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THE IMPACT OF SCREEN TIME ON THE GROWTH AND DEVELOPMENT OF TODDLER IN THE CITY OF SURABAYA

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ABSTRACT

This research aims to determine the impact of screen time on the development of toddlers in the city of Surabaya. After distributing questionnaires to residents of the city of Surabaya who have children under five, 110 respondents were obtained who filled out questionnaires to become supporting data for this research. The results of this study show that screen time given to toddlers with a period of less than 1 hour per day will result in better sleep quality, because children will get enough sleep for at least 10 hours per day consisting of naps and nighttime sleep. Apart from that, it will produce more toddler play activities so that toddlers will prefer playing with their friends rather than having to play alone with gadgets. Giving children less than one hour of screen time per day will result in better toddler socialization activities. Toddlers will adapt more easily to their new environment and be more confident when they meet new people because their social psychology development is very good. Apart from that, toddlers have better eye and hand coordination, meaning that children's fine motor and gross motor development is also very good, as well as toddlers' better communication skills. Toddlers can answer their parents' calls more quickly and answer more quickly when their parents ask. Toddlers who can communicate both ways with their parents and other people indicate that their verbal and logical skills are very well developed.

Keywords

Toddlers, Screen Time, Growth and Development

INTRODUCTION

Since the last few decades, rapid technological advances have brought significant changes in the way we communicate, work, learn, and even entertain. Gadgets, such as smartphones, tablets, and computers, have become an integral part of people's lives, creating a profound impact on various aspects of life. Technological developments provide convenience and comfort in accessing information, communicating globally, and

carrying out various daily tasks. However, along with the benefits, the use of gadgets and increased screen time also raises various questions and challenges regarding their impact on physical and mental health, especially in the younger generation. Increased screen time, which includes activities such as watching television, playing video games, and using social media, has become a serious concern. The dominating presence of screens in daily life can impact sleep patterns, the quality of social interactions, cognitive development and psychological well-being.

The golden period is the period of the first five years of life, a golden age that lasts once in a human's life, often understood as a window of opportunity or critical period. At this age, children's physical, intellectual, mental and emotional development takes place. The speed of responding and exploring the environment is very good, in this period it also determines the child's attitude, behavior and personality. Children's development is influenced by several aspects, one of which is the social environment and the role of parents. During the COVID-19 pandemic, using gadgets has become a shortcut for parents to accompany their children in playing. Fun features and applications on gadgets make children calmer, this can make it easier for parents to carry out their activities. Screen time can affect toddlers' emotional and developmental processes. The process of early childhood development includes the development of gross motor skills, fine motor skills, language, personal and social. Excessive intensity of screen time causes children to become dependent, this can trigger emotional development disorders, resulting in potential tantrums. Tantrums are children's attitudes and behavior that are expressed by getting angry, throwing tantrums, slamming things, crying and hitting, which is sometimes caused by rejection of something. Using devices too early can have a big impact on early childhood development (Setyarini et al., 2023)

Screen time is a term that refers to the amount of time a person spends looking at or interacting with an electronic screen, such as a television, computer, tablet, or smartphone, which includes various activities that involve the use of digital devices with screens, ranging from watching films, playing video games. , to using social media applications. Screen time on children has positive and negative impacts (Setyarini et al., 2023). Therefore, through this research, a study will be developed to analyze the impact of screen time on the growth and development of children under five in the city of Surabaya.

THEORETICAL BASIS

Toddler

Toddler is a term generally used for children aged between one and five years. This toddler phase is an important stage in a child's development, where they experience rapid progress in various physical, cognitive, social and emotional aspects. In this period, toddlers are actively exploring the world around them, starting to develop motor skills, and starting to hone language skills. Some general characteristics of toddlers include (Yulizawati & Afrah, 2022):

a. Toddlers are usually experiencing motor development, such as learning to walk, crawl, and developing hand-eye coordination. They begin to explore their surroundings in more active ways.
b. Language is an important aspect at this stage. Toddlers begin to develop vocabulary, learn to construct simple sentences, and communicate with their surroundings. They also tend to imitate and absorb speech patterns from the people around them.

c. Toddlers begin to show the urge to be independent. They want to do simple tasks themselves, such as putting on shoes or holding a spoon. This is the first step in establishing their independence.
d. At this stage, toddlers begin to know and interact with other people around them. They may show interest in playing with peers or show responsiveness to social stimuli.
e. Toddlers begin to recognize and express emotions in a more open way. They can show excitement, frustration, or anxiety more clearly. Temperature development also begins to appear.
f. Even though they are starting to show signs of independence, toddlers are still very dependent on their parents or caregivers. A strong relationship with parents remains important to provide support and security.

Screen Time

Screen time is a term that refers to the amount of time a person spends looking at or interacting with an electronic screen, such as a television, computer, tablet, or smartphone, which includes various activities that involve the use of digital devices with screens, ranging from watching films, playing video games. , to using social media applications. Screen time on children has positive and negative impacts. The benefits include encouraging creative expression and critical thinking in children without limiting them to real-world boundaries. The negative impacts of screen time outweigh the positive impacts, namely addiction, lack of concentration, delayed speech and exposure to radiation. The use of gadgets in children has quite a negative impact, where toddlers spend most of their time just playing with gadgets, making them tend to be lazy about moving and doing activities which can interfere with gross motor skills. Over time, toddlers will forget the fun of playing with their friends, which will disrupt social interactions (Setyarini et al., 2023)

Along with the development and ease of access to technology, the duration of screen time in children has increased beyond the duration recommended by WHO. Children aged 3 years are reported to have increased screen time by an average of 3.6 hours per day. It is reported that newborn children up to 8 years old spend 2.5 hours per day on screen time. Parents often allow their children to have screen time at meal times and as a play activity for their children. Recently, the increase in the duration of screen time has occurred because parents use digital devices as a medium for distracting children, especially when parents are tired, working, helping to calm children who are fussy/restless, and lulling children to sleep. Increasing the duration of screen time in children will reduce the quality of interactions between parents and children, thereby allowing behavioral problems in children (Simanjuntak, 2023)

Growth and development

The term growth and development actually covers two events that are different in nature, but are interrelated and difficult to separate, namely growth and development. Growth is related to the problem of changes in size, number or dimensions at the cell, organ and individual level. Development focuses more on aspects of changes in the form or function of the maturation of organs or individuals, including changes in social or emotional aspects due to environmental influences. The types of growth and development are divided into (Wahyuni, 2018):

1. Physical growth and development
   Physical growth and development includes changes in the size and function of organisms or individuals. These functional changes vary from simple molecular level functions such as

enzyme activation in cell differentiation, to complex metabolic processes and changes in physical shape during puberty and adolescence.

2. Intellectual growth and development Intellectual growth and development is related to communication skills and the ability to handle material those that are abstract and symbolic, such as talking, playing, counting or reading.
3. Emotional growth and development The process of emotional growth and development depends on the baby's ability to form inner bonds, the ability to make love and affection, the ability to handle anxiety due to frustration and the ability to be aggressively stimulated.

Growth is an increase in the size and number of cells and intracellular tissue, meaning an increase in the physical size and structure of the body in part or in whole, so that it can be measured in units of length and weight, while development focuses on changes that occur gradually from the lowest level to the highest level. high and complex through the process of maturation and learning. Growth is related to changes in quantity, which means changes in the number and size of body cells as indicated by an increase in the size and weight of all parts of the body (Yulizawati & Afrah, 2022). According to Soetjiningsih, growth has characteristics (Yulizawati & Afrah, 2022):

1. Changes in body proportions that can be observed in infancy and adulthood.
2. The disappearance of old characteristics and the emergence of new characteristics. These changes are characterized by the loss of milk teeth and the appearance of permanent teeth, the loss of primitive reflexes during infancy, the emergence of secondary sex signs and other changes.
3. Irregular growth rate. This is characterized by certain periods where growth occurs rapidly, which occurs during the prenatal, infant and adolescent periods (adolescence).
4. Growth is slow during the pre-school and school years.

The process of child growth and development is individual. However, the development of every child has the same characteristics (Yulizawati & Afrah, 2022):

1. Development causes change. Development occurs simultaneously with growth. Every growth is accompanied by a change in function. For example, intelligence development. In a child, this will accompany the growth of the brain and nerve fibers.
2. Growth and development in the early stages determines subsequent development. A child cannot pass through one stage of development before he passes through the previous stage. Example: a child will not be able to walk before he stands and he cannot stand if the growth of the legs and other body parts related to the child's function is hampered. This initial development is a critical period because it will determine further developments.
3. Growth and development have different speeds. Like growth, development also has different speeds, both in physical growth and in the development of organ function. The speed of growth and development of each child is also different.
4. Growth is correlated with development. When growth takes place, development follows. There is an increase in mental abilities, memory, reasoning power, associations and so on in children, so that healthy children as they get older will also increase their height and weight as well as their intelligence.

METHODS

This research uses quantitative methods because it is focused on collecting statistical data. Quantitative methods provide a more objective and measurable framework in data collection and analysis. This can increase research reproducibility, where results can be repeated with the same method to confirm correctness or consistency. In addition, quantitative methods make it easy to explore relationships between variables or answer causal questions, as well as providing tools to measure the level of these relationships (Sahir, 2021).

Researchers have gathered 110 parents to serve as respondents in this research to provide information regarding giving screen time to children and the impact it has on children. Sample selection used the Purposive Sampling technique method because researchers wanted criteria in sampling, including (Ahyar et al., 2020):

1. Children are still toddlers (aged 1 – 5 years)
2. Has been given gadgets in his daily life.

After the questionnaires were distributed and answers were obtained from each parent, data was obtained which was then analyzed using descriptive techniques, namely an analytical approach that aims to provide a detailed and systematic picture related to the characteristics of a dataset without making inferences or generalizations to a larger population, including calculating the frequency of appearance of each answer or category in the questionnaire which is able to provide an idea of how often a response appears, as well as calculating the frequency percentage of respondents. Percentages provide an overview of the relative proportion or distribution of each category (Ahyar et al., 2020).

RESULTS

After done spread questionnaire to 110 parents with toddlers for _ know impact *screen time* to grow Toddler flowers in the city of Surabaya, then obtained analysis as following :

1. A total of 59 parents (53.6%) provided *screen time* to child since age not enough from 2 years , whereas the remaining 51 parents (46.4%) provided *screen time* to child above _ 2 years old .
2. A total of 78 parents (70.9%) stated that child more Like play with Friend compared to *screen time* , meanwhile the remaining 32 parents (29.1%) stated his son more Like *screen time* compared with play together friends his age .
3. A total of 88 parents (80%) explained that when *screen time* the children really like it watch YouTube , meanwhile the remaining 22 parents (20%) explained that his children No Like watch YouTube .
4. A total of 85 parents (77.3%) accompanied them child when *screen* , meanwhile the remaining 25 parents (22.7%) did not accompany child when *screen time.*
5. A total of 71 parents (64.5%) gave *screen time* when his parents busy or not can disturbed , meanwhile the remaining 39 parents (35.5%) provided *screen time* at any time to child without waiting for his parents Busy .
6. A total of 64 parents (58.2%) had restrictions *screen time* child not enough from 1 hour per day , whereas the remaining 46 parents (46.4%) allowed it child more *screen time* from 1 hour per day .

7. A total of 103 parents (93.6%) stated that child The toddler every day more Lots do activity physical , meanwhile the remaining 7 parents (6.4%) stated that child The toddler not enough in do activity physique .
8. A total of 96 parents (87.3%) stated that child The toddler Like activity physique running and jumping , meanwhile the remaining 14 parents (12.7%) stated that child The toddler not enough Like activity physique running and jumping .
9. A total of 83 parents (75.5%) explained that although child given *screen time* but bedtime _ children still not enough more than 10 hours per day , whereas the remaining 27 parents (24.4%) explained that consequence *screen time* his children Sleep not enough than 10 hours per day .
10. A total of 108 parents (98.2%) stated that child The toddler own coordination good eyes and hands _ although get *screen time* , meanwhile the remaining 2 parents (1.9%) stated that child The toddler No own coordination good eyes and hands _ consequence get *screen time* is too long.

Furthermore based on a number of statement the will correlated How impact giving *screen time* to grow Toddler flowers so obtained results following :

Table 1. Impact Giving *Screen Time* with Sleep Hours

Crosstab

Count

		Sleep approximately 10 hours per day		
		Yes	No	Total
Screen Time < 1 Hour per Day	Yes	48	16	64
	No	35	11	46
Total		83	27	110

Source : SPSS Data Processing, 2024

Based on table 1 is obtained results that as many as 48 parents agree If given *screen* time to child not enough from one hour per day will give time Sleep for will not enough more than 10 hours per day . This matter show that given *screen* time to Toddlers with period time not enough from 1 hour per day will produce quality more sleep _ OK , because child will own Enough sleep at least 10 hours per day consisting of from Sleep Afternoon nor Sleep Evening . Because of that , preferably parents _ Limit your toddler's screen *time* for quality his sleep become more Good so that grow flower child become more Good .

Table 2. Impact Giving *Screen Time* with Activity Play

Crosstab

Count

		Likes to Play Alone		
		Yes	No	Total
Screen Time < 1 Hour per Day	Yes	12	52	64
	No	11	35	46
Total		23	87	110

Source : SPSS Data Processing, 2024

Based on table 2 is obtained results that as many as 52 parents agree If given *screen* time to child not enough from one hour per day will produce activity more Toddler play Lots . Toddlers will more Like play with his friends compared to must play Alone with *gadgets.* Because of that , preferably parents _ Limit your toddler's screen *time* so they can more Good in

activity play with his friends so that grow flower motor become more Good .

Table 3. Impact Giving *Screen Time* with Activity Socialization

Crosstab				
Count				
		Easy Socialize		
		Yes	No	Total
Screen Time < 1 Hour per Day	Yes	54	10	64
	No	35	11	46
Total		89	21	110

Source : SPSS Data Processing, 2024

Based on table 3 is obtained results that as many as 54 parents agree If given *screen* time to child not enough from one hour per day will produce activity more toddler socialization Good . Toddlers will more easy adapt with environment new and more believe self If meet with new people Because development psychology very good social . Because of that , preferably parents _ Limit your toddler's screen *time* so they can more Good in activity socialization so that grow flower social become more Good

Table 4. Impact Giving *Screen Time* with Eye and Hand Coordination Crosstab.

Count				
		Good Eye and Hand Coordination		
		Yes	No	Total
Screen Time < 1 Hour per Day	Yes	64	0	64
	No	44	2	46
Total		108	2	110

Source : SPSS Data Processing, 2024

Based on table 4 is obtained results that as many as 64 parents agree If given *screen* time to child not enough from one hour per day will produce coordination Toddler's eyes and hands are more good , meaning development motor fine nor motor rough the child is also very good . Toddlers will more do activity like running , jumping , tearing , squeezing , throwing , and so on . Because of that , preferably parents _ Limit your toddler's screen *time* so they can more Good in development motor smooth and motoric roughly so that grow the flower become more Good .

Table 5. Impact Giving *Screen Time* with Two Way Communication Crosstab

Count				
		Easy Communicate Two Ways		
		Yes	No	Total
Screen Time < 1 Hour per Day	Yes	60	4	64
	No	43	3	46
Total		103	7	110

Source : SPSS Data Processing, 2024

Based on table 5 is obtained results that as many as 60 parents agree If given *screen* time to child not enough from one hour per day will produce ability more toddler communication Good . Toddlers can more fast answer his parents call and more fast answer when his parents ask . Toddlers can two- way communication with his parents nor other people indicate verbal and logical abilities developing very well . Because of that , preferably parents _ Limit your toddler's screen *time* so they can more Good in development verbal and logical abilities so that grow the flower become more Good .

CONCLUSIONS

Based on research that has been done can formed conclusion that given *screen* time to Toddlers with period time not enough from 1 hour per day will produce quality more sleep _ OK , because child will

own Enough sleep at least 10 hours per day consisting of from Sleep Afternoon nor Sleep Evening . Besides that will produce activity more Toddler play Lots so Toddler will more Like play with his friends compared to must play Alone with *gadgets.*

Giving *screen time* to child not enough from one hour per day will produce activity more toddler socialization Good . Toddlers will more easy adapt with environment new and more believe self If meet with new people Because development psychology very good social . Apart from that, toddlers have coordination Toddler's eyes and hands are more good , meaning development motor fine nor motor rough the kids are also very nice , too ability more toddler communication Good . Toddlers can more fast answer his parents call and more fast answer when his parents ask . Toddlers can two- way communication with his parents nor other people indicate verbal and logical abilities developing very well .

Characteristic features grow flower good boy _ in a way motor is there is development accompanying intelligence _ with growth brain and fibers nerve . A child can pass One stage development before He pass stages before , like child can walk Because previously has Study crawling and sitting. When _ growth ongoing , then development too follow . Happen enhancement mental ability , memory , power reasoning , associations and so on in children , so that in children Healthy along increase age so also increases in height and weight his body likewise his intelligence . Because of that , preferably parents _ Limit hours of *screen time* for toddlers to grow the flower become more Good .

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