DOI: 10.1590/1809-2950/22018129042022EN

ORIGINAL RESEARCH

Emotional disorders, parafunctional habits, and bruxism in hospital healthcare professionals in the COVID-19 post-pandemic period: a cross-sectional observational study

Alterações emocionais, hábitos parafuncionais e bruxismo em profissionais de saúde de ambiente hospitalar no período pós-pandemia de COVID-19: um estudo observacional descritivo

Cambios emocionales, hábitos parafuncionales y bruxismo en profesionales de la salud en el ámbito hospitalario en el período pospandemia por COVID-19: un estudio observacional descriptivo

Catarina dos Santos Pereira[1], Maria Carlos Lopes Cardoso Real Dias Quaresma[2]

ABSTRACT | During the COVID-19 pandemic, hospital healthcare professionals (HHP) were vulnerable to sources of anxiety that can lead to the onset or worsening of conditions such as bruxism and parafunctional habits (PH). This study aims to evaluate the relationship between sleep bruxism (SB), awake bruxism (AB), and PH and HHP's stress, anxiety, and depression in the post-pandemic period. Data were collected via an online questionnaire composed of four sections: sample characterization, "Depression, Anxiety and Stress Scale" (DASS-21), "Oral Behavior Checklist" (OBC), and diagnostic questionnaire of SB from the American Academy of Sleep Medicine. This is a descriptive and inferential statistical analysis with 118 responses (mostly females and nurses). A total of 99.2% of the sample presented PH, 38.1% SB, and 686% AB. We found a significant association between AB and stress (p=0029), anxiety (p=0005), and depression (p=0.004); SB and anxiety (p=0.013); and between SB and AB and emotional changes in the studied sample.

Keywords | Bruxism; COVID-19; Health Personnel.

RESUMO | Durante a pandemia da COVID-19, os profissionais de saúde de ambiente hospitalar (PSAH) estiveram vulneráveis a fontes de ansiedade que podem conduzir ao surgimento ou agravamento de condições como o bruxismo e os hábitos parafuncionais. Foi objetivo deste estudo avaliar a relação entre o bruxismo do sono (BS), da vigília (BV) e os hábitos parafuncionais (HP) e o estresse, a ansiedade e a depressão em PSAH no período pós-pandemia. Os dados foram recolhidos através de questionário online dividido em quatro secções: caracterização da amostra, escala de ansiedade, depressão e estresse (EADS-21), lista de avaliação de comportamentos orais (Laco) e questionário de diagnóstico de BS da Academia Americana de Medicina do Sono. Em seguida, procedeu-se à análise estatística descritiva e inferencial. A amostra foi composta de 118 respostas, sendo a maioria do sexo feminino e enfermeiros. Do total, 99,2% apresentou HP, 38,1% BS e 68,6% BV. Houve associação significativa entre BV e estresse (p=0,029), ansiedade (p=0,005) e depressão (p=0,004); entre BS e ansiedade (p=0,013); e entre BS e BV e as alterações emocionais na amostra em estudo.

Descritores | Bruxismo; COVID-19; Profissionais de Saúde.

RESUMEN | Durante la pandemia del COVID-19, los profesionales de la salud en el ámbito hospitalario (PSAH) estuvieron expuestos a focos de ansiedad que podían conducirles al surgimiento o empeoramiento de condiciones como el bruxismo y hábitos parafuncionales. El objetivo de este estudio fue evaluar la relación entre el bruxismo del sueño (BS), bruxismo de la vigilia (BV) y hábitos parafuncionales (HP) con el estrés, la ansiedad y la depresión en PSAH en el período pospandémico. Los datos se recolectaron de un cuestionario en línea, dividido en cuatro secciones: caracterización de la muestra, escala de ansiedad, depresión y

Part of Catarina Santos Pereira's dissertation to obtain a master's degree in dentistry at the Faculty of Dental Medicine of the University of Lisbon.

[1]Universidade de Lisboa (ULisboa) – Lisboa, Portugal. E-mail: catpereira98@hotmail.com. ORCID-0000-0003-1697-0338
[2]Universidade de Lisboa (ULisboa) – Lisboa, Portugal. E-mail: mcrealdias@hotmail.com. ORCID-0000-0002-0821-1115

Corresponding address: Catarina Santos Pereira – Faculdade de Medicina Dentária da Universidade de Lisboa – Rua Professora Teresa Ambrósio – Lisboa, Portugal – ZIP Code: 1600-277 – E-mail: catpereira98@hotmail.com – Financing source: nothing to declare – Conflict of interests: nothing to declare – Presentation: Oct. 26th, 2022 – Accepted for publication: Nov. 2nd, 2022 – Approved by the Research Ethics Committee: No. CE-FMDUL202165.

estrés (EADS-21), lista de evaluación del comportamiento oral (LACO) y cuestionario de diagnóstico de BS de la Academia Americana de Medicina del Sueño. Luego, se realizó un análisis estadístico descriptivo e inferencial. La muestra constó de 118 respuestas, y su mayoría era mujeres y enfermeras. Del total, el 99,2% tenía HP; el 38,1% BS; y el 68,6% BV. Hubo asociación significativa entre BV y estrés (p=0,029), ansiedad (p=0,005) y depresión (p=0,004); entre BS y ansiedad (p=0,013); y entre BS y BV, además de cambios emocionales en la muestra del estudio.

Palabras clave | Bruxismo; COVID-19; Personal de Salud.

INTRODUCTION

Coronavirus Disease 2019 (COVID-19), the disease caused by the new Severe Acute Respiratory Syndrome – Coronavirus 2 (SARS-CoV-2) was declared pandemic by the World Health Organization on March 11th, 2020[1].

During this period, hospital healthcare professionals (HHP) were especially vulnerable to numerous anxiety factors[1,2]. Emotional effects, such as stress, anxiety and depression appeared in those professionals[1-3]. Morgado[1], verified that individuals who have been infected with COVID-19, HHP (specially nurses and females) and those present on the frontline of the fight against COVID-19 were more susceptible to emotional suffering[1].

Bruxism is an oral behavior defined as a repetitive activity of the masticatory muscles[4,5]. The exact cause is yet unknown, but its possible etiology includes factors such as occlusal interferences, sleep disturbances, genetic predisposition, exogenous factors, psychosocial factors—such as stress and anxiety—and comorbidities[4,6-10].

Considering the emotional changes that HHP were subjected to during the pandemic—as well as the relationship between bruxism and parafunctional habits (PH) with such changes—it is important to understand the effect of the pandemic on the development and worsening of these behaviors. This study aimed to evaluate the association between sleep bruxism (SB), and awake bruxism (AB) and other PH with HHP's levels of depression, anxiety, and stress after the COVID-19 pandemic.

METHODOLOGY

A descriptive observational cross-sectional study was realized addressing HHP who worked during the COVID-19 pandemic in a hospital facility and whose career was of, at least, 3 years. This last criteria aimed to ensure that individuals had professional experience before the onset of the pandemic, working throughout the whole period.

Data collection was carried out in a single moment, via an online questionnaire on the Google Forms platform, with the access link being published on social networks, during February 2022. The questionnaire was composed of four characterization sections: sample; stress, anxiety, and depression levels; PH and SB; and AB.

The sample was characterized regarding age, gender, schooling level, profession, years of professional activity, hours of daily professional activity, hours of mask use, presence in the emergency department, presence in the COVID-19 frontline, moving from home, COVID-19 infection, and diagnosis of gastroesophageal reflux. Depression, anxiety, and stress levels were measured using the Portuguese version of the Depression, Anxiety and Stress Scale (DASS-21)[11]. Following the score assigned to each of the DASS-21, the level of each emotional change was characterized as "normal," "mild," "moderate," "severe," or "extremely severe." A positive diagnosis of depression, anxiety, or stress was considered whenever the score was, at least, corresponding to the "mild" level[11].

The analysis of PH was performed following the Portuguese translation of the Oral Behavior Checklist (OBC)[12]. A positive diagnosis of PH was considered when at least one sign was present.

AB was assessed via Items 3, 4, and 5 of the OBC, considering a positive diagnosis if the response was positive to at least one of the items. SB was diagnosed using part of the criteria of the International Classification of Sleep Disorders (ICSD) of the American Academy of Sleep Medicine, as well as Item 1 of the OBC. SB was considered positive if there was a positive response to at least one of the aforementioned items[13]. The diagnosis presented in this study is a possible diagnosis of bruxism[12].

Data were entered into the Microsoft Excel® 2016 software, version 2202(Microsoft, Redmond, USA) and statistical analysis was performed using the SPSS® software version 28.0 (IBM®, Armonk, New York, USA). Data were described in absolute and relative frequency (percentage). The inferential statistics, performed to determine the associations between the variables, was performed using the

Phi, Cramér's V, and Gamma tests, depending on the type of variables under analysis—nominal, binomial, or ordinal. Statistical significance of the associations was defined as p=0.05 (i.e., 5%). Considering the lack of continuous variables, normality of the variables was not verified.

RESULTS

Initially, 152 answers to the questionnaire were obtained, although 34 had to be excluded—31 had not worked in a hospital facility for more than three years and three were not HHP. Thus, the sample was composed of 118 HHP. Most participants were women (93.2%, n=110), aged between 20 and 40 years (83.1%, n=98) and had completed a undergraduate (68.6%, n=81) or a graduate course (28.0%, n=33). Nurses had the highest representation (81.4%, n=96), followed by physicians (14.4%, n=17), medical assistants (3.39%, n=4) and physiotherapists (0.8%, n=1). Regarding labor, 39.8% (n=47) of the participants had been working for 10 years at most, 25.4% (n=30) from 11 to 20 years, 28.0% (n=33) from 21 to 30 years and 6.8% (n=8) for more than 30 years. 52.5% (n=62) worked in a shift ranging from 8 to 16 hours per day and 50.0% (n=59) wore protective masks for the same amount of time. In total, 99 (83.9%) participants worked on the COVID-19 frontline, 60 (50.8%) performed work in emergency wards, 41 (34.7%) were infected with SARS-CoV-2, and seven (5.9%) had to move from their homes. 14 (11.9%) of the participants reported gastroesophageal reflux diagnosis. 38.1% of the HHP revealed a positive diagnosis of depression, with 4.2% (n=5) demonstrating a "severe" level and 6.8% an "extremely severe" level. Anxiety was present in 51.7% (n=61) of the sample, with 5.9% (n=7) presenting a "severe" level and 6.8% an "extremely severe" level. In total, 39.8% (n=47) had a positive diagnosis of stress, with 10.2% (n=12) reporting a "severe" level, and 3.4% (n=4) an "extremely severe" level. A total of 78.0% (n=92) of the HHP stated that their stress levels had increased since March 2020, as a result of the COVID-19 pandemic. Also, 99.2% (n=117) of the sample had at least one PH. "Chew food using one side only" and "eating between meals (food that requires chewing)" were the most frequently reported oral behaviors, whereas "holding or jutting jaw forward or to the side" and "placing the tongue between teeth" were the least reported ones. The maximum value of behaviors per HHP was 21 and the minimum was zero. The mean number of behaviors per participant was 10.86±4.37 (standard deviation – SD). Out of the total, 56.8% (n=67) stated PH existed before the pandemic with the same frequency, 41.5% (n=49) said PH existed before, but are now more intense and/or frequent, and 1.7% (n=2) reported that PH started after the beginning of the pandemic. SB was verified in 38.1% (n=45) of the HHP and AB in 68.6% (n=81) of the participants.

We observed a significant association between age and depression (p=0.003), anxiety (p=0.039), and stress (p=0.001). The youngest groups presented even higher levels. An association with statistical significance was also found between profession and anxiety (p=0.047), with the diagnosis being more frequent and more severe in nurses. There is a significant association between schooling level and levels of stress (p=0.026), anxiety (p=0.018), and depression (p=0026)—the greater the academic differentiation of HHP, specifically Master's/Doctoral degree, the lower the levels of stress, anxiety, and depression.

We found a correlation between years of professional activity and levels of stress (p<0.001), anxiety (p=0.047), and depression (p=0.003), with fewer years of profession corresponding to more severe levels of stress, anxiety, and depression (Table 1).

Table 1. Significance of the Association between Stress, Anxiety, and Depression and Demographic Variables (Lisbon, Portugal (2022))

		Emotional changes (DASS-21)		
		Depression	Anxiety	Stress
		p (significance)		
Sociodemographic characteristic	Age	**−0.329*** *0.003***	**−0.215*** *0.039***	**−0.394*** *<0.001***
	Gender	0.212** *0.259*	0.279** *0.057*	0.166** *0.514*
	Profession	0.299** *0.567*	**0.424**** *0.047*	0.287** *0.641*
	Schooling level	**−0.351*** *0.026***	**−0.337*** *0.018***	**−0.356*** *0.026***
	Years of professional activity	**−0.371*** *0.003***	**−0.213*** *0.047***	**−0.442**** *<0.001**
	Worked in the COVID-19 frontline	0.181** *0.423*	0.099** *0.885*	0.149** *0.621*
	Worked in the emergency ward	0.092** *0.908*	0.204** *0.299*	0.262** *0.088*
	Hours of daily professional activity	0.115*** *0.476*	−0.080*** *0.574*	0.109*** *0.489*
	Hours of mask use	0.072*** *0.653*	−0.094*** *0.511*	0.036*** *0.818*
	COVID-19 infection	0.255** *0.104*	0.103** *0.869*	0.174** *0.465*
	Moved from home	0.225** *0.202*	0.248** *0.123*	0.224** *0.205*

** Cramérs'V; *** Gamma; AB: awake bruxism; SB: sleep bruxism.

There was a statistically significant association (p=0.006) between gender and AB, with the latter being more frequent in women. SB was more frequently diagnosed in individuals

with less years of activity (p=0.046) and in those who had to move from their home during the pandemic. No significant association between oral behaviors and depression, anxiety, and stress was found (Table 2).

Table 2. Significance of the association between positive diagnosis of awake bruxism and sleep bruxism and sociodemographic variables (Lisbon, Portugal (2022))

		Bruxism (OBC and AASM)	
		AB	SB
		p (significance)	
Sociodemographic Variables	Age	0.281** *0.054*	0.149** *0.623*
	Gender	**0.254*** ***0.006***	0.073* *0.428*
	Profession	0.218** *0.133*	0.177** *0.295*
	Schooling level	0.147** *0.634*	0.152** *0.605*
	Years of professional activity	0.135** *0.542*	**0.260**** ***0.046***
	Worked in the COVID-19 frontline	0.102* *0.270*	−0.036* *0.697*
	Worked in the emergency ward	−0.043* *0.638*	0.004* *0.964*
	Hours of daily professional activity	−0.016* *0.861*	0.023* *0.807*
	Hours of mask use	−0.055* *0.552*	−0.017* *0.850*
	COVID-19 infection	0.110* *0.234*	−0.097* *0.294*
	Moved from home	0.170* *0.065*	**0.246*** ***0.008***

*Phi; ** Cramérs'V; AB: awake bruxism; SB: sleep bruxism.

A significant association between AB and depression (p=0.004) was verified, as well as with anxiety (p=0.005) and stress (p=0.029). A positive diagnosis was associated with higher levels of emotional changes. SB was only significantly associated with anxiety (p=0.013), following the same relationship as AB and emotional changes (Table 3).

Table 3. Significance of the association between awake bruxism and sleep bruxism and emotional changes (stress, anxiety, and depression) (Lisbon, Portugal (2022))

		Emotional changes (DASS-21)		
		Depression	Ansiedade	Stress
		p (significance)		
Bruxism diagnosis (OBC and AASM)	AB	**0.363**** ***0.004***	**0.356**** ***0.005***	**0.303**** ***0.029***
	SB	0.191** *0.369*	**0.328**** ***0.013***	0.205** *0.291*

**Cramér's V; AB: awake bruxism; SB: sleep bruxism.

DISCUSSION

The sample included in this study reflects the reality of HHP in Portugal, agreeing with the data reported by the Portuguese National Health Service and Ferreira et al.[2], regarding the distribution of HHP by gender, age, profession, schooling level, work in the COVID-19 frontline, and necessity to move from home during the pandemic[2,14].

The prevalence of emotional changes and the proportion of individuals with "severe" or "extremely severe" emotional changes were slightly lower than those reported by Ghaleb et al.[15]. Coincidently, the questionnaire was completed in a period of slowdown in the number of confirmed cases of COVID-19 in Portugal, when the number of deaths was considerably lower compared to the same period in the previous year, which may have contributed to a reduction in the levels of emotional changes in HHP.

Out of the 99.2% individuals with PH, 41.5% stated that PH occurred with greater frequency or intensity after the beginning of the pandemic and 1.7% said that PH have appeared after the pandemic. Thus, despite the sample being composed of a population at risk of developing PH—since they already had this type of behavior—their frequency and/or intensity have worsened during the pandemic.

Peixoto et al.[16], reported a higher prevalence for SB (58.03%) and a lower prevalence for AB (58.2%), compared to those presented in this study. In this investigation, physicians, nurses, medical assistants, and physical therapists were interviewed, whereas the investigation carried out by Peixoto et al.[16] focused solely on dentists. This difference in the target population may have resulted in a higher prevalence of SB in the aforementioned study[16], since dentists will be more aware of the signs and symptoms of SB. To diagnose AB, Peixoto et al.[16] used only a few items of the OBC, which might have led to a lower prevalence of AB.

Tee et al.[17] reported that levels of stress, anxiety, and depression were higher in younger age groups.

Contrary to what was indicated by Santamaría et al.[18], Tee et al.[17], and Çiğdem et al.[19], no statistically significant differences were found in the levels of emotional changes among genders, which can be explained by the fact that the sample is mostly composed of women.

Nurses demonstrated the highest levels of emotional changes. In the study of Çiğdem et al.[19], medical assistants were the ones with higher levels, with nurses taking second place. Notably, in our study, nurses corresponded

to 81.4% of the participants, whereas in Çiğdem et al.[19], they were only 33.4% of the sample. Furthermore, only 3.4% of the sample included in this investigation corresponds to medical assistants, compared to 12.3% in Çiğdem et al. study[19]. The higher prevalence of these emotional changes in nurses can also be explained by the fact that this professional group constitutes the majority of the study sample.

In the study by Tee et al.[17], stress levels were higher in individuals with a lower schooling level, as verified in our investigation, which may be explained by the lack of experience in certain tasks, possibly causing relevant emotional changes.

The association between years of professional activity and moving from home with SB may be due to the fact that younger HHP are more vulnerable to higher levels of stress, anxiety, and depression, as aforementioned, as well as those who were absent from their usual household during the COVID-19 pandemic[17].

In agreement with Çiğdem et al.[19] and Peixoto et al.[16], AB was significantly associated to positive diagnosis of stress, anxiety, and depression, being reported more frequently when these levels were also higher.

Only anxiety had a significant relationship with SB. It is noteworthy that, Çiğdem et al.[19] and Peixoto et al.[16] found an association between SB and anxiety as well as between SB and stress and depression.

A limitation of our study was the bias of the sample which—despite reflecting the panorama of the National Health Service—was mostly composed of women, nurses, with a higher education degree, and with up to 20 years of professional activity, which might have influenced some of the associations found. Also, the fact that the questionnaire was made available on an online platform may have influenced the results, in the sense that one of the diagnostic criteria for bruxism—tooth wear—was not evaluated[13].

We suggest further investigations in this area, to verify the effect of the pandemic on the levels of stress, anxiety, and depression of HHP, also focusing on its effects on the development of BV, SB, and PH.

CONCLUSIONS

We found a statistically significant association between the levels of stress, anxiety, and depression and the positive diagnosis of AB, being more frequent when the levels of emotional changes are higher. We noted a similar significant correlation between the levels of anxiety and SB, with the diagnosis of SB being more prevalent when anxiety occurs with greater intensity. PH, AB, and SB proved to be frequent in HHP and were intensified by the COVID-19 pandemic. Thus, we advert for the importance of the dentist's role in the diagnosis of these parafunctional habits in order to establish information and prevention campaigns contributing to minimize its effects on the stomatognathic system. Data suggest a possible worsening of PH as a result of the COVID-19 pandemic. Further studies should investigate these possible relationships and the true effects of this pandemic.

REFERENCES

1. Morgado P. Saúde mental em tempos de pandemia COVID-19: uma perspetiva da Medicina. In: Martins M, Rodrigues E, editors. A Universidade do Minho em tempos de pandemia: (re)ações. Braga: UMinho; 2020. p. 8-22.
2. Ferreira S, Sousa MM, Moreira PS, Sousa N, Picó-Pérez M. A wake-up call for burnout in Portuguese physicians during the COVID-19 outbreak: national survey study. JMIR Public Health Surveill. 2021;7(6):e24312. doi: 10.2196/24312.
3. Emodi-Perlman A, Eli I. 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. Dent Med Probl. 2021;58(2):215-8. doi: 10.17219/dmp/132896.
4. Beddis H, Pemberton M, Davies S. Sleep bruxism: an overview for clinicians. Br Dent J. 2018;225(6):497-501. doi: 10.1038/sj.bdj.2018.757.
5. 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. doi: 10.11607/jop.921.
6. Lavigne GJ, Khoury S, Abe S, Yamaguchi T, Raphael K. Bruxism physiology and pathology: an overview for clinicians. J Oral Rehabil. 2008;35(7):476-94. doi: 10.1111/j.1365-2842.2008.01881.x.
7. Giraki M, Schneider C, Schäfer R, Singh P, Franz M, et al. Correlation between stress, stress-coping and current sleep bruxism. Head Face Med. 2010;6:2. doi: 10.1186/1746-160X-6-2.
8. Carra MC, Huynh N, Lavigne G. Sleep bruxism: a comprehensive overview for the dental clinician interested in sleep medicine. Dent Clin North Am. 2012;56(2):387-413. doi: 10.1016/j.cden.2012.01.003.
9. Castroflorio T, Bargellini A, Rossini G, Cugliari G, Deregibus A. Sleep bruxism and related risk factors in adults: a systematic literature review. Arch Oral Biol. 2017;83:25-32. doi: 10.1016/j.archoralbio.2017.07.002.
10. Chemelo VS, Né YGS, Frazão DR, Souza-Rodrigues RD, Fagundes NCF, et al. Is there association between stress and bruxism? A systematic review and meta-analysis. Front Neurol. 2020;11:590779. doi: 10.3389/fneur.2020.590779.

11. Lovibond SH, Lovibond PF. Manual for the depression anxiety stress scales. 2nd ed. Sydney: Psychology Foundation of Australia; 1995.

12. Schiffman E, Ohrbach R, Truelove E, Look J, Anderson G, et al. Diagnostic criteria for temporomandibular disorders (DC/TMD) for clinical and research applications: recommendations of the International RDC/TMD Consortium Network and Orofacial Pain Special Interest Group. J Oral Facial Pain Headache. 2014;28(1):6-27. doi: 10.11607/jop.1151.

13. American Academy of Sleep Medicine. The international classification of sleep disorders. Chicago: AASM; 2001.

14. Portugal. Ministério da Saúde. Relatório social do Ministério da Saúde e do Serviço Nacional de Saúde [Internet]. Lisboa: SNS; 2018 [cited 2022 Nov 18]. Available from: https://www.acss.min-saude.pt/wp-content/uploads/2019/09/Relatorio-Social-MS_SNS_2018_vf.pdf

15. Ghaleb Y, Lami F, Al Nsour M, Rashak HA, Samy S, Khader YS, et al. Mental health impacts of COVID-19 on healthcare workers in the Eastern Mediterranean Region: a multi-country study. J Public Health (Oxf). 2021;43(Suppl 3):iii34-42. doi: 10.1093/pubmed/fdab321.

16. Peixoto KO, Resende CMBM, Almeida EO, Almeida-Leite CM, Conti PCR, et al. Association of sleep quality and psychological aspects with reports of bruxism and TMD in Brazilian dentists during the COVID-19 pandemic. J Appl Oral Sci. 2021;29:e20201089. doi: 10.1590/1678-7757-2020-1089.

17. Tee ML, Tee CA, Anlacan JP, Aligam KJG, Reyes PWC, Kuruchittham V, et al. Psychological Impact of COVID-19 pandemic in the Philippines. J Affect Disord. 2020;277:379-91. doi: 10.1016/j.jad.2020.08.043.

18. Santamaría M, Ozamiz-Etxebarria N, Rodriguez IR, Alboniga-Mayor JJ, Gorrotxategi MP. Impacto psicológico de la COVID-19 en una muestra de profesionales sanitarios españoles. Rev Psiquiatr Salud Ment. 2021;14(2):106-12. doi: 10.1016/j.rpsm.2020.05.004.

19. Çiğdem B, Medin C, Korkmaz M, Şahbaz T. The Effect of anxiety and depression on bruxism among healthcare workers during the COVID-19 pandemic. Ahi Evran Med J. 2021;5(2):78-84. doi: 10.46332/aemj.787182.