



The Impact of Smartphone Use on the Psychology of Young Children in Parungponteng District

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Abstract

This research aims to analyze the impact of gadget use on the psychological development of elementary school-aged children at Cibuntu Elementary School, Cibungur Village, Parungponteng District. The research method used is a qualitative approach using observation, questionnaires and interviews as data collection techniques. The research results show that the use of gadgets has both positive and negative impacts on children's psychological development. Positive impacts include improved cognitive skills and access to information, while negative impacts include the risk of addiction and behavioral disorders. The role of parents and schools in supervising and directing gadget use is very important to minimize negative impacts. This research provides a comprehensive picture of the complexity of the interaction between technology and child development.

Keywords: Gadgets, Psychological Development, Elementary School Age Children, Observation.

1. Introduction

Gadgets are media that are used as modern communication tools. Gadgets facilitate human communication activities. Currently, communication activities are increasingly developing with the emergence of gadgets. This includes smartphones such as iPhone, Android, Blackberry and laptops. In psychology, childhood development refers to children aged 0 to 6 years. Facilities impact childhood social development. The impact of gadget use on the social development of early childhood has positive and negative impacts. Using too many devices will have a negative impact on a child's social and emotional development (Serra et al., 2021; Modecki et al., 2020).

The negative impacts of using gadgets on children include children becoming withdrawn individuals, having difficulty sleeping, preferring to be alone, violent behavior, reduced creativity, and the risk of bullying in cyberspace. The solution to the problem of using equipment at preschool age is to limit the use of equipment, supervise children when playing with equipment with the participation of parents who play a very important role, and make a schedule. Toys so that children do not receive these items. On the road, social development of preschool children (Gowthami & Kumar 2016). It is not surprising that today's children are exposed to various types of devices and technology from a very young age. While some people believe that this can be beneficial for their development, others also believe that it can be detrimental.

It cannot be denied that devices and technology can bring many benefits to children. For example, it can help improve cognitive skills and hand-eye coordination. They can also learn new things and experience different cultures through the use of apps and the internet. However, there is also the risk of children becoming too dependent on gadgets and technology (Hu et al., 2021; Kim & Jahng 2019; Rozgonjuk et al., 2023). They may not socialize well with others and become dependent on screen time. This is why it is important for parents to monitor their children's use of devices and ensure that they do so in moderation.

Modern devices have both positive and negative impacts on children's growth and development. On the positive side, using devices can help children develop their fine motor skills. They can also improve children's eyesight and improve their ability to concentrate. On the downside, these devices can cause problems such as headaches, neck pain, and dry eyes. It is important for parents to be aware of the positive and negative impacts of modern devices on children's growth and development. Gadgets can also influence children's emotional development (Shon et al., 2019; Melumad and Pham 2020). On the positive side, devices can help children feel connected to friends and family

members. They can also provide a sense of security for children. On the downside, devices can cause feelings of isolation and loneliness. Once again, it is important for parents to be aware of the positive and negative emotional impacts of modern devices on their children's development.

Social networks have become one of the most popular forms of communication, especially among young people. A recent study found that more than 60% of teenagers use social networks every day. While social media can be a great way to stay connected with friends and family, it can also have a negative impact on a child's development. One of the negative impacts of social media is that it can be addictive. Research has shown that social media can be as addictive as drugs or alcohol.

Another negative impact is that it can cause anxiety and depression. It's true, many people compare their lives to the "perfect" lives they see on social media and feel as though they are worthless. This can also lead to cyberbullying. This is when people use social media to bully others by posting malicious comments or spreading rumors about them. Even though it has a negative impact, social media can also have a positive impact on children's growth and development. This can be a great way to stay in touch with friends and family, especially if you live far away from them. It can also be used as a communication tool (Kashif et al., 2019; Sun et al., 2019).

It cannot be denied that modern devices have revolutionized the way we live. They have made our lives easier and more comfortable in many ways. However, the increased use of devices by children also has some potential downsides. One of the main concerns is the impact these devices will have on children's mental development. Some experts believe that spending too much time looking at screens can affect a child's ability to focus and pay attention. Additionally, it can also cause short-term memory problems.

Another concern is that devices can make it difficult for children to socialize and interact with others. As children spend more time on their phones or tablets, they may have fewer opportunities for face-to-face interactions with their friends. This can have a negative impact on the development of children's social skills. In general, modern devices have both positive and negative impacts on children's growth and development. Parents need to be aware of both sides so they can make informed decisions regarding their children's use of these devices (Knitter & Zemp 2020).

One of the most common impacts of electronic devices on children is their sleep habits. A 2018 study found that 50% of children aged 8 to 11 used mobile devices in the hour before bed. This number may be even higher in teenagers. Blue light from screens can disrupt a child's natural sleep cycle, resulting in poor sleep quality. This can significantly affect a child's health and development. Using devices can also lead to reduced physical activity.

Children who spend more time indoors playing on their devices are missing important opportunities for physical activity. This can lead to obesity and other health problems later in life. It is important for parents to monitor their children's use of devices and ensure that their use is not excessive. Using too many devices can negatively impact a child's health and development. However, when used in moderation, these devices can have a positive impact on childhood.

By focusing on the local context of Tasikmalaya Regency, especially in Parungponteng District, this research aims to analyze in detail the impact of smartphone use on the psychological aspects of early childhood. With a deeper understanding of these dynamics, preventive and intervention efforts can be focused on ensuring that smartphone use among young children in this region does not negatively impact their psychological well-being. It is hoped that this research can provide a valuable contribution in understanding how modern technology interacts with the psychological development of early childhood in Tasikmalaya Regency. Moreover, the findings from this research can be a basis for designing more targeted approaches in supporting children's psychological growth and development in this digital era.

This research method adopts a qualitative approach to explore it. This was done with the aim of understanding the impact of gadget use on the psychological development of children at Cibuntu Elementary School, Cibungur Village, Parungponteng District. Using a qualitative approach, researchers attempt to explore the meaning, perceptions and experiences of parents, teachers and children regarding this phenomenon. Observation is an important technique in getting a direct picture of children's behavior in using gadgets in the school environment. In-depth interviews with parents and teachers were aimed at obtaining an in-depth perspective regarding the influence of gadgets on children.

The data collection process also includes documentation of policies and guidelines regarding the use of gadgets in schools. The collected data will then be transcribed and analyzed using a thematic analysis approach. Themes will be identified to reveal the impact of gadget use on children's psychological development. It is important to ensure the validity of the data by triangulating, namely comparing and validating findings from various data sources. Ethical aspects of research will also be carefully maintained, including data security and the rights of research subjects.

Although this research provides in-depth insight into the impact of gadget use on children at Cibuntu Elementary School, there are several limitations that need to be acknowledged. This study was limited to the scope of this school and may not fully generalize its findings to the wider population of children. Time and resource-related constraints may also influence the depth of analysis. Thus, it is hoped that the results of this research can provide a better understanding of the interaction between gadget use and children's psychological development in the Cibuntu Elementary School environment, Cibungur Village, Parungponteng District.

2. Results and Discussion

The results of observations, in-depth interviews, documentation and filling out questionnaires provide a comprehensive picture regarding the impact of gadget use on the psychological development of elementary school-age children at Cibuntu Elementary School. In this research, it was found that the use of gadgets does have a significant impact on children.

Researchers believe that gadgets can have both positive and negative impacts. Positive impacts include improving cognitive skills and hand-eye coordination, enabling access to new information, and providing opportunities to understand different cultures through apps and the internet. However, negative impacts have also been found, such as the tendency for children to become too dependent on technology, which can reduce direct social interactions and interfere with children's ability to concentrate.

Apart from that, in the aspect of emotional growth, it was found that the use of gadgets can also influence the way children express and manage their emotions. Children may tend to be more closed or have difficulty communicating verbally when they are too often glued to gadgets. Apart from that, in the aspect of prosocial behavior, the use of gadgets can also influence children's ability to interact positively with peers and adults around them.

In terms of moral development, this research shows that gadget use can also influence children's understanding of social values and norms. There is a tendency that children who use gadgets too much may have less direct experience in practicing social norms in daily interactions.

Based on these findings, there needs to be more attention in managing gadget use in elementary school age children. Parents and educators need to play an active role in supervising and providing appropriate direction regarding gadget use. Additionally, it is also important to ensure that children have sufficient opportunities to interact socially outside the digital environment. In this way, they can grow and develop holistically, including aspects of their psychological development.

2.1. Observation Results

Based on the results of observations carried out over three days, it can be concluded that students at this elementary school show various attitudes and behaviors that reflect their psychological development. Most students show a responsive attitude when spoken to, are comfortable in class, and are able to complete assignments at school. They are also able to control their emotions, carry out pickets according to schedule, comfort friends who are sad, and some are even willing to donate some of their pocket money.

However, some students still need to improve some aspects of psychological development. Some students have not been able to show the attitude of sharing food or stationery with their friends, and there are also those who have not been able to praise their friends' work. However, the results of these observations illustrate that the majority of students have developed positive prosocial behavior and are able to control their emotions.

2.2. Questionnaire Results

The results of filling out questionnaires by children and their parents provide important information regarding gadget use. It was found that the majority of children (42%) were in the moderate gadget usage category, with usage duration of less than 1 hour or 40-60 minutes a day. However, 26% of children fall into the category of high gadget use, with a duration of more than 2 hours a day. Most children use gadgets to access the internet, watch YouTube and play games.

The level of addiction to gadgets is also increasing, with some children showing symptoms such as hands not remaining still when not holding the gadget, crying when the gadget is taken away, and imitating movements in games that are often played. However, children generally still show positive behavior in aspects of psychological development, such as communication skills, politeness, responsibility and the ability to carry out religious teachings.

Parents agree that children's use of gadgets should be limited, especially to less than 1 hour a day or only during free time. They also observed that children tend to prefer playing with gadgets at home rather than playing outside with friends. However, they also noted that children were able to adapt to new environments, be responsible with household tasks, and be polite towards their elders.

The results of these observations and questionnaires provide a more complete picture of how gadget use affects the psychological development of elementary school children. Further attention is needed in managing and supervising gadget use in order to maintain a balance between technology and children's social and psychological development.

2.3. Results of interviews with children and parents

The results of interviews with children, parents, teachers and school principals provide a richer picture of the impact of gadget use on the psychological development of children in this school.

From interviews with children, it was revealed that gadgets were used mainly for playing online games and watching YouTube. Some children feel limited by their parents in using gadgets, but some show resistance when gadgets are taken from them. They admit that excessive use of gadgets can make them feel dizzy, their eyes become

red and their vision blurry. Apart from that, some children also admit that they have difficulty controlling their emotions and feel panic. However, they also show good adaptability to new environments and prosocial behavior such as helping friends who are in trouble. However, there are problems such as violations of school rules and conflicts between friends.

Parents say that their children use gadgets to play online games, watch YouTube and communicate with friends via WhatsApp. They see gadgets as having a positive impact if used wisely, especially as learning aids. However, they also see negative impacts such as children becoming lazy about doing physical activities, getting angry easily, and imitating behavior from games. They agreed that restrictions on the time they use gadgets need to be implemented.

Teachers and principals emphasized that schools do not allow children to bring gadgets to school. They suggest limiting gadget use to only about 1 hour a day, more on holidays, and always with parental assistance. Teachers also suggest using gadgets for learning purposes with useful applications. They see that using gadgets properly can help learning, but if they are used only for playing games, they can have a negative impact on children's behavior and vision. Teachers also highlight that children need guidance in controlling emotions, making decisions, and solving problems.

In general, the interview results indicate that gadgets can have both positive and negative impacts on the psychological development of children at this school. Therefore, there needs to be an active role from parents and schools in supervising and directing children's use of gadgets in order to minimize their negative impacts and maximize their positive potential in children's education and development.

3. Conclusion

This research has explored the impact of gadget use on the psychological development of elementary school age children at Cibuntu Elementary School, Cibungur Village, Parungponteng District using qualitative methods through observation, questionnaires and interviews. The following are the conclusions that can be drawn from this research:

- a) Positive and Negative Impacts, the use of gadgets in children has positive and negative impacts. Positive impacts include improved cognitive skills, access to information, and understanding of various cultures. However, negative impacts involve potential addiction, behavioral disorders, and health impacts such as headaches and vision problems.
- b) Psychological Development, the impact of gadget use also influences children's psychological development. Several aspects such as emotions, prosocial behavior, and moral development can be affected. Children tend to have unruly behavior and find it difficult to control their emotions when they use gadgets too often.
- c) Supervision Approach, it is important for parents and teachers to supervise children's use of gadgets wisely. Limiting time on gadget use, using gadgets for educational purposes, and assistance from adults can help reduce negative impacts.
- d) Role of Schools, schools have a role in educating children about wise use of gadgets. They can provide guidance and support the use of gadgets as learning aids.
- e) Balance, a balance between gadget use and direct social interaction is essential for the holistic development of children. By integrating physical activity, social interaction, and controlled use of gadgets, children can develop their social and cognitive abilities well.

This research shows that the use of gadgets can provide benefits and risks for children's psychological development. Therefore, there needs to be special attention from parents, teachers and schools in managing the use of gadgets so that they can provide a balanced experience and support healthy psychological growth and development for children.

References

- Gowthami, S., & Kumar, S. V. K. (2016). Impact of smartphone: A pilot study on positive and negative effects. *International journal of scientific engineering and Applied Science*, 2(3), 473-478.
- Hu, T., Wang, Y., Lin, L., & Tang, W. (2021). The mediating role of daytime sleepiness between problematic smartphone use and post-traumatic symptoms in COVID-19 home-refined adolescents. *Children and Youth Services Review*, 126, 106012.
- Kashif, K., Tariq, R., Hussain, A., & Shahid, M. (2019). Effects of smartphone usage on psychological wellbeing of school going children in Lahore, Pakistan. *JPMA. The Journal of the Pakistan Medical Association*, 69(7), 955-958.
- Kim, D., & Jahng, K. E. (2019). Children's self-esteem and problematic smartphone use: The moderating effect of family rituals. *Journal of Child and Family Studies*, 28, 3446-3454.
- Knitter, B., & Zemp, M. (2020). Digital family life: A systematic review of the impact of parental smartphone use on parent-child interactions. *Digital Psychology*, 1(1), 29-43.

- Melumad, S., & Pham, M. T. (2020). The smartphone as a pacifying technology. *Journal of Consumer Research*, 47(2), 237-255.
- Modecki, K. L., Low-Choy, S., Uink, B. N., Vernon, L., Correia, H., & Andrews, K. (2020). Tuning into the real effect of smartphone use on parenting: a multiverse analysis. *Journal of Child Psychology and Psychiatry*, 61(8), 855-865.
- Rozgonjuk, D., Blinka, L., Löchner, N., Faltýnková, A., Husarova, D., & Montag, C. (2023). Differences between problematic internet and smartphone use and their psychological risk factors in boys and girls: a network analysis. *Child and adolescent psychiatry and mental health*, 17(1), 1-14.
- Serra, G., Lo Scalzo, L., Giuffrè, M., Ferrara, P., & Corsello, G. (2021). Smartphone use and addiction during the coronavirus disease 2019 (COVID-19) pandemic: cohort study on 184 Italian children and adolescents. *Italian Journal of Pediatrics*, 47(1), 1-10.
- Škařupová, K., Ólafsson, K., & Blinka, L. (2016). The effect of smartphone use on trends in European adolescents' excessive Internet use. *Behaviour & information technology*, 35(1), 68-74.
- Sohn, S. Y., Rees, P., Wildridge, B., Kalk, N. J., & Carter, B. (2019). Prevalence of problematic smartphone usage and associated mental health outcomes amongst children and young people: a systematic review, meta-analysis and GRADE of the evidence. *BMC psychiatry*, 19(1), 1-10.
- Sun, J., Liu, Q., & Yu, S. (2019). Child neglect, psychological abuse and smartphone addiction among Chinese adolescents: The roles of emotional intelligence and coping style. *Computers in Human Behavior*, 90, 74-83.