



## Influence Of The Phone On The Health Of Tma Students

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### ABSTRACT

Modern technologies have become an integral part of students' lives, but excessive use of mobile phones can have a negative impact on their health. First of all, it leads to deterioration of vision due to constant eye strain and exposure to blue light from the screen. In addition, prolonged use of gadgets in the wrong position contributes to the development of problems with posture and pain in the neck and back. No less important is the impact of smartphones on the psycho-emotional state of students. Constant notifications and active use of social networks can cause anxiety, stress and decreased concentration.

### Keywords:

Computer vision syndrome, postural disorder, carpal tunnel syndrome, insomnia, sleep, physical inactivity, obesity, mental health, stress, anxiety, depression, self-esteem, social isolation, loneliness, self-esteem,

**Purpose of the study:** to study the impact of mobile phones on the health of TMA students.

### Research objectives.

- 1.To determine the correlation between time spent using mobile phones and levels of stress, anxiety and depression in college students.
- 2.To identify the relationship between the use of social networks on a mobile phone and the level of self-esteem among students.
- 3.To assess the impact of mobile phone use on posture and the development of musculoskeletal diseases in students.
- 4.To develop recommendations to reduce the negative impact of mobile phone use on students' health.

**Object of study:** TMA students

**Introduction:** It is impossible to imagine the modern world without mobile phones. They have become an integral part of our lives, providing convenient communication, access to information and many other functions. However,

as the time spent using phones increases, there is a need to assess their impact on human health. On the one hand, phones open up new opportunities, simplifying everyday tasks, improving access to health services and promoting education. On the other hand, their improper use can have negative consequences for physical and mental health. In addition, excessive time spent in virtual space can lead to sleep disturbances, as the light from the screen suppresses the production of melatonin, which is responsible for healthy sleep.

### The Impact of Mobile Phone on Human Health

Mobile phones have become an integral part of everyday life, but their use raises many questions regarding their impact on human health. One important topic is the impact of mobile phones on hygiene and how improper use of these devices can lead to health risks.

#### 1. Bacterial contamination of phones

One of the most important aspects of hygiene when using mobile phones is their contamination with bacteria and viruses. According to research, the surface of the phone can contain more microorganisms than door handles or toilet seats. This is due to the fact that the phone is in constant contact with hands, face, and also gets into various environments (pockets, bags, tables). Food particles, sweat, and skin oil can get on the phone, which creates an ideal environment for bacteria to multiply.

The main microorganisms that can be found on your phone are:

**Escherichia coli (E. coli)**– a bacterium often associated with intestinal infections.

**Staphylococcus aureus**– a pathogen capable of causing skin infections.

**Fungal organisms**– may cause skin irritation and infections.

## 2. Using the phone in public places

Many people use mobile phones in public places, including transport, cafes, toilets. This increases the likelihood of contamination of the device with pathogenic microorganisms. For example, when using a phone in toilets, there is a high probability of faecal bacteria getting on its surface, which can be a source of intestinal diseases.

Using your phone in public places can also be a problem. While eating, a person can transfer bacteria from their hands to their phone and back to the food, which can lead to food poisoning.

## 3. Phone and facial skin

Frequent use of a mobile phone and its contact with the skin of the face can lead to skin problems. The phone, when in contact with the skin, can transfer bacteria, oil and dirt, which leads to acne and other skin problems, especially if the phone is dirty and not cleaned regularly.

In addition, prolonged contact of the phone with the skin promotes the release of sweat, which also creates a favorable environment for the development of microbes.

## 4. Radiofrequency radiation

Mobile phones emit radio frequency waves that can affect the human body. Using phones can lead to the development of serious diseases such as cancer.

## 5. Ergonomic problems and postural disorders

Using your phone for long periods of time, especially for texting and using social media, can lead to posture problems and neck and back pain. Text neck syndrome is the result of keeping your head bent over while using your phone for long periods of time, which causes tension in the muscles of your neck and upper back. This can lead to chronic pain and the need for medical intervention.

### The Negative Impact of Phone on Students' Health

Mobile phones play an important role in the lives of students, but their excessive and improper use can have negative effects on health. Let's look at the main aspects of the negative impact:

#### 1. Impact on vision

Problems with eye accommodation: Long-term use of phones leads to strain in the eye muscles, which can cause computer vision syndrome.

Decreased vision: Constant focus on the screen contributes to the development of myopia (nearsightedness).

Dry and irritated eyes: Reduced blinking frequency, especially when using phones in low light conditions.

#### 2. Poor posture and spinal problems

"Smartphone Neck": Tilting your head forward while using your phone puts excess strain on your neck muscles and can lead to chronic pain.

Problems with the spine: Staying in an uncomfortable position for a long time can contribute to curvature of the spine and the development of osteochondrosis.

#### 3. Sleep disturbance.

Blue light from the screen: Reduces the production of melatonin, a hormone that regulates sleep. This leads to insomnia and poor sleep quality.

Phone Addiction: Continuous use of gadgets before bed stimulates the brain, making it difficult to fall asleep.

#### 4. Psychological impact

Phone addiction (nomophobia): The fear of being without your phone causes anxiety, stress and impaired concentration.

Decreased social activity: Being caught up in virtual communication can lead to isolation from real life.

Digital Stress: Constant notifications, the need to respond to messages, and checking social media cause emotional exhaustion.

5. Impact on physical health.

**Materials and research methods.** The study involved 100 second-year students of the Medical Academy. Among the respondents were 56 girls and 44 boys. The average age of all subjects was  $19.1 \pm 0.5$  years. All respondents were informed about the goals and objectives of the testing and gave their consent to the processing and publication of the results of the study. The main methods of our study were: questionnaire-survey method. The impact of the phone on the health of students was carried out during the height of educational activities and during different meteorological conditions. The

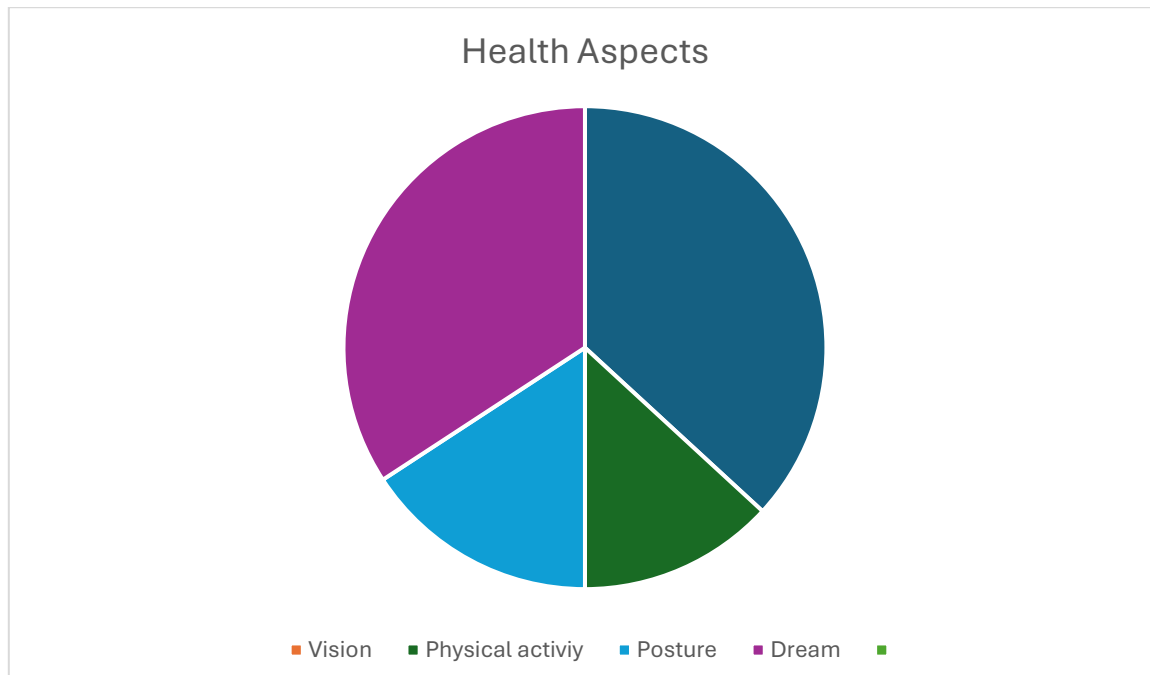
following factors were taken into account: attention stability - this term is understood as the general direction of attention in the process of activity; psycho-emotional state; average duration of sleep. When studying the decrease in vision was determined in (70%) students; curvature of posture in (30%), physical activity in (25%), sleep disorders in (65%).

### **The results of the influence of the phone on the health of students**

Research and observations show that excessive use of mobile phones by students has both short-term and long-term negative effects on their health. A strong correlation was found between time spent on social media and stress levels ( $r = 0.7$ ,  $p < 0.01$ ). There was a significant increase in sleep complaints among students who used phones before bed. Here are the main results:

**Table:**

<b>Health aspect</b>	<b>Negative influence</b>	<b>Statistics examples</b>
<b>Vision</b>	Dryness, redness of the eyes, decreased vision, development of myopia.	<b>70%</b> students complain of dry eyes, 30-40% of myopia.
<b>Posture</b>	"smartphone neck" chronic pain in the neck and back, curvature of the spine.	<b>60%</b> students complain of neck pain, 23-30% have problems with posture.
<b>Physical activity</b>	Sedentary lifestyle, weight gain.	Students who spend more than 5 hours on their phones have a 25% increased risk of obesity.
<b>Mental health</b>	Anxiety and stress. Nomophobia (fear of being without a phone), emotional exhaustion.	50% of students feel anxious about notifications. More than 30% of students prefer virtual communication to real communication.
<b>Dream</b>	Insomnia. Difficulty falling asleep, disrupted sleep patterns due to using the phone before bed.	65% of students report insomnia, 45% have poor sleep quality.
<b>Cognitive abilities</b>	Productivity. Decreased concentration, distractions from notifications.	Learning productivity is reduced by 20-30% due to distractions.
<b>Electromagnetic radiation</b>	Headaches and fatigue.	Some students complain of headaches after long conversations.



### Recommendations:

#### **Maintaining a balance between "time with your phone and time without it"**

Limit screen time to 2-3 hours per day for non-critical tasks. Use timers or apps to control screen time.

#### **Prevention of visual impairment**

Follow the 20-20-20 rule: Every 20 minutes, take a 20-second break and look at something 20 feet away. Use a "night light" setting or dim your screen.

#### **Maintaining correct posture**

Avoid using your phone in a tilted position. Spend more time at your desk rather than lying down with your phone in your hands. "No-gadget days" or temporary breaks from using your phone. Limit the amount of time you spend using your phone to avoid posture problems and reduce eye strain.

#### **Mental Health Protection**

Avoid excessive social media use, which can cause anxiety and depression. Replace scrolling with outdoor activities or physical activity.

**Preventing exposure to electromagnetic radiation** Use headsets or speakerphone during calls. Reduce the time spent on phone calls. Use headphones or speakerphone to reduce contact between the phone and your face.

**Planning a sleep schedule** Stop using your phone 1-2 hours before bed to avoid blue light affecting your sleep quality. Use special blue light filters or glasses when working with a screen. Keep your phone away from your head and body while sleeping. Try not to keep your phone close to your body, especially while sleeping. Set your phone to "silent mode" before going to bed and keep it away from your bed.

#### **Recommendations for hygiene when using mobile phones:**

- regular disinfection of the phone using wipes or special sprays;
- washing your hands before using your phone, especially after visiting public places;
- avoid using the phone in toilets and in the kitchen while preparing food.

**Conclusion** Students' health can be maintained by using their phones consciously. Following simple rules helps minimize the negative impact and improve overall well-being. The negative impact of smartphones affects both physical and mental health.

**Physical health:** Using your phone for long periods of time, especially with poor posture, can lead to neck, back, and wrist pain (called "text syndrome" or "smartphone neck"). Blue light from screens disrupts melatonin

production, which can impair sleep quality, reduce concentration, and cause fatigue.

**Mental Health:** Excessive use of social media can lead to anxiety, depression, and low self-esteem due to comparing yourself to others. Constant notifications cause stress and make it difficult to concentrate on your studies.

**Cognitive Function and Academic Performance:** Research shows that frequent interruptions to check your phone impair memory, attention, and learning. The habit of multitasking with your smartphone can reduce productivity and slow down task completion.

**Social aspects:** Although phones help keep in touch with friends and family, excessive use can impair face-to-face communication skills and lead to social isolation.

**Prevention of negative consequences:** Regulate the time of using gadgets, especially before bedtime. Use eye protection mode and take regular breaks from working with the phone. Develop digital hygiene skills and conscious content consumption.

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