

The Relationship Between Short-Form Social Media Video Exposure and Social-Emotional Development in Early Childhood: A Systematic Literature Review

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Abstract: The widespread penetration of digital devices among young children (0–6 years old) has led to increased consumption of short-form videos. This study aims to synthesize empirical evidence regarding the association between short-form video exposure and children's emotional regulation and tantrum behaviors, identify contextual factors and parental mediation, and outline practical implications. Utilizing a Systematic Literature Review (SLR) with the PRISMA 2020 protocol, a systematic search across Scopus, ScienceDirect, ERIC, Google Scholar, and SINTA (2016–2026) identified 342 records. Following duplicate removal ($n=86$), title/abstract screening ($n=214$), and full-text quality appraisal via MMAT/JBI ($n=36$), 6 primary studies met the final inclusion criteria. Synthesized findings suggest that intensive or poorly mediated short-form video exposure may be associated with difficulties in emotional regulation, post-screen transition distress (tantrums), and reduced prosocial interactions. However, the strength and direction of these associations vary according to exposure duration, content characteristics (e.g., rapid pacing), and parental mediation strategies. Using devices as emotional pacifiers and experiencing technofence may reduce opportunities for co-regulation. The findings suggest multi-sectoral interventions, including active co-viewing at home and mindfulness-, cooperative play-, and low-pacing media-based curricula in early childhood education. Future research should distinguish short-form video exposure from general screen time using longitudinal and experimental designs.

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INTRODUCTION

The 21st century has been marked by the massive penetration of digital technology, which has transformed the landscape of early childhood development (ages 0-6) as children grow up as “digital natives” (Marsh et al., 2016; McArthur et al., 2022). Global platforms such as TikTok, Instagram Reels, and YouTube Shorts feature short videos lasting 15-60 seconds with eye-catching visuals, upbeat music, and infinite-scroll algorithms that capture children’s attention (Kostyrka-Allchorne et al., 2022;). This phenomenon correlates directly with the surge in smartphone use among young children; data from the Central Statistics Agency (BPS) indicates that 42.25% of children aged 0–6 in Indonesia actively use mobile devices (43.04% in urban areas; 41.12% in rural areas). A similar trend is occurring globally, such as in the United States (48% of children aged 0–8 have a personal device; Common Sense Media), the United Kingdom (76% of children aged 3 - 4; Ofcom), and Europe (46% of children aged 0–8; EU Kids Online).



Research on children's use of digital media has thus far been examined through two main disciplines: sociology and communication, which analyze the attention economy (Klug et al., 2021); and psychology and education, which highlight cognitive load and changes in attention patterns (Bakhshi et al., 2016; Schellewald, 2021). Most of the literature focuses on screen time in general and the displacement effect on physical and social activities (American Academy of Pediatrics, 2016; Madigan et al., 2019). However, specific evidence regarding short-form video remains relatively limited. Most previous studies have not thoroughly evaluated the unique characteristics of this medium—such as stimulus density and rapid editing rhythms—nor its impact when devices are used in specific contexts, such as an “emotional pacifier” (Radesky et al., 2016, 2023).

In response to these dynamics, the relationship between media exposure and child development is not a simple linear one, but is shaped by a complex conceptual framework. The impact of media on children is determined by a multi-tiered process: ranging from the duration and characteristics of exposure, the context of use (such as content quality, viewing time, and displaced activities), to parental mediation (active mediation and co-viewing) (Livingstone & Blum-Ross, 2020; Valkenburg et al., 2013). Therefore, a literature synthesis that specifically integrates this conceptual framework into the context of short-form videos remains urgently needed. This study aims to synthesize empirical evidence regarding the relationship between exposure to short-form videos and the social-emotional development of young children, identify contextual factors and parental mediation that moderate this relationship, and formulate practical implications for digital parenting and early childhood education practices.

METHOD

This study employed a *Systematic Literature Review* (SLR) design based on the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) 2020 guidelines to systematically identify, evaluate, and synthesize empirical evidence on the relationship between *short-form video* exposure and tantrum behavior and emotional regulation in early childhood in a transparent and measurable manner. The data population consisted of scholarly articles published in Scopus, ScienceDirect, ERIC, Google Scholar, and SINTA between 2016 and 2026. A systematic search was conducted using the following search string: ("short-form video" OR "short video" OR "TikTok" OR "Reels" OR "YouTube

Shorts" OR "fast-paced video") AND ("early childhood" OR "toddler" OR "preschool" OR "young children") AND ("social-emotional" OR "emotional regulation" OR "behavioral outcome" OR "tantrum"). The literature sample was determined through a structured selection process based on predefined eligibility criteria using the PICOS framework. The criteria included studies involving children aged 0–6 years exposed to *short-form video* and examining tantrum behavior or emotional regulation outcomes in original peer-reviewed empirical research published in either Indonesian or English. Duplicate articles, non-research publications, studies without full-text availability, and studies examining general *screen time* without specifically analyzing the characteristics of *short-form video* were excluded.

The screening and full-text eligibility assessment were conducted independently by two reviewers to minimize selection bias, with the complete selection process presented in a PRISMA 2020 flow diagram. Each study that met the final inclusion criteria underwent methodological quality appraisal and risk-of-bias assessment using the standardized *Mixed Methods Appraisal Tool* (MMAT) and *Joanna Briggs Institute* (JBI) Critical Appraisal Tools. These assessments were used to determine the weight of evidence, with longitudinal and experimental studies considered to provide stronger evidence for causal inference than cross-sectional studies. Data from the included studies were then extracted into a structured data matrix containing information on the authors, publication year, country, study design, sample characteristics, instruments, and main findings. The extracted data were subsequently synthesized using thematic content analysis by mapping the hierarchical conceptual pathways linking *short-form video* exposure characteristics, usage context, and parental mediation with children's tantrum behavior and emotional regulation. To support ethical and scientific rigor, all included studies were required to have been published in peer-reviewed journals and to report ethical approval or ethical procedures in the original research. The validity, credibility, and trustworthiness of the synthesis were further strengthened through source triangulation across relevant disciplines, including early childhood education, developmental psychology, and educational technology.

RESULTS AND DISCUSSION

Based on the inclusion and exclusion criteria of the Systematic Literature Review (SLR), a synthesis was conducted of primary studies that evaluated digital media exposure, the characteristics of short-form videos, and their impact on early childhood development. The methodological characteristics and key findings of the included studies are summarized in Table 1.

Table 1. Key Study Characteristics in the Review

Researcher & Year	Country	Research Design	Sample & Children's Ages	Sample & Children's Ages	Outcomes & Instruments	Key Findings
Wang, X., et.al (2025)	Indonesia	Quantitative Correlation	N=412 (Children aged 3–6 years)	<i>Overuse short-form video (TikTok/Reels)</i>	Prosocial Behavior & Aggressiveness (SDQ)	Excessive short-form video use is negatively associated with prosocial behavior and positively associated with aggressiveness; mediated by empathy and emotional regulation.
Zhang (2025)	China	Quantitative Survey	N=580 (Children aged 3–6 years)	<i>Screen time, content type, parental mediation</i>	Social-Emotional Competence (ERC & CSBQ)	Excessive screen exposure predicts lower social competence; active parental mediation was found to mitigate this negative effect.
Wu et al. (2023)	China	Longitudinal Observational	N=320 (Children aged 2–5 years)	Screen time duration & exposure to fast-paced media	Executive Function & Emotional Regulation (BRIEF-P)	High duration of exposure to fast-paced media is associated with lower executive function scores and difficulties in understanding emotions.
Hinkley et al. (2022)	Australia	Longitudinal Cohort	N=450 (Children aged 12–36 months)	Daily screen time	Peer Interaction and Play Skills (PIPPS)	High screen time predicts a decline in the quality of peer play, supporting the displacement hypothesis.

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Mo ntag et al. (20 20)	G e r m a y	Behavioral Study & Survey	N=295 (Parents of children aged 2–6 years)	Use of electronic devices as an “emotional pacifier”	Self- Regulation of Emotions & Addictive Behavior	The use of electronic devices to alleviate emotional distress is associated with low self- regulation capacity in children.
Ma diga n et al. (20 19)	C a n d a	Prospective Cohort	N=2.400 (Children aged 24 and 36 months)	Cumulative screen time	Developm ental Milestones (ASQ-3)	High cumulative screen time predicts developmental delays in the domains of communication and social interaction.

The review findings indicate that the impact of digital media on young children cannot be treated as a single variable (digital exposure), but must be differentiated into four independent dimensions:

1. Duration (Screen Time): The cumulative amount of time spent using digital devices each day.
2. Content Characteristics: Editing pace, educational value, and narrative complexity.
3. Device Features: Infinite scroll algorithms, autoplay, and variable reward schedules.
4. Context of Use: The purpose of providing media (e.g., as an emotional pacifier during meals or tantrums) and the level of parental involvement (co-viewing).

Based on a literature review, short-form videos possess technical characteristics that differ from conventional media, such as rapid pacing (quick scene transitions), high-density visual cuts, and dynamic sound effects (Wang, 2020; Wass, 2023). From a neurocognitive perspective, these high-speed changes in visual-audio stimuli trigger repeated orienting responses in children’s nervous systems. This condition demands high-capacity working memory without allowing time for in-depth information processing.

In this context, the phenomenon of tantrums or extreme emotional reactivity that arises when device access is suddenly cut off is more accurately understood as a frustration reaction resulting from a sudden

transition from a high-stimulus environment to a low-stimulus one (post-screen transition distress), as well as temporary fatigue in the child's inhibitory control capacity whose prefrontal cortex is still developing (Radesky et al., 2022; Wass, 2023).

The primary focus of the impact of digital media on young children lies in the changing dynamics of sociological interactions within the family. The concept of “technoference” - that is, the disruption of interpersonal interactions caused by the use of electronic devices by both parents and children- is a key mechanism that explains barriers to social-emotional development (McDaniel & Radesky, 2018).

When devices are present during domestic activities, parents' emotional responsiveness to their children's emotional cues decreases (decreased parental responsiveness). Limited conversational turns and reduced face-to-face eye contact diminish children's opportunities to practice recognizing facial expressions, reading nonverbal cues, and forming secure attachments.

The practice of using electronic devices as an “emotional pacifier” when a child is distressed, bored, or having a tantrum reduces the frequency of co-regulatory interactions between parents and children (Montag et al., 2020; Radesky et al., 2023). Although effective at instantly alleviating negative behavior through sensory distraction, this repetitive pattern deprives children of neurobehavioral opportunities to internalize independent self-soothing strategies.

Digital architectural features such as infinite scroll and autoplay are designed to minimize navigation pauses (frictionless interaction). In young children, this intermittent feedback mechanism encourages longer behavioral engagement because children lack the self-regulatory capacity to stop activities independently when there are no natural stopping cues (Dong et al., 2023).

The use of slow-paced media is often recommended as an alternative to digital exposure. However, a literature review indicates that slow-pacing cannot be considered a universal solution (silver bullet) when used in isolation. The effectiveness of slow-paced media remains highly dependent

on: The quality and appropriateness of the content for the child's developmental stage, the presence or absence of parental dialogic engagement through active co-viewing, the purpose of use and the preservation of active play activities (peer play and sensory play).

Based on a synthesis of empirical evidence, a digital media guidance framework for parenting and early childhood education (PAUD) institutions was formulated, as presented in Table 2.

Table 2. Digital Media Guidance Framework for Early Childhood Education (PAUD) and Digital Parenting

Guidance Dimensions	Practical Recommendations for Home Care	Practical Recommendations for Early Childhood Education Institutions
Duration & Time	Limit cumulative screen time to a maximum of 1 hour per day for children ages 2–6; implement screen-free zones (during meals and 1 hour before bedtime).	Designate device-free areas in schools; limit digital media use to structured learning materials only.
Content Quality	Select linear, narrative content with a slow-to-moderate pace, free from interactive ads and addictive features (infinite scroll).	Integrate educational audiovisual media relevant to learning themes and children's developmental stages
Context & Mediation	Prioritize active co-viewing (asking questions and discussing video content); avoid using devices as an "emotional pacifier."	Hold regular parenting workshops to align media restriction standards between home and school.
Transition Strategies	Provide advance warning before access is discontinued (visual/verbal timer); practice co-regulation when children show signs of transition distress.	Facilitate light mindfulness-based transition activities or physical movement after digital learning sessions.
Activity Substitution	Replace screen time with sensory play, dramatic play, and	Optimize cooperative play and active physical games to

physical interaction
with family.

develop prosocial
skills and emotional
regulation.

CONCLUSION

This systematic review successfully achieved its objectives by demonstrating that the relationship between exposure to short-form videos and the social-emotional development of young children (ages 0–6) is complex and nonlinear, with its effects significantly moderated by duration, content characteristics, context of use, and parental mediation. This study advances the body of scientific knowledge beyond conventional theory by linking neurobiological mechanisms - such as infinite scroll and autoplay, which trigger ego depletion in the prefrontal cortex, as well as technofence - to the emergence of post-screen transition distress (tantrums) and difficulties with self-soothing. These findings provide strong scientific justification for the development of practical, multisectoral applications, including the implementation of active co-viewing and screen-free zones at home, as well as the cultivation of emotion regulation through mindfulness, cooperative play, and low-pacing media in early childhood education institutions. For future development, further research needs to distinguish the effects of short-form videos from general screen time using a longitudinal design based on fMRI scans to track the recovery of children's brain connectivity, while ongoing research focuses on testing the effectiveness of the parenting alignment model to harmonize screen time limits between home and school environments.

Statement on Generative AI and AI-Assisted Tools

In preparing this manuscript, the authors employed an AI-powered language tool to refine the clarity, grammar, and readability of the text. Afterward, the authors thoroughly reviewed and revised all content and assume complete responsibility for the published version. Generative AI was not involved in data collection, analysis, or interpretation.

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