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## **INFLUENCE OF SLEEP QUALITY ON COGNITIVE ACTIVITY OF MEDICAL STUDENTS**

**Topicality:** Sleep is a regularly recurring state of the body characterized by changes in the electrical activity of the brain and is an important component of human biological rhythms. Functioning of all body systems depends on the quality of sleep. During this important process most anabolic mechanisms are induced which helps to restore nervous, musculoskeletal, immune and endocrine systems. Recently the problem of sleep disorders has become very common at a young age, especially among medical students. Statistics show that medical students, due to their immense workload and number of homework assignments, have a tendency to reduce duration and quality of their sleep. This leads to impaired cognitive functions, such as attention, speech, thinking, decision-making, learning and memory. [1,2]

**Aim of the study:** to determine the impact of sleep quality disorders on cognitive functions of medical students during distance learning.

**Materials and methods:** This study was conducted using a questionnaire based on the Google Forms service. The study involved 80 respondents (64 women-81.3% and 15 men-18.8%) aged 18 to 24 years. The results were statistically processed and subjected to comparative analysis.

**Results:** Duration of sleep is one of the most important criteria for its quality. Physiological sleep is considered to be 6-8 hours, but its duration depends on a large number of factors, such as age, physical and intellectual activity, and well-being, and therefore the norm is strictly individual. [3] Analysis of the results showed that the average duration of sleep at night among students is: more than 9 hours in 2.5%, 8-9 hours in 20%, 7-8 hours in 27.5%, 6-7 hours in 33.8%, less than 6 hours in 16.2%.

Daytime sleep helps to restore strength and concentration, but it is recommended to sleep no more than 20-30 minutes. [4] According to the survey, we found out that 0% of students always sleep during the day, 21.3% often, 57.5% rarely, and 21.3% never sleep during the day.

36.3% of students go to bed on weekdays before 00:00, 62.5% of students between 00:00 and 03:00, and 1.2% after 03:00. The trend does not change on weekends. Higher education students associate late sleep with academic workload, large amounts of homework, things they did not have time to do before night, working night shifts, air rage, distraction by social media, and problems falling asleep.

Half of the students are partially satisfied with the quality of their sleep, a quarter are not satisfied at all, and only 25% are completely satisfied. One of the reasons of poor sleep quality is that students often have nightmares (60%). Moreover, 26.3% of students wake

up in the middle of the night regularly, 45% rarely and 28.8% never, and the majority of respondents (72%) have difficulty falling asleep.

Most respondents (67%) are exposed to stimulating influences before falling asleep, such as watching social media, movies and TV shows, listening to music, and eating less than 2-3 hours before bedtime.

Another factor that interferes with sleep is consumption of stimulating drinks (coffee, tea, energy drinks, alcohol). Moreover, 17.5% drink these drinks all the time, 32.5% rarely when preparing for an exam, module, or must study a lot of material for class, and 50% do not drink stimulating drinks at all before bed. As it is known, nicotine also has an excitatory effect on the central nervous system and can have a negative impact on the sleep-wake cycle. Out of all respondents, only 11.3% constantly smoke before bed, 7.5% rarely and 81.3% never. It is necessary to avoid substances with a stimulating effect in case of frequent night wakings. [5]

The consequence of the above factors is violation of cognitive activity in medical students, which is manifested in decrease of ability to memorize and reproduce information in 61.3% of students, ability to perceive new information in 66.3%, concentration in 78.8%, speed of thinking is affected in 76.3% and ability to make quick decisions in 57.5% of respondents, and only 3.8% of the students did not notice any cognitive impairment at all. [6]

**Conclusion:** while distance learning, medical students undergo certain changes in sleep, its quality and duration, drowsiness appears during the day, which in turn leads to impaired cognitive functioning among higher education students. Thus, a very important aspect of maintaining physical and mental health is physiological sleep as one of the mechanisms of regulation.

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