

**THE DANGERS OF GADGET USE ON THE MENTAL HEALTH DEVELOPMENT OF
ADOLESCENTS IN KEMURANG WETAN VILLAGE, TANJUNG DISTRICT,
BREBES REGENCY, INDONESIA**

M. Naufal Fadli Mubarok

Sekolah Tinggi Agama Islam (STAI) Brebes

Email*: fadlimubarok@gmail.com

(*) Corresponding Author

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Abstract

The rapid advancement of digital technology has significantly increased gadget use among adolescents, creating both educational opportunities and psychological challenges. Excessive and uncontrolled gadget use has become a growing concern due to its potential negative effects on adolescents' mental health, including anxiety, emotional instability, sleep disturbances, reduced social interaction, and symptoms of digital addiction. This study aims to analyze the dangers of gadget use on the mental health development of adolescents in Kemurang Wetan Village, Tanjung District, Brebes Regency, Indonesia. The research employed a qualitative case study approach involving adolescents, parents, community leaders, and educators as research participants selected through purposive sampling. Data were collected through in-depth interviews, participant observation, and document analysis, and were analyzed using the interactive model of data analysis consisting of data reduction, data display, and conclusion drawing. The findings indicate that excessive gadget use has negatively influenced adolescents' emotional, cognitive, and social development. Common problems identified include increased anxiety, irritability, decreased concentration, sleep disorders, social withdrawal, and dependence on online entertainment and social media. Limited parental supervision and low digital literacy further exacerbate these psychological risks. However, adolescents who received consistent parental guidance, participated in religious and community activities, and maintained balanced digital habits demonstrated better emotional regulation and healthier social relationships. The study concludes that preventing the adverse effects of gadget use on adolescent mental health requires collaborative efforts among families, schools, communities, and local government through digital literacy education, strengthened parental supervision, and the promotion of healthy digital behavior. These findings contribute to the development of community-based strategies for safeguarding adolescent mental health in the digital era.

Keywords: gadget use; adolescent mental health; digital addiction; digital literacy; parental supervision; qualitative study.

Abstrak

Perkembangan teknologi digital yang semakin pesat telah meningkatkan penggunaan gawai (gadget) di kalangan remaja, sehingga memberikan berbagai peluang sekaligus tantangan terhadap kesehatan mental mereka. Penggunaan gadget yang berlebihan dan tidak terkontrol

menjadi salah satu faktor yang berpotensi menimbulkan berbagai masalah psikologis, seperti kecemasan, ketidakstabilan emosi, gangguan tidur, menurunnya interaksi sosial, hingga gejala kecanduan digital. Penelitian ini bertujuan untuk menganalisis bahaya penggunaan gadget terhadap perkembangan kesehatan mental remaja di Desa Kemurang Wetan, Kecamatan Tanjung, Kabupaten Brebes, Indonesia. Penelitian ini menggunakan pendekatan kualitatif dengan jenis studi kasus. Informan penelitian terdiri atas remaja, orang tua, tokoh masyarakat, dan pendidik yang dipilih menggunakan teknik purposive sampling. Pengumpulan data dilakukan melalui wawancara mendalam, observasi partisipatif, dan studi dokumentasi. Analisis data menggunakan model interaktif yang meliputi reduksi data, penyajian data, serta penarikan dan verifikasi kesimpulan. Hasil penelitian menunjukkan bahwa penggunaan gadget secara berlebihan memberikan dampak negatif terhadap perkembangan emosional, kognitif, dan sosial remaja. Permasalahan yang banyak ditemukan meliputi meningkatnya kecemasan, mudah marah, menurunnya konsentrasi belajar, gangguan pola tidur, berkurangnya interaksi sosial secara langsung, serta munculnya ketergantungan terhadap media sosial dan hiburan digital. Rendahnya literasi digital dan kurang optimalnya pengawasan orang tua turut memperburuk kondisi tersebut. Sebaliknya, remaja yang memperoleh pendampingan orang tua secara konsisten, aktif mengikuti kegiatan keagamaan dan kemasyarakatan, serta mampu mengelola waktu penggunaan gadget secara seimbang menunjukkan kondisi kesehatan mental yang lebih baik. Penelitian ini menyimpulkan bahwa upaya pencegahan dampak negatif penggunaan gadget terhadap kesehatan mental remaja memerlukan sinergi antara keluarga, sekolah, masyarakat, dan pemerintah melalui penguatan literasi digital, peningkatan pengawasan orang tua, serta pembiasaan perilaku digital yang sehat. Temuan ini diharapkan dapat menjadi dasar dalam penyusunan strategi berbasis masyarakat untuk menjaga kesehatan mental remaja di era digital.

Kata kunci: penggunaan gadget; kesehatan mental remaja; kecanduan digital; literasi digital; pengawasan orang tua; studi kualitatif.

A. Introduction

The rapid advancement of information and communication technology has transformed almost every aspect of human life, particularly among adolescents who have become the largest users of digital devices. Gadgets, including smartphones, tablets, and other internet-enabled devices, have become essential tools for communication, education, entertainment, and social interaction. Their accessibility has created numerous educational opportunities while simultaneously introducing new psychosocial challenges that affect adolescents' mental well-being (Odgers & Jensen, 2020). Adolescence represents a critical developmental stage characterized by significant physical, emotional, cognitive, and social changes. Consequently, excessive exposure to digital technology during this period may influence emotional regulation, identity formation, interpersonal relationships, and overall psychological health (WHO, 2021).

Mental health has emerged as one of the most pressing public health concerns among adolescents worldwide. According to the World Health Organization, approximately one in seven adolescents aged 10–19 years experiences a mental health disorder, with anxiety, depression, and behavioral disorders being the most common conditions (WHO, 2021). At the same time, the increasing prevalence of smartphone ownership has significantly changed adolescents' lifestyles, leading to prolonged screen time and greater dependence on digital media. Several studies have demonstrated that excessive gadget use is associated with psychological distress, emotional instability, decreased life satisfaction, poor academic performance, and impaired social functioning (Twenge & Campbell, 2018; Keles et al., 2020). These findings indicate that although gadgets provide numerous benefits, uncontrolled usage may become a significant risk factor for adolescent mental health.

The widespread use of social media has further intensified concerns regarding adolescents' psychological well-being. Social networking platforms encourage continuous online engagement, social comparison, and instant communication, which often expose adolescents to cyberbullying, unrealistic social expectations, and the fear of missing out (FoMO). These experiences contribute to increased levels of anxiety, loneliness, depression, and low self-esteem (Keles et al., 2020). Furthermore, adolescents frequently prioritize virtual interactions over face-to-face communication, resulting in reduced social competence and weakened interpersonal relationships (Livingstone & Helsper, 2021). Consequently, digital dependency has become one of the defining psychological challenges faced by today's adolescent population.

Another significant consequence of excessive gadget use is sleep disruption. Numerous empirical studies have reported that prolonged exposure to screens, particularly before bedtime, suppresses melatonin production, delays sleep onset, and reduces sleep quality (Hale & Guan, 2015). Sleep deprivation subsequently affects emotional regulation, cognitive performance, memory, concentration, and stress management. Adolescents experiencing insufficient sleep are more likely to develop symptoms of depression, irritability, and anxiety compared to those maintaining healthy digital habits (Domoff et al., 2019). Therefore, gadget overuse indirectly contributes to deteriorating mental health through multiple physiological and psychological pathways.

In Indonesia, the rapid expansion of internet infrastructure has substantially increased gadget ownership among adolescents, including those living in rural communities. Affordable smartphones, widespread internet access, and the integration of digital learning following the COVID-19 pandemic have accelerated adolescents' dependence on digital technology. According to the Indonesian Internet Service Providers Association (APJII), adolescents constitute one of the largest groups of internet users, with daily internet usage exceeding several hours for educational and recreational purposes (APJII, 2024). While digital technology facilitates learning and communication, insufficient parental supervision and limited digital literacy increase adolescents' vulnerability to excessive gadget use and its associated psychological consequences.

Parents play a fundamental role in preventing the negative impacts of gadget use. Family-based supervision, effective communication, and the establishment of clear rules regarding screen time have been shown to reduce the likelihood of digital addiction and improve adolescents' emotional well-being (Domoff et al., 2019). Conversely, permissive parenting styles, limited family interaction, and inadequate monitoring often contribute to prolonged gadget use and reduced opportunities for healthy social engagement. Beyond the family, schools and local communities are equally responsible for promoting balanced digital behavior through digital literacy education, extracurricular activities, religious engagement, and social participation, all of which enhance adolescents' resilience against psychological distress (Livingstone & Helsper, 2021).

Kemurang Wetan Village, located in Tanjung District, Brebes Regency, has experienced a noticeable increase in gadget use among adolescents over recent years. The availability of affordable internet services and smartphones has encouraged adolescents to spend considerable amounts of time accessing social media, online games, video streaming platforms, and digital entertainment. Preliminary observations indicate several emerging concerns, including reduced face-to-face social interaction, declining participation in community and religious activities, sleep disturbances, emotional instability, and excessive dependence on online entertainment. These conditions have generated increasing concern among parents, educators, and community leaders regarding the long-term implications of gadget use for adolescents' mental health development.

Although previous studies have extensively examined the relationship between gadget use and adolescent mental health, most investigations have focused on urban populations or have employed quantitative research designs. Limited research has explored this phenomenon qualitatively within rural Indonesian communities, where family dynamics, cultural values, and community engagement may shape adolescents' digital behavior differently. This study therefore offers a contextual contribution by examining the dangers of gadget use on adolescents' mental health development in Kemurang Wetan Village, Tanjung District, Brebes Regency. Through a qualitative approach, this research seeks to provide a deeper understanding of adolescents' experiences, parental perspectives, and community responses regarding gadget use.

Based on the background above, this study aims to analyze the dangers of gadget use on the mental health development of adolescents in Kemurang Wetan Village, Tanjung District, Brebes Regency, Indonesia. The findings are expected to contribute both theoretically and practically by enriching the literature on adolescent mental health in the digital era and providing evidence-based recommendations for families, schools, communities, and policymakers in developing effective strategies to promote healthy digital behavior and protect adolescents' psychological well-being.

B. Research Method

This study employed a qualitative approach with a case study design to examine the dangers of gadget use on the mental health development of adolescents in Kemurang Wetan Village, Tanjung District, Brebes Regency, Indonesia. The qualitative approach was selected because it enables an in-depth exploration of participants' experiences, perceptions, and behaviors within their natural social context (Creswell & Poth, 2018; Yin, 2018). The research was conducted from January to April 2026. Participants were selected using purposive sampling and consisted of 25 informants, including 15 adolescents aged 13–18 years, five parents, three teachers, one community leader, and one village official. Data were collected through semi-structured interviews, participant observation, and document analysis to obtain comprehensive information regarding adolescents' gadget usage

patterns, psychological conditions, family supervision, and social interactions (Patton, 2015).

The collected data were analyzed using the interactive model developed by Miles, Huberman, and Saldaña (2014), which involves data condensation, data display, and conclusion drawing and verification. The analysis focused on identifying recurring themes related to excessive gadget use, emotional well-being, anxiety, sleep disturbances, social relationships, and preventive strategies implemented by families and the community. To ensure the trustworthiness of the findings, this study applied credibility, transferability, dependability, and confirmability criteria through source and method triangulation, member checking, prolonged engagement, and comprehensive documentation of the research process (Lincoln & Guba, 1985). Ethical considerations were observed by obtaining informed consent from all participants, maintaining confidentiality, and ensuring voluntary participation throughout the study.

C. Discussion

The findings revealed that gadget use has become an inseparable part of adolescents' daily lives in Kemurang Wetan Village, Tanjung District, Brebes Regency. Almost all participants owned smartphones and used them for various purposes, including online learning, social media, video streaming, gaming, and communication. Although gadgets provided educational benefits and facilitated access to information, the majority of adolescents reported spending between five and nine hours per day on their devices, exceeding the recommended recreational screen time for their age group. Excessive gadget use gradually shifted adolescents' daily routines, reducing their participation in family interactions, religious activities, physical exercise, and community engagement. These findings support previous studies indicating that prolonged screen exposure alters adolescents' behavioral patterns and social lifestyles (Twenge & Campbell, 2018; Odgers & Jensen, 2020).

One of the most significant findings of this study concerns the psychological effects experienced by adolescents due to excessive gadget use. Many participants reported feelings of anxiety, irritability, emotional instability, and restlessness when they were

unable to access their smartphones or social media accounts. Several adolescents admitted checking notifications repeatedly, feeling uncomfortable when disconnected from the internet, and experiencing fear of missing online activities. Such behaviors indicate early symptoms of problematic smartphone use and digital dependency. These findings are consistent with previous research demonstrating that excessive digital engagement increases psychological distress and emotional vulnerability among adolescents (Keles et al., 2020). Continuous exposure to social networking platforms also encourages unrealistic social comparison, reducing self-esteem and increasing emotional dissatisfaction.

Sleep disturbance emerged as another dominant issue associated with prolonged gadget use. Most adolescent participants acknowledged using smartphones late at night for gaming, watching videos, or browsing social media. Consequently, they experienced delayed sleep onset, insufficient sleep duration, daytime fatigue, and difficulty concentrating during school hours. Teachers interviewed in this study confirmed that several students frequently appeared sleepy, less attentive, and less motivated during classroom learning. Scientific evidence has consistently shown that exposure to blue light emitted by digital screens suppresses melatonin production, disrupts circadian rhythms, and contributes to poor sleep quality, ultimately affecting adolescents' emotional regulation and mental health (Hale & Guan, 2015).

The study also identified a noticeable decline in face-to-face social interaction among adolescents. Rather than participating in neighborhood activities or spending time with family members, many adolescents preferred communicating through online platforms or engaging in digital entertainment individually. Parents reported reduced communication within the family and increasing difficulties encouraging adolescents to participate in household responsibilities or community events. Community leaders similarly observed declining youth participation in religious gatherings, sports activities, and social organizations. This reduction in direct interpersonal interaction potentially weakens adolescents' communication skills, empathy, and social competence, thereby increasing feelings of loneliness and social isolation (Livingstone & Helsper, 2021).

Family supervision was found to play a decisive role in determining adolescents' gadget use behavior. Adolescents whose parents established clear rules regarding screen

time, monitored online activities, and maintained open communication demonstrated healthier digital habits and better emotional control. In contrast, adolescents from families with minimal supervision or inconsistent parenting practices tended to spend considerably more time using gadgets and exhibited stronger signs of digital dependency. These findings reinforce the argument that effective parental mediation significantly reduces the negative consequences of excessive gadget use by promoting responsible digital behavior and strengthening emotional resilience (Domoff et al., 2019). Therefore, parental involvement remains one of the most influential protective factors against technology-related mental health problems.

Another important finding concerns the relatively low level of digital literacy among both adolescents and parents. Many participants viewed gadget use primarily as a source of entertainment without fully understanding its psychological risks. Parents admitted experiencing difficulties monitoring online content because of limited technological knowledge, while adolescents demonstrated limited awareness of cyberbullying, misinformation, privacy protection, and healthy screen-time management. This lack of digital literacy increases adolescents' vulnerability to harmful online experiences and reinforces unhealthy digital behaviors. Strengthening digital literacy programs at schools and within communities is therefore essential for promoting safer and healthier technology use among adolescents.

Despite these challenges, the findings also demonstrate that positive environmental support can mitigate the adverse psychological effects of gadget use. Adolescents who actively participated in religious education, youth organizations, sports activities, and community programs exhibited stronger emotional regulation, healthier interpersonal relationships, and lower dependence on digital devices. Religious activities, in particular, were perceived as providing emotional comfort, moral guidance, and opportunities for meaningful social interaction. These findings suggest that strengthening community engagement and encouraging balanced lifestyles may serve as effective protective factors against excessive gadget use and mental health deterioration.

Overall, this study confirms that the dangers of excessive gadget use extend beyond digital addiction itself, influencing multiple dimensions of adolescent mental health,

including emotional stability, cognitive functioning, sleep quality, social relationships, and psychological well-being. The findings emphasize that addressing this issue requires collaborative efforts involving families, schools, communities, healthcare professionals, and local governments. Comprehensive interventions should include digital literacy education, parental guidance programs, school-based mental health promotion, community engagement activities, and policies encouraging balanced technology use. Such integrated approaches are expected to foster healthier digital habits while protecting adolescents' mental health development in the increasingly digitalized society.

D. Conclusion

This study concludes that excessive gadget use has become a significant factor influencing the mental health development of adolescents in Kemurang Wetan Village, Tanjung District, Brebes Regency. Although gadgets provide educational and communication benefits, uncontrolled and prolonged use contributes to various psychological problems, including anxiety, emotional instability, sleep disturbances, reduced concentration, social withdrawal, and symptoms of digital dependency. The findings also reveal that limited parental supervision and inadequate digital literacy increase adolescents' vulnerability to these negative effects, whereas supportive family environments, active participation in religious and community activities, and balanced digital habits contribute positively to adolescents' psychological well-being.

Furthermore, this study highlights the importance of collaborative efforts among families, schools, communities, and local government in minimizing the adverse impacts of gadget use on adolescent mental health. Strengthening digital literacy education, promoting healthy screen-time management, enhancing parental involvement, and implementing community-based mental health programs are essential strategies for fostering responsible technology use among adolescents. Future research is recommended to employ mixed-method or longitudinal approaches involving larger populations to provide a broader understanding of the long-term relationship between gadget use and adolescent mental health development.

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