

Impact of Gadget Use on Speech Delay: Case Study of Toddlers in Tanjung Gusta Village

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ABSTRACT

Gadget is a term in English, which is an electronic device that has a special purpose and function to download the latest information, various technologies and the latest features so as to make human life more practical. The purpose of this study is to analyze the effect of gadget exposure on speech delay in children under five years old. This study is a qualitative descriptive analysis research. This descriptive research aims to describe a situation or phenomena as it is. This research was conducted in Tanjung Gusta Village. The subject of this research is the parents of toddlers who experience speech delay. Data collection techniques used in the study were observation and interviews. The results of observations and interviews show that children who intensely use gadgets (experimental group) have limited verbal communication skills compared to children who minimally use gadgets (control group). Children in the experimental group tended to have delayed speech, difficulty articulating words clearly and limited age-appropriate vocabulary. They also showed difficulty in understanding and following simple commands.

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1. INTRODUCTION

Gadget is a term in English, namely an electronic device that has a special purpose and function for downloading the latest information, various technologies and the latest features so as to make human life more practical. Gadgets can be computers or laptops, tablet PCs, video games, and so on. also cell phones or smartphones (Dewanti, et al. 2016). Based on data and information sources, gadget users in Indonesia reach 142% of the population, which means there are 371.4 million gadget users out of a total of 262 million people in Indonesia. Thus, on average, each resident uses 1.4 telephones because one person sometimes uses 1-2 telephones. Of the 371.4 million cell phone users, there were 132.7 million internet users, 106 million active social media users and 92 million active mobile social media users (Mariyama et al. 2023). Based on a survey entitled Internet Penetration & Internet User Behavior in Indonesia 2018 released by the Indonesian Internet Service Providers Association (APJII), North Sumatra is the province with the most internet users on Sumatra Island, reaching 6.3%. The provinces with the next largest contribution to internet use are Lampung (3%), West Sumatra (2.6%), Riau Islands (2%), Aceh (1.5%), Riau (1.3%), Bangka Belitung & South Sumatra (0.9%), and Bengkulu & Jambi (0.6%).

Excessive use of gadgets in children has been linked to a potential increased risk of speech delay. 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). According to Fauziddin (2017), the ability to speak is very important for children because by speaking children can communicate about their situation. Speech and language delay is one of the most common and most common forms of developmental delays in children. The reported incidence or prevalence of children's developmental delays in the language sector is 10-12%. Delays in children's development in the language sector generally occur in children aged 2 years to 5 years with different levels of severity for each child (Wooles et al. 2018). This late speaking disorder has an impact on children in developing social skills and when building social relationships with other people (Nilawati & Suryana. 2018).

The World Health Organization reports that between 5 and 25 preschool children experienced developmental disabilities in speech in 2016. Various problems related to child development include: Delays in motor skills, language and social behaviour have increased in recent years. The incidence rate is 12-16% in the United States, 24% in Thailand, 22% in Argentina, and 13-18% in Indonesia. Every child's growth is special and different. Child development is the maturation of the body's organs, especially the central nervous system (CNS). The most important period in a child's growth and development is the first three years, when development is rapid and guarantees the child's future. Indirectly, gadgets have positive and negative impacts on children's growth and development. According to Handrianto (2013), the positive impact is, firstly, on the development of imagination by looking at pictures which can develop thinking skills, and secondly introducing letters and numbers and supporting the learning process because it can train the mind, thirdly increasing self-confidence when you can complete the game, and fourthly supporting growth. Children learn reading, mathematics, and

problem solving. Meanwhile, the negative impacts of gadgets are as follows: Firstly, when studying, children often remember the gadgets more than the lesson, thereby reducing their concentration in studying. Second, children become lazy in writing and reading because children watch YouTube more often than other activities. Third, children become less social because lack of interaction with the environment and other people, Fourth, children will experience gadget dependence, Fifth, the impact of gadget radiation can affect the brain and damage the eyes, Sixth, cognitive development in early childhood is disrupted because children rarely study, observe, pay attention, imagine, assess, evaluate, and think about their environment, and the seven children who play with gadgets tend to be quiet, withdrawn and reluctant to talk to other people, which hinders their language skills. Their behaviour when playing with gadgets depends on what they see.

Gadget addiction which has an impact on speech delays in children is a serious problem that must immediately find a solution and be treated because it will have a big impact on intellectual or cognitive abilities and development. Apart from that, delays in speaking will also affect other aspects, such as decreasing the child's quality of life because the child is less able to socialize with his peers. This also results in a decrease in children's productivity because children consider themselves to lack the same abilities as their peers (Maulida, 2013).

In this article, researchers will explain in more detail the impact of using gadgets on speech delay in children. Researchers will also review the latest research that has been carried out in this field to provide a more comprehensive picture of this problem. This research involves evaluating the impact of gadget use on children's language abilities, the factors that influence it, and steps that can be taken to reduce the risk of speech delay. Through a better understanding of the impact of gadget use on speech delay, we can take effective steps in managing gadget use in children. By considering the importance of social interaction and verbal learning in children's development, we can develop a balanced approach to gadget use and ensure children's language development remains optimal. There has not been much research referring to speech and language delay in toddlers in Tanjung Gusta village, especially in relation to the impact of using gadgets. Therefore, this research is needed to provide data on the prevalence of speech and language delay in toddlers, which is caused by exposure to gadgets. The aim of this research is to analyze the effect of gadget exposure on speech and language delay in toddlers.

2. 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. Researchers do not change or treat research items, and all actions or occurrences take place as they are. Researchers wish to characterize the qualities and interactions between the phenomena being studied regarding the influence of electronics on speech delay in toddlers in Tanjung Gusta Village in a systematic, factual, and correct manner. Tanjung Gusta Village was the site of this study. The participants in this study were parents of toddlers who were experiencing speech delays. In research, observation and interviews are employed to acquire data.

3. RESULTS AND DISCUSSION

3.1. Result

This study aims to examine the impact of gadget use on speech delay in children. Data was collected through observation and interviews with parents as well as examining children's language development. Of the 5 participants involved in this research, 4 children used gadgets intensively (experimental group) and 1 child used gadgets minimally (control group). The child's age ranges from 3 to 5 years and is within the normal developmental range.

Table 1. Observation Table of children behavior towards the gadget utilization

Observation	Always	Often	Sometimes	Never
Children prefer playing with gadgets rather than communicating with peers or family members	✓ (4)		✓ (1)	
how long children use gadgets in one day		✓ (4)	✓ (1)	
Children have difficulty pronouncing words or sentences correctly and fluently		✓ (4)	✓ (1)	
The child seems to understand and respond well to the conversation		✓ (1)	✓ (4)	

Observation results show that children who use gadgets intensively (experimental group) have limited verbal communication skills compared to children who use gadgets minimally (control group). Children in the experimental group tended to have speech delays, had difficulty articulating words clearly, and had limited vocabulary appropriate for their age. They also show difficulty in understanding and following simple commands.

Interviews with parents revealed that children in the experimental group tended to be more interested and fixated on gadgets compared to social interactions with other people. They are less interested in communicating verbally, prefer playing with gadgets rather than interacting with peers, and have limitations in expressing their emotions or experiences. Parents set time limits for children to use gadgets, but they are inconsistent.

3.2. Discussion

The findings in this study indicate that intense gadget use in children can have a negative impact on language development and has the potential to cause speech delays. Children who are glued to gadgets tend to experience limited verbal communication, have difficulty understanding and using appropriate words, and have difficulty interacting and sharing experiences with others. Several experts are strengthen the previous opinion by stating that gadgets have a relationship and influence on children's speech and language development. The children who use gadgets for 2 hours per day have a risk of speech and language delays compared to children who use gadgets for less than 2 hours per day, or even more than 60 minutes who experience language delays (Fernandez & Lestari. 2019; Oktaviani et al. 2019; Sari. 2018; & Nirwana et al. 2018).

The frequency and level of gadget use differs between adults and children, but it is too early to make these devices accessible to all children. Because young children have certain time limits and different needs from adults, close supervision from parents is required when using devices in everyday life. Children who are not supervised tend to become addicted to gadgets. Once a child experiences addiction, it is difficult for him to recover (Nurafifah et al. 2023). These findings support existing concerns in society about the influence of gadgets on children's development. In addressing this problem, it is important to involve parents, educators, and health professionals in educating and promoting wise gadget use in children. Although this study provides useful initial insights, several limitations of this study should be noted. First, the study sample was limited to children aged 3 to 5 years. Further studies with larger sample sizes and wider age ranges may provide more comprehensive results. In addition, it is also important to consider other factors such as environmental and genetic factors in understanding speech delays in children. Understanding the impact of gadget use on children's language development is very important in an era of increasingly advanced technology. Collaborative efforts from individuals, families, schools, and society as a whole are needed to address potential negative impacts and promote healthy gadget use in children.

4. CONCLUSION

The results of this research show that intense use of gadgets in children can contribute to speech delay. Children who are too fixated on gadgets tend to experience speech delays, have difficulty understanding and using vocabulary, and have limited verbal communication skills. Parents should play an active role in supervising and accompanying children in using gadgets both in terms of duration of use, frequency and selection of educational games when using gadgets. Communication and interaction are also very important to stimulate children's speech and language development, especially in increasing the number of vocabulary. So it can be concluded that the more often children use gadgets, the higher the impact of gadget use.

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