



**PARENTAL  
PERCEPTIONS  
OF MEDIA USE  
BY CHILDREN  
WITH AUTISM**

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# ABSTRACT

This research is about parental perceptions and experiences regarding the use of media (television, Internet, games, etc.) by children with autism. The research methodology includes semi-structured interviews with parents of 22 children with autism who are a representative sample, that is, they differ in age, gender, education, and economic status, and inclusive of an ethical approach showing their personal experiences and perceptions. The research also includes the use of observation logs kept by parents for 30 days. The analysis of the interviews with parents of children with autism reveals that the use of media is often seen as a means of improving their children's communication skills. Parents often report that interactive programs and video games help children develop information-gathering and problem-solving skills. The analysis of the observation logs also shows that more than half of the parents reported positive effects of media use on children's emotional regulation. A significant correlation was also found between the time spent in front of the TV or the Internet and their ability to deal with stressful situations. Research further reveals that media have significant potential to improve the lives of children with autism, particularly in the context of emotional regulation and socialization. However, a recommendation is to have a balanced approach and parental support to avoid negative effects and maximize the advantages of media use in these cases. The conclusions of this research are of great importance for the development of inclusive policies for children with autism and they are the basis for the development of improved strategies and programs that will improve the living conditions and the inclusion of this population in various segments of the community.

**Keywords:** parental perceptions, media, children with autism

## 1. INTRODUCTION

Children with autism face many challenges in everyday life – in terms of communication, social interactions, and cognitive processes. When it comes to the parents and families of these children, introducing media into their lives can have a significant impact on their daily routine and quality of life. Media such as television, games, the Internet, and other digital applications are potential tools for education and therapy. For children with autism, media can be an easy-to-access manner of learning various skills and acquiring knowledge. In many cases, interactive games and programs can stimulate cognitive development and improve the ability to socialize. If properly integrated, media can help children with autism develop communication skills and assist them in adapting to various social contexts. For parents and families, media use can be different in two aspects. First, the media can serve as an educational and supportive resource, providing information on techniques and support for child development. Second, media can be a respite for parents, which can help reduce stress and maintain positive family relationships. In today's digital society, television, the Internet, social networks, video games, and media platforms provide a wide range of content and interactions that have a significant impact on the social, emotional, and cognitive development of children with autism. The influence of the media on children is complex and can vary depending on the individual characteristics and needs of each child. Children with autism often face challenges in understanding and learning social norms and interactions. Media such as videos and social networks can provide them with a safe and controlled way to learn and practice social skills such as conversation and understanding emotions. Interactive media, such as computer games and apps for developing language skills, can be an effective way to improve communication skills in children with autism. These tools often provide visual support and interaction that help children understand and express their thoughts and needs. Some children with autism react differently to different sensory stimuli. Media can be a useful tool to support the development of sensory skills through games, audiovisual content, and interactive experiences that stimulate the different senses. For the majority of children with autism, individualized and personalized approaches are essential. Media can offer flexibility and opportunities to adapt the content according to the needs and interests of each child. Although the media have significant advantages, it is important to be aware of potential negative aspects such as excessive use, exposure to unwanted content, or social problems in the virtual environment. Every child with autism is different and may have different reactions to and benefits from media. Therefore, it is important to consider individual needs and use media as part of complex development and therapy programs that are adapted to each child.

## 2. LITERATURE REVIEW

There are global researches that provide more examples of how various media and technologies can be used for the support and development of children with autism. They analyze the different aspects of media use, with the aim of improving the quality of life of these children and their social, cognitive, and communicative functionality. In terms of the influence of television on children with autism, information is obtained on how television programs can affect the social and communication skills of children with autism. For example, the study by Dissanayake et al. (2014)

investigated the reaction of children with autism to different types of television programs and their social development. The study by Ploog et al. (2014) identifies the need for digital media and the Internet among children with autism, how they engage and react to digital media and the Internet, including the analysis of advantages and challenges in the use of technologies among children with autism. Many studies focus on the perceptions and needs of parents of children with autism and their rapport with the media. For example, research by Nikken and d'Hondt (2014) examined the parental perceptions and practices related to media use by children with autism. A study by Ferguson et al. (2016) revealed the effects of computer-based media interventions on cognitive and social skills in these children. Research by Ramdoss et al. (2012) focuses on the efficacy of various technologies seen as interventions aimed at improving cognitive and communication skills in children with autism. The research analyzes the effects of computer games and interactive programs on children's development.

In terms of social media, a study by Vismara et al. (2013) analyzed how interactions via platforms such as Facebook or other social networks can influence social interaction and communication in these children. The research by Hourcade et al. (2013) investigates the effects of multimedia training programs and the integration of children with autism in the school context. This research analyzes various technologies and their impact on children's academic and social achievement. When it comes to interactive games, research by Kuo et al. (2014) examined the effects of interactive games for accounting and mathematics on cognitive skills and motivation in children with autism. This research provides an example of how games can be useful for developing specific skills in these children. The above-mentioned studies investigate various aspects of media influence on children with autism, including social, cognitive, and communication aspects. They provide important examples for understanding how the media can influence these children and how they affect their development.

### 3. RESEARCH METHODOLOGY

The purpose of this research is to examine parents' perceptions and their attitudes towards the positive and negative aspects of the use of media by their children with autism, as well as to analyze how these media affect the emotional regulation and socialization of children.

Several hypotheses have been put forward in the research. A general hypothesis: Parents of children with autism have divided views on the influence of the media: they see significant potential for improving communication and cognitive abilities but are concerned about possible negative effects on socialization and sensory sensitivity.

**HYPOTHESIS 1:** Parents believe that media, with carefully selected content (such as relaxing videos or emotion management apps), can positively influence the ability of children with autism to manage their emotions and can help develop social skills in children with autism.

**HYPOTHESIS 2:** Parents recognize that educational apps and communication tools are most beneficial for their children's cognitive and language development.

**HYPOTHESIS 3:** Parents believe that media containing intense visual and sound effects (e.g. action videos or games) can cause sensory overload and anxiety in children.

This research uses qualitative methods to acquire a comprehensive understanding of the parents' perceptions regarding media use by their children with autism. The research design involved semi-structured interviews and logs. A total of 22 parents of children with autism participated in the research. Inclusion criteria are parents of children aged 5 to 18 with diagnosed autism. The participants were selected via e-mail that was sent to them using databases of therapy centers, parents' associations, and schools, with prior permission from the relevant institutions, and also through professional referrals i.e. professionals who work with children with autism referred parents to the research to establish a relevant sample. It was emphasized that participation was voluntary and anonymous and that the data would be used exclusively for scientific purposes. The sample includes parents with different educational and economic levels.

Instruments used for data collection included semi-structured interviews – for obtaining in-depth and subjective perceptions of the parents. The interviews included open-ended questions about parents' experiences and attitudes about their children's media use. The interviews were recorded and transcribed for later analysis, analyzed using thematic analysis in order to identify major themes and patterns in parents' perceptions and experiences.

Logs – used for monitoring of daily activities related to the use of media and emotional regulation. Parents kept logs over 4 weeks. They received a pre-designed template with clearly defined fields for each entry. These fields include date and time: when was the media used; and type of media (application, videos, games, TV programs). Another field is the duration, that is, how long the child used the media. Emotional state before the use of the medium (eg anxiety, joy, frustration) and follow-up after the use of the medium (perceived improvement, worsening, or still the same condition). Specific behaviors observed during use (e.g. focus, rejection, hyperarousal). Data from the logs is analyzed to study media use and its influence on emotional regulation. This methodology allowed for a detailed and comprehensive analysis of parents' perceptions with full validation and reliability. All participants were informed about the purpose of the research and signed an informed consent, and were told that the data would be used for research purposes only. All personal information is de-personalized to protect the privacy of the participants. The results of the interviews were shared with the participants to verify the accuracy of the interpretation.

## 4. FINDINGS/RESULTS

The results that emerged from the interviews are divided into two types of effects: positive and negative.

Positive effects of using the media:

- Most parents find that educational programs, applications, and Internet resources help their children learn new information and skills.
- Some parents report that media, especially video games and social media, help children connect with peers and build social bonds.
- Watching favorite programs and listening to music helps children relax and calm down after a busy day.

Negative effects of using the media:

- Nervousness and irritability: Many parents notice that prolonged use of video games and other interactive media leads to increased nervousness and irritability in children.
- Sleep problems: Some parents point out that using media right before bed leads to problems falling asleep and sleep disturbance.
- Media addiction: Several parents express concern that their children are becoming addicted to media and their children find it difficult to separate themselves from screens.

### **SUMMARY RESULTS:**

Educational media and applications are very useful for the cognitive and educational development of children with autism – 18 out of 22 parents point out that the use of educational programs and applications has a positive effect on the cognitive development of their children.

Video games and the Internet have the potential to improve socialization, but at the same time can cause nervousness and irritability – 8 out of 22 parents noted that video games help socialize their children, but 14 of them also noted negative effects such as nervousness and irritability.

Parents note sleep problems and media addiction as negative effects – 16 out of 22 parents expressed concern about media addiction and difficulty in limiting screen time.

Logs and analysis of their entries provide a detailed overview of how different types of media affect the emotional state of children with autism. When analyzing the logs, it was observed that children use media at different times of the day for different purposes – the morning hours are mostly for relaxation, the afternoon hours are for games and the evening hours are for education or relaxation. A positive emotional reaction has been observed after watching favorite TV programs and using educational applications, while nervousness and frustration are most often associated with playing video games. Certain logs show diversity in the use of different media throughout the day, showing how children divide their time between educational and recreational activities. In terms of emotional reactions, children show positive emotional reactions such as joy, interest, and concentration while participating in various media activities. This shows that the right type of media can stimulate positive emotions and interest in them. Although there are negative emotions associated with playing video games, other activities such as watching educational videos and listening to music evoke positive emotions such as interest, relaxation, and concentration.

Analysis of the logs in terms of frequency of media use: some logs show how the media are used in different parts of the day. Morning hours are usually reserved for educational content, such as educational apps and children's programs on TV. Afternoons are mostly for gaming, including video games and mobile apps. Evening hours are used for relaxation with TV and Internet content. Analysis of the results of the logs allows a detailed overview of how different media affect their emotional state, social skills, and cognitive functions. Depending on the results, adjustments, and modifications can be made to improve the quality of the interaction and the child's development. It is identified which educational media (educational videos, interactive educational games) encourage cognitive skills and knowledge. It is also perceived how entertainment media – video games, movies, music – stimulate interest and the development of creative and social skills, such as social media or applications for interaction with others, and how they improve or reduce communication. Emotional reactions are represented in two types of positive and negative reactions – involvement in activities that create joy, interest, relaxation, and satisfaction, as well as examples that are frustration or fear of certain types of activities. In terms of time aspects, they show results regarding frequency of use, that is, how often one participates in different types of media and how it affects the child's daily routine and interests. The time distribution is also shown, how the time allocated for different media is distributed throughout the day, and how this affects the child's energy and concentration. The results confirm the general hypothesis that parents have divided views on

the influence of the media, recognizing benefits and risks depending on the type of media and the context of use. The hypotheses of the research were confirmed. Hypothesis 1: Confirmed by variations in social skills. Hypothesis 2: Confirmed, especially in structured and educational contexts. Hypothesis 3: Confirmed, with clear evidence of sensory overload and anxiety.

## 5. DISCUSSIONS AND CONCLUSIONS

The media have a significant positive effect on the cognitive and social development of children with autism, but careful monitoring and limiting of screen time is required to minimize negative effects.

Parents play a key role in regulating media use and should be educated and careful in choosing the content their children consume.

Additional research is needed to improve the understanding of the role of the media in the lives of children with autism and to develop guidelines and recommendations for their beneficial and safe use. More such research is needed to investigate how different types of media affect the daily routine and interests of children with autism, to identify the most effective methods and techniques for including media in the educational and therapeutic process for these children, and also to recommend practical strategies for parents, teachers, and therapists aimed at supporting and encouraging the development of children with autism via the media.

By identifying these parental perceptions, we make the following recommendations:

- Education for parents, that is, providing education and support for parents on the effective use of the media. This may include workshops and training for parents, as well as the development of resources to help them understand and manage their children's media use.
- Creation of specialized media programs for children with autism. These programs should be designed to support children's needs and help them develop their social and communication skills.
- Introduction of measures for regulation and supervision for safe use of the media. This may include the development of standards and guidelines for safe media use, as well as introduction of monitoring and oversight mechanisms.

The conclusions of this research are of great importance for the development of inclusive policies for children with autism. Research shows that the media can play a key role in improving the emotional regulation and socialization of children with autism. Parents should actively participate in the use of media, for example, by watching video content with their children or using applications together and support them in expressing feelings and developing social skills. It is effective to discuss the content after the use of the media and how they felt. This will help process the emotional and social aspects of the content.

Educational applications and communication tools significantly support cognitive and language development in children with autism, especially in structured activities, but parents should focus on apps that specialize in cognitive and language skills, such as those that include exercises for discerning letters, numbers or pictures. It is recommended that the applications be used in collaboration with therapists or in the context of educational institutions in order to ensure efficiency.

It is also advised to avoid overuse of media so as not to reduce personal interaction, which is also crucial for development. Media with intense visual and sound effects (such as action videos or video games) cause sensory overload and anxiety in some children with autism, suggesting the need for careful media selection. Parents should be careful with the selection of media content that contains fast and aggressive visual or sound elements, as they can cause stress and anxiety. Parents should create calming strategies and engage in activities to help relieve stress after viewing these media, such as deep breathing or sensory activities. Media use should be part of a balanced daily schedule that includes physical activity and social interaction with other children.

## **6. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

To improve the understanding and practices in this area, when it comes to future and advanced research in media and their influence on children with autism, several longitudinal studies or research can be carried out concerning the development and identification of how it works. These surveys or research will monitor children over a longer period to study how the use of different types of media affects their development and functioning. This may include an analysis of social skills, communication abilities, sensory responsiveness, and overall social interactions. An analysis of various digital platforms and applications designed to enhance the specific skills and needs of children with autism is also needed. Research can include an evaluation of how these interventions affect children's autonomy, learning, and social integration. Research is also needed on media regulation and safety by studying how parents regulate media and how they perceive the risks associated with it, such as accessing inappropriate content or the impact of prolonged exposure to screens. The greatest limitations may be in studying individual differences and analyzing how different aspects of autism, such as the level of functioning, sensitivity to sensory stimuli, and communication abilities may affect responsiveness to media and technology use. These aspects are crucial for having an advanced understanding of the impact of the media on children with autism and for developing effective interventions and support for these children and their parents. The development and implementation of research with vulnerable groups requires special responsibility and attention to ethical and legal aspects, to protect the rights and interests of the participants. When conducting research with vulnerable groups such as children or people with autism, researchers have a special responsibility to respect their rights and interests at all stages of the research process. For any research involving vulnerable groups, ethical approval should be obtained from the relevant authorities. The consent of the participants or their legally based representatives is essential. Researchers should make sure that participants or their representatives understand the aims of the research, the procedures, and the opportunities and risks associated with participation. Researchers should try to minimize the invasion of participants' privacy, especially among vulnerable groups where privacy may be particularly important. Consideration should be given to the specific needs and capabilities of participants with autism or other disabilities. This may include using alternative means of communication or adapting data collection methods. Researchers should treat research participants with empathy.



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## ANNEXES

### Examples of logs from parents

Date:

Time:

Media Type:

Emotional state (before/after):

Behavior:

#### Example of log 1:

• Day 1:

- 09:00 - 09:30: Watching an animated movie (emotional state: happy)
- 15:00 - 15:45: Playing a video game (emotional state: excited, irritable)
- 20:00 - 20:30: Using an educational application (emotional state: calm)

• Day 2:

- 10:00 - 10:30: Watching children's programs (emotional state: calm)
- 14:00 - 14:45: Playing a video game (emotional state: frustrated)
- 18:00 - 18:30: Watching a documentary (emotional state: interested)

#### Example of log 2:

• Day 1:

- 08:30 - 09:00: Watching a morning TV program (emotional state: calm)
- 12:00 - 12:45: Playing a video game (emotional state: excited)
- 19:00 - 19:30: Using a mobile application for learning (emotional state: not interested)

• Day 9:

- 09:00 - 09:30: Watching favorite cartoons (emotional state: happy)
- 13:00 - 13:45: Playing an online game (emotional state: nervous)
- 17:00 - 17:30: Watching an educational documentary (emotional state: not interested)

#### Example of log 3:

• Day 16:

- 09:30 - 10:00: Watching educational series (emotional state: interested)
- 13:00 - 13:45: App game - puzzle on a tablet (emotional state: concentrated)
- 17:30 - 18:00: Watching sports activities (emotional state: excited)

• Day 22:

- 11:00 - 11:30: Playing educational games on the computer (emotional state: happy)
- 15:30 - 16:15: Watching a nature documentary (emotional state: interested)
- 19:00 - 19:30: Playing interactive games (emotional state: upset)

#### Example of log 4:

- Day 11:

- 10:00 - 10:30: Playing a video game (emotional state: frustrated)
- 14:00 - 14:45: Watching animated movies (emotional state: calm)
- 18:30 - 19:00: Using a music app to listen to music (emotional state: relaxed)

- Day 18:

- 09:30 - 10:00: Watching educational videos online (emotional state: not interested)
- 13:30 - 14:15: Playing a strategy game on the computer (emotional state: unfocused)
- 16:30 - 17:00: Watching sports lectures (emotional state: excited)

# ABOUT THE AUTHOR



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Marija Davchevska is a Special Educator and Mentor Teacher who has participated in over sixty seminars, congresses, symposiums, and conferences both domestically and internationally in the fields of special education, inclusive education, and supporting schools in creating inclusive learning environments. She is the author of more than 30 papers published in national and international journals on special and inclusive education.

Marija has extensive experience in implementing development projects in the areas of inclusion, social inclusion, and anti-discrimination, as well as organizing and conducting workshops, training sessions, and events for teaching, professional, and support staff, students, and specialized services in primary and secondary schools on topics related to inclusion and societal participation. She has also worked closely with representatives of the civil sector.

In 2022, she was awarded the “9th November” recognition by the city of Veles for her exceptional dedication and contributions to advancing educational practices for students with disabilities.



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