

## Classification of Psychosomatic Disorders Affecting Orofacial Region: A Review

**Running Title:** Psychosomatic Disorders

**Type of article:** Review article

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**Published date: 02-01-23**

### Abstract

Psychosomatic conditions are characterised by physiological alterations that have a mixed emotional and physiological cause. Dental professionals frequently encounter halitophobia, phantom bite syndrome, burning mouth syndrome, chronic pain, occlusal discomfort, and other oral symptoms. The mental or emotional cause of these symptoms is believed to exist. There are many patients who visit the dentist with complaints that are primarily psychological in nature and that affect the perioral and oral structures and have clear psychosomatic causes, but who regrettably go undiagnosed due to the constrained nature of their presenting symptoms. Patients with these psychosomatic diseases should be treated with consideration for psychological management. The therapeutic strategy also includes several types of medicine and psychotherapy.

Keywords: Anxiety, Depression, Emotional factors, Psychosomatic disorders, Stress.

### Introduction

In 1818, psychiatrist Heinroth coined "Psychosomatic" to describe how psychological factors impact the body, leading to psychosomatic illnesses.<sup>1,2</sup> These conditions link emotional factors to physiological changes, involving neural, hormonal, and immunological elements.<sup>3,4</sup> Stress triggers responses like teeth clenching and compromises the immune system. Research explores stress's role in conditions such as high blood pressure and oral issues like lichen

planus.<sup>5</sup> Emotions like fear and joy communicate through the body's "organ language," illustrating the profound connection between mental states and physical well-being.<sup>6</sup>

**Classification of Psychosomatic Disorders**

The global classification of psychosomatic disorders categorizes them based on the presence or absence of tissue damage:

A - "Psychological dysfunction stemming from mental factors" refers to various physical symptoms or types of psychological dysfunction that originate from mental factors and do not involve tissue damage. These conditions are often influenced by the autonomic nervous system (ANS). Examples of such conditions include respiratory problems like hyperventilation and cough, cardiac neurosis, and skin diseases such as pruritis.

B - When tissue damage occurs, and psychological factors contribute to the onset of the condition, the following description is employed: mental influences or psychic components are believed to have played a significant role in the cause of certain physical conditions, which more commonly result in tissue damage. This classification encompasses psychogenic illnesses like urticaria, dermatitis, eczema, stomach ulcers, mucous colitis, and ulcerative colitis.<sup>7</sup>

A revised simple working type classification for psychosomatic disorders pertaining to dental practice was proposed by Shamim (Table 1).<sup>8</sup>

Table 1: Classification for psychosomatic disorders.

<p>1.1) Pain Related Disorders</p> <ol style="list-style-type: none"> <li>1. Myofascial pain dysfunction syndrome (MPDS)</li> <li>2. Atypical facial pain</li> <li>3. Atypical odontogenic pain</li> <li>4. Phantom pain II</li> </ol>
<p>1.2) Disorders Related to Altered Oral Sensation</p> <ol style="list-style-type: none"> <li>1. Burning mouth syndrome</li> <li>2. Idiopathic xerostomia</li> <li>3. Idiopathic dysgeusia</li> <li>4. Glossodynia</li> <li>5. Glossopyrosis</li> </ol>
<p>1.3) Disorders Induced by Neurotic Habits</p> <ol style="list-style-type: none"> <li>1. Dental and periodontal diseases caused by bruxism</li> <li>2. Biting of oral mucosa (self-mutilation)</li> </ol>
<p>1.4) Autoimmune Disorders</p> <ol style="list-style-type: none"> <li>1. Oral lichen planus</li> <li>2. Recurrent aphthous stomatitis</li> <li>3. Psoriasis</li> <li>4. Mucous membrane pemphigoid</li> <li>5. Erythema multiforme</li> </ol>
<p>1.5) Disorder caused by altered perception of dentofacial form and function</p> <ol style="list-style-type: none"> <li>1. Body dysmorphic disorder</li> </ol>

- 1.6 Miscellaneous Disorders
  1. Recurrent herpes labialis
  2. Necrotising ulcerative gingivostomatitis
  3. Chronic periodontal diseases
  4. Cancerphobia

Source: Shamim T. A simple working type classification proposed for the psychosomatic disorders of the oral cavity. *J Coll Physicians Surg Pak* 2012; 22: 612.

### **Pain-Related Disorders**

Conditions affecting the oral and facial area characterized by unspecific pain and believed to be triggered by psychological stress fall into the category of pain-related illnesses.<sup>1</sup> This category comprises disorders as following:

#### **1. Myofascial Pain Dysfunction Syndrome (MPDS)**

Myofascial Pain Dysfunction Syndrome (MPDS) is a prevalent musculoskeletal disorder characterized by trigger points in muscles and fascia, causing localized or referred pain and functional impairment. This complex condition involves myofascial trigger points—hyperirritable nodules or taut bands in skeletal muscles and connective tissue. Etiology is multifactorial, linked to muscle overuse, trauma, poor posture, stress, and structural abnormalities. Trigger point development involves inflammatory mediators, muscle ischemia, and metabolic byproducts, heightening muscle sensitivity. MPDS manifests as regional or diffuse muscle pain, restricted motion, and weakness. Diagnosis is challenging due to localized or referred pain.<sup>10</sup> Treatment employs a multidisciplinary approach, including direct injections, stretching, massage, physical therapy, NSAIDs, and muscle relaxants. Heat or cold packs alleviate spasms, while addressing emotional and psychological factors is crucial. Correcting posture, promoting a healthy lifestyle, and stress reduction techniques contribute to symptom management. Overall, MPDS management focuses on pain relief, enhancing muscle function, and addressing contributing factors.<sup>10</sup>

#### **2. Atypical facial pain**

Atypical facial pain initially observed by Frazier and Russell<sup>11</sup>, is a medically unexplained symptom believed to have a psychogenic origin. Manifesting as burning, painful, or cramping sensations, it often occurs unilaterally in the trigeminal nerve's innervation zone, with potential radiation to the upper neck or back of the scalp. The term "atypical" reflects its deviation from typical toothaches, lacking precise localization within sensory nerve boundaries. Typically affecting the elderly, it equally impacts men and women, with a lower incidence in children.<sup>12</sup> Chronic facial pain, lasting at least 6 months, poses diagnostic challenges, often leading to misdiagnosis or attribution to prior dental procedures or trauma. Accompanying depressive or anxiety-depressive symptoms aid diagnosis.<sup>11</sup> Clinical management involves screening for depression, employing pharmacological approaches like antidepressants or antiepileptics, and recommending cognitive-behavioral therapy. The "retribution" technique explores physical, emotional, and social factors, explaining how depression, fatigue, and muscle tension contribute to pain.<sup>12</sup>

### 3. Atypical odontogenic pain:

Atypical odontogenic pain is linked to unexplained toothache and is more prevalent in women during their fourth to fifth decades of life. The precise cause of this condition remains unknown. It is perceived as neuralgia that emerges following tooth extraction, pulp extirpation, or neuroma amputation. Additionally, it might be connected to a degenerative process in the trigeminal nucleus. Some authors propose a vascular or neurovascular origin for atypical odontalgia, while recent discussions have included a psychogenic etiology.<sup>13</sup> In a study, 42% of individuals with atypical odontogenic pain reported depressive symptoms, raising questions about whether "depression causes pain or pain has led to depression". Regarding clinical management, tricyclic antidepressants like amitriptyline and nortriptyline are generally considered beneficial in alleviating the condition.<sup>14</sup>

### 4. Hallucinative pain/ Phantom pain:

Phantom pain is the sensation experienced as originating from a body part that no longer exists; typically observed in individuals with amputated limbs, it can also manifest following surgeries to remove a breast, eye, penis, tongue, or tooth.<sup>15</sup> This type of pain is neuropathic in nature, persisting even in the absence of tissue damage. Neuropathic pain lacks an adaptive function and can significantly impact the affected individuals' quality of life. It occurs independent of the cause of amputation and may not diminish over time, posing the risk of developing into a chronic and resistant condition.<sup>16</sup> Patients may perceive an irregular bite when no physical discrepancies can be found, as described by Marbach's concept of a "phantom bite."<sup>17</sup> Concerning clinical management, the literature suggests over 60 different therapies for phantom pain, although limited randomized controlled trials have been conducted to establish robust evidence of their efficacy. The most commonly employed methods include pharmacotherapy, involving medications like lidocaine or other pain relievers, surgical interventions, and prosthetic replacement of the missing organ.<sup>15</sup>

### Disorders Related to Altered Oral Sensation

A persistent burning sensation within the mouth may indicate a condition related to impaired oral sensitivity.<sup>8</sup> This category encompasses glossopyrosis, idiopathic dysgeusia, idiopathic xerostomia, and burning mouth syndrome.

#### 1. Burning mouth syndrome (BMS):

Burning mouth syndrome is defined by an intraoral burning sensation and lacks identifiable medical or dental causes. This condition is often associated with somatization, depression, anxiety, and reduced quality of life. Research suggests that factors like cancerphobia, anxiety, depression, and other psychological conditions are linked to burning mouth syndrome.<sup>18</sup> The behavioural effects of burning mouth syndrome can be categorized into chronic vegetative disorders, chronic somatic disorder, and chronic pain phenomena.<sup>19</sup>

#### 2. Idiopathic xerostomia:

Xerostomia, a common condition characterized by changes in the quantity and quality of saliva, often referred to as dry mouth or reduced salivary function. Various factors such as systemic disorders like Sjogren's syndrome, the side effects of certain medications with anticholinergic properties, psychosocial influences, and physiological alterations can all

contribute to this condition.<sup>20</sup> Patients with idiopathic subjective dry mouth often exhibit symptoms of depression.<sup>21</sup>

### **3. Idiopathic dysgeusia:**

Dysgeusia, a term describing a persistent abnormal taste sensation. It can arise due to insufficient saliva production, which is essential for proper taste function, or it may be a side effect of burning mouth syndrome in individuals with psychological conditions. Dysgeusia is a common oral complication in cancer patients, often resulting from treatments like radiation, chemotherapy, or multimodal therapy, negatively impacting their quality of life.<sup>18,22</sup> Sadly, the root triggers are often unknown, leading to cases being classified as idiopathic dysgeusia.<sup>23</sup>

### **4. Glossodynia:**

Glossodynia is a psychological condition characterized by chronic discomfort on the superior layer of the tongue.<sup>24</sup> It is typically associated with conditions like Burning Mouth Syndrome (BMS), Candida-associated lesions (CAL), or both.<sup>25</sup>

### **5. Glossopyrosis:**

Glossopyrosis is a condition characterized by a burning sensation on the tongue, often occurring alongside the burning mouth symptom. This syndrome can be triggered by various factors related to the gastrointestinal tract, immune system, brain, psychological factors, and skin. Prolonged episodes of depression are frequently observed before the full clinical profile of glossopyrosis develops.<sup>26</sup> In glossopyrosis patients, lingual burning is constant with pain hypersensitivity, and neurological inflammatory response has been seen in tissues deficient in magnesium, as well as in individuals and animals with hypomagnesemia.<sup>27</sup>

## **Disorders Resulting from Neurotic Behaviours**

Conditions stemming from neurotic behaviours lead to parafunctional activities in the mouth's soft and hard tissues.<sup>8</sup> This category encompasses tooth-related and periodontal issues caused by teeth grinding and clenching and self-mutilation (biting the oral mucosa).

### **1. Dental and Periodontal Problems Associated with Bruxism**

Bruxism refers to the parafunctional clenching and grinding of upper and lower teeth, often involving intense pressure exerted for longer durations than typical mastication.<sup>28</sup> While stress and depression are considered threat factors for bruxism, the exact physiology and pathophysiology of the condition remain unclear.<sup>29</sup> Behavioural issues in children and potential emotional factors have also been identified as risk factors for bruxism.<sup>30</sup>

### **2. Oral Mucosa Biting (Self-Mutilation)**

Chronic biting of the tongue, cheek, or lip causing self-mutilation results from the chewing of the oral mucosa. These lesions are often observed in individuals experiencing high levels of stress, so it's important to investigate any psychogenic factors in those displaying this behaviour.<sup>31</sup>

## **Autoimmune Disorders**

Psychological stress plays a role in the progression of autoimmune diseases, which are usually skin-related conditions with oral symptoms.<sup>8</sup>

### **1. Oral Lichen Planus (OLP)**

Lichen planus is a chronic immunologic inflammatory disease of the skin and mucosa characterized by a distinct symmetrical pattern of white keratotic lines known as Wickham's

striae on the buccal mucosa.<sup>32</sup> Although the precise cause of OLP remains uncertain, it is believed to involve immunologic abnormalities. Presently, it is considered a state that may manifest as a psychological issue due to stress, anxiety, and depression.<sup>33</sup> Cutaneous lichen planus (CLP) frequently affects the flexor surfaces of the extremities, displaying as small, itchy, violaceous papules in middle-aged adults. The conventional 6 "P's" of LP- "Pruritic, Purple, Polygonal, Planar, Papules, and Plaques"—are commonly associated with CLP. These lesions typically appear bilaterally and exhibit a relatively symmetrical distribution. Oral lichen planus (OLP) may manifest as the exclusive clinical presentation of the disease or coexist with cutaneous or other mucosal symptoms, including those in the genital area, gastrointestinal tract, and eyes.<sup>33</sup> Figure 1 shows Reticular form of oral lichen planus at the right buccal mucosa.



**Figure 1. Reticular form of oral lichen planus at the right buccal mucosa**

Source: Glick M, Greenberg MS, Lockhart PB, Challacombe SJ. *Burket's Oral Medicine*. 13th edition. USA: Wiley; 2021: 108.

## 2. Recurrent Aphthous Stomatitis

The term "aphthous" originates from the Greek word "aphtha," signifying ulceration. Recurrent aphthous stomatitis (RAS) stands out as one of the prevalent and painful conditions affecting the oral mucosa in patients. These ulcers manifest as recurring, small, round, or oval-shaped sores with well-defined borders, featuring yellow or grey bases and being encircled by red halos. Typically, these ulcers first appear during childhood or adolescence.<sup>34</sup> Recurrent aphthous stomatitis (RAS) is a persistent inflammatory condition affecting the oral mucosa, and its origin remains uncertain. The diagnosis relies on a thorough medical history and clinical examination. There appears to be a hereditary inclination, with up to 46% of individuals reporting a family history of RAS. Several factors contribute to the predisposition to RAS, including local injuries, stress, smoking cessation, anaemia, and deficiencies in hematinic substances.<sup>35</sup>

## 3. Psoriasis

Psoriasis is a chronic, hereditary, scaly, and inflammatory skin condition characterized by periods of improvement and exacerbation. The term 'psora,' meaning itch, was accurately described by Willan. Typically manifesting in the second and third decades of life, the condition does not exhibit gender or social preferences. The most common form is psoriasis vulgaris, identified by distinct papulosquamous plaques. These plaques, displaying a red or

salmon pink color, are covered by white or grey scales and tend to appear symmetrically. Common areas affected include the extensor surfaces of the elbows and knees, the scalp, lumbosacral region, and the umbilicus. Notably, the Koebner phenomenon is observed, leading to the emergence of new lesions at sites of trauma or pressure.<sup>36</sup> Oral manifestations in psoriasis manifest in four primary types of lesions:<sup>37</sup> distinct yellowish-white lesions, round to oval in shape, independent of cutaneous psoriasis; white, lacy, circinate, elevated lesions on the mucosa and tongue corresponding to skin lesions; erythema or redness of the entire oral mucosa associated with acute psoriasis exacerbation; and geographic tongue, more frequently observed in patients with cutaneous psoriasis than in controls.<sup>36</sup>

#### 4. Mucous Membrane Pemphigoid

The main damage in MMP occurs when autoantibodies (IgG and/or IgA) targeting Basement Membrane Zone (BMZ) antigens trigger an inflammatory reaction, resulting in subepithelial separation and the formation of vesicles. MMP, also addressed by cicatricial pemphigoid solely extends to involve the mucosal surfaces sparing the skin.<sup>38</sup> Predominant antibodies of IgG type are active against the hemidesmosomal structural proteins leading to cell-to-cell detachment. Oral lesions extend to involve gingival, palatal, labial, buccal mucosa and tongue. Lesions are erythematous erosions with underlying slough. At times, intact vesicle/bulla can be seen. It is characterized by redness in the connected gum tissue, with or without the presence of blisters and ulcers. This condition can be either confined to a specific area or affect the gums overall. In other locations, manifestations can appear as areas of redness, unbroken blisters, or ulcers characterized by a yellow base and clearly defined edges. Although scarring is uncommon in the oral mucosa, it may manifest as a reduction in sulcal depth or scarring of the buccal mucosa or soft palate. For mild oral conditions, improving oral care practices and employing topical corticosteroids can be beneficial. This can be done by applying corticosteroids directly, using a paste like clobetasol and Orabase (utilizing a custom tray if necessary), or as a mouthwash, such as a 3-minute rinse with betamethasone sodium phosphate or fluticasone propionate.<sup>38</sup>

#### 5. Erythema Multiforme

It is an acute variety of immune-mediated disease with most likely to be the type 4 hypersensitivity. The skin lesions typically manifest as target-like giving the classic appearance. Cytotoxic intra- and subepithelial damage takes place, possibly as a result of keratinocyte antigens. Furthermore, it has been established that certain individuals have autoantibodies that attack the epidermis, as well as desmoplakin 1 and 2.<sup>39</sup> The involvement of mucosal surfaces in EM is less frequently encountered, but when it does, it is often self-limiting. But the clinical features can be best described as formation of vesicles and erythema the erodes and forms ulcerations covered in pseudomembranous slough or necrotic debris predominantly involving labial/buccal mucosa and vermilion border of lip as well. Another noticeable manifestation is bloodstained crusts on the lips, which cause speaking and feeding difficulties. Stress appears to be a contributing factor in this condition, as it can dysregulate T-lymphocyte activity.<sup>40</sup>

## **Disorders Caused by Altered Perception of Dentofacial Form and Function**

### **1. Body dysmorphic disorder (BDD)**

Body Dysmorphic Disorder (BDD) is a mental health condition marked by an obsessive focus on perceived physical flaws causing distress. Key features include preoccupation with minor flaws, repetitive behaviors (grooming, seeking reassurance), and interference with daily life.<sup>41</sup> BDD often leads to avoidance of social situations and impaired insight. Starting in adolescence, it may cause chronic emotional distress, anxiety, and depression. Though its exact cause is unclear, genetic, neurobiological, environmental, and psychological factors contribute. Associated with depression, anxiety disorders, and OCD, BDD is treated with psychotherapy (especially cognitive-behavioral therapy) and medication, like selective serotonin reuptake inhibitors. Early intervention aids symptom management and overall well-being.<sup>42</sup>

### **Conclusion**

In summary, this article introduces psychosomatic disorders related to dental practice, offering a revised working type classification. The updated classification replaces the term "psychosomatic disorders of the oral cavity" with "psychosomatic disorders pertaining to dental practice." The psychosomatic origin is already suggested for orofacial pain in dental practice. It is recommended to implement this modified classification into the DSM-5 system and to assess its validity. Psychological factors often contribute to the development of oral cavity symptoms. Furthermore, various mental health conditions can impact the well-being of oral tissues. When everyday stress levels increase, dental professionals are more likely to come across patients with these conditions. As a result, it is crucial to recognize these symptoms and, when necessary, collaborate with psychiatrists and psychologists to address them. This underscores the importance of a multidisciplinary approach. In the field of psychosomatic dentistry, it is not only dental interventions but also psychological therapy and potentially medication that are advisable.

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