

THE IMPACT OF SMARTPHONE ADDICTION ON CHILDREN IN MEDAN

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Abstract: This is qualitative research with a phenomenological approach. The subjects were young children aged 5–6 in Medan City who were indicated to be addicted to smartphones for 3–4 hours a day. Data collection is done using observation techniques and interviews with children, and data triangulation is done with parents to verify the accuracy of the data obtained. The results of this study show that the impact of smartphone users on children is divided into physical, psychological, consisting of positive and negative, as well as social. Physically, children experience eye fatigue and dizziness. Psychically, they experience increased emotional and less responsiveness to the environment, anger, irritability, and tantrums, while on the positive side, they can learn the concepts of numbers and letters, have a new vocabulary, have active communication skills, know the short suras in the Qur'an, and have greater curiosity for something. And socially, children are becoming more often at home playing smartphones.

Keywords: *Impact Of Smartphone Addiction, Children.*

Introduction

The smartphone is very popular with adults and children. Nearly every young child now knows and can even use a smartphone; sometimes they're better at using the app than adults. However, long-term use of smartphones can be dangerous to children's health. (Jennifer 2018). Technology has become an essential part of everyday life in this increasingly advanced digital age. The existence of smartphones is one of the greatest proofs of technological advances. One of the adverse effects of smartphone use most felt in early childhood is addiction. (Kuss and Griffiths, 2011). According to Purnomo (2020), smartphone addiction causes children to spend a lot of time playing smartphones and can't get rid of smartphones. The Digital Marketing Research Institute Emarketer showed that in 2018, the number of active smartphone users in Indonesia exceeded 100 million people. The We Are Social Institute (2017) stated that there were 371.4 million mobile phones in the country, or 142 percent of the total population of 262 million. A cell phone spread to more than its users. That means one cell phone user can have more than one phone. (Ambarwaty 2018).

It raises academic concerns about early childhood development as it can affect a child's learning ability. Smartphone addiction can affect children's ability to study at school because it disrupts their concentration and focus. (Moazedian et al., 2014). Children who spend a lot of time on smartphones will experience a decline in academic achievement, difficulty completing tasks, and a decrease in interest in learning, and if this continues, it can affect the child's cognitive development. (Swing et al. 2010).

Research has proven that children exposed to smartphones will influence the development of language, memory, and problem-solving skills. (Heo and Lee, 2018). Other effects on mental health include anxiety, depression, and sleep disturbances. The physical health effects of overusing smartphones in early childhood, which is to make the back bend, can lead to posture problems, vision problems, and other physical health problems such as obesity due to a lack of physical activity. (Kwon 2015). Results of research conducted by Demirci, Akgönül, and Akpınar (2015) mention that overuse of smartphones can lead to depression, anxiety, and decreased sleep quality or sleep disturbances, thus creating deviant behavior such as aggressive behavior in adolescents.

According to the American Psychiatric Association (APA), smartphone addiction can be classified as an "internet use disorder" in the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). It is characterized by patterns of excessive or compulsive internet use that interfere with a person's social functions, work, or education. (DSM V, 2013).

A growing phenomenon today is that a lot of children are addicted to smartphones because of the ease with which they can access the Internet, either from smartphones, laptops, or computers. These three media are very often used by children to access the internet, especially smartphones. (Sharma and Sharma, 2021). Statistics in Indonesia show that most people use smartphones for entertainment, social media, games, and online shopping. Based on data, the current smartphone functions are not just to send messages and make calls, but many more functions from other smartphones, which makes someone addicted. (Pinasti & Kustanti, 2017). Based on recent phenomena in society, researchers want to look more deeply into the impact of smartphone addiction on children. The study was conducted at the PAUD institute in the town of Medan, involving children aged 5–6 years who are indicated to have smartphone addiction according to the criteria of the parent of the householder.

Literature Review

A.1. Smartphone Addiction

Addiction, or addiction in the Complete Dictionary of Psychology, is understood as the condition that an individual is dependent on drugs. The addiction makes individuals use drugs without tolerating physical and psychological changes and keeps them away from society when they don't use the drugs again. (Chaplin, 2009). In medical terms, addiction is the necessity or habit of engaging in a particular activity or using a substance, although the consequences can be detrimental to the physical, social, spiritual, mental, and financial well-being of the individual. (Perdew, 2015).

From a neurological perspective, the basis of any addiction is the occupation the brain receives. During a fun activity, one will experience an abundance of dopamine neurotransmitters, which activate the pleasure centers in the brain. Dopamine is the part of the brain that is involved in certain activities. When the activity is repeated with the same pleasant results, then the behavior will be strengthened. It means the brain wants it to do it over and over, and addiction can form. (Duke and Montag, 2017)

According to the latest APA guide in the Diagnostic and Statistical Manual of Mental Disorders (DSM V), smartphone addiction falls into the categories of substance use disorder and non-alcohol/drug addiction disorder. It describes patterns of behavior that indicate addiction to smartphone use, with symptoms such as loss of control, difficulty stopping use, increased tolerance, and disruption in everyday life. (DSM V 2013). Mark Griffiths, a psychologist who specializes in addictive behavior research, defines smartphone addiction as a psychological condition in which a person experiences physical and psychological dependence on a smartphone, thereby affecting social, personal, and occupational functioning. (Kuss and Griffiths, 2015). Kwon (2013), in his research with colleagues, defined smartphone addictions as a disorder characterized by smartphone dependence, inability to control use, excessive involvement, anxiety, and stress when separated from the smartphone, as well as the negative impact on personal and social life. (Kwon and Lee, 2013)

A.2. Smartphone Addiction Aspects

The emergence of handheld smartphones has made a lot of people more active and busy with the features of the device. Individuals much more like interaction via social media networks than having to look at them directly. There's also a smartphone that has a new effect on user behavior. (Bian and Leung, 2015).

Kwon (2013) developed smartphone addiction in six aspects (Kwon et al. 2013), namely:

a. Daily-life disturbance

It is a disturbance of everyday life, including loss of a planned job, difficulty concentrating in class or at work, blurred vision, pain in the wrists and back of the neck, and sleep distortions.

b. Positive anticipation

Describes the feeling of enthusiasm when using a smartphone, so you can get rid of stress and feel empty without a smartphone.

c. Withdrawal

Withdrawal is associated with impatience, anxiety, and incapacity without a smartphone, always remembering a smartphone even if not using it.

d. Cyberspace-oriented relationship

Cyberspace-oriented relationships include questions about someone who feels that a relationship with a friend he knows through a smartphone is becoming much more familiar than that with a real friend.

e. Overuse

Overuse refers to the uncontrolled use of a smartphone, preferring to search for something through a smartphone rather than asking for someone else's help.

f. Tolerance

Tolerance is always trying to control not using a smartphone but always failing to do it.

A.3. Factors Affecting Smartphone Addiction

There are factors that influence smartphone addiction. (Lee et al. 2020), among them are disruptions in everyday life; the use of smartphones continues even though there are disturbances in daily life such as frequent physical, social, or psychological problems that are most likely caused or aggravated by the usage of smartphones.

There are four factors that cause smartphone addiction (Agusta 2016), namely:

a. Internal factors

This factor consists of factors that describe individual characteristics, namely:

1. A high degree of sensation.

Sensational sensation, commonly referred to as sensational quest, is a trait defined as diverse, new, and complex sensational needs as well as a desire to take risks, both physically and socially.

2. low self-esteem.

Self-esteem itself is an individual's self-evaluation of quality or self-respect as a human being.

3. high extraversive personality.

Individuals with high extraversive personalities tend to be extroverted and have a wide social circle.

4. Low self-control.

Self-control is the ability of an individual to organize, guide, regulate, and direct his or her steps and actions toward something desired.

b. Situational factors

This factor consists of causal factors that lead to the use of smartphones as a means of making individuals feel psychologically comfortable when faced with uncomfortable situations. For example, levels of stress, sadness, anxiety, loneliness, learning saturation, and leisure boredom (tidak adanya kegiatan ketika waktu senggang).

c. Social factors

Consist of smartphone addiction factors as a means of interacting and keeping in touch with others. In this case, individuals always use phones to interact and tend to be too lazy to communicate directly with other individuals. Increasing the number of smartphones will form new patterns of interaction and can reduce the intensity of communication among individuals. (Agusta, 2016).

d. External factors

External factors are factors that come from outside the individual. These factors are related to the high level of media exposure to mobile phones and their various facilities.

B.1. Early Childhood Defense

The reason why this period is called the golden age is because at this time, a child develops rapidly and remarkably, is born, and his brain cells make intercellular connections, forming experiences that will be very important and will be carried away for a lifetime. (Santrock 2018). Various media reports of brain research show that 100 to 200 billion brain cells are made up of human brains at birth and are ready to develop trillions of pieces of data. (Suryana 2016).

Some experts define early childhood, among others (Santrock 2018):

1. According to Jean Piaget, early childhood is the period in which a child undergoes the earliest stages of cognitive development. Children at this stage begin to develop the ability to think symbolically, understand the concept of numbers, develop imagination, and understand the relationship between cause and effect.
2. Lev Vygotsky emphasizes the important role of social interaction in child development. According to Vygotsky, early childhood is the period in which children begin to learn through interaction with adults and peers. They develop speech skills, use symbols, and build mutual understanding through social interaction.
3. Erik Erikson sees early childhood as a stage of psychosocial development characterized by a conflict between autonomy and shame and guilt.
4. Bronfenbrenner sees early childhood as a period of development influenced by their interaction with the microenvironment, such as family and peers.
5. Maria Montessoro. According to Montessori, early childhood is an important period for the development of individual potential. Children at this stage should be given the opportunity to explore the environment, use appropriate learning aids, and develop motor, cognitive, and social skills.

B.2. Early Childhood in the Perspective of the Qur'an

Chasanah (2019) explains that childhood is a time free of all kinds of personality tendencies, and children will be prone to the environment that raises them. It is affirmed by Al Ghazali in the Book of *Ihya' Ulumiddin* that the child is a trust that God has entrusted to both parents. In Islam, the child is the trust given by God to the parents, so the parents have a duty to take care of the child. Because man belongs to God, parents must educate their children in the knowledge of and confrontation with God. (Chasanah 2019).

Like a verse about children. First, the child is the jewel of the world in the letter Al Kahf (18), verse 46: "Wealth and children are the jewels of this worldly life, but good deeds are better for your Lord and better for hope" (QS.18:46). In the Qur'an, it is explained that the child is born like white paper; the child will be the son of Majusi or a Jew, depending on the education obtained. Education for early childhood—in this case, both formal school and parental education—is considered crucial in the formation of the child's character. (Chasanah 2019).

B.3. Characteristics of Early Childhood Development

Early childhood has characteristic characteristics, both physically, socially, morally, and so on. According to S. Aisyah, M. Amini, and T. Chandrawati (2014) characteristics of early childhood consist of:

1. Have great curiosity,

2. Is a unique personality,
3. Love fantasy and imagination.
4. Most potential time to learn
5. Show an egocentric attitude.
6. Has a short range of concentration.
7. As part of a social being

Early life is a golden age, a time when children experience rapid growth and development. Besides, each child has its own uniqueness that comes from genetic factors or may also come from environmental factors. (Sunday, Adesope, and Maarhuis 2021).

Method

This study uses descriptive qualitative research with a phenomenological approach. (logika). (Creswell 2019). The data collection methods in this study are observation and interview methods. The observations were carried out on the indicated child, who was addicted to a smartphone, and interviews were conducted with the child, as well as the triangulation used to triangulate the source of data, and the data obtained was tested for validity through various sources in this case, namely the parent. Data analysis is done by reducing data, presenting data, and drawing conclusions from available information. (Sugiono 2017)

Result and Discussion

Based on the results of interviews with five informants regarding the impact shown by children on smartphone addiction, it can be seen in the table below:

Tabel 1. The Impact of Smartphone Addiction on Children

No	Informan	Impact of Smartphone Addiction
1	I1	The child takes a long time to respond when spoken to and given orders; stay silent for a moment, then do what he is told. He often shows an emotional attitude and sometimes gets angry if he is not given a smartphone, but this also results in whiny behavior.
2	I2	Negative impacts Children show emotional behavior such as getting angry when they don't get a smartphone and wanting to pinch it. The positive impact is that children really like foreign languages, which creates an interest in foreign language lessons.
3	I3	Negative impacts: Children become whiny, have tantrums, scream, fight, and like to answer their parents' words if the child doesn't get a smartphone. The positive impact is that children can now sing along to songs like those on YouTube because, previously, the child had limitations in communicating or his language was not yet clear.
4	I4	The negative impact is that children are slow to respond when called, they are told to move slowly because they are focused on their smartphone, and apart from that, children have difficulty receiving lessons at school. The positive impact is that it is easier for children to memorize short verses.
5	I5	Children are getting wiser with words; they like to protest, and there are things that make them ask new questions of their parents. Apart from

		that, children understand the dangers around them; for example, don't invite people they don't know, don't go near electricity poles because it can cause short circuits, and don't eat snacks carelessly.
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The average results shown by children regarding excessive smartphone use have negative and positive impacts. Children with smartphone addiction have a higher likelihood of having problems such as emotional instability (Kwon et al., 2013). In research conducted by Rangkuti et al. (2021), it was concluded that the negative impact of using smartphones is that it can trigger dependence or addiction, so that children will have unstable emotions. Children are basically great imitators. The reason they use smartphones is that there are parental figures who always show smartphones to children, and this is seen by children, so they imitate their parents' behavior because, basically, the family is the first educational environment for children (Rahimah and Koto 2022). In the family, there are many things that must be taught to children, one of which is moral and character education (Nurzannah, Akrim 2015). Parents must teach the basic foundations of morals and good characteristics to children so that the child's behavior matches what the parents expect. Even though this is not easy, it will have a positive impact if parents are consistent in carrying it out (Widya 2019).

Apart from showing negative impacts, children who are indicated to be addicted to smartphones also show several positive impacts, including having a new vocabulary and liking foreign languages, thus generating interest in foreign language lessons. Able to sing along to songs like those on YouTube, because previously the child had limitations in communicating or his language was not yet clear. Apart from that, it is easier for children to memorize short verses; it stimulates children to be able to ask new questions to their parents; and children understand the dangers around them. All of these are impacts that arise from smartphone addiction. In other words, smartphone addiction does not only have a negative effect or impact on children but can also have a positive impact. This depends on how the parents direct and care, because the right parenting style can have the expected positive effects and vice versa (Nasution and Sitepu 2018).

Conclusion

The unknown sophistication of technology has both negative and positive effects on children. Indirectly, children experience a variety of issues caused by smartphones; among other things, physically, children experience eye fatigue and see the smartphone screen too close. Psychologically, smartphone addiction causes children to become more emotional and less responsive to the environment, and socially, children are more likely to play at home. Therefore, as much as possible, parents can give their children an understanding of the use of smartphones so that the negative impact can be minimized.

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