



The Influence of Gadget Use Interaction on Antisocial Behavior in Early Childhood

Amilah Qistie Ramadhani¹, Natasya Ainun Nasuha², Trivena Lorensia Harefa³

¹Universitas Pendidikan Indonesia
Correspondence : amilahaqira11@student.upi.edu

ARTICLE INFO	ABSTRACT
<p>Article History: Submitted/Received March 01, 2025 First Revised April 06, 2025 Accepted May 21, 2025 First Available online June 06, 2025 Publication Date June 11, 2025</p> <p>Keyword: Early childhood gadget use, Antisocial behavior, Children's social development, Screen time, Gadget dependence, Social interaction</p>	<p><i>This study aims to examine the influence of gadget use on the emergence of antisocial behavior in early childhood. The method used was a qualitative approach with bibliometric analysis of scientific articles indexed by Google Scholar between 2015 and 2025. Data was collected using the Publish or Perish (PoP) application and further analyzed using VOSviewer to map research trends, keyword relationships, and dominant study focuses. The analysis shows that excessive, passive, and unsupervised gadget use is associated with decreased social interaction in children, such as a lack of empathy, poor communication skills, a tendency to withdraw, and the emergence of aggressive and selfish behavior. On the other hand, controlled and supervised gadget use can have a positive impact on children's cognitive development and creativity. Therefore, an active role is needed from parents, educators, and the community in regulating the duration and patterns of gadget use to prevent the development of antisocial behavior in early childhood in the digital age.</i></p> <p>© 2025</p>

1. INTRODUCTION

Information technology is an inseparable part of human life. Activities ranging from shopping to studying are conducted online from home using gadgets. Even before COVID-19, gadget usage in Indonesia was already quite high, as evidenced by Indonesian telecommunications statistics. The percentage of internet users aged 5 years and older increased from approximately 25.84% to 50.92% in 2018. Meanwhile, in rural areas, the percentage rose from 8.37% in 2014 to 25.56% in 2018 (*Sub Direktorat Komunikasi dan Teknologi Informasi*, 2018).

Gadgets have become an inseparable part of human life and have become a basic necessity. Everyone from children to adults uses gadgets in their daily lives; many even have their own gadgets. Gadgets offer numerous benefits to human life, thanks to the presence of social media. For example, WhatsApp, Instagram, Facebook, Twitter, Messenger, and many more can be used to connect with others and make new friends from all over the world. Then there's YouTube, TikTok, and Snack Video, which can be used for entertainment and to broaden your knowledge. There are also other apps easily downloaded from the Play Store. It's so easy that even kindergarten-aged children can download them. However, despite the many benefits of gadgets, there are also negative impacts if left unsupervised. With the multitude of features available on gadgets, they can become gateways for children to access things that are inappropriate for their age and can interfere with their development. However, despite these benefits, excessive gadget use can negatively impact social behavior, particularly triggering antisocial behavior in children.

Prolonged gadget addiction has the potential to significantly disrupt an individual's ability to engage in healthy social interactions. Dependence on the digital world diverts attention from real social environments, making individuals increasingly withdrawn and reluctant to communicate face-to-face. In this condition, users tend to lose basic social skills, such as empathy and the ability to read others' emotional expressions. This is the beginning of the formation of more serious deviant behavior, namely antisocial personality. Antisocial behavior is behavior that defies social norms and is not in line with the interests of society. From a psychological perspective, antisocial behavior is understood as behavior that does not consider others and has the potential to harm those around them, either intentionally or unintentionally. According to (Putri et al., 2024), antisocial behavior is an individual's actions that violate, oppose, and contradict prevailing behaviors in society. Children who use gadgets excessively spend more time in cyberspace and interact less with their surroundings. This results in children being unable to separate from electronic devices and tending to exhibit antisocial behavior such as avoiding real-world interactions, being less sensitive to social norms, and having mental instability (Azzahra et al., 2025). Over the long term, antisocial behavior not only disrupts social relationships but also reduces the overall quality of life.

In the educational setting, this phenomenon is a serious concern. Some children exhibit withdrawn behavior, difficulty cooperating with peers, and even aggressive behavior due to uncontrolled gadget use (Rosyada & Syah, 2023). Dependence on gadgets can lead to social isolation and decreased communication skills, ultimately contributing to the development of antisocial behavior in schools (Fairiyati Nahdiyah et al., 2023). Furthermore, exposure to age-inappropriate digital content also impacts children's moral and empathy development (Ashifa et al., 2022).

In the context of digital-based antisocial behavior, research also reveals that anonymity in cyberspace can trigger negative behaviors, such as aggression and manipulation during online interactions. This indicates the importance of early detection in identifying antisocial behavior that arises from gadget use in young children. Preventive efforts can be implemented through monitoring children's digital interactions, observing behavior at school, and collaborating with parents, teachers, and counselors to conduct regular assessments of children's social development (Manzilah Putri, 2024).

Based on this explanation, it is important to delve deeper into how gadget use can influence antisocial behavior in young children. This research is expected to provide a comprehensive understanding of the forms of antisocial behavior that emerge and serve as a foundation for prevention and intervention efforts to support children's social development in the digital era.

2. METHODS

This study uses a qualitative approach by applying bibliometric methods to analyze the development of research trends. Data were obtained through the Google Scholar indexed database between 2015 and 2025 using specific keywords such as "gadget use, early childhood, and antisocial behavior." Data visualization and mapping were performed using the POP (Publish or Perish) application for data extraction and VOSviewer for co-keyword network analysis.

3. RESULTS AND DISCUSSION

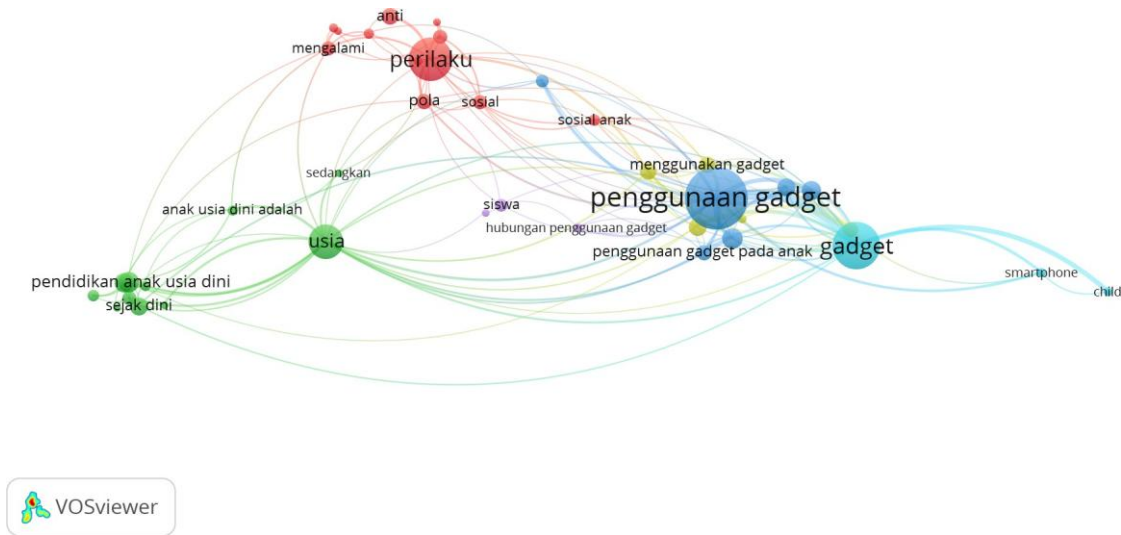


Figure 1. Research Trend Map Visualization

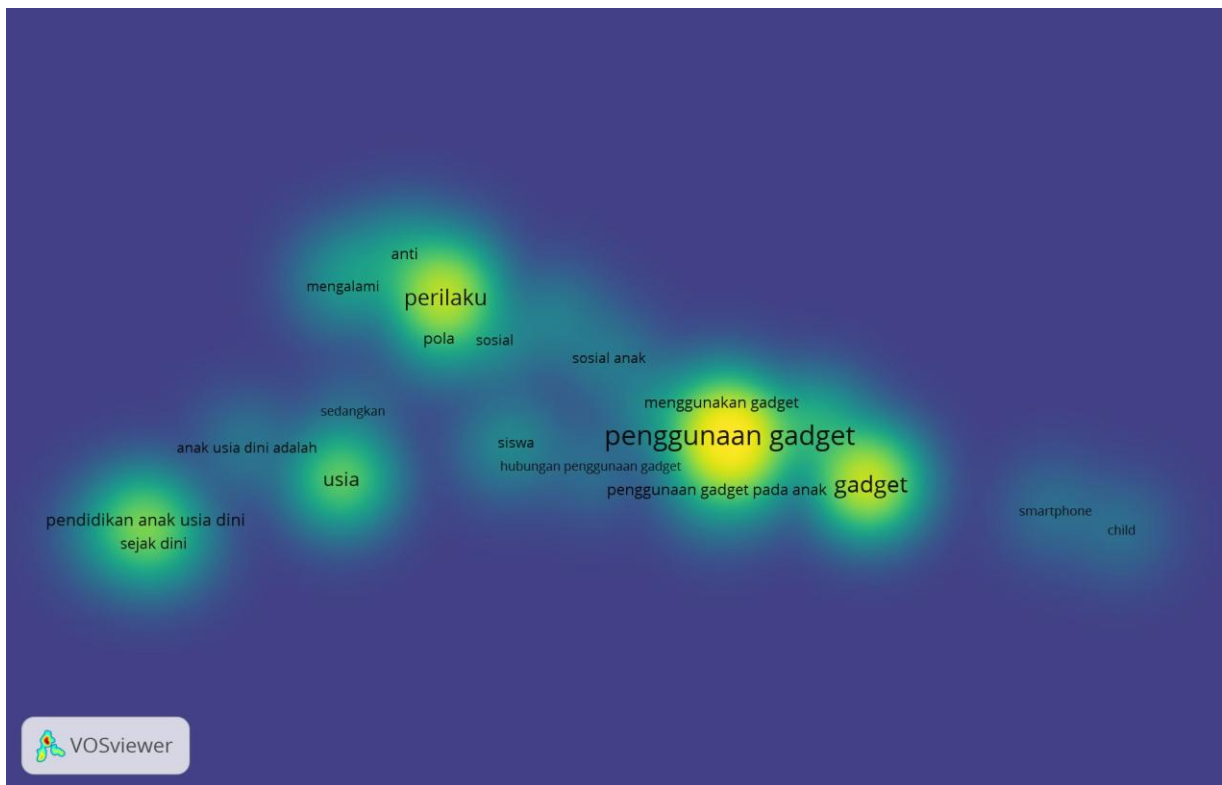


Figure 2. Research Trends Depth (Density) Visualization

This co-occurrence map with six clusters shows the main dimensions predominantly researched on gadget use and its relationship to behavior. These clusters are clearly divided between variables (cause/effect) and subjects (audience).

1. Network Centrality and Linkages

The keyword "Gadget" is the term with the highest frequency of occurrence and has the most connections to other clusters. This confirms that technology itself is a central topic and a primary driver of research, indicating that the literature consistently attempts to measure the impact of these devices.

2. Thematic Cluster Analysis

The six clusters formed are grouped into three large categories: Technology Focus, Behavior Focus, and Subject Focus.

Technology Focus Category (Independent Variable)

The first cluster is light blue with the keyword "Gadget," which refers to hardware or general technology terms. The second cluster is dark blue with the keyword "Gadget Usage," which refers to the process or context of usage (e.g., duration or pattern). The third cluster is yellow with the keyword "Using Gadgets," which refers to the child's actions or roles as a user.

Behavior Focus Category (Dependent Variable)

The first cluster is in red with the keyword "Behavior." This cluster represents a broad dependent variable. It is estimated that this cluster includes studies measuring the general impact of gadgets on behavioral development, emotional regulation, or adaptive behavior. The second cluster is in purple with the keyword "Students." Although this is a subject cluster, its association with "behavior" often points to behavioral issues in the school context or the impact of gadget use on academic performance.

Subject Focus and Setting Categories (Contextual)

The first cluster is green with the keyword "Age and Early Childhood Education (PAUD)." The separation of this cluster indicates the existence of a solid body of literature focused exclusively on this crucial age setting and stage. The second cluster is purple with the keyword "Students." The presence of the "students" cluster (which typically refers to children of elementary school age and above) indicates that research is often not limited to PAUD, or that PAUD literature often compares results with older age groups (students).

Early childhood behavior patterns during excessive gadget use are usually characterized by a tendency to interact less with those around them. Excessive gadget use can reduce children's opportunities for direct communication. Gadget use can impact children's social interactions and potentially negatively impact relationships with parents or others. Children find it difficult to interact or socialize with those around them, and aggressive and selfish behavior can emerge. On the other hand, early childhood children (3-6 years old) are now adept at using gadgets for playing games, watching videos, or accessing the internet.

Early childhood has unique characteristics that are different from children over eight years

of age (Hartani, 2005), namely as follows:

- a. Egocentric, children see things from their own perspective and interests, are not ready to behave socially which involves other people.
- b. Having a sense of curiosity. Children see the world as filled with interesting things. This sparks a strong sense of curiosity.
- c. Unique in nature, the uniqueness of the child's learning style and interests.
- d. Have short concentration power.

Children exhibit characteristics when playing, studying, or engaging in other activities. However, when children hold their devices, they tend to focus and become quiet. This behavior slowly carries over into their daily lives, unconsciously leading to gadget addiction.

According to Miranti and Putri (2021), when children are unsupervised while using gadgets, they tend to imitate scenes from the screens they watch. They also become less interactive with others because they prioritize their devices, and they become addicted to gaming, neglecting other tasks. However, with supervised use, children's behavior can also be positive, such as fostering creativity and learning through educational content.

The impact of gadget use in early childhood on behavior and development can have both positive and negative impacts. Positive outcomes include developing children's adaptive functions, increasing knowledge from useful educational content, facilitating communication, and fostering creativity. However, negative impacts include children becoming dependent and unwilling to let go of gadgets, which can disrupt their development and activities (Yumarni, 2022).

Research (Apsari, Nurfauziah, and Asiah, 2023) also found that young children who frequently use gadgets tend to be less able to respect the rights of others, such as having difficulty accepting others' opinions. Furthermore, other impacts are seen in helping behavior, where some children become indifferent, indifferent to the difficulties of others due to being engrossed in their gadgets, do not show initiative in helping parents or others, and are less friendly in social interactions. Thus, uncontrolled gadget use in young children can indicate a tendency to weaken basic social behaviors such as respect and helping.

Early childhood is introduced to gadgets by parents or family members, hoping that the child will remain calm and not fussy when their parents are busy. Diverting gadgets to children can trigger an increased interest in gadgets, leading to children spending hours on them, which can lead to gadget addiction (Yumarni, 2022).

To prevent negative consequences, gadget use requires limits and supervision to prevent the child's development and growth from being disrupted. WHO (World Health Organization) divides the screen time limit for gadget use into three age categories, namely first for babies under 1 year, WHO does not recommend the use of gadgets at all, second, babies aged 1 to 2 are also not recommended to use gadgets, third, children aged 2 to 3 years should not use gadgets more than one hour per day. The United States and Canadian pediatrician associations state that children born to 2 years old are strongly advised not to use gadgets, then children aged 3 to 5 years are given a limit on gadget use of less than 1 hour, then children aged 6 years are given a limit of only 2 hours per day. Experts do not recommend that early childhood is given gadgets because it can interfere with child development.

This information also aligns with research conducted by Nuraini and Wardhani (2023),

which explains that there is a relationship between the duration of gadget use and children's social development. Children who are taught to use gadgets for less than an hour develop well. Meanwhile, children who use gadgets for more than an hour tend to experience stunted social development. Using gadgets for an inappropriate amount of time can negatively impact social development. These negative impacts include children experiencing reduced interaction, selfishness, irritability, and impulsive and aggressive behavior.

According to Syamsu Yusuf LN (2004: 24) in Dewi, n.d., there are three prominent characteristics of elementary school children aged 6-13: physical development, a strong curiosity about the world around them, and a drive to join peer groups. If a child exhibits antisocial behavior toward their peers while socializing with their peers, it becomes a problem. This behavior is demonstrated by children who don't care about their friends, always bother their friends, and always start fights with their friends (Elizabeth B. Hurlock, 2001 in Dewi, n.d).

According to Schaefer and Millman, 1981 in Dewi, n.d, antisocial behavior in children has 3 characteristics, namely:

- a. The Passive Resistant Type, namely the child's behavior becomes passive and if given an order, carries out the order half-heartedly.
- b. The Openly Defiant Type, namely the behavior of children who reject orders directly and verbally.
- c. The Spiteful Type of Noncompliance, namely the behavior of a child who, when ordered to do something, does the opposite of what was ordered.

Children's interactions with gadgets can lead to the emergence of antisocial behavior in early childhood. The interaction methods referred to include the intensity of use, duration, type of activity, and the presence or absence of adult supervision.

According to Gunawan et al. (2023), gadget use influences early childhood social interactions. Children who use gadgets more frequently tend to have lower social interactions with their surroundings, as their attention is more focused on the device than on direct communication with others.

Furthermore, according to Suhadi et al. (2023), a significant relationship was found between gadget use and the socio-emotional development of preschool-aged children. Children with high levels of gadget use exhibited suboptimal socio-emotional development, such as being less responsive, having difficulty interacting, and having difficulty managing emotions, which are early indicators of antisocial behavior.

Research by Juriah et al. (2025) also revealed that excessive gadget use can cause children to become more withdrawn, passive, and withdrawn. This suggests that passive interactions with gadgets can hinder the development of social skills that should be acquired through direct interaction.

Furthermore, Nurbani and Mashudi (2024) stated that gadget dependence in children aged 5–6 is associated with a decline in basic social skills, such as sharing, cooperation, and understanding others' emotions. This decline in skills can lead to antisocial behavior in early childhood.

Excessive, passive use of gadgets, and the absence of parental or community supervision can

lead to antisocial behavior in early childhood, such as social withdrawal, lack of empathy, and poor direct communication skills.

4. CONCLUSION

Based on the results of a study and bibliometric analysis of various studies indexed by Google Scholar, it can be concluded that gadget use is significantly related to the emergence of antisocial behavior in early childhood. Excessive, passive gadget use, and without adult supervision tends to have a negative impact on children's social development, such as reduced direct social interaction, low empathy, communication difficulties, and a tendency to withdraw from social environments. Early childhood who are more exposed to gadgets also exhibit selfish behavior, lack of concern for others, and difficulty cooperating with peers. However, controlled and supervised gadget use can have a positive impact, especially in supporting children's creativity and learning through educational content. Therefore, an active role is needed from parents, educators, and the community in regulating the duration, type of activity, and patterns of supervision of gadget use to ensure optimal social development and prevent antisocial behavior in the digital era.

5. ACKNOWLEDGMENT

The author would like to thank the supervising lecturer in Universitas Pendidikan Indonesia for guidance, support and valuable advice provided.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article.

7. REFERENCES

- Azzahra, A., Darmawan, I., Karlina, I., Lampung, U., & Lampung, K. B. (2025). Analisis Dampak Kecanduan Gadget Sebagai Pemicu. *Jurnal Media Akademik (JMA)*, 3(6).
- Dini, A. U., & Sosial, P. (n.d.). *Waspada Dampak Penggunaan Gadget Terhadap Perkembangan Sosial Anak Usia Dini 1,2*. 6(1), 58–66.
- Gunawan, A. P., Munawar, H. N., & Zakiya, S. L. D. (2023). Pengaruh Penggunaan Gadget Terhadap Interaksi Sosial Anak Usia Dini. *Jurnal Ekonomi Manajemen Dan Bisnis*, 1(2), 202-210.
- Juraidah, J., Irwani, N. R., Nurhayati, N., Hayati, R., Fajri, Y., Putri, H. A., & Khadijah, K. (2024). Perkembangan Sosial Emosional Anak Usia Dini Dalam Penggunaan Gadget. *Ta'rim: Jurnal Pendidikan Dan Anak Usia Dini*, 5, 45-52.
- Nurbani, R. R., & Mashudi, E. A. (2023). Ketergantungan Gadget Terhadap Perkembangan Sosial Emosional Anak Usia 5-6 Tahun. *Indonesian Journal of Islamic Early Childhood Education*, 8(2), 100-105.
- Nurhayati, S. (2025). PENGARUH PENGGUNAAN GADGET TERHADAP PERKEMBANGAN SOSIAL DAN MORAL ANAK USIA DINI DI TK MUSLIMAT NU 6 AL-FAQIH SUKOANYAR-MALANG. *JURALIANSI: Jurnal Lingkup Anak Usia Dini*, 6(1), 36-46.

- Purwadi, H., & Fitriyani, L. (2023). *Hubungan durasi penggunaan gadget terhadap personal pada anak usia 1-6 tahun di Kota Depok*.
- Putri, R. S., Wigati, I., & Sartika, I. D. (2024). Dampak Lingkungan Sosial terhadap Perilaku Antisosial pada Anak Usia 4-6 Tahun. *INCARE, International Journal of Educational Resources*, 5(3), 238–249. <https://doi.org/10.59689/incare.v5i3.1008>
- Suhadi, P., Rusdianah, E., & Yuliana, F. (2023). Hubungan penggunaan gadget dengan perkembangan sosial-emosional pada anak usia prasekolah (4–6 tahun). *Jurnal Penelitian Perawat Profesional*, *6*(5), 3323–3332.
- Yumarni, V. (2022). *Pengaruh Gadget Terhadap Anak Usia Dini*. *Jurnal Literasiologi*. Vol 8 No 2: 107-119