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RELATIONSHIP BETWEEN SOCIAL ISOLATION, ANXIETY, AND SELF-REPORTED BRUXISM IN UNDERGRADUATE STUDENTS[1]

RELAÇÃO ENTRE ISOLAMENTO SOCIAL, ANSIEDADE E BRUXISMO AUTO-RELATADO EM ESTUDANTES UNIVERSITÁRIOS

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ABSTRACT

This study aims to evaluate the prevalence of bruxism and its relation to anxiety in university students at a Brazilian public institution during the period of social isolation due to the COVID-19 pandemic. This was a cross-sectional study, with data collected at the beginning of the pandemic in the country. The dependent variable was the presence or absence of awake and sleep bruxism. The independent variables were gender, age, course of study, study year/semester, social isolation, and anxiety, analyzed with the Generalized Anxiety Disorder 7-item (GAD-7). Descriptive and analytical statistics were employed, showing significance below 5% ($p < 0.05$) and a 95% confidence interval (95% CI). 251 undergraduate students participated in the research. 80.1% said they were in social isolation, and 33.9% had moderate and severe anxiety. The prevalence of awake bruxism was 33.5%, and it was statistically associated with anxiety ($p<0.001$) and social isolation ($p<0.024$). On the other hand, sleep bruxism was prevalent in 15.9% of the population and was associated only with the course of study ($p<0.041$). Bruxism and anxiety showed a substantial prevalence among undergraduate students during the period of social isolation.

Keywords: Bruxism. Anxiety. COVID-19.

RESUMO

Este estudo visa avaliar a prevalência do bruxismo e sua relação com a ansiedade em estudantes universitários de uma instituição pública brasileira durante o período de isolamento social devido à pandemia da COVID-19. Este foi um estudo transversal, com dados coletados no início da pandemia no país. A variável dependente era a presença ou ausência do bruxismo acordado e do sono. As variáveis independentes foram sexo, idade, curso do estudo, ano/semestre do estudo, isolamento social e ansiedade, analisadas com o item 7 do GAD-7 (Generalized Anxiety Disorder 7-item). Foram empregadas estatísticas descritivas e analíticas, mostrando significância abaixo de 5% ($p < 0,05$) e um intervalo de

confiança de 95% (95% CI). 251 estudantes de graduação participaram da pesquisa. 80,1% disseram estar em isolamento social, e 33,9% tinham ansiedade moderada e severa. A prevalência de bruxismo desperto foi de 33,5%, e foi estatisticamente associada à ansiedade (p<0,001) e ao isolamento social (p<0,024). Por outro lado, o bruxismo do sono era prevalente em 15,9% da população e estava associado apenas ao curso do estudo (p<0,041). O bruxismo e a ansiedade mostraram uma prevalência sustancial entre os estudantes de graduação durante o período de isolamento social.

Palavras-chave: Bruxismo. Ansiedade. COVID-19.

INTRODUCTION

COVID-19 is an infectious disease that appeared in the city of Wuhan, China, in December 2019. It is caused by the virus called Sars-Cov-2, which affects, a priori, the respiratory system, resulting in respiratory failure and progressing, in some cases, to death (Pimentel; Silva, 2020). This disease has developed a pandemic potential, becoming a worldwide concern. On March 11, 2020, the World Health Organization (WHO) announced a public health emergency due to the high degree of spread of the virus (Costa et al., 2020).

In this scenario, it was necessary to establish preventive measures, such as quarantine, for - symptomatic or asymptomatic - individuals exposed to the virus and isolation or social distancing to slow down the infection process. In addition, the pandemic has impacted mental health since the lack of social relationships, feelings of loneliness, fear, anxiety, and anger are frequent in socially isolated individuals (Almeida-Leite; Stuginski-Barbosa; Conti, 2020; Roy et al., 2020). In the UK, for example, a study of 932 participants showed that 36.8% experienced psychological problems during the period of social isolation/distancing, and the disorders were more prevalent in the young population (Smith et al., 2020).

From this perspective, psychological disorders are closely related to bruxism. The American Academy of Sleep Medicine defines such behavior as repetitive muscular activity of the jaw, characterized by clenching or grinding of teeth and/or clenching or pushing the jaw. Bruxism that occurs during sleep is unconscious and is distinguished from that which occurs during the day, also called brychismus, awake or daytime bruxism, which involves consciousness (Pontes; Prietsch, 2019).

The pathophysiology of this behavior is still unknown; however, studies indicate that its cause is multifactorial, involving biological factors, such as genetic predisposition, and psychosocial factors, such as lifestyle and mental state (Dantas-

Neta et al., 2014; Calderan et al., 2017; Gómez; Sánchez; Castellanos, 2015). From this point of view, several scientific articles correlate psychological comorbidities, such as anxiety, with the risk of bruxism in undergraduate students, and it has been proven that psychological problems are associated with the strength and severity of bruxism (Quadri et al., 2015).

These problems may have been exacerbated by the quarantine and social isolation/distancing need and the uncertainties during the COVID-19 pandemic. Therefore, this study aims to evaluate the prevalence and relationship of anxiety and self-reported bruxism in undergraduate students of the Federal University of Campina Grande, Paraíba, Brazil, during the period of social isolation.

MATERIALS AND METHODS

The present study was characterized as quantitative, descriptive, and analytical, with a cross-sectional design. The sample was composed of Biological Sciences, Forestry Engineering, Dentistry, and Veterinary Medicine students from the Center for Rural Health and Technology of the Federal University of Campina Grande (CSTR-UFCG, Patos, Paraíba, Brazil). The research project was approved by the Research Ethics Committee of the Alcides Carneiro University Hospital - HUAC/UFCG, under Opinion number 3.480.524.

The data collection instrument was applied online, in the period between April 25 and May 5, 2020, through the Google Forms platform. It was previously tested with ten students. The form was sent to the e-mail addresses of the 1233 students on campus and sent through their social networks (Instagram and Whatsapp). All research participants anonymously accepted the Informed Consent Form (ICF) before completing the questionnaire. Students under the age of 18 did not participate in the survey.

Electronic questionnaires, also known as Survey research, are scientifically validated as data collection methods in several areas. For example, in the health area, Faleiros et al. (2016) stated that using virtual environments for this purpose is an economic possibility, with greater feasibility and speed of scientific production, and therefore is a competent and valuable tool. In this sense, the survey was composed of sociodemographic questions such as gender and age, and if the participant was in social isolation (yes or no). In addition, the Generalized Anxiety Disorder 7-item anxiety scale (GAD-7) index was used to assess anxiety. It was developed by Spitzer et al. (2006) and validated by Moreno et al. (2016), according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria.

The GAD-7 consists of seven items, arranged on a four-point scale: 0 (not at all) to 3 (nearly every day). The scores range from 0 to 21 when measuring the frequency of signs and symptoms of anxiety over the previous two weeks. Scores of 10 or higher represent an ideal cut-off point for identifying anxiety. Therefore, anxiety was considered low when scores ranged from 0-9 and moderate to severe from 10-21 points (Spitzer et al., 2006).

Bruxism was assessed by the self-reported presence of a habit of grinding or clenching teeth during sleep or during the day, starting within the last 30 days, and comprising the initial period of isolation due to the COVID-19 pandemic. Awake bruxism was evaluated through the following question: have you noticed grinding or clenching your teeth during the day while not eating in the last 30 days?. The student who marked "sometimes" or "often" (Serra-Negra et al., 2014) was considered to have bruxism. Following the diagnostic criteria of the International Classification of Sleep Disorders (American Academy of Sleep Medicine, 2014), sleep bruxism was considered present when the first question was "sometimes" or "often" in association with at least a "yes" in one of the other questions.

The data collected were tabulated and analyzed using version 21.0 Statistical Package for the Social Sciences software (SPSS Inc., Chicago, IL, USA). Bivariate analysis was performed using the Chi-square test, considering a significance level below 5% ($p< 0.05$) and a 95% confidence interval (95%CI).

RESULTS

The final sample consisted of 251 undergraduate students, with a mean age of 21 years (±3.08). The majority were female (68.1%), from the Dentistry course (44.2%), and were in their second year, third and fourth semester (29.1%). Regarding social isolation, 80.1% of the undergraduate students claimed to be completely isolated, only going out to engage in essential activities (Table 1).

Table 1: Sociodemographic characteristics of the undergraduate student sample (n = 251). Patos, Paraíba, Brazil, 2020.

Variables	n	%
Gender		
Male	80	31,9
Female	171	68,1
Age		
18-20	92	36,6
21-23	111	44,2
24-26	26	10,3
27-29	12	4,7

30-33	10	4,2
Course of Study		
Dentistry	111	44,2
Forest Engineering	15	6
Veterinary Medicine	90	35,9
Biological Sciences	35	13,9
Semester		
First-Second	51	20,3
Third-Fourth	73	29,1
Fifth-Sixth	59	23,5
Seventh-Eighth	30	12
Ninth-Tenth	38	15,1
Social Isolation		
Yes	201	80,1
No	50	19,9

Fonte: Autoria própria.

Regarding the self-reported variables, Table 2 shows that the prevalence of awake bruxism was 33.5%, while sleep bruxism had a frequency of 15.9% among undergraduate students. In addition, moderate to severe anxiety was present in 85 participants (33.9%) and low anxiety in 166 (66.1%).

Table 2: Distribution of the undergraduate student sample by anxiety level, awake bruxism (AB), and sleep bruxism (SB) (n = 251). Patos, Paraíba, Brazil, 2020.

Self-Reported Variables	n	%
Awake bruxism (AB)		
Yes	84	34
No	167	67
Sleep bruxism (SB)		
Yes	40	16
No	211	84
Anxiety (GAD-7)		
Low (0-9)	166	66
Moderate to severe (10-21)	85	34

Fonte: Autoria própria.

When the association between bruxism and the variables studied was verified, the awake bruxism (AB) was more present in women, subjects in the Dentistry course, and the third year of the course (fifth-sixth semester). Moreover, it was associated with social isolation and anxiety ($p< 0.05$). On the other hand, sleep bruxism (SB) was more common in females, undergraduate students of Veterinary Medicine, and second-year students (third-fourth semester), being associated only with the course variable ($p< 0.05$) (Table 3).

Table 3: Sample distribution of the undergraduate students according to sociodemographic characteristics and anxiety in relation to awake bruxism (AB) and sleep bruxism (SB) (n= 251). Patos, Paraíba, Brazil, 2020.

Variables	AB		p-value*	SB		p-value*
	Yes	No		Yes	No	
Gender			0,279			0,782
Male	23	57		12	68	
Female	61	110		28	143	
Course of Study			0,381			0,041
Dentistry	40	71		16	95	
Forest Engineering	2	13		-	15	
Veterinary Medicine	30	60		21	69	
Biological Sciences	12	23		3	32	
Semester			0,09			0,281
First-Second	12	39		5	46	
Third-Fourth	26	47		14	59	
Fifth-Sixth	27	32		12	47	
Seventh-Eighth	10	20		6	24	
Ninth-Tenth	9	29		3	35	
Social Isolation			0,024			0,676
Yes	74	127		33	168	
No	10	40		7	43	
Anxiety (GAD-7)			<0,001			0,105
Moderate to severe (10-21)	43	42		18	67	
Low (0-9)	41	125		22	144	

* Chi-Square test (significance level p<0.05)
Fonte: Autoria própria.

Among the signs and symptoms of sleep bruxism, according to the International Classification of Sleep Disorders, the most frequent self-reported sign was tooth wear, present in 30.7% of the sample. In addition, 16.8% of the undergraduate students reported that they grinded their teeth at night. It is worth noting that 83.2% of the participants who said they did not grind their teeth also reported tooth wear. When anxiety and the signs and symptoms of sleep bruxism were associated with the habit of grinding teeth at night, they all had a statistically significant association (p< 0.05) (Table 4).

Table 4: Distribution of the sample of undergraduate students according to the signs and symptoms of the International Classification of Sleep Disorders and anxiety in relation to the habit of grinding teeth during sleep (n = 251). Patos, Paraíba, Brazil, 2020.

Signs and symptoms	Grinding teeth (nocturnal)		p-value*
	Yes	No	
Dental Wear			< 0,001
Yes	27	50	
No	15	159	
Tiredness/jaw pain/mouth muscle pain			< 0,001
Yes	33	39	
No	9	170	
Pain in the temples			< 0,001
Yes	25	25	
No	17	184	
Difficulty opening the mouth when waking up			< 0,001
Yes	14	14	
No	28	195	
Anxiety (GAD-7)			0,039
Moderate to severe (10-21)	20	65	
Low (0-9)	22	144	

* Pearson Chi-Square test (p<0.05).
Fonte: Autoria própria.

DISCUSSION

In Brazil, the first case of COVID-19 was confirmed on February 26, 2020, in the city of São Paulo. However, due to the non-contingency, new cases have appeared in other regions of the country. In Paraíba, for example, the first patient with the disease was confirmed on March 18. The day before (03/17/2020), the Federal University of Campina Grande announced the suspension of face-to-face activities on all campuses, suspending the school term until the return online only announced on December 16. Thus, this study was conducted 39 days after the university closed, when most participants confirmed that they were entirely socially isolated, only going out to engage in essential activities (80.1%).

Prevalence rates of 15.9% sleep bruxism and 33.5% awake bruxism were found. These findings resemble the results of previous studies before the pandemic, such as the one done by Cavallo, Carpinelli e Savarese (2016). This research showed a prevalence of 31.9% of SB and 37.9 of AB in undergraduate students, as well as that of Serra-Negra et al. (2014), which had a prevalence of 21.5% for SB and 36.5% for AB, both self-reported.

Regarding the pandemic period, Emodi-Perlman et al. (2020) evaluate, among other things, the effect of the pandemic on the prevalence and worsening of bruxism in adults (mostly young adults) from two different countries. The authors found a prevalence of 39.71% of awake bruxism in Israelis and 68.04% in Poles. Furthermore, the prevalence of sleep bruxism was 31.71% in Israelis and 50.36% in Poles, concluding that the high frequency of this behavior and its aggravation were related to psycho-emotional factors caused by the pandemic. Similarly, in undergraduate students, Medeiros et al. (2020) concluded that isolation due to COVID-19 impacted the prevalence of Temporomandibular Dysfunction symptoms as well as anxiety in Brazilian students.

A statistically positive association ($p<0.05$) was found between social isolation and anxiety with awake bruxism in our study. In this sense, it is known that the causality of bruxism is related to poor sleep quality, circadian preferences, nocturnal or diurnal habits, and psychological factors, among which stress and anxiety stand out. Moreover, such factors are commonly found in undergraduate students since many develop habits and psychopathies due to their academic life, and this group is prone to develop bruxism (Alencar et al., 2020).

During the pandemic, social isolation aggravated some psychosomatic symptoms, among them anxiety in undergraduate students. For example, in Italy, in one of the most affected regions by the pandemic during the first outbreak, a study using the same evaluative instrument as our research (GAD-7) investigated the anxiety of 399 Dentistry students in isolation. According to the research, 25% of them had moderate and severe anxiety (Generali et al., 2020). This number was even higher in Spain, where out of 932 undergraduate students, 570 (61.2%) scored ten or more points on the GAD-7 questionnaire. Thus, the majority of the study population was considered to have moderate and severe anxiety (Padrón et al., 2021).

From this point of view, our study showed a prevalence of moderate to severe anxiety of 33.9%. This result corroborated studies that used the evaluative criterion of anxiety similar to this research, ranging from 15.6% to 61.2% (Generali et al., 2020; Padrón et al., 2021; Amendola et al., 2021; Lingawi; Afifi, 2020). This prevalence and the association between anxiety with awake bruxism and the habit of grinding the teeth at night may be related to the moment of the research, in which the students were socially isolated due to Sars-Cov-2 - a virus that recently arrived in Brazil and it is still not fully understood. Furthermore, the context led to uncertainties regarding academic education and financial, family and health

concerns (Amendola et al., 2021), which may have contributed to increased anxiety during this time and, consequently, to the onset or progression of bruxism and teeth grinding at night.

Moreover, among the signs and symptoms of the International Classification of Sleep Disorders, the most frequent self-reported sign was tooth wear, present in 30.7% of the sample, although only 16.8% reported grinding their teeth at night. This dental wear may be associated with other factors, such as malocclusion and tooth loss; furthermore, the low perception of the habit of grinding teeth at night, due to not knowing this behavior or because a partner did not notice it, may have been the cause for the high number of individuals who said they did not grind, but reported dental wear.

Among some limitations found in this study is that the perception regarding bruxism may not have been faithful to reality since data collection was self-administered, and its prevalence could be even higher. In addition, although the questionnaire was sent to all students on the analyzed campus through the university's registered e-mails, the inference of the data to all students may not be correct, given that the response rate does not comprise a probabilistic study. Thus, new studies must be developed with larger samples to reliably investigate tooth wear employing physical examination (possibly in the post-pandemic period) better to assess the data on bruxism and its associated factors.

CONCLUSION

Awake and sleep bruxism, as well as anxiety, showed a substantial prevalence among the evaluated undergraduate students. In addition, there was a statistical association between social isolation and anxiety with awake bruxism and between anxiety and the habit of grinding teeth at night. It was possible to evidence a significant contribution of social isolation resulting from the current COVID-19 pandemic in the health of individuals, which contributed to the emergence or progression of awake bruxism or even anxiety in this population. Thus, the need to control bruxism in undergraduate students and psychological monitoring of this group during the pandemic becomes evident.

REFERENCES

ALENCAR, L. B.; SILVA, I. L.; SOUSA, S. C.; ARAÚJO, V. F.; MOURA, C. Factors associated with bruxism in university students: an integrative review. **RSD**, [S. l.], v. 9, n. 7, 2020. Available at: https://rsdjournal.org/index.php/rsd/article/view/3728.

ALMEIDA-LEITE, C. M.; STUGINSKI-BARBOSA, J.; CONTI, P. C. How psychosocial and economic impacts of COVID-19 pandemic can interfere on bruxism and temporomandibular disorders?. **J. Appl. Oral Sci**., [S. l.], v. 28, 2020. Available at: https://www.scielo.br/j/jaos/a/YSyF5ZNgGQwDrS8N8kzkgLB/?lang=en.

AMENDOLA, S.; VON WYL, A.; VOLKEN, T.; ZYSSET, A.; HUBER, M.; DRATVA, J. A Longitudinal Study on Generalized Anxiety Among University Students During the First Wave of the COVID-19 Pandemic in Switzerland. **Front Psychol.**, [S. l.], v. 12, 2021. Available at: https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.643171/full.

AMERICAN ACADEMY OF SLEEP MEDICINE. International Classification of Sleep Disorders. 3. ed. Darien: American Academy of Sleep Medicine, 2014.

CALDERAN, M. F.; SILVA, T. C.; HONÓRIO, D. R.; OLIVEIRA, T. M.; MACHADO, M. A. Fatores etiológicos do Bruxismo do Sono: revisão de Literatura. **Rev. odontol. Univ. Cid. São Paulo**, [S. l.], v. 26, n. 3, p. 243, 2017. Available at: https://doi.org/10.26843/ro_unicid.v26i3.308.

CAVALLO, P.; CARPINELLI, L.; SAVARESE, G. Perceived stress and bruxism in university students. **BMC Res Notes**, [S. l.], v. 9, n. 1, p. 514, 2016. Available at: https://link.springer.com/article/10.1186/s13104-016-2311-0.

COSTA, I. B.; BITTAR, C. S.; RIZK, S. I.; FILHO, A. E.; SANTOS, K. A.; MACHADO, T. I. et al. O Coração e a COVID-19: O que o Cardiologista Precisa Saber. **Arq. Bras. Cardiol.**, [S. l.], v. 114, n. 5, 2020. Available at: https://www.scielo.br/j/abc/a/F5BDXsNWzSjbwzqfV6WPQbF/?lang=pt.

DANTAS-NETA, N. B.; LAURENTINO, J. B.; SOUZA, C. H.; NUNES-DOS-SANTOS, D. L.; MENDES, R. F.; PRADO-JUNIOR, R. R. Prevalence and potential factors associated with probable sleep or awake bruxism and dentin hypersensitivity in undergraduate students. **Rev Odontol UNESP**, [S. l.], v. 43, n. 4, p. 245-251, 2014. Available at: https://www.scielo.br/j/rounesp/a/63BZLpm3sFFhBZZz37tMqZQ/?format=html&lang=en.

EMODI-PERLMAN, A.; ELI, I.; SMARDZ, J.; UZIEL, N.; WIECKIEWICZ, G.; GILON, E. et al. Temporomandibular Disorders and Bruxism Outbreak as a Possible Factor of Orofacial Pain Worsening during the COVID-19 Pandemic-Concomitant Research in Two Countries. **J Clin Med**., [S. l.], v. 9, n. 10, p. 3250, 2020. Available at: https://www.mdpi.com/2077-0383/9/10/3250.

FALEIROS, F.; KÄPPLER, C.; PONTES, F. A.; SILVA, S. S.; GOES, F.; CUCICK, C. D. Uso de questionário online e divulgação virtual como estratégia de coleta de dados em estudos científicos. **Texto e Contexto Enfermagem**, [S. l.], v. 25, n. 4, p. 3–8, 2016. Available at: http://dx.doi.org/10.1590/0104-07072016003880014.

GENERALI, L.; IANI, C.; MACALUSO, G. M.; MONTEBUGNOLI, L.; SICILIANI, G.; CONSOLO, U. The perceived impact of the COVID-19 pandemic on dental undergraduate students in the Italian region of Emilia-Romagna. **Eur J Dent Educ**., [S. l.], p. 1–13, 2020. Available at: https://onlinelibrary.wiley.com/doi/10.1111/eje.12640.

GÓMEZ, S. A.; SÁNCHEZ, E. O.; CASTELLANOS, J. L. Advances and challenges in the treatment of patients with bruxism. **Rev. ADM**, [S. l.], v. 72, n. 2, p. 106–114, 2015. Available at: https://www.medigraphic.com/cgi-bin/new/resumenI.cgi?IDARTICULO=57880.
LINGAWI, H. S.; AFIFI, I. K. COVID-19 Associated Stress Among Dental Students. **Open dent. j.**, [S. l.], v. 14, p. 554-562, 2020. Available at: https://opendentistryjournal.com/VOLUME/14/PAGE/554/FULLTEXT/.

MEDEIROS, R. A.; VIEIRA, D. L.; SILVA, E. V.; REZENDE, L. V.; SANTOS, R. W.; TABATA, L. F. Prevalence of symptoms of temporomandibular disorders, oral behaviors, anxiety, and depression in Dentistry students during the period of social isolation due to COVID-19. **J. Appl. Oral Sci**., [S. l.], v. 28, 2020. Available at: https://pmc.ncbi.nlm.nih.gov/articles/PMC7714260/.

MORENO, A. L.; SOUSA, D. A.; SOUZA, A. M.; MANFRO, G. G.; SALUM, G. A.; KOLLER, S. H. et al. Factor structure, reliability, and item parameters of the brazilian-portuguese version of the GAD-7 questionnaire. **Temas psicol.,** [S. l.], v. 24, n. 1, p. 367-376, 2016. Available at: https://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1413-389X2016000100019&lng=en.

PADRÓN, I.; FRAGA, I.; VIEITEZ, L.; MONTES, C.; ROMERO, E. A Study on the Psychological Wound of COVID-19 in University Students. **Front Psychol**., [S. l.], v. 12, 2021. Available at: https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.589927/full.

PIMENTEL, A. S.; SILVA, M. R. Psychic Health in Times of Corona Virus. **Research, Society and Development**, [S. l.], v. 9, n. 7, 2020. Available at: https://rsdjournal.org/rsd/article/view/3602.

PONTES, L. S.; PRIETSCH, S. O. Bruxismo do sono: estudo de base populacional em pessoas com 18 anos ou mais na cidade de Rio Grande, Rio Grande do Sul. **Rev Bras de Epidemiol**., [S. l.], v. 22, 2019. Available at: https://www.scielosp.org/article/rbepid/2019.v22/e190038/.

QUADRI, M. F.; MAHNASHI, A.; AL ALMUTAHHIR, A.; TUBAYQI, H.; HAKAMI, A.; ARISHI, M. et al. Association of Awake Bruxism with Khat, Coffee, Tobacco, and Stress among Jazan University Students. **Int. j. dent**., [S. l.], 2015. Available at: https://onlinelibrary.wiley.com/doi/10.1155/2015/842096.

ROY, D.; TRIPATHY, S.; KAR, S. K.; SHARMA, N.; VERMA, S. K.; KAUSHAL, V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. **Asian J Psychiatr**, [S. l.], v. 51, 2020. Available at: https://doi.org/10.1016/j.ajp.2020.102083.

SERRA-NEGRA, J. M.; SCARPELLI, A. C.; TIRSA-COSTA, D.; GUIMARÃES, F. H.; PORDEUS, I. A.; PAIVA, S. M. Sleep Bruxism, Awake Bruxism and Sleep Quality among Brazilian Dental Students: A Cross-Sectional Study. **Brazilian Dental Journal,** [S. l.], v. 25, n. 3, 2014. Available at: https://www.scielo.br/j/bdj/a/rxyrYGr5qpRfj3QWhBhB73s/?lang=en#articleSection3.

SMITH, L.; JACOB, L.; YAKKUNDI, A.; MCDERMOTT, D.; ARMSTRONG, N. C.; BARNETT, Y. et al. Correlates of symptoms of anxiety and depression and mental wellbeing associated with COVID-19: a cross-sectional study of UK-based respondents. **Psychiatry res.,** [S. l.], v. 291, 2020. Available at: https://www.sciencedirect.com/science/article/pii/S0165178120312476.

SPITZER, R. L.; KROENKE, K.; WILLIAMS, J. B.; LÖWE, B. A brief measure for assessing generalized anxiety disorder: the GAD-7. **Archives of Internal Medicine,** [S. l.], v. 166, n. 10, p. 1092-1097, 2006. Available at: https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/410326.