

LEVEL OF GADGET ADDICTION WITH EMOTIONAL DISORDERS IN CHILDREN

Siang Tarigan¹, Dina Indarsita², Shifa Rahmania³
¹²³Politeknik Kesehatan Kementerian Kesehatan Medan
Email : ¹tariganrenisra1972@gmail.com

ABSTRACT

Emotional disturbance is a form of self-adaptation difficulty and inappropriate behaviors that were improper to the applied norms in certain age group or society, in which disadvantageous to self or other people. When children were addicted to gadgets, this will make children anxious when they got separated away to the said gadget. While most of their time were spent in using the gadget. General goal of this research was to identify the relationship between gadget addiction level and emotional disorder in elementary school children aged 11-12 years at UPT SDN No. 064023, Medan Tuntungan. Method used in this research were quantitative method with cross-sectional approach with the amount of samples of 30 people. Results acquired from this research, through statistical analysis of Chi-square test, was $p\text{-value} < 0.05$ which was 0.049 (difficulty scale) and $p\text{-value}$ of 0.025 (strength scale). Conclusively, there was a relationship between gadget addiction level and emotional disorders in elementary school children aged 11-12 years at UPT SDN No. 064023, Medan Tuntungan District, though in low correlation. Hopefully, to give a suggestion for further researches, to be able to analyze the intensity and which factors that could affect children to avoid gadget addiction.

Keywords : *Addiction Level, Gadget Usage, Emotional Disorder, Children*

INTRODUCTION

Emotional disorders are difficulties in adjustment that lead to deviant behavior that deviates from societal norms, harming themselves and others. Children struggle to control their emotions due to their dependence on gadgets, neglecting their surroundings, and tending to lack empathy. Factors associated with emotional disorders in children include biology, cognitive development, family, and environment (school environment, peer environment, technological development, and gadget addiction) (Suryani, 2023).

Children addicted to gadgets tend to be anxious when separated from their devices and spend most of their time playing with them. Due to the lack of closeness between parents and children, children tend to become introverted, and their brain development is affected. The Prefrontal Cortex (PFC) is the part of the brain that controls emotions, self-control, and moral values. Children addicted to technology produce excess dopamine, disrupting PFC function. (Ministry of Health, 2023)

Indonesians are addicted to scrolling through their phones, ranking first in the world according to the "State of Mobile 2023" report. The report shows that Indonesia is the highest user, with an average of 5.7 hours per day using mobile devices (phones and tablets) in 2022. The average duration of phone use has increased significantly from 5.4 hours per day in 2021 (Dewi, 2023).

Research from the Faculty of Medicine, University of Indonesia (FKUI) shows that approximately 20% of Indonesian children are addicted to gadgets, not including those experiencing problematic issues. Indonesia's child and adolescent population has reached 90 million (Nisa, 2020), with a mental and emotional disorder rate of 9.6% (Risksdas 2018). This figure has increased by 6.0% since 2013, with the prevalence of Central Java Province also increasing from 4.7% to 7.7% (BPPK, 2018).

A 2019 Kominfo survey showed that 66.31% of Indonesians aged 9-19 use gadgets, with an average of 65.34%. North Sumatra Province ranks first in gadget use (6.3%), followed by Lampung (3%) and West Sumatra (2.6%) in internet usage. According to the 2019 Digital Yearbook Report, social media users in Indonesia are increasing by 15% annually, with nearly 150 million of the 268.3 million population actively using social media, with an average of 11.2 accounts. Social media users in Indonesia spend an average of 3 hours and 26 minutes per

day on their smartphones, longer than the global average of 2 hours and 16 minutes. (Suryani 2023)

Research by Intan Risma Juliani (2022) found a significant relationship between gadget addiction and emotional disorders in eighth-grade adolescents at SMP Negeri 29 Bandung (p-value 0.03). Similarly, Zahratul Ayinni (2023) found a relationship between gadget addiction and emotional disorders in adolescents at SMK Negeri 1 Padang in 2023 (p-value = 0.000). Research by Ahmad Ramadhan Asif (2017) also found a relationship between gadget addiction and emotional and behavioral disorders in adolescents aged 11-12 years, as shown by a chi-square test (p = 0.002).

Based on initial observations and interviews that we conducted at UPT SDN No. 064023 Medan Tuntungan on Saturday, December 20, 2025, it was found that the school allowed students to bring gadgets to support their studies, but after researchers observed many students misusing gadgets, such as during recess, many students chose to play gadgets rather than playing other activities with friends. From the school's observations, almost every day there were students who fought and it was known that one of the factors was playing online games, especially among male students, and the results of interviews with 30 students showed that they already had their own gadgets, especially smartphones, and they admitted to playing gadgets without any time limits, because they were engrossed in playing online games and playing social media such as Instagram, Facebook, WhatsApp, and other media. They also admitted that they could get angry if they felt disturbed while playing gadgets.

Based on the explanation above, it can be seen that this research is important to be studied so that we can find out whether children are experiencing gadget addiction and emotional disorders in children. then the author is interested in conducting research on the Relationship between the Level of Addiction to Gadget Use and Emotional Disorders in Elementary School Children (SD) Aged 11-12 Years at UPT SDN No. 064023 Medan Tuntungan. This research is important to be studied so that we can find out whether children are experiencing mild, moderate, and severe levels of gadget addiction. so that we can prevent the occurrence of emotional disorders continuously in children. Currently, researchers see many children who already have their own gadgets without any time limits in using gadgets.

RESEARCH METHOD

This study used a quantitative method with the Chi-Square test. The study was conducted at the UPT SDN No. 064023 Meidan Tuntungan, planned to begin in February 2024. The population of this study was 156 students aged 11-12 years at the UPT SDN No. 064023 Meidan Tuntungan. The sample size was 30.

RESEARCH RESULTS AND DISCUSSION

This study was conducted to examine the relationship between gadget addiction and emotional disorders in elementary school children aged 11-12 years at the SDN No. 064023 Meidan Tuntungan School. This study involved 30 students at the SDN No. 064023 Meidan Tuntungan School. The study used simple random sampling, with 13 students from grade 5 and 17 from grade 6.

This study was conducted on March 9, 2024, at the SDN No. 064023 Meidan Tuntungan District. The data collection for this study was carried out using a questionnaire sheet where the school was given time to conduct the study.

The results of the results can be seen as follows:

1. Results of Univariate Analysis

a. Characteristics of Responden

Table 1 Distribution and Frequency of Respondent Characteristics

Characteristics	<i>f</i>	%
Age		
11 years old	13	43,3
12 years old	17	56,7
Gender		
Man	16	53,3

Woman	1	46,7
	4	
Class		
Class 5	1	43,3
	3	
Class 6	1	56,7
	7	
Total	3	100.
	0	0

Based on table 1, it is known that respondents aged 12 years and over were 17 people (56.7%), while male respondents were 16 people (53.3%).

b. *Level of Addiction to Using Gadgets*

Table 2 Frequency Distribution of Gadget Addiction Levels

Gadget Addiction	<i>f</i>	<i>%</i>
No addiction	1	3,3
Light	18	60,0
Currently	7	23,3
Heavy	4	13,3
Total	30	100.0

Table 2 shows that the level of addiction to gadget use among students at UPT SDN No. 064023, Meidan Tuntungan District, in the medium category is 18 people (60.0%).

c. Emotional Disorders

Tabel 3 . Frequency Distribution of Emotional Disturbances

Emotional Disorders	<i>f</i>	%
Difficulty		
Normal	8	30,0
Borderline	16	46,7
Abnormal	6	23,3
Strength		
Normal	21	70,0
Borderline	3	10,0
Abnormal	6	20,0
Total	30	100.0

Table 3 shows that emotional disorders are in the borderline category in 16 people (46.7%) and emotional disorders are in the normal category in 21 people (70.0%).

2. Results of Bivariate Analysis

Table 4. Frequency Distribution of the Relationship between Gadget Addiction and Emotional Disorders by Strength Category

Addicted	Strength			Total	<i>p</i> – value
	Nor mal	Borderlin e	Abnorma l		
No Addiction	0	1	0	1	0,024
Light	14	1	3	18	

Currently	6	0	1	7
Heavy	1	1	2	4
Total	21	3	6	30

In Table 4, based on the results of the chi-square test, it is known that there is a relationship between the level of gadget addiction and emotional disorders (strength scale) with a p value of 0.024.

Table 5. Frequency Distribution of the Relationship between Gadget Addiction and Emotional Disorders with the Difficulty Category

Addicted	Difficulty			Total	<i>p</i> – value
	Normal	Borderline	Abnormal		
No Addiction	0	0	1	1	
Light	4	11	3	18	
Currently	4	1	2	7	0,049
Heavy	0	4	0	4	
Total	8	16	6	30	

In table 5, based on the chi-square test, it is known that there is a relationship between the level of addiction to gadget use and emotional disorders (difficulty scale) with a p value of 0.049.

DISCUSSION OF RESEARCH RESULTS

1. Respondent Characteristics

The research results showed that more than half of the respondents were 12 years old (17 people) (56.7%), and 16 respondents were female (53.3%).

Based on the research analysis, adolescent age significantly influences gadget use, as indicated by APJII survey data (2019) in the study (R. G. Pratiwii & Malwa, 2021). The 10-14 age group experienced a 66.52% increase in gadget use. This indicates that early adolescents are experiencing increased gadget use, which can influence their emotions and behavior. Inappropriate gadget use, such as accessing social media, gambling sites, and pornography, can lead to negative emotions and behavior in adolescents.

(Badeirii & Eikawatii, 2020) state that social media serves as a social connection for girls, while for boys it serves as a means of communication and entertainment. Social media has a significant influence on adolescents' lives, particularly on emotions, behavior, and social life. Teenagers influenced by cyberspace tend to feel more connected to the virtual world than the real world. This makes them more withdrawn, doubt their self-esteem, and experience social isolation.

2. Level of Gadget Addiction

Based on the research results, it was found that 18 students (60.0%) were addicted to gadgets, while only 1 student (3.3%) was not addicted to gadgets. This is in line with the research conducted by Praseityo, 2017, which obtained results of 60% (48 people) having a high level of gadget addiction, 26.25% (21 people) being classified as medium, 12.5% (10 people) being classified as low and 1.25% (1 person) being classified as very high. So it can be concluded that the subjects of the research have a high level of addiction, meaning there are significant negative impacts from gadget addiction. Seitiiawan (2021) stated that several articles show that smartphone addiction greatly affects the emotional health of adolescents. Excessive smartphone use can cause emotional disorders, and the higher the addiction, the higher the disorders experienced by adolescents. Teenagers with emotional disorders can have difficulty thinking and managing their emotions, and are at high risk for obesity, stress, high blood pressure, mental disorders, and serious illnesses. Excessive gadget addiction also affects children's emotions and behavior, making them irritable,

reluctant to interact, forgetting prayer times, and focusing more on gadgets than on the real world.

3. Emotional Disorders

The relationship between gadget exposure and emotional balance in adolescents has been found to result in abnormal emotional balance (59.3%). Emotions arise when humans interact with their environment and are the result of efforts to adapt to it (Baihaqi, 2017).

Emotional disorders are difficulties adjusting to themselves and behavior that is inconsistent with prevailing norms within their age group or society, thus harming themselves and others (Heiward, 2018).

Emotional symptoms have serious consequences, such as inability to solve problems, attention deficit disorder, hyperactivity, rejection of positive feedback, and aggression. If not addressed promptly and properly, this can impact adolescent development. Therefore, preventative measures are necessary to address this issue early. (Alveis, 2018)

When playing with gadgets, children tend not to respond when called, similar to children engrossed in online games. The difference is that when playing with gadgets, the child decides for themselves when to stop playing. Various psychosocial stressors can affect a child's development into adulthood, particularly due to advances in science and technology. This impacts adolescents' balance, such as increased hyperactivity, difficulty concentrating, feelings of loneliness or boredom, and mental and emotional problems. (Wiiguna, 2017)

Excessive gadget use can have negative impacts on children's behavior within the family, such as emotional instability that results in children being easily angered, emotionally withdrawn, withdrawn, and even withdrawn due to being separated from gadgets.

4. The Relationship Between Gadget Addiction and Emotional Disorders

Based on the research results above, it is known that there is a relationship between gadget addiction and emotional disorders in the strength category with a p-value <0.05 , namely 0.024.

The results of this study are in line with the research of Riizkii, 2022, namely there is a relationship between gadget addiction with emotional thoughts and the behavior of teenagers aged 10-19 years in RW 06 Ciipayung Ciiputat Tangerang Seilatan, with a p-value of 0.013 ($p < 0.05$). Likewise, the research of Asiif & Rahmadii, 2017 stated that there is a significant relationship between the level of gadget addiction with emotional disorders and the behavior of teenagers aged 11-12 years ($p = 0.002$). Fiitriiana (2021) stated that excessive use of gadgets has negative impacts on adolescent behavior in the family, such as emotional instability that causes adolescents to become easily irritated, emotional, anxious, and even withdrawn due to being kept away from gadgets. Teenagers who use gadgets for more than 2 hours a day, used for less beneficial activities, can be said to have experienced gadget addiction.

Excessive gadget addiction can affect teenagers' emotions and behavior in their daily lives, such as teenagers becoming easily angered, lazy to interact with their surroundings, forgetting prayer times, and only focusing on their gadgets rather than the real world. This greatly affects teenagers' emotions and behavior due to excessive gadget use (Riizkii, 2022). According to Anggrahiinii (2013), since using gadgets, children at home have become difficult to communicate with, uncaring, and less responsive when their parents talk to them, which can cause a gap between children and their parents, their environment, and even their peers. Triiniika Yulii (2015) found that there is an influence of gadget use on children's psychosocial balance. When using gadgets, their time is wasted on continuously playing games. According to Hovart (2016), addiction isn't limited to substances, but also to certain activities that are repeated repeatedly, leading to negative impacts, as does gadget addiction. This can hinder a child's socialization process and lead to dependence on the gadget.

From the above opinion, it can be concluded that several journals show that gadget addiction has a very big influence on children's emotional, excessive use of gadgets can cause disruption to children's emotional health. From several journals that show that the higher the gadget addiction, the higher the level of emotional disorders experienced by children. Children who have emotional disorders can affect their ability to think, and are also less able to control their emotions.

CONCLUSION

After conducting the research, the researcher concluded that using the chi-square test, the p-value <0.05, namely 0.049 (difficulty scale) and the p-value <0.05, namely 0.024 (strength scale), indicated a relationship between gadget addiction and emotional disorders in respondents aged 11-12 years. The majority of respondents were 17 (17) and 16 (16) males. The level of gadget addiction among respondents was in the mild category (18), and only one student was not addicted to gadget use. Gadget use is restricted and supervised by parents. The majority of respondents with emotional disorders, 16 in the borderline category, were on the difficulty scale, and 21 in the normal category, on the strength scale.

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