

## Tooth Loss, Anxiety and Depression: A Viewpoint

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Loss of teeth may be due to dental caries or periodontitis. Congenitally missing teeth and trauma may be other reasons. The absence of teeth in the oral cavity affects the individual's esthetic factor, speech and mastication. More than ten to twelve teeth missing has a profound effect on the mental health of a person.

On the other hand, an individual with a mental disorder is not in the condition to take care of his dental hygiene thus making the oral hygiene even worse and so also the mental health deteriorates.

Oral health and mental health clinicians need to collaborate to reduce the burden of health-related disorders in this arena.

## Access this article online

## Website:

[www.cijmr.com](http://www.cijmr.com)

## DOI:

[10.58999/cijmr.v4i01.205](https://doi.org/10.58999/cijmr.v4i01.205)

## Keywords:

Depression, Periodontitis, Cognitive behavior, Water fluoridation.

## Introduction

According to the World Health Organization (WHO), depression is a common mental disorder that presents with the following:

- Depressed mood
- Loss of interest or pleasure
- Feelings of guilt
- Disturbed sleep or appetite
- Low energy
- Poor concentration.

A newer hypothesis of depression neurobiology suggests the overactivation of the hypothalamic-pituitary axis.<sup>1</sup>

Oral health can affect quality of life and oral diseases are a major public health issue. In spite of all these facts, oral health is a subject of neglect and policy failure.

People with severe mental illness have 2 to 7 times the likelihood of having lost all teeth as compared to the general community. It is also observed that the pain threshold is higher in depressed persons.<sup>2</sup>

Social withdrawal due to painful and unpleasing-looking dentition and poor-fitting dentures, isolation due to incompetence in mastication in a gathering, and speech difficulties can all add to anxiety, mood changes, and

depression. Dental pain affects

the quality of life and has an association with worse mental health status.<sup>3,4</sup>

On the other hand, tooth loss causes depression. Losing 10 or more teeth has an impact comparable to adults with major depressive disorder.

Tooth loss may lead to cognitive decline by reducing the mastication-induced sensory stimulation to the brain.

Tooth loss also affects the overall nutrition status of the individual due to impairment of the masticatory efficiency as the number of units involved in the process of mastication i.e. chewing the bolus is reduced. This can lead to cognitive impairment and dementia.

Periodontal disease and mental health are closely associated. Tooth loss is an indication of poor oral hygiene and periodontitis.

Anxiety increases blood levels of adrenocorticotrophic hormones such as cortisol which has a negative effect on the periodontal immune mechanism.

Patients with more than 10 teeth missing or lost have more chances of cognitive behavior impairment and dementia, as a consequence of bacteremia and secondary immune complexes resulting in inflammatory responses in arteries. In a study, it was concluded that increased evidence of missing teeth showed an increase in the overall health treatment needs<sup>5</sup> and that there is a positive association between poor oral health and depression<sup>6</sup>

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Submitted: 10/01/2025

Revision: 02/02/2025

Accepted: 20/02/2025

Published: 20/04/2025

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**How to cite this article:** Sinha N, Mishra B. Tooth Loss, Anxiety and Depression: A Viewpoint. Central India Journal of Medical Research. 2025;4(1):13-15.

## Discussion

There should be a collaboration; working together of mental health clinicians and dentists to achieve better management of care.

Patients dealing with mental illness should receive help with oral hygiene management and also early referral to a dentist could help reduce anxiety and many kinds of mental trauma. Loss of teeth hinders mastication, pronunciation, and esthetics leading to personal difficulties. Loneliness, stress, and depression grow reducing happiness.<sup>7-9</sup>

Consultation and patient education should be done to reduce tobacco, and alcohol consumption: also reduce intake of acidic and caffeinated beverages. Counseling to avoid vigorous tooth brushing and teaching methods of tooth brushing and other oral hygiene aids should be imparted to patients.

There is a frequent need to check and follow up with the patients for drug-induced xerostomia, halitosis, lip dryness, cracking and mouth sores by doing the necessary recall appointments.

There should be a supply of toothbrushes and denture baths as poor hygiene is a risk to mentally ill patients because of bacteremia.

Patients with a history of dementia, and schizophrenia have increased decay and gum disease due to bacterial infection and lack of effective oral hygiene maintenance. Depression is related to poorer subjective and objective oral health and it is a risk factor for oral health behaviour.<sup>10-12</sup>

More than 40 years of data are available concerning the poor oral health of mentally ill patients, yet it is a forgotten problem.

A study conducted by Davis and Jenkins in 1961 revealed the association between periodontal disease severity and anxiety, depression, and mood changes.

This study has postulated that anxiety increases the release of ACTHs such as cortisol which has a negative effect on the periodontal immune mechanism.

Attrition, Ablation, and erosion of enamel and dentin are seen in patients with mood disorders due to issues such as smoking tobacco, alcohol, and bruxism.

There also may be evidence of enamel erosion due to gastroesophageal reflux. Also, patients with depressive disorders have a higher count of salivary lactobacilli which puts them at higher risk of having dental caries and other dental treatment needs.<sup>13</sup> Frequent use of antidepressants leads to dryness of the oral cavity and increases tooth decay. Monitoring, prevention, and

treatment of hyposalivation is a part of the clinical management of depression.<sup>14</sup>

## Conclusion

A creation of a mission statement with overall goals to improving access to primary care and oral health services, providing dental services to achieve whole health needs.

Offering multidisciplinary health services in a dental setting has the potential to reach an unserved population.

There is no wrong door to entry into a health care system and each clinical environment should be equipped to best serve patients' whole health needs.

Water fluoridation is a candidate instrument to help reduce dental caries and in turn tooth loss and improve conditions of mental illness related to tooth loss.

Elective treatment of dental needs including restoration of carious teeth, oral prophylaxis, and replacement of missing teeth with the best possible options such as implants or well-fitting partial or complete dentures will make patients feel more confident to masticate better and improve their quality of life.

Regular follow-ups and checkups for dental treatment needs and patient education in maintaining oral hygiene are essential foremost. A study conducted showed that a reduced number of occluding pairs of teeth, affected the quality of living.<sup>15</sup>

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