



THE IMPACT OF SLEEP DEPRIVATION ON THE MENTAL AND EMOTIONAL HEALTH OF FUTURE PHYSICIANS

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Annotation: Sleep disorders can have a significant impact on a person's overall health and well-being. As future doctors, it is important to investigate sleep issues in order to better understand how they affect our ability to provide quality care for patients. This information could also be used to improve patient treatment and ensure patient safety. Sleep deprivation can lead to negative effects on doctors' cognitive function, decision-making abilities, and increased risk of burnout. By addressing insomnia in health care professionals, we can prevent burnout and promote well-being among doctors, leading to reduced errors and improved patient outcomes.

Keywords: medical students, insomnia, academic performance, psychological disorders, productivity, difficulty falling asleep, memory, concentration.

The purpose of the study. A research study was conducted at Tashkent Medical Academy with the aim of investigating the impact of insomnia on the psychosocial well-being of young adults. The study involved administering a questionnaire to more than 20 participants, which included questions designed to collect information about their experiences with insomnia and overall mental health.

Introduction. Insomnia is a sleep disorder that is characterized by difficulties falling asleep, maintaining sleep, or experiencing poor quality sleep. It can be caused by various factors, including environmental, medical, psychological, and mental conditions.

Sleep plays a crucial role in maintaining brain function as it helps brain cells communicate with each other and remove toxins through the glymphatic system during slow-wave sleep. Recent studies have suggested that sleep deprivation disrupts brain function and can lead to disruptions in biological rhythms, which can slow down the healing process.

Gumustekin et al. have found that sleep deprivation may slow down wound healing. Short sleep duration in adolescents can have negative physical,



neurological, and psychological consequences. A study among medical students at the Tashkent Medical Academy found that 38% of students slept after midnight and 55% had an average sleep duration of 6 hours or less per night during clinical training. Due to poor sleep quality, approximately 52% of participants experienced difficulties maintaining wakefulness during lectures and 25% reported experiencing insomnia symptoms. Medical students often reduce their sleep in order to adapt to the demands of their workload and the stress of studying. They may prioritize academic pursuits over sleep, leading to reduced sleep hours in order to increase study time, particularly in the lead-up to exams. Insomnia can have a significant impact on academic performance and can lead to psychological issues.

It is crucial to address insomnia in order to improve students' health and academic success. The aim of this study was to determine the prevalence of insomnia among medical students and to investigate the psychoemotional effects associated with difficulties in memory and concentration.

Materials and methods. To investigate the incidence of sleep deprivation among medical students, a sample of both genders and sixth-year students was included in this study. Using a simple random sampling method, a total of 379 participants were selected from a random number table.

The questionnaire included socio-demographic data about the participants as well as questions regarding insomnia and anxiety. They are young adults between the ages of 16 and 25, and come from the younger generation, with approximately 66% being female and the remainder being male. This is evident from the survey findings. It emerges that approximately 25% of the students experience difficulty sleeping after going to bed.

When asked about taking naps during the day in order to refresh, approximately 65% indicated that it depends on their schedule, approximately 6% stated that they always take naps, and approximately 29% responded that they do not nap during the daytime.

Regarding waking up without an alarm clock, approximately 40% stated that this occurs sometimes and approximately 44% stated that it always occurs without an alarm. Only approximately 16% indicated having insomnia.

Student youth were also queried about the impact of poor sleep quality and lack of sleep on their memory. Approximately 64% responded yes, approximately 20% responded no, and the remaining 16% did not respond.



How does insomnia impact the moods of our student population, according to the survey? We asked them to rate its impact on a scale of 1 to 10. The outcomes were as follows: 3% of young people reported experiencing high levels of insomnia-related mood disturbances. When asked about the reasons for this, those who reported it said that they themselves experience the condition and commented that despite their mood remaining generally good, they found it difficult to process information. Individuals who also reported difficulty concentrating were included in this group.

For those who slept well, the mood improved after sleep and they reported that it had a positive impact on concentration and memory. Is it necessary for people to sleep for 7 hours? This has been revealed through a survey conducted among students, who typically sleep between 02:30 and 11:00. 59% of the students sleep after midnight (00:00) and before 8:00 (08:00). 3% of the participants sleep between 12:00 and 8:30. Those who sleep after 1:00 in the morning are 6%, and they are between the ages 16-25.

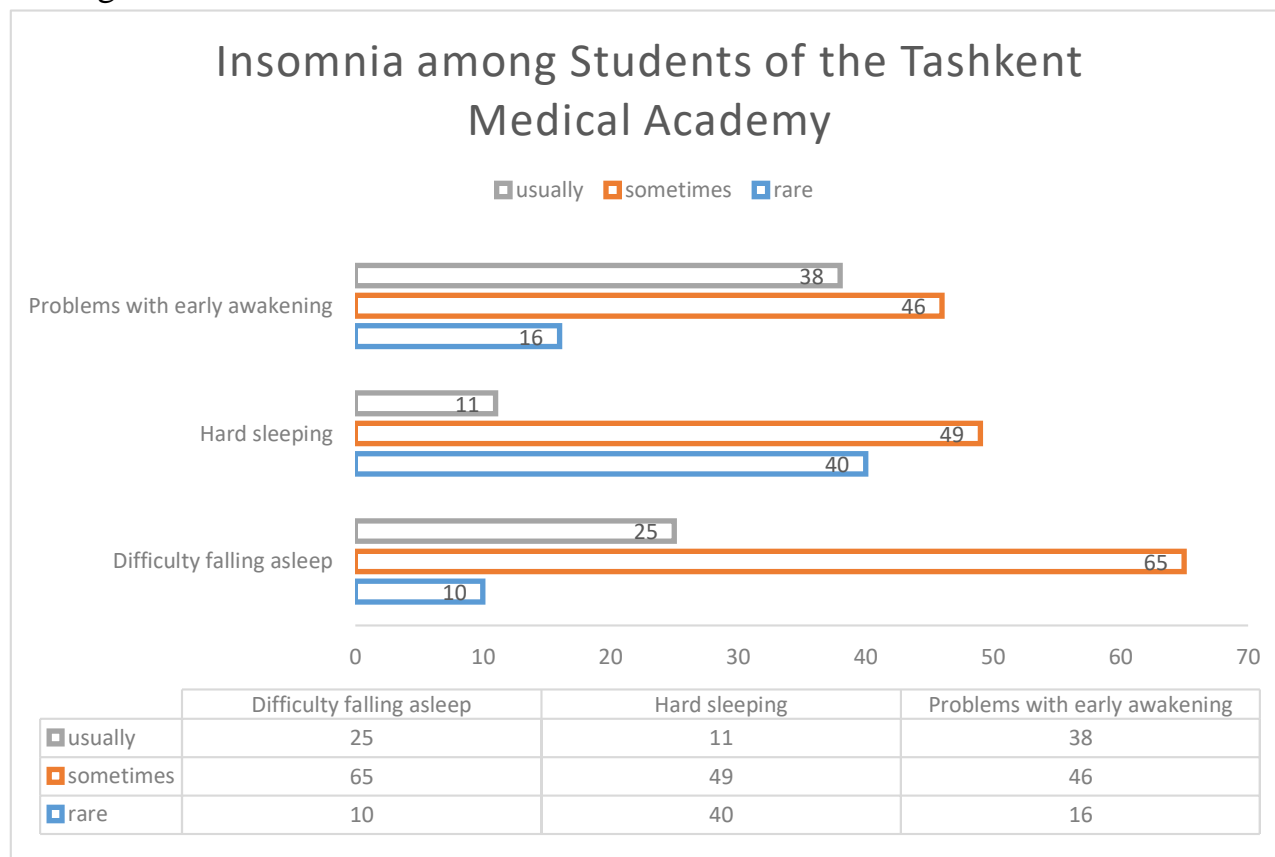
In this survey, 25% reported having difficulty falling asleep after going to bed, while 65% said they always have time for a nap. Only 29% do not sleep during the daytime. Regarding the ability to wake up without an alarm, 40% said it is difficult for them to wake up on their own, while 44% did not use an alarm for waking up. Only 16% reported experiencing trouble waking up at all. Additionally, 16% experience insomnia, and 64% stated that poor sleep and lack of sleep have an impact on their memory.

When asked about the effect of sleep on memory, 64% answered yes, while 36% answered no. We asked participants to rate their level of insomnia on a scale from 1 to 10. The results were as follows: 3% of participants experienced high levels of insomnia. Insomnia can lead to difficulty concentrating at work or in studies.

Most students (59%) preferred to sleep between 11 pm and midnight. Only a small percentage of students (3%) preferred to sleep before 10 pm or after



midnight.



Conclusion. This study was conducted to study the prevalence of insomnia among students of the Tashkent Medical Academy. In general, our result shows that more than 2/3 of students (70%) suffer from insomnia. The Sing CY study reports that the insomnia rate among Hong Kong college students is 68.6% [10]. In another study, Almojali et al. It was reported that 76% of students at King Saud bin Abdulaziz University of Medical Sciences in Riyadh, Saudi Arabia, suffered from insomnia [18]. Al Qahtani MS et al. A high prevalence (78%) of insomnia was reported among students of three medical schools in Riyadh, Saudi Arabia [11]. Haytham et al. They reported a high prevalence (86.3%) of poor sleep quality, which conducted a study among residents within the framework of programs controlled by the Saudi Commission on Health Specialties [12]. The reasons for medical students' lack of sleep may be related to pre-sleep cognition, such as active thinking, anxiety, planning and analysis of problems and issues [13]. Lichstein K.L. et al. It has been suggested that obsessive cognition is much more common than somatic factors in the occurrence of insomnia [14].



The characteristics of sleep problems were presented as difficulty falling asleep in 25%, complaints of nocturnal awakening in 11% and problems with early awakening in 84%.

Our results show that students suffering from insomnia have a deterioration in memory, productivity and mood change. These results are consistent with a study conducted in Riyadh, Saudi Arabia. The authors also demonstrated that insufficient sleep and daytime sleepiness can lead to problems in interpersonal relationships, anxiety and depression [15] Another study conducted earlier by Ford et al. It was reported that 40% of people with insomnia and 46.5% of people with hypersomnia had anxiety and other mental disorders, compared with 16.4% of people without sleep complaints [16]. Monti et al. previously reported a link between sleep disorders and anxiety [17]. Our study concluded that the prevalence of insomnia among medical students of the Tashkent Medical Academy is high. There is a significant association between insomnia and anxiety, more than half of the students complain of concomitant insomnia and anxiety.

Literature

1. Kupfer DJ, Reynolds CF. Management of insomnia. *N Engl J Med* 1997; 336:341–346.
2. <https://www.ninds.nih.gov/Disorders/Patient-CaregiverEducation/Understanding-Sleep>
3. Salako M, Welcome MO, Unal C, et al. The effect of sleep deprivation on cortical oscillatory waves of the EEG in shift and non-shift health workers. *J Res Med Dent Sci* 2019; 7:112-118.
4. Gumustekin K, Seven B, Karabulut N, et al. Effects of sleep deprivation, nicotine, and seleni-um on wound healing in rats. *Int J Neurosci* 2004; 114:1433-1442.
5. Dewald JF, Meijer AM, Oort FJ, et al. The influence of sleep quality, sleep duration and sleepiness on school performance in children and adolescents: A metaanalytic review. *Sleep Med Rev* 2010; 14:179-189.
6. Trends in self-reported sleep problems, tiredness and related school performance among Finnish adolescents from 1984 to 2011. *J Sleep Res* 2015; 24:3–10.
7. Sleep health: Can we define it? Does it matter? *Sleep* 2014; 37:9–17.
8. Alsagaf MA, Wali SO, Merdad RA, et al. Sleep quantity, quality, and insomnia



- symptoms of medical students during clinical years. Relationship with stress and academic performance. Saudi Med J 2016; 37:173-182.
9. Almojali AI, Almalki SA, Alothman AS, et al. The prevalence and association of stress with sleep quality among medical students. J Epidemiol Glob Health 2017; 7:169-174.
10. Azad MC, Fraser K, Rumana N, et al. Sleep disturbances among medical students: A global perspective. J Clin Sleep Med 2015; 11:69–74.
11. Sing CY, Wong WS. Prevalence of insomnia and its psychosocial correlates among college students in hong kong. J Am College Health 2010; 3:174-182.
12. Al Qahtani MS, Alkhalidi TM, Al-Sultan AM, et al. Sleeping Disorders among medical students in Saudi Arabia in relation to anti-insomnia medications. Egyptian J Hospital Med 2017; 69:2750-53.
13. Haytham I, Al Saif SBFM. Prevalence of and risk factors for poor sleep quality among resi-dents in training in KSA. J Taibah University Med Sci 2019; 14:52-55.
14. Lund HG, Reider BD, Whiting AB, et al. Sleep patterns and predictors of disturbed sleep in a large population of college students. J Adolesc Health. 2010; 46:124–132.
15. Lichstein KL, Rosenthal TL. Insomniacs' perceptions of cognitive versus somatic de-terminants of sleep disturbance. J Abnorm Psychol 1980; 89:105–107.
16. Albhlal LA, Alanzi FG, Ghannam KB, et al. Sleep disturbance patterns among medical students, Saudi Arabia. Arch Med 2017; 9:1-3.
17. Ford DE, Kamerow DB. Epidemiologic study of sleep disturbances and psychiatric disorders. An opportunity for prevention. JAMA 1989; 262:1479-84.
18. Monti JM, Monti D. Sleep disturbance in generalized anxiety disorder and its treatment. Sleep Med Rev 2000; 4:263–276.