The Duration of Playing Gadgets in Preschool Children Is Related to The Level of Anxiety of Parents

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Abstract

The use of gadgets in preschool children is increasing. This can affect the level of anxiety of parents. This study aim was to determine the correlation of the duration of playing gadgets for preschool children with the level of parents’ anxiety. This study used a cross-sectional approach. The independent variable of this study was the duration of playing gadgets, while the dependent variable was the level of parents’ anxiety. The population of this study was parents who have preschool-age children, with 55 respondents. The sampling technique used total sampling. The research instrument for the duration of the gadget used a checklist. In contrast, the parents’ anxiety level instrument used a modified GAD-7 (General Anxiety Disorder-7) tested for validity and reliability. Analysis of the research data using Spearman Rho test. The results obtained were p = 0.000 < (0.05), which means that there was a correlation between the duration of playing gadgets for preschool children with the level of parents’ anxiety with a significant correlation of 0.547 or quite large or strong enough. Things that can be suggested for parents are more supervision of children in using gadgets properly and determining the specified duration.

Keywords: preschool children, gadget-use duration, anxiety level.

INTRODUCTION

Knowledge in the era of technology is increasing and overgrowing. One of the technological advances is the use of gadgets, especially in preschool children (Dewi et al., 2021). Preschool-age children have extraordinary abilities and have undergone many significant changes (Nurwijayati, n.d.). The development of the child's brain is very rapid, which serves as the work of every hobby and human quality. Children respond and quickly research new things by exploring the surrounding environment. The stimulation may be essential in improving the simple skills possessed by children, especially in the growth and development of children (Setianingsih, 2018). Many fathers and mothers are no longer aware of the importance of early stimulation in the development of preschool children.

The pattern of parenting that is carried out between the father and mother affects the child's further development. One of them is gadgets, generally starting from the change of father and mother or their circle of relatives through displaying video games or movies on the gadget so that children are not fussy or do something. Starting from the transition, he indirectly added children with gadgets which later led to an excessive preference for gadgets (Mutia et al., 2020; Herliana & Lestari, 2021). Gadgets are sophisticated devices with many different functions and packages to help people's lives become practical. It is fun for kids because this gadget provides motion impression, sound, color, and multi-functional tools for functions like playing, watching, singing, and many other things. Gadget customers
in Indonesia are overgrowing, and it is estimated that the assessment of device information in Indonesia will exceed the variety of Indonesian people (Zaini & Soenarto, 2019).

Smartphone users in the world in 2020 are estimated to be around 3.6 billion. This number has increased compared to 2019, which was 3.4 billion users, and it is predicted that in 2023 there will be around 4.3 billion smartphone users globally. Indonesia is in the fourth position with 160.23 million smartphone users and has reached 58.6% of the total population of the population in Indonesia (Pusparisa, 2021). More than 25% of international children own a device before turning eight. 1 in 3 children starts using gadgets when they are three years old, and 1 in 10 children enjoy gadgets at the age of 2 years younger (Zaini & Soenarto, 2019). The use of gadgets has a good (positive) and bad (negative) impact. From the positive (positive) impact of the device's sophistication to making it easier for children to hone their creativity and intelligence, including applications, reading, and writing letters, it has a good effect on increasing children's thinking power. There are negative impacts of using gadgets on children, namely health problems, impaired development of toddlers, vulnerability to crime, and can affect children's behavior (Munisa, 2020) (Hermawan Agus, 2021).

Another effect is easier internet access via gadgets which may show a whole that is no longer visible to children. Many young people become addicted to gadgets and forget to socialize with their surrounding environment, which impacts mental, incredibly emotional, and self-confidence disorders and children's physical development (Mihrja & Fitrianti, 2019). Based on the official journal of the American academy of pediatrics, it is recommended that the duration of using gadgets or screen-based media for children is not 1 to 2 hours/day (Munisa, 2020). According to Wijanarko (2016), the deviant behavior that occurs is if the gadget is taken, the child may be furious, excessive, screaming, or throwing a tantrum (Ayunda Ragil & Sodikin, 2020).

The impact of gadgets on children's behavior will cause anxiety for parents in the process of growing their children. However, some mothers and fathers are not aware of the adverse effects on their children or deliberately allow their children to use gadgets; some mothers and fathers do not feel the effects of the gadget themselves (Nurhidayah et al., 2019). Anxiety is a bad feeling. Anxiety is a reaction from within and from outside a person when an event or occurrence (Tirajoh et al., 2021). Anxiety can cause physical signs consisting of restlessness, shortness of breath, and excessive sweating. Psychological signs consist of fear, loss of consciousness, and irritability—socio-spiritual signs consist of moodiness, withdrawal, and reduced self-confidence (Lubis et al., 2014). The research results by Rosales Finatika et al. (2019) describe the level of anxiety of parents towards children who use gadgets. The study results show that most respondents experience mild anxiety as many as 54 respondents (74%), and respondents with moderate anxiety, as many as 19 respondents (26%). The description of gadget intensity in children is obtained by 35 respondents (47.9%) getting medium gadget intensity, 25 respondents (34.2%) getting high gadget intensity, and 13 respondents (17.8%) getting low gadget intensity (Finatika & Mustikawati, 2019).
Based on a preliminary study that researchers conducted on parents of preschool-aged children in RT.06 Jagakarsa, by filling out questionnaires and direct interviews, 25 respondents were obtained, five children who play with gadgets 1 hour/day, nine children who play with gadgets 1 hour to 2 hours/day, and 11 children playing gadgets for 2 hours. Then the level of parents’ anxiety was severe with a duration of playing with gadgets for 2 hours in 10 children and a mild level of anxiety for parents with a child playing with gadgets for 1 hour for children as many as three people. While parents with mild anxiety levels with a duration of playing gadgets 2 hours in children as many as one parent and parents with severe anxiety levels with playing 1 hour in children as many as five parents. This study was conducted to determine how parents’ anxiety affects the duration of playing with gadgets in children. So that actions can be taken to minimize the impact caused by using gadgets. The negative impact of using gadgets on children, namely, (1) disturbing health, (2) can interfere with child development, (3) vulnerable against crime, (4) can affect children’s behavior, another impact is the easier internet access through gadgets that can display everything that should not be seen by children (Hermawan Agus, 2021). Based on this, this study aim was to determine the correlation of the duration of playing gadgets for preschool children with the level of parents’ anxiety.

METHODS

This research uses a descriptive quantitative method with a cross-sectional approach (cross approach). This research was conducted in RT.06 Jagakarsa, South Jakarta. The research sample used a total sampling of 55 respondents with inclusion criteria of parents who have children aged 3 to 6 years. Data on the duration of playing gadgets used a checklist sheet and anxiety level using GAD-7 (General Anxiety Disorder-7). This questionnaire has been tested for validity and reliability for research results using the Spearman rho test. This research has passed the ethical test at the STIKIM Health Research Ethics Commission with a certificate Number: 2623/Sket/Ka-Dept/RE/STIKIM/XI/2021.

RESULTS

Tabel 1. Description of Gadget Playing Duration in Preschool Children and Parents’ Anxiety Levels (n=55)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gadget Playtime</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short</td>
<td>13</td>
<td>23.6</td>
</tr>
<tr>
<td>Normal</td>
<td>21</td>
<td>38.2</td>
</tr>
<tr>
<td>Long</td>
<td>21</td>
<td>38.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>55</td>
<td>100</td>
</tr>
<tr>
<td><strong>Parents Anxiety Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td>4</td>
<td>7.3</td>
</tr>
<tr>
<td>Currently</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Heavy</td>
<td>40</td>
<td>72.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>55</td>
<td>100</td>
</tr>
</tbody>
</table>
Based on the data from table 1, the results measuring the duration of gadgets in preschool children are typical, and the results are 21 parents (38.2%). While the results of measuring the level of anxiety of parents were the results of the level of severe anxiety of 40 people (72.7%).

Table 2. The Correlation of Preschool Children’s Gadget Playing Duration with Parents’ Anxiety Levels (n=55)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Anxiety Level</th>
<th>Light</th>
<th>Medium</th>
<th>Heavy</th>
<th>Total</th>
<th>P Value</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of Playing Gadgets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short</td>
<td></td>
<td>4 (7.3%)</td>
<td>5 (9.1%)</td>
<td>4 (7.3%)</td>
<td>13 (23.6%)</td>
<td>0.000</td>
<td>0.547</td>
</tr>
<tr>
<td>Normal</td>
<td></td>
<td>0</td>
<td>5 (9.1%)</td>
<td>16 (29.1%)</td>
<td>21 (38.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long</td>
<td></td>
<td>0</td>
<td>1 (1.8%)</td>
<td>20 (36.4%)</td>
<td>21 (38.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4 (7.3%)</td>
<td>11 (20%)</td>
<td>40 (72.7%)</td>
<td>55 (100%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the cross tabula table 2, it can be seen that for a short duration of playing gadgets with mild parents’ anxiety level 4 (7.3%) respondents, short duration of playing gadgets with moderate parents’ anxiety level 5 (9.1%) respondents, duration of playing gadgets short with a heavy parents’ anxiety level of 4 (7.3%) respondents. For the duration of playing typical gadgets with moderate parents’ anxiety level 5 (9.1%) respondents, duration of playing gadgets with severe anxiety level 16 (29.1%) respondents. Moreover, for the duration of playing old gadgets with moderate anxiety levels, 1 (1.8 %) respondents, duration of playing old gadgets with severe parents’ anxiety levels, 20 (36.4%) respondents. From the results of the Spearman rho test with a result of 0.000 (p-value < 0.05), which means that it is concluded that there is a correlation between the duration of playing with gadgets in preschool children with the level of parents’ anxiety, which is significant, and the closeness of the correlation is 0.547 or quite large or strong enough.

DISCUSSION

Based on 1, it was found that the duration of playing gadgets for preschool children in RT.06 Jagakarsa, South Jakarta has a duration of playing gadgets, namely, in a short time (< 1 hour/day) the duration of playing gadgets for children is 13 (23.6%) parents of respondents, in regular time (1 hour - < 2 hours/day) the duration of playing gadgets on children is 21 (38.2%) of respondents' parents. For a long time (> 2 hours/day), the duration of playing with gadgets children is 21 (38.2%) of respondents' parents. It can be concluded that the majority have the duration of playing with gadgets in children in a regular and extended time with the same number of frequencies, namely 21 (38.2%) respondents.

The results of this study are in line with research conducted at TK "X" Bengkulu City that out of 54 respondents, 33 (61.1%) people had children using gadgets with an abnormal duration of > 2 hours and 21 people had children using gadgets with a duration of 2 hours (Pearl et al., 2020). The results of other studies that are in line describe that of 80 respondents, 47 (58.8%) have a habit of playing with gadgets for more than 2 hours or in the high category every day (Suri et al., 2021). Moreover, the results
of the research are in line with that described by 71 respondents; the results of the duration of using gadgets show that 43 (60.6%) use gadgets excessively (> 1 hour/day). Based on the view of psychiatric nursing, the use of gadgets at an early age is not recommended because it can cause children not to learn to communicate and socialize (Chikmah & Fitrianingsih, 2018).

The use of gadgets, especially gadgets in children, is currently overgrowing. Today's gadgets are filled with various applications such as games to lessons. Each application has a variety of colors and characters, presenting someone pleased to linger in front of a gadget (Suri et al., 2021). At the age of preschool children, there is very high activity and physical development and significant personality development. At this age, motor development also affects continuously, one of which is fine motor development, namely writing first names, building a tower as high as 12 squares, coloring lines, holding a pencil correctly between thumb and two fingers, drawing people with hair, tracing go lengths, circles, and triangles (Putri et al., 2020).

It is not wrong that children like today's gadgets. Because today's gadgets have evolved with attractive designs and the use of touchscreen technology that makes them attractive, gadgets are currently filled with various applications, like games that are currently very varied, ranging from games with the theme of adventure to learning. Then the presentation of each application (game) with various colors and characters is not surprising if gadgets are very popular with children (Munisa, 2020).

So that the duration of playing with gadgets for children does not exceed the duration recommended by the America Academy of pediatrics 1 to 2 hours per day, parents need to limit the use of gadgets, namely at certain times or suggest children play with friends or divert other games (Chikmah & Fitrianingsih, 2018). The use of gadgets for too long is feared to have a negative impact. Namely, impaired physical conditions such as visual impairment, pain in the wrist or back of the neck, the potential for gadget addiction (Laurintia et al., 2019), decreased concentration power, anger, and being too busy with their gadgets. Lazy behavior, sleep behavior, and children's health (Finatika & Mustikawati, 2019). Gadgets have actual consequences for especially children, namely the duration of playing with gadgets for the positive impact on children's ability to learn independently, very high curiosity, creativity, and intelligence (Suri et al., 2021).

According to the researchers' assumptions, children like to play with gadgets because the touchscreen design makes it easier for children to play with gadgets, and there are many exciting applications that make children comfortable and happy in using gadgets. In addition, working parents are more dominant in giving gadgets to children. If parents do not limit the duration of children playing with gadgets, it will cause addiction in children. Because playing with gadgets for too long can affect the growth and development of preschool children, such as lack of socialization, laziness to get along, and inhibition of fine motor work in children.

Based on the results of the study in table 1, it is known that the anxiety level of parents in RT.06 Jagakarsa, South Jakarta with mild anxiety levels of as many as 4 (7.3%) parents respondents, moderate anxiety levels as many as 11 (20.0%) parents of respondents, and the level of severe anxiety was 40
(72.7%) of the respondent's parents. It was concluded that 40 (72.7%) parents of respondents experienced severe anxiety levels.

This study is in line with previous the study that the results of this study are mild anxiety 3 (9.68%), moderate anxiety 13 (41.94%), and severe anxiety 15 (48.38%) (Lubis et al., 2014). Other study that is in line with this study illustrates that the level of maternal anxiety is low anxiety 2 respondents (2%), moderate anxiety 34 respondents (35.1%), and high anxiety 61 respondents (62.9%) (Pramudia & Wardani, 2021). And the results of other studies also mentioned the results of mild anxiety levels for 8 respondents (4.2%), moderate anxiety for 70 respondents (36.6%) and severe anxiety for 113 respondents (59.2%) (Herliana & Lestari, 2021).

The level of anxiety is a state experienced by a person in an unpleasant state and feeling uncomfortable. In the form of feelings of fear, they are accompanied by physical symptoms such as chest pain, heart palpitations, shortness of breath, and shaking hands accompanied by cold sweat (Halawa, 2021). Gadgets result from parental tension because the use of gadgets among children is increasingly involved and harms children's growth and development (Miharja & Fitrianti, 2019). Parents should be wise in the type of media used by children and set a time limit on the hours per day to use gadgets so that they are not too long and can minimize the negative impacts caused if they are too long (Finatika & Mustikawati, 2019). In addition, this anxiety affects the psychology of the parents, such as fear, worry, unable to concentrate on the activities to be carried out, causing feelings of sadness (Lestari & Anindya, 2021; Ximenes, 2019).

Parents’ anxiety arises because of the influence of gadgets among children and more worries and harm to growth and development. Young people are good at adapting to today's technology. Therefore, the current generation is often run over by the greatness of devices and functions based on technological sophistication. Children who use devices regularly ignore their surroundings and often forget their surroundings. In addition, the use of gadgets will affect children's psychomotor abilities, which are reduced due to using gadgets; children find it challenging to communicate and socialize with other people (Miharja & Fitrianti, 2019). So, in this case, parents have different ways of limiting children in using gadgets. Some parents limit the use of gadgets by giving their gadgets only on school holidays, and parents who give gadgets to their children by limiting it to 1 hour per day (Suherman, 2019).

According to the researcher's assumption, parents have a role in controlling and monitoring the use of gadgets in children, which can cause gadget addiction. So, parents feel anxiety in children, which makes children's eating patterns disrupted or learning activities in children also become irregular due to too long using gadgets that can make parents unable to control emotions such as anger or yelling and will impact children's emotions such as crying, tantrums, or anger. So that parents give the transition by making a schedule for using gadgets for children, such as parents only giving gadgets during school holidays or people limiting gadgets to children for 1 hour per day.

It can be seen in Table 2 that the results of the duration of playing with gadgets in children are short with a mild level of parents’ anxiety 4 (7.3%) and the duration of playing with gadgets in children
is long with severe parents’ anxiety levels of 20 (36.4%) respondents. From the results of the Spearman rho statistical test, the result is 0.000 (p-value <0.05), which means that it is concluded that there is a correlation between the duration of playing with gadgets in preschoolers and the level of parents’ anxiety, which is significant and the correlation is 0.547 or quite large or strong enough.

The results of this study have a correlation with research conducted at SMP N 3 Gamping Sleman Yogyakarta with 60 respondents; the results of the research with the correlation test obtained a significant p-value of 0.001 (p <5%) so that it can be stated that there is a correlation between parents’ anxiety and the use of gadgets in children. This study indicates that parents’ anxiety affects the use of children’s gadgets, causing parents to worry about their children when playing with gadgets (Ximenes, 2019).

Then, other related studies were conducted in RT. 22 and 23 Tambak Sari Surabaya with 24 respondents. The results of cross-tabulation found that teenagers who are addicted to games. From the results of the Spearmen statistical test, it was found that p = 0.001 with a significance level of p < 0.05, which means HO is rejected or there is a significant correlation between online game addiction in adolescents and parents’ anxiety levels (Halawa, 2021).

In addition, the results of this study are in line with research conducted on 167 respondents aged 4-6 years in the East Java Province. The results obtained with the regression coefficient test obtained a value of 0.021 <0.05, so it is stated that the variable use of gadgets in children affects parents’ anxiety. So this study shows the anxiety of parents with the use of gadgets in children with too long or excessive duration. The negative impact of excessive use of gadgets is that children will become less concentrated (Saroinsong et al., 2021).

The purpose of giving gadgets to children by parents is so that children do not cry and are not fussy (Pearl et al., 2020). Based on research by the World Health Organization (WHO), the duration of playing gadgets in children is less than one to two hours/day (Nurhidayah & et al, 2019). Gadgets have a positive impact, such as increasing visual acuity, improving language skills, improving mathematical skills, and children can also recognize colors and objects in the surrounding environment. Gadgets also harm children, such as children being busy with their world. Children cannot interact with other people, eyes will often see water and red eyes, and children will get angry quickly when gadgets are taken by other people (Sari & Miranda, 2019).

The impact of the eye and brain health on the duration of playing with gadgets is too long, namely the disruption of brain growth in children, obesity, lack of sleep, mental disorders, being aggressive and emotional, children’s concentration, radiation from gadgets do not immediately see the effect. Therefore parents must be wise in supervising children playing with gadgets (Anggraeni, 2019).

The use of gadgets for too long makes parents complain about children who are challenging to remind. Children whose parents do not supervise watch YouTube videos or are relaxed with their gadgets, so that children do not have a long time to play with gadgets that are more than 1 hour. Parents should be wise in determining the type of media children use (Finatika & Mustikawati, 2019).
Children will become individual and comfortable with gadgets, leading to a less caring attitude towards friends or other people. So the role of parents is significant for preschool-aged children to provide assistance and supervision for the length of time using gadgets in children (Nurhidayah & Dkk, 2019). Because parental supervision can make children more careful in using gadgets. The role of parents is critical in maintaining and providing direction to children so that children understand what is usually learned and what is not worth learning. Signs that a child has experienced an addiction such as loss of desire to do activities, talk about the topics seen or observed, tend to deny a request often if it prevents him from accessing gadgets, is sensitive or irritable (Hermawan Agus, 2021).

According to the research assumptions, there are negative and positive impacts caused by giving gadgets to children. The negative impact caused is that children quickly have tantrums, are relaxed with their gadgets, and do not want to socialize with the surrounding environment. While the positive impact of giving gadgets to children is that children can stimulate their ability to think creatively and help children stimulate their motor skills. Children's motor skills will increase because muscle movements are interlocked when playing with gadgets, so the eye motor system and child's finger activity will be trained. In addition, children will easily be able to communicate with parents when away from their children. However, parents also need to pay attention to limits by giving children a schedule and playing time using gadgets.

Based on the researchers' assumptions, there are several causes for children playing gadgets, namely because seeing their friends, parents deliberately give gadgets so that the child's goals do not interfere with parental activities, and so that children do not cry. However, this behavior makes children addicted to gadgets so that it will have an impact on causing parents’ anxiety. Therefore, the role of parents is needed in order to be able to monitor children while playing gadgets.

CONCLUSION

The description of the duration of playing gadgets for preschool children in RT.06 Jagakarsa, South Jakarta has the duration of playing gadgets for children, the majority of which are standard and extended, have the same number of frequencies, namely 21 (38.2%) respondents. In the description of the anxiety level of parents in RT 06 Jagakarsa, South Jakarta, the majority of severe anxiety levels are 40 (72.7%) respondents. Knowing the correlation between the duration of playing gadgets in preschool children with the level of parents’ anxiety obtained a value of 0.000 (p-value <0.05), which means that there is a correlation between the duration of playing gadgets in preschool children with the level of parents’ anxiety which is significant and the closeness of the correlation is 0.547 or sufficient. Big or strong enough. What can be recommended for parents is to be extra careful with children using gadgets properly and determining the predetermined duration.

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