

SCREEN TIME AND SPEECH DELAY: ANALYZING THE DANGERS OF USING GADGETS ON LANGUAGE DEVELOPMENT IN CHILDREN AGED 1-3 YEARS

Raysha Zahra Harahap¹, Bernieke Anggita Ristia Damanik²

English Department, Univesity of HKBP Nommensen Pematangsiantar, Indonesia

E-mail: rayshazahrahrp@gmail.com¹, damanikberniekeofficial@gmail.com²

Abstract

Gadget is a small electronic device that has many special functions. In addition, gadgets can also be interpreted as modern devices that have a number of applications in them. These applications are used as sources of information, social networks, hobbies, creativity, and various other uses. The purpose of this study is to know how dangers of using gadgets on language production in children aged 1-3 years. In this digital era, most parents allow their children to use gadgets. The goal is to provide entertainment or just entertainment to relieve children's boredom. In addition, gadgets are also often used so that children can sit still without whining for various things. That way, parents can freely do various pending jobs. Using gadgets at an early age of less than two years can increase the risk of children experiencing delays in their development, including speech delays. This study is a qualitative descriptive analysis research. This descriptive research aims to describe a situation or phenomena as it is. Data collection techniques used in the study were library research. The result of this study is to ascertain three things (1) language development in early childhood (2) The dangers of giving excessive gadgets to young children between the ages of 1-3 years.

Keywords: Gadget, Speech Delays, Language Development, Early Child, Ages 1-3 Years

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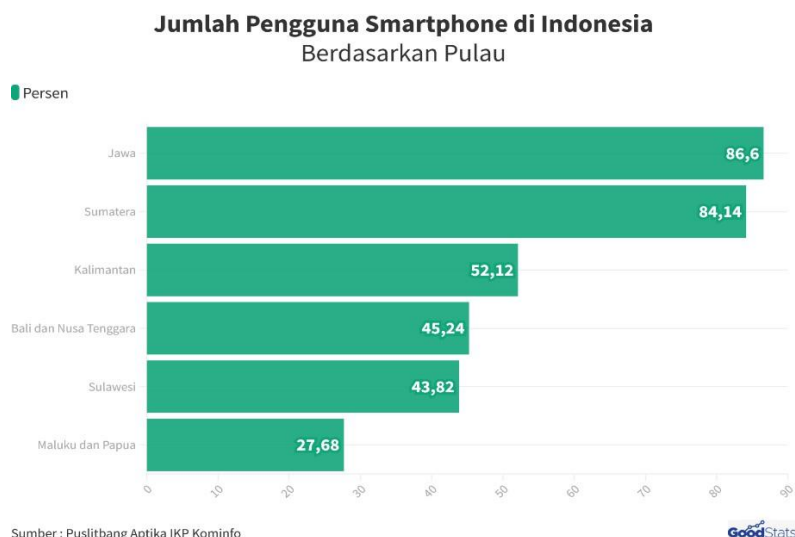


INTRODUCTION

A. BACKGROUND

Gadget is a small electronic device that has many special functions. In addition, gadgets can also be interpreted as modern devices that have a number of applications in them. These applications are used as sources of information, social networks, hobbies, creativity, and various other uses. According to (Dewanti, et al. 2016) Gadgets can be computers or laptops, tablet PCs, video games, and so on. also cell phones or smartphones. Based on data and information sources, number of active mobile phones in Indonesia currently reaches 354 million devices (Data Reportal, 2023). The number of active mobile phones in Indonesia exceeds the total population of Indonesia as a whole. Because, based on data from the Central Statistics Agency (BPS), the population of Indonesia has reached 278.69 million people in mid-2023 which means, when compared to the total population in Indonesia, the number is already

more than 100%, or to be precise 128%. The report from the results of the Indonesiabaik.id survey implies that the socio-cultural aspects of Indonesian society show that the majority of Indonesian people already have gadgets. Where smartphone users in Indonesia show that they have reached almost 2/3 of the total Indonesian population or can be said to be twice as many as those who do not have gadgets. The results of the report sourced from the IKP Kominfo Aptika Research and Development Center show several divisions of gadgets use in terms of region as follow.



From the data it can be seen, based on the island shows the proportion of gadgets ownership the most in Indonesia is in Java Island, amounting to 86.60%. Followed by Sumatra gadgets usage of 84.14 percent. Then, Kalimantan Island of 52.12%. Bali and Nusa Tenggara of 45.24%, Sulawesi 43.82%, last Maluku and Papua 27.68%.

Gadgets have value and benefits for certain groups. However, gadgets also have negative impacts that arise for inappropriate users. Among children, even toddlers. gadgets are often used as a shortcut for parents to accompany their children as companions while parents cannot accompany them to play, but sometimes parents forget to supervise and limit smartphone use in their children (Anggraini, 2011). One example of the negative impact for inappropriate users is among children, such as stunted child development, disrupted brain growth, and dependence on gadgets, so when using gadgets must remain under parental supervision. If children are given gadgets without supervision and time, this will have an impact on physical or mental health and delayed speech in children (Anggraini, 2011). With children using gadgets, the interaction carried out by children is very little, so the lack of stimulation makes them lazy to talk and less familiar with their surroundings, children only focus on the gadgets they use. Children who spend excessive time in front of screens may be less involved in the verbal interactions, play, and interpersonal learning that are essential for developing their speech skills. The speaking abilities that children must have include several stages, starting at an early age stage where children must have very simple speech and language skills that cannot be interpreted later, then the child begins to go through the babbling stage, then can begin to imitate several sounds that come from the environment, continues with the ability to speak a few short words that are understood, then begins to be

able to combine several simple words and language and speaking skills, finally the child is able to pronounce complete sentence formations (Wooles et al., 2018). In addition to the child's speaking ability must be fulfilled, language skills must also be possessed by children. Language is a concept that has a broader meaning than speaking ability. Language is a concept that exists in the mind of an individual that will be used to express something to other individuals. A child's speech delay can be seen from their peers as a benchmark to determine whether the child has a speech delay or not. It is often found that if the child experiences a speech delay or speech delay, he tries to express his communication by using his body language so that the person he is talking to can understand what he is saying.

METHODOLOGY

This study is a qualitative descriptive analysis study. The goal of descriptive research is to describe a situation or phenomenon exactly as it is. Descriptive itself means that the research results will be described as clearly as possible based on the research that has been conducted without drawing a conclusion based on the research results. According to Walidin & Tabrani (2015, p. 77) qualitative research is a research process to understand human or social phenomena by creating a comprehensive and complex picture that can be presented in words, reporting detailed views obtained from informant sources, and carried out in a natural setting. Qualitative research is descriptive in nature and tends to use an inductive approach analysis, so that the process and meaning based on the subject's perspective are more emphasized in this qualitative research (Fadil, 2020, p. 33). The descriptive nature of qualitative research means that the research will try to create a systematic, accurate, and factual overview of a fact, nature, and relationship between the phenomena being studied. As expressed by Nazir (2014, p. 43) that the descriptive research method is a method in researching the status of a group of people, an object, a condition, a system of thought, or a class of events in the present with the aim of creating a systematic, factual and accurate description, picture or painting of the facts, nature and relationships between the phenomena being investigated. This paper search through Google Scholar to find 5 articles that match the keywords published between 2012 and 2024. The keywords used to select articles are gadgets, speech delays, and early childhood. The language used in this article is Indonesian and English, as can be seen in the following table.

Author's name	Year	Country	Research Purpose	Research Object	Research Methods	Findings
Annisa Namira Rinaldi, Safia Utami, Silmi Kaffah Tanzielin N, Widya Putri Utami	2023	Indonesia	Investigating the impact of smartphones on children diagnosed with speech delay.	A mother who has twins.	Interview	The use of smartphones without rules and monitoring in children diagnosed with speech delay has a significant impact on the development of children's language.

Nadiia Senchylo-Tatlilioğlu	2022	Ukraine	To describe how language developed at the early childhood.	Early Childhood	Review of literature	Language development is divided into three periods, namely: Period Prelingual, Early Lingual Period and Differentiation Period. Start early period this early lingual child starts to say the word - first word which is the most amazing moment for parents.
Wahyu Dwi Kusdaryanto, Nenden Nursyamsi Agustina, Sindhu Wisesa	2023	Indonesia	Knowing the relationship between the role of gadgets and speech delays in children during the pandemic	Children aged 2-5 years old.	Case control study	Gadget screen time of 2 hours in 1 day increases the risk of speech disorders in children 3 times
Dyah Rohma Wati	2021	Indonesia	Find evidence and describe the effect of using gadgets on speech delays in children.	Reviewing several journals	Literature review	Gadget use can affect speech delays, so it can be interpreted that there is a relationship between the intensity of gadget use that is too long, namely in the category of 120 minutes or more than 75 minutes in a day.

Irma Suryani Siregar STAIN	2022	Indonesia	To find out the use and impact of gadgets on early childhood, and to explain the role of parents in supervising children in Siolip village.	early childhood children who use gadgets	Interviews, observations and documentation	The use of gadgets in early childhood in Siolip Village is that children use personal gadgets bought by their parents, children use their parents' gadgets or their siblings' gadgets.
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FINDINGS AND DISCUSSION

1. Language Development in Early Childhood

Language is an abstract system that consists of processes in linking biology and neurology. In producing language, the brain, as the neurological process, takes control how the language is perceived, and the body, as the biological process, takes control how the language is produced. Beyond the neurological and biological processes, Abonyi (2011) states that language is a mean of initiating the child into the culture of his people. This contact process is dependent upon the children's environment which influences the success of language development. Without people around the children language skills will not fully develop. Early childhood is the most optimal time to acquire language. Starting from birth, a baby starts to deliver signal to people around him/ her. The signals which is send will be develop by the time, as same as the development of the brain and vocal apparatus. To know when and how humans acquire and use the real language, this paper will explore theoretical frameworks related with the steps of early children language acquisition related with the process of brain and vocal apparatus development and the influence of the environment on creating the language system.

Early childhood is a child in the age of 0-6 years. At the age of 0-2 years of physical and brain growth is. The relationships they form and the experiences they have during their first five years of life have a huge impact on their brain's growth. The crucial years of development start from the moment they're born, to five years old. This period is filled with sensitive milestones that are key to their cognitive development. In general, young children tend to follow a similar progression through of language development. There is no set timeline for this happening. Language development of children is divided in three periods, as follows:

- **Prelingual Period (age 0-1 years):** At this period children cannot pronounce 'spoken language' as spoken of adults, in the sense of not following the rules of the applicable language. In this period the child has a language of its own, such as babbling instead of communication with others.
 - a. Newborn period (crying / 0-2 months)
 - b. Coughing / crying period (2-2 months)

- c. Humming period (4-6 months)
- d. Repetitive humming period (7-9 months)
- e. Imitation of others voices period (9-11 months).
- **Early Lingual Period (1 to 3 years):** In this period, children began to speak the first words, though not yet complete. There are 4 stages:
 - a. Starting with the Sound and Word Period (9-12 months) where babies make speech-like sounds.
 - b. One-Word Stage (12-18 months) using single words like "doggy."
 - c. The Two-Word Stage (18-24 months) shows basic two-word combinations like "mommy hat,"
 - d. the Early Multiword Stage (2-3 years) where children form longer but simplified sentences, known as telegraphic speech.
- **Differentiation Period (3-6 years):** During this period, the child begins to speak in accordance with grammatical rules. In this period children's skills in organizing the differentiation of words and sentences are more appropriate.

According to (Indrayani, 2016: 279) stated that, language development is always in line with the growth of the child. Parents should always pay attention to these development, because at this time, largely determines the learning process. This can be done by giving a good example, to motivate children to learn. Parents are largely responsible for the success of children's learning and should always strive to improve the potential of children in order to develop optimally.

2. The Dangers of Giving Excessive Gadgets to Young Children Between the Ages of 1-3 Years

According to Sukmawati (2019), Pranesia, Anggrasari, Bahagia (2020), and Sawitri, Yannaty, Widyastika, Harumsih, Musyarofah (2019), the golden age is the peak of development in children, one of which is in speech and language development where during this developmental period children will become very active in playing, imitating behavior, babbling, imitating sounds, and combining words into sentences. The abnormality of a child's speaking ability when compared to the speaking ability of children of the same age is a speech delay. Therefore, the role of parents is very important in regulating the pattern of gadget use in children. The dangers of gadget use on early childhood is very much, namely making children's psychomotor abilities not develop, reducing children's sensory motor speech, reducing socialization and interaction which makes children insensitive to the environment, cognitive, psychological, emotional abilities, physical development, moral, social emotional, language development, one-way communication, less able to assess, examine and understand the meaning of the conversation.

The use of gadgets results in children being unable to communicate naturally, which makes children unresponsive to their surroundings, makes children passive listeners, affects children's growth and development, gadget radiation can damage nerves and brain tissue, reduce active power, reduce eye health, disrupt children's sleep and rest, make it difficult to concentrate, reduce learning concentration, limit children's physical activity, and create weight imbalances because children often hold back hunger and thirst when playing gadgets.

Appropriate speech and language development is the child's gross motor skills, fine motor skills, gross and fine movements according to their age.

Children who use smartphones for more than 60 minutes a day are more likely to have language delays than those who use them for less than two hours a day. According to (Prasetya, 2017) he stated that, the duration of gadget use of more than 60 minutes can cause speech delays. Thirty minutes of children using gadgets can increase speech and language delays. There is an influence of gadget addiction behavior on children's language development which is at a moderate level, meaning that children who experience gadget addiction behavior, children's language development is also at a moderate level. So, the higher the level of gadget addiction behavior in children, the smaller the effect on increasing children's language development. In terms of monitoring and assisting children when using gadgets parents play an important role in determining the duration, frequency, and selection of educational games. Children's speech and language development is also greatly assisted by interaction and communication, especially in expanding their vocabulary.

CONCLUSION

Based on a review of several journals, it was concluded that speech delays can be influenced by gadget use. Speech delay is a condition in which early childhood children experience a delay in the speaking process compared to the language process of children of the same age. One way to overcome or prevent children from experiencing language delays is to use screen time (screen time levels) so that parents can spend more time with their children to stimulate their language development. Children who have problems with communication will need every opportunity to hear words spoken directly to them, not words that come from gadgets, and they also need a place to practice using their own voice and words.

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