

CHILDHOOD IN THE DIGITAL MEDIA AGE: PARENTAL OBSERVATIONS, PERCEPTIONS, AND MEDIATION APPROACHES FOR CHILDREN AGED 5-8

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ABSTRACT

This qualitative study aims to explore in depth parents' observations, perceptions, and mediation strategies regarding the digital media usage of children aged 5-8. In the context of the digital age, where technology is increasingly integrated into the daily lives of young children, concerns have grown regarding its potential impact on attention, memory, and social development. Adopting a phenomenological design, semi-structured interviews were conducted with 24 parents selected through maximum variation sampling. Data were analyzed using Braun and Clarke's thematic analysis framework. Seven main themes were identified: (1) screen time habits, (2) content and device use, (3) gaming and addiction tendencies, (4) cognitive effects, (5) social withdrawal, (6) parental attitudes, and (7) general attitudes. Parents reported that children often exceed the recommended screen time and show a strong preference for entertainment content. In addition, issues such as excessive gaming, attention deficits, weak verbal memory, reduced social interaction, and increased introversion were commonly noted. Parents implemented active mediation strategies, including time limitation and content filtering. This study provides valuable insights into the multidimensional effects of digital media on child development in the digital age. The original findings from the Turkish context offer meaningful contributions to the literature and can inform future policy development and targeted intervention strategies.

Keywords: Digital media, Early childhood, Parental observations, Cognitive development, Social interaction.

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INTRODUCTION

In recent years, the increasing prevalence of digital media tools in the daily lives of pre-school and early school-age children has triggered important developmental concerns (Gottschalk, 2019). The 5-8 age range, considered critical for development, is a period when attention, memory, executive functions, and social-emotional skills rapidly evolve (Diamond, 2013). The frequency, type, and context of digital media exposure during this period can have both positive and negative effects on children's cognitive and social development (Lillard *et al.*, 2015a; Nathanson & Aladé, 2021).

Studies indicate that intense digital media exposure at an early age may weaken attention span, verbal memory, and executive functioning (Christakis *et al.*, 2018; Gosling & Mason, 2015). Furthermore, excessive audiovisual content can suppress verbal processing skills and hinder children's face-to-face communication, empathy, and social interaction abilities (Turkle, 2015; Xu & Qiao, 2025). For instance, an experimental study conducted by UCLA found that children who abstained from screens for just 5 days showed a significant improvement in recognizing facial expressions (Uhls *et al.*, 2014).

Conversely, digital media is also reported to have educational potential, and when guided by appropriate content, may enhance attention and visual memory (Radesky *et al.*, 2015; Hirsh-Pasek *et al.*, 2015). However, the effectiveness of this potential depends largely on the level of parental guidance and mediation strategies (Nikken & Jansz, 2014). Some studies have shown that both active and restrictive parental mediation strategies are effective in shaping children's media habits (Dulkadir Yaman *et al.*, 2023).

In the Turkish context, the most existing research has employed quantitative methods, and there is a notable lack of qualitative studies examining parental perspectives on how digital media affects child development. Yet, parents' everyday observations offer a rich contextual understanding of children's cognitive and emotional responses to digital content (Bostancı & Çakır, 2022).

Accordingly, this research aims to address the qualitative gap in the field by deeply examining parents' observations, perceptions, and intervention strategies regarding children's digital media use between the ages of 5 and 8 years. Findings related to screen time, content types, gaming addiction tendencies, cognitive effects, social withdrawal, and parental attitudes are expected to shed light on key dynamics affecting child development and contribute to both academic literature and practical intervention approaches.

Research aim

This study aims to explore in depth the observations, perceptions, and intervention strategies of parents regarding digital media use among children aged 5-8. It focuses on the effects of variables such as screen time, content preferences, device types, and parental supervision on children's attention, memory, and social development. The study also analyzes parents' ambivalent attitudes toward digital media, evaluating their awareness of the balance between risks and opportunities.

Significance of the study

The significance of the study stems from the ongoing uncertainty about how children's interactions with digital media influence cognitive and social skills during early developmental stages (Christakis *et al.*, 2018; Dresch-Langley, 2020). Particularly during pre-school and early primary school years, family attitudes toward digital media directly shape children's media habits, thereby influencing developmental outcomes (Bostancı & Çakır, 2022; Nikken & Jansz, 2014). However, qualitative, parent-based research focusing on this age group in Türkiye is limited, with most studies remaining descriptive and quantitative.

This study aims to provide a multi-layered framework that includes not only individual factors but also systemic and social dimensions regarding children's digital media use. The findings can inform early intervention strategies in child development and media literacy, offering evidence-based recommendations for educational policy and digital parenting practices. In doing so, it both fills a gap in the literature

and contributes to efforts to prevent potential developmental risks associated with early digital media exposure.

METHODS

In this study, a qualitative research method phenomenological design was employed to explore in depth the perceptions, attitudes, and experiences of parents regarding digital media use. Phenomenology is an approach that seeks to understand how individuals make sense of a specific phenomenon based on their lived experiences (Creswell, 2013). Accordingly, the study aimed to develop themes grounded in the subjective experiences of parents and to provide a comprehensive explanation of the phenomenon of digital media use.

Research design

This study adopted a phenomenological design, one of the qualitative research approaches. Phenomenological design focuses on examining individuals' lived experiences, interpretations, and subjective meanings associated with a specific phenomenon (Creswell, 2013; Yıldırım & Şimşek, 2021). The research aimed to understand parents' perceptions, attitudes, and experiences concerning digital media use, and to uncover common themes based on their narratives.

Study group

The study group consisted of 24 parents selected through purposeful maximum variation sampling. This sampling method aims to include participants with diverse sociodemographic backgrounds to reveal various perspectives on the phenomenon (Patton, 2014). All participating parents had children aged 5–8 who actively used digital media tools. The sample reflected a diversity of educational backgrounds, income levels, and occupational groups, which contributed to the comprehensiveness and representativeness of the findings (Merriam & Tisdell, 2016). This is presented in Table 1.

Data collection tool

Data were collected through a semi-structured interview form developed by the researcher. The form included questions regarding children's digital media usage duration, preferred content types, parental mediation strategies, and the perceived effects of digital media use on attention, memory, and social skills. The interviews were conducted face-to-face, recorded with audio devices, and supported with written notes when necessary.

Data analysis

The data were analyzed using Braun & Clarke's (2006) six-phase thematic analysis process:

1. Familiarization with the data,
2. Generating initial codes,
3. Searching for themes,
4. Reviewing themes,
5. Defining and naming themes,
6. Producing the report.

Manual coding was used due to the intensity and richness of the data. Codes, sub-themes, and themes were systematically developed by the researcher. When necessary, inter-coder reliability was ensured through collaboration with a second researcher.

Validity and reliability

Various strategies were employed to enhance the internal validity of the qualitative data. Expert opinions were sought during the development of the semi-structured interview form, and revisions were made based on content validity evaluations. Pilot interviews were conducted with two participants to assess the clarity and functionality of the questions.

To ensure reliability, inter-coder consistency was prioritized during data analysis. Inter-coder agreement was calculated using the formula suggested by Miles and Huberman (1994) ($\text{Reliability} = \frac{\text{Agreement}}{[\text{Agreement} + \text{Disagreement}]}$), resulting in a coefficient of 0.89. A coefficient above 0.80 is considered to indicate high reliability.

Direct quotations from participants were included under each theme, supporting consistency with the data and enhancing objectivity in interpretation. This practice, as emphasized by Miles & Huberman (1994), plays a significant role in strengthening the reliability of qualitative research.

In addition, member checking was applied to improve the accuracy of findings. Themes and sub-themes were shared with selected participants, and their feedback was used to reinforce the reliability of the findings. These comprehensive strategies ensured the scientific rigor and integrity of the study.

FINDINGS

In this study, parents' views on the digital media use of pre-school children were examined through qualitative data, and the data obtained were analyzed using the thematic analysis method. Based on participant statements, seven main themes and two sub-themes under each theme were identified. The themes encompass children's screen time habits, content, and device preferences, tendencies toward game addiction, cognitive effects, levels of social interaction, parental intervention strategies, and general attitudes. The findings reveal that digital media use affects multiple dimensions of child development and that parents experience complex challenges in managing this process. Sample participant statements related to the themes are detailed below.

Theme 1: Screen time habits

Most participants indicated that their children spend long hours in front of screens. The first sub-theme, "More than 3 h/day," suggests that children are highly exposed to digital content, with usage often intensifying during evening hours. The second sub-theme, "Limited on weekdays, free on weekends," shows that while parents try to regulate screen time, the increase on weekends creates a sense of "reward" for the child. Jess Haines *et al.* found that using screens as rewards led to an average 20-min increase in children's weekend screen time, which reinforced the screen's appeal (Haines & Tang, 2019). The screen time compensation model proposed by Tang *et al.* (2018) supports this, showing a link between weekday restrictions and increased weekend use. The American Academy of Pediatrics recommends that daily screen time for preschoolers should not exceed 1–2 h and emphasizes the importance of quality content and parental involvement (Council on Communications and Media, 2016; AAP, 2020).

Theme 2: Content and device use

Tablets stand out as the most frequently used device during the preschool period. The first sub-theme, tablet use, indicates frequent use due to the portability and easy access of mobile screens. The second sub-theme, preference for educational content, reveals that despite parents' positive direction, children tend to prefer entertainment content. Studies have shown that educational content contributes to cognitive development. For instance, a study in China found that pre-school children using educational apps showed a significant increase in attention span (Lozano-Blasco *et al.*, 2020). Furthermore, tablet content can positively impact attention and learning processes, supporting language-focused activities and enabling babies to interact based on their interests (Hirsh-Pasek *et al.*, 2015; Radesky *et al.*, 2015; Uhls *et al.*, 2017). However, the effectiveness of this content depends critically on time regulation and content guidance.

Theme 3: Gaming and addiction tendencies

Most participants expressed concern about their children's excessive inclination toward digital games and the development of addictive behaviors when time limits are not enforced. The sub-theme "Daily desire to play games" indicates that digital games have become part of children's daily routines, and that they become restless when not allowed to play. The sub-theme "Addiction concern" reveals high levels of anxiety among parents, especially regarding their inability to control game time. These findings reinforce the presence of early-age screen addiction risk. In particular, the study by Hadders-Algra (2020) highlights the addiction risks in the relationship between media

Themes	Sub-themes	Participant statements
Theme 1. Screen time habits	Exceeding time limits Weekday restrictions, weekend freedom	"My child spends more than 3 hours in front of a screen during the day." (P1) "We limit screen time on weekdays, but we allow it on weekends." (P3) "Screen time doubles on weekends." (P4)
Theme 2. Content and device preferences	Tablet use Preference for educational content	"The tablet is the device he uses the most; he usually watches cartoons." (P5) "We installed educational apps, but he mostly prefers entertainment content." (P8)
Theme 3. Gaming and addiction tendencies	Desire to play every day Addiction concerns	"He becomes restless when he doesn't play games." (P9) "Some days he doesn't want to stop playing, which is challenging for us." (P11) "If we didn't set limits, he would play for hours." (P12)
Theme 4. Cognitive effects	Attention problems Memory-related observations	"I feel like his attention span shortens as screen time increases." (P13) "He used to be able to focus for longer before." (P15) "He remembers visual content better but forgets verbal information." (P7) "He learns visually very quickly but also forgets quickly." (P14)
Theme 5. Social withdrawal	Distancing from peers Introversion and preference for solitary play	"He doesn't want to play with his friends; he prefers the screen." (P6) "He no longer wants to play outside with his friends." (P18) "He used to want to go to the park, now he chooses to stay home and play games." (P8) "He has become more introverted and doesn't communicate like he used to." (P19)
Theme 6. Parental attitudes	Setting time limits Educational content guidance and filtering	"We set a maximum of one hour of screen time per day." (P1) "We set time limits and remain consistent in applying them." (P21) "We only allow educational content." (P4) "We don't permit screen use except for educational purposes." (P22)
Theme 7. General attitudes	Balancing opportunities and risks Concerns about screen addiction	"With proper guidance, it can be beneficial, but one needs to be cautious." (P3) "There are both opportunities and risks; we think balance is key." (P12) "I worry that it might lead to screen addiction." (P6) "Digital media may cause a decline in attention and social skills." (P18)

Table 1: Participant characteristics

Participant	Gender	Education level	Income (category)	Number of children
1	Female	Bachelor's degree	2 - Up to twice the minimum wage	1
2	Male	High school	1 - Up to one minimum wage	2
3	Female	Master's degree	3 - Up to 3 times the minimum wage	1
4	Female	University degree	2 - Up to twice the minimum wage	2
5	Male	Primary school	1 - Up to one minimum wage	3
6	Female	Middle school	1 - Up to one minimum wage	1
7	Female	High school	2 - Up to twice the minimum wage	2
8	Male	University degree	2 - Up to twice the minimum wage	1
9	Female	Master's degree	4 - Four times the minimum wage or more	2
10	Female	High school	1 - Up to one minimum wage	2
11	Male	University degree	2 - Up to twice the minimum wage	1
12	Female	Bachelor's degree	3 - Up to 3 times the minimum wage	3
13	Male	Middle school	1 - Up to one minimum wage	2
14	Female	High school	2 - Up to twice the minimum wage	1
15	Male	Bachelor's degree	4 - Four times the minimum wage or more	2
16	Female	Primary school	1 - Up to one minimum wage	3
17	Female	University degree	2 - Up to twice the minimum wage	1
18	Male	High school	2 - Up to twice the minimum wage	2
19	Female	Master's degree	4 - Four times the minimum wage or more	1
20	Male	University degree	3 - Up to 3 times the minimum wage	2
21	Female	Middle school	1 - Up to one minimum wage	3
22	Female	Bachelor's degree	2 - Up to twice the minimum wage	2
23	Female	High school	2 - Up to twice the minimum wage	1
24	Female	High school	2 - Up to twice the minimum wage	2

and early childhood development. In addition, the Mayo Clinic Health System emphasizes that games stimulate the brain's reward system, triggering dopamine release and reinforcing uncontrolled gaming behavior (Mayo Clinic Health System, 2022). Moreover, studies indicate that excessive video game use leads to a *deregulation* of the dopamine system in children, which is associated with biochemical changes similar to those observed in Internet and gaming addiction (Dresp-Langley, 2020). These findings align with research showing that digital games stimulate the dopamine system and trigger addictive behaviors.

Theme 4: Cognitive effects

As frequently stated by parents, screen time has noticeable negative effects on children's attention and memory development. The sub-theme "Attention problems" demonstrates that fast-paced, visually and audibly

stimulating digital content can lead to attention deficits in children. The sub-theme "Memory-related observations" shows that while visual memory appears to improve according to parental observations, there is a decline in verbal memory skills. These findings parallel the study by Gosling & Mason (2015), which indicates that digital media use decreases verbal processing skills. The researchers emphasize that Internet-based content transforms individuals' attention and cognitive processes, weakening verbal processing and deep thinking skills due to the fast consumption of online content.

As supporting literature, a study by Mesman *et al.* (2022) with children noted that rapid media switching reduced cognitive control functions, and although visual attention skills improved, verbal memory declined. In addition, research by Lillard *et al.* (2015b) found that heavy media

consumption in children reduced verbal processing speed and word generation performance.

Theme 5: Social withdrawal

The negative impact of digital media use on social interactions is particularly evident among preschool-aged children. The sub-theme "*Distancing from peers*" refers to the decline in time spent playing with peers and reduced interest in social environments. The sub-theme "*Introversiön and preference for solitary play*" indicates that children prefer spending time alone and that their empathic and social skills have declined. This supports Sherry Turkle's (2015) findings that digital technology reduces empathic interactions in the modern era.

Recent studies reinforce this theme. For example, a meta-analysis found that extended digital screen exposure among preschool children was associated with social withdrawal, anxiety, and depressive symptoms (Gou & Perceval, 2022). Furthermore, children who frequently use screens alone during their free time showed a significant decline in social participation and face-to-face empathic interactions (Xu & Qiao, 2025). Experimental studies also support that technology use can lead to reduced empathy; for instance, a UCLA study observed significant improvement in children's ability to read facial expressions after they stopped using screens (Uhls *et al.*, 2014).

Theme 6: Parental attitudes

Parents implement strategies such as time limits and content filtering to balance their children's digital media use. The sub-theme "*Setting time limits*" reflects parents' efforts to control screen time using timers or specific restrictions, while the sub-theme "*Guiding toward educational content and filtering*" shows a tendency among families to prioritize positive and educational content for their children. These regulatory attitudes align directly with the "active mediation" approach in the parental media mediation model developed by Nikken & Jansz (2014). Nikken and Jansz argue that, in the digital age, it is important for parents to enhance children's media literacy both through discussion of content (active mediation) and by setting boundaries (restrictive mediation).

These approaches are not only theoretical but be effective in empirical studies. For example, a large-scale study conducted in Germany found that both active and restrictive mediation strategies significantly reduced problematic media use in preschool children (Dulkadir Yaman *et al.*, 2023). In addition, Turkish literature reviews have reported that restrictive strategies are particularly effective in reducing screen time, while active strategies help children critically evaluate media content by improving media literacy (Fam *et al.*, 2023).

Theme 7: General attitude

Families perceive digital media use as both an opportunity and a risk, and this dual perspective creates uncertainty in decision-making regarding screen use. The sub-theme "*Balancing opportunities and risks*" shows that while screens can contribute to educational and cognitive development, they also pose potential harm to social and emotional development. This dilemma parallels the ambivalence observed in Sherry Turkle's (2024) ethnographic study, which showed that Indian parents oscillate between positive and negative views about their children's digital media use (Attavar & Rani, 2025).

The sub-theme "*Concerns about screen addiction*" reveals that parents have strong concerns about this topic. Participants expressed worry that, if screen time gets out of control, it could lead to signs of addiction and disruptions in routines. This finding aligns with the views of Strasburger *et al.* (2010), who emphasize that digital media tools can have both positive and negative effects and influence child development. Moreover, a major systematic review found that symptoms of screen addiction are strongly associated with anxiety and conduct problems in children (Twenge & Campbell, 2018).

The thematic analysis findings show that the effects of digital media use on child development are multidimensional and strongly

interconnected. First, increased screen time (Theme 1) negatively affects children's attention and memory skills (Theme 4), thus directly influencing cognitive development. Similarly, excessive screen time increases gaming addiction tendencies (Theme 3), which in turn causes children to withdraw from their social environments (Theme 5).

Content type and device preferences (Theme 2) also emerge as important factors; particularly fast-paced, entertainment-focused content is closely linked to issues such as attention deficits and social withdrawal. In this context, the quality of media content plays a critical role not only in cognitive but also in social development.

Throughout all these processes, parental intervention strategies (Theme 6) play a decisive role. Parental attitudes such as setting time limits, guiding content choices, and active mediation directly influence the direction of screen time and content impacts. Therefore, parental intervention emerges as a key moderating factor in the effects of digital media use on children.

Finally, families' general attitudes (Theme 7) present the overarching framework that shapes their perceptions, approaches, and interventions regarding digital media. Families view digital media both as a developmental opportunity and a risk area; this dual perspective leads to ambivalence. Thus, to ensure that children's engagement with digital media is structured in a healthy manner, it is critical for parents to develop informed, consistent strategies tailored to the child's developmental level.

DISCUSSION AND CONCLUSION

The findings of this study provide significant insights into parental perspectives on digital media use among preschool-aged children. The results reveal that there are multidimensional relationships between screen time, content preferences, cognitive effects, and parental strategies. The frequently cited impacts of increased screen time on children's attention, memory, and social skills in the literature (Lillard *et al.*, 2015a; Gosling & Mason, 2015) are also supported by participant observations in this study. In this respect, the research contributes to filling a gap in the literature by explaining the cognitive and social effects of digital media interaction in early childhood development within a local context and opens a discussion on how cultural differences shape this relationship.

Another key finding of the study is parents' ambivalent attitudes toward digital media. Families perceive digital media as both a developmental opportunity and a potential risk, and this duality complicates the process of determining appropriate strategies. This result aligns with the ambivalent approach observed among Indian parents by Attavar & Rani (2025). Furthermore, the study's findings on parental intervention strategies provide up-to-date and high-quality data on how active and restrictive mediation models are implemented in local contexts (Nikken & Jansz, 2014; Dulkadir Yaman *et al.*, 2023).

By holistically presenting parental experiences regarding the digital media use of preschool children, this study offers a qualitative contribution to a field that is largely dominated by quantitative research. The findings on parents' perceptions, attitudes, and strategies generate practical implications that may serve as guidance for policymakers and early childhood education professionals.

In conclusion, this research examined parental views on preschool children's digital media use through thematic analysis and revealed the relationships between screen time, content type, device usage, cognitive and social effects, and parental strategies in a comprehensive manner. The findings show that digital media use affects multiple developmental domains such as attention, memory, social interaction, and play habits. These effects vary depending on parental attitudes and intervention strategies.

The study's results provide valuable insights for the development of educational policies regarding digital media use, the preparation of parental awareness programs, and the structuring of media literacy

initiatives in early childhood education. In particular, the need for parents to develop conscious and balanced strategies in light of their ambivalent attitudes lays a foundation for further research and practice. Understanding this complex relationship between digital media and child development will only be possible through parents' consistent and informed guidance.

RECOMMENDATIONS

Media literacy training programs should be provided for parents. Given the multifaceted effects of digital media use on child development, it is crucial to raise awareness among families. Guidance initiatives for parents should be increased, especially concerning screen time, content selection, and addiction risks. As Nikken & Jansz (2014) suggest, equipping parents with active mediation skills can help children build healthier relationships with digital media.

Modules on digital media use should be integrated into early childhood education programs. Considering children's early exposure to digital media, curricula should incorporate media literacy and digital balance education. This would support children's cognitive and social development and help them gain early awareness of healthy media use.

Digital content developers must adhere to developmental appropriateness criteria. While educational content can have positive effects on child development, such content must be designed to match the child's age and developmental level. As Radesky *et al.* (2015) indicate, interactive and pedagogically grounded content should be prioritized over fast-paced and visually overstimulating applications.

Psychosocial support should be offered to families. The findings indicate that some parents experience anxiety related to issues such as screen addiction, attention deficits, and social withdrawal. Therefore, counseling and psychoeducational services should be provided to families, and behavioral boundaries regarding media use should be consistently structured within the home environment.

Digital inequality and access issues should be investigated. Access to digital content, capacity for supervision, and awareness levels vary across families. More research is needed to examine how social and economic factors affect digital media use, and policymakers should develop inclusive strategies that consider these differences.

Future studies should employ longitudinal approaches. This study provides a cross-sectional view based on qualitative data. However, to reveal the long-term effects of digital media use, longitudinal research is necessary. This would allow for the evaluation of relationships between screen time and attention, memory, social skills, and addiction over time.

Comparative studies in different cultural contexts should be conducted. Parental attitudes toward digital media may vary by cultural context. Therefore, comparative qualitative studies conducted in different countries or social groups would contribute to the literature by identifying both risks and best practices.

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