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The Impact of Screen Time on Children's Independence in Daycare Contexts: A Qualitative Study

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ABSTRACT

Background: The increasing presence of digital technology in young children's daily lives has raised international concerns regarding its influence on developmental outcomes, particularly children's independence. While excessive screen time is often associated with reduced autonomy, limited qualitative research has explored how children's independence is shaped across different contexts, especially the interaction between daycare environments and home screen time practices in early childhood education. Purpose: This study aims to explore the impact of screen time on children's independence in daycare settings and to understand how independence developed in daycare is maintained within the home environment. Methods: The study adopted a qualitative descriptive approach. Data were collected through semi-structured interviews with two children enrolled in a daycare center and two parents. The daycare context was selected as the primary educational setting, while parents provided perspectives on home practices. The interview data were analyzed using thematic analysis to identify recurring patterns and shared meanings related to independence and screen time. Findings: The findings indicate that daycare plays a significant role in fostering children's independence through structured routines, consistent expectations, and opportunities for autonomous engagement. Screen time at home was reported to be controlled and non-addictive, with parents actively mediating digital device use. Such regulation allowed children's independent behaviors developed in daycare to be sustained at home. Consistency between daycare practices and home routines emerged as a key factor in maintaining children's independence across contexts. Conclusion: The study concludes that children's independence is influenced more by environmental structure and adult mediation than by screen time exposure alone. These findings contribute to early childhood education by highlighting the importance of daycare–home consistency and providing practical implications for educators and parents in managing screen time to support children's independence.

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1. INTRODUCTION

The rapid advancement of digital technology has significantly transformed children's daily lives, including those in early childhood. Globally, increased access to digital devices has led to growing concerns regarding screen time exposure among young children and its potential impact on developmental outcomes, particularly children's independence. In the context of Early Childhood Education (ECE), independence is considered a crucial developmental milestone, encompassing children's ability to manage self-care, make simple decisions, regulate behavior, and engage autonomously in daily routines [1], [2]. As children increasingly interact with digital media both at home and in educational settings, understanding how screen time intersects with the development of independence has become an important international issue.

Early childhood education environments, such as daycare centers, play a central role in fostering children's independence through structured routines, guided social interactions, and consistent behavioral expectations. Daycare settings often provide children with opportunities to practice autonomy in eating, dressing, problem-solving, and peer interaction under adult supervision. In contrast, the home environment may present different patterns of interaction, particularly regarding the use of digital devices. While excessive screen time has been associated with reduced self-regulation and dependence on external stimulation, several studies suggest that contextual factors—such as parental mediation, usage rules, and daily routines—significantly influence its impact on children's development [3], [4]. Therefore, children's independence cannot be understood solely by measuring screen time duration, but must be examined within the broader ecological contexts in which children live and learn.

Qualitative research is particularly well suited to exploring these complex and context-dependent phenomena in early childhood education. By focusing on participants lived experiences and perspectives, qualitative approaches allow researchers to capture how children, parents, and educators interpret and negotiate screen time and independence in everyday practice. Previous international qualitative studies have examined digital play, parental mediation, and early learning environments; however, many have focused on either home or educational settings in isolation [5], [6]. Limited attention has been given to how daycare experiences interact with home practices in shaping children's independence, especially from the perspectives of both children and parents.

Based on this gap, this study seeks to explore the impact of screen time on children's independence within daycare contexts and how this independence is maintained at home. Using a qualitative descriptive approach, the study draws on interviews with children and parents to examine their experiences and perceptions of independence development across settings. The guiding research questions are: (1) How does the daycare environment contribute to the development of children's independence? and (2) How do home screen time practices influence the maintenance of children's independence outside the daycare setting? By addressing these questions, the study aims to contribute to a deeper understanding of the contextual role of daycare in supporting children's independence amid increasing digital exposure.

2. LITERATURE REVIEW

2.1 Early Childhood Education Context

Early Childhood Education (ECE) emphasizes holistic child development, encompassing cognitive, social, emotional, and behavioral domains. One of the core developmental outcomes in early childhood is children's independence, which refers to the ability to perform self-care tasks, regulate behavior, make simple decisions, and engage autonomously in daily activities. Independence is not viewed as an innate trait but as a developmental process shaped through continuous interaction with social and institutional environments [7]. Within ECE settings, children's independence is fostered through structured routines, guided participation, and consistent expectations that encourage autonomy while providing emotional and instructional support.

Daycare centers play a particularly important role in supporting children's independence, as they provide predictable schedules, peer interaction, and opportunities for children to practice responsibility in everyday activities such as tidying up, managing personal belongings, and participating in group tasks. Research in early childhood pedagogy highlights that independence develops most effectively when children are given meaningful opportunities to act autonomously within supportive and responsive environments. The role of educators is therefore not only instructional but also facilitative, guiding children toward self-directed behavior through scaffolding and modeling [3], [8].

In recent years, the integration of digital technology into children's lives has introduced new challenges and considerations for ECE contexts. Screen time has become increasingly prevalent, both in educational settings and at home, raising concerns about its potential impact on children's social behavior, attention, and self-regulation. While digital tools can support learning when used intentionally, excessive or unregulated screen exposure has been associated with reduced opportunities for active play and social interaction—both of which are critical for the development of independence [9], [10]. Consequently, understanding children's independence in contemporary ECE contexts requires attention to how digital media use intersects with educational practices, family routines, and institutional norms.

2.2 Review of International Qualitative Studies

International qualitative research has increasingly explored the relationship between screen time, early childhood development, and educational contexts. Several studies have examined how children experience digital media in their daily lives, emphasizing that the effects of screen time are highly dependent on context, content, and adult mediation rather than duration alone [5], [11], [12]. Qualitative findings suggest that when screen use is structured and guided, children may still engage in independent behaviors; however, unregulated use can limit opportunities for autonomy and self-directed play.

Studies focusing on early childhood education settings highlight that educators often perceive independence as being closely linked to routine-based activities and social learning opportunities rather than digital engagement. Qualitative research conducted in daycare and preschool settings shows that children develop independence through repeated participation in everyday practices, such as following schedules, cooperating with peers, and managing personal tasks. These studies consistently report that independence emerges through interaction and practice, not through passive engagement with digital devices.

Research involving parents has further revealed contrasting practices between home and educational environments. Qualitative interviews with parents indicate varying beliefs about screen time, with some viewing digital devices as educational tools and others expressing concern about dependency and reduced self-initiative. Importantly, several studies note that parental mediation strategies—such as setting time limits, co-viewing, and aligning screen use with daily routines—play a critical role in mitigating potential negative impacts [13]–[15]. Despite these insights, existing qualitative studies often examine either home or educational contexts separately. Limited research has explored how daycare experiences and home screen time practices interact in shaping children's independence, particularly from the combined perspectives of children and parents.

2.3 Conceptual or Theoretical Framework

This study is guided by a sociocultural perspective on child development, which emphasizes that learning and development occur through social interaction and are embedded within cultural and institutional contexts. From this perspective, children's independence is understood as a socially constructed competence that develops through participation in everyday practices with the support of more knowledgeable others, such as educators and parents. Independence is therefore not simply the absence of adult involvement, but the result of gradual scaffolding that enables children to internalize routines, expectations, and self-regulatory behaviors [16], [17][17]. Within this framework, daycare and home are viewed as interconnected developmental contexts that jointly influence children's independence. Daycare environments provide structured opportunities for autonomy through consistent routines and peer interaction, while the home environment shapes how independence is reinforced or constrained through parenting practices, including the regulation of screen time. Screen time itself is conceptualized not as inherently detrimental or beneficial, but as a contextual factor whose impact depends on how it is integrated into children's daily lives and mediated by adults [18], [19].

By applying this sociocultural lens, the study seeks to understand how children's independence is negotiated across settings and how consistency between daycare practices and home screen time management supports the maintenance of independent behavior. This framework informs the research questions, data collection, and thematic analysis by focusing on participants' experiences, meanings, and interactions within their specific educational and familial contexts.

3. METHODOLOGY

3.1 Research Design

This study employed a qualitative descriptive research design to explore the impact of screen time on children's independence within daycare contexts. A qualitative approach was considered appropriate because the research aimed to understand participants' experiences, perceptions, and meanings rather than to measure variables or test hypotheses. Qualitative descriptive design allows for a comprehensive and straightforward portrayal of phenomena as experienced by participants, making it suitable for research in early childhood education settings where contextual understanding is essential. The design enabled the researcher to capture how children's independence is developed in daycare environments and how it is maintained at home in relation to screen time practices.

3.2 Participants and Research Context

The study was conducted in a daycare setting that provides early childhood care and education for young children. Participants consisted of four individuals: two children enrolled in the daycare and two parents of the participating children. A purposive sampling strategy was used to select participants who were considered relevant to the research focus, particularly those who could provide firsthand experiences related to children's independence and screen time practices. The daycare context was chosen because it represents a structured educational environment where children regularly engage in routines and activities designed to promote independence. Parents were included to provide insights into home practices and screen time regulation outside the daycare setting.

3.3 Data Collection Methods

Data were collected through semi-structured interviews, which allowed flexibility while ensuring that key topics related to children's independence and screen time were consistently addressed. Separate interview guides were used for children and parents, with questions adapted to be age-appropriate and ethically sensitive. Interviews with parents focused on their perceptions of their children's independence, screen time habits at home, and the influence of daycare experiences. Interviews with children explored their daily activities, routines, and experiences both in daycare and at home. All interviews were conducted in a supportive and comfortable environment and were audio-recorded with participants' consent to ensure accuracy of data.

3.4 Data Analysis Techniques

The collected data were analyzed using thematic analysis. The analysis process involved several stages: data familiarization through repeated reading of interview transcripts, initial coding to identify meaningful units of information, categorization of codes into broader patterns, and the development of themes that represented key findings of the study. Themes were generated inductively from the data to ensure that the findings were grounded in participants' experiences. To enhance the credibility

of the analysis, data from children and parents were compared to identify converging perspectives and ensure consistency across sources.

3.5 Ethical Considerations

Ethical principles were carefully observed throughout the research process. Informed consent was obtained from all participating parents prior to data collection, and assent was sought from child participants in an age-appropriate manner. Participants were informed of the voluntary nature of the study and their right to withdraw at any time without consequences. Confidentiality and anonymity were ensured by using pseudonyms and removing identifying information from transcripts and reports. All data were securely stored and used solely for research purposes. These ethical measures were implemented to protect participants' rights and well-being, particularly given the involvement of young children.

4. FINDINGS

The findings are presented thematically to reflect patterns that emerged from the qualitative analysis of interviews with children and parents. Three main themes were identified: (1) daycare as a primary environment for developing independence, (2) controlled screen time practices at home, and (3) consistency between daycare and home in maintaining children's independence.

4.1 Daycare as a Primary Environment for Developing Independence

Participants consistently described the daycare environment as a key setting in which children developed independent behaviors. Parents reported that structured routines and daily expectations in daycare encouraged children to perform tasks independently, such as eating, tidying up toys, and managing personal belongings. These routines provided children with repeated opportunities to practice autonomy within a supportive environment.

One parent explained that the daycare setting played a significant role in shaping their child's independence:

"At daycare, my child is used to doing things by themselves, like eating and cleaning up. They are trained to be independent there." (Parent 1)

Children also expressed familiarity with independent routines in daycare, indicating that such behaviors had become part of their daily habits. A child participant mentioned:

"At daycare, I can do many things by myself." (Child 1)

These findings suggest that daycare functions as a structured space where independence is actively cultivated through routine-based practices and consistent guidance from caregivers.

4.2 Controlled Screen Time Practices at Home

Another prominent theme concerned screen time practices in the home environment. Parents emphasized that screen use at home was regulated and not excessive. Rather than allowing unrestricted access to digital devices, parents described implementing clear rules regarding duration and timing of screen use. As a result, screen time was not perceived as interfering with children's independent behaviors.

One parent stated:

"At home, screen time is limited. My child is not addicted to gadgets, so they still do things on their own." (Parent 2)

Children's responses supported this perspective, as they did not describe screen use as their primary daily activity at home. Instead, they referred to playing, helping parents, or continuing routines similar to those practiced in daycare. This indicates that controlled screen time did not diminish children's independence but instead coexisted with autonomous behaviors.

4.3 Consistency Between Daycare and Home Practices

The third theme highlighted the importance of consistency between daycare and home environments in maintaining children's independence. Parents acknowledged that values and routines learned in daycare were reinforced at home, allowing children to sustain independent behaviors across contexts. This alignment appeared to support the continuity of children's autonomy rather than creating conflicting expectations.

One parent explained:

"What my child learns at daycare continues at home. We try to keep the same habits so they stay independent." (Parent 1)

Children similarly demonstrated awareness of consistent expectations in both settings, suggesting that independence was not limited to one environment. This theme underscores the role of collaboration between daycare and families in supporting children's independence amid increasing exposure to digital media.

5. DISCUSSION

This study aimed to explore the impact of screen time on children's independence within daycare contexts and how independence is maintained at home. The findings indicate that daycare plays a central role in fostering children's independence through structured routines and consistent expectations. These results align with sociocultural perspectives on early childhood development,

which emphasize that independence emerges through guided participation and repeated engagement in meaningful social practices [3], [4], [13], [20].

The prominence of daycare as a space for developing independence supports previous qualitative studies that highlight the importance of routine-based activities and peer interaction in early childhood settings. Rather than being shaped by digital exposure, children's independence in this study was primarily influenced by daily practices that encouraged autonomy, such as self-care tasks and responsibility for personal belongings. This suggests that structured educational environments can serve as protective contexts that promote independence even in an era of widespread digital technology.

Contrary to concerns that screen time inevitably undermines children's autonomy, the findings show that controlled screen time at home did not negatively affect children's independence. Parents' active mediation strategies, including setting limits and aligning screen use with daily routines, appeared to prevent excessive dependency on digital devices. This finding extends existing research by demonstrating that the impact of screen time is highly contextual and mediated by adult practices rather than determined solely by exposure duration [12], [15], [18], [21].

The consistency between daycare and home practices emerged as a crucial factor in maintaining children's independence across settings. When values and routines related to independence were reinforced both in daycare and at home, children were more likely to sustain autonomous behaviors. This finding highlights the importance of collaboration between early childhood education institutions and families in supporting children's development. It also suggests that alignment between educational and familial practices can mitigate potential tensions between digital media use and developmental goals [7], [13], [22].

Overall, the study contributes to the growing body of qualitative research on early childhood education by emphasizing the contextual nature of children's independence in relation to screen time. The findings suggest that daycare environments, combined with mindful parental mediation at home, can support children's independence despite increasing digital exposure. These insights have practical implications for educators and parents, underscoring the need for consistent routines, clear expectations, and collaborative approaches to managing screen time in early childhood.

6. CONCLUSION

This study examined the impact of screen time on children's independence within daycare contexts and explored how independence developed in daycare is maintained at home. The findings demonstrate that daycare environments play a central role in fostering children's independence through structured routines, social interaction, and consistent expectations. Children's ability to act independently was primarily shaped by daily practices and guided participation rather than by their exposure to digital devices [16], [21], [23].

Importantly, the study found that screen time at home did not negatively affect children's independence when its use was controlled and mediated by parents. Clear rules, limited duration, and alignment with daily routines allowed children to maintain independent behaviors outside the daycare setting. Consistency between daycare and home practices further strengthened the sustainability of children's independence across contexts. These findings underscore the importance of collaboration between early childhood education institutions and families in supporting children's developmental outcomes amid increasing digital exposure.

The study contributes to early childhood education research by providing qualitative insights into how children's independence is negotiated across daycare and home environments. However, several limitations should be acknowledged. The small number of participants and the focus on a single daycare context limit the generalizability of the findings. Additionally, the study relied on interview data, which reflect participants' perceptions and may not capture all aspects of children's daily behaviors.

Future research is recommended to involve a larger and more diverse sample, include multiple daycare settings, and incorporate observational methods to enrich data triangulation. Further studies may also explore educators' perspectives and examine how different types of digital content influence children's independence. Such research would deepen understanding of the complex relationship between screen time, educational contexts, and early childhood development.

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