International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 7, 2025
https://www.theaspd.com/ijes.php

Awareness Of Stress-Related Bruxism Among Medical Students

Miss. Sanya Jignesh Patel[1], Dr. Tejashree Omkar Kumbhar[2*]

[1] Intern, Krishna College of Physiotherapy, Krishna Vishwa Vidyapeeth Deemed to be University, Karad, Maharashtra, India.
[2] Assistant Professor, Department of Musculoskeletal Sciences, Krishna College of Physiotherapy, Krishna Vishwa Vidyapeeth Deemed to be University, Karad, Maharashtra, India.
*Corresponding author: drtejashreekumbhar9099@gmail.com

ABSTRACT

Background: *Bruxism is thought to be the grinding or clenching of the teeth without a goal-oriented purpose, either while sleeping or when awake. This study focuses more on the relationship between the stressors and bruxism according to the gender, personality trait and coping mechanism of stress in a population of medical students. Therefore, this study would pay special attention to spreading awareness regarding bruxism and the stressors to avoid the ill-effects of chronic teeth clenching or grinding.* ***Materials and methods:*** *The study was conducted through a validated questionnaire and a standardized Perceived Stress Scale-10 (PSS-10). 372 medical students were asked to fill the questionnaire and PSS-10. The sample population were selected based on their ages between 18 to 30 years of age.* ***Result:*** *The rate of awareness for bruxism is 24.1%, which consists of 28 male and 62 female participants. Similarly, the awareness rate for the ill-effects of stress on oral health is 43.9%(49 male and 115 females). Out of 372 students, 18 males and 47 females have bruxism, i.e. 17.4% . Total of 269 students experience stress, 82 are male and 187 are female participants.* ***Conclusion:*** *There is not much awareness regarding stress-related bruxism among medical students and there should be better knowledge about bruxism to avoid the adverse effects of stress and bruxism over oral health and temporomandibular joint. The relation between stress levels and bruxism was analysed and it concluded that the students with bruxism have moderate levels of stress.*

Keywords: *Bruxism, Coping Strategies, Medical Students, Personality Traits, Stress*

INTRODUCTION:

Bruxism is thought to be grinding or clenching of the teeth without a goal-oriented purpose, either while sleeping or when awake. The incidence of bruxism being a stress-linked condition has been increasing according to several studies, particularly targeting young adults, those being the university students aged 18 to 26 years[1].

This particular disorder frequently goes unnoticed due to improper awareness and knowledge about the effects of bruxism and overall psychological well-being on the oral health and the quality of life among the target population. Bruxism is recognized to be of two kinds – sleep bruxism and/or awake bruxism. Research shows that the prevalence of sleep bruxism is greater than that of awake bruxism. Sleep bruxism is defined as the non-functional gritting or grinding of teeth during sleep. It is considered a part of sleep-related movement disorder. Awake bruxism is mostly associated with stress where there is an involuntary clenching of teeth. Bruxism is connected to a number of symptoms, including temporal headaches, dental wear (enamel wears off), fatigue, jaw soreness, teeth sensitivity, temporomandibular joint dysfunction resulting in jaw stiffness[2].

This condition is believed to develop due to factors like neurotransmitter hindrance, consumption of drugs, alcohol, cigarettes, diseases, trauma and psychological processes, for example- stress, anxiety[3]. There also have been speculations about disruption in the sleep cycles of university students that lead to advancement of sleep bruxism. This has been found as a result of stress that is formed within the university students due to disturbances in their normal circadian rhythm[4]. Hicks reported the correlation

of personality traits and the bruxers in university students. His study focuses on explaining how type A personality traits are more likely to develop bruxism than the type B personality traits students[5].

The aetiology and the mechanism that lead to the production of bruxism is yet to be discovered, so the mechanism is unknown. There are further studies that hypothesize the aetiology, some claiming that the central nervous system plays a major role in the induction of this condition. The three main hypotheses for the cause of this disorder consists of neurological factors, peripheral stimulus and psychogenic stimulus. Although, it should be kept in mind that these speculated causes are for sleep bruxism. Awake bruxism, which consists of teeth clenching, is acquisitive behaviour according to some researchers[6].

Sleep bruxism can be diagnosed initially by a sleep partner, who reports hearing the sounds of teeth grinding. This can be followed by the presence of tooth wear. Other signs that were predominantly noticed were the hypertrophy of the masseter muscle, pain in the temporomandibular joint, headache, pain, masticatory muscles stiffness after waking and tongue or cheek indentation.

Phuong et al.[7] has described the prevalence of sleep bruxism to be 12.8 ± 3.1% and awake bruxism to be 22.1 to 31 %. Despite all the prevalence studies done on the topic of bruxism and its correlation with stress, there is extremely limited awareness about it among the university students. Hence, it is just as important to emphasize the effects of stress for the student population.

Stress is defined as the physiological response to perceived threat as reported by Kumar [8]. He also mentions that any changes in daily life will be characterized to be stressful, this causes various reactions in the form of neurological and physiological alterations in the body. These alterations in the body occur as a part of an adaptative function to aid in processing the crucial changes in life. There are various stressors in the environment which results in the evolution of stressful situations. Few stressors are necessary in the life of university students as an element of development; this includes the transition of leaving the home for college the first time and living alone away from family. These leads to the generation of psychosomatic symptoms like headaches, a simple cold, etc. Zaleski et al. [9] shows evidence of levels of stress being high when there is conflict with parents and during situations causing social anxiety.

While the same levels are considered to be low when the students do not face any sorts of stressors in their surroundings and when they're not separated from their homes for further education.

The determinants which trigger stressful situations in medical students are academic pressures, social dynamics and lifestyle changes. Academic pressures consist of anxiety during examinations, assignment submissions. Social dynamics includes peer pressures or personal conflict between friendship groups. Lastly, lifestyle changes are characterized by any sorts of sudden illnesses in daily life, adjustment to a new environment or changes in sleeping habits. Other component that can exacerbate this psychological factor can be financial pressures, competitiveness among academic peers, new responsibilities or separation anxiety from friends and family. To deal with these situations, there are different types of coping strategies that are employed by the students. The strategies differ according to the personality types and the amount of perceived stress felt by the students.

The definition of perceived stress being as a condition subjectively experienced by an individual who identifies an imbalance between demands addressed to him and the resources available to encounter these demands. He speculates that the basic function of any coping strategy is to manage the problem causing stress and to guide the emotions related to the stressor. On the basis of these functions, it is assumed that there are 3 types of coping strategies which are used by the students to manage their stress – task-oriented, emotion-oriented and avoidance-oriented.

Task-oriented refers to a direct action being taken against the problem and actively focuses on decreasing the stressor. Emotion-oriented strategy consists of altering the emotional responses, which has a negative impact on the person. This helps in solving the problem in such a way that the stressor would no longer cause any adverse emotional state in its presence, resulting in less stress. Avoidance-oriented points to the strategy to elude a problem, ignoring it and distracting themselves to continue avoiding to solve the issue causing stress. Therefore, the former two strategies are pro-active in nature and is used more efficiently by the students and the latter is used by specific personality types, who would rather avoid the issue at hand than resolve it. Later, it was deduced that instead of 3, there are 4 strategies namely- active practical coping, active-distractive coping, avoidance-coping and religious coping[10].

Active practical strategy engages in proactively settling the dilemma to minimize the stressor. Active-distraction strategy involves indulging in various recreational activities or leisure time to distract oneself instead of fixing a certain obstacle. Avoidance strategy is to treading different paths to redirect their attention from the task at hand. Religious strategy is to associate in religious activities and rituals. So according to the amount of workload given to the students, they opt for coping strategies. Students with more workload opts for active practical coping and while for less workload, they choose to go for active distractive or avoidance coping strategies.

Given that the students face unique stressors in their everyday life, their susceptibility to stress-related bruxism may be higher, warranting a focused exploration of awareness within this group. So, early identification and awareness are essential to avoid unnecessary adverse effects of the condition.

The aim of this study is to find out the level of awareness of stress-related bruxism among medical students, exploring their understanding of its symptoms and causes. Through this study, the research can help identify the gaps in knowledge and provide insights regarding this condition and how to manage stress within the medical university setting.

MATERIALS AND METHODOLOGY:

Study Design and Setting

This cross-sectional observational study was conducted at Krishna College of Physiotherapy OPD in Karad, Maharashtra, for a period of six months. Assessing medical students' reported stress levels and any potential associations with oral health-related symptoms and behaviours was the aim of the study. The study was carried out in accordance with ethical standards, and the Institutional Ethics Committee approved it before any data was gathered.

Ethical Considerations

Every participant received complete information on the purpose and nature of the study. Before being included in the study, each subject gave their informed consent. Respondents were guaranteed the secrecy and privacy of their answers, and participation was completely optional.

Study Population and Sampling

In all, 372 people participated in the study. The sample population consisted of male and female medical students currently enrolled at a university in Karad. Participants were selected using preset inclusion and exclusion criteria to provide a focused and relevant research group. Male or female medical students between the ages of 18 and 30 who were enrolled in a recognised university and self-reporting stress were required to participate. Those who were older than 30, had a history of mental illness, were taking any drugs for psychological problems, had previously been diagnosed with bruxism or were receiving therapy for it, or had a history of severe dental diseases were not permitted to participate.

Data Collection Tools

Data was collected using a structured online survey that was distributed using Google Forms. There were two sections in the questionnaire. Age, gender, academic year, and general health status were among the demographic and background information requested in the first section. The second section employed the Perceived Stress Scale-10 (PSS-10) [11], a validated psychological instrument that rates an individual's level of stress using 10 items on a 5-point Likert scale. Higher scores corresponded to higher stated stress levels. The replies were automatically recorded, gathered, and then statistically analysed.

RESULT

This study aimed to investigate the awareness of stress-related bruxism among medical students. 372 participants were asked to fill the questionnaire and PSS-10 to record the data. Accordingly, the data was analysed and results were calculated to determine the relationship between bruxism, coping strategies, stress and personality traits.

International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 7, 2025
https://www.theaspd.com/ijes.php

Data :

Gender	Frequency
Female	256
Male	118
Total	374

Table No.1 : Population Distribution

Interpretation:
The demographic data in the table shows the sample of medical students. 256 females and 118 males, who filled the questionnaire to check the awareness regarding stress-related bruxism. According to the collected data, 68.4% of 374 participants are females and the rest 31.6% are male participants.

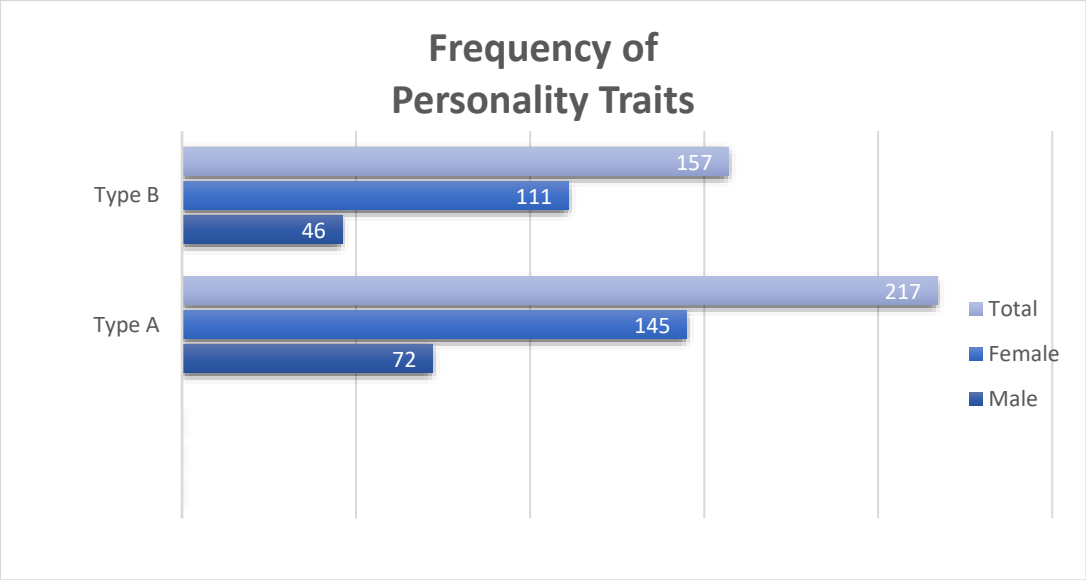


Figure No. 1: Personality Trait Distribution

Interpretation:
The participants are depicted according to their personality traits in the above graph. In the above chart, 58% (217) of 374 participants have Type A personality trait and 42% (157) have Type B personality traits. Out of 217 Type A traits, 72 are male and 145 are female participants. Out of 157 Type B traits, 46 are male and 111 are female participants.

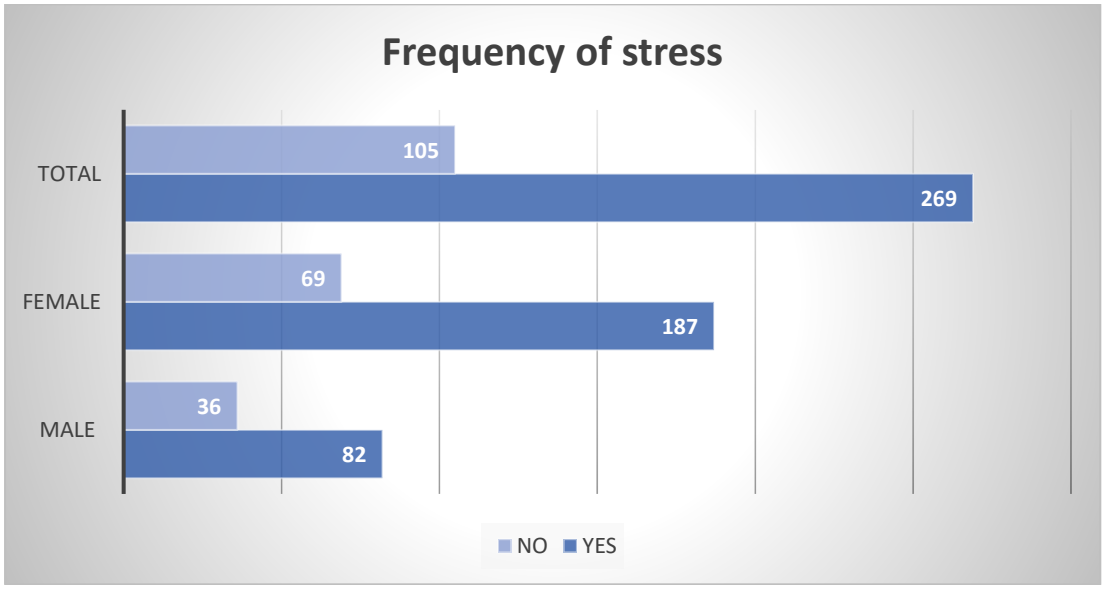


Figure No. 2 : Frequency of Stress Distribution

Interpretation:
The frequency of participants experiencing stress in their daily life is shown in above graph. In 374 individuals, 269 (71.9%) experience stress and 105 (28.1%) do not experience stress. Out of 269 individuals who experience stress, 82 and 187 individuals are male and female respectively. Out of 105 individuals who do not experience stress, 36 and 69 individuals are male and female respectively.

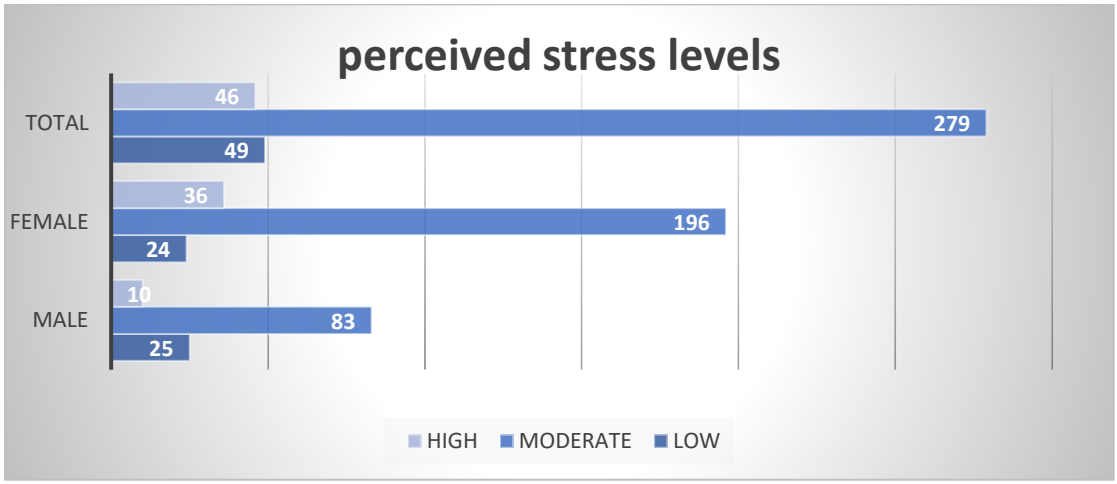


Figure No 3: Perceived Stress Levels Distribution

Interpretation:
As stated by the PSS-10, the stress levels of the individuals were calculated into low, moderate and high, and this is depicted in the above graph. For individuals with low stress levels, 25 are male and 24 are female out of 49(13.1%) total participants. For individuals with moderate stress levels, 83 are male and 196 are female out of 279 (74.6%) total participants. For individuals with high stress levels, 10 are male and 36 are female out of 46(12.3%) total participants.

International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 7, 2025
https://www.theaspd.com/ijes.php

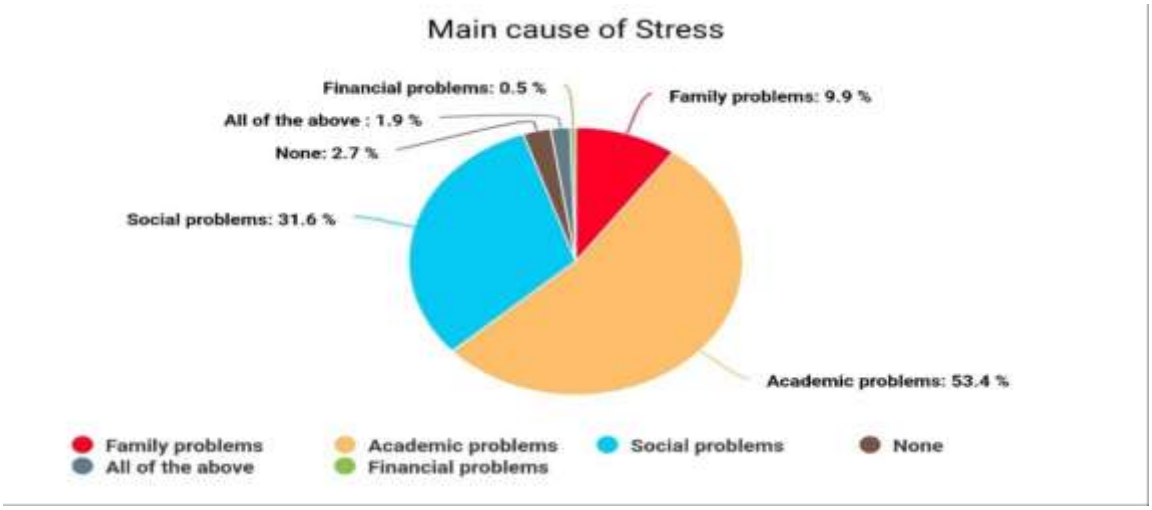


Figure No. 4: Stressors distribution

Interpretation :

The above chart consists of the main causes of stress because of which individuals experience stress in their daily lives. The most common stressor is of academic problems, i.e. 53.4% (199). The other most common stressor is due to social problems which consists of 31.6% (118) of the total. The third common stressor is due to family problems which is 9.9% (37) of the total. The other stressor mentioned is due to financial problems which is 0.5% (2) of the total. Some individuals mention that all of the above-mentioned stressors are the cause of stress, i.e. 1.9% (7). The rest of the participants have none of the mentioned stressors, i.e. 2.7% (10).

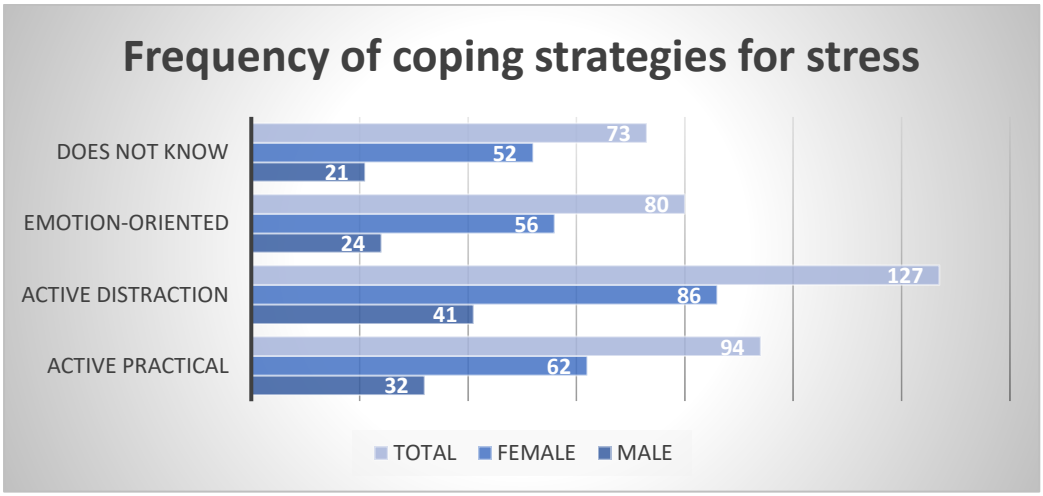


Figure No. 5 : Coping Strategies Distribution

Interpretation:

The above graph consists of different coping mechanisms used by participants to decrease their stress levels. In participants using active practical mechanism, 32 are male and 62 are female out of 94(25.1%) individuals. In participants using active distraction, 41 are male and 86 are female out of 127(34%) total. In participants using emotion-oriented, 24 are male and 56 are female out of 80 (21.4%) total. Rest of the participants mention that they do not know their mechanism, in which 21 are male and 52 are female out of 73(19.5%) total.

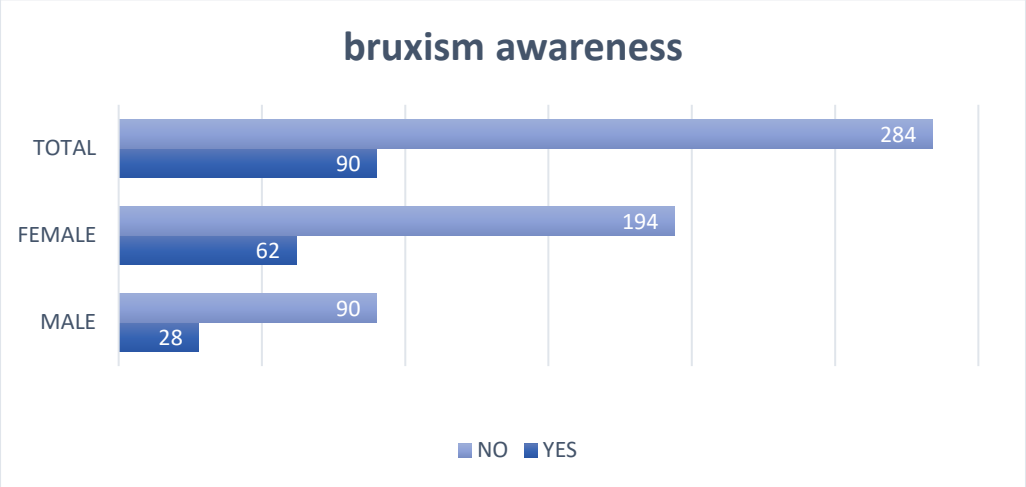


Figure no. 6 : Bruxism Awareness Distribution

Interpretation:
The above graph depicts the awareness for the term "bruxism". 284 (75.9%) participants show that they do not know the term "bruxism", in which 90 are male and 194 are female. 90(24.1%) participants show that they have awareness for the term "bruxism", in which 28 are male and 62 are female.

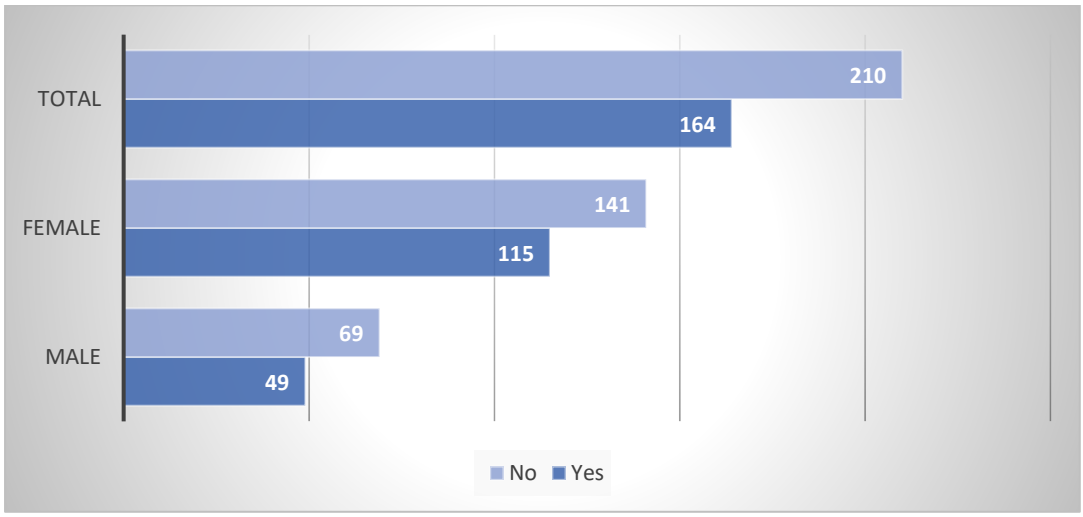


Figure no. 7: Ill-effects of Stress on Oral Health Distribution

Interpretation:
The above graph consists of the awareness of the participants about the ill-effects of stress on oral health. 164(43.9%) have awareness regarding the ill-effects of stress over oral health, in which 49 are male and 115 are female. 210(56.1%) show no awareness towards the ill-effects, in which 69 are male and 141 are female.

International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 7, 2025
https://www.theaspd.com/ijes.php

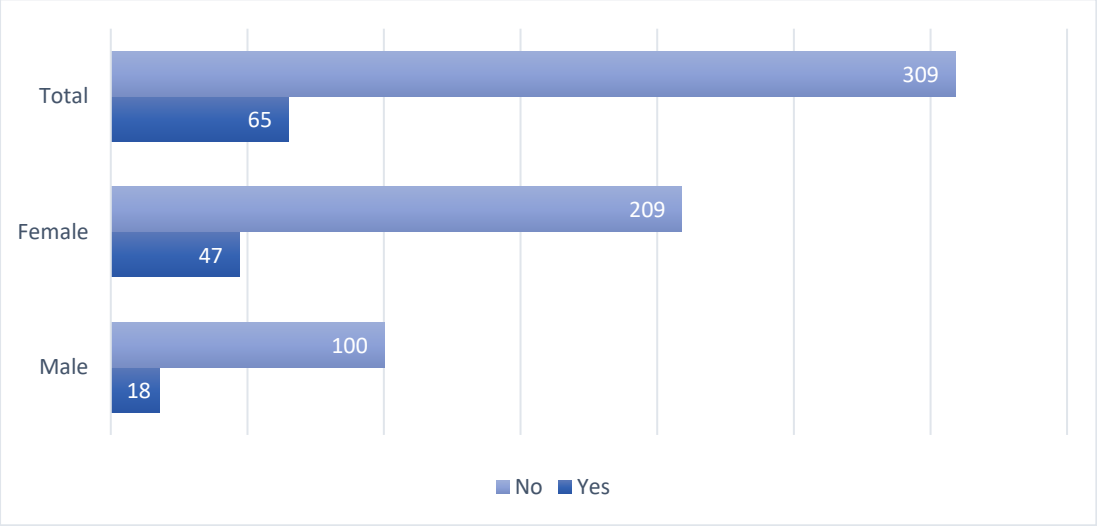


Figure no. 8: Bruxism presence Distribution

Interpretation:
The above graph depicts the presence of bruxism among participants. 65(17.4%) participants reported the presence of bruxism, in which 18 are male and 47 are female. 309 (82.6%) participants report no presence of bruxism, in which 100 are male and 209 are female.

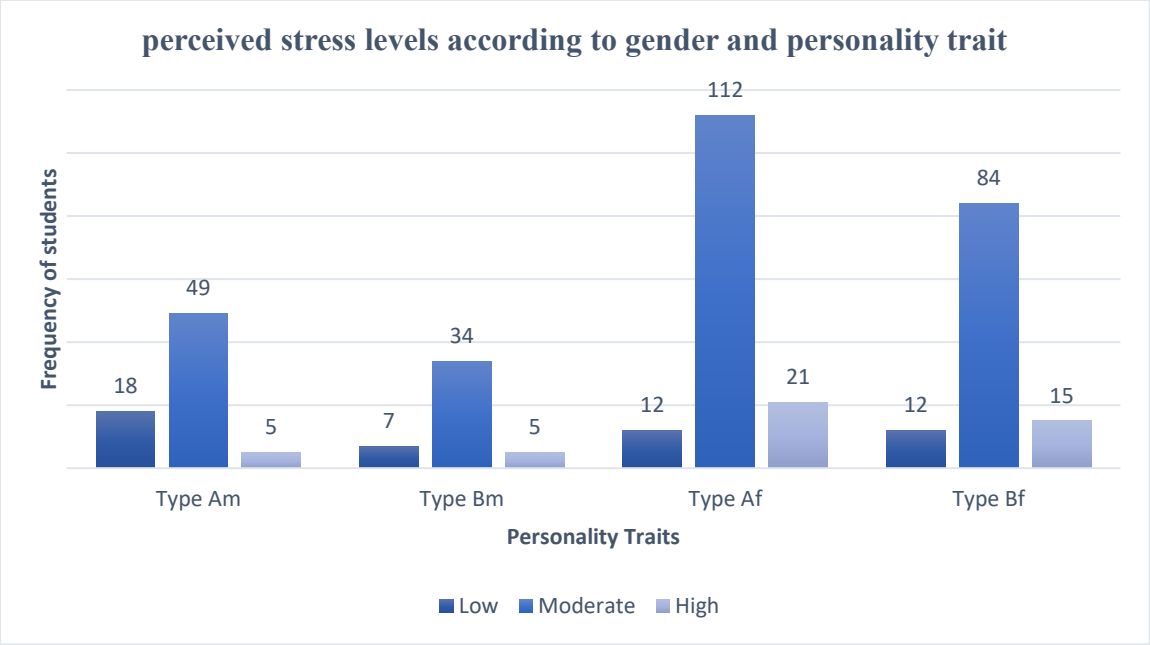
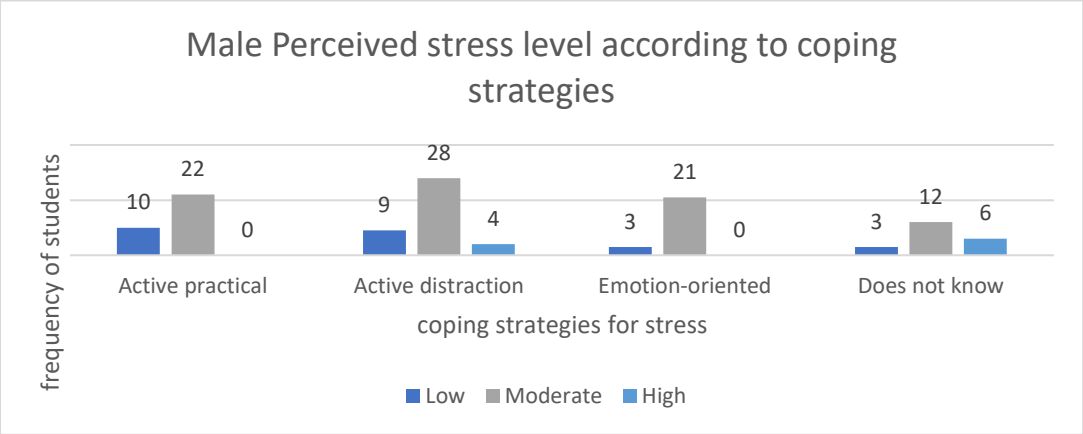


Figure no. 9: Distribution of Perceived Stress Levels based on Gender and Personality traits
[Type A_m = Type A for male; Type A_f = Type A for female]

Interpretation:
The above graph depicts the frequency of perceived stress levels of male and female participants according to their personality traits. In male participants, there are 72 type A traits out of which 18 have low stress levels, 49 have moderate stress levels and 5 have high stress levels. There are 46 male type B traits, out of

which 7 have low stress levels, 34 have moderate stress levels and 5 have high stress levels. In female participants, there are 145 type A traits, out of which 12 have low stress levels, 112 have moderate stress levels and 21 have high stress levels. There are 111 type B traits, out of which 12 have low stress levels, 84 have moderate stress levels and 15 have high stress levels.



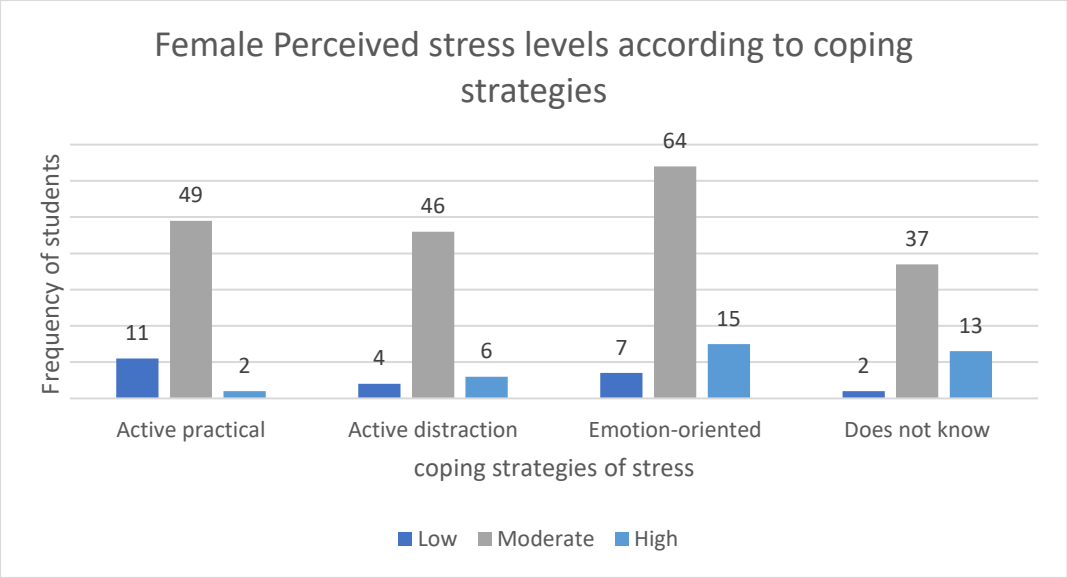


Figure no. 10 and 11: Distribution of Male and Female Perceived Stress Levels based on Coping Strategies respectively.

Interpretation:

The above graphs consist of the frequency of stress levels according to their gender and coping mechanisms used to relieve stress of the participants. In male participants, 33 participants use active-practical mechanism, out of which 10 have low stress levels, 22 have moderate and none have high stress levels. 41 participants use active-distraction mechanism, out of which 9 have low stress levels. 28 have moderate and 4 have high stress levels. 24 participants use emotion-oriented mechanism out of which 3 are low, 21 are moderate and none are high stress levels. 21 participants do not know their mechanism in which 3 are low, 12 are moderate and 6 are high stress levels. In female participants, 62 use active-practical, out of which 11 have low, 49 have moderate and 2 have high stress levels. 56 individuals use active-distraction, in which 4 have low, 46 have moderate and 6 have high stress levels. 86 individuals use emotion-oriented, in which 7 have low, 64 have moderate and 15 have high stress levels. 52 participants do not know their mechanism in which 2 have low, 37 have moderate and 13 have high stress levels.

International Journal of Environmental Sciences
ISSN: 2229-7359
Vol. 11 No. 7, 2025
https://www.theaspd.com/ijes.php

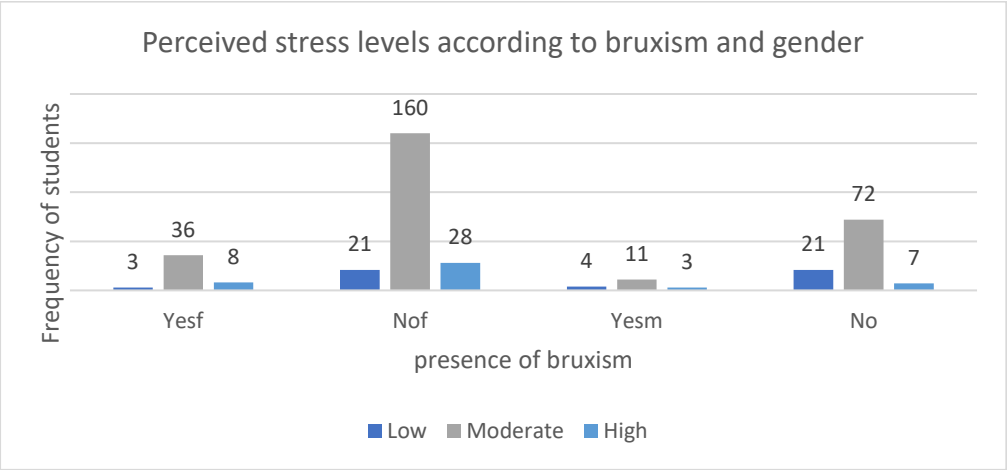


Figure no. 12: Distribution of Perceived Stress Levels based on Bruxism and Gender. [Yes_f = yes for female; Yes_m = yes for male]

Interpretation:
The graph shows the frequency of bruxism according to their perceived stress levels of the participants. For female individuals with bruxism, 3 have low, 36 have moderate, 8 have high stress levels. For patients with no bruxism, 21 have low, 160 have moderate and 28 have high stress levels. For male individuals with bruxism, 4 have low, 11 have moderate and 3 have high stress levels. For individuals with no bruxism, 21 have low, 72 have moderate and 7 have high stress levels.

DISCUSSION

This is the study aimed to find the awareness of stress-related bruxism among medical students. In this study, we aimed to find the knowledge regarding stress-related bruxism among medical students and the relationship between the stressors and occurrence of gender-wise bruxism. For this, we concluded the awareness rate with the help of a validated questionnaire and Perceived Stress Scale-10, which helped in calculating the stress levels of the medical students.

After analysing the data collected, the rate of awareness regarding bruxism in males is 23.7% and in females it is 24.2%. Therefore, the total awareness rate for bruxism among medical students is 24.1%. Additionally, the rate of medical students experiencing stress in their daily life is 71.9%, out of which 69.4% of male participants experience stress and 73% of female participants experience stress.

This study consisted the use of perceived stress scale-10 (PSS-10) and a validated questionnaire as the outcome measures. The PSS-10 consisted of 10 questions, which were used to calculate the perceived stress levels of the medical students in the last month. The data was collected on the basis of 5-point Likert scale, which ranks the score, ranging from "never" to "very often" i.e., 0 to 4. In PSS-10, there are 4 positive questions(4,5,7,8) for which, the scores marked are reversed. This is done to achieve an accurate and reliable score for the calculation of perceived stress levels. Therefore, the scores are then calculated out of 56 and ranked accordingly into low, moderate and high. After the data was collected, the frequency of gender-wise perceived stress levels were calculated. In male participants, 21.1% had low stress levels, 70.3% had moderate and 8.4% had high stress levels. In female participants, 9.3% had low, 76% had moderate and 14% had high stress levels[12]. The rest of the data was collected in light of a validated questionnaire which consisted of 16 questions and a data collection sheet comprising of socio-demographic information. The socio-demographic information included the medical students personal information in addition to their personality traits, sleep duration and reason of sleep disruption. Personality traits i.e., Type A/ Type B was collected in response to the effect of these traits on the medical students' stress levels. Type A trait is considered to have higher chances of stress in daily life due to their workaholic nature and no proper work-life balance, while Type B trait is considered to have less chances

of stress in their life due to their laid-back nature and proper work-life balance. According to the results, male participants with Type A traits have 15.2% low, 41.5% moderate and 4.2% high stress levels, while Type B traits have 5.9% low, 28.8% moderate and 4.2% high stress levels. In female participants with Type A traits, 4.6% have low, 43.7% have moderate and 8.2% have high stress levels, while Type B traits, 4.6% have low, 32.8% have moderate and 5.8% have high stress levels. The sleep cycle information is collected to see whether there is presence of sleep deprivation which could be responsible for inducing stress.

The questionnaire consists of questions regarding stress and bruxism. These questions help in establishing the presence of stress and bruxism among medical students and their knowledge regarding bruxism as well as the information regarding the coping mechanism of stress used to relieve stress. Coping strategies used to relieve stress can also be responsible to increase the stress levels. First strategy used commonly is active distraction mechanism, which involves the student distracting themselves to avoid the stressor. This strategy causes more chances of stress. Second commonly strategy used is active practical mechanism, in which the student actively deals with the stressor and helps reduce stress levels. The other common strategy is emotion-oriented mechanism, in which emotional response towards the stressor is changed. This also is more likely to induce higher stress levels in the student. According to the responses from the questionnaire, the male participants using active practical have 8.4% low, 18.6% moderate and no high stress levels. For active distraction strategy, 7.6% have low, 23.7% have moderate, 3.3% have high stress levels. For emotion-oriented, 2.5% have low, 17.7% have moderate, none have high stress levels. For students who do not know, 2.5% have low, 10.1% have moderate and 5% have high stress levels. In female participants with active practical, 4.2% have low, 19.1% have moderate, 0.7% have high stress levels. For active-distraction, 1.5% low, 17.9% moderate and 2.3% high stress levels. For emotion-oriented, 2.7% low, 2.5% moderate, 5.8% high stress levels. For people who do not know, 0.7% low, 14.4% moderate and 5% high stress levels[13]. The questionnaire also included a question regarding the main cause of stress. Majority of the students experience stress due to academic problems and social problems. The participants also responded that majority of the students' stress levels were moderate to handle. Similarly, the question including the symptoms of stress experienced by the students consisted mostly of mood swings, headache, food cravings and sweating.

The questionnaire's following section asked about bruxism, including if pupils had a propensity of grinding their teeth or clenching them. The majority of pupils do not have any tendencies of grinding their teeth or clenching them, based on their replies. A question on family members' awareness of bruxism was included; the results showed that there was no discernible level of awareness. This was significant because medical students are now more aware of whether there is a hereditary component to it. The remaining questions asked about the existence of additional temporomandibular joint and bruxism symptoms in the teeth [14]. According to every response, the majority of students do not experience any bruxism symptoms. A question about whether students had ever had a bruxism diagnosis or treatment was also included. 3.5% of students said they had received treatment for bruxism, while 5.6% of students said they had received a diagnosis.

The perceived stress levels were checked in relation with signs of bruxism with respect to their gender. In male participants, people with bruxism report 3.4% low, 9.3% moderate and 2.5% high stress levels. Students without bruxism report 17.7% low, 61% moderate and 5.9% high stress levels. In female participants, student with bruxism report 1.1% low, 14% moderate and 3.1% high stress levels. Students without bruxism report 8.2% low, 62.5% moderate and 10.9% high stress levels. This is checked to find out whether higher stress is responsible for bruxism among medical students. In this research, there is no significant findings regarding bruxism and stress among the targeted group.

CONCLUSION

The study found out the awareness of stress-related bruxism among medical students in 372 participants. The rate of awareness for bruxism is 24.1% , which consists of 28 male and 62 female participants. Similarly, the awareness rate for the ill-effects of stress on oral health is 43.9%(49 male and 115 females). Out of 372 students, 18 males and 47 females have bruxism, i.e. 17.4% . Total of 269 students experience stress, 82 are male and 187 are female participants.

The association between different coping mechanisms and perceived stress levels was examined in this study, and it was found that male participants experienced higher levels of stress when they were unsure about their stress-reduction strategy, whereas female participants experienced higher levels of stress when they employed the emotion-oriented approach. When using the active-practical technique, both male and female participants reported feeling less stressed. Similarly, the gender-specific association between personality characteristics and perceived stress level found that male individuals had greater stress levels evenly across both qualities, whereas female participants had higher stress levels associated with a Type A disposition. Male individuals who exhibit Type A features have low stress levels, but female participants exhibit low stress levels that are evenly distributed among both qualities.

The relation between stress levels and bruxism was analysed and it concluded that the students with bruxism have moderate levels of stress.

Overall, the conclusion for this research is that there is not much awareness regarding stress-related bruxism among medical students and there should be better knowledge about bruxism to avoid the adverse effects of stress and bruxism over oral health and temporomandibular joint.

LIMITATIONS

This study has several limitations that should be acknowledged. Firstly, there is no significant awareness regarding bruxism among medical students so that is also responsible to restrict the ability to find out the relationship between the different coping strategies, personality traits and bruxism. Secondly, with the data being self -reported, this may produce inaccuracies or bias towards the responses. Additionally, other factors like sleep cycle, caffeine intake, which may influence stress and bruxism were not controlled in this study.

CONFLICT OF INTERESTS

NIL.

REFERENCES

1) Cavallo, P., Carpinelli, L., & Savarese, G. (2016). Perceived stress and bruxism in university students. BMC Research Notes, 9(1), 1–6. https://doi.org/10.1186/s13104-016-2311-0
2) Koyano, K., Tsukiyama, Y., Ichiki, R., & Kuwata, T. (2008). Assessment of bruxism in the clinic. Journal of Oral Rehabilitation, 35(7), 495–508. https://doi.org/10.1111/j.1365-2842.2008.01880.x
3) Winocur, E., Uziel, N., Lisha, T., Goldsmith, C., & Eli, I. (2010). Self-reported bruxism—Associations with perceived stress, motivation for control, dental anxiety and gagging. Journal of Oral Rehabilitation, 38(1), 3–11. https://doi.org/10.1111/j.1365-2842.2010.02118.x
4) Soares, L. G., Costa, I. R., Brum Júnior, J. D. S., Borba, D. L., Lima, I. N. G., Demarco, F. F., & Flores-Mir, C. (2017). Prevalence of bruxism in undergraduate students. Cranio: The Journal of Craniomandibular Practice, 35(5), 298–303. https://doi.org/10.1080/08869634.2016.1218671
5) Hicks, R. A., Conti, P. A., & Bragg, H. R. (1990). Increases in nocturnal bruxism among college students implicate stress. Medical Hypotheses, 33(4), 239–240. https://doi.org/10.1016/0306-9877(90)90134-z
6) Serra-Negra, J. M., Scarpelli, A. C., Tirsa-Costa, D., Guimarães, F. H., Pordeus, I. A., & Paiva, S. M. (2014). Sleep bruxism, awake bruxism and sleep quality among Brazilian dental students: A cross-sectional study. Brazilian Dental Journal, 25(3), 241–247. https://doi.org/10.1590/0103-6440201302429

7) Phuong, N. T. T., Ngoc, V. T. N., Linh, L. M., Duc, N. M., Tra, N. T., & Anh, L. Q. (2020). Bruxism, related factors and oral health-related quality of life among Vietnamese medical students. International Journal of Environmental Research and Public Health, 17(20), 7408. https://doi.org/10.3390/ijerph17207408
8) Kumar, S., & Bhukar, J. (2013). Stress level and coping strategies of college students. Journal of Physical Education and Sports Management, 4(1), 5–11. https://doi.org/10.5897/JPESM12.001
9) Zaleski, E. H., Levey-Thors, C., & Schiaffino, K. M. (1998). Coping mechanisms, stress, social support, and health problems in college students. Applied Developmental Science, 2(3), 127–137. https://doi.org/10.1207/s1532480xads0203_2
10) Kausar, R. (2010). Perceived stress, academic workloads and use of coping strategies by university students. Journal of Behavioural Sciences, 20(1), 31–45.
11) Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24(4), 385–396. https://doi.org/10.2307/2136404
12) Smardz, J., Martynowicz, H., Wojakowska, A., Michalek-Żrabkowska, M., Mazur, G., & Wieckiewicz, M. (2019). Correlation between sleep bruxism, stress, and depression—A polysomnographic study. Journal of Clinical Medicine, 8(9), 1344. https://doi.org/10.3390/jcm8091344
13) Nelson, N. G., Dell'Oliver, C., Koch, C., & Buckler, R. (2001). Stress, coping, and success among graduate students in clinical psychology. Psychological Reports, 88(3), 759–767. https://doi.org/10.2466/pr0.2001.88.3.759
14) American Academy of Sleep Medicine. (2005). International classification of sleep disorders (2nd ed.). American Academy of Sleep Medicine.