

THE IMPACT OF SMARTPHONES ON CHILD AND ADOLESCENT PSYCHOLOGY: RISKS AND PREVENTION

Abirkulova Shokhsanam Zokir qizi

Samarkand State Institute of Foreign Languages

2th year student

Abstract: This article aims to scientifically study the impact of smartphones on the psychology of children and adolescents. It analyzes the psychological, cognitive, emotional-volitional and social risks that may arise from the misuse of smartphones. The article also examines the role of the dopamine system in the formation of addiction and the attention-grabbing properties of applications from a neuropsychological perspective. Practical recommendations for parents, schools and community organizations are proposed as ways to solve the problem, including measures to limit screen time, control content and increase media literacy. The article aims to create a foundation for children and adolescents to use smartphones safely and consciously.

Keywords: smartphones, child psychology, adolescent psychology, digital addiction, dopamine, screen time, cognitive development, emotional development, cyberbullying, media literacy.

Introduction.

In today's rapidly developing digital age, smartphones have become an integral part of human life. They provide unparalleled opportunities for communication, information, entertainment and learning. Smartphones are very common, especially among children and adolescents, and have become an important component of their daily activities. In the modern world, their presence has become so widespread that one or more smartphones can be found in almost every household. However, along with the bright sides of this technological revolution, there are also serious negative consequences that can arise from improper and uncontrolled use.

The relevance of the topic is that the impact of smartphones on the psychology, mental development, emotional state and social relationships of children and adolescents is increasingly worrying researchers, parents and education professionals. Issues such as excessive screen time, Internet addiction, and the psychological impact of social networks are among the most important problems today. These problems can increase children's susceptibility to conditions such as attention deficit, sleep disorders, anxiety and depression.

The purpose of this article is to scientifically study the impact of smartphones on the development of children and adolescents, identify their potential risks and develop practical recommendations for preventing these risks. The article analyzes the neuropsychological mechanisms of smartphone use, as well as examines in detail their negative effects on the cognitive, emotional-volitional and social development of children and adolescents. Finally, preventive measures and effective strategies for parents, educational institutions and the public are presented. The article aims to create a basis for children and adolescents to interact safely and consciously with smartphones through an integrated approach to this problem.

Literature review.

A review of the scientific literature on the impact of smartphones on children and adolescents includes:

1.American Academy of Pediatrics (2016). "Media and Young Minds." This publication presents important recommendations and studies on children's health and media use. In particular, it emphasizes the recommendation of almost no screen time for children under 2 years of age (except for family video chats), as well as the recommendation of no more than 1 hour of educational and quality content per day for children aged 2 to 5 years.

2.Kardaras, N. (2019). "Glow Kids: How Screen Addiction Is Hijacking Our Kids' Brains—and How to Break the Trance." This book provides detailed information on screen addiction and its impact on children's brains. The author highlights the role of the dopamine system in the formation of addiction, which is especially strong because children's brains are not yet fully developed.

3.Turon, S. (2018). "Digital addiction in adolescents and its effects on psychological well-being." This scientific article provides information on digital addiction in adolescents and its effects on psychological well-being. The article shows that excessive use of smartphones leads to increased levels of anxiety, depression, and stress.

4.Twenge, J. M. (2017). "iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood." This comprehensive book analyzes changes in the psychology, behavior, and well-being of the smartphone generation. It examines issues such as social isolation and weakened communication skills.



5.UNICEF (2017). "The State of the World's Children 2017: Children in a Digital World." This global report from the United Nations Children's Fund discusses the relationship between children and the digital world, including the risks and opportunities.

6.World Health Organization (2019). "Guidelines on physical activity, sedentary behaviour and sleep for children and adolescents." These recommendations from the World Health Organization provide important information on physical activity, sedentary behaviour and sleep for children and adolescents, including a discussion of screen time. In particular, it is noted that using smartphones in the evening can suppress the production of the hormone melatonin and lead to sleep disorders.

7.Zou, J., Huang, Y., & Li, R. (2020). "Association between smartphone addiction and mental health in adolescents: A meta-analysis." This meta-analysis examines the relationship between smartphone addiction and mental health in adolescents, confirming that excessive use increases levels of anxiety, depression and stress.

A literature review confirms the complex negative impact of smartphones on the development of children and adolescents and indicates the need for a comprehensive approach to solving this problem.

Methodology.

This article uses a theoretical and analytical approach to study the impact of smartphones on the psychology of children and adolescents. The article is based on the following methodological steps:

Literature Review: The available scientific literature on the topic was analyzed, including studies in the fields of psychology, neuropsychology, education and health, books, scientific articles and reports of international organizations (e.g. American Academy of Pediatrics, UNICEF, WHO). At this stage, information was collected on the impact of smartphones on children's development, mechanisms of digital addiction, cognitive, emotional-volitional and social consequences.

Analysis of neuropsychological foundations: The impact of smartphone use on the human brain, in particular the dopamine system, and the mechanisms of addiction formation were reviewed. The specific features of children and adolescents' brain development (underdevelopment of the prefrontal cortex, brain plasticity, impulsivity) were analyzed in terms of their role in increasing their susceptibility to smartphones and the risk of addiction.

Studying the impact of smartphone app design: The design features of apps that aim to keep the user on the screen for longer, such as infinite scrolling, notifications, reward systems, and variable rewards, were analyzed.

Systematization of negative effects: The negative effects of smartphones on the development of children and adolescents were systematized in the following main areas:

Mental and cognitive development (attention, memory, creativity).

Emotional-volitional sphere (anxiety, depression, stress, social isolation, self-control).

Physical health (eye problems, spine, obesity).

Social risks (cyberbullying, inappropriate content, information security).

Development of recommendations for prevention and preventive measures: Based on the results of the analysis, practical recommendations aimed at solving the problem were formulated, divided into three main groups: for parents, for schools and educational institutions, as well as for government and public organizations. This methodology allows for a deep and comprehensive analysis of the impact of smartphones on the psychology of children and adolescents, and also provides an integrated approach to solving the problem.

Results.

Uncontrolled and excessive use of smartphones can have serious negative effects on the psychological, cognitive, emotional and social development of children and adolescents. Studies show that:

- Digital addiction: The reward system of smartphones (dopamine release) and the addictive design of applications (endless scrolling, notifications, reward systems) lead to the formation of digital addiction in children. This is especially dangerous for children and adolescents whose brains are not yet fully developed.

- Mental and cognitive disorders: Attention deficit and concentration disorders: Rapidly changing content and constant notifications reduce the ability to concentrate. This causes difficulties in the educational process and in completing homework.

- Negative effects on memory and learning ability: The constant opportunity to search for information can weaken the brain's mechanisms for remembering and analyzing information.

- Decreased creativity and problem-solving skills: Smartphones offer ready-made solutions, reducing children's desire to think independently and seek creative solutions.

- Emotional-volitional problems: Increased anxiety, depression and stress levels: Images of a "perfect" life on social media can increase anxiety and depression through phenomena such as "FOMO" (Fear Of Missing Out).

- Weakened social isolation and communication skills: Virtual communication cannot replace real-life connections, which hinders the development of face-to-face communication, empathy and conflict resolution skills.

1. Decreased self-control: Providing instant gratification weakens the ability to control patience and impulsivity.

2. Sleep disorders: Using a smartphone in the evening suppresses the production of the hormone melatonin, making it difficult to fall asleep and reducing the quality of sleep.

- Physical health issues:

1. Eye problems and spinal disorders: Long-term use of screens can lead to eye strain, and "tech neck" can lead to spinal pain.

2. Decreased physical activity and risk of obesity: Excessive use of smartphones keeps children away from playing outside, which leads to decreased physical activity and an increased risk of obesity.

Social risks:

1. Cyberbullying: Social media puts children at risk of becoming victims or perpetrators of cyberbullying.



2. Exposure to inappropriate content: Children can easily be exposed to age-inappropriate, harmful content.

3. Personal information security: Children's lack of knowledge about protecting their personal information creates security issues.

Discussion.

The results clearly demonstrate the serious negative effects of smartphones on the comprehensive development of children and adolescents. When discussing these issues, it is necessary to pay attention to the following aspects:

The importance of neurobiological foundations: The understanding of the mechanism of the dopamine system and its addictive nature shows why smartphones are so attractive to children and adolescents. The immaturity of the prefrontal cortex increases their impulsivity and inability to assess consequences. This increases the responsibility of technology designers and emphasizes the need to adhere to ethical standards when creating content for children.

Impact on cognitive development: Cognitive problems, such as attention and concentration disorders, have a direct negative impact on children's academic performance. Modern education systems should change educational materials and introduce methods aimed at developing deep analytical skills in children, taking into account these challenges. Decreased creativity and problem-solving skills may lead to a shortage of innovative thinking professionals in the future.

Emotional and social health: The consequences of smartphone use, such as emotional isolation, anxiety, and depression, may lead to an increase in mental health problems in society. Virtual communication cannot replace real-life relationships and hinders the development of children's social skills. It is important for parents and schools to create more opportunities for children to communicate face-to-face, teach them empathy and manage emotions. Sleep disorders have a negative impact on overall mental and physical health.

The need for a comprehensive approach: Solving the problem is not the responsibility of parents alone. Schools should develop policies to increase media literacy, and governments should develop policies to create a safe Internet environment. Recommendations from international organizations (for example, the American Academy of Pediatrics, WHO) serve as an important guideline in this regard.



Finding a balance: Smartphones are an undeniable part of modern life. The goal is not to completely abandon them, but to create a culture of conscious and responsible use. This ensures that children are protected from the risks while taking advantage of the potential of technology. Future research should focus on the long-term effects of smartphones and finding innovative solutions for their effective use. These discussions show that there is no single solution to address the impact of smartphones on the development of children and adolescents, but rather a concerted effort and ongoing monitoring.

Conclusion.

The widespread use of smartphones in modern society, especially in the lives of children and adolescents, remains a part of human development.

However, ensuring the conscious and responsible use of this technology is extremely important for the healthy psychological, cognitive and social development of the future generation. As discussed in this article, smartphones are attractive to the younger generation due to the neuropsychological mechanisms and special designs of applications that affect the reward system of the human brain, increasing the risk of digital addiction among them. Uncontrolled use of smartphones can cause mental problems in children and adolescents, such as attention deficit, decreased memory and learning ability, and limited creativity.

In the emotional and volitional sphere, negative conditions such as anxiety, depression, social isolation and sleep disorders are observed. In terms of physical health, eye problems, spinal diseases and the risk of obesity are also of serious concern. In addition, there are social risks such as cyberbullying and exposure to inappropriate content. Therefore, creating a culture of conscious and responsible smartphone use requires, first and foremost, the active participation of parents. They should limit their children's screen time, monitor content, set an example for them and offer alternative activities to smartphones. Schools and educational institutions can make an important contribution by promoting media literacy and setting rules for smartphone use. Governments and public organizations should develop policies to support scientific research, raise awareness and create a safe internet environment.

In conclusion, smartphones are a part of modern life, but it is important to learn to use them wisely. This is a fundamental condition for the proper development of children and their future role in society.

Further research should focus on studying the long-term effects of smartphones in more depth, as well as finding more innovative solutions for the effective and safe use of digital technologies for children and adolescents.

The list of used literature.

- 1. American Academy of Pediatrics. (2016). Media and Young Minds. Pediatrics, 138(5), e20162591. DOI: 10.1542/peds.2016-2591**
- 2. Kardaras, N. (2019). Glow Kids: How Screen Addiction Is Hijacking Our Kids' Brains—and How to Break the Trance. St. Martin's Press.**
- 3. Turon, S. (2018). Digital addiction in adolescents and its effects on psychological well-being. Journal of Adolescent Health, 63(3), 254-260. DOI: 10.1016/j.jadohealth.2017.11.011**
- 4. Twenge, J. M. (2017). iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood. Atria Books.**
- 5. UNICEF. (2017). The State of the World's Children 2017: Children in a Digital World. UNICEF.**
- 6. World Health Organization. (2019). Guidelines on physical activity, sedentary behavior and sleep for children and adolescents. WHO.**
- 7. Zou, J., Huang, Y., & Li, R. (2020). Association between smartphone addiction and mental health in adolescents: A meta-analysis. Journal of Affective Disorders, 276, 730-738. DOI: 10.1016/j.jad.2020.07.039**

