



The Childhood Bruxism: Literature Review

Çocukluk Dönemi Bruksizmi: Bir Literatür Derlemesi

Merve ABAKLI İNCİ 
Hazal ÖZER 
Merve KOÇ 

Department of Pedodontics,
Faculty of Dentistry, Necmettin
Erbakan University, Konya, Turkey



ABSTRACT

Bruxism is an activity characterized by tightening or creaking of the teeth that occurs most frequently during sleep. It may occur at night or in the daytime. Patients typically clench their teeth during the day, and they grit their teeth at night. Although its etiology is not entirely understood, it can be said that factors such as stress, nutritional deficiency, allergic diseases, unhealthy behaviors, and malocclusion predispose to the presence of bruxism. The treatment of childhood sleep bruxism is a multidisciplinary approach involving pediatricians, pedodontists, and other practitioners in the healthcare field. This study summarizes childhood bruxism, its etiological causes, diagnosis, and potential current options for treatment.

Keywords: Bruxism, teeth grinding, parafunctional habits, diagnosis, treatment

ÖZ

Bruksizm; en sık uyku sırasında ortaya çıkan dişlerin sıkılması veya gıcırdatılması ile karakterize bir aktivitedir. Gece ya da gün boyunca oluşabilmektedir. Etiyolojisi tam olarak bilinmemekle birlikte stres, beslenme yetersizliği, alerjik hastalıklar, zararlı alışkanlıklar ve malokluzyon gibi faktörlerin bruksizm varlığına yatkınlık oluşturduğu söylenebilir. Çocuklarda uyku bruksizmi tedavisi; pediatristler, pedodontistler ve diğer sağlık profesyonellerini de içeren multidisipliner bir yaklaşımdır. Bu derleme çocuklarda görülen bruksizmi, etiyolojik faktörlerini, tanı ve olası güncel tedavi seçeneklerini özetlemektedir.

Anahtar Kelimeler: Bruksizm, diş gıcırdatma, parafonksiyonel alışkanlıklar tanı, tedavi

INTRODUCTION

A typical movement problem called bruxism is characterized by teeth grinding or clenching. Sleep bruxism (nocturnal bruxism) and diurnal bruxism are the 2 categories (awake bruxism). Even while diurnal and sleep bruxism appears to have different etiologies, their impact on teeth may be comparable. Although healthy children and adults routinely experience bruxism, it is also frequently documented in kids with cerebral palsy and mental retardation.¹ In children, the reported prevalence of bruxism ranges from 3.5% to 40.6%², while in adults, it ranges from 8% to 31.4%.³ In the pediatric population, bruxism is seen as a typical parafunctional condition linked to alterations in teeth. Children start grinding their teeth between the ages of 4 and 8 on average.⁴ Due to mixed dentition, the prevalence of bruxism is higher between the ages of 10 and 14 and then declines.⁵ However, because sleep bruxism may be a result of the continuous physiological development of the central nervous system, it can be challenging to evaluate bruxism in children.⁶

Even though it is thought of as a benign and self-limiting illness in youngsters, bruxism can deteriorate orofacial features if it gets bad enough.⁷ Additionally, it was believed that some bruxist patients would benefit from sleep bruxism. This mechanism improves the upper respiratory tract's airway patency⁸ and acts defensively by promoting salivation, which guards against tooth erosion.⁹ However, bruxism can have several adverse effects on the stomatognathic system if it is not controlled, including aberrant tooth wear, tension headaches, pain or exhaustion in the chewing muscles, and temporomandibular disorders.¹⁰

Received/Geliş Tarihi: 06.01.2021

Accepted/Kabul Tarihi: 10.08.2021

Publication Date/Yayın Tarihi: 10.10.2023

Corresponding Author/Sorumlu Yazar:

Merve KOÇ

E-mail: kocmerve02@gmail.com

Cite this article as: Abaklı İnci M, Özer H, Koç M. The childhood bruxism: Literature review. *Curr Res Dent Sci.* 2023;33(4):256-260.



Content of this journal is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

ETIOLOGY

Harmful Habits and Malocclusion

Harmful oral habits (pacifier use, finger sucking, and nail biting); it is thought that these behaviors help kids deal with psychological and emotional challenges such as stress, worry, and tension. In this situation, sleep bruxism might be a method for the kid to unwind at night.¹¹ According to Drumond et al,¹² sleep bruxism was 50% more common in kids who bit their nails and 30% more common in kids who bit objects. They added that girls had a 22% lower prevalence of sleep bruxism. In a different study, oral respiration was assessed together with gender, breastfeeding style, pacifier use, bottle or finger sucking, nail biting, and other factors. It was shown that only oral respiration was statistically associated with sleep bruxism. Children who breathe orally during sleep are 2.71 times more likely to grind their teeth at night.¹³ According to several types of research, a posterior crossbite is a protective feature. As a result, it is believed that children without posterior crossbites are 2.2 times more prone than those with posterior crossbites to bruxism.¹⁴ Bruxism is brought on by regional causes like traumatic occlusion, early contact, protruding restorations, tooth cysts, and ectopic eruption. The development of bruxism is supported by malocclusions, calculus, mobility, lip deformity, gingival hyperplasia, and other occlusal physiology-related variables.¹⁵ According to a study, the 2 oral behaviors that sleep bruxism sufferers have in common the most are breastfeeding and bottle feeding.¹⁶ Although at a young age, these behaviors are not hazardous. When they are kept up for a long time, they may result in malocclusions and other oral health issues.¹⁷ In their study, Zapata et al¹⁸ found that 12.6% of bruxist patients utilize feeding bottles and pacifiers in addition to 23.13% using solely feeding bottles. Simões-Zenari and Bitar¹⁹ observed a relationship between bruxism and pacifier use, lip biting, and nail biting and concluded that the risk of developing bruxism in children who use pacifiers is 7 times higher and that the risk of developing lip bites is 5 times higher. These studies indicate that the presence of certain harmful habits increases the likelihood of bruxism occurring.

Psychological Factors

Repeated teeth grinding as you sleep, which is triggered by stress and worry, is thought to be the primary cause of bad sleep.²⁰ The most frequent emotional element in children was stress from regular restlessness and worry. These elements may hinder the development of the facial skull complex and harm the Temporomandibular Joint (TMJ), muscles, periodontium, and other structures.²¹ In research, children who reported being agitated and tense during the day had a statistically greater frequency of bruxism (42.7%) than children who reported being calm (22.6%).²² According to Manfredini et al,²³ demographic factors may have an impact on a person's mental state, which may lead to sleep bruxism. A 2017 study from Brazil found that emotional elements like stress, anxiety, and personality features have an impact on several behaviors in bruxist patients.²⁴ A statistically significant association between sleep bruxism and psychosocial factors, particularly between bruxism and personality traits of stress, anxiety, and tension, was discovered in a 2015 study.²⁵ Neuroticism, perfectionism, aggression, higher sensitivity to stress, and coping mechanisms were found to be connected with an increased chance of developing bruxism, according to Serra-Negra et al⁶ and Restrepo et al²⁶ Children with sleep bruxism had high levels of stress linked to psychological responses, according to a case-control study involving 360 patients aged 7-10 years.²⁷ Another study found that maternal stress had a significant impact on

children's behavior and sleep bruxism.¹² According to studies, parental stress leads to emotional and/or psychological issues in children, and anxiety symptoms can lead to bad dental habits like nail biting.²⁸⁻³⁰

Genetics

According to a study, the HTR2A gene polymorphism plays a significant role in the development of sleep bruxism.³¹ On the other hand, a meta-analysis in 2014 by Lobbezoo et al³² that looked at 10 studies examining the connection between genetics and bruxism concluded that bruxism is partially inherited genetically.

Parasite/Allergy

Immunoglobulin E (IgE) levels are elevated in cases of allergies and parasitic intestinal infections; hence, it was decided that oral symptoms were present. Additionally, it has been noted that eosinophilia and bruxism are closely related to IgE levels.¹⁵ Studies show that compounds known as non-specific proteins, which have toxic effects and are released from parasites at different stages of life, are typically connected to bruxism caused by intestinal parasites.¹⁵ However, research examining this idea has produced varying conclusions.³⁴ While there was no difference in the presence of intestinal parasites between patients aged 6-11 who had bruxism and those who did not, according to Brazilian researchers, Indian researchers concluded that these parasites may be the cause of the onset of bruxism in children aged 3-6 years.³⁵

Nutrition/Cigarette

Adult studies have revealed that smokers experience bruxism more frequently. The impact of cigarette smoke on bruxism in children has so been researched. According to a study, children who are exposed to high amounts of smoking are more likely to develop bruxism than those who are exposed to moderate or low levels.³⁶ In a different study, it was hypothesized that dietary elements such as caffeine, tea, chocolate beverages, soft drinks, and smoking could lead to bruxism by stimulating the central nervous system and escalating stress and anxiety.^{37,38}

Diseases

Nutritional deficiencies, parasite infestations, Down syndrome, gastrointestinal issues, allergic reactions, pharmacological side effects, mental retardation, and cerebral paralysis are some of the systemic problems connected to bruxism.³⁸ Patients with neurological diseases getting neuroleptic and anticonvulsant medication have shown signs of bruxism. Patients using stimulant medications including levodopa, amphetamines, and antidepressants frequently experience bruxism.³⁸⁻⁴⁰

Gastroesophageal reflux and bruxism have been linked in a 2018 study; long-term gastroesophageal reflux has been observed to induce severe tooth wear in patients with bruxism. Since dentists are the ones who usually notice tooth wear, when bruxism patients exhibit any symptoms of pathological tooth wear as a result of erosion, dentists should thoroughly assess systemic conditions like dietary practices, oral hygiene, and gastroesophageal reflux to further understand reflux symptoms. important.⁴¹

An investigation into the prevalence of bruxism and its associations with age, gender, intellectual handicap level, and trisomy 21 chromosomal abnormalities was conducted in 2007 among a group of Mexican children with Down syndrome. In the 57 patients (36 normal, 11 with mosaicism, and 5 with translocation) included in the study, bruxism was observed to be prevalent at a rate of 42%. According to a report, there is no appreciable

variation in bruxism prevalence between the sexes. There is no discernible difference between children with special educational needs at various levels, according to research. The various forms of trisomy 21 were discovered to significantly differ from one another, though. Five times more probable than children without mosaicism, children with Down syndrome who also have mosaicism are more likely to have bruxism.⁴²

In a study including kids with autism, it was discovered that the prevalence of bad oral habits was almost twice as high in these kids (87.3%) as compared to typically developing kids (49.3%). Object biting (44.7%), mouth breathing (26.7%), and bruxism (54.7%) were the 3 behaviors that autistic kids were most likely to engage in. This is thought to enhance the likelihood of malocclusions.⁴³

Diagnosis

The clinical identification and evaluation of bruxism is a difficult process. It is crucial to observe the patient or their parent or caregiver to spot bruxism. One of the reasons parents look for expert assistance is teeth grinding as they sleep.⁴⁴ This highlights the need and necessity of educating patient families more. It is advised that medical professionals speak clearly and use appropriate terminology to ensure proper communication with parents or carers during anamnesis and treatment.⁴⁵

According to the findings of a cross-sectional study conducted on 1325 parents in 5 distinct Brazilian regions, 57.3% of respondents had no idea what sleep bruxism was and 60.0% had no idea what its causes were.⁴⁵ In rare instances, sleep bruxism may go unnoticed by parents. Examples of these circumstances include not sharing a bed, children's sleep bruxism symptoms not being severe, and the onset of tooth wear.⁴⁶

In the clinical diagnosis of bruxism, symptoms such as occlusal and/or incisal abrasion, pulp hypersensitivity, destruction of periodontal tissues, mobility, temporomandibular joint pain and disorders, cusp-restoration fractures, masseter hypertrophy, and headache are frequently observed.⁴⁷ It may cause pseudo-class III development by accelerating the resorption of primary teeth and causing changes in the eruption time of permanent teeth.⁴⁸ Also, clinical features of sleep bruxism include masticatory muscle hypertrophy, indentations on the lip or tongue, and linea alba on the cheek.⁴⁹ However, they can also be consequences of functional promoter activity such as swallowing⁵⁰

Sample questions directed to patients or parents in the diagnosis of bruxism are shown in Table 1.

TREATMENT

Children's sleep bruxism is treated using a multidisciplinary strategy that involves pedodontists, pediatricians, and other

medical specialists.⁵² Orthodontic treatments, bite aligners, and restorative operations are frequently carried out by dentists. Bite plates are used to minimize muscle activity and to relieve the patient. Therefore, in more severe situations, the occlusal surface is shielded from deterioration.⁵³ Occlusal alignment, orthodontic bracketing, an interdental splint, psychotherapy, and exercises are advised if bruxism has caused harm to the stomatognathic system. On the best strategy, there is still no agreement, though.⁵⁴ Rapid expansion therapy is used to treat children with bruxism in sleep apnea syndrome situations to widen the airways, enhance breathing, and lessen parafunction.⁵⁵

For the treatment of bruxism in the adult population, studies have looked at the use of pharmacological drugs such as analgesics, anti-inflammatories, muscle relaxants, benzodiazepines, catecholamine precursors, and beta-adrenergic antagonists. There is not a single medicine that is effective and safe enough to use on kids.⁵⁶ However, both adult and pediatric populations may benefit from short-term (<6-12 weeks) medication use. Diazepam is a benzodiazepine with an intermediate and long half-life that is used to treat several some money ailments, including anxiety, muscle spasms, seizures, and sleep disturbances.⁵⁷

In a 2019 study, the effectiveness and safety of short-term diazepam use on the management of sleep bruxism in healthy children were assessed. A total of 109 children with sleep bruxism were randomly assigned to 1 of 3 groups in this double-blind, randomized, placebo-controlled clinical experiment. These groups each received low- or moderate-dose benzodiazepines for 2 weeks or a placebo. The severity of sleep bruxism was evaluated at baseline and then again at weeks 2, 8, and 12. The long-term control of sleep bruxism in children was not observed to be improved by short-term diazepam use over a placebo. In both groups, bruxism drastically decreased after using diazepam for 2 weeks. The severity of bruxism thereafter reverted to approximately pre-treatment severity in all groups; therefore, this impact is just temporary.⁵⁸

Although the use of several pharmacological drugs has been recorded, the research by Yap and Chua⁶⁰ indicates that there are only controlled clinical studies demonstrating the effectiveness of clonidine, L-dopa, and clonazepam in the treatment of sleep bruxism.⁵⁹ The long-term use of agents in this field is constrained by side effects, which include certain psychological negative consequences and the possibility of addiction. The most widely employed benzodiazepine in this area is clonazepam.⁶⁰

Another treatment choice is psychological counseling. Behavioral therapy procedures are part of psychological treatment and are used to treat behaviors, manage environmental factors, and lessen stress in patients.⁶¹

Table 1. Examples of Questions Directed to the Patient and/or Parents in the Diagnosis of Bruxism⁵¹

	Never	Sometimes	Generally	Don't Know
Do you grind your teeth while sleeping?				
Has anyone heard you grind your teeth while you sleep?				
Do you notice that you grit your teeth when you wake up?				
Do you have jaw pain or jaw fatigue when you wake up?				
Have you ever felt your teeth shake when you woke up?				
Do you have pain in your teeth and/or gums when you wake up?				
Do you have pain in your temples when you wake up?				
Do you have a lock in your jaw when you wake up?				
Have you ever noticed that you grind your teeth during the day?				
Have you ever noticed that you grind your teeth during the day?				

CONCLUSION

Bruxism is a complex condition with an unknown etiology that is now regularly observed in both adults and children. This condition has to be identified to be treated. The awareness of parents on this problem closely relates to their capacity to diagnose bruxism in youngsters. According to studies, parents are ignorant of bruxism. These findings imply that parents should get an education to lessen the prevalence and severity of bruxism.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – M.A.İ., H.Ö.; Design – M.A.İ., H.Ö.; Supervision – M.A.İ., H.Ö.; Resources – M.A.İ., H.Ö.; Materials – M.A.İ., H.Ö.; Data Collection and/or Processing – M.K.; Analysis and/or Interpretation – M.K.; Literature Search – M.K.; Writing Manuscript – M.A.İ., M.K.; Critical Review – H.Ö.

Declaration of Interests: The authors declare that they have no competing interest.

Funding: The authors declared that this study has received no financial support.

Hakem Değerlendirmesi: Dış bağımsız.

Yazar Katkıları: Fikir – M.A.İ., H.Ö.; Tasarım – M.A.İ., H.Ö.; Denetleme – M.A.İ., H.Ö.; Kaynaklar – M.A.İ., H.Ö.; Malzemeler – M.A.İ., H.Ö.; Veri Toplanması ve/veya İşlenmesi – M.K.; Analiz ve/veya Yorum – M.K.; Literatür Taraması – M.K.; Yazıyı Yazan – M.A.İ., M.K.; Eleştirel İnceleme – H.Ö.

Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

REFERENCES

- American Academy of Sleep Medicine (AASM). *International classification of sleep disorders: Diagnostic and coding manual*. Westchester: AASM; 2005.
- Manfredini D, Restrepo C, Diaz-Serrano K, Winocur E, Lobbezoo F. Prevalence of sleep bruxism in children: a systematic review of the literature. *J Oral Rehabil*. 2013;40(8):631-642. [\[CrossRef\]](#)
- Manfredini D, Winocur E, Guarda-Nardini L, Paesani D, Lobbezoo F. Epidemiology of bruxism in adults: a systematic review of the literature. *J Orofac Pain*. 2013;27(2):99-110. [\[CrossRef\]](#)
- Negoro T, Briggs J, Plesh O, Nielsen I, McNeill C, Miller AJ. Bruxing patterns in children compared to intercuspal clenching and chewing as assessed with dental models, electromyography, and incisor jaw tracings preliminary study. *ASDC J Dent Child*. 1998;65(6):449-458.
- Kieser JA, Groeneveld HT. Relationship between juvenile bruxing and craniomandibular dysfunction. *J Oral Rehabil*. 1998;25(9):662-665. [\[CrossRef\]](#)
- Serra-Negra JM, Ramos-Jorge ML, Flores-Mendoza CE, Paiva SM, Pordeus IA. Influence of psychosocial factors on the development of sleep bruxism among children. *Int J Paediatr Dent*. 2009;19(5):309-317. [\[CrossRef\]](#)
- Shetty S, Pitti V, Satish Babu CL, Surendra Kumar GP, Deepthi BC. Bruxism: A literature review. *J Indian Prosthodont Soc*. 2010;10(3):141-148. [\[CrossRef\]](#)
- Jokubauskas L, Baltrušaitytė A. Relationship between obstructive sleep apnoea syndrome and sleep bruxism: a systematic review. *J Oral Rehabil*. 2017;44(2):144-153. [\[CrossRef\]](#)
- Ohmure H, Oikawa K, Kanematsu K, et al. Influence of experimental esophageal acidification on sleep bruxism: a randomized trial. *J Dent Res*. 2011;90(5):665-671. [\[CrossRef\]](#)
- Bader G, Lavigne G. Sleep bruxism; an overview of an oromandibular sleep movement disorder. Review article. *Sleep Med Rev*. 2000;4(1):27-43. [\[CrossRef\]](#)
- Vieira-Andrade RG, Drumond CL, Martins-Júnior PA, et al. Prevalence of sleep bruxism and associated factors in preschool children. *Pediatr Dent*. 2014;36(1):46-50.
- Drumond CL, Ramos-Jorge J, Vieira-Andrade RG, Paiva SM, Serra-Negra JMC, Ramos-Jorge ML. Prevalence of probable sleep bruxism and associated factors in Brazilian schoolchildren. *Int J Paediatr Dent*. 2018;10. [\[CrossRef\]](#)
- Lamenha Lins RM, Cavalcanti Campêlo MC, Mello Figueiredo L, Vilela Heimer M, Dos Santos-Junior VE. Probable sleep bruxism in children and its relationship with harmful oral habits, type of crossbite and oral breathing. *J Clin Pediatr Dent*. 2020;44(1):66-69. [\[CrossRef\]](#)
- Nahás-Scocate AC, Coelho FV, de Almeida VC. Bruxism in children and transverse plane of occlusion: is there a relationship or not? *Dent Press J Orthod*. 2014;19(5):67-73. [\[CrossRef\]](#)
- Alves AC, Alchieri JC, Barbosa GA. Bruxism. Masticatory implications and anxiety. *Acta Odontol Latinoam*. 2013;26(1):15-22.
- Soares-Silva L, Tavares-Silva C, Fonseca-Gonçalves A, Maia LC. Presence of oral habits and their association with the trait of anxiety in pediatric patients with possible sleep bruxism. *J Indian Soc Pedod Prev Dent*. 2019;37(3):245-250. [\[CrossRef\]](#)
- Gonçalves LPV, Toledo OAd, Otero SAM. Relação entre bruxismo, fatores oclusais e hábitos bucais. *Dental Press J Orthod*. 2010;15(2):97-104. [\[CrossRef\]](#)
- Zapata M, Bachiega JC, Marangoni AF, et al. Ocorrência de mordida aberta anterior e hábitos bucais deletérios em crianças de 4 a 6 anos. *Rev CEFAC*. 2010;12(2):267-271. [\[CrossRef\]](#)
- Simões-Zenari M, Bitar ML. Factors associated to bruxism in children from 4-6 years. *Pro Fono*. 2010;22(4):465-472. [\[CrossRef\]](#)
- Ahlberg J, Lobbezoo F, Ahlberg K, et al. Selfreported bruxism mirrors anxiety and stress in adults. *Med Oral Patol Oral Cir Bucal*. 2013;18(1):e7-11. [\[CrossRef\]](#)
- Alóe F, Gonçalves LR, Azevedo A, Barbosa RC. Bruxismo Durante Sono. *Rev Neurociências*. 2003;11(1):4-17.
- Kasımoğlu Y, Esen M, Fırat N, Ebeveynlerin çocuk T-IE, ile ilgili GEB, değerlendirilmesi BVT. Ata diş Hek Fak. *Derg*. 2020;30(3):400-405.
- Manfredini D, Lobbezoo F, Giancristofaro RA, Restrepo C. Association between proxy-reported sleep bruxism and quality of life aspects in Colombian children of different social layers. *Clin Oral Investig*. 2017;21(4):1351-1358. [\[CrossRef\]](#)
- de Alencar NA, Leão CS, Leão ATT, Luiz RR, Fonseca-Gonçalves A, Maia LC. Sleep bruxism and anxiety impacts in quality of life related to oral health of Brazilian children and their families. *J Clin Pediatr Dent*. 2017;41(3):179-185. [\[CrossRef\]](#)
- De Luca Canto G, Singh V, Conti P, et al. Association between sleep bruxism and psychosocial factors in children and adolescents: a systematic review. *Clin Pediatr (Phila)*. 2015;54(5):469-478. [\[CrossRef\]](#)
- Restrepo CC, Vásquez LM, Alvarez M, Valencia I. Personality traits and temporomandibular disorders in a group of children with bruxing behaviour. *J Oral Rehabil*. 2008;35(8):585-593. [\[CrossRef\]](#)
- Drumond CL, Paiva SM, Vieira-Andrade RG, et al. Do family functioning and mothers' and children's stress increase the odds of probable sleep bruxism among schoolchildren? A case control study. *Clin Oral Investig*. 2020;24(2):1025-1033. [\[CrossRef\]](#)
- Dickstein S. The family couch: considerations for infant/early childhood mental health. *Child Adolesc Psychiatr Clin N Am*. 2015;24(3):487-500. [\[CrossRef\]](#)
- Schor EL, American Academy of Pediatrics Task Force on the Family. Family pediatrics: report of the Task Force on the Family. *Pediatrics*. 2003;111(6 Pt 2):1541-1571.
- Leme M, Barbosa T, Castelo P, Gavião MB. Associations between psychological factors and the presence of deleterious oral habits in children and adolescents. *J Clin Pediatr Dent*. 2014;38(4):313-317. [\[CrossRef\]](#)
- Abe Y, Suganuma T, Ishii M, et al. Association of genetic, psychological and behavioral factors with sleep bruxism in a Japanese population. *J Sleep Res*. 2012;21(3):289-296. [\[CrossRef\]](#)

32. Lobbezoo F, Visscher CM, Ahlberg J, Manfredini D. Bruxism and genetics: A review of the literature. *J Oral Rehabil*. 2014;41(9):709-714. [\[CrossRef\]](#)
33. Craig CF, Faust EC. *Klinik Parazitoloji*. 8. ed. Philadelphia: Lea ve Febiger; 1970. s. 67.
34. Portero PP, Kern R, Kusma SZ, Grau-Grullon P. Placas oclusais no tratamento da disfunção temporomandibular. *Gestão Saudev*. 2009; 1(1):36-40.
35. Rodrigues CK, Ditterich RG, Shintcovsk RL, Tanaka OM. Bruxismo: Uma revisão da literatura. *Publ UEPG Cienc Biol Saúde*. 2006;12(3):13-21.
36. Schmidt E, Floriano N. "Rev O bruxismo como expressão do estresse contemporâneo". *Rev do Cromg: Odontologia, Ciência e Saúde*. 2001; 12(1):4-8.
37. Klasser GD, Rei N, Lavigne GJ. Sleep bruxism etiology: The evolution of a changing paradigm. *J Can Dent Assoc*. 2015;81:f2.
38. Ohayon MM, Li KK, Guilleminault C. Risk factors for sleep bruxism in the general population. *Chest*. 2001;119(1):53-61. [\[CrossRef\]](#)
39. Okeson JP. *Management of Temporomandibular Disorders and Occlusion*. 5th ed. St. Louis: Mosby; 2003.
40. Alonso-Navarro H, Martín-Prieto M, Ruiz-Ezquerro JJ, Jiménez-Jiménez FJ. Bruxism possibly induced by venlafaxine. *Clin Neuropharmacol*. 2009;32(2):111-112. [\[CrossRef\]](#)
41. Li Y, Yu F, Niu L, et al. Associations among bruxism, gastroesophageal reflux disease, and tooth wear. *J Clin Med*. 2018;7(11):417. [\[CrossRef\]](#)
42. López-Pérez R, López-Morales P, Borges-Yáñez SA, Maupomé G, Parés-Vidrio G. Prevalence of bruxism among Mexican children with Down syndrome. *Downs Syndr Res Pract*. 2007;12(1):45-49. [\[CrossRef\]](#)
43. Al-Sehaibany FS. Occurrence of oral habits among preschool children with autism Spectrum Disorder. *Pak J Med Sci*. 2017;33(5):1156-1160. [\[CrossRef\]](#)
44. Clementino MA, Siqueira MB, Serra-Negra JM, Paiva SM, Granville-Garcia AF. The prevalence of sleep bruxism and associated factors in children: a report by parents. *Eur Arch Paediatr Dent*. 2017;18(6):399-404. [\[CrossRef\]](#)
45. Prado IM, Paiva SM, Fonseca-Gonçalves A, et al. Knowledge of parents/caregivers about the sleep bruxism of their children from all five Brazilian regions: a multicenter study. *Int J Paediatr Dent*. 2019;29(4):507-523. [\[CrossRef\]](#)
46. Gomes MC, Neves ÉT, Perazzo MF, et al. Evaluation of the association of bruxism, psychosocial and sociodemographic factors in preschoolers. *Braz Oral Res*. 2018;32:e009. [\[CrossRef\]](#)
47. Hachmann A. Eficácia da placa de uso noturno no controle do bruxismo em criança de 3 a 5 anos. *Rev Paul Pediatr*. 2009;27(3):329-334.
48. Corrêa CT. O desenho da figura humana de crianças com bruxismo. *Bol Psicol*. 2006:55-124.
49. Lobbezoo F, Ahlberg J, Raphael KG, et al. International consensus on the assessment of bruxism: report of a work in progress. *J Oral Rehabil*. 2018;45(11):837-844. [\[CrossRef\]](#)
50. Takagi I, Sakurai K. Investigation of the factors related to the formation of the buccal mucosa ridging. *J Oral Rehabil*. 2003;30(6):565-572. [\[CrossRef\]](#)
51. Paesani DA, eds. *Bruxism Theory and Practice*. New Malden, UK: Quintessence Publishing Co; 2010.
52. Serra-Negra JM, Tirsá-Costa D, Guimarães FH, Paiva SM, Pordeus IA. Evaluation of parents/guardian knowledge about the bruxism of their children: family knowledge of bruxism. *J Indian Soc Pedod Prev Dent*. 2013;31(3):153-158. [\[CrossRef\]](#)
53. Abreu LG, Paiva SM, Pordeus IA, Martins CC. Breastfeeding, bottle feeding and risk of malocclusion in mixed and permanent dentitions: a systematic review. *Braz Oral Res*. 2016;30:1806-1807. [\[CrossRef\]](#)
54. Koyano K, Tsukiyama Y, Ichiki R, Kuwata T. Assessment of bruxism in the clinic. *J Oral Rehabil*. 2008;35(7):495-508. [\[CrossRef\]](#)
55. Alóe F, Gonçalves LR, Azevedo A, Barbosa RC. Bruxismo durante o sono. *Rev Neurocienc*. 2003;11(1):4-17. [\[CrossRef\]](#)
56. Freitas AR, Dias MM, Falcão Filho HB, Vasconcellos AA. Sleep bruxism in children: prevalence and multidisciplinary therapy. *Oral Health Dent Manag*. 2014;13:897-901.
57. Griffin CE 3rd, Kaye AM, Bueno FR, Kaye AD. Benzodiazepine pharmacology and central nervous system-mediated effects. *Ochsner J*. 2013;13(2):214-223.
58. Mostafavi SN, Jafari A, Hoseini SG, Khademian M, Kelishadi R. The efficacy of low and moderate dosage of diazepam on sleep bruxism in children: A randomized placebo-controlled clinical trial. *J Res Med Sci*. 2019;24:8. [\[CrossRef\]](#)
59. Saletu A, Parapatics S, Anderer P, Matejka M, Saletu B. Controlled clinical, polysomnographic and psychometric studies on differences between sleep bruxers and controls and acute effects of clonazepam as compared with placebo. *Eur Arch Psychiatry Clin Neurosci*. 2010;260(2):163-174. [\[CrossRef\]](#)
60. Yap AU, Chua AP. Sleep bruxism: current knowledge and contemporary management. *J Conserv Dent*. 2016;19(5):383-389. [\[CrossRef\]](#)
61. Macedo CR. *Placas Oclusais Para Tratamento do Bruxismo do Sono: Revisao Sistematica*. Sao Paulo: Cochrane; 2007.