

## IMPACT OF MODERN DIGITAL ENVIRONMENT ON HUMAN MENTAL AND PHYSICAL HEALTH

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**Annotation.** This research analyzes the dynamics of digitalization of people's lives, considers the development of diseases of the psychological and physical component of a person in correlation with the development of the use of digital devices. An analysis was also made of the direct and indirect impact of the development of digital technologies in the social life of a person. A method is proposed for solving the current negative consequences of digitalization of a person's lifestyle in the context of large-scale and widespread digitalization.

**Introduction.** The growth of Internet users has more than doubled over the past ten years, from 20.18 billion in 2012, which in 2022 increased to 4.95 billion. 8.6%, the sharpest jump was in 2020 against the backdrop of the COVID 19 situation. The use of digital technologies by people can harm health in two ways: passive (wasteful spending time on social networks, getting used untested) and active (harm from an inactive lifestyle, the influence of monitors on vision, tunnel syndrome, scoliosis, hypertension and hyperglycemia).

The growth in the number of social media users on the Internet reached over 4.62 billion people, which is more than three times higher than in 2012. And the growth during these ten years is 12% on average per year. For at least the last year, the number of social media users has increased by one million a day. The most serious and negative fact is that the time spent on the Internet has increased by 50% over the past 7 years, if in 2015 the average users spent 1 hour and 51 minutes, now this average is at least 2 hours 27 minutes.

American researchers from the Academy of Pediatrics have proven the risks of using digital technologies, as well as identified and determined the facts of deterioration in the cognitive, verbal and socio-emotional development of adolescents and children [1]. The principle and rule of "structured and limited" use of the Internet is fixed, with all the data on preventing the consequences of using the Internet, that unconscious and aimless use of the Internet negatively affects the mental, and as a result, physical, well-being of the population [2].

**The purpose of the work:** to analyze the data on the development of digital technologies and the problems of the physical and emotional state of people, as well as to substantiate the relevance of the lack of conscious use of digital technologies and propose a method for improving human digital hygiene.

**Main part.** A study by the optical industry association Vision Council found that 80% of the adult population use digital device displays for more than two hours a day, and among them, more than 67% expose their eyes to two or more displays at the same time.

Unlimited and unconscious use of digital devices negatively affects the formation and development of a person's personality, primarily affecting social, mental and physical qualities, this leads to addictions, as well as a deterioration in the starting level of well-being [3]. Also, the sex industry, which went online and got the name cybersexuality, is approved as a form of sex addiction [4]. This dependence negatively affects material well-being, as well as mental health and social connections of a person.

Empirically proven relationship between the times spent in front of the display of digital devices, with health problems such as overweight, malnutrition, symptoms of depression and reduced quality of life [3]. And feedback, as an improvement in a person's life achievement indicators with minimal use of digital devices. In China, the crowding out hypothesis was also confirmed, according to which the use of time spent on digital devices directly proportionally reduced mental and physical activity.

The multitasking mode worsens the cognitive component of a person, the use of working memory, the ability to concentrate attention and the quality of memory are falling. Lost profit syndrome, which manifests itself in the fear of missing the news, increases the time spent using digital gadgets. A study in the journal *Clinical Psychological Science*, which included 506,000 adolescents, confirmed a direct correlation between the displacement of offline life by digital content and rates of depressive symptoms, aggression, and suicidal behavior, especially among girls [5].

A study by the University of Essex has proven that children are getting weaker. The sample included groups of 10-year-old children and the evidence was that since the end of the 20th century, arm strength has decreased by 26%, and the number of squats they could do has decreased by 27.1%. This is a consequence of the growing use of digital devices replacing active leisure.

The main and most reliable way to limit yourself and others in the use of digital technologies is to use steps that will allow people with a low genetic predisposition to volitional decisions to hold high levels of self-control: 1. The absence of a dopamine stimulant. The absence of a stimulator for the production of dopamine and contact with it (visual, sound, tactile, olfactory). 2. Forced necessity of refusal of harmful or useful actions. 3. Development of a negative association with desire. Obtaining negative information through images, audio messages, etc. 4. Create a plan and limits.

These items can be automated with digital devices and used to improve the quality of life. An example of such a product is the ARCANA physical and mental health application under development. The absence of stimulants is one of the features that block unwanted content and data, similar to ad blocking plugins in browsers. The development of negative associations can be automated and systematic through the use of data from the Internet and reminders when using digital gadgets. And the interests taken into account that contribute to the development of human potential, both physical and mental, will be encouraged and stimulated, recalling the positive end result, producing “long-term” dopamine.

**Conclusions.** Medical workers describe pathological manifestations when using digital technologies and the consequences that unconscious, prolonged and passive use of digital technologies can lead to. One of the ways to solve this problem can be the ARCANA application, incorporating the basics of psychotherapeutic practice, it allows you to influence the user through the use of digital technologies and wearable devices, at the moment the application is under development.

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