Navigating the bi-directional relationship between oral diseases and mental disorders – Clinical management implications and ethical considerations for dental practitioners

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Keywords: Ethical considerations, global burden, oral health, mental health, oral diseases, mental disorders, bi-directional relationship, oral manifestations, risk factors, interventions.

Executive summary

Importance

- Oral disease has an impact on mental health, or conversely, mental disorders can affect oral health.
- Understanding the bi-directional relationship between oral and mental health is essential for ethical and integrated approach towards oral health care.

Key points

- Individuals with oral diseases and/or mental disorders share common risk factors.
- Individuals with mental disorders tend to have poor oral health, are more likely to present with decayed teeth and periodontal disease.
- Dry mouth is a common side-effect of many psychotropic medications.

Practice implications

- Coordinate and collaborate with primary care physicians and mental health care providers for a holistic approach to treatment planning and oral health care.
- Be aware of side-effects and drug interactions between medications used.
- Encourage oral hygiene measures and preventive dental care.
- The core of professionalism is a therapeutic relationship built on competent and compassionate care.

Background

Oral diseases and mental disorders are recognized global public health problems.[1,2,3,4,5] Although the relationship between oral and mental health has been controversial,[6] the global importance of oral health and mental health and their bi-directional relationship is underscored by their extensive impacts on overall health, quality of life, and social well-being.[7,8,9,10,11,12] Irrespectively, both oral health and mental health has long been neglected in the global health agenda and less attention has been given to the links between oral disease and mental disorders, and their reciprocal impact on each other is less understood.[6,13,14] Oral health care is an essential part of care for patients

with mental health disorders.[15] However, individuals with mental health problems generally have poor oral health, are often overlooked due to patients' lack of motivation, lack of awareness, poor economic status, phobias, and unwelcoming attitudes by dentists.[16]

Worldwide different treatment strategies are used in the dental treatment of patients with mental disabilities.[17] Furthermore, it has also been reported that currently insufficient evidence exists on the impact of oral health management on mental health.[6,11] Dentists may find treating patients with mental disorders challenging due to a lack of understanding and awareness in modifications of dental care delivery for individuals with special needs.[16] Also, polypharmacy is common amongst individuals with mental disorders, further complicating dental care while prescribing routine medications as potential drug interactions and side effects must be considered.

This is exacerbated by the longstanding separation of dental care from other health services.[18] As a result, people with severe mental disorders (SMD) are significantly less likely to visit a dentist than the general population,19 and if they do, they are less likely to be adherent with treatment recommendations.[20] Furthermore, dental professionals may also be unprepared to spend additional time in explaining the importance of oral health and making people with mental disorders feel comfortable.[18] It has also been suggested that avoidance and dismissive behaviours by dental staff may lead to stigmatization of people with mental disorders and further hinder optimal delivery of oral health care.[21,22]

In addition, the COVID-19 pandemic has had a profound impact on both oral health, mental health, and general well-being of people world-wide. The pandemic led to the temporary closure of many dental practices, significantly reducing access to routine and emergency dental care and resulting in disruption in dental services contributing towards deterioration in oral health.[23] Concurrently, the pandemic has precipitated a significant rise in mental health issues in both patient and provider.[24,25] due to fear of the virus, social isolation, economic uncertainty, and changes in daily routines.[26,27] In addition, the chronic stress induced by the pandemic led to various maladaptive coping mechanisms, such as increased alcohol and substance use, poor sleep patterns, and reduced physical activity, all of which negatively impact oral and mental health. [26,28] In addition, the prolonged social isolation and the lack of face-to-face interactions have been linked to increased feelings of loneliness and social anxiety.[29,30,31] This is especially pronounced among vulnerable populations, such as the elderly and those with pre-existing mental health conditions. All these factors, individually and combined, has led to multiple clinical and ethical dilemmas.

Purpose

Although oral and mental health are both critical components of overall well-being and quality of life, their interconnection and impact on each is not well understood.[6,14] This review aims to explore the global burden of oral diseases and mental disorders and their bi-directional relationship. Understanding this relationship is essential for increasing awareness, developing holistic and ethical oral health care strategies, and encouraging better self-care and help-seeking behaviours, ultimately leading to better treatment outcomes, overall well-being and quality of life (QoL).

The global burden of oral disease

Oral diseases, such as dental caries, periodontal disease, and oral cancer, are among the most prevalent (ranking No.1) non-communicable diseases (NCD's) affecting approximately 3.5 billion people globally.[3,13,32] The combined estimated number of cases of oral diseases globally is approximately 1 billion higher than cases of all five main NCDs combined (mental disorders, cardiovascular disease, diabetes mellitus, chronic respiratory diseases and cancers).[32]

Although largely preventable, oral diseases, pose a major health burden and affect people throughout their lifetime,[13] causing pain, discomfort, and difficulty in chewing, swallowing, and speaking, and even death.[1] Oral diseases also impact on appearance negatively affecting confidence, social interactions, and relationships which are important determinants of general health, well-being, and QoL.[2,30]

Furthermore, the costs of treating oral diseases impose a major economic burden to the individuals affected and to public health care systems[2,13] primarily because oral diseases disproportionally affect poorer and marginalized groups.[13] Thus, vulnerable populations including individuals with mental disorders, often face greater challenges in accessing and affording dental care.[1]

The global burden of mental health disorders

Mental disorders are among the top ten leading causes of health care burden worldwide,[5,33] with more than 1 of 8 individuals globally living with a diagnosable mental disorder.[32,34] Mental disorders are categorized according to two primary classification systems namely the Diagnostic and Statistical Manual of Mental Disorders[35] and the International Classification of Diseases.[36] Both systems

Table 1: Impact of oral disease/disorders on mental health

Oral Disease/ Disorders	Shared risk factors	Oral manifestations	Mental health manifestations	Impact on mental health/well-being	References
Periodontal disease	Stress/ cortisol Smoking Alcohol Oral hygiene neglect Chronic systemic diseases Immune dysfunction/ deficiencies	High plaque index Halitosis Bleeding gums Tooth mobility Chronic pain Halitosis Tooth loss / Loss of function	Stress Low self-esteem Embarrassment Social withdrawal Reduced social interaction	Depression Anxiety Cognitive decline/ Dementia Reduced Quality of Life (QoL)	18,51,52,53,54
Dental caries	Dietary factors (sugar intake) Oral hygiene neglect Financial stress	Chronic pain/discomfort Halitosis Visible dental decay/ Aesthetics & Appearance	Self-consciousness Low self-esteem Stress Dental phobia	Social Anxiety Compromised QoL Avoidance behaviours Depression	7,53,55,56
TMJ Disorders	Stress Disrupted sleep/Apnea Compulsive disorder/ behaviour	Bruxism/clenching Chronic Oro-facial pain Jaw dysfunction Malocclusion & dental interferences Tooth wear/fractures	Insomnia /sleep disturbance Stress	Anxiety Depression Reduced QoL	57,58,59
Oral cancers & Oral infections	Alcohol Smoking Auto-immune Nutritional deficiencies Oral hygiene neglect Co-morbid systemic conditions	Chronic pain Oral infection Loss of teeth	Stress Fatigue Reduced motivation	Anxiety Depression	59,60

are designed to help clinicians diagnose and treat mental health conditions more effectively by providing standardized criteria and descriptions. The most common mental disorders seen are depression, anxiety disorders, and SMD such as schizophrenia, bipolar disorder, and dementia.[37,38]

Mental health disorders affect hundreds of millions of people worldwide39 and depression alone the leading cause of "years lived with disability".[5,40,41] The new Global Burden of Disease analysis show that depression and anxiety are among the top causes of health loss worldwide, and has significantly increased due to the COVID-19 pandemic.[24,25] Mental health disorders, such as depression and anxiety, directly affect emotional stability, mood, and overall psychological well-being.[42]

Current evidence suggests that good mental health facilitates better interpersonal relationships, social support, community engagement, and improved QoL.[43,44,45] It has also been reported that mental health conditions can impair cognitive functions, including memory, attention, and decision-making, affecting work and daily activities and increased absenteeism.[46] It is suggested that the burden of mental illness in terms of both health and economic losses may be much higher than previously assessed.[47]

Mental health disorders are often comorbid with systemic health conditions. For example, depression is common among individuals with chronic diseases such as diabetes and cardiovascular disease, and it can worsen their prognosis.[48] The high rate of physical comorbidity, which often has poor clinical management, drastically reduces life expectancy for people with mental illness, and also increases the personal, social, and economic burden of mental illness across the lifespan.[4,49] People with SMD have up to 60% higher chances of dying prematurely due to preventable and treatable chronic systemic conditions. [40]

Bi-directional relationship between oral health and mental health

Oral health and mental health are an integral part of general health, sharing common pathways and affecting each other in a bi-directional fashion that involve complex interconnected biological, social, psychological, and behavioural, processes.[15,20] This means that poor oral health can contribute directly towards, or exacerbate existing mental health issues, or conversely, mental health disorders can lead to, or exacerbate oral diseases. Currently, no causal relationship has yet been proved.[50]

Impact of oral diseases on mental health

Several oral health conditions have been associated with poor mental health. Oral diseases, shared risk factors, manifestations and their impact on mental well-being is summarized in Table 1. The number one oral health factor that has a significant impact on mental health is periodontal disease.[51] Patients with periodontal disease had almost a two-fold likelihood of developing depression over the following 5-11 years.[61] The evidence supporting the bi-directional relationship between both periodontal disease and tooth loss with cognitive decline is growing and continues to highlight the importance of overall oral health and preventative care.[62]

Dental aesthetics and appearance play a significant role in self-perception and social interactions. Poor oral health manifested through, neglected (i.e., visible decay), missing or discoloured teeth, and halitosis, can negatively affect self-esteem and body image, social interaction, potentially contributing to social anxiety and avoidance behaviours, particularly among individuals with mental disorders. This, in turn, affects an individual's ability to interact socially and maintain relationships, contributing to feelings of isolation and depression.[18,51,52,53,54, 55,56] It is also reported that tooth loss is positively associated with an increased risk of dementia in adults.[63,64]

The impact of mental disorders on oral health

The relationship between mental disorders and oral health is well-documented, revealing a significant impact of mental health conditions on oral health outcomes.[7] Mental disorders, shared risk factors, manifestations and their impact on oral health is summarized in Table 2. Oral diseases in individuals with mental illnesses are mostly associated with adverse side effects of the psychotropic medications,[38,69] lack of motivation or ability (i.e., cognitive impairment) to maintain good oral hygiene, lifestyle factors (e.g., eating disorders, alcohol, tobacco, and other substance use), difficulty to access health services, and a lack of cooperation in dental treatments,[3,10,20,37] leading to increased incidence of dental caries, periodontal disease, and tooth loss.[20,65]

Antipsychotic medications used by patients with schizophrenia or bipolar disorder, and use of antidepressants and anxiolytics by patients with depression and anxiety often cause dry mouth and other side effects that increase the risk of dental and periodontal problems. [60,66,67]

Brain-stomatognathic axis and its biomechanisms

The brain-stomatognathic (BS) connection refers to a complex multifaceted bi-directional relationship between the brain (central nervous system) and the stomatognathic system, which includes the structures involved in mastication, (chewing), speech, and swallowing.[14,15] This connection is maintained through intricate neural pathways and influenced by biological (inflammatory process, neurotransmitter imbalance, and microbiome dysbiosis) [80,81], psychological, behavioural and life style, and socio-economic risk factors. [3,13,15,18] Understanding the BS axis is crucial for diagnosing and treating various conditions affecting oral-, mental-, and overall well-being and highlights the importance of integrated healthcare approaches.

Microbiome imbalance

Emerging evidence suggests a potential link between the oral microbiome and mental health.[77,78,79,80] It is suggested that disruptions in oral microbiota composition (dysbiosis) possibly influence mental health through inflammatory pathways and neurotransmitter production.[80,81] The presence of periodontal pathogens and their byproducts within the bloodstream and CNS can have detrimental effects on the brain by stimulating the body's neuroinflammatory response.[79, 81]

Inflammatory processes

Chronic systemic inflammation is a common factor linking periodontal disease and mental health disorders such as anxiety, depression and schizophrenia,[82,83,84] and is often indicated by elevated levels of pro-inflammatory cytokines mediated by lipopolysaccharides from the outer membrane of associated gram-negative bacteria.[20,85,86,87] These cytokines can cross the blood-brain barrier and influence brain function, contributing to the development or exacerbation of mental health conditions like depression and anxiety. Exosomes from cells, which act as mediators of intercellular communication, may also play a role in transmitting inflammation from the oral cavity to the central nervous system (CNS) thereby affecting function and behaviour.[78,88]

Neurotransmitter Imbalance

Neurotransmitters like serotonin and dopamine are involved in both mental health and oral health and play an important role in mood regulation and pain perception. It is suggested that dysbiosis of the oral and gut microbiome can impact on neurotransmitters including serotonin, dopamine, availability, contributing to mental disorders like depression.[89] Furthermore, imbalances in neurotransmitters associated

with depression also play a role in pain perception and inflammation. Oral inflammation and infection can alter the production and function of these neurotransmitters, influencing mood and anxiety levels.[79] Chronic persistent pain can also alter pain perception pathways in the brain, leading to heightened sensitivity and emotional distress.[79]

Immune dysregulation

Psychosocial stress may be a common contributor to both chronic oral and non-oral diseases.[90,91] Chronic stress and mental health disorders can dysregulate the hypothalamic-pituitary-adrenal axis (HPA axis), leading to increased cortisol production.[59,90,91] Elevated cortisol levels can impair immune function, reducing the body's ability to fight off infections, including oral infections and periodontal disease, thus exacerbating oral health problems.[59] Conversely, oral pain and discomfort can activate the stress response, further disrupting the HPA axis.[90]

Ethical considerations

Oral/Dental health care providers (DHCP) face several ethical considerations when dealing with patients with mental health problems. The 4 main ethical principles that need consideration are beneficence, nonmaleficence, autonomy, and justice.[92] Addressing these ethical challenges requires sensitivity, understanding, and adherence to professional guidelines.

Autonomy and Informed Consent

Autonomy is defined by the right to self-determination and respects the individual's right to make informed decisions. Informed consent, truth-telling, and confidentiality arise from the principle of autonomy.

Capacity to Consent

Mental health conditions can sometimes impair cognitive function, making it difficult for patients to make informed decisions. It is therefore essential that DHCP assess the patient's capacity to understand and consent to treatment. If a patient lacks the capacity to consent, DHCP may need to involve legal guardians or healthcare proxies in the decision-making process while ensuring that the patient's best interests are prioritized.

- Clear Communication

DHCP should provide information in a clear, truthful and straightforward manner, avoiding medical jargon that might confuse patients with cognitive impairments or anxiety. Repeating information and checking for understanding will encourage full participation in treatment decisions, and will also help ensure that patients are making informed decisions about their care.

Confidentiality and Privacy Concerns

DHCP must handle sensitive information about a patient's mental health with confidentiality. This includes information disclosed during dental visits that may pertain to the patient's psychological state or mental health history. Sharing patient information with other healthcare providers should be done only with the patient's consent or if legally required, ensuring that only relevant information is disclosed.

Non-Maleficence and Beneficence

Beneficence is defined as acting in the best interest of the individual thus providing benefit. Non-maleficence on the other hand means avoiding and doing no harm to the individual. Compassion, a prelude to caring presupposes sympathy, is expressed in beneficence.[93] It is critical not take advantage of patients by deception or coercion and not treat beyond the scope of one's competence.

Providing Appropriate Care

DHCP should not recommend treatments or radiographic examinations or tests that have no therapeutic benefit for the patient, or increase the risk of harm to the patient relative to the expected benefit. Oral health care providers must avoid treatments that could harm patients, particularly those with mental health conditions that might make them more vulnerable to anxiety, stress or pain. Creating a supportive and non-judgmental environment can help reduce anxiety and improve the patient's overall experience. It is considered appropriate to decline to treat a patient who exhibits behaviours that will impede good outcome and to refer to an appropriate provider that has the necessary skills. Behaviour management techniques and sedation are frequently used[17]

Holistic Care

Consider the patient's overall health, including mental health, when developing treatment plans. The goal of treatment should always be – to promote general health and well-being of patients. This might involve adjusting dental treatments to accommodate the patient's psychological state or working with mental health professionals to manage the patient's care. Dentists should always collaborate with colleagues and specialists in a manner that can enhance patient care.

Table 2: Impact of mental illness/disorders on oral health

Mental disorders	Shared risk factors	Mental illness manifestations	Oral manifestations	Impact on oral health	References
Depression Anxiety	Financial stress Fear Antidepressants Anxiolytics Comorbid systemic conditions Stress	Feeling of hopelessness Loss of interest in personal care Lack of motivation Heightened alert Asking many questions Fatigue Stress Harmful behaviours (alcohol, smoking) Poor dietary choices	Poor oral hygiene Bruxism and teeth clenching -Tooth wear and fractures Medication side effects – Xerostomia Dental phobia Burning mouth syndrome	Oral health neglect Periodontal disease Dental caries Tooth loss TMJ disorders Reduced QoL Dental avoidance behaviour Chronic pain	3,20,37,60,61, 65,66,67,68, 69,75,76
Severe mental illnesses: Schizophrenia Bipolar disorder Psychosis	Mood stabilizers Antipsychotic medication Psychotropic medication Opiates Methadone Comorbid systemic conditions	Disorganized though Disorganized behaviour Selfcare deficits Mood changes Apathy Lack of motivation Tardive dyskinesia Cognitive impairment Dental phobia	Xerostomia (medication side-effects) Oral hygiene neglect Trauma to oral tissues Loss of teeth Bruxism	Poor oral health, Dental caries Periodontal disease Gingival hyperplasia Oral infections Abnormal flavour perception Excessive tooth wear TMJ disorders	3,20,37,38,55, 60,65,66,67,69, 71,76
Eating disorders: Bulimia Anorexia nervosa	Nutritional deficiencies Mental health issues Stress Comorbid systemic conditions	Shame Guilt Body image issues Obsessive compulsive behaviour Anxiety	Dental erosion/ tooth wear Increased sensitivity Dental caries Dental avoidance behaviour	Poor oral health Dental aesthetics issues Pain and discomfort Poor QoL	72,73
Substance use: Methamphetamine Cocaine Alcohol	Comorbid systemic conditions Stress Comorbid mental disorders	Apathy Unhealthy dietary habits Cognitive impairment	Oral health neglect Tooth loss Chronic pain Xerostomia	Poor oral health Exacerbate dental caries, periodontal disease, oral infections, oral cancers	3,18,20,61,65, 70,74,75

Professionalism

The core of professionalism is a therapeutic relationship built on competent and compassionate care by a clinician that meets the expectations and benefits a patient.[93] In this relationship, which is rooted in the ethical principles of beneficence and nonmaleficence the DHCP is required to fulfill their professional obligations including: (i) prevent oral disease; (ii) promote oral health; (iii) treat and cure disease; (iv) educate and council patients; (v) avoid harm to patients in the course of their care; and (vi) maintain competency. Professionalism demands placing the interest of patients above those of the provider, setting and maintaining standards of competence and integrity, and providing expert advice to society on matters of health.[96] In all interactions with patients, besides clinical and technical competence of a clinician, the human element of caring (one human to another) is needed. In different situations, caring can be expressed verbally and non-verbally (e.g., the manner of communication with both clinician and patient closely seated, and with unhurried, softly spoken words); a gentle touch especially when conveying "bad news"; and a firmer touch or grip to convey reassurance to a patient facing a difficult treatment choice.

Justice and Fair Treatment

Justice is generally interpreted as fair, equitable, and appropriate treatment of persons.[93]

Access to Care

Individuals with mental health disorders may face barriers in accessing regular dental care due to financial constraints, transportation issues, fear or anxiety related to dental visits, or stigma associated with seeking healthcare.[18, 38] Stigma and discrimination further exacerbate these disparities, leading to underdiagnosis and undertreatment,[22,94,95] leading to an increased risk in caries and periodontal disease.[38] Strategies

to improve mental health care access and reduce stigma are essential for addressing these disparities and improving overall mental health outcomes globally.[22,95]

DHCP should provide non-discriminatory and equitable care to all patients, regardless of their mental health status, ensuring that patients with mental health conditions have the same access to dental services and the same quality of care as other patients.

Fairness

Making reasonable accommodations for patients with mental health issues, such as scheduling longer appointments or providing a quiet space, can help ensure fair treatment. Increased social awareness accompanied by positive experiences characterized by empathy, reassurance and shared decision-making, are suggested to be empowering for patients.[95]

Interventions to address oral diseases in patients with mental disorders

Oral diseases and mental disorders are an expanding threat, which requires raised awareness, education, prevention, and treatment initiatives nationally and globally.[15,97] Dealing with their combined impact through integrated and preventive care approaches, and targeted interventions can lead to significant improvements in health outcomes and quality of life.[38,97] Additionally, taking into consideration shared risk factors (Table 1 & 2), can enhance the relevance and success of interventions.[98]

By considering the following treatment strategies, DHCP can provide more empathetic and effective care, ensuring a positive experience for patients with mental disorders.

Assessment of medical and dental history

Prior to beginning dental treatment, the clinician should establish good rapport with the patient, carer or legal guardian, and take a thorough medical history, including medications and comorbid conditions that might impact on oral and mental health.[20] The clinician should be non-judgemental, which can allow for more information to be disclose.[38]

Clinical assessment

Assess the stability of the patient's. If the patient is experiencing symptoms this may be a sign that he/she is not being managed effectively or they are not adhering to their medications. Record all medications and be aware of possible oral side-effects and interactions. The commonly used psychotropic medications to treat patients with psychiatric illnesses such as selective serotonin reuptake inhibitor, tricyclic antidepressants, antidepressants, and benzodiazepines frequently exhibit oral manifestations that promote oral diseases.[38,99] Dental practitioners should be aware of these potential manifestations and work closely with mental health care providers to manage the oral health and well-being of these patients effectively.

The oral cavity is also linked to potential physical manifestations of psychological origin. Oral symptoms such as facial pain, oral dysaesthesia, extreme palatal erosion, or self-inflicted harm are perhaps the first or sole signs of mental health issues.[100] Dental practitioners should be able to recognize these changes early in the course of the condition and provide appropriate treatment or collaborate with psychiatrists to make necessary modifications in the prescriptions.[99]

Establish an individualized oral care plan

Promoting good oral hygiene is of critical importance, therefor, a customized oral hygiene plan that accommodates the patient's unique needs and preferences, considering factors such as dexterity, mobility, and cognitive function should be established. Be flexible with appointment lengths and frequency based on the patient's ability to cope.

Providing education and training on proper oral hygiene techniques and the importance of diet can significantly reduce the risk of dental problems such as dental cavities and gum disease. Use clear, simple language and visual aids and allow extra time for explanations and for answering questions. Promoting oral hygiene and regular dental check-ups among individuals with mental health disorders can help prevent oral health complications and improve overall well-being.

Adaptive Tools and Techniques

Managing oral hygiene in patients with physical and cognitive disabilities requires a tailored approach to address the unique challenges they may face.[20] Promote the use of ultrasonic (Smart) toothbrushes with larger and extended, or angled handles for easier grip and for more effective removal of biofilm and oral hygiene. Their superior plaque removal capabilities, ease of use, and smart features enhance oral hygiene, while their role in establishing routines, boosting self-esteem, reducing dental anxiety, and promoting mindfulness can positively impact mental well-being. Consider preventive measures such as use of fluoride and antimicrobial tooth pastes and/or mouth rinses, fluoride treatments, sealants to reduce the risk of dental problems.

Positioning and Environment

DHCP need to be aware of, and manage several practical implications when treating patients with mental disorders.[20] Ensure the patient is in a comfortable and stable position during oral care. Minimize bright lights, loud noises, and strong smells to limit sensory sensitivity.

Caregiver and family Involvement

Some patients have to rely on caregivers or family to get access to oral health care facilities. Provide education and training for caregivers or family members on proper oral hygiene techniques and the use of adaptive tools to assist individuals with mental disorders.[20] Establish a consistent oral care routine that fits into the patient's daily schedule. Social support networks (family members) can influence health behaviours, including those related to oral health, by providing emotional and practical support.[20]

Addressing specific needs

It is important to be aware of the many interactions and side effects of the drugs used for the treatment of these patients. It is advisable for the dentist to contact the treating psychiatrist before initiating any medications.[37] Monitoring for medication side effects such as dry mouth is essential for maintaining oral health.[67] Prevention of oral mucosal and dental implications of dry mouth should be addressed by avoidance of caffeinated beverages, smoking cessation, advice on taking frequent sips of water throughout the day for adequate hydration, the use of artificial oral lubricants, (i.e., Biotene) saliva substitutes or saliva stimulants (i.e. sugarless gum with Xylitol) to help improve salivary flow.[37,67] Chlorhexidine rinses or gel can be used to assist with plaque control to help prevent periodontal disease. Fluoride rinses can also be used to prevent caries. Patients should be advised to limit sweetened beverages. Advise on a balanced diet that minimizes sugary and acidic foods to prevent decay and erosion. Patients should have frequent recalls to monitor their oral health and to ensure the preventive measures are effective at suppressing the progression of oral diseases.[38]

Manage behavioural and lifestyle Issues

Fear of going to the dentist is a common condition seen in patients with mental disorders with a prevalence oscillating between 6 and 20%, independent from culture and country, and is more frequent in females.[37] The most frequent fears regarding dentist consults are fear of the noise of the equipment, the vibrations in the mouth, and the needles.[37]

Implementing desensitization techniques through gradual introduction to dental tools and procedures, use of positive reinforcement, and a calm, supportive demeanor is suggested to manage behavioural issues.[101] Use techniques like deep breathing, calming music, or a weighted blanket to comfort the patient. Consider mild oral sedation or anaesthesia for highly anxious patients. Schedule appointments consistently at the same time of day to maintain routine. Send pre-visit information to familiarize the patient with what to expect.

Lifestyle issues should also incorporate smoking cessation, dietary and nutritional advice and stress reduction techniques, as they have synergistic effects on both oral and mental health.[20] Collaborate with a psychologist or behavioural therapist and involve caregivers to assist with lifestyle issues and to address the management of severe behavioural challenges during dental visits.

Collaboration with Other Healthcare Providers

An integrated care approach that involves collaborative efforts between DHCP and psychiatrists, psychologists, behavioural therapists, physical therapists, and primary care physicians, are crucial for addressing the complex interplay between oral health and mental health disorders, and to facilitate a holistic approach towards preventive, restorative and rehabilitative treatment planning that can improve outcomes for patients with both oral and mental health concerns.[12,15,20,38,71,97,102]

Public Health Strategies

Increasing education and awareness about the link between mental health and oral health can encourage better self-care and help-seeking behaviours. Interventions should include interdisciplinary education and training, improved communication, and strategies to reduce financial barriers and anxiety in dental practice.[98]Enhancing access to dental and mental health services, particularly for vulnerable populations, is essential for improving health outcomes. Regular dental check-ups and mental health screenings can help identify and address issues early.

Conclusions

The global importance of oral health and mental health is underscored by their extensive impacts on individual health, public health, economic productivity, and social well-being and QoL. Concurrently, the COVID-19 pandemic has precipitated a significant rise in mental health issues, including anxiety, depression, and chronic stress that has had a profound impact on both oral health and mental health world-wide.

Mental health disorders can negatively impact oral health, while poor oral health can exacerbate mental health issues through interplay of various biological, psychological, behavioural and social mechanisms. The complex bidirectional relationship between oral health and mental health emphasizes the need for integrated care approaches that address both aspects to improve overall well-being and QoL. Patients with mental disorders are generally more susceptible to dental cavities and periodontal disease due lack of motivation, poor oral hygiene, fear of visiting the dentist, difficulty to access health services, and adverse effects of medications, mainly xerostomia.

Effective management of oral and mental health requires a combination of reviewing medical and medication history, regular dental care, good oral hygiene practices, healthy lifestyle choices, stress reduction techniques, and professional oral and mental health support. Collaboration between dental care providers, mental health professionals, caregivers, and patients themselves is key to optimizing outcomes and promoting overall well-being. In all interactions with patients, besides the clinical and technical competence, the human element of caring is most needed. Overall good oral health will boost self-esteem and confidence, prevent dental pain and discomfort, reduce stress and anxiety, enhance social interactions, improved sleep quality, reduce the risk of systemic health issues, and promote a sense of well-being.

While more research is needed to fully understand the mechanisms and causal relationships between oral health and mental health, the existing evidence supports the notion that maintaining good oral health is important not only for physical health but also for psychological well-being. Integrated approaches to healthcare that consider both oral health and mental health are increasingly recognized as essential.

References

The full list of references 1-102 is available in the references document