THE USE AND HARM OF THE MOBILE DEVICES FROM THE PERSPECTIVES OF THE 8TH GRADE STUDENTS

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Annotation. It is not a secret that electromagnetic radiation from modern mobile devices has a negative impact on the central nervous system, especially on children. The opinion of high school students about the influence of mobile devices on their bodies was studied through questionnaires. It was revealed that pupils using mobile devices up to 7 hours a day note irritability, tearfulness, dissatisfaction with themselves and their academic performance is lower than those of their peers. It turned out that "Internet addiction" is more common in girls than in boys.

Key words: mobile devices, radiation, Internet addiction, blurred vision, depression.

Introduction. Nowadays, there is a huge amount of information, both about the benefits, and about the harm of mobile devices, for children. Each parent has his own opinion on the use of tablets by children, either a categorical restriction, or temporary restrictions or complete freedom. According to the statistics from 2015 in the UK every third child had his own tablet. At the age of 15 years, 60% of children used a tablet computer at home. However, the Parliamentary Assembly of the Council of Europe (PACE) recommends taking all reasonable measures to reduce the impact of electromagnetic radiation, especially radio frequencies from mobile phones on children and young people who are most at risk of brain tumors. Scientists from different countries have asked the UN to formulate international standards for the safety of electromagnetic radiation. Regarding the recommendation of the Canadian Society of Pediatricians the use of mobile devices should be limited to 2 hours a day for children 6 to 18 years.

In Russia, electronic textbooks have been actively introduced since 2015. The Ministry of Education and Science requires that the content of electronic and paper textbooks coincide. Nevertheless, according to Russian sanitary norms, children are not recommended to use telephones, smartphones, tablets. However, in order to ensure the information security of children, along with the prohibition of information products, it is necessary to promote the creation of conditions that ensure positive socialization and individualization of the child, his psychological well-being and positive worldview. Researchers from the Russian center of electromagnetic safety argue that the electromagnetic radiation from modern mobile devices has a negative impact on the central nervous system, especially children. In adolescence, gadgets carry the danger of the emergence of Internet addiction. Internet addiction is a mental disorder in which a person very intrusively wants to enter the global network and is not able to get out of it on time.

Schoolchildren who regularly used tablets and smartphones differ from peers by scattered attention, increased impulsiveness. They have decreased ability to self-regulation. Regular use of smartphones and tablets takes a lot of time, reducing the time for physical activity. Naturally, this way of life leads to a delay in the physical development of the child and therefore his success in the school is rather low. With prolonged use of electronic sensory devices by children, there is an abnormal formation of muscle tissue, a curvature of the spine. Most smartphones are harmful to the eyes, as they lead to the development of myopia.

With the frequent use of mobile devices, children become withdrawn or spend a lot of time alone, avoiding contacts with peers and their loved ones, including with their parents. Children begin to lie and skip classes at school. Appeal to them with usual questions and requests causes in them an inadequate, sometimes aggressive reaction.

The purpose of the research: to reveal the presence of Internet addiction among students of the eighth “Zh” class.

Data and methods. There was studied the opinion of high school students about the influence of mobile devices on the organism of the younger generation. The study involved only children of the same class (8th "F"). There are 20 children in total, 10 boys and 10 girls. The average age was 13.5-14 years. Schoolchildren filled out questionnaires in schools anonymously and independently, without the influence of adults. The questionnaire included 18 questions: age, sex, age of an access to mobile devices, the purpose of use, Internet addiction, school assessment, health, well-being and other items.

Results and discussions. By age of access to the mobile device, two groups were singled out. The first group had access to technology from 7 years old - 6 children, 2 girls and 4 boys. The second group - children had access from 10 years old - 14 schoolchildren, 8 girls and 6 boys.

In the first group, children use smartphones first to play and watch video films, and then for training. 3 of 6 noted deterioration of vision, poor sleep and fatigue (2 boys, 1 girl). Two learn "satisfactorily", and 4 schoolchildren (3 boys and 1 girl) - "good". Three children pointed the presence of “Internet addiction”. But all of the children admitted mood changes, caused by their phones, taken away.

In the second group, 8 schoolchildren use mobile devices first for play, then for training (5 girls and 3 boys). All of them noted the presence of an Internet addiction, deterioration of visual acuity and rapid fatigue. Four schoolchildren
complain of a headache and a bad dream. They assessed their studies as "satisfactory". It was revealed that pupils who use (6 children) mobile devices for training, watch educational videos learn "good" and "excellent". Deny the "Internet addiction" at home. They can turn off their mobile devices themselves. It was revealed that "Internet addiction" is more common in girls than in boys. Headache, fatigue and poor sleep are noted more often by girls, which is shown in the diagram number 1. While vision impairment is revealed in 11 schoolchildren, among them there are more girls.

![Diagram № 1. State of health.](image)

It was revealed that 12 schoolchildren have access to mobile devices from 1 hour to 4 hours a day, while 8 students have access - 7 hours or more per day. Student analysis showed that students who have a restricted access to mobile devices up to 4 hours a day learn better, and also they expressed the "Internet addiction" less emotionally and brighter. Studies have shown that students who use mobile devices up to 7 hours a day note irritability, tearfulness, dissatisfaction with themselves and their academic performance is lower than that of their peers.

**Conclusions:**
1. Students are ready to use the mobile device for an unlimited time.
2. Early access to mobile devices (from 7 years) contributes to the development of "Internet addiction". The academic progress in this group is low.
3. The use of mobile devices for self-study does not improve the performance, because without the supervision of older children, children are distracted by other sites.
4. Long-term use of mobile devices worsens the well-being of students.

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