

## THE SPECIFICS OF USE OF ELECTRONIC DEVICES BY PRESCHOOL CHILDREN AT HOME AND THE ROLE OF PARENTAL MEDIATION

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Due to the development of digital technologies and their growing availability to all categories of the population, the age of children who regularly use electronic devices decreases. This article summarizes the results of the studies investigating the use of electronic devices by preschool children and describes the role of parents in organizing this type of activity for them. The data were collected from papers published from 2017 through 2024 and available in eLibrary, CyberLeninka, and PubMed. The analysis of the data revealed that most parents lack the skills needed to teach children to use electronic devices safely, and their awareness of the associated health disorders and preventive measures is insufficient. Therefore, the experience of using electronic devices by children, including preschoolers, may be negative, which necessitates efforts aimed at counseling parents and educating them about digital safety and the rules of controlling the relationship of their children with such devices.

**Keywords:** preschool children, electronic devices, digital environment, role of parents, awareness, skill development

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## ОСОБЕННОСТИ ИСПОЛЬЗОВАНИЯ ЭЛЕКТРОННЫХ УСТРОЙСТВ ДЕТЬМИ ДОШКОЛЬНОГО ВОЗРАСТА В ДОМАШНИХ УСЛОВИЯХ, РОЛЬ РОДИТЕЛЬСКОГО ПОСРЕДНИЧЕСТВА

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Развитие цифровых технологий, их доступность всем категориям населения определяют снижение возраста детей, регулярно использующих электронные устройства. В статье представлена обобщенная информация о результатах исследования особенностей использования электронных устройств детьми дошкольного возраста, описана роль родителей в организации этого вида деятельности детей. Сбор литературных данных проводили с использованием баз данных научных электронных библиотек eLibrary, КиберЛенинка, PubMed. Область поиска — 2017–2024 гг. Анализ литературных данных выявил отсутствие у большинства родителей навыков приобщения детей к безопасному использованию электронных устройств, недостаточную информированность родителей о возможных нарушениях здоровья и мерах профилактики. Указанные обстоятельства могут быть причиной формирования отрицательного опыта использования электронных устройств детьми, в том числе дошкольного возраста, и требуют проведения информационно-консультационной работы с родителями дошкольников по вопросам цифровой безопасности и правилам знакомства детей с электронными устройствами.

**Ключевые слова:** дети дошкольного возраста, электронные устройства, цифровая среда, роль родителей, информированность, сформированность навыков

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The development of digital technologies and their application in all spheres of life translates into availability of electronic devices to all categories of the population, including preschool children [1]. Basic and additional education programs rely on such devices to a significant degree. They allow learning social skills [2, 3] and ensure the child develops harmoniously in the context of the accelerating digitalization of society [4]. Parents are directly involved in introducing preschool children to the world of digital technologies; by their own example, they show children how such technologies are used, and, to the best of their understanding, teach the respective rules of use and critical thinking skills applicable to the process of consumption of digital content. Thus, the parents' knowledge and skills pertaining to the safe employment of electronic devices are the basis for the respective skills that their preschool children are developing. Other important factors are the nature and degree of influence of electronic devices on the health

of children and adolescents, including functional state of their vision and the nervous and musculoskeletal systems [5–8].

When exceeding the allowed time for using electronic devices becomes a routine practice, significant changes may occur in the body's organs and systems that promote chronic diseases. Understanding the nuances of how children use such devices as well as the specifics of development of the related skills would enable designing effective strategies aimed at minimizing health risks and consolidating the positive effects of children's interaction with digital technologies.

This study aimed to summarize the existing knowledge about the role of parents in the process of development of skills of use of digital devices by their preschool children.

The article analyzes the available data describing the frequency and duration of use of electronic devices by preschoolers, the degree of parental control over how, for what, and when children interact with such devices, provides information

about the reasons of giving them to children, and outlines their reactions to the attempts to take the devices away. The data were collected from papers published from 2017 through 2024 and available in eLibrary, CyberLeninka, and PubMed.

The analysis of the available related literature revealed that the subject has not been investigated sufficiently, which necessitates further studies looking into the reasons why preschoolers disobey the electronic devices safe use rules and supporting the development of the effective ways to prevent health disorders in this cohort and children in general.

The papers on the subject published thus far show that the frequency of use of electronic devices by preschool children has increased significantly in the past decades. The reasons behind this phenomenon are the development of technology in general, the increasing availability of digital devices in everyday life, and their growing attractiveness in the eyes of preschoolers. Currently, the mean age of the first stable contact with smart devices is 3.5 years. As of 2024, the number of children who started using electronics before they reached school age has doubled in the last four years. Every second (53%) child is initiated with such devices before the age of two, and 4.5% of children receive one before turning 6 months old. On weekdays, 64% of children count approximately an hour of screen time, and the remaining 36% — up to 3 hours. On weekends, about 8% of preschoolers use electronic devices for more than three hours [2]. Every third (28.1%) preschool child accesses the Internet, and the rest of them use electronic devices for offline activities, viewing already downloaded cartoons and playing games. As for the type of electronic devices themselves, the devices of choice for most preschoolers are tablets, smartphones, and laptops. According to surveys, children aged 3–6 are more likely to prefer tablets (12.2%) than smartphones (9.4%) or laptops (8.6%), as tablets combine the convenient aspects of both of them, featuring a larger and brighter screen and being easy to transport [9]. Given the affordability of electronic devices, a considerable number of these preschool children (from 23.5 to 49%, according to various sources) have a tablet of their own [1, 3]. The main type of activities they indulge in are watching cartoons and other entertainment videos for children (about 94%), and playing mobile games (about 72%). Research shows that preschoolers' preferences in digital games change with age from simple object manipulation games (ages up to 3 years) to story-based RPGs (ages from 4–6 years). The aspect of cybersecurity aspect is particularly important in the context of children browsing online resources. Almost every second child aged 5–7 years has encountered hazards on the Internet, the most common of which have to do with technical and content components, including uninitiated video playback, intrusive banners, frightening or obscene content, and infection of devices with malware [9].

Public opinion research shows that parents realize the dual role of electronic devices: they can be a practical learning and entertainment tool, or turn into a source of threats to the child's mental and physical health [1–3]. In this connection, monitoring the use of such devices should become an important component of the process of upbringing, because preschoolers are unable to control their gadget addiction — they will use electronic devices until they get bored. The parents may enforce the screen time limits and oversee the quality of the content that children access, thus mitigating the risk of exposure of the child to age-inappropriate information preventing early problems with the visual analyzer. Technologically, they can use special applications and built-in functions (parental control) to set the said limits and content filters, ensuring their children stay safe while using electronic devices. Secondly, supervision

from parents helps children to learn the basics of digital literacy and use electronic devices responsibly. Discussing the rules of electronic device application and explaining potential threats, parents help children develop critical thinking and the ability to make their own decisions in the digital realm. Such communication helps children understand how important it is to maintain a balance between online activity and real life. In addition, this sort of control has a positive effect on family ties, as joint discussion of topics related to electronic devices improves the general quality of communication and enhances intergenerational understanding. Parents and children learn to hear each other better, which fosters a more trusting and open atmosphere in the family.

However, research shows that half (43.8%) of parents give an electronic device to their children spontaneously, and a quarter (24.8%) do it consciously, believing that they are useful. The majority (64.4%) of parents admit that they do so to take a break from their child. Only one in ten (11.4%) parents offers educational applications, the rest turn on cartoons and games [10, 11].

As for the attitude of parents towards the use of electronic devices by their children, the studies revealed three stances: "unlimited" (42%), "normal" (46%) and "prohibitive" (13%). Parents practicing the prohibitive stance do not allow their children to use any electronic devices. Those from the normal stance cohort allowed using one specific electronic device, be it a tablet, phone, or computer. The unlimited stance is self-descriptive: children see no restrictions when it comes to electronic devices. Most parents allow their children no more than one or two hours of screen time a day, with the process mainly controlled by mothers. Electronic devices are mainly used to consume age-appropriate entertainment content, such as cartoons and computer games, and to use educational applications that help in preparing for school. Parents can increase screen time as needed to complete educational activities that are important for the positive development of children [11, 12].

Data from other literary sources indicate that Russian parents of preschoolers largely prefer a restrictive approach to their children's media activity. Two thirds of parents (60%) reported that they limit their children's screen time, and a third (35%) actively participates in choosing the content and explains their children which media resources are safe and which are not. Only half (54.4%) of children hear the rules of using electronic devices from their parents, one in five (21.7%) receive this information from older siblings, and one in three (30%) children learns how to use electronic devices on their own. Only 22.2% of children easily put down electronic devices when asked to do so by their parents, with 52.8% of children doing this reluctantly. A smaller proportion of parents practice joint use of electronic devices, as they typically have their own business to attend to and only give the children electronic devices as a temporary distraction [13, 14].

A significant number of parents give ambiguous answers to questions about their children's access to electronic devices, which indicates that they do not have a clear screen time strategy for their children [14].

## CONCLUSION

The analysis of the previously published studies reveals that the culture of electronic device usage is low in families with preschoolers, and parents act irresponsibly due to their incompetence in the matters of digital safety. The possible reasons behind this situation is the low level of awareness of parents about health risks associated with electronic devices,

and lack of accessible, reliable and complete information about how to use them safely [15]. Thus, the issues of digital safety of the population in general and preschoolers in particular should form the basis of the hygienic training programs for both children and their parents, as well as those involved in the processes of upbringing and education. This work

should be integrated into the overall system of education to ensure it is supported by a methodological foundation and is carried out consistently and systematically. The involvement of parents of preschoolers will help to improve their digital security competencies and encourage them to strengthen control over how their preschool children use electronic devices.

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