

## Analysis of the Negative Impacts of Gadget Use on Early Adolescents

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### ABSTRACT

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The purpose of this study is to analyze the negative impacts of gadget use on early adolescents. The presence of gadgets, particularly in the form of smartphones, has significantly contributed to daily life as a medium for information retrieval, interaction, entertainment, and even online business activities. The advancement of information and communication technology is increasingly benefiting society. Gadgets, as one of the products of this technology, have transformed human communication behavior by transcending space and time. A gadget is a small electronic device with specific functions, such as a smartphone. Essentially, this technology was created to make human life easier and more comfortable. However, the rapid technological advancements today have made it nearly impossible to find any area of human life untouched by their use, whether directly or indirectly. Along with globalization and the demand for rapid information exchange, negative impacts on early adolescents have emerged. These impacts include health issues, educational challenges, disruptions in social interaction, and even effects on family economics. Excessive gadget use among early adolescents can trigger harmful side effects such as an increased risk of depression, health problems, anxiety disorders, difficulty focusing, and other problematic behaviors. Gadget addiction can also hinder adolescents from socializing with their surroundings and increase the risk of loneliness. The role of parents is crucial in setting boundaries to prevent gadget addiction among children and mitigate these risks.

## 1. INTRODUCTION

The advancement of science and technology has altered nearly every facet of human existence. The era of globalization has seen tremendous progress in media and information technology in almost every sphere of life (Dewi et al., 2022). The term "technology" encompasses any item or instrument designed by humans to support and improve human activities in a variety of ways. People now have greater access to a wide variety of information because to the development of information and technology. A manifestation of technological advancement is the existence of gadgets, which are tiny electrical devices with specialized uses.

These days, gadgets are media designed to help people communicate with each other. Devices come in a variety of formats, including computers, laptops, smartphones, televisions, radios, games, and more. The usage of gadgets has increased quickly in Indonesia, making it one of the nations with the biggest user bases for social media sites like Facebook, Twitter, and WhatsApp, each of which has about 52 million subscribers. With the help of gadgets' many engaging, varied, interactive, and adaptable features and applications, users can more easily and swiftly meet their demands.

This development is indicated by the growing usage of electronics, especially smartphones and other devices with easy access to the internet. Smartphone usage clearly increased between 2016 and 2018, and forecasts for 2019 indicate that it will continue to expand. 65.2 million Indonesians were smartphone users, according to data from 2016. With 92 million users expected by 2019, this number increased to 74.9 million in 2017 and subsequently to 83.5 million in 2018 (Katadata, 2018).

Globally, early adolescents (ages 12 to 17) and late adolescents (ages 18 to 29) account for 93% of all device usage. Data from the Ministry of Communication and Information Technology in Indonesia supports this, showing that 80% of teenagers between the ages of 15 and 19 use gadgets most frequently (Sherlyanita & Rakhmawati, 2016). One of the main reasons why children are using devices at an increasing rate is its allure and their constantly improving technology. Children's use of media and gadgets increased from 38% in 2011 to 72% in 2013, according to earlier research (Nurhalipah et al., 2020).

Gadgets are equipped with many features such as games and are easy to use. However, they can also serve as highly effective learning tools. While the increasing use of gadgets brings benefits, it also has impacts, both positive and negative. Sundus (2018) describes the positive impacts of gadget use, such as better motor skills, enhanced cognitive abilities, a means of distraction, enjoyment for children, learning tools, and improved competitiveness. Nevertheless, adolescent behavior is also influenced by devices because of things like the family, the surrounding environment, and the parental responsibilities in adolescents' life. From an early age, religious knowledge and beliefs should be deliberately fostered, typically through household rituals such as reading the Qur'an, saying "salam," reciting "bismillah" and "alhamdulillah," and other specialized prayers.

According to field observations, early teenagers face significant problems like getting into fights, dating like adults, gambling online, playing video games excessively, utilizing TikTok, and visiting unsuitable websites. These actions frequently divert teenagers from their studies and have a detrimental effect on their surroundings. Despite being intended for instructional purposes, gadgets are frequently abused for undesirable ends and non-educational content. Teenagers are oblivious to their parents, their schoolwork, and their environment since playing with electronics is so convenient. Laziness brought on by excessive device use and inadequate parental supervision frequently results in a lack of responsibility that is expected of them at their age, such as praying, studying, and assisting parents. Although gadgets can be useful for

remote learning and information access, excessive use can have detrimental behavioral impacts on early teens, including decreased quality of social interactions and health issues like eye strain and sleep difficulties. When it comes to monitoring early adolescent gadget use, parental engagement is essential. It's crucial to have frank and constructive conversations with kids so they feel free to share their everyday experiences and know they may ask for assistance when they're confused or having issues.

## 2. METHODOLOGY

This study is a quantitative descriptive investigation. Numerical data gathered from data collection is used to support the description of variables as they are in quantitative descriptive research. Without the use of hypotheses, the goal of this research is to investigate and elucidate a fact or phenomena. As the units of analysis in quantitative descriptive research, the researcher gathers data from a large number of people or groups using techniques like surveys. Twenty primary school pupils are included as the population of study. Additionally, simple random sampling, which chooses samples at random without taking into account the traits or strata within the population, was the sampling strategy employed in this study. Questionnaires are used as part of this study's data collection method. The tool is intended to provide a precise account of the detrimental effects of technology use on junior high school pupils at Mts Islamiyah Medan. In the form of a checklist with four possible answers, the questionnaire uses a Likert scale.

**Table 1.** Indicators of Outline of the Instrument for Negative Impact of Gadget Use

| Aspect                   | Indicator                        | Item Number |
|--------------------------|----------------------------------|-------------|
| Physical & Health Aspect | Duration of gadget usage         | 1           |
|                          | Limitations on gadget usage time | 2           |
|                          | Physical health disorders        | 3,4,5       |
| Academic Aspect          | Learning interest                | 6           |
|                          | Learning focus                   | 7,8         |
| Social Aspect            | Interaction with the environment | 9,10        |
| Economic Aspect          | Financial expenses               | 11,12       |

## 3. RESULTS AND DISCUSSION

The results of this study (table 2) show that teenagers use these gadgets every day. Teenagers rarely have time or rules regarding gadget use at home, and they often use gadgets for more hours than they should in a day, which can negatively affect the quality of their sleep. The physical health of adolescents, which is one of the important aspects to maintain, will result in diseases at a young age. This data illustrates that more than half of teenagers experience sleep disturbances, dry eyes due to prolonged eye strain, back pain, obesity due to lack of movement, unstable emotions, and psychosomatic disorders.

**Table 2.** Result of Survey for Physical & Health Aspect

| Item Questionnaire   | Responses |       |        |       |
|--|-----------|-------|--------|-------|
|  | Always    | Often | Rarely | Never |
| I often use gadgets every day                                | 50%       | 25%   | 15%    | 10%   |
| I find it difficult to limit the time spent using gadgets    | 35%       | 25%   | 30%    | 10%   |
| The quality of my sleep is affected by gadgets               | 20%       | 15%   | 55%    | 10%   |
| I experience eye strain due to gadgets                       | 25%       | 30%   | 40%    | 5%    |
| I experience stress or anxiety when I can't access my gadget | 60%       | 20%   | 15%    | 5%    |

Children Who Are Already Addicted to Gadgets If a child is already addicted to gadgets, then the things that parents can do are to set time limits on gadget use. By setting limits/reducing the time spent on gadgets, over time the child will start to forget about their gadgets. Develop the child's talents. For example, by developing the talents that the child possesses. Whether it's playing music, drawing/painting, and so on. Engaging in activities outside of school hours will make teenagers start to limit their gadget usage. Parents who often play with their children will make the child more focused on their parents than on their gadgets. Through this data, it can be concluded that the highest absorption of radiation is among children, so for children under the age of 16 who are already addicted to smartphones, the risk of radiation exposure will be very high (Sugianto et al., 2015).

The survey results (table 3) revealed that gadgets have an influence on the academic performance of teenagers, causing their concentration in studying to be disrupted. Gadgets affect children's performance, leading to a decline in their achievement levels. This indicates a negative impact from teenagers frequently using gadgets excessively, which results in problems in their learning process. Consequently, children experience difficulties in their learning process due to dependence on gadgets that are not used properly. This dependence leads to a decrease in children's motivation to study, reduced concentration, and ultimately a decline in their academic performance.

**Table 3.** Result of Survey for Academic Aspect

| Item Questionnaire  | Responses |       |        |       |
|---|-----------|-------|--------|-------|
|   | Always    | Often | Rarely | Never |
| I feel disturbed studying for school because of gadgets                 | 50%       | 25%   | 15%    | 10%   |
| I feel a decrease in my interest in studying because of gadgets         | 35%       | 25%   | 30%    | 10%   |
| I feel my concentration while studying has decreased because of gadgets | 55%       | 30%   | 5%     | 5%    |

If children use gadgets according to their needs as students, utilizing them as a learning tool to seek educational information, it can support students' achievement levels positively. However, if students use gadgets excessively and become dependent on them, it will make them lazy to study, reduce their enthusiasm for learning, and decrease their concentration, which will lead to a decline in their academic performance. Therefore, the role of parents is very important in supervising students' use of gadgets. This is in line with Priatno & Marantika (2017) who state that utilizing information technology has a positive impact on children's achievements, as long as it is under parental supervision.

**Table 4.** Result of Survey for Social Aspect

| Item Questionnaire  | Responses |       |        |       |
|---|-----------|-------|--------|-------|
|   | Always    | Often | Rarely | Never |
| I feel like I haven't been interacting enough with friends and family | 20%       | 60%   | 15%    | 5%    |
| I find it easier to follow viral content                              | 30%       | 40%   | 15%    | 15%   |

The results of study (table 4) shows that the more teenagers have the intention to use gadgets, the more their time, thoughts, and even energy will be consumed by gadgets, leading them to avoid reality, become immersed in the virtual world, and thus have minimal real social interactions. Meanwhile, direct social interaction trains teenagers to understand the feelings of others, control their own emotions, and learn to express emotions accurately, so they can succeed in social interactions. This is because there is a significant non-verbal language that is not obtained in the virtual world, and oral communication skills must be continuously practiced so that teenagers can be useful in society later, and this is not formed through social media on the internet. This data illustrates that more than half of teenagers indicate that the intention behind using these gadgets contributes to the development of their emotional intelligence.

Teenagers are also very easily influenced by viral content that is currently rampant—often consumed by these early teenagers—which can have negative impacts. Digital game violence appears to be one of the risk factors for increased aggressive behavior, including among teenagers. This means that teenagers should refrain from spending too much time with their gadgets, considering that the impact of gadgets significantly affects their emotional intelligence. Emotional intelligence is crucial for social interactions, enabling teenagers to fulfill their developmental tasks. This happens because teenagers are in the process of maturing, and they are not yet fully capable of managing their emotions, which often leads to emotional instability that affects their social relationships (Wardhani & Yuliati, 2021; Ariston & Frahasini, 2018).

**Table 5.** Result of Survey for Economic Aspect

| Item Questionnaire                                       | Responses |       |        |       |
|--|-----------|-------|--------|-------|
|  | Always    | Often | Rarely | Never |
| I feel wasteful in my internet data usage                | 70%       | 20%   | 5%     | 5%    |
| I feel like my money runs out quickly because of gadgets | 40%       | 20%   | 25%    | 15%   |

The results of survey (table 4) shows that the increasing use of gadgets in daily life leads to economic waste for families, caused by teenagers who have become dependent on gadgets. Thus, owning a gadget can sometimes become a lifestyle, as sometimes a person uses this gadget merely to boost their self-confidence or social status. Now people are competing to own gadgets because gadgets are not only communication tools, but for society in general, gadgets also serve as a lifestyle, trend, and prestige (Kogoya, 2015). The other side is to keep up with the latest trends where increasingly advanced types of gadgets have turned gadget trends into a lifestyle. Wastefulness by continuously buying internet packages will increase parents' expenses, especially if the gadget is only used for unproductive activities, making it a mere waste. This data illustrates that excessive gadget use can lead to wastefulness in children, resulting in negative impacts such as stealing parents' money, lying, and taking others' belongings to buy internet packages when they run out for too long.

According to the study's findings, adolescents who use gadgets excessively suffer serious consequences that effect their social interactions, academic performance, physical health, and even financial conduct. Long-term device use causes physical health problems that might appear early in life, including sleep disruptions, eye strain, back discomfort, obesity, and psychosomatic illnesses. Over-reliance on technology in the classroom impairs focus, lowers motivation to learn, and eventually results in worse academic performance. Teens who spend too much time on technology tend to withdraw from social connections in real life, which lowers their emotional intelligence and social skills. They also become unduly affected by violent online behavior and viral content. Economically speaking, excessive gadget use leads to wastefulness and frequently puts more strain on family finances.

Despite these drawbacks, when used sensibly and under appropriate supervision, technology may be a useful tool for learning and growth. In order to prevent addiction, parents must establish clear limits and help teens use technology for useful and educational purposes (Hidayatuladkia et al., 2021; Sunita & Mayasari, 2018). To lessen the harmful consequences of gadget use, it is crucial to promote healthy digital habits, open communication, and alternate activities. Teens can improve their scholastic and social abilities, adopt healthier habits, and lessen the financial cost of excessive device dependence by addressing these challenges.

#### 4. CONCLUSION

Based on the results of the data analysis that has been conducted, it can be concluded that excessive use of gadgets has a significant negative impact, especially on adolescents. The impacts include an increased risk of depression, physical and mental health disorders, anxiety, difficulty maintaining focus, and the emergence of other problematic behaviors. In addition, gadget addiction also impacts social aspects, such as reducing teenagers' ability to socialize with their surroundings, which can ultimately trigger feelings of loneliness and social isolation. In this context, the role of parents is very important to provide stricter supervision and set limits on gadget usage. Parents need to create an open and positive communication pattern with their children, so that the children feel comfortable sharing experiences and asking questions when facing problems. Additionally, parents also need to encourage alternative activities that support the physical, mental, and social development of their children, such as sports, creative hobbies, or interactive learning activities. With this approach, the risk of gadget addiction can be minimized, allowing teenagers to grow and develop in a healthier and more balanced way.

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