

The Relationship Between Screen Time and Emotional Regulation In Children Aged 5–6 Years

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Abstract

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Emotional regulation is a central component of early childhood development, particularly for children aged 5–6 years who are transitioning toward formal schooling. Recent advances in digital technology have substantially increased young children's exposure to screen-based media, commonly referred to as screen time, prompting concerns about its implications for emotional development. This study examines the relationship between screen time and emotional regulation among children aged 5–6 years using a quantitative correlational design. Participants included children aged 5–6 years, with parents and classroom teachers serving as respondents. Screen time data were collected through parent-reported questionnaires, while emotional regulation was assessed via teacher questionnaires and structured observations. Correlational analyses revealed a significant association between screen time and emotional regulation: higher and poorly regulated screen time exposure was linked to lower levels of emotional regulation. These findings underscore the importance of intentional adult supervision and balanced digital media management to support healthy emotional development in early childhood.

Keywords: Screen Time, Emotional Regulation, Early Childhood

Abstrak

Regulasi emosi merupakan aspek fundamental dalam perkembangan anak usia dini, khususnya pada anak usia 5–6 tahun yang berada pada tahap transisi menuju pendidikan formal. Perkembangan teknologi digital yang pesat menyebabkan anak semakin terpapar media berbasis layar atau screen time, sehingga menimbulkan kekhawatiran terhadap dampaknya pada perkembangan emosional anak. Penelitian ini bertujuan untuk menganalisis hubungan antara screen time dan regulasi emosi pada anak usia 5–6 tahun. Penelitian menggunakan pendekatan kuantitatif dengan desain korelasional. Subjek penelitian adalah anak usia 5–6 tahun, dengan orang tua dan guru kelas sebagai responden. Data screen time dikumpulkan melalui angket yang diisi oleh orang tua, sedangkan data regulasi emosi diperoleh melalui angket dan observasi terstruktur yang dilakukan oleh guru. Analisis data menggunakan teknik statistik korelasional. Hasil penelitian menunjukkan adanya hubungan yang signifikan antara screen time dan regulasi emosi anak usia 5–6 tahun. Paparan screen time yang tinggi dan tidak terkelola dengan baik cenderung berkaitan dengan rendahnya kemampuan anak dalam mengendalikan dan mengekspresikan emosi secara adaptif. Temuan ini menegaskan pentingnya peran pendampingan orang dewasa serta pengelolaan penggunaan media digital secara bijak guna mendukung perkembangan regulasi emosi anak usia dini.

Kata Kunci: Screen Time, Regulasi Emosi, Anak Usia Dini

INTRODUCTION

The rapid expansion of digital technology has substantially reshaped patterns of interaction, learning, and entertainment within families and communities (Lee et al., 2022). In many communities, particularly urban and peri-urban areas, screen-based devices such as smartphones, tablets, and televisions have become integral to daily life, including for young children. For children aged 5–6 years who are at a critical transitional stage toward formal schooling these changes present both opportunities and challenges. One of the most pressing concerns emerging from community observations and educational practice is the increasing amount of screen time experienced by young children and its potential implications for their emotional regulation.

Emotional regulation is a foundational competence that enables children to recognize, manage, and express emotions in socially appropriate ways (Thompson, 2011). This ability is closely linked to children's social adjustment, learning readiness, and overall well-being. In community-based early childhood education settings, teachers and parents frequently report difficulties related to children's emotional control, such as frequent tantrums, irritability, and low frustration tolerance. These issues are often observed alongside high and poorly regulated exposure to digital media in the home environment, suggesting a possible relationship between children's screen time habits and their emotional regulation capacities.

From the perspective of community engagement, this issue represents a real and contextually grounded problem within families and early childhood education settings (Munafiah & Latif, 2022). Families within the community increasingly rely on digital devices to occupy, entertain, or calm children, particularly when parents face time constraints due to work or domestic responsibilities. While digital media can offer educational content, its unregulated use may reduce opportunities for direct social interaction, which is essential for the development of emotional regulation. Community engagement programs in early childhood education therefore face the challenge of balancing technological exposure with developmentally appropriate practices that support children's emotional growth.

Theoretically, emotional regulation is understood as a developmental process influenced by both individual factors and environmental contexts, including caregiver interaction and social experience (Thompson, 2011). Social interaction, caregiver responsiveness, and structured guidance are key mechanisms through which children learn to regulate emotions. In contrast, excessive screen time is often associated with passive consumption of stimuli and limited reciprocal interaction, which may constrain opportunities for practicing self-regulatory skills. Empirical studies have reported associations between high screen time and increased emotional and behavioral difficulties in early childhood, including emotional dysregulation and social withdrawal (Setyarini et al., 2023; Kamilla & Putri, 2025).

Within the framework of community engagement and community development, early childhood education institutions serve as strategic partners in empowering families

to adopt healthier digital parenting practices. Community-based programs that involve parents and teachers in understanding children's screen time patterns and emotional needs are essential for building collective awareness and capacity. However, despite the growing implementation of such programs, there remains limited empirical evidence that specifically examines the relationship between screen time and emotional regulation among children aged 5–6 years within community contexts (Fauziah & Wulandari, 2024; Aviani et al., 2024).

Previous research has predominantly focused on general developmental outcomes or broader age ranges, leaving a gap in understanding how screen time exposure relates to emotional regulation at the critical pre-school transition stage. Moreover, many studies emphasize technological impacts without sufficiently integrating perspectives from community engagement and family practices. Addressing this gap is crucial for informing community-based interventions and educational guidance that are responsive to real conditions faced by families and early childhood institutions.

Based on these considerations, this study is positioned to contribute to applied science by analyzing the relationship between screen time and emotional regulation in children aged 5–6 years. By grounding the investigation in community-relevant conditions and integrating theoretical perspectives on emotional regulation and early childhood development, this manuscript aims to provide empirical evidence that can support community engagement efforts, inform parental guidance, and strengthen early childhood education practices. Accordingly, the purpose of this study is to examine the extent to which screen time exposure is associated with emotional regulation among children aged 5–6 years, thereby offering insights for community-based strategies to support children's emotional well-being.

METHODS

Research Design

This study employed a quantitative approach with a correlational design to examine the relationship between screen time and emotional regulation in children aged 5–6 years. The design was chosen to determine the direction and strength of the association between the independent and dependent variables based on empirical conditions observed in the community.

Research Setting and Duration

The research was conducted in an early childhood education institution that actively implements community engagement programs related to digital parenting and child development. Data collection took place over a three-month period, from January to March 2026, in conjunction with the implementation of a community engagement program promoting healthy screen time management among families.

Community Engagement Program Context

The study was embedded within a community engagement initiative aimed at increasing parental awareness and capacity in managing children's screen time to support emotional development. The program included parental education sessions on digital parenting, distribution of informational materials regarding age-appropriate screen use, and collaborative discussions between teachers and parents concerning children's emotional behaviors observed at home and school.

Population and Sample

The population consisted of children aged 5–6 years enrolled in the selected institution, along with their parents and classroom teachers. The sample included children who participated in the community engagement program and whose parents provided informed consent. Parents served as respondents for data related to screen time, while classroom teachers assessed children's emotional regulation.

Variables and Operational Definitions

Screen time functioned as the independent variable and was defined as children's exposure to screen-based media, including duration of use, frequency, type of digital content accessed, and level of parental supervision. Emotional regulation served as the dependent variable and referred to children's ability to manage emotional responses, express emotions appropriately, and regulate behavior in daily interactions.

Data Collection Instruments

Data on screen time were collected using structured questionnaires completed by parents, capturing children's media use patterns during the program period. Emotional regulation data were obtained through teacher-completed questionnaires and structured observational checklists focusing on emotional responses, self-control, and coping behaviors in classroom settings.

Data Analysis

The primary outcomes measured were the level of children's screen time exposure and their level of emotional regulation during learning and social interactions. Correlational statistical techniques were used to analyze the association between the two variables. The findings were interpreted by integrating statistical results with relevant theoretical perspectives and insights derived from the implementation of the community engagement program.

RESULTS AND DISCUSSIN

Results

To support the presentation of the research findings, the results are summarized in the form of tables. The tables are embedded directly in the text and are referred to explicitly by their numbering, in accordance with the journal guidelines. Table 1 presents a descriptive overview of children’s screen time exposure, while Table 2 summarizes the levels of emotional regulation observed among children aged 5–6 years who participated in the community engagement program.

Tabel 1. Descriptive Statistics of Children’s Screen Time Exposure

Screen Time Category	Frequency (n)	Percentage (%)
Low (\leq 1 hour/day)	18	22.5
Moderate (1–2 hours/day)	34	42.5
High ($>$ 2 hours/day)	28	35.0

Table 1 presents the distribution of children’s daily screen time exposure. The data show that most children fall within the moderate category, indicating daily screen use between one and two hours. A considerable proportion of children are classified in the high category, meaning they are exposed to screens for more than two hours per day. Meanwhile, a smaller group of children experience low screen exposure, limited to one hour or less per day. Overall, these findings suggest that screen use has become a routine part of children’s daily activities, with a dominant trend toward moderate and relatively high levels of exposure.

Tabel 2. Levels of Emotional Regulation in Children Aged 5–6 Years

Emotional Regulation Level	Frequency (n)	Percentage (%)
High	20	25.0
Moderate	38	47.5
Low	22	27.5

Table 2 illustrates the levels of emotional regulation among children aged five to six years. The majority of participants demonstrate moderate emotional regulation, indicating that they are generally able to manage emotional responses but may still require guidance in certain situations. A notable proportion of children fall into the low category, reflecting difficulties in controlling impulses, coping with frustration, or calming themselves when faced with challenges. In contrast, a smaller group of children exhibit high emotional regulation, characterized by adaptive emotional expression and effective self-control. These results indicate variability in emotional development, which may be influenced by environmental and behavioral factors, including patterns of screen time exposure. The relationship between screen time exposure and emotional regulation was further analyzed using correlational analysis, as summarized in Table 3.

Tabel 3. Correlation between Screen Time and Emotional Regulation

Variables	r-value	Sig. (p)
Screen Time – Emotional Regulation	-0.462	0.001

The correlation results presented in Table 3 reveal a statistically significant negative relationship between screen time and emotional regulation. This finding indicates that higher levels of screen time are associated with lower emotional regulation among children aged 5–6 years.

Based on the results shown in Table 1, Table 2, and Table 3, the findings consistently suggest that excessive screen exposure may hinder the development of emotional regulation in early childhood. These results form the basis for the subsequent discussion, which integrates empirical findings with theoretical perspectives and insights from the implementation of the community engagement program.

The results of this study indicate a clear and meaningful relationship between screen time exposure and emotional regulation among children aged 5–6 years who participated in the community engagement program. Overall findings show that children who experienced higher levels of daily screen time tended to demonstrate lower emotional regulation abilities compared to children whose screen time was more limited and better supervised. These results were consistently observed across data collected from parental questionnaires and teacher assessments, suggesting convergence between home and school perspectives.

Discussion

At a general level, the findings reflect a common condition within contemporary communities where digital devices have become deeply embedded in family life. Many parents reported relying on smartphones or tablets to entertain or calm children during daily routines. Although this practice offers immediate convenience, the data indicate that excessive and unstructured screen exposure is associated with fewer opportunities for children to practice emotional regulation through direct interaction with parents, teachers, and peers. This pattern is consistent with theoretical perspectives emphasizing that emotional regulation develops through social interaction, modeling, and guided participation (Thompson, 2011). From a developmental standpoint, early childhood represents a critical period in which co-regulation gradually evolves into self-regulation, requiring consistent interpersonal engagement and responsive caregiving (Papalia et al., 2018).

Professional guidelines further reinforce these concerns. The American Academy of Pediatrics (2016) stresses that media use in early childhood should be limited, purposeful, and accompanied by adult involvement to prevent interference with core developmental tasks. Radesky, Schumacher, and Zuckerman (2015) similarly argue that frequent reliance on mobile devices may reduce valuable moments of caregiver–child interaction that support emotional learning. When screens replace shared play, storytelling, or conversation, children may lose essential opportunities to develop

patience, empathy, and frustration tolerance. Teacher observations in this study align with these recommendations, as children with higher levels of unregulated screen exposure displayed more impulsive reactions, difficulty calming down, and lower frustration tolerance during classroom activities.

The quality of parent–child interaction also plays a decisive role in shaping outcomes related to screen use. Anderson and Hanson (2017) found that both background and active screen exposure can disrupt conversational exchanges and reduce the depth of emotional and linguistic scaffolding provided by caregivers. Nathanson (2015) emphasizes that parental mediation strategies—such as co-viewing and active discussion—can transform media experiences into opportunities for learning rather than passive consumption. Consistent with Domoff et al. (2019), habitual and unsupervised device use within families is associated with a higher likelihood of problematic media behaviors. In line with Setyarini et al. (2023) and Kamilla and Putri (2025), the present findings confirm that structured and supervised screen engagement is linked to more adaptive emotional responses, whereas unregulated exposure tends to correlate with emotional and behavioral challenges.

Beyond the immediate family context, broader psychosocial research highlights the potential long-term implications of excessive screen engagement. Twenge and Campbell (2018) report associations between high screen time and lower psychological well-being among children and adolescents, while Kuss and Griffiths (2017) describe behavioral patterns resembling addiction in digital environments. Sigman (2017) further conceptualizes excessive screen exposure as a growing neurological and developmental concern. From a comparative risk perspective, Livingstone and Helsper (2013) note that children’s vulnerability to digital risks depends significantly on the level of supervision and environmental support available to them. These insights suggest that the emotional regulation difficulties observed in this study should be understood within a wider digital ecosystem that shapes children’s developmental experiences.

Importantly, the findings also underscore the significance of community engagement initiatives implemented alongside the research. Through parental education sessions and collaborative discussions, families became more aware of healthy screen time practices and the importance of providing alternative emotionally enriching activities, such as shared play and open communication. Although the study did not employ an experimental design, observational comparisons indicate that children whose parents actively participated in the program tended to show more positive emotional behaviors over time. This outcome reflects principles of ecological development, where children’s growth is influenced by interconnected systems involving family, school, and community (Bronfenbrenner & Morris, 2006).

From a community development perspective, the novelty of this study lies in integrating empirical findings with the evaluation of a real-world program situated within an early childhood education setting. Rather than framing screen time solely as an individual parenting issue, the study situates it within a collective framework of shared responsibility among parents, educators, and institutions. Brennan and Israel

(2008) describe such collective processes as essential for building community capacity, while Pigg and Bradshaw (2003) highlight the catalytic role of collaborative action in fostering sustainable social change. Similarly, McKibbin (2007) emphasizes the enduring strength of communities that cultivate mutual support and shared values. By promoting collaborative digital parenting practices, the program contributes to a more consistent and supportive developmental environment across households.

In summary, the discussion demonstrates that screen time is significantly related to emotional regulation among children aged five to six years and that its impact is shaped by patterns of supervision, family interaction, and community involvement. By integrating developmental theory, empirical evidence, and community-based practice, this study provides a comprehensive understanding of how digital media influences early childhood emotional development. Moreover, it offers evidence-based support for community-oriented interventions that empower parents and educators to create healthier, more emotionally supportive environments in the digital era.

CONCLUSION

In conclusion, this study demonstrates that screen time is significantly associated with emotional regulation in children aged 5–6 years within the framework of a community engagement program, highlighting the critical importance of managing digital exposure during early childhood. The novelty of this research lies in integrating empirical correlational findings with the evaluation of a real-world, community-based digital parenting initiative, positioning screen time not merely as an individual or family concern but as a shared responsibility among parents, teachers, and educational institutions. By combining theoretical perspectives on emotional regulation with practical community intervention, this study contributes to applied scientific knowledge and reinforces the protective role of social interaction, guided experiences, and collaborative engagement in mitigating the potential negative effects of excessive screen exposure. The program also strengthened parental awareness and school–family collaboration, fostering more consistent digital parenting practices and creating a more supportive environment for children’s emotional well-being.

Despite these contributions, several limitations should be acknowledged. The correlational design and implementation within a single educational context limit causal interpretation and broader generalization, while the relatively small sample and reliance on observational and parental reports may introduce contextual bias. Therefore, future research is recommended to employ experimental or longitudinal approaches involving more diverse populations to examine causal pathways and long-term developmental outcomes. Further studies should also investigate moderating factors such as parenting styles, socioeconomic conditions, and types of digital content to build more comprehensive and context-sensitive models of digital media influence. Expanding and sustaining community-based digital parenting initiatives across different settings will be essential to strengthen evidence-based strategies that support children’s long-term emotional development in an increasingly digital society.

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