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STUDY OF THE PREVALENCE OF USE AND THE IMPACT OF HEADPHONES ON THE HEALTH STATUS OF STUDENTS

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Abstract

In connection with the development of scientific and technological progress, an important part lives at a given time are different electronic devices [2-5]. Today mobile phones and MP3 players almost everyone has with headphones. They have become a familiar attribute of everyday life, ranging from schoolchildren listening to music in between lessons to people wanting to take time on public transport on their way to school or work. The auditory system — is one of the most important remote sensory systems of a person, which frolicked due to the occurrence of speech as a means of interpersonal communication. And despite the fact that the human auditory system is a unique and perfect mechanism, its capabilities are limited. Among adolescents and young adults aged 12-35 years, nearly 50% are exposed to unsafe volume sound from personal audio devices and are at risk of hearing loss, according to WHO research [10]. In 2004, more than 275 million people worldwide had moderate or severe hearing impairment, and by 2020, more than 30% of the world's population had hearing impairment. The leading position is occupied by damage to the sound-receiving apparatus due to the use of headphones [1, 10-11]. The problem of hearing impairment in young people with increasing technological progress and increased the availability of devices that allow you to listen to music through headphones is becoming increasingly common relevant and discussed in Uzbekistan and the world [6-10].

Purpose of the study

Study of the prevalence of use and the influence of headphones on the auditory function of medical university students.

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Research materials and methods

The object of the study is students of a medical university. The questionnaire survey studied such issues as: the influence of the sound effect of headphones on a person, the prevalence of headphone use, the frequency of headphone use, the purpose of using headphones, the nature of headphone use. A total of 200 students took part in the questionnaire survey, of which 85 were girls and 115 were boys. The age of the students was mostly 20-25 years. A whisper test and the experiment "Determining Hearing Acuity" were also conducted among respondents. 26 students participated in these studies, the first group – students listening to music for less than 2 hours a day at a volume less than half the maximum possible. Second group – students listening to music 5 hours a day or more; every day at maximum volume.

Research results and discussion

Using the survey, the use of headphones among students was studied: 80% of 160 students (100 boys; 60 girls) use it daily; often uses 3-4 times a week - 12% 24 students (10; 14); does not use 8% 16 students (5; 11). The most popular in terms of frequency of use are (in descending order): in-ear 120 students (60%), in-ear 60 (30%), in-ear 16 (8%), full-size 4 (2%) headphones (Fig.1). 40% 80 students (60; 20) use wired headphones, 60% 120 students (55; 65) prefer wireless headsets. The third thing that was studied through the questionnaire – what students use audio headphones for during the day. It was found that the students interviewed they use headphones to listen to music 71% (142) of students, for watching films in 12% (24) of students, as a means of communication – 10% (20) and for games 7% (14) of students.

Significant differences were identified in the use of audio headphones for games – their use among students was noted in 90% of boys and 10% of girls. Girls (65%) are significantly more likely to use headphones as a means of communication than boys (35%). Students boys use audio headphones for an average of 6 hours during the day, girls students for 5 hours. The volume of music playing through headphones was conventionally divided by 5 points. The minimum playback volume corresponds to 1 point, the maximum sound intensity

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– 5 points; the playback volume is 3 points, corresponds to 60% of the maximum volume of the device. 45% (90) of the students surveyed noted that they use audio headphones at a volume exceeding 3 points (4 and 5 points, respectively). Among the boys and girls of the students, significant differences in the number of people using headphones at maximum volume have not been identified. Reliably earlier start times for audio headphones among students were found.45% (90) of students started using headphones before the age of ten. It was also found that 55% (110) of students use audio headphones from the age of over ten years.

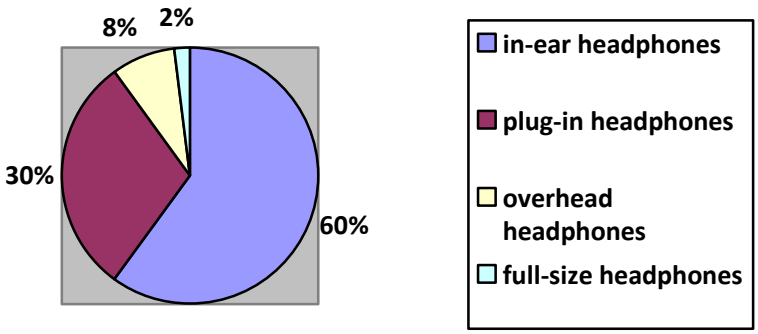

Figure 1. Types of headphones used by students

With long-term use audio headphones experience a decrease in concentration, deterioration in attention stability, and also an increase in the level of irritability. Thus, 68% of respondents experience headache, 9% experience a decrease in concentration, 11% experience noise and ear pain, 7% experience an increase in irritability, and only 5% have no changes. We asked respondents to rate their hearing immediately after using headphones. About 63% of the subjects were unable to clearly recognize the speech of the interlocutor, 20% were able to recognize half of the speech of the interlocutor, 17% were able to fully recognize the speech of the interlocutor. We also found that 93% of the students surveyed asked to repeat what they were told, and only 7% clearly heard the interlocutor's speech. Students made mistakes in recognizing whispering speech 3 times more often than students who listen to music less than 2 hours a day at less than half

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the maximum volume possible. And during the experiment: Determining hearing acuity" students who use the maximum volume when using headphones heard the sound of a watch at a distance of 15-20 cm (15 students), and students using headphones heard less than half of the maximum sound at a distance of 30-35 cm (11 students).

Conclusions

1. When conducting a survey among students, it was found that most people begin to use headphones from childhood. Most often, students use headphones every day to listen to music and prefer to use a volume above average. 48% of students surveyed report hearing impairment over the past year.
2. The whisper test found that students who were exposed to headphones every day for more than 5 hours and used the maximum sound volume made errors in whispering recognition 3 times more often than students who used headphones for less than 2 hours a day at a volume less than half the maximum possible.
3. After checking the hearing acuity, it was revealed that two students had moderate hearing impairment and seven students had mild hearing impairment.

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