



THE IMPACT OF INSOMNIA ON THE MENTAL AND EMOTIONAL HEALTH OF STUDENTS

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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.

Аннотация:Нарушения сна, особенно бессонница, значительно влияют на физическое и психологическое здоровье студентов, особенно обучающихся на медицинских факультетах. Медицинские студенты часто сталкиваются с высоким учебным стрессом, длительными занятиями и нерегулярным графиком, что способствует хроническим нарушениям сна. В данной статье рассматривается распространенность и последствия бессонницы среди студентов Ташкентской медицинской академии. Полученные данные демонстрируют, что нарушения сна негативно сказываются на памяти, концентрации внимания и эмоциональном состоянии. Подчеркивается необходимость внедрения институциональных мер по улучшению гигиены сна и предоставлению психологической поддержки в медицинском образовании.



Ключевые слова: студенты-медики, бессонница, когнитивные функции, академическая успеваемость, психологический стресс, гигиена сна, эмоциональная регуляция, выгорание

Annotatsiya: Uyqu buzilishlari, ayniqsa uyqusizlik (insomniya), tibbiyot yoʻnalishida tahsil olayotgan talabalarning jismoniy va psixologik salomatligiga jiddiy taʼsir koʻrsatadi. Tibbiyot talabalari yuqori darajadagi oʻquv bosimi, uzoq dars vaqtlar va tartibsiz rejim tufayli surunkali uyqu muammolariga duch kelishadi. Ushbu maqolada Toshkent tibbiyot akademiyasi talabalarida insomniya tarqalishi va uning oqibatlarini tahlil qilinadi. Tadqiqot natijalari yomon uyqu sifatining xotira, diqqat va emotsional holatga salbiy taʼsirini koʻrsatadi. Tibbiy taʼlimda uyqu gigiyenasini targʻib qilish va psixologik qoʻllab-quvvatlashni yoʻlga qoʻyish muhimligi taʼkidlanadi.

Kalit soʻzlar: tibbiyot talabalari, insomniya, kognitiv funksiyalar, oʻquv samaradorligi, psixologik zoʻriqish, uyqu gigiyenasi, hissiy regulyatsiya, charchoq

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.^[1] 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.

This cross-sectional, observational study was conducted at Tashkent Medical Academy in 2024. A total of 379 sixth-year medical students, aged between 16 and 25 years, were selected using a simple random sampling technique. Data were collected via structured self-administered questionnaires assessing sleep habits, insomnia symptoms, and psychological well-being.

The questionnaire contained both closed- and open-ended questions and included the Insomnia Severity Index (ISI) as a standardized metric. Socio-demographic data were recorded, alongside questions pertaining to sleep onset latency, number of nocturnal awakenings, duration of sleep, daytime sleepiness, napping behavior, use of alarm clocks, and subjective sleep satisfaction. Participants also rated their concentration, memory function, and emotional stability relative to their sleep quality.



Data were analyzed using SPSS software. Descriptive statistics were used to report frequencies and percentages. Associations between sleep disturbances and cognitive-emotional variables were assessed using chi-square tests and logistic regression models.

RESULTS.

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.

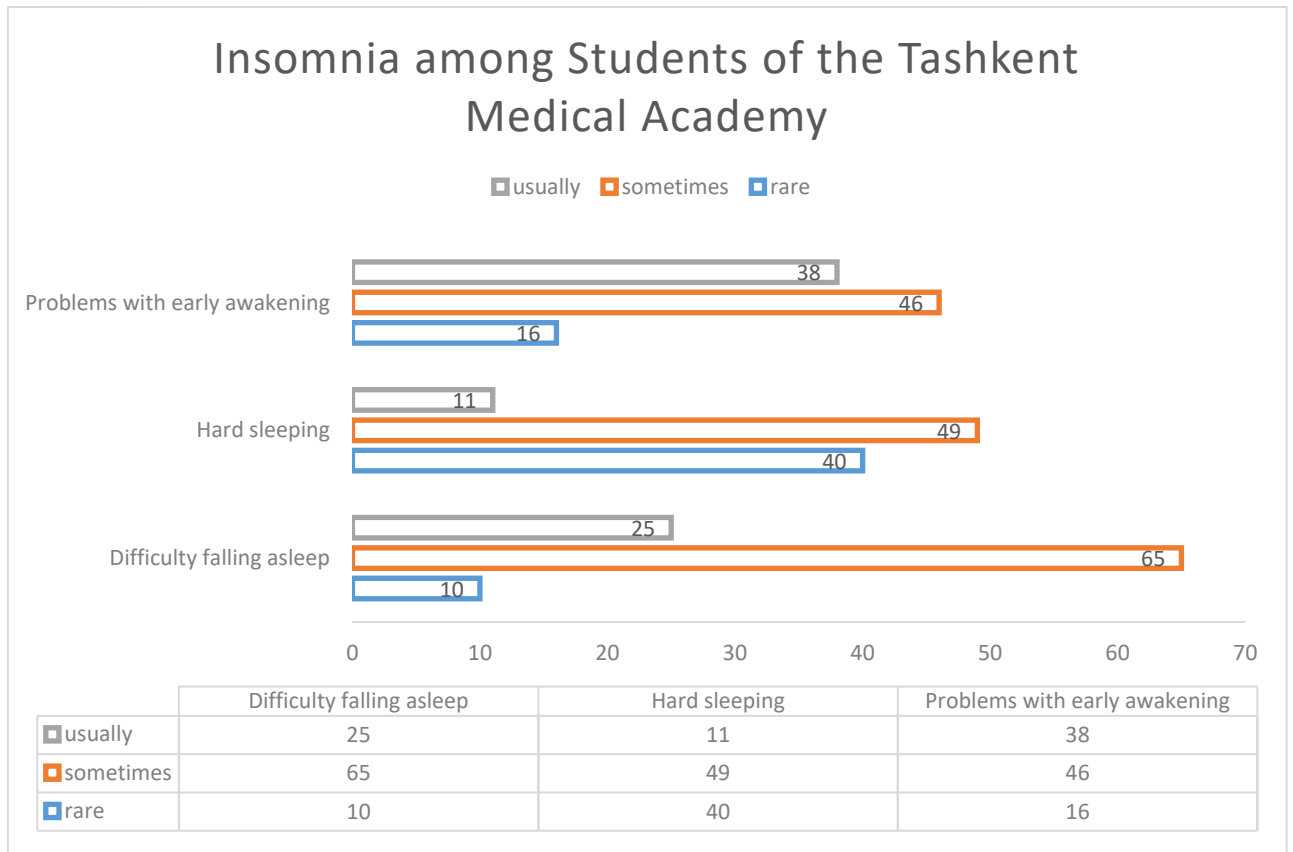
For those who slept well, the mood improved after sleep and they reported that it had a positive impact on concentration and memory. Is it necessary for people to sleep for 7 hours? This has been revealed through a survey conducted among students, who typically sleep between 02:30 and 11:00. 59% of the 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.



DISCUSSION.

The findings of this study indicate a high prevalence of insomnia and sleep disturbances among medical students at the Tashkent Medical Academy, aligning with global data reported in similar populations. The results suggest that insomnia is not only widespread but also significantly associated with impairments in memory, concentration, and mood stability. These effects are consistent with previous studies conducted in Saudi Arabia, Hong Kong, and other countries where medical students frequently experience stress, cognitive overload, and irregular sleep patterns due to academic pressures.



Approximately 25% of the respondents reported difficulty falling asleep, while 64% acknowledged that sleep deprivation negatively affected their memory. This cognitive decline could have serious implications for medical students, who rely heavily on memory and attention for academic success and clinical performance. The fact that a majority of students (59%) go to sleep after midnight may reflect a cultural or behavioral pattern, possibly exacerbated by excessive screen time, late-night studying, and lack of structured routines.

Furthermore, while only 16% explicitly reported insomnia, a significant number of students reported symptoms commonly associated with it, such as difficulty maintaining wakefulness and feeling unrested. These findings highlight the potential underreporting of insomnia symptoms due to lack of awareness or normalization of sleep deprivation among students.

The data also underscore the emotional and psychological toll of poor sleep quality. Although only 3% reported severe mood disturbances, many students noted challenges with concentration and emotional regulation, which can contribute to anxiety, irritability, and academic burnout. These observations support the bidirectional relationship between insomnia and mental health, where psychological stress can both contribute to and be exacerbated by poor sleep.

Given the correlation between sleep quality and overall well-being, it is imperative to implement strategies to promote better sleep hygiene among medical students. Educational programs emphasizing the importance of sleep, time management workshops, and mental health support services could help mitigate the impact of insomnia. Future research should explore interventions and longitudinal effects of insomnia on academic performance and mental health in medical training environments.

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%.^[2] 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^[3]. Al Qahtani MS et al. A high prevalence (78%) of insomnia was reported among students of three medical schools in Riyadh, Saudi Arabia.^[4,5,6] 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.^[7,8] 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.^[9,10,11] Lichstein K.L. et al. It has been suggested that obsessive cognition is much more common than somatic factors in the occurrence of insomnia.^[12,13,14,15,16]

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.^[15] 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.

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