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DENTISTRY OF SLEEP: IMPACTS ON QUALITY OF LIFE

ODONTOLOGIA DO SONO: IMPACTOS NA QUALIDADE DE VIDA

ODONTOLOGÍA DEL SUEÑO: IMPACTOS EN LA CALIDAD DE VIDA

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Abstract

Sleep Dentistry plays an important role in studying the causes and consequences of the relationship between sleep, the oral cavity, and the maxillofacial region of individuals. The aim of this work is to present a critical review of the literature on Sleep Dentistry and demonstrate how it can impact people's quality of life. To achieve this objective, a search was conducted in the Embase, Web of Science, and PubMed databases using the descriptors "dentistry," "sleep," "quality of life," and "Sleep Medicine Specialty." The main articles that were most relevant to the topic of the present study were selected. Many analyzed articles found that sleep and circadian rhythm dysregulation directly influence oral health and weaken the immune system, leading to the onset of dental caries and periodontitis. Additionally, Sleep Bruxism (SB) is one of the disorders that affects quality of life, considered a probable risk factor for Temporomandibular Disorders (TMD), present in 16 to 33% of children. Therefore, it is concluded that quality of life, oral health, and sleep are directly related; however, more research on Sleep Dentistry is needed, as it is still under-discussed by students and professionals. Its inclusion in undergraduate curricula and in the routine of dentists is necessary for effective and clear understanding of this topic.

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Keywords: Sleep Medicine Specialty, dentistry, quality of life, sleep

Resumo

A Odontologia do sono possui papel importante no estudo das causas e consequências da relação sono, cavidade bucal e região maxilofacial dos indivíduos. O objetivo deste trabalho é apresentar uma revisão crítica da literatura sobre a Odontologia do Sono e mostrar de que forma ela pode impactar na qualidade de vida das pessoas. Para alcançar esse objetivo, foi realizada uma busca nas bases de dados Embase, Web of Science e PubMed por meio do uso dos descritores “dentistry”, “sleep”, "quality of life" e "Sleep Medicine Specialty". Foram selecionados os principais artigos que mais dialogassem com o tema do presente estudo. Muitos artigos analisados constataram que a desregulação do sono e do ritmo circadiano influenciam diretamente na saúde bucal e no enfraquecimento do sistema imunológico, sendo responsáveis pelo surgimento de cárie dental e periodontite. Outrossim, o Bruxismo do Sono (BS) é um dos distúrbios que interfere na qualidade de vida, sendo considerado um provável fator de risco para o surgimento da DTM, presente entre 16 e 33% das crianças. Portanto, conclui-se que a qualidade de vida, da saúde bucal e do sono estão diretamente relacionadas, contudo, faz-se necessário realizar mais pesquisas sobre a Odontologia do Sono, ainda pouco debatida pelos estudantes e profissionais, assim como sua aplicação na grade curricular da graduação e na rotina dos cirurgiões-dentistas para que o entendimento sobre essa temática seja efetivo e claro.

Palavras-chave: Especialidade em Medicina do Sono, odontologia, qualidade de vida, sono.

Resumen

La Odontología del sueño tiene un papel importante en el estudio de las causas y consecuencias de la relación entre el sueño, la cavidad bucal y la región maxilofacial de los individuos. El objetivo de este trabajo es presentar una revisión crítica de la literatura sobre la Odontología del Sueño y mostrar de qué manera puede impactar en la calidad de vida de las personas. Para alcanzar este objetivo, se realizó una búsqueda en las bases de datos Embase, Web of Science y PubMed mediante el uso de los descriptores “dentistry”, “sleep”, “quality of life” y “Sleep Medicine Specialty”. Se seleccionaron los principales artículos que más se relacionaran con el tema del presente estudio. Muchos artículos analizados constataron que la desregulación del sueño y del ritmo circadiano influye directamente en la salud bucal y en el debilitamiento del sistema inmunológico, siendo responsables de la aparición de caries dental y periodontitis. Asimismo, el Bruxismo del Sueño (BS) es uno de los trastornos que interfiere en la calidad de vida, siendo considerado un probable factor de riesgo para la aparición de la DTM, presente entre el 16 y el 33% de los niños. Por lo tanto, se concluye que la calidad de vida, la salud bucal y el sueño están directamente relacionados, sin embargo, es necesario realizar más investigaciones sobre la Odontología del Sueño. aún poco debatida por los estudiantes y profesionales, así como su aplicación en el plan de estudios de la

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licenciatura y en la rutina de los cirujanos dentistas para que la comprensión sobre este tema sea efectiva y clara.

Palabras clave: Especialidad en Medicina del Sueño, odontología, calidad de vida, sueño.

1. Introduction

The American Academy of Dental Sleep Medicine, in 2008, initially misconceived Dental Sleep Medicine as the treatment of respiratory disorders related to sleep problems, such as snoring and obstructive sleep apnea, and proposed that the optimal approach to treatin (LOBBEZOO, et al., 2016). However, it was observed that this concept was insufficient to define what this field actually was, since orofacial pain, bruxism and salivary disorders were not considered an important factor. Thus, in 2016, some researchers developed a new concept for this area as a field of dentistry whose responsibility is to analyze how sleep-related problems occur and what the consequences are for the oral cavity and maxillofacial region of individuals (LOBBEZOO, et al., 2016; LOBBEZOO, et al., 2020).

Adequate sleep plays a crucial role in preserving well-being, thus promoting a better quality of life, as it plays an important role in the immune system, tissue repair, homeopathic functions and fatigue (Karaaslan, et al., 2019). In addition, getting a good night's sleep can prevent dental injuries or trauma, for example, as it interferes with various areas of the human body, such as cognitive functions, attention and motor skills (TODERO, et al., 2019).

Sleep disorders interfere with the quality of a person's sleep, decreasing or even intensifying the period during which they sleep, and this is a factor that influences attention, concentration and behavior, and can lead to daytime fatigue in individuals (WAJSZILBER, et al., 2018). In addition, people with sleep disorders are more likely to develop periodontal problems, toothache and bone loss (MOVAHED, et al., 2023). A recurring example, which is increasingly affecting the population, is Obstructive Sleep Apnea (OSA), characterized by total or partial obstruction of the Upper Airway (UA) during the period in which individuals are sleeping. OSA is not only a chronic respiratory disorder, but also has systemic

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repercussions (DE OLIVEIRA, et al., 2023).

Another problem that can interfere with people's sleep is bruxism, characterized by involuntary, repetitive and non-functional movements of the muscles associated with the jaw. These movements basically consist of grinding and/or contracting the muscles associated with the mandibular region in such a way as to cause a clenching between the upper and lower teeth (KOTHARI, et al.,2024). Among children, sleep bruxism, Temporomandibular Dysfunction (TMD) and dental caries are more prevalent in those with some resistance or even sleep fragmentation (TOPALOGLU-AK, et al., 2022).

In this context, this study aims to present a narrative review of the literature on sleep dentistry and show how it can impact on the quality of life of individuals.

2. Methodology

This is a narrative literature review of a critical and descriptive nature. Given that it has a broader approach, some topics were used in the form of guiding questions in order to develop the theme of Sleep Dentistry in a coordinated way: a)"How can sleep disorders impact on the oral health of individuals?" b)"How can Dentistry impact on the sleep of individuals, generating a better quality of life?".

In order to achieve the study's objectives, searches were initially carried out in the Pubmed, Web of Science and Embase databases. Among the scientific articles found, those published between 2016 and 2024 were filtered out. The Health Sciences Descriptors (DeCS) were used for the specific collection of articles.

Table 1. Elaboration of the search strategy, using the guiding questions.

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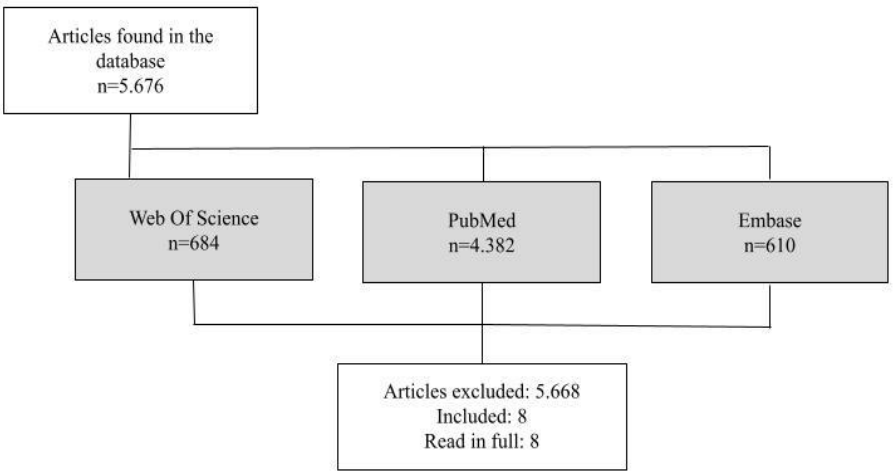
Pages: 1-14

Terms	Dentistry	Sleep	Quality of life	Sleep Medicine Specialty
Conversão	Dentistry	Sleep	"Quality of life"	"Sleep Medicine Specialty"
Search strategy	((dentistry) AND (sleep) AND ("quality of life") NOT ("Sleep Medicine Specialty"))			

Source: Authors, 2024.

5,676 results were obtained from the databases using the search strategy described in table 1. Among the results, 684 articles were found in Web of Science, 610 in Embase and 4,382 in PubMed. The articles were chosen strategically in order to select the studies that most closely correlated with the topic in question. Articles that met the following criteria were also checked: a) they had been published between 2016 and 2024; b) they were in Portuguese or English; c) they were original articles.

Figure 1. Search and selection of articles in the databases.



Source: Authors, 2024.

3. Results and discussions

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Pages: 1-14

The purpose of this research was to present a narrative review of the literature on sleep dentistry and show how it can impact on people's quality of life. Table 2 shows the following details of the articles included in the research: authors/year, title, objectives, results and conclusions of the main ones.

Table 2. Information on the main studies included in the research.

Authors and year	**Title**	**Objective of the study**	**Result/conclusion**
Kurtović, et al., 2023.	*The Relationship between Sleep, Chronotype, and Dental Caries—A Narrative Review.*	To provide an overview of the relationship between circadian rhythm, sleep and the prevalence of dental caries.	It is concluded that the impact on circadian rhythm and sleep, as well as the lack of healthy eating habits, contributes to the emergence of dental caries.
Halfeld; Sonnesen, 2022.	*Daytime Sleepiness and Quality of Life in Obstructive Sleep Apnoea Patients before and after Long-Term Mandibular Advancement Device Treatment.*	To initially compare the level of daytime sleepiness and quality of life of patients with Obstructive Sleep Apnea (OSA) and the healthy control group. Subsequently, another comparison was made with OSA patients before and after treatment.	It was found that patients with Obstructive Sleep Apnea who have not yet undergone treatment have greater daytime sleepiness and lower quality of life, especially in terms of mental health, social aspects, functional capacity, energy and vitality.
Lobbezoo, et al., 2020.	*A Further Introduction to Dental Sleep Medicine.*	Introduce the emerging discipline of dental sleep medicine to professionals who work in the area, including	Develop patient-centered research measures, have dentists involved in coordination and continuity of access to care. Dentists play

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Pages: 1-14

		doctors and dentists specializing in dental sleep medicine.	an important role in caring for OSA patients alongside other specialists in the field. Greater attention to dental sleep medicine in dental curricula is essential if they are to be able to treat dental sleep disorders.
LEE, 2022.	*Relationship Analogy between Sleep Bruxism and Temporomandibular Disorders in Children: A Narrative Review.*	To discuss the diagnosis, etiology, pathophysiology and complications of sleep bruxism, with a particular interest in the relationship between sleep bruxism and TMD in children.	It can be concluded that there is an association between Sleep Bruxism (SB) and Temporomandibular Dysfunction (TMD). SB can cause tooth wear, pain in the masticatory muscles and TMD pain. However, scholars argue that the relationship between SB and TMD seems recently controversial and unclear, and high-level studies are needed in the future.
TAMASAS, et al., 2019.	*Health and oral health-related quality of life in children with obstructive sleep apnea.*	To assess oral health and oral health-related quality of life (OHRQoL) in children with obstructive sleep apnea.	The study suggests that childhood OSA may have a significant association with worse oral health when compared to control patients without sleep problems, and that their oral health status may have a negative effect on their quality of life.
Lobbezoo, et al., 2020.	*The face of Dental Sleep Medicine in the 21st century.*	To broaden the perspective of researchers, teachers and health professionals on the	Sleep and orofacial pain may be linked by biological or psychosocial factors. Although there is a scarcity of studies on the relationship between SB

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Pages: 1-14

		discipline of "Dental Sleep Medicine", explaining how it was formed in the 21st century and thus promoting benefits for patients suffering from dental sleep disorders.	and sleep disorders, it is suggested that SB is associated with sleep awakenings. Dental clinicians and researchers play an essential role in caring for patients with OSA.
MUNIZ, et al., 2021.	*Are periodontal diseases associated with sleep duration or sleep quality? A systematic review.*	To carry out a systematic review on the relationship between periodontal diseases, tooth loss and sleep duration/quality.	More studies are needed on this relationship, but it has been observed that poor sleep quality influences the development of periodontitis and a decrease in the number of teeth in the oral cavity.
Shen, et al., 2024.	*The Association of Salivary Flow Rate and Sleep Quality among Head and Neck Cancer Survivors after Radiotherapy.*	To analyze the importance of salivary flow on oral health and the quality of sleep of patients.	It was observed that salivary flow has an influence on both the quality of sleep and the oral health of head and neck cancer survivors.

Legend: OSA: Obstructive Sleep Apnea. **SB:** Sleep Bruxism. **TMD:** Temporomandibular Dysfunction. **OHRQoL:** Oral Health Related Quality of Life.
Source: Authors, 2024.

Dysregulation of sleep and circadian rhythm are relevant factors in the development of dental caries, since they influence the production and composition of saliva, which is very important for maintaining proper oral health, since it regulates the levels of bacteria in the cavity and the oral microbiome, preventing possible infections (KURTOVIĆ, et al., 2023; LEE, 2022). According to Kurtovic et al. (2023), sleeping too little has an effect on the individual's immune system, since the sympathetic nervous system is weakened, which can compromise the body's ability to fight infections and diseases. As a result, when the human body's

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Pages: 1-14

protection is reduced, dental caries, which is bacterial in origin, tends to develop more easily (KURTOVIĆ, et al., 2023). These findings are in line with the findings of Shen et al. (2024), who also observed that salivary flow influences Oral Health-Related Quality of Life (OHRQoL). In their analysis of patients who survived head and neck cancer after radiotherapy, they found that 55% of patients who withstood radiotherapy treatment had sleep disorders (SHEN, et al., 2024).

There are still many conflicting ideas in the literature about the relationship between hours of sleep and the quality of oral health, but it is clear that unregulated sleep contributes significantly to a reduction in the number of teeth in the mouth and to the development of periodontitis (MUNIZ, et al., 2021).

According to the study by Halfeld and Sonnesen (2022), people with OSA before undergoing treatment with long-term mandibular advancement devices showed an increase in daytime sleepiness and a considerable decrease in quality of life, especially in relation to functional capacity, mental health, social aspects and general perception of health when compared to those patients who had already undergone treatment (HALFELD; SONNESEN, 2022).

According to Tamasas, Nelson and Chen (2019), children affected by Obstructive Sleep Apnea (OSA) are more likely to face oral complications compared to those without sleep problems, which can have a negative impact on their quality of life. The study revealed that 71% of child patients with OSA had dental crowding, while only 22% of the control group suffered from this condition. In addition, OSA increases the likelihood of a class II occlusion, being identified in 48% of OSA patients compared to only 28% of the control group (Tamasas, Nelson & Chen, 2019) (TAMASAS, et al., 2019).

Another disorder that falls within the scope of sleep dentistry research is bruxism, which can occur during waking hours or during sleep (LOBBEZOO, et al., 2020; LOBBEZOO, et al., 2016). According to researchers, bruxism has a multifactorial etiology associated with the use of medication, smoking, alcohol, stress, anxiety, genetics, changes in the balance of neurotransmitters and sleep arousal. The possible consequences of this disorder involve the breaking or loss of teeth, intrinsic mechanical wear of the teeth, hypertrophy of the chewing

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Pages: 1-14

muscles, TMD pain and jaw dysfunctions (LOBBEZOO, et al., 2016).

Although studies on the relationship between bruxism and other sleep disorders are scarce, it is believed that the interaction between them is most often associated with sleep awakenings (LOBBEZOO, et al., 2020). This is because episodes of Sleep Bruxism (SB) trigger the release of catecholamines in the central nervous system, influencing the release of chemical mediators that alter arousal and the onset and maintenance of sleep. However, people with SB are generally unaware of the damaging factors that can eventually lead to abnormal tooth wear, generalized attrition, cervical abrasion of the teeth, gingival recession and the development of TMD (LEE, 2022).

SB is one of the most frequent forms of behavioral disturbances that occur at the beginning or during sleep in children, and is considered a probable risk factor for the onset of TMD (LEE, 2022). The prevalence of TMD is between 16 and 33% of children, and the incidence of pain related to this disorder is predominantly female. As the diagnostic criteria for SB and TMD in children have not been clearly established, it is difficult to make recommendations for their diagnosis and estimate prevalence (KURTOVIĆ, et al., 2023; LEE, 2022).

4. Final Considerations

The main current studies on sleep dentistry, which is still little debated by professionals and students, were brought together. The aim of the research was to present a critical review of the literature on sleep dentistry and to show how it impacts on individuals' quality of life. Therefore, it was observed that quality of life, oral health and sleep are directly related. Sleep disorders, such as SB and OSA, influence the emergence of oral problems, especially dental caries, periodontitis, dental crowding and class II occlusion, which has a negative impact on oral health and, consequently, on the individual's overall quality of life.

There were some limitations to the study, including the lack of more information on the relationship between the number of hours slept and the effects on quality of life. Some studies have shown that prolonged sleep also has an

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influence on quality of life and oral health, but this information in the literature is still limited and conflicting. Furthermore, there is a need for more scientific studies that consider physical, psychological, genetic and sociocultural aspects of the relationship between SB and TMD in children. It is therefore important for more primary research to be carried out on sleep dentistry, as well as its application in the undergraduate teaching project and in the routine of dental surgeons.

References

DE OLIVEIRA, João Vitor Antônio; DE OLIVEIRA JÚNIOR, Geovane Cleber; GUEDES, Cizelene do Carmo Faleiros Veloso. ATUAÇÃO DA ODONTOLOGIA NO DIAGNÓSTICO E TRATAMENTO DA SÍNDROME DA APNEIA OBSTRUTIVA DO SONO (SAOS): uma revisão de literatura. **Scientia Generalis**, v. 4, n. 2, p. 220-229, 2023.

HALFELD, Signe; SONNESEN, Liselotte. Daytime sleepiness and quality of life in obstructive sleep apnoea patients before and after long-term mandibular advancement device treatment. **Dentistry Journal**, v. 10, n. 12, p. 226, 2022.

KARAASLAN, Fatih; DIKILITAŞ, Ahu. The association between stage-grade of periodontitis and sleep quality and oral health–related quality of life. **Journal of periodontology**, v. 90, n. 10, p. 1133-1141, 2019.

KOTHARI, Simple F. et al. Occurrence, presence and severity of bruxism and its association with altered state of consciousness in individuals with severe acquired brain injury. **Journal of Oral Rehabilitation**, v. 51, n. 1, p. 143-149, 2024.

KURTOVIĆ, Anamaria et al. The relationship between sleep, chronotype, and dental caries—a narrative review. **Clocks & sleep**, v. 5, n. 2, p. 295-312, 2023.

LEE, Yeon-Hee. Relationship analogy between sleep bruxism and

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Received: 13/11/2025 - **Accepted:** 13/12/2025
Vol: 01.01
DOI: 10.61164/60rqy935
Pages: 1-14

temporomandibular disorders in children: a narrative review. **Children**, v. 9, n. 10, p. 1466, 2022.

LOBBEZOO, Frank et al. A further introduction to dental sleep medicine. **Nature and science of sleep**, p. 1173-1179, 2020.

LOBBEZOO, Frank. et al. A new definition of dental sleep medicine. **Journal of oral rehabilitation**, v. 43, n. 10, p. 786-790, 2016.

LOBBEZOO, Frank et al. The face of dental sleep medicine in the 21st century. **Journal of Oral Rehabilitation**, v. 47, n. 12, p. 1579-1589, 2020.

MOVAHED, Emad et al. Investigating oral health among US adults with sleep disorder: a cross-sectional study. **BMC Oral Health**, v. 23, n. 1, p. 996, 2023.

MUNIZ, Francisco Wilker Mustafa Gomes et al. Are periodontal diseases associated with sleep duration or sleep quality? A systematic review. **Archives of oral biology**, v. 129, p. 105184, 2021.

SHEN, Yen-Wen et al. The association of salivary flow rate and sleep quality among head and neck cancer survivors after radiotherapy. **BMC Oral Health**, v. 24, n. 1, p. 251, 2024.

TAMASAS, Basma; NELSON, Travis; CHEN, Maida. Oral health and oral health-related quality of life in children with obstructive sleep apnea. **Journal of Clinical Sleep Medicine**, v. 15, n. 3, p. 445-452, 2019.

TODERO, Sara RB et al. The association of childhood sleep problems with the prevalence of traumatic dental injury in schoolchildren. **Dental traumatology**, v. 35, n. 1, p. 41-47, 2019.

REMUNOM
ISSN 2178-6925

Received: 13/11/2025 - **Accepted:** 13/12/2025
Vol: 01.01
DOI: 10.61164/60rqy935
Pages: 1-14

TOPALOGLU-AK, Asli et al. Can sleeping habits be associated with sleep bruxism, temporomandibular disorders and dental caries among children?. **Dental and medical problems**, v. 59, n. 4, p. 517-522, 2022.

WAJSZILBER, Dafna; SANTISEBAN, José Arturo; GRUBER, Reut. Distúrbios do sono em pacientes com TDAH: impacto e desafios de manejo. **Natureza e ciência do sono**, p. 453-480, 2018.