

The Relationship between Gadget Addiction Level and Tantrum Behavior in Children Aged 4-6 Years

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Abstract

Early childhood is a critical period for emotional development and behavioral regulation. Increasing digital device use among young children has raised concerns about its association with tantrum behavior, although research examining addiction-related use rather than screen duration alone remains limited. This study aimed to examine the relationship between gadget addiction levels and tantrum behavior among children aged 4–6 years at Widya Santhi Buana Kindergarten, West Denpasar District. A quantitative correlational approach with a cross-sectional design was employed, involving 45 parents or guardians recruited through total sampling. Data were collected on April 15, 2026, through online questionnaires administered using Google Forms. The instruments comprised an adapted Digital Addiction Scale for Children with 25 items, which demonstrated high internal consistency during pilot testing (Cronbach's $\alpha = .977$), and the 31-item Rating Scale of Angry Emotional Behavior and Temper Tantrum. Univariate analysis summarized the distributions of gadget addiction levels and tantrum behavior, while Spearman's rank correlation assessed their relationship. The results showed that 48.9% of children were classified as having moderate gadget addiction levels. Regarding tantrum behavior, 53.3% were classified as exhibiting no tantrum behavior, whereas 22.2% were classified as exhibiting severe tantrum behavior. A strong, positive, and statistically significant correlation was identified between gadget addiction levels and tantrum behavior ($\rho = .641, p < .001$). Higher parent-reported gadget addiction levels were therefore associated with greater tantrum severity within the participating group. The cross-sectional design and reliance on parent-reported measures limit causal

interpretation. These findings may inform parent education concerning supervised device use and consistent family rules. Further research should include larger samples, examine parenting styles and other relevant factors, and use longitudinal designs to clarify the direction of the relationship.

Keywords: Gadget Addiction; Tantrum Behavior; Early Childhood; Emotional Regulation; Kindergarten Children

INTRODUCTION

Early childhood is a golden period in which cognitive, emotional, social, and motor aspects develop rapidly, and social-emotional development shapes children's behavior (Anggraini et al., 2023). In the digital era, gadgets have become part of everyday life and are easily accessed by young children (Febriani & Kurniawan, 2025; Qomariah et al., 2025). Globally, screen time among children aged 3-6 years is rising. Gadgets are often used as passive entertainment and as a way of calming or distracting children while parents are busy (Rismala et al., 2024), and heavy use may impair children's ability to manage their feelings, which makes early childhood gadget use an issue of global concern (Irzalinda & Latifah, 2023).

The World Health Organization (2020) stated that excessive exposure to digital media in early childhood needs to be limited because it may affect cognitive function, emotion regulation, and behavior. The American Academy of Pediatrics (2022) explained that excessive digital media use can disrupt emotion regulation, making children more easily frustrated and prone to anger or tantrums when gadgets are restricted, because instant visual and audio gratification reduces opportunities to manage emotions through natural social interaction. In Indonesia, the Indonesian Pediatric Society reported that gadget use of more than three hours per day makes children more vulnerable to emotional and behavioral problems such as tantrums, aggression, and difficulty concentrating (IDAI, 2023). Locally, household access to digital devices in Denpasar City has also increased (Kota Denpasar, 2025), so young children are increasingly exposed to gadgets.

Tantrum behavior in early childhood is an uncontrolled outburst of emotion marked by crying, screaming, and aggressive acts such as throwing objects or rolling on the floor (Nanda & Rusdiani, 2024). It generally arises from frustration that children cannot express in words or control cognitively (Johal, 2024). Parenting, particularly how parents set limits

and manage behavior, contributes to tantrum and is closely related to how parents give access to and control gadget use; excessive gadget provision without supervision can weaken children's ability to control their emotions (Somoyani & Rahyani, 2025). Our argument is therefore that uncontrolled gadget use should be treated as a distinct and potentially modifiable trigger of tantrum behavior, in addition to developmental and parenting factors.

Beyond duration of use, excessive gadget use can be understood as a behavioral addiction, characterized by a strong urge to continue the activity, difficulty in self-control, and negative feelings such as sadness or anger when the activity cannot be done (Domoff et al., 2021). In young children it appears as preoccupation, namely constantly asking for the gadget and preferring screen activities over other play (Hawi et al., 2019), and as withdrawal, namely anger, crying, or screaming when use is stopped (Radesky et al., 2023). This study is grounded in three theoretical perspectives: behavioral addiction theory, in which pleasurable, fast, and interactive stimulation motivates repeated use; reinforcement theory, in which use is sustained by positive reinforcement (entertainment and instant satisfaction) and negative reinforcement (relief when a gadget is handed to a fussy child) (Radesky et al., 2023); and emotion regulation theory, which concerns the ability to recognize, understand, and manage emotions according to situational demands (Rahmayunita, 2026). These are complemented by Piaget's theory, in which children aged 4-6 years are in the preoperational stage, egocentric and still limited in logical thinking (Fatimah & Yasni, 2021).

Several Indonesian studies have examined gadget use and tantrum. Trisno Putri et al. (2023) found that children aged 1-5 years with long gadget use tended to cry or react aggressively when access was restricted. Setyarini et al. (2023) reported that excessive screen use was associated with a higher likelihood of tantrum and emotional developmental problems. Wilianti & Hasibuan (2024) showed that the more often children used gadgets, the more likely manipulative tantrums were when a gadget was not given. These studies indicate that excessive gadget use increases the risk of tantrum, but most focus on the duration and intensity of screen use and differ in age range and analysis (chi-square, Spearman, and Pearson tests). The research gap is that the *level of addiction*, assessed through behavioral addiction indicators, has been little examined in relation to tantrum among children aged 4-6 years.

A preliminary interview with 12 parents at Widya Santhi Buana Kindergarten pointed in the same direction. Most children used gadgets for about 1-3 hours per day, some for

more than 4 hours, mostly after school to watch YouTube or TikTok and play games. Several preferred gadgets to playing with peers and held them while eating or before sleeping. When use was restricted, many parents reported crying, anger, or aggression, and some children became angry because of such restrictions one to five times a month. These signs indicate a pattern of dependence and not only long use.

The novelty of this study lies in its focus on the level of dependence, classified as low, moderate, or high on the basis of behavioral addiction indicators, rather than on duration and frequency of use alone, and in its local context of kindergarten children aged 4-6 years in West Denpasar District. Accordingly, this study aims to analyze the relationship between the level of gadget addiction and tantrum behavior among children aged 4-6 years at Widya Santhi Buana Kindergarten. Specifically, it identifies the level of gadget addiction and tantrum behavior and quantitatively analyzes the relationship between the two variables.

METHODS

This study employed a quantitative analytical correlational method with a cross-sectional design to examine the relationship between gadget addiction levels and tantrum behavior among children aged 4-6 years at Widya Santhi Buana Kindergarten, West Denpasar District, Bali, Indonesia. The study involved 45 parents or guardians of children aged 4-6 years, selected using a total sampling technique, in which all members of the defined study population were included as participants (Sugiyono, 2019). Data were collected on one day in April 2026 through online questionnaires using an adapted 25-item Digital Addiction Scale for Children (DASC), originally developed by Hawi et al. (2019) and a 31-item Rating Scale of Angry Emotional Behavior and Temper Tantrum to assess tantrum behavior developed by Wigati & Mufidah (2022). The adapted DASC was pilot-tested and yielded a Cronbach's alpha coefficient of 0.977, while the tantrum behavior instrument had a previously reported Cronbach's alpha coefficient of 0.832. Data were analyzed using univariate analysis to describe the frequency distributions of the study variables and bivariate analysis using Spearman's rank correlation test to examine the relationship between gadget addiction levels and tantrum behavior. Statistical significance was set at $p < 0.05$. Ethical considerations, including informed consent, voluntary participation, and confidentiality, were addressed in accordance with the applicable research ethics procedures (Kemenkes RI, 2021).

Table 1. Operational Definitions of the Research Variables

Variable	Operational definition	Instrument	Scale / categories
Gadget addiction (X)	Dependence of the child on gadgets: preoccupation, tolerance, withdrawal, mood modification, conflict, relapse, displacement, deception, and problems	Adapted DASC (Digital Addiction Scale for Children), 25 items, parent-reported (Hawi et al., 2019)	Ordinal: low (25-58), moderate (59-92), high (93-125)
Tantrum behavior (Y)	Uncontrolled outbursts of anger and emotion (crying, screaming, aggression) shown by the child	Rating Scale of Angry Emotional Behavior and Temper Tantrum 31 items, (Wigati & Mufidah, 2022)	Ordinal: no tantrum (0-31), mild (32-62), severe (63-93)

Source: Compiled by the researcher (2026)

Table 1. Operational Definitions of the Research Variables showed that gadget addiction and tantrum behavior. Gadget addiction was defined as children's dependence on gadgets, encompassing preoccupation, tolerance, withdrawal, mood modification, conflict, relapse, displacement, deception, and problems. It was measured using an adapted 25-item Digital Addiction Scale for Children (DASC), completed by parents, and classified into low, moderate, and high categories. Tantrum behavior was defined as uncontrolled emotional outbursts, including crying, screaming, and aggression. It was measured using the 31-item Rating Scale of Angry Emotional Behavior and Temper Tantrum and classified into no tantrum, mild, and severe categories.

Table 2. Validity and Reliability of the Instruments

Instrument	Items	Valid items	r-table ($\alpha = 0.05$)	Cronbach's alpha
Gadget addiction (adapted DASC; pilot, n = 30)	25	25	0.361	0.977
Tantrum behavior (Wigati, 2022)	31	31	-	0.832 (original study)

Source: Compiled by the researcher (2026)

Table 2 validity and reliability results of the research instrument showed that adapted gadget addiction instrument consisted of 25 items, all of which were reported as valid, with an r-table value of 0.361 and a Cronbach's alpha coefficient of 0.977 based on the pilot test involving 30 respondents. The tantrum behavior instrument consisted of 31 valid items, with a Cronbach's alpha coefficient of 0.832 reported in the original study by (Wigati & Mufidah, 2022).

RESULTS

All 45 respondents met the inclusion criteria. The characteristics of the children and their parents or guardians are presented in Table 3.

Table 3. Characteristics of the Respondents and Their Children (N = 45)

Characteristic	n	%
Child's sex		
Boys	23	51.1
Girls	22	48.9
Child's age		
4-5 years	15	33.3
6 years	30	66.7
Parent's age		
≤ 35 years	30	66.7
> 35 years	15	33.3
Parent's education		
Basic	5	11.1
Secondary	20	44.4
Higher	20	44.4
Parent's occupation		
Employed	36	80.0
Not employed	9	20.0

Source: Compiled by the researcher (2026)

Table 3 characteristics of the 45 respondents and their children showed that regarding child sex, 23 children (51.1%) were boys and 22 (48.9%) were girls. Most children were 6 years old (66.7%, n = 30), while 15 (33.3%) were aged 4-5 years. Among the parents, 30 (66.7%) were aged ≤35 years and 15 (33.3%) were aged >35 years. Regarding education, 20 parents (44.4%) had secondary education and 20 (44.4%) had higher education, while 5 (11.1%) had basic education. Most parents were employed (80.0%, n = 36), whereas 9 (20.0%) were not employed.

Table 4. Cross-Tabulation of Gadget Addiction Level and Tantrum Behavior (N = 45)

Gadget addiction	No tantrum, n (%)	Mild tantrum, n (%)	Severe tantrum, n (%)	Total, n (%)
Low	13 (100.0)	0 (0.0)	0 (0.0)	13 (28.9)
Moderate	10 (45.5)	7 (31.8)	5 (22.7)	22 (48.9)
High	1 (10.0)	4 (40.0)	5 (50.0)	10 (22.2)
Total	24 (53.3)	11 (24.4)	10 (22.2)	45 (100.0)

Source: Compiled by the researcher (2026)

Table 4 cross-tabulation of gadget addiction level and tantrum behavior showed that all 13 children (100.0%) in the low gadget addiction group exhibited no tantrum behavior. Among children with moderate gadget addiction, 10 (45.5%) exhibited no tantrum, 7 (31.8%) experienced mild tantrums, and 5 (22.7%) experienced severe tantrums. Meanwhile, in the high gadget addiction group, 1 child (10.0%) exhibited no tantrum, 4 (40.0%) experienced mild tantrums, and 5 (50.0%) experienced severe tantrums. Spearman's rank correlation test revealed a statistically significant positive association between gadget addiction level and tantrum behavior ($\rho = 0.641$; $p < 0.001$). This finding indicates that higher levels of gadget addiction were associated with more severe tantrum behavior among the children in this study.

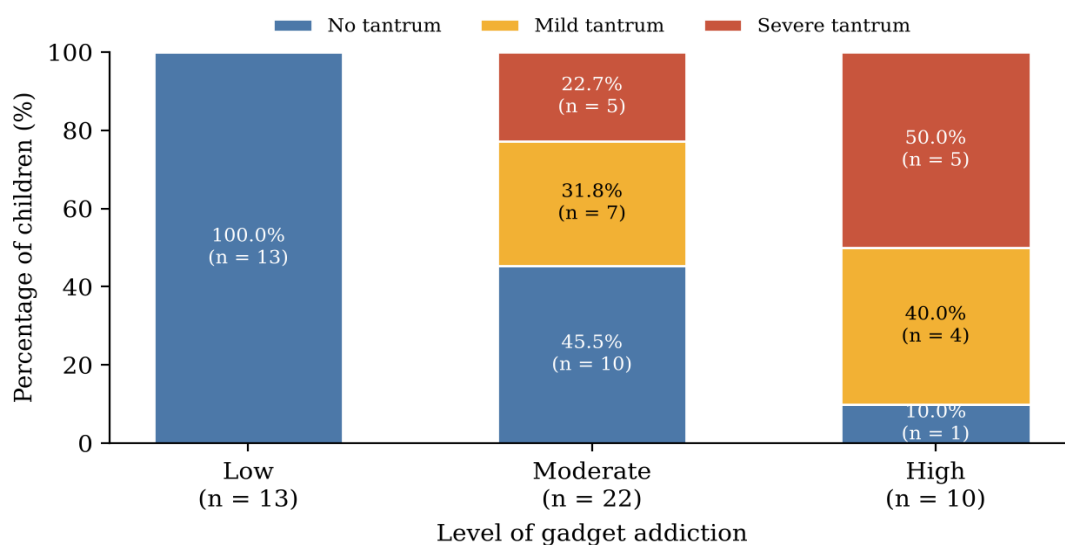


Figure 1. Distribution of Tantrum Behavior by Level of Gadget Addiction

Figure 1 The distribution of tantrum behavior by level of gadget addiction showed that all children in the low gadget addiction group were classified as having no tantrum (100.0%). In the moderate gadget addiction group, 10 children (45.5%) had no tantrum, 7 (31.8%) experienced mild tantrums, and 5 (22.7%) experienced severe tantrums. Meanwhile, in the high gadget addiction group, severe tantrum was the most common category, affecting 5 children (50.0%), followed by mild tantrum in 4 children (40.0%) and no tantrum in 1 child (10.0%). Overall, the figure shows that higher levels of gadget addiction were associated with a greater proportion of children experiencing more severe tantrum behavior.

Several findings did not follow the general pattern. Ten of the 22 children (45.5%) with moderate addiction and one of the 10 children (10.0%) with high addiction showed no tantrum. The number of children with severe tantrum was the same in the moderate ($n = 5$) and high ($n = 5$) groups, although the proportions differed (22.7% vs. 50.0%) because the groups had different sizes. No child in the low group showed mild or severe tantrum, so those cells contributed no variation.

DISCUSSION

1. Analysis and Interpretation of Findings

The finding that gadget addiction is significantly, strongly, and positively related to tantrum behavior ($\rho = 0.641$; $p < 0.001$) indicates that dependence on gadgets plays an important role in how young children express and control frustration, which is consistent with the objective of the study.

The characteristics of the children help to interpret this result. Boys were only slightly more numerous (51.1%), so sex is unlikely to explain the association, although developmental accounts suggest that boys tend to be more active and impulsive and to develop emotion regulation somewhat later. Most children were 6 years old, in Piaget's preoperational stage, where children can use symbols, language, and imagination but remain egocentric and limited in logical thinking (Fatimah & Yasni, 2021). Egocentrism makes it hard to accept refusal or delay, which leads to conflict when children must wait or follow rules (Halipah & Suyatmin, 2024). Children of this age are drawn to gadgets, which offer colorful animation and immediate feedback, while their emotion regulation is still developing (Li, 2023) and they tend to express feelings spontaneously and sometimes excessively (Anggraini et al., 2023). Because anger is reported to peak at two to four years and then gradually decline (Mulfiani & Rakimahwati, 2023), the predominance of 6-year-olds may partly explain why more than half of the children showed no tantrum.

The parents' characteristics point to the same mechanism. Most parents were young adults who are typically familiar with digital technology and may be more permissive in giving access, while an incomplete understanding of the effects of excessive use can weaken supervision. Most parents (80.0%) were employed, which limits time for direct interaction, and gadgets may then be used to entertain or calm a child (Rismala et al., 2024). Under reinforcement theory, behavior that brings comfort or relieves discomfort tends to be

repeated, so a child who calms down after receiving a gadget is reinforced to depend on it, and less parent-child interaction reduces opportunities to learn emotion management through parental guidance (Somoyani & Rahyani, 2025).

Nearly half of the children (48.9%) were in the moderate addiction category, suggesting that many already use gadgets intensively and are moving toward dependence. Behavioral addiction theory explains that an activity becomes addictive when it repeatedly gives pleasurable experiences; fast, interactive audiovisual stimulation encourages repetition, particularly when self-control is immature (Domoff et al., 2021). Although most children were not in the tantrum category, a considerable share showed mild (24.4%) or severe (22.2%) tantrum, which is an intense outburst that appears when children are frustrated or cannot fulfil their wishes (Nanda & Rusdiani, 2024); children with low frustration tolerance tend to show intense emotions when an enjoyable activity is stopped suddenly (Falensia, 2025).

2. Comparison with Theories and Previous Literature

The finding is consistent with emotion regulation theory and with the withdrawal and reinforcement processes described above. Children used to instant satisfaction from digital content have lower frustration tolerance and less practice in delaying gratification, and screen exposure is associated with reactive emotional responses (Radesky et al., 2023; Rahayu & Wulandari, 2025). Studies of children aged 4-5 years likewise describe an impact of gadget addiction on emotion regulation (Kamilla & Putri, 2025). When access is stopped, intense reactions such as crying, screaming, or anger follow as an expression of limited emotional control.

The results agree with Trisno Putri et al. (2023), who found a significant relationship between gadget use and temper tantrum in children aged 1-5 years ($p = 0.021$) among 106 respondents using a chi-square test; the present study instead examines the level of addiction in children aged 4-6 years with the Spearman test, with the same direction. It is also in line with Setyarini et al. (2023), who linked excessive screen time to greater tantrum potential and developmental delay with a strong Spearman correlation (17 respondents showed tantrum potential and 15 were in the suspect developmental category), although they studied screen time and general development. Wilianti & Hasibuan (2024) found a strong, same-direction relationship ($r = 0.662$; $p < 0.05$) among 101 children aged 4-5 years in Sidoarjo using a Pearson correlation, with frequent daily access associated with manipulative tantrums; the

coefficient here ($\rho = 0.641$) is very similar. The American Academy of Pediatrics (2022) likewise noted that excessive gadget use makes children more easily frustrated and reactive when access is restricted. Gadget addiction is also associated with irritability and difficulty adapting socially (Sajawandi et al., 2025), and with reduced direct interaction (Ramdana et al., 2024), which limit practice in managing emotions.

Earlier studies differ mainly in age range, analysis, and exposure measure (mostly use or screen time), whereas this study measured the level of addiction through behavioral indicators; the consistent conclusion suggests that gadget dependence, and not only screen time, is relevant to children's emotional behavior. The unexpected cases reported in the Results, such as children with moderate or high addiction who showed no tantrum, may reflect variation in participant characteristics and other unmeasured determinants of tantrum, including physical factors (hunger, fatigue, or illness), psychological factors, the surrounding environment, and parenting style (Lestari & Putri, 2021).

3. Research Implications

Theoretically, the findings support the use of behavioral addiction, reinforcement, and emotion regulation perspectives to explain tantrum behavior in early childhood and add local evidence that the level of addiction, and not only duration of use, is related to tantrum. Practically, parents can set clear daily limits and accompany children during gadget use, since gadgets can be beneficial when supervised but tend to harm concentration and attention when used without supervision (Batubara et al., 2023), and can encourage interactive and social play rather than using gadgets as the main way to calm a child. Kindergartens can educate parents on age-appropriate gadget use through parent meetings or counseling. Health workers, including midwives, can use the findings in promotive and preventive programs on family digital literacy and tantrum prevention, in line with approaches that involve accompaniment of mothers and parenting education (Idhayanti et al., 2022; Somoyani & Rahyani, 2025).

4. Research Limitations and Directions for Future Research

First, the researcher could not meet the parents in person because many parents work and kindergarten hours are short, so the aims and the way to complete the questionnaire could not be explained directly, and the return of questionnaires was delayed. Second, the researcher did not brief those who helped to distribute the questionnaire, which was circulated through the principal to the parents' group, so respondents may have understood

some items differently. Third, the sample was small ($n = 45$) from one kindergarten, and the cross-sectional design measured both variables once, so the findings cannot be generalized widely or interpreted causally. Fourth, both variables were parent-reported and confounders such as parenting style were not controlled. Future studies should use larger and more varied samples, collect data face to face or with briefed enumerators, and apply longitudinal or comparative designs that also consider parenting style, family environment, and children's social interaction.

CONCLUSION

More than half of the children (53.3%) showed no tantrum, while 24.4% showed mild and 22.2% severe tantrum. Nearly half (48.9%) had a moderate level of gadget addiction, 28.9% a low level, and 22.2% a high level, so gadget use has begun to reach a level that needs attention. There was a significant relationship between the level of gadget addiction and tantrum behavior among children aged 4-6 years at Widya Santhi Buana Kindergarten ($p < 0.001$; $\rho = 0.641$), which is strong and positive: the higher the level of gadget addiction, the greater the tendency toward tantrum behavior.

Theoretically, the study shows, with a behavioral-addiction-based measure, that the level of dependence on gadgets is related to tantrum behavior in kindergarten children, which strengthens the literature on early childhood emotion regulation. Practically, it gives local evidence for parents, schools, and health workers to design limits on gadget use and parent education. The contribution is limited to the context and design of the study.

Parents are advised to apply consistent limits on gadget use, such as a daily time limit and accompaniment during use, and to direct children toward other activities such as playing with friends, reading, or physical activity. Educational institutions are advised to educate parents about healthy gadget use. Future researchers are advised to involve more respondents, collect data face to face, and examine other factors that may influence tantrum behavior, such as parenting style, the family environment, and children's social interaction.

REFERENCES

American Academy of Pediatrics. (2022). Children, adolescents, and digital media: Risks and opportunities. *Pediatrics*, 149(6), Article e2022054321.

- Anggraini, N., Br Ginting, S. A., & Dazura, W. (2023). Pengaruh Perkembangan Sosial Emosional pada Perilaku Anak Usia Dini. *Hukum dan Demokrasi*, 23(1), 31–39. <https://doi.org/10.61234/hd.v23i1.13>
- Batubara, M., Nasution, M. I. M., Syahrin, T. A., Lubis, M. Y., Nujaima, I., & Husna, A. U. (2023). Pengaruh Gadget terhadap Anak Usia Dini. *Communnity Development Journal*, 4(4), 7429–7435.
- Domoff, S. E., Borgen, A. L., Kim, S. J., & Emond, J. A. (2021). Prevalence and predictors of children's persistent screen time requests: A national sample of parents. *Human Behavior and Emerging Technologies*, 3(5), 700–709. <https://doi.org/10.1002/hbe2.322>
- Falensia, R. (2025). Dampak Penggunaan Gadget Berlebihan terhadap Perkembangan Emosional Anak Usia Dini. *DUNIA ANAK: Jurnal Pendidikan Anak Usia Dini*, 8(2), 139–145. <https://jurnal.stkippersada.ac.id/jurnal/index.php/PAUD/article/view/5738>
- Fatimah, E. R., & Istikomah. (2021). Konsep Perkembangan Kognitif Anak Usia Dini (Studi Komparatif Jean Piaget dan Al-Ghozali) [The concept of early childhood cognitive development (A comparative study of Jean Piaget and Al-Ghozali)]. *ALAYYA: Jurnal Pendidikan Islam Anak Usia Dini*, 1(1), 1–31. <https://ejurnal.iaiyasnibungo.ac.id/index.php/alayya/article/view/317>
- Febriani, N., & Kurniawan, F. A. (2025). Dampak Penggunaan Gadget terhadap Pola Komunikasi dan Keseimbangan Sosial Generasi Alpha di Era Digital. *Journal of Smart Education and Learning*, 2(2), 93–102. <https://doi.org/10.53088/jsel.v2i2.2353>
- Halipah, S., & Suyatmin, S. (2024). Manfaat Bermain untuk Mengembangkan Aspek Sosial dan Emosi Anak Usia Dini. *Masa Keemasan: Jurnal Pendidikan Anak Usia Dini*, 4(1), 37–42. <https://doi.org/10.46368/mkipaud.v4i1.1958>
- Hawi, N. S., Samaha, M., & Griffiths, M. D. (2019). The Digital Addiction Scale for Children: Development and validation. *Cyberpsychology, Behavior, and Social Networking*, 22(12), 771–778. <https://doi.org/10.1089/cyber.2019.0132>
- Idhayanti, R. I., Winarsih, S., Masini, M., Sarwono, B., Agustina, R., Safitri, S., Wijayanti, N. Z. D., Rahmawati, N. D., & Nurjanah, A. S. (2022). Cegah Tantrum pada Anak Melalui Pendampingan Ibu Balita. *LINK*, 18(1), 37–42. <https://doi.org/10.31983/link.v18i1.8050>
- Ikatan Dokter Anak Indonesia. (2023). *Pedoman Penggunaan Gawai pada Anak Usia Dini di Indonesia*. <https://idai.or.id>
- Irzalinda, V., & Latifah, M. (2023). Screen time and early childhood well-being: A systematic literature review approach. *Journal of Family Sciences*, 18–34. <https://doi.org/10.29244/jfs.vi.49792>
- Johal, G. (2024). Screen time and emotional regulation in children (8–14 years). *Academe Journal of Education & Psychology*, 14(2), 56–64. <https://academejournal.in/paper-details.php?id=363&vid=69&vid=25>
- Kamilla, K. N., & Putri, A. A. P. (2025). Dampak Kecanduan Gadget pada Kemampuan Regulasi Emosi Anak Usia 4–5 Tahun. *Aulad: Journal on Early Childhood*, 8(2), 878–888. <https://doi.org/10.31004/aulad.v8i2.1173>
- Komite Etik Penelitian dan Pengembangan Kesehatan Nasional. (2021). *Pedoman dan Standar Etik Penelitian dan Pengembangan Kesehatan Nasional*. Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan. <https://www.badankebijakan.kemkes.go.id/repositori/id/eprint/4214/>

- Kota Denpasar. (2025). *Kota Denpasar, Indonesia—Statistik*.
<https://id.zhujiworld.com/id/915584-kota-denpasar/#details>
- Lestari, W. A., Putri, C. E., Sugiarti, R., & Suhariadi, F. (2021). Pengelolaan Perilaku Tantrum oleh Ibu terhadap Anak Usia 12–48 Bulan. *Proyeksi*, 16(2), 208–219.
<https://jurnal.unissula.ac.id/index.php/proyeksi/article/view/15880>
- Li, X. (2023). Emotion understanding, expression, and regulation in early childhood. *Journal of Education, Humanities and Social Sciences*, 15, 25–30.
<https://doi.org/10.54097/ehss.v15i.9055>
- Mulfiani, T. N., & Rakimahwati, R. (2023). Case study of tantrum behavior in early childhood. *AL-ISHLAH: Jurnal Pendidikan*, 15(3), 3327–3333.
<https://doi.org/10.35445/alishlah.v15i3.4173>
- Nanda, F. I., & Rusdiani, N. I. (2024). Intervensi Guru terhadap Perilaku Tantrum Anak Usia Toddler di Daycare Pocenter. *BUHUTS AL ATHFAL: Jurnal Pendidikan dan Anak Usia Dini*, 4(1), 64–74. <https://doi.org/10.24952/alathfal.v4i1.10579>
- Qomariah, S., Panggabean, S., & Siagian, D. S. (2025). The relationship between gadget use and socio-emotional development of preschool children in Islamic Kindergarten Integrated Raudhatul Jannah Senapelan Alwashliyah Pekanbaru City. *Jurnal Maternitas Kebidanan*, 10(2), 140–149. <https://doi.org/10.34012/jumkep.v10i2.7670>
- Radesky, J. S., Kaciroti, N., Weeks, H. M., Schaller, A., & Miller, A. L. (2023). Longitudinal associations between use of mobile devices for calming and emotional reactivity and executive functioning in children aged 3 to 5 years. *JAMA Pediatrics*, 177(1), 62–70.
<https://doi.org/10.1001/jamapediatrics.2022.4793>
- Rahayu, S., Wulandari, A., & Azainil. (2025). The effect of digital technology use on emotion regulation of elementary school students. *Edunesia: Jurnal Ilmiah Pendidikan*, 6(3), 1647–1658. <https://doi.org/10.51276/edu.v6i3.1335>
- Rahmayunita, A. Y. (2026). Regulasi Emosi pada Anak Usia Dini: Tinjauan Teoretis dalam Perspektif Psikologi Perkembangan. *Jiwara: Jurnal Psikologi dan Bimbingan Konseling*, 1(1), 1–11. <https://ejournal.darulfaizin.or.id/index.php/jiwara/article/view/69>
- Ramdana, N., Usman, Ilyas, S. N., Rahayu, & Razak, A. (2024). Gadget dan Anak: Mengukur Dampaknya terhadap Tumbuh Kembang Peserta Didik. *SOCIETIES: Journal of Social Sciences and Humanities*, 4(1), 19–26.
- Rismala, M. O., Firdaus, A. D., & Febriani, R. T. (2024). Hubungan antara Durasi Penggunaan Gadget dengan Perkembangan Sosial Anak Usia Prasekolah (4–5 Tahun). *Jurnal Ilmiah Keperawatan STIKES Hang Tuah Surabaya*, 19(1), 67–75.
<https://doi.org/10.30643/jiksht.v19i1.344>
- Sajawandi, L., Najach, S. Y., Farhani, K. A., Riana, Darini, & Pramuditya, A. A. P. (2025). Analisis Perubahan Perilaku pada Anak Usia Dini yang Kecanduan Gawai: Sebuah Tinjauan Pustaka Sistematis. *J-Symbol: Jurnal Magister Pendidikan Bahasa dan Sastra Indonesia*, 13(2), 1342–1349. <https://doi.org/10.23960/symbol.v13i2.1480>
- Setyarini, D. I., Rengganis, S. G., Ardhiani, I. T., & Mas'udah, E. K. (2023). Analisis Dampak Screen Time terhadap Potensi Tantrum dan Perkembangan Anak Usia Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(2), 2496–2504.
<https://doi.org/10.31004/obsesi.v7i2.3376>
- Somoyani, N. K., & Rahyani, N. K. Y. (2025). Edukasi Pola Asuh Orangtua dalam Pencegahan Temper Tantrum Melalui Pemberdayaan Nakes dan Ibu Batita di Praktik

- Mandiri Bidan di Denpasar Selatan. *Jurnal Pengabmas Masyarakat Sehat*, 7(1), 20–30. <https://ejournal.poltekkes-denpasar.ac.id/index.php/JPMS/article/view/3794>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (Edisi revisi). Alfabeta.
- Trisno Putri, N. R. I. A., Astuti, V. W., & Zuhrufillah, I. (2023). Penggunaan Gadget dan Kejadian Temper Tantrum pada Anak Usia 1 hingga 5 Tahun. *Jurnal Keperawatan Rafflesia*, 5(1), 47–56. <https://doi.org/10.33088/jkr.v5i1.907>
- Wigati, D., & Mufidah, W. (2022). Pengembangan Alat Ukur Metode Observasi Rating Scale: Perilaku Emosi Marah dan Temper Tantrum pada Anak Usia Dini. *IDEA: Jurnal Psikologi*, 6(2), 99–106. <https://doi.org/10.32492/idea.v6i2.6205>
- Wilianti, R., & Hasibuan, R. (2024). Hubungan Penggunaan Gadget terhadap Potensi Tantrum pada Anak Usia 4–5 Tahun. *PAUD Teratai*, 13(2), 1–6. <https://ejournal.unesa.ac.id/index.php/paud-teratai/article/view/61179>
- World Health Organization. (2019). *Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age*. <https://www.who.int/publications/i/item/9789241550536>