

Exploring the Association Between Gadget Use and Emotional Disturbances in Pre-School Children: Evidence from Al-Mujahidin Al-Qur'an Kindergarten

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ABSTRACT

Introduction: In the digital era, gadget use among preschool-aged children has become increasingly common, raising concerns about its impact on emotional development. Excessive screen time may reduce social interaction and increase emotional disturbances, such as irritability and anxiety.

Objective: This study aimed to analyze the relationship between gadget use and emotional problems among preschool children at TK Al-Qur'an Al-Mujahidin Krui in 2024.

Method: A cross-sectional quantitative analytical design was used. A total of 103 children aged 4–6 years were selected through purposive sampling. Emotional problems were assessed using the Kuisloner Masalah Mental Emosional (KMME), a validated 12-item instrument. Children with diagnosed neurodevelopmental disorders were excluded. Data were analyzed using the Chi-square test and odds ratio (OR) with a significance level of $p < 0.05$.

Results: Among the 103 participants, 26 (25.2%) had doubtful emotional problems and 77 (74.8%) exhibited deviant emotional behaviors. Children with bad gadget use were 7.71 times more likely to experience emotional problems compared to those with good gadget use (OR = 7.71, $p = 0.034$). A significant association was found between higher levels of gadget use and increased emotional disturbances.

Conclusion: There is a statistically significant relationship between gadget use and emotional problems in preschool children. Excessive gadget use may negatively affect emotional well-being, emphasizing the need for parents and educators to monitor and regulate children's screen time to support healthy emotional development.

Keywords: digital media, emotional problems, gadget use, preschool children

Introduction

In the current digital era, the use of gadgets among children, particularly those in the preschool age group, has become increasingly prevalent. Gadgets such as tablets, smartphones, and other electronic devices offer easy access to a wide range of entertainment and information. However, excessive use of these devices among children has been associated with the emergence of serious emotional and behavioral problems. According to Chikmah et al. (2018), children who frequently engage with electronic gadgets are more likely to experience negative emotional states, including anxiety, tension, and irritability.

Firmansyah et al. (2021) emphasize that digital devices negatively affect the social interactions of elementary school students. Prolonged gadget use can reduce children's awareness of their surroundings and lead to a sense of alienation. This decline in social engagement compromises children's sensitivity to and concern for their environment, posing a risk to their social development, especially at the preschool stage. Furthermore, children may be exposed to age-inappropriate content and potentially dangerous behaviors through gadgets, which they may imitate without understanding the consequences.

Similarly, Rahman et al., (2020) highlights that children who excessively rely on electronic devices to the point of daily dependence may experience adverse effects on their personality and developmental processes. Rather than engaging with peers, these children often prefer playing with gadgets, becoming more consumptive and isolated. This behavior can lead to addiction, engagement in inappropriate activities such as online dating or making offensive remarks, and even unintentional exposure to pornography.

The increasing concern over gadget use is also supported by findings from Ritongga and Wirtati (2025), who observed that prolonged gadget use reduces students' willingness to interact with peers, parents, and teachers. Instead, students tend to use gadgets for self-entertainment, which limits real-world social interaction. Nawaila et al. (2018) further adds that widespread internet access through gadgets exposes children to unrestricted content, including material unsuitable for their age.

Preschool-aged children, often described as being in their "golden age," are naturally curious and highly impressionable. According to Abd Somad and Haron (2023), gadgets with appealing and interactive features attract children's attention, leading to prolonged usage. This habit can result in emotional dependency and even increase the risk of accidents due to distraction or misuse. Children at this stage are adept imitators and, as Putri et al. (2021) explain, early exposure to gadgets can interfere with language acquisition and emotional development, which are critical during early childhood.

A pre-survey conducted in 2024 at TK Al-Qur'an Almujaahidin Krui involved interviews with ten parents, revealing that each child used gadgets for more than one hour per day. Furthermore, seven out of ten children reportedly exhibited emotional distress, such as crying or anger, when gadgets were taken away. Interviews with the teachers at the same institution noted varied emotional and social responses among children, including shyness, frequent crying, unwillingness to interact, affection, and mutual support.

Given these observations, it can be concluded that the use of electronic gadgets significantly influences the emotional and social development of young children. Therefore, it is crucial for parents to supervise and regulate gadget use to prevent dependency and negative developmental outcomes. Based on this context, the present study aims to analyze "The Relationship between Gadget Use and Emotional Problems in Preschool Children at TK Al-Qur'an Almujaahidin Krui in 2024."

Objective

This study aimed to analyze the relationship between gadget use and emotional problems among preschool children at TK Al-Qur'an Almujaahidin Krui in 2024.

Method

This study employed a cross-sectional quantitative analytical design and was conducted in January 2025. The target population consisted of preschool children enrolled at TK Al-Qur'an Almujaahidin Krui. A total of 103 children were selected through purposive sampling based on the following inclusion criteria: aged 4–6 years, actively attending the kindergarten, and having parental consent to participate in the study. Children diagnosed with neurodevelopmental disorders were excluded.

Data collection utilized the *Kuisiener Masalah Mental Emosional* (KMME), a standardized questionnaire comprising 12 validated items designed to assess symptoms of emotional problems in early childhood. Prior validation and reliability testing conducted on a similar population yielded a Cronbach’s alpha value greater than 0.7, indicating acceptable internal consistency.

Result

Table 1. Relationship Between Gadget Use and Emotional Problems in Preschool

Emotional Problems in Children							OR (95.0%)	P- Value
Gadget use	Doubtful		Deviate		Total			
	n	%	n	%	n	%		
Good	2	7.7%	24	92.3%	26	100.0%	-	0.034
Moderate	15	27.8%	39	72.2%	54	100.0%		
Bad	9	39.1%	14	60.9%	23	100.0%		
Total	26	25.2%	77	74.8%	103	100.0%		

Table 1 illustrates the distribution of emotional problems among preschool children based on their level of gadget use. Of the 103 respondents, 26 (25.2%) were categorized as having doubtful emotional problems and 77 (74.8%) were categorized as having deviant emotional problems.

In the good gadget use category, only 2 children (7.7%) were found to have doubtful emotional problems, while 24 children (92.3%) exhibited deviant emotional problems. Among those with moderate gadget use, 15 children (27.8%) had doubtful emotional problems and 39 children (72.2%) were categorized as deviant. In the bad gadget use category, 9 children (39.1%) had doubtful emotional problems, while 14 children (60.9%) were categorized as deviant.

The Chi-square test yielded a p-value of 0.034, which is less than the significance level of 0.05. This indicates a statistically significant association between gadget use and emotional

problems in preschool children ($p < 0.05$). Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

The calculated odds ratio (OR) suggests that children with moderate gadget use were 1.67 times more likely to experience emotional problems compared to those with good gadget use. Moreover, children with bad gadget use had a 7.71 times higher likelihood of experiencing emotional problems compared to children with good gadget use.

Discussion

The results revealed a significant association between gadget usage and emotional problems in preschool children. Children classified with poor gadget use had a markedly higher likelihood of experiencing emotional deviations. This finding supports prior studies such as Agustin et al. (2022) and Putri et al. (2021), which also found that excessive screen time contributes to increased emotional instability.

Developmentally, preschool-aged children are highly impressionable and emotionally vulnerable. According to Vitrianingsih et al. (2018), during the “golden age,” emotional growth is closely tied to environmental stimuli, including media exposure. Excessive exposure to gadgets, particularly without parental mediation, may reduce face-to-face interactions and hinder emotional regulation. Moreover, this study observed that boys had a higher tendency for emotional problems, aligned with Costigan et al. (2013) and Page (2010), who noted that boys’ higher energy needs and social tendencies may make them more susceptible to screen-based behavioral issues.

Children aged 2–3 years were also at higher risk, confirming findings by Ghe et al. (2023) that younger children have underdeveloped coping skills and weaker immune and neurological systems, making them more prone to emotional stress from screen overuse. The strength of this study lies in its contextual relevance, practical implications, and use of validated tools. However, the limitations include reliance on cross-sectional data, which prevents causal inference, and self-reported questionnaires, which may introduce bias. The lack of longitudinal tracking means that long-term effects of gadget use on emotional health remain uncertain.

Conclusion

This study confirms a significant association between gadget use and emotional problems in preschool children at Almujaahidin Kindergarten Krui ($p = 0.034$). Preschoolers with poor gadget usage were over seven times more likely to experience emotional difficulties. These findings underline the importance of educating parents and teachers on managing screen time and promoting emotionally supportive environments.

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Not applicable.

Authors’ contribution

Each author contributed equally in all the parts of the research. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Conflict of interest

The researchers stated that there is no conflict of interest related to the implementation and publication of the results of this research. The entire research process, from planning, data collection, analysis, to report preparation, was carried out independently without any influence or pressure from any third party. A commitment to research ethics is upheld throughout the research process, ensuring transparency, accuracy and honesty in reporting results. Respondents' participation was voluntary with informed consent, and their confidentiality and privacy were maintained in accordance with applicable research ethics standards. With this statement, researchers hope that the research results can be trusted and used as a valid reference for the development of science and health practices related to ethnomedicine and reproductive health.

Ethical consideration

Not applicable.

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