BRUXISM AND ITS RELATIONSHIP WITH SOCIO-AFFECTIVE ASPECTS DURING THE COVID-19 PANDEMIC

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ABSTRACT

Bruxism is the habit of clenching or grinding teeth, being part of the lives of many Brazilians, of both sexes and at different ages. This disorder can be daytime and nighttime and the most common clinical sign is wear of the incisal surfaces of the anterior teeth and occlusal surfaces of the posterior teeth. Its origin is multifactorial, and may be associated with several etiological factors, such as psychological, due to the experiences of stress, anxiety and depression. Treatments vary according to the patient, requiring multidisciplinary actions, in addition to the dental surgeon, who is highly sought after for his treatment. The objective of this literature review was to verify whether there was an increase in bruxism and teeth clenching during the COVID-19 pandemic, due to the levels of stress, anxiety, worry, fear, grief, and depression in people as a result of the social isolation imposed by the World Health Organization and other shocks arising from the pandemic situation. The bibliographic search was carried out in the VHL, BVS-Psi, PUBMED and SciELO databases using the descriptors "bruxism", "bruxism in the pandemic", "bruxism and COVID-19", for full texts, in Portuguese, English and Spanish, with publications between December 2019 and December 2022. Reports of dental surgeons who attended many cases of bruxism during the COVID-19 pandemic due to the high level of emotional stress of patients were found reporting fear, grief, pressure of social isolation and worry. Thus, studies show a significant increase in parafunctional activity and poor sleep quality, under the association between stress and anxiety caused by the pandemic.

Keywords: Bruxism. COVID-19. Pandemics.

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INTRODUCTION

The World Health Organization (WHO) was alerted, on December 31, 2019, about the health status of the Chinese with a high demand for pneumonia in the city of Wuhan: it was a new strain of the coronavirus, called SARS-CoV-2. [1]

In Brazil, the first case was registered in February 2020, starting social distancing on March 11, 2020, recommended by the National Health Council and the population was forced to stay at home, away from work and their socio-affective relationships, due to the high risk of contagion from the virus, requiring more restrictive social distancing, the confinement or "*lockdown*" in some territories. This measure was only taken due to the exacerbated increases in COVID-19 cases and greater occupancy of ICU beds in Brazilian hospitals. [2]

Such imposed social isolation brought many socioeconomic and psycho-affective impacts that had repercussions on the mental health of many people. This is because there was an increase in unemployment, reductions in income, domestic violence, in addition to the fear of contamination, its consequences and the possibility of death, mourning for acquaintances and strangers who died as a result of the coronavirus, in short, demands that were too distressing and for a long time, since the pandemic extended much longer than expected. [3]

In this scenario, this study aimed to investigate the relationship between bruxism and clenching teeth and other socio-affective impacts promoted by the COVID-19 pandemic, discussing whether there was an increase in bruxism and clenching teeth in the pandemic, due to the levels of stress, anxiety, worry, fear, grief and depression in people as a result of social isolation at the request of the World Health Organization and other shocks arising from the pandemic situation.

CHARACTERIZATION OF BRUXISM

Bruxism is a parafunctional activity that affects adults of both sexes. The disorder causes involuntary clenching of the teeth, especially during the night while the patient is sleeping, and teeth grinding, interfering with the quality of sleep and the patient's social life. It is classified into two types: centric (clenching of the teeth) and eccentric (grinding of the teeth). Its etiology is unknown, and it may be associated with several etiological factors, such as systemic, local, psychological, and hereditary. The diagnosis is usually made by a dental surgeon upon consultation. [4]

The clinical characteristics of patients with bruxism most often are: tooth wear, pain in the temporomandibular joint and muscles, headache, pulpitis, damage to the periodontal

ligament, tooth mobility, ringing in the ear, increased tooth sensitivity, among others. Some imaging tests may be requested to evaluate Bruxism, such as MRI and X-rays. [5]

ANXIETY, ITS VICISSITUDES AND ORALITY IN PSYCHOANALYSIS

Anxiety is considered normal in situations of fear, doubt or expectation, such as the cases of that test where you really need a favorable grade or before a much-desired trip. In other situations, it is important to record Generalized Anxiety Disorder (GAD), which often presents with sleep problems, comorbidities with depression, apprehensive anticipation, difficulty controlling worry, palpitations, shortness of breath, tachycardia, whose associated symptoms are difficulty concentrating and forgetfulness, the "blank mind". In clinical practice, patients with anxiety commonly manifest cognitive complaints and lack of confidence in their cognitive performance, which often interferes with their functionality at the occupational level. [6]

Studies have indicated that the numbers of anxiety diagnoses have increased as a result of the COVID-19 pandemic. The bad news and exaggerated information in the media made anxiety about health excessive and some people started having hypochondriac symptoms. On an individual level, this can manifest as maladaptive behaviors (repeated doctor visits, avoiding medical care even if really sick, hoarding specific cleaning supplies such as toilet paper, disinfectants, etc.), and on a broader societal level, it can lead to distrust of public authorities and feelings of being the "scapegoat" for certain populations or groups [6].

With social isolation, while everyone stayed at home watching people dying or being hospitalized, fear and insecurity surfaced, being invaded by the thought of losing a family member or even being contaminated, arousing anxiety in many. [7]

Even physicians and other health professionals (with major aggravations in nurses) did not unleash intense psychic suffering; participating in the front line of collective health actions, they experienced greater daily fear of contamination, potentiating anxiety and depression, as well as stress, anguish and altered sleep. Treatment of mental disorders, such as GAD, may include the use of antidepressant or anxiolytic medications, under medical guidance, and psychotherapy. [8]

The oral cavity is the first organ of the stomatognathic system that is interconnected with the respiratory system. When a person comes into the world, the mouth plays a fundamental role in the diet and development of an individual. The only and main food in the life of a newborn is breast milk, which when sucking on the mother's breast, works the muscles of the face and the entire gastroesophageal and intestinal system. [9]

The psychoanalytic theory of psychosexual development, developed by neurologist and psychiatrist Sigmund Freud, is divided into five phases, the first of which is called the oral phase, covering the first two years of the child's life. The aforementioned psychoanalyst states that the oral phase is the first manifestation of sexuality, aggressiveness, other affections and libidinal evolution of the child. Freud [9] says that it is from breastfeeding that sexual pleasure will be linked to the excitement of the oral cavity, which accompanies the baby's feeding. Thus, the baby is satisfied through the mother's breast, the first object of the sexual instinct. Abraham [9] explains that this region shows the primary sources of pleasure, frustration and pain. It is a place for expressions of habits, such as nail biting, smoking and biting objects. [9]

This contact between psychoanalysis and dentistry brings comprehensive discussions about the triggering factors of problems caused in the oral cavity, which can begin in childhood and have consequences for the health of the mouth in adolescence and adulthood. [9]

Barreto [9] claims that the prolongation of breastfeeding (natural and/or artificial), as well as the use of substitutes (pacifier, thumb and cloths) can be the basis for dental problems. [9]

Parafunctional habits and their evolution can begin in childhood and continue in adulthood; situations of stress, fear, and sudden changes in daily life can trigger parafunctional activities, such as grinding and clenching teeth. It is known that psychosocial and economic damage has occurred in the world population due to the COVID-19 pandemic, causing more than 6.5 million deaths and more than 60 million cases worldwide, according to the latest data updated on November 3, 2022, by *Our World in Data*. [10]

Faced with uncertainties and waiting for a vaccine, the world population was in a state of alert and vulnerability, which caused stress, fear, depression, loneliness and insomnia. In view of these facts, this scenario may have been able to stimulate bruxism or to worsen the existing situation, since social restriction was the measure taken on a global scale to contain the exacerbated contamination of COVID-19. [7]

Consultations with health professionals have become limited, especially dental surgeons, because through the aerosols and droplets generated during dental procedures for dental and surgical bone cooling, the risks of transmission have been judged as a threat to the health of both dentists and patients. As a result, only emergency dental procedures were advised, such as caries in advanced stages, pulpitis and abscesses. It is important to note that this occurred for a short time, as Dental Surgeons adapted to the new phase,

using all the Personal Protective Equipment (PPE) necessary on the front line of the fight against COVID-19, making care safer, both for them and for patients. [11]

In general, dental procedures had to be interfered with manually and, with the limitation of services due to the pandemic, this market felt the need for innovation until activities were resumed in person. In cases of orofacial pain in the initial stage, bruxism and clenching, teledentistry or remote consultation was a solution found in order to provide first aid to patients with the complaint of these diseases. The guidelines of the Dental Surgeon using the remote medium to mitigate the side effects of the pandemic on oral and orofacial health were self-massage to release muscle tensions in the face, drug therapies, stretching, meditation, mindfulness practice, sleep repair and the use of digital applications with notifications ordered according to the patient's needs for jaw relaxation. [11]

METHODOLOGICAL PROCEDURES

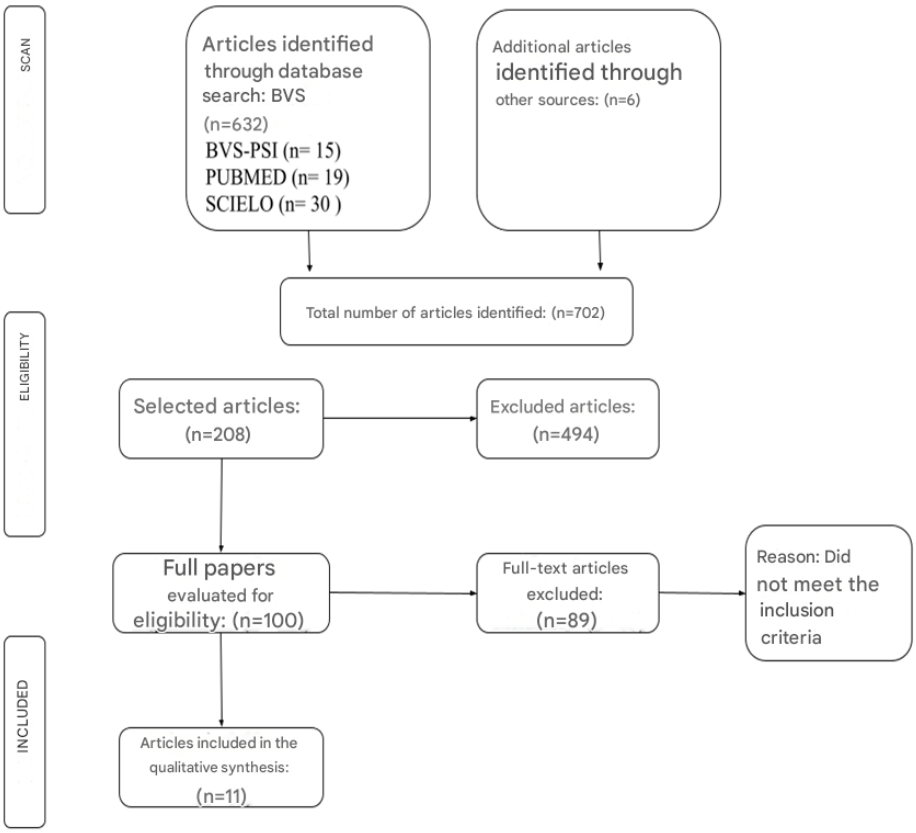
For this literary narrative review study, bibliographic research with a qualitative approach and descriptive nature was used. The survey prioritized scientific articles indexed in the Virtual Health Library (VHL) portal, Virtual Health Library - Psychology Brazil (BVS-Psi), in the National Library of Medicine (PUBMED) platform and in the electronic journals available in the Scientific Electronic Library Online (SciELO), and was carried out in May 2022.

The inclusion criteria were: articles published in Portuguese, English and Spanish, with full texts, available in full and free for *download*, with a time frame from December 2019 to December 2022, due to the current era experienced worldwide in the last two years. The exclusion criteria were: studies that addressed other types of subjects in relation to bruxism and studies that were outside the present theme.

To search for studies, the combination of scientific descriptors was used: Bruxism; Bruxism in the pandemic; Bruxism *and* COVID-19, with the purpose of identifying among the articles of this research whether there was an increase in bruxism during the COVID-19 pandemic due to the levels of stress, anxiety, worry, fear, grief and/or depression in people, as a result of social isolation and other impacts promoted by the COVID-19 pandemic.

The protocol used for the selection of articles and documents in the databases is present in the flowchart presented below:

Flowchart 1: follow-up of the search and choice of articles.



RESULTS

The search carried out located 632 publications on the VHL Health portal, 15 in the VHL-Psi, 19 in PUBMED, 30 in SciELO and 6 publications through other sources, with a total of 702 publications identified. In this study, 494 articles were excluded due to duplication or for not meeting the inclusion criteria. The initial selection of texts was carried out from the title and abstract, leaving 208 texts. Then, publications with full texts based on the specific theme were selected, leaving 100 texts. Based on the eligibility criteria, 89 articles were excluded because they did not meet the inclusion criteria, resulting in 11 scientific articles selected from the integrative systematic review protocol described in [flowchart 1] and [table 1].

Table 1: synthesis of the selected articles, prepared by the authors (2022)

Authors / Year	Title	Objective	Results
SCHAVARSKI, C.; CARVALHO, G. R. de; PERRY, E. L.; RIBEIRO, J. D. T.; PAIVA, S. M.; PORDEUS, I. A.; SERRA-NEGRA, J. M. 2021	Fear of COVID-19 and factors associated with possible sleep and/or wakefulness bruxism among university students in the southeastern region of Brazil during the COVID-19 pandemic	To analyze the association between the level of fear of COVID-19, as well as other factors associated with the prevalence of possible bruxism among university students.	The prevalence of Possible Sleep Bruxism (PBS) was 12.5% and in Possible Wake Bruxism (PBV) was 23.8%, with no association between COVID-19 fear scores in both. A higher prevalence of PBV was observed among participants who did not work, with a higher percentage among university students in the second half of the course and who were attending graduate studies. Finally, bruxism was more prevalent among students enrolled in stricto sensu graduate programs compared to those in lato sensu graduate programs.
PEIXOTO, K. O.; RESENDE, C. M. B. M. de; ALMEIDA, E. O. de; ALMEIDA-LEITE, C. M.; CONTI, P. C. R.; BARBOSA, G. A. S.; BARBOSA, J. S. 2021	i.Association of sleep quality and psychological aspects with reports of bruxism and TMD in Brazilian dentists during the COVID-19 pandemic.	To evaluate the emotional state of sleep characteristics, TMD traits, and bruxism in Brazilian dentists during the COVID-19 pandemic.	It was concluded that a probable TMD was found in 24.3% of the 156 participants; possible sleep bruxism in 58% of the 372 subjects and awake bruxism were diagnosed in 53.8% of the 345 investigated. Depressive symptoms were significantly higher in the group that was in quarantine when compared to those who worked in the clinic. Those who worked were significantly less likely to manifest depressive symptoms. The study concluded that dentists who were not worried or were less worried about the pandemic were less likely to experience stress, anxiety, and poor sleep quality. Finally, sleep showed a strong positive correlation in frontline workers and a moderate correlation with psychological factors in DCs in outpatient care.
WITH ONE, T. C. A.; WITH ONE, T. M.; MATOSO, A. G. B.; JANUZZI, E.; DAL FABBRO, C. 2021	COVID-19 - The clinical consequences of social isolation and the relationship with sleep bruxism and comorbidities	Describe the possible association between anxiety and poor sleep quality (sleep bruxism).	The conditions of social isolation, in addition to impairing the quality of life, have altered the quality of sleep, and it is very important for people to have the establishment of a healthy routine, from the food consumed to the regulated sleep.
ALMEIDA-LEITE, C. M.; STUGINSKI-BARBOSA, J.; CONTI, P. C. R. 2020	How psychosocial and economic impacts of COVID-19 pandemic can interfere on bruxism and	To describe the importance of psychosocial factors in the development of Temporomandibular Disorders.	It was noted that psychological factors can cause or aggravate Bruxism and TMD.

	temporomandibular disorders?		
EMODI-PERLMAN, A.; ELI, I.; MOREL, J.; UZIEL, N.; WIĘCKIEWICZ, G.; GILON, E.; GRYCHOWSKA, N., WIĘCKIEWICZ, M. 2020	Temporomandibular Disorders and Bruxism Outbreak as a Possible Factor of Aggravation of Orofacial Pain During the COVID-19 Pandemic – Concomitant Research in Two Countries.	To review recent articles on TMD, bruxism, and orofacial pain during the COVID-19 Pandemic in the database. Symptoms, screening, diagnosis, tension and immediate risks due to social isolation.	Studies found in the database from the COVID-19 pandemic point to the worsening of the signs and symptoms of TMD and bruxism in the general population and patients with TMD.
WINOCUR-ARIAS, O.; WINOCUR, E.; SHALEV-ANTSEL, T.; REITER, S.; LEVRATOVSKY, S.; EMODI-PERLMAN, A.; FRIEDMAN-RUBIN, P. 2022	Painful temporomandibular disorders, bruxism, and oral parafunctions before and during the COVID-19 pandemic era: a sex comparison among dental patients.	To analyze the prevalence of bruxism, parafunctional habits, and painful Temporomandibular Disorders (TMDs) in a patient population divided between men and women according to the date of the exam, with 108 patients examined in the pre-COVID-19 pandemic era and 180 examined during the pandemic.	There was a higher prevalence of awake bruxism and sleep bruxism in women and a significant increase in parafunctional habits in both sexes during the pandemic.
DADNAM, D.; DADNAM, C.; Al-SAFFAR, H. 2021	Pandemic Bruxism	Description of bruxism and its increase during the covid-19 pandemic through a letter described by dental surgeons in up to 500 words to a British dental journal	An increase in bruxism and Temporomandibular Disorders was found in patients suffering from an aggravated psychoemotional state. This pathology is being found more and more in the daily life of the Dental Surgeon.
PUPPIN, C. F. 2021	Bruxism in times of pandemic: a dialogue between dentistry and psychoanalysis	To associate psychological aspects and bruxism through a case report during the COVID-19 pandemic	Only data regarding the main complaint and the patient's general health were collected. She used medication (antidepressants, analgesics and anti-inflammatories), followed the guidelines of the Dental Surgery (the daily use of an acrylic plate made based on the mold of the dental arch), but did not have psychological follow-up. Due to these factors and the etiology of bruxism being uncertain, there are many alternatives in the treatment, but it is known that there is no cure and therefore the patient must be analyzed in a broad way, integrating his emotional state

COLONNA, A.; GUARDA-NARDINI, L.; FERRARI, M.; MANFREDINI, D. 2021	COVID-19 pandemic and the psyche, bruxism, temporomandibular disorders triangle	To investigate the effect of the Coronavirus pandemic on the reporting of psychological state, bruxism, and TMD symptoms.	Half of the subjects showed an increase in bruxism behaviors; one-third increased symptoms involving the TMJ and jaw muscles, with 36% of participants reporting increased TMJ pain and 32.2% facial muscles; Nearly 50% of individuals also reported more frequent migraines and/or headaches.
MIRANDA, J. S.; BONATO, L. L.; TESCH, R. de S. 2021	COVID-19 and Painful Temporomandibular Disorders: what does the dentist need to know?	Discuss how the COVID-19 pandemic has induced the emergence, maintenance, or worsening of TMD globally.	The social and psychological reasons associated with the pandemic can lead to an increased risk of developing, aggravating and/or perpetuating cases of TMD.
OLIVEIRA, S. S. I. de *et al.* 2020	Temporomandibular Disorder: Guidelines and Self-Care for Patients During the COVID-19 Pandemic	Assist the patient in the presence of signs and symptoms of TMD and Orofacial Pain due to the period of social isolation during the COVID-19 pandemic.	The COVID-19 pandemic and the need for social distancing generated psychological damage that raised anxiety levels, directly affecting patients who already had bruxism and TMD.

DISCUSSION

This bibliographic research enjoyed online journals and through the integrative systematic review protocol, 11 articles were chosen, of which 9 point out that emotional reasons together with the pandemic led to a greater risk of developing, potentiating and maintaining bruxism.

Only 2 studies contradict these data. The first of these was the study by Schavarski *et al*. [12], which aimed to assess the levels of fear of COVID-19 among university students, hypothesizing that fear may act as a triggering factor for sleep bruxism or awake bruxism among young adults. However, after data analysis, no significant associations were found between the level of fear of COVID-19 and the presence of bruxism in university students, and that other variations may be more influential in the prevalence of bruxism in students, such as: age group, social problems, and personal characteristics. Thus, it was concluded that in the undergraduate and graduate dental students in the southeastern region of Brazil evaluated, the level of fear of COVID-19 was not directly associated with the presence of sleep bruxism and awake bruxism. [12]

The second study was by Peixoto *et al*. [13], in which sleep quality, psychological issues, bruxism, and TMD in Brazilian dentists during the COVID-19 pandemic were evaluated. Among all the questions questioned, it was concluded that only the symptoms of depression were notably higher in the group in quarantine compared to those who worked

in outpatient clinics. Dental surgeons who were active at work were considerably less likely to have depressive symptoms, and those who were less concerned about the pandemic were also less likely to arouse symptoms of stress anxiety and insomnia. In addition, the association of sleep with psychological problems was severe to the workers who were on the front line and to the professionals who were attending the clinic. [13]

The following are the other 9 studies that converge on the interrelationship between emotional aspects and risk to develop, enhance and maintain bruxism. Giacomo *et al*. [6], concluded in their study that the most evident fact during the pandemic was the increase in parafunctions and sleep disorders.

Oliveira *et al*. [7] say that during the COVID-19 pandemic, there has been a significant increase in the prevalence of GAD in diverse population groups. Health professionals, pregnant women, postpartum women and students stood out as the most affected. The results revealed that triggering factors, such as uncertainties related to the pandemic, restrictions on access to medical care, financial concerns, social isolation, family members with a high degree of risk of infection, in addition to other factors, contributed to the increase in GAD.

According to Oliveira *et al.* [14], psychological factors associated with the pandemic can lead to a greater risk of developing, worsening and perpetuating bruxism, especially awake bruxism and TMD, so dentists should be aware of the occurrence of signs and symptoms to manage the multifactorial aspects of this condition. This study also aimed to guide patients to seek information that could help them in the presence of signs and symptoms of TMD and orofacial pain.

Cunha *et al*. [15] mention that more and more studies have been carried out that show the association between psychological aspects and bruxism, even because such aspects are related to orofacial dysfunction; patients who manifest this habit are anxious, depressed, with a repressed aggressiveness that they end up directing themselves, known as self-aggression.

The authors also point out that the literature associates bruxism with anxiety and GERD (Gastroesophageal Reflux Disease) with sleep disorders and, indirectly, with obesity. GERD is described as a retrograde flow of gastrointestinal contents into the esophagus and adjacent organs and denotes typical (heartburn and regurgitation) or atypical (chronic cough, hoarseness, throat clearing, and sleep disturbances) symptoms, which together with anxiety are capable of reducing the tone of the lower esophageal sphincter, increasing the number of ineffective esophageal contractions, and increasing the permeability of the gastric mucosa, generating a greater propensity to develop peptic esophagitis and

esophageal hypersensitivity. In addition to factors related to anxiety, obesity is also interconnected, and may potentiate GERD due to the increase in the consumption of alcoholic beverages and psychotropic drugs, especially serotonin reuptake inhibitors that can potentiate bruxism. [15]

Cunha *et al*. [15] also describe that the literature points to a higher rate of awakenings and incidence of sleep bruxism in patients with GERD and that these associations are in accordance with the severity of the patient's case. The more severe the patient's anxiety level, the more severe the symptoms of GERD and the more constant the symptoms of insomnia and bruxism. [15]

Almeida-Leite *et al*. [16] state that awake bruxism is correlated with psychosocial factors, such as anxiety, stress and difficulty in expressing and recognizing feelings that are also significant in terms of the pathologies in its occurrence and care. Unlike sleep bruxism, which was not associated with reports of stress, anxiety, pain, or TMD. [16]

Psychological problems, together with the emergency circumstances and threats to human life caused by the COVID-19 pandemic, are conducive to stimulating high degrees of sympathetic activity, where there is a greater release of adrenocortical steroids that carry muscle vasoconstriction and increase peripheral vascular resistance. This activity is an autonomic stress response that causes chills, diarrhea, gas, nausea, vomiting, palpitations, and tachycardia. And, in addition to autonomic involvement, there may be an increase in the sympathetic impulse and hyperarousal that causes an increase in alertness and attention that generates and maintains sleep disorders. [16]

Muscle tensions in the head and neck caused by awake bruxism is a defensive behavior associated with stress and anxiety, which is related to the fight-or-flight body posture. [16]

Almeida-Leite *et al*. [16] and Emodi-Perlman *et al*. [17] state that patients with high levels of stress are about 6 times more likely to report bruxism while awake.

Emodi-Perlman *et al*. [17] bring in their studies data on the intensification of TMD symptoms and bruxism in the pandemic, leading to increased orofacial pain.

In the research conducted by Winocur-Arias *et al*. [18], a considerable increase in parafunctional activity among men and women ($p < 0.001$) is pointed out during the COVID-19 pandemic. However, the highest prevalence of awake bruxism and sleep bruxism was reported only in women (AB-$p < 0.001$; SB- $p = 0.014$). These numbers may be related to the fact that women suffer overloads from daily tasks, which cause more stress than men, such as increased household chores, child care and unemployment. [18]

Dadnam *et al*. [19] point out that there was an increase in parafunctional habits in the COVID-19 pandemic due to emotional aspects, socio-affective and economic instabilities suddenly, bringing to the surface feelings of fear and insecurity, arousing anxiety, stress and depression, which are etiologies of bruxism. They point out that the dental surgeon was and is being sought after in the post-pandemic period and has seen an increase in bruxism according to the clinical aspect of coronary fractures, cracks in enamel, severe wear on the teeth at various ages. He is the most suitable professional to treat such problems and control cases of bruxism and tooth clenching, and can guide his patient to seek professional help in the area of psychology and other health areas that contribute to his treatment, in an interdisciplinary way. [19]

Puppin *et al*. [20] report that more and more studies have been done that show the association of psychological aspects and bruxism; The article brings us the clinical case study of a patient with bruxism who came to the office, stating that each case has to be treated in a unique way, but the individual has to be analyzed together, bringing psychoanalysis to the context of the subject, that is, the patient must be seen in a broad way, including their emotional state, integrating psychoanalytic and dental treatments that, in a well-conducted way, allow the patient to return to well-being, free of functional pain. [20]

The research by Colonna *et al.* [21] was designed to analyze the psychological state, bruxism, and TMD symptoms during the COVID-19 pandemic, and did not obtain positive results regarding the mental health of these patients: 68.2% reported an increase in pain in the TMJ and facial muscles and, on average, 50% reported migraines and frequent headaches, concluding that there was an increase in psychosocial distress during the pandemic and, consequently, the increase in symptoms of TMD and bruxism. [21]

Miranda *et al*. [22] conducted a non-systematic search to identify articles that related the areas of TMD and orofacial pain and COVID-19 to each other and state that social and psychological factors related to the pandemic can lead to increased risk of developing or worsening TMD cases and will always be a challenge for those dealing with this pain; dentists have to be prepared and aware to diagnose and pass on the treatment plan correct for each patient. [22]

FINAL CONSIDERATIONS

The association between bruxism and psychological aspect has been debated in recent times, but during and after the COVID-19 pandemic, the subject has been on the rise, due to the great stress suffered by people who spent more than six months in their homes without having any kind of social interaction. Through the fear experienced, the

levels of stress and anxiety increased, due to the uncertainties of the way of working and, consequently, the decrease in income; In addition, the loss of family members, close friends or strangers caused these difficulties to directly affect the quality of sleep and the development of parafunctional habits, such as bruxism and clenching of the teeth.

The patient who presents a parafunctional activity such as bruxism is diagnosed through clinical examination, but it is necessary to take into account the combination of etiological factors, since clinically tooth wear, pain in the temporomandibular joint, toning of the muscles of the face, recurrent headache, pulpitis, damage to the periodontal ligament and consequently tooth mobility can be observed.

Treatment is variable and individualized for each patient, and resorting to a multidisciplinary team is of great importance. As this study found an association between psychological condition and triggering or aggravation of bruxism and clenching of the teeth, it is recommended to provide guidance and referral to a psychology professional in these situations, with the objective of working on the patient's feelings and emotions and understanding the causality of this habit and, if necessary, associating it with drug treatments with medical follow-up and proceeding with dental care.

REFERENCES

1. Organização Pan-Americana da Saúde. Histórico da Pandemia de COVID-19 - OPAS/OMS. [Acesso em 10 de maio de 2022]. Disponível em: www.paho.org/pt/covid19/historico-da-pandemia-covid-19.

2. Brasil. Ministério da Saúde. Conselho Nacional de Saúde. Recomendação Nº 036, de 11 de maio de 2020. Recomenda a implementação de medidas de distanciamento social mais restritivo (lockdown), nos municípios com ocorrência acelerada de novos casos de COVID-19 e com taxa de ocupação dos serviços atingindo níveis críticos. Diário Oficial do Distrito Federal: Poder Executivo, Brasília. [Acesso em 22 de maio de 2022]; 5 p. Disponível em: https://conselho.saude.gov.br/recomendacoes-cns/1163-recomendac-a-o-n-036-de-11-de-maio-de-2020.

3. Vieira, R., et al. (2020). Isolamento social e o aumento da violência doméstica: o que isso nos revela? *Revista Brasileira de Epidemiologia*, 23(E200033), 1-5. [Acesso em 22 de maio de 2022]. Disponível em: https://www.scielo.br/j/rbepid/a/tqcyvQhqQyjtQM3hXRywsTn/.

4. Real Aparício, M. C. (2018). Disfunción temporomandibular: causas y tratamientos. *Revista Nacional (Itauguá)*, 10(1), 68-91. [Acesso em 10 de maio de 2022]. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-916246.

5. Zielinsky, L. (1998). Desórdenes temporomandibulares. Interface: ATM; oclusión; disfunción; dolor crónico orofacial. *Revista Ateneo Argentino Odontologia*, 37(1), 32-8. [Acesso em 10 de maio de 2022]. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/lil-241270.

6. Di Giacomo, P., Serritella, E., Imondi, F., & Di Paolo, C. (2021). Psychological impact of COVID-19 pandemic on TMD subjects. *European Review for Medical and Pharmacological Sciences*, 25(13), 4616-4626. [Acesso em 10 de maio de 2022]. Disponível em: https://doi.org/10.26355/eurrev_202107_26254.

7. De Oliveira, L. H. G., Miranda, A. M. do C., da Silva, L. dos S. R., Mion, F. A., Pavan, I. P., Casotti, M. C., et al. (2023). Implicações da pandemia de COVID-19 no transtorno de ansiedade generalizada. *RECIMA21*, 4(11), e4114298. [Acesso em 10 de maio de 2022]. Disponível em: https://recima21.com.br/index.php/recima21/article/view/4298.

8. Prado, A. D., Peixoto, B. C., da Silva, A. M. B., & Scalia, L. A. M. (2020). A saúde mental dos profissionais de saúde frente à pandemia do COVID-19: uma revisão integrativa. *REAS*, (46), e4128. [Acesso em 10 de maio de 2022]. Disponível em: https://acervomais.com.br/index.php/saude/article/view/4128.

9. Barreto, R. A. (2012). Sobre psicanálise, oralidade e odontologia. *Estudos Psicanalíticos*, 38, 135-139. [Acesso em 10 de maio de 2022]. Disponível em: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S0100-34372012000200015.

10. Mathieu, R., Ritchie, et al. (2020). Coronavírus Pandemic (COVID-19). *OurWorldInData.org*. [Acesso em 10 de maio de 2022]. Disponível em: https://ourworldindata.org/coronavirus.

11. Coutinho, J., Boehm, F. C., Avelino, C. A. S., Aquino, M. V. M. B., Gomes, T. C. A., Cavalero, C., et al. (2022). Impacto mundial psicológico da pandemia Coronavírus em dentistas na prática clínica privada. *REASE*, 8(2), 229-246. [Acesso em 10 de maio de 2022]. Disponível em: https://periodicorease.pro.br/rease/article/view/4165.

12. Schavarski, C., et al. (2021). Medo de COVID-19 e fatores associados ao possível bruxismo do sono e/ou em vigília entre universitários da região sudeste do Brasil durante a pandemia COVID-19. *Revista Científica CRO-RJ*, 6(2), 15-23. [Acesso em 10 de maio de 2022]. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1357496.

13. Peixoto, K. O., et al. (2021). Association of sleep quality and psychological aspects with reports of bruxism and TMD in Brazilian dentists during the COVID-19 pandemic. *Journal of Applied Oral Science*, 2(10), 1-10. [Acesso em 10 de maio de 2022]. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1286915.

14. Oliveira, S. S. I., et al. (2020). Desordem temporomandibular: orientações e autocuidados para pacientes durante a pandemia do COVID-19. *Brazilian Dental Science*, 23(2, supl. 2), 1-8. [Acesso em 10 de maio de 2022]. Disponível em: https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1100310.

15. Cunha, T. C. A., Cunha, T. M., Matoso, A. G. B., Januzzi, E., & Dal-Fabbro, C. (2021). COVID-19: The clinical consequences of social isolation and the relation with sleep bruxism and comorbidities. *Sleep Science*, 14(4), 366-369. [Acesso em 10 de maio de 2022]. Disponível em: https://doi.org/10.5935/1984-0063.20210004.

16. Almeida-Leite, C. M., Stuginski-Barbosa, J., & Conti, P. C. R. (2022). How psychosocial and economic impacts of COVID-19 pandemic can interfere on bruxism and temporomandibular disorders? *Journal of Applied Oral Science*, 28(e20200263), 1-3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7213779/

17. Emodi-Perlman, A., & Eli, I. (2021). One year into the COVID-19 pandemic – temporomandibular disorders and bruxism: What we have learned and what we can do to improve our manner of treatment. *Dental and Medical Problems*, 58(2), 215-218. https://doi.org/10.17219/dmp/132896

18. Winocur-Arias, O., et al. (2022). Painful temporomandibular disorders, bruxism, and oral parafunctions before and during the COVID-19 pandemic era: A sex comparison among dental patients. *Journal of Clinical Medicine*, 11(3), 589. https://doi.org/10.3390/jcm11030589

19. Dadnam, D., Dadnam, C., & Al-Saffar, H. (2021). Bruxismo pandêmico. *Jornal Odontológico Britânico*, 230(5), 271. https://www.nature.com/articles/s41415-021-2788-3

20. Puppin, C. F. (2021). Bruxismo em épocas de pandemia: Um diálogo entre a odontologia e a psicanálise. *Estudo Psicanalista*, 55, 91-95. https://pesquisa.bvsalud.org/portal/resource/pt/psi-72208

21. Colonna, A., Guarda-Nardini, L., Ferrari, M., & Manfredini, D. (2021). Pandemia COVID-19 e o triângulo psique, bruxismo, disfunções temporomandibulares. *Crânio*, 1-6. https://doi.org/10.1080/08869634.2021.1989768

22. Miranda, J. S., Bonato, L. L., & Tesch, R. de S. (2021). COVID-19 and painful temporomandibular disorders: What does the dentist need to know? *Revista Gaúcha de Odontologia*, 69(e20210017). https://doi.org/10.1590/1981-86372021001720200145