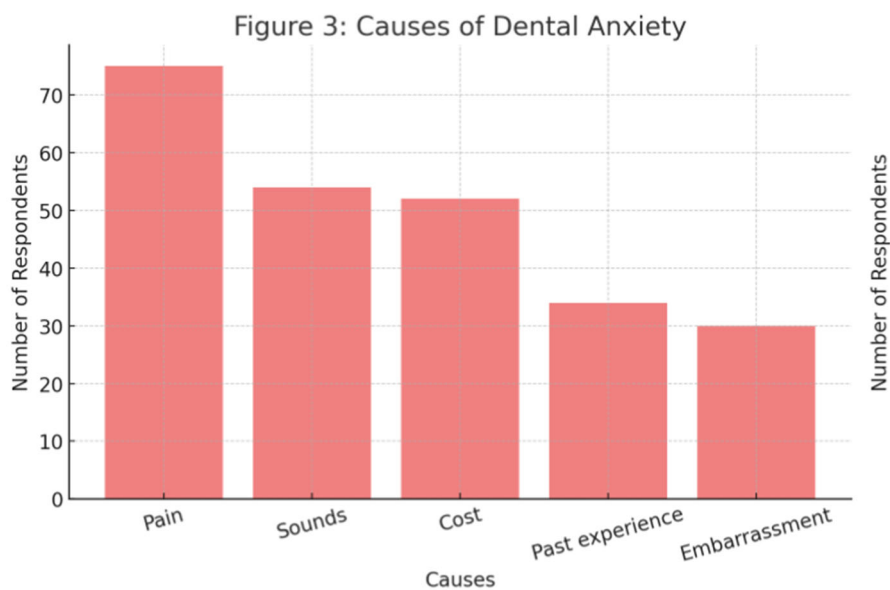


Figure 3. Causes of Dental Anxiety.

- **Suggested Methods to Reduce Dental Anxiety:**
 1. Friendly and empathetic dentist: 109 respondents
 2. Clear explanation of procedures: 77 respondents
 3. Relaxing clinical environment: 45 respondents
 4. Sedation or anesthesia: 44 respondents
 5. Positive past experiences: 37 respondents



Figure 4. Recommended Strategies to Reduce Dental Anxiety.

Discussion

This study highlights the significant prevalence of dental anxiety among respondents in Kazakhstan, particularly within the 26–35 age group. The primary factors contributing to dental anxiety included pain during treatment, the sound of dental instruments, and the high cost of dental care.

The findings emphasize the necessity for enhanced emotional intelligence and effective patient communication among dental professionals. Notably, a friendly and empathetic approach by dentists, coupled with clear procedural explanations, significantly mitigated anxiety. Additionally, improving the clinical environment and offering sedation options were strongly recommended.

This research underscores the importance of professional communication skills and psychological training within dental practice. Future studies should further explore the effectiveness of specific interventions aimed at reducing dental anxiety.

Conclusions

This study provides insight into dental anxiety's prevalence and underlying causes in Kazakhstan, highlighting practical measures dental professionals can take to mitigate patient fears and anxiety.

Author Information: Aisha Melsova: General Dentist, graduated in 2021 internship from Asfendiyarov Kazakh National Medical University, currently on maternity leave but remains passionately engaged in research activities, balancing motherhood with academic exploration.

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