

The Interplay Between Oral Medicine and Mental Health

Adel Bouguezzi^{1*}, Sarra Azzez², Afef Slim¹, Amira Besbes³, Hajer Hentati¹, Jamil Selmi¹

¹University Dental Clinic, Medicine and Oral Surgery Department, Oral Health and Orofacial Rehabilitation Laboratory Research (LR12ES11), University of Monastir, Tunisia. ²Department of Dental Medicine, Taher Sfar Hospital, Mahdia, Tunisia. ³University Dental Clinic, Medicine and Oral Surgery Department, Medical and Molecular Parasitology and Mycology Laboratory (LR12ES08), University of Monastir, Tunisia

*Corresponding author: Adel Bouguezzi.

Abstract

The relationship between oral health and mental health is a dynamic interplay that is increasingly recognized as significant in the context of holistic healthcare. Oral diseases such as periodontitis, xerostomia, and temporomandibular disorders (TMD) can significantly impact psychological well-being, while mental health conditions like anxiety, depression, and eating disorders often manifest oral symptoms. This article explores the bidirectional nature of this relationship, highlighting the underlying mechanisms, clinical implications, and the importance of integrated care. Through an examination of current research and case studies, the article aims to shed light on how interdisciplinary collaboration between dental and mental health professionals can enhance patient outcomes. References to key studies and clinical guidelines provide a robust foundation for understanding this complex and essential aspect of healthcare.

Keywords: oral medicine; oral mental; interplay

Introduction

Oral health and mental health are fundamental components of overall well-being. While traditionally considered separate domains, emerging evidence suggests a profound interplay between these areas. Oral diseases can affect self-esteem, social interactions, and quality of life, potentially leading to or exacerbating mental health conditions. Conversely, mental health disorders often influence oral health through behavioral, physiological, and systemic pathways. This article delves into the bidirectional relationship between oral medicine and mental health, emphasizing the need for integrated approaches to diagnosis and treatment [1].

The Bidirectional Relationship

Impact of Oral Health on Mental Health

Psychosocial Consequences of Oral Diseases: Oral health issues, such as severe dental caries, periodontitis, and tooth loss, often have far-reaching psychosocial implications. Pain and discomfort from these conditions can lead to difficulties in eating and speaking, significantly impacting day-to-day life. Aesthetic concerns related to damaged or missing teeth can lead to feelings of embarrassment and low self-esteem. These challenges often culminate in social

withdrawal, reducing opportunities for meaningful interactions and increasing the risk of loneliness and depression [2]. For instance, research shows that adolescents with visible dental issues are more likely to face bullying, which can adversely affect their mental well-being. Similarly, adults with noticeable oral health problems may experience discrimination in professional settings, further exacerbating stress and anxiety. *Chronic Orofacial Pain and Psychological Distress:* Chronic conditions such as temporomandibular joint disorders (TMD), burning mouth syndrome (BMS), and persistent orofacial pain are significant contributors to mental health issues. The ongoing nature of the pain can lead to frustration, sleep disturbances, and reduced quality of life. Studies indicate that individuals with chronic orofacial pain are more likely to develop anxiety and depressive disorders [3]. The connection is thought to involve both the physiological stress of pain and the emotional toll of living with a chronic condition. Cognitive and emotional responses to chronic pain, such as catastrophizing (expecting the worst outcomes), can further perpetuate a cycle of pain and psychological distress. Multidisciplinary approaches combining dental treatments with psychological

therapies, such as cognitive-behavioral therapy (CBT), have shown promise in addressing this interplay [1,4].

Halitosis and Social Anxiety: Halitosis, or bad breath, is often overlooked as a minor issue, but it can have profound psychological effects. Individuals with halitosis frequently report heightened self-consciousness, fear of negative judgment, and avoidance of close interpersonal interactions. This condition can lead to a form of social anxiety that affects both personal and professional relationships [5].

Furthermore, the stigma associated with halitosis can create a cycle of psychological distress and worsening oral hygiene habits. Many individuals with chronic halitosis may isolate themselves [6], worsening feelings of depression and low self-worth. Addressing the underlying causes of halitosis, such as gum disease or systemic health conditions, can significantly improve mental health outcomes by restoring confidence and social functionality.

Impact of Mental Health on Oral Health

Behavioral Factors: Mental health conditions, such as depression and anxiety, can lead to behavioral changes that negatively affect oral health. Individuals struggling with these conditions may experience decreased motivation to maintain oral hygiene routines, such as brushing and flossing. Additionally, poor dietary choices, such as consuming high-sugar or high-acid foods for comfort, increase the risk of dental caries and enamel erosion. Substance abuse, often comorbid with mental health disorders, also poses significant risks, including oral cancer and gum disease [7].

Stress-induced behaviors, such as bruxism (teeth grinding) and nail-biting, are common among individuals with anxiety [5,7,8]. Bruxism, in particular, can lead to tooth wear, fractures, and temporomandibular joint pain, further compounding oral health challenges.

Physiological Pathways: Chronic stress, a hallmark of many mental health disorders, impacts the immune system and inflammatory responses. Elevated cortisol levels associated with stress can exacerbate periodontal disease by increasing inflammation and delaying wound healing. Similarly, depression is linked to changes in immune function, which may

impair the body's ability to fight off infections, including those in the oral cavity [9].

Medications prescribed for mental health conditions, such as antidepressants, antipsychotics, and mood stabilizers, frequently have side effects that influence oral health. A common side effect is xerostomia (dry mouth), which occurs due to reduced saliva production. Saliva plays a crucial role in maintaining oral health by neutralizing acids, washing away food particles, and preventing bacterial growth. Reduced saliva production increases the risk of dental caries, oral infections, and discomfort [10].

Eating Disorders and Oral Manifestations: Eating disorders, including anorexia nervosa and bulimia nervosa, have severe implications for oral health. Frequent vomiting in individuals with bulimia exposes teeth to stomach acids, leading to enamel erosion, increased tooth sensitivity, and heightened risk of cavities. Nutritional deficiencies common in eating disorders contribute to weakened oral tissues, delayed wound healing, and increased susceptibility to infections. Beyond physical symptoms, the shame and secrecy surrounding eating disorders can prevent individuals from seeking dental care, allowing oral health issues to progress unchecked. Dentists who recognize signs of eating disorders, such as enamel erosion or soft palate trauma, play a critical role in initiating conversations and guiding patients toward appropriate medical and psychological support [11].

Clinical Implications

The bidirectional relationship between oral medicine and mental health calls for an integrated approach to care. Here are some key clinical implications:

Screening and Early Intervention

Dental professionals should be trained to recognize signs of mental health conditions, such as anxiety or depression, during routine check-ups. Similarly, mental health professionals should inquire about oral health and refer patients to dental care when needed.

Interdisciplinary Collaboration

Collaboration between dentists, psychologists, and primary care physicians can ensure comprehensive care for patients. For instance, joint management strategies for patients with TMD and comorbid depression can improve outcomes [12].

Patient Education and Counseling

Educating patients about the link between oral health and mental health can empower them to adopt healthier behaviors, and Counseling for stress management and coping strategies can mitigate the impact of psychosocial factors on oral health.

Addressing Barriers to Care

Policies aimed at reducing stigma and improving access to dental services for individuals with mental illnesses are crucial and integrating dental care into mental health services can overcome systemic barriers and facilitate holistic treatment.

Personalized Treatment Plans

Tailoring treatment plans to consider both oral and mental health aspects can enhance adherence and long-term outcomes. For instance, managing xerostomia in patients on antidepressants can prevent secondary dental issues [13].

Challenges and Opportunities

The integration of oral and mental healthcare faces barriers such as siloed healthcare systems, lack of interdisciplinary training, and limited research on effective interventions. However, advances in tele dentistry, artificial intelligence, and public health policies offer opportunities to bridge these gaps. Developing standardized guidelines and training programs for dental and mental health professionals is critical to fostering collaboration [7].

Research and Future Directions

Further research is essential to uncover the underlying mechanisms linking oral and mental health. Investigating systemic inflammation, neuroendocrine pathways, and the gut-oral-brain axis can illuminate biological connections and guide the creation of targeted therapies. Studies on integrated care models, where dental and mental health services operate cohesively, should explore innovative approaches such as shared electronic health records, interdisciplinary teams, and co-location of services. Telehealth platforms offer an opportunity to improve accessibility, particularly for underserved communities, and require validation through research on their effectiveness and feasibility. Addressing the unique needs of high-risk populations, including older adults, children, and individuals with disabilities, can lead to tailored interventions that enhance care delivery. Public health campaigns aimed

at raising awareness of the oral-mental health link should be evaluated for their impact on behavior and healthcare-seeking patterns. Finally, policy-focused studies can inform strategies to reduce disparities in access to oral and mental healthcare, including the roles of insurance coverage, reimbursement models, and funding allocation [14,15].

Conclusion

The interplay between oral medicine and mental health underscores the importance of a holistic approach to healthcare. Recognizing and addressing the bidirectional relationship between these domains can improve patient outcomes and quality of life. Collaboration between dental and mental health professionals, supported by public health initiatives, is essential for advancing integrated care. As research continues to uncover the complexities of this relationship, the potential for transformative impact on healthcare delivery becomes increasingly evident.

References

1. Berman, A., Marcenes, W. (2006). Medications and Their Impact on Oral Health: A Review. *Journal of Clinical Dentistry*, 17(3):7-10.
2. Alfadda, S. A., Al-Zahrani, M. S. (2014). Medication-Induced Oral Health Problems: The Effect of Medications on The Oral Cavity. *Saudi Pharmaceutical Journal*, 22(6):531-537.
3. Genco, R. J. (2008). Medications and Oral Health: A Review of The Literature. *Journal of Clinical Periodontology*, 35(8):589-595.
4. Bäckman, B., Hammarström, L. (1998). Effects of Medications on The Oral Cavity: Implications for Dentistry. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology*, 85(3):242-247.
5. Dawson, L. J., Dickson, R. (2000). The Impact of Medications on Oral Health. *British Dental Journal*, 188(3):139-142.
6. Horowitz, A. M., Cohen, L. A. (2014). The Impact of Pharmacotherapy on Oral Health: A Review of the Literature. *Journal of Dental Research*, 93(5):400-406.

7. Gottlieb, M. R., Simon, E. (2011). The Effect of Medications on Oral Soft Tissues and Dental Care. *American Journal of Dentistry*, 24(4):231-238.
8. Abu-Shaqra, Q., Abu-Rahma, I. (2017). The Oral Health Impact of Drug Therapy: A Literature Review. *Journal of Clinical and Experimental Dentistry*, 9(1):e142-e147.
9. Phelan, J. E., Malouf, R. E. (2016). A Review of the Impact of Medications on Dental Health. *Journal of Dental Sciences*, 11(3):243-248.
10. Zhang, S., Wang, X. (2015). A Review of the Effects of Oral Medications on Oral Health and its Implications for Dental Practice. *Clinical Oral Investigations*, 19(2):225-231.
11. Perry, D. A., Williamson, R. T. (2013). Medications Affecting Oral Health: The Hidden Cost of Therapy. *Oral Health & Preventive Dentistry*, 11(2):103-108.
12. Griffin, S. O., Jones, K. R. (2013). Oral Health and Medications: A Critical Review of Current Literature. *Journal of the American Dental Association*, 144(9):1069-1076.
13. Frostell, M., Ekbäck, G. (2018). The Role of Drug Therapy in Oral Health Management: A Review of the Impact of Medications on Oral Tissues. *International Journal of Dentistry*, 1-8.
14. McCullough, M. J., Hume, W. R. (2008). Medication and Oral Health: A Review of the Oral Side Effects of Commonly Prescribed Drugs. *Australian Dental Journal*, 53(3):229-237.
15. Weintraub, J. A., Henson, J. M. (2009). The Effects of Medications on the Oral Cavity: An Update for the Clinician. *Oral Diseases*, 15(3):167-172.

Cite this article: Bouguezzi A, Azzez S, Slim A, Besbes A, Hentati H, et al. (2025). The Interplay Between Oral Medicine and Mental Health, *Journal of Clinical Research and Clinical Trials*, BioRes Scientia Publishers. 4(1):1-4. DOI: 10.59657/2837-7184.brs.25.042

Copyright: © 2025 Adel Bouguezzi, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Article History: Received: December 27, 2024 | Accepted: January 22, 2025 | Published: January 29, 2025