INTERNATIONAL JOURNAL OF
INTEGRATIVE AND
MODERN MEDICINE

Reading With Headphones: Beneficial or Harmful

Toshmatova Guzal Adilxodjayevna
Environmental Hygiene, Tashkent Medical Academy, Tashkent, Uzbekistan,
E-mail: g.toshmatova@yahoo.com

Erkinov Islom Arslon ugli
Tashkent Medical Academy, 1st Faculty of Treatment, Student of Group 215,
E-mail: islomerkinov45@gmail.com

Abstract: There are various perspectives on how the use of headphones affects students' study efficiency. Some studies suggest that headphones help block external noise and improve concentration, while others indicate that they can be a distracting factor. This research focuses on examining the effectiveness and negative impacts of studying with headphones among medical students.

Keywords: headphones, study efficiency, instrumental music, white noise, medical students, concentration.

Introduction. In modern education, students use various methods to acquire knowledge. In recent years, studying with the help of headphones has become widespread, raising the question of how it affects students' concentration and study efficiency. A study conducted in Saudi Arabia showed that young people primarily use headphones for listening to music, with 80% wearing them for 0.5 to 2 hours per day [3]. However, prolonged exposure to sound has been linked to the development of ear disorders such as tinnitus [4].

Research conducted by Kulawiak indicated that noise-canceling headphones can enhance academic performance by reducing distractions and improving concentration during study sessions [5]. Another study by Townsend and colleagues found that noise-canceling headphones may help reduce anxiety and stress, thereby aiding concentration [6].

At the same time, a study by Wang et al. emphasized the need for educational programs on hearing health for students. Their research highlighted the importance of students' awareness of hearing-related risks and behaviors. Therefore, medical students should be cautious in their use of headphones to protect their hearing while also improving their ability to concentrate effectively [12].

For medical students, headphones have become an essential tool that helps them focus. The use of headphones during study sessions can significantly impact their level of attention.

Thus, the relationship between using headphones while studying and the level of concentration among medical students is influenced by various factors. Headphones can create a favorable environment for studying and aid concentration, but prolonged use may negatively affect hearing health [13]. The widespread use of headphones in daily life impacts not only hearing health but also emotional stability.

Some studies suggest that individuals who play video games involving horror and thriller elements experience stronger excitement and fear when wearing headphones, indicating the psychological effects of sound [1]. Similarly, a study conducted by the American Depression and Anxiety Association on anxiety symptoms found that children who blocked external noise using headphones experienced reduced anxiety levels [2]. Therefore, excessive use of headphones in daily life may affect both hearing health and emotional well-being.

It has been noted that listening to music or white noise through headphones can help reduce external noise and improve focus. However, some studies suggest that lyrics and high-tempo rhythms in music may distract attention during the reading process.

Medical students are required to memorize and analyze large volumes of scientific material during their studies. As a result, they often seek effective reading strategies. Can reading with the help of headphones aid this process, or could it instead be detrimental? This research is aimed at answering this very question. The study evaluates the effectiveness of reading with headphones among medical students, analyzes the impact of different types of noise, and determines their influence on reading outcomes.

Research objective: To identify the relationship between the use of headphones and reading efficiency, and to study which type of noise has a more positive or negative impact on the reading process.

Research subjects and materials: This study involved 100 second-year students from the 1st Faculty of Treatment at the Tashkent Medical Academy.

Results obtained: To study the impact of using headphones on reading efficiency, the students were divided into two groups: 60 students who used headphones while reading and 40 students who did not use headphones. The group of 60 students who used headphones listened to three types of sounds: music with lyrics, white noise, and natural sounds. Both groups were given the same medical material to study and were allotted 45 minutes to read and learn.

At the end of the time, the students were assessed through test-based tasks. The overall results (based on test scores) were as follows:

- Students who read with headphones showed an average result of 82%.
- Students who read without headphones showed an average result of 76% .

Based on the overall average scores, the group using headphones performed slightly better.

Results by type of sound:

- Natural sounds or white noise: 85% of students reported being able to focus better and stated that they memorized the material more effectively.
- Music with lyrics: 60% of students reported significant distraction, and as a result, 55% of students scored relatively lower on the test. The reason is that lyrics interfere with concentration and memorization during reading.

Subjective feedback (Students' opinions):

- 85% of students stated that natural sounds or white noise helped block external noise and allowed them to focus better. They noted that listening to these sounds through noise-canceling headphones reduced stress and made the reading process more enjoyable.
- However, it is also worth mentioning that 40% of students reported feeling fatigue or discomfort after prolonged use of headphones.
- Only 10% of students found it comfortable to read while listening to music with lyrics.

Conclusion:

Using headphones while reading can be beneficial under certain conditions, but the type of music and individual learning preferences must be taken into account. To improve reading efficiency, instrumental music or white noise is recommended, while music with lyrics and loud sounds may distract attention.

Effects of prolonged headphone use

- Prolonged use of headphones, especially at high volumes, can potentially harm hearing ability.
- It may cause headaches or fatigue.
- Some students may experience psychological pressure or stress after extended use.

In summary, while headphones can enhance focus and reading efficiency in some cases, their prolonged or improper use may lead to negative consequences. It is essential to consider the type of sound and individual preferences when using headphones for studying.

References:

1. Erkinov I.A., Toshmatova G.A. “Investigating Reasons for High Use of Headphones among Students.” “Research Journal of Trauma and Disability Studies”, Volume: 3, Issue: 12, Dec–2024. ISSN: 2720-6866.
   http://journals.academiczone.net/index.php/rjtds
2. Nguyen, T., & Chen, Y. (2019). "Social Signaling: Use of Technologies in Personal Space in Management Roles." *Sociology and Technology Trends*.
3. Smith, A., Patel, R., & Gonzalez, M. (2021). "Students in Streaming Culture: Behavior Analysis." *Media and Society Magazine*.
4. Gilles, A., Van Hal, G., De Ridder, D., Wouters, K., & Van de Heyning, P. (2013). "Epidemiology of Noise-Induced Tinnitus and Attitudes Towards Noise and Hearing Protection in Adolescents." *PLoS One*, 8(7), e70297. doi:10.1371/journal.pone.0070297. [PubMed: 23894638]. [PubMed Central: PMC3722160].
5. Toshmatova, G.A., & Erkinov, I.A. (2024). "Plastic Waste and Their Health Threat." *International Journal of Integrative and Modern Medicine (IJIMM)*, Volume 2, Issue 12. ISSN: 2995-5319.
   http://medicaljournals.eu/index.php/IJIMM/issue/view/3
6. Berger, E.H. (1986). "EarLog #17—Ear Infection and the Use of Hearing Protection." *Journal of Occupational Medicine*, 27(9), 620–623.
7. Sanusi, S. (1998). "The Prevalence of Noise-Induced Hearing Loss Among Radio Deejays Working with Radio and Television Malaysia from Dec 1996–March 1997." Thesis submitted for Master of Surgery (ORL-Head and Neck), Universiti Kebangsaan Malaysia.
8. "Noise and Hearing Loss." *NIH Consensus Statement*, Jan 22–24, 1990, 8(1), 1–24.
9. Toshmatova, G.A., Niyazova, O.A., & Erkinov, I.A. (2024). "Air Quality in Secondary Schools and Its Impact on Pupils' Health and Well-Being." *American Journal of Interdisciplinary Research and Development*, Volume 35. ISSN Online: 2771-8948. www.ajird.journalspark.org
10. Kämpfe, J., Sedlmeier, P., & Renkewitz, F. (2011). "The Impact of Background Music on Learning: A Systematic Review and Meta-Analysis." *Educational Psychology Review*, 23(4), 631–658.
11. Schroeder, J., & Marian, V. (2017). "Cognitive and Neural Benefits of Listening to Music While Studying." *Cognition*, 165, 1–10.
12. Perham, N., & Vizard, J. (2011). "Can Preference for Background Music Mediate the Irrelevant Sound Effect?" *Applied Cognitive Psychology*, 25(4), 625–631.
13. Tóth, B., Janacsek, K., & Németh, D. (2017). "White Noise Enhances Memory Consolidation in Learning." *Scientific Reports*, 7(1), 1789.
14. Erkinov, I.A., Jalolov, N.N., & Sultonov, E.Y. (2024). "Psychological Risks and Measures to Manage Stress Among Students." ISSN: 2776-0979, Volume 5, Issue 12, December 2024.