

Parent-Child Relationship and Gadget Addiction: The Role of Loneliness

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ABSTRACT

Gadget addiction refers to the excessive dependence on electronic devices, leading to significant disruptions in daily life and functioning. One of the major contributing factors to gadget addiction is the quality of the parent-child relationship, which, when poor, may lead to increased feelings of loneliness. This study aims to analyze the role of loneliness as a mediating factor in the relationship between parent-child relationships and gadget addiction. A quantitative study design was employed, utilizing three validated psychological scales: SAS-SV, PCRS, and UCLA Loneliness Scale Version 3. The study sampled 188 junior high school students through purposive sampling. Data analysis using Hayes' mediation model revealed that loneliness partially mediates the effect of parent-child relationships on gadget addiction. These findings highlight the importance of fostering strong parent-child bonds to mitigate the risks of gadget addiction among adolescents.

Keywords: Gadget addiction, parent-child relationship, loneliness, adolescents.

INTRODUCTION

Technology has played a crucial role in enhancing individual productivity, especially in communication and social interactions (Latifi et al., 2022; Lillford & Hermansson, 2021). The rapid advancement of technology has facilitated various technology-based activities, including e-learning, telemedicine, and digital commerce, all of which heavily rely on electronic devices (Sugianto, 2013). As a result, gadgets have become an essential part of daily life across different demographics, including students, professionals, and the elderly. These devices, such as smartphones, computers, and tablets, offer numerous benefits, yet they also introduce challenges, particularly in interpersonal relationships (Khairuldin et al., 2021).

Information from the Indonesian Ministry of Health (Promkes, 2023) reveals that the use of gadgets is prevalent among both adults and adolescents. These devices fulfill various roles, including internet browsing, GPS navigation, and serving as multimedia tools. However, the widespread adoption of these gadgets has altered interaction patterns, often leading individuals to place a higher priority on their devices rather than in-person communication (Hidayat et al., 2024). While they offer convenience, gadgets can adversely impact relationships, diminishing the quality and effectiveness of communication (Celikkalp et al., 2020; Diadi et al., 2023). In particular, there is an increasing trend among adolescents towards extended gadget use compared to ten years ago (Yoon & Yun, 2023).

Gadgets serve as a double-edged sword for young people. When used correctly, they provide educational resources, communication opportunities, and entertainment; however, excessive use can lead to social isolation, decreased physical activity, and health issues like eye strain and obesity (Kurniawati & Sutharjana, 2023; Rianasari et al., 2023). Adolescents aged 12-27 show the highest rates of gadget usage, significantly surpassing other age categories (Hysa et al., 2021). In Indonesia, this trend is intensified by advances in technology and the broad availability of the internet (Hinduan et al., 2020; Persada et al., 2020). Furthermore, adolescents who spend over 5 hours a day on gadgets are ten times more likely to develop gadget addiction compared to those who use them less frequently (Salles et al., 2024).

This concern is in line with the DSM-V findings, which define addiction as a dependency that negatively affects individuals and can lead to impulsive behaviors despite adverse outcomes (APA, 2013). Gadget addiction may hinder the development of the prefrontal cortex in young people, affecting their self-control, emotional

regulation, and moral judgment (Yumarni, 2022). This issue is particularly alarming given that adolescence is a vital developmental period characterized by psychological, social, and emotional transformations. According to Erik Erikson's psychosocial theory, adolescents are navigating the "identity vs role confusion" stage, where social support, especially from parents and peers, plays a pivotal role in shaping their identity (Aulia et al., 2022; Fadilah et al., 2023).

Study suggests that the nature of parent-child relationships is crucial in influencing gadget addiction. Strained relationships, often marked by discord, heighten the risk of addiction, whereas supportive and healthy relationships can help reduce this risk (Zhou et al., 2022). The way parents interact, their parenting techniques, and their emotional connectivity are vital elements of these relationships, which also impact feelings of loneliness in adolescents (Cheng et al., 2021). Loneliness, defined as a sense of social disconnect, adversely affects both mental and physical well-being (Turner et al., 2024) and serves as a major predictor of gadget addiction (Young, 2015). Adolescents who feel lonely may resort to gadgets as a means of coping, which can worsen their addiction (Dikec, 2018).

In Indonesia, the rate of internet use has reached 79.5%, with individuals aged 12-27 forming the largest group of users (APJII, 2024). Study conducted in Denpasar indicates that 69.5% of adolescents are categorized as gadget addicts, marking a significant rise from prior years (Fatah et al., 2022). Loneliness, frequently caused by conflicts with peers, family issues, or feelings of isolation, is especially common among adolescents and is closely linked to higher gadget usage (Suryana et al., 2022).

This study aims to investigate the connections between parent-child relationship dynamics and gadget addiction, considering loneliness as a mediating factor. While existing study underscores the importance of these factors, there is a notable gap in thorough investigation within the Indonesian setting. The study posits that loneliness mediates the connection between negative parent-child relationships and gadget addiction, indicating that the interplay of these factors significantly enhances the prevalence of gadget dependency among adolescents.

METHODS

This study employs a non-experimental quantitative approach to investigate the connections between parent-child dynamics, feelings of loneliness, and addiction to gadgets among adolescents aged 12 to 15. A total of 188 participants were selected from a junior high school in Kutai Kartanegara Regency, East Borneo, using purposive sampling. Participants were classified based on their gadget usage (more than 5 hours per day), main activities (social media or online gaming), and primary caregivers (mother, father, or others). Data collection involved the use of validated measures: the SAS-SV for gadget addiction, the PCRS scale for parent-child relationships, and the UCLA Loneliness Scale Version 3 for loneliness, which were all adapted for the Indonesian context with reliability coefficients of 0.773, 0.826, and 0.893, respectively.

Procedure

The study method involved observation, preparation of instruments, and data gathering via Google Forms. The data were analyzed using SPSS version 25 and Hayes' PROCESS Macro (model 4) to evaluate the mediating effect of loneliness on the link between parent-child relationships and gadget addiction. This methodology allowed for a thorough investigation of the interactions between the variables within the adolescent group.

RESULTS

This study examines the relationship between parent-child relationships, loneliness, and gadget addiction among adolescents. Data obtained from 188 adolescents was verified to be suitable for parametric analysis through classical assumption tests. The descriptive analysis revealed that adolescents displayed higher-than expected levels of gadget addiction (empirical mean: 40.62) and quality of parent-child relationships (empirical mean: 71.96), while their loneliness levels were lower than expected (empirical mean: 43.85). The correlation test showed a weak negative relationship between gadget addiction and parent-child relationships ($r=-0.173$; $p=0.006$), a weak positive relationship between gadget addiction and loneliness ($r=0.185$; $p=0.003$), and a relatively stronger negative relationship between parent-child relationships and loneliness ($r=-0.272$; $p=0.000$).

The hypothesis test using Hayes model 4 mediation analysis revealed significant effects. A strong parent-child relationship significantly reduced loneliness ($\beta=-0.259$; $p=0.000$), while loneliness significantly increased the risk of gadget addiction ($\beta=0.200$; $p=0.000$). The total effect of parent-child relationships on gadget addiction was significant ($\beta=-0.132$; $p=0.005$), indicating that strong parent-child relationships reduce gadget addiction tendencies. Additionally, loneliness was found to partially mediate this relationship ($\beta=0.052$; BootCI=0.021-0.092). Partial mediation means that while loneliness explains part of the relationship between parent-child relationships and gadget addiction, the direct relationship between the two variables remains significant, consistent with theories by Baron and Kenny (1986) also Pardo and Roman (2013).

These findings emphasize the importance of fostering strong parent-child relationships to reduce gadget addiction among adolescents. Additionally, reducing loneliness plays a crucial role, as it partially mediates the relationship between parent-child relationships and gadget addiction. This aligns with study by Mustafa (2023) and Sugiyono (2019), supporting the hypothesis that loneliness mediates the effect of parent-child relationships on gadget addiction.

DISCUSSION

This study investigates the impact of parent-child relationships on gadget addiction among adolescents, with loneliness serving as a mediating variable. Findings reveal that a strong parent-child relationship significantly reduces gadget addiction, both directly and through mitigating loneliness. Positive interactions between parents and children foster emotional security and reduce feelings of isolation, which are key triggers for excessive gadget use (Cheng et al., 2021; Gao & Cummings, 2019). In contrast, poor relationships, such as conflict or neglect, may lead adolescents to seek validation through online interactions, increasing the risk of gadget addiction (Cheng et al., 2021; Hussien, 2022). Additionally, while mother in Indonesia are primary caregivers, the father-child relationships also plays a critical role, as it contributes more significantly to gadget addiction risks than the mother relationship (Song, 2021).

Loneliness, identified as a central factor in this study, is both a consequence of poor family relationships and a predictor of gadget addiction. Adolescents experiencing loneliness often turn to gadgets for emotional escape or social validation, but this reliance can exacerbate social isolation and create a cycle of dependence (Hussien, 2022; Zeng et al., 2022). The mediation analysis further underscores that loneliness partially explains the relationship between parent-child relationships and gadget addiction. Effective communication and emotional engagement within families can therefore interrupt this cycle, providing adolescents with the emotional support they need to reduce gadget use (Pradhita & Widyorini, 2023).

This study also highlights gender-specific trends in gadget addiction, with boys at slightly higher risk than girls. Boys are more likely to use gadgets for gaming, while girls tend to engage in social media interactions (Mabaroh & Sugianti, 2021). In both genders, excessive gadget use of over five hours daily is linked to increased stress, diminished social interactions, and a greater likelihood of addiction (Kim et al., 2019). These findings suggest that family-based strategies focusing on reducing loneliness and promoting emotional connection can be effective in addressing gadget addiction.

CONCLUSION

This study concludes that strong parent-child relationships significantly reduce gadget addiction among adolescents, both directly and indirectly, by decreasing levels of loneliness. These findings emphasize the need for family-based interventions that focus on strengthening emotional bonds and improving communication within families.

Despite these significant findings, this study has certain limitations. The correlation between variables, although statistically significant, is relatively weak, suggesting the presence of other influencing factors such as self-esteem, self-control, and peer pressure, which were not included in this study. Additionally, the use of a quantitative approach limits the depth of understanding of adolescents' emotional experiences. Future study should consider adopting a mixed-methods approach and expanding the geographical scope to enhance the generalizability of findings.

Overall, this study contributes to the growing literature on adolescent gadget addiction by emphasizing the mediating role of loneliness and highlighting the importance of parent-child relationships in mitigating excessive gadget use.

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