

EDITORIAL

Effect of the SARS-CoV-2 pandemic on the population's mental and oral health

Efeito da pandemia de SARS-CoV-2 na saúde mental e bucal da população

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The SARS-CoV-2 pandemic, which emerged in December 2019 in Wuhan, China, and is widely known as COVID-19, continues to exert profound impacts on both mental and oral health. According to the World Health Organization (WHO), at least one-third of individuals exposed to the pandemic may develop psychopathological manifestations, depending on factors such as economic, geographic, and cultural vulnerability¹.

There has been a marked increase in the diagnosis of psychological disorders, including anxiety, stress, and depression, largely driven by the emotional toll of human loss and the effects of social isolation². Clinical and epidemiological studies have demonstrated a strong correlation between psychological distress and perceptions related to the COVID-19 pandemic². These psychological effects directly influence mood regulation, sleep quality, and oral health, particularly manifesting as bruxism among affected individuals².

The emergence of mood disorders during the pandemic is attributable to multiple interacting factors, including psychosocial and economic pressures. Health measures imposed to contain the virus disrupted social dynamics, weakened interpersonal relationships, and jeopardized the financial stability of large segments of the global population. Coupled with fears over personal safety, these circumstances significantly contributed to psychological and emotional vulnerability. Studies report a sharp rise in the incidence of depression and anxiety disorders during the pandemic, many of which remain underdiagnosed

but nonetheless pose substantial mental health risks. Personal and material losses further acted as catalysts for psychological distress, while persistent worry and sadness exacerbated emotional burden²⁻⁵.

Bruxism is a parafunctional disorder characterized by involuntary rhythmic movements of the jaw. Research suggests a significant association between bruxism and dopaminergic dysfunction within the nigrostriatal pathway, which is implicated in stereotyped and repetitive behaviors. Stress-induced tension often manifests unconsciously as tooth clenching or grinding, serving as a compensatory mechanism to relieve psychological overload. This phenomenon is especially pronounced during sleep. Notably, mood disorders are strongly linked to the development and exacerbation of bruxism and its long-term consequences²⁻⁵.

Mood disorders, particularly anxiety and depression, substantially impair quality of life, affecting both mental and physical domains. Persistent feelings of sadness, worry, irritability, and difficulty concentrating diminish functional capacity. Simultaneously, disruptions in sleep patterns and the inability to achieve relaxation elevate stress levels. Physical manifestations, such as the worsening of dental conditions like bruxism, often reflect the underlying psychological strain²⁻⁵.

Recent studies, including that by Shalev-Antsel et al.,³ revealed that after the onset of the SARS-CoV-2 pandemic, individuals were 3.3 times more likely to be diagnosed with painful temporomandibular disorders

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(TMD) compared to the pre-pandemic period. The risk of non-painful TMD during the pandemic was four times higher, while the likelihood of developing probable sleep bruxism was 2.7 times greater. Notably, the odds of experiencing awake bruxism after the pandemic were 3.2 times higher than before³.

Once a behavioral pattern of sustained tension becomes established, intertwined with declining mental health, a self-reinforcing cycle emerges. The symptoms of bruxism—particularly pain and physical fatigue—further reduce the capacity for relaxation, intensifying stress levels and, consequently, exacerbating mood disturbances. Conversely, anxiety and depression amplify the repetitive muscular activity characteristic of bruxism, perpetuating a feedback loop that consolidates the problem and renders it increasingly difficult to interrupt³⁻⁵.

Given these realities, it is imperative to advance interdisciplinary strategies aimed at understanding, preventing, and managing the psychological and physical consequences of the pandemic. Such efforts should incorporate psychological support services, targeted therapeutic interventions, and comprehensive care approaches that promote overall well-being and mitigate the downstream effects of psychiatric disorders, including bruxism.

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