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The Effect of Parent-Child Games on Gadget Addiction in Preschool Age Children (3-6 Years)

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Abstract
The use of gadgets in preschool age children continues to increase beyond the specified limit and it is often used in daily routines. This condition has a high risk of causing addiction to gadgets that have an impact on children's growth and development. The many negative impacts that occur require parents to increase their interaction with children through parent-child games. This study aims to analize the effect of parent-child games in minimizing gadget addiction in preschoolers. This study used a quasi-experimental design with a non-equivalent control group pretest posttest approach to 30 preschool children at Permata Hati Kindergarten Banda Aceh selected by total sampling. Pre- and post-intervention data were measured in both groups using the Indonesion version of Smartphone Addiction Scale (SAS) questionnaire. Wilcoxon Signed-Ranks and Mann Whitney tests were carried out to analyze the data. The result of this study there was an effect of parent-child games on the level of gadget addiction in preschool children before and after the intervention with p value = 0.003, and there was a difference in the mean score of gadget addiction between the control group and the experimental group with p value = 0.023. Parent-child games are effectively used to reduce gadget addiction in preschool children so that they can minimize the bad effects due to excessive use of gadgets.

Keywords: Preschool Children, Gadget Addiction, Parent-Child Games

1. Background

The use of interactive technology media through gadgets is increasing rapidly among preschoolers (3-6 years). The use of gadgets began to be used in children aged 2 years and used them in daily routines [1]. The prevalence of using gadgets in children aged 2-5 years reaches 67.2% [2]. A survey of parents and children in the United States found data that 42% of children aged 0-2 years used gadgets while those aged 3-5 years were 56% higher [1]. A survey by Common Sense Media (2017) [3] on 350 parents in the United States stated that the prevalence of gadget use in children under the age of eight in the world has increased to 72% compared to 2011 which was 38%. Research data from the Indonesian Ministry of Communication and Informatics (2014) [4] collaboration with the *United Nations Children's Fund* (UNICEF) and *Harvard University's Berkman Center for Internet and Society* showed that the percentage of children using gadgets in Indonesia is 52% of the total population, Furthermore, Zaini & Soenarto (2019) [5] stated that 94% of children aged 4-6 years have used gadgets.

Various reasons parents give gadgets to preschoolers. 70% of parents allow their children to play gadgets because they are doing homework and 65% to calm children when they are in public places and children from the age of four years already have personal gadgets without parental supervision [6]. In addition, the duration of gadget use is relatively high. Bernard *et al*., (2017) [7] reported that 75% of children aged 2-3 years use gadgets beyond the usage limit recommended by the American Association of Pediatrics, (2016) [8] which is no more than one hour per day. The research of Tanjung *et al*., (2017) [9] also found that more than half of children aged 3-6 years use gadgets for a long duration to play games and watch YouTube. This condition shows that preschoolers have been using gadgets for a long time and are at high risk of causing gadget addiction.

Gadget addiction in preschoolers will result in developmental disorders, attention deficit disorders and hyperactivity [10], mental health status disorders and reduced socio-emotional development, speech delays [11], decreases children's motor skills and activity, decreases nighttime sleep duration [12], increases the incidence of obesity [9], decreases empathy and sympathy, decreases interactions with parents and the surrounding environment, and reduces time with family [13]. However, 57.14% of parents are not aware of the adverse effects that occur due to excessive use of gadgets on children [14] The number of negative impacts due to gadget addiction requires parents to supervise and assist children in playing gadgets more. The role of parents is very Important in reducing gadget addiction in preschool children because preschool age is a golden period in the growth,

development and character formation of children. Preschool-age children should place more emphasis on physical activity to stimulate child growth and development so that they can optimize developmental tasks in the form of fine and gross motor skills, language, and personal-social, cognitive, emotional, and spiritual development [15, 16].

In this case, the interaction of parents and children is further enhanced. One of them is through *parent child games. Parent-child games* are a combination of providing education about the dangers of gadgets to preschool children and parents with the games with parents that involve physical activity in preschoolers to distract and reduce the use of gadgets. Types of games that can be done together include drawing, coloring, playing puzzles, and others. Playing with parents and children will strengthen the bond between them and parents can identify negative behaviors that arise in children due to the bad effects of gadgets. Besides that, playing with parents and children can also improve the ability to communicate, interact and be sensitive to the environment [17].

1.1 Objective

Aim of study is to analize the effect of parent-child games in minimizing gadget addiction in preschoolers.

2. Methods

This study used a quasi-experimental with a pretest posttest non-equivalent control group design. *The sampling technique used in this study was total sampling, the sample taken from* Permata Hati Kindergarten in Banda Aceh. The number of samples used in this study were 34 preschool children and parents. The total sample was divided into two groups, namely 17 respondents in the control group and 17 respondents in the experimental group with random single blended, that is, only researchers who know the group that was given the intervention and each group is given a pretest then given treatment and a posttest is done again related to the variables studied to see the difference between the results of the pretest and posttest in the two groups. The inclusion criteria of respondents in this study are mother/father has preschool children (3-6 years old), child using gadgets, mother/father lives with child, mother/father can read and write, and mother/father is willing to be a respondent.

The instrument used in this study was the Smartphone Addiction Scale (SAS) to measure the level of gadget addiction consists of 33 question items. SAS which had been tested for validity and reliability with an item correlation coefficient value of 0.282-0.802 and a Cronbach Alpha value of 0.890, which means SAS is valid and reliable [18]. This study was approved by the health research ethics committee of Bandung Aisyiyah University as an effort to protect the welfare of the respondents in the form of an ethical statement 125/KEP. 01/UNISA-BANDUNG/IV/2022.

Data was collected by dividing into two research groups, namely the experimental group and the control group. Each respondent from both groups received a pretest on the level of gadget addiction using the SAS questionnaire. Then, the experimental group carried out several interventions for 5 days with a maximum duration of 30 minutes using different games such as drawing & coloring, sensory play by sticking seeds on paper according to children's creativity, playing puzzles, telling stories, and throwing and catching balls which were done every day. With parents at home. The researcher asked parents to document every game activity carried out by the child at home in accordance with the game sequence that had been determined by the researcher and sent documentary evidence in the form of videos and photos to the researcher via whatsapp group and the researcher monitored the respondents through video calls with parents during the activity in accordance with agreed-upon time contract. While the control group was only given education on the dangers of gadgets to preschool children. On day 7, a posttest was conducted on both groups using the SAS questionnaire.

The data analysis used in this study was univariate analysis to see the level of gadget addiction before and after the test in the intervention group and the control group. Univariate data analysis with frequency distribution, while bivariate data analysis using SPSS (*Statistical Product and Service Solution*) *for windows release 25* with a significance level of 95% ($\alpha = 0.05$) with a non-parametric test, namely the Wilcoxon Signed Rank Test to determine differences in in the level of gadget addiction of preschoolers before and after parent-child games. The difference in the mean level of gadget addiction between the control and experimental groups was analyzed using the *Mann-Whitney* test.

3. Result

Table 1 provides an overview of respondent's characteristics. The gender of the respondents in both groups was dominated by girls (52.9%; 70.6%) with the highest age range being >5-6 years (47.1%; 52.9%). The most dominant occupation of father and mother is Civil Servant. Likewise, the education of fathers and mothers is mostly at the level of the Bachelor's degree. Table 2 shows that the level of gadget addiction in the control group before the action was in the high category (52.9%) and remained severe after being given education on the dangers of gadgets. Whereas in the experimental group before the dominant action was in the high category (58.8%), but after the intervention of parent-child games showed a decrease in the level of gadget addiction, namely the moderate category (64.7%).

Table 3 present the results of the Wilcoxon Signed Rank Test analysis showed that the average gadget addiction score was 81.06 and after parent-child games intervention there was a decrease in the average gadget addiction score to 68.06 with p value = 0.003 which means that there is an effect of parent-child games on the average gadget addiction score before and after the intervention. Meanwhile, in the control group, there was no effect on the average score of gadget addiction before and after the intervention in the control group with p value = 0.257.

Table 4 shows that the results of the analysis test using Mann Whitney obtained a p value of 0.023, which means that there is a difference in the mean score of gadget addiction between the control group and the experimental group.

Table 1: Characteristics of Respondents (n=17; n=17)

Characteristics of Respondents	The control group		The experimental group	
	f	(%)	*f*	(%)
Gender				
Girls	9	52.9	12	70.6
Boys	8	47.1	5	29.4
Age (years)				
3-4 years	3	17.6	2	11.8
>4-5 years	6	35.3	6	35.3
>5-6 years	8	47.1	9	52.9
Fathers' occupation				
Government employees	8	47.1	10	58.8
Privat employees	6	35,3	3	17.6
Others	3	17.6	5	29.4
Mothers' occupation				
Government employees	10	58.8	9	52.9
Privat employees	5	29.4	6	35.3
Housewives	1	5.9	1	5.9
Others	1	5.9	1	5.9
Fathers Education				
Senior High School	1	5.9	8	47.1
Diploma (DIII/DIV)	1	5.9	1	5.9
Bachelor degree	11	64.7	8	47.1
Magister	4	23.5	0	0.0
Mothers Education				
Senior High School	0	0	2	11.8
Diploma (DIII/DIV)	0	0	4	23.5
Bachelor degree	9	52.9	9	52.9
Magister	8	47.1	2	11.8

Table 2: Level of gadget addiction before and after Parent-Child Games (n=17; n=17)

Variable	Gadget addiction			
	Before Parent-Child Games		After Parent-Child Games	
	f	%	f	%
The level of gadget addiction in the control group				
Mild	0	0	0	0
Moderate	8	47.1	7	41.2
Severe	9	52.9	10	58.8
The level of gadget addiction in the experimental group				
Mild	0	0	4	23.5
Moderate	7	41.2	11	64.7
Sever	10	58.8	2	11.8

Table 3: Analysis of the influence of parent-child games on gadget addiction before and after intervention in preschool children (n=17; n=17)

Group	N	Mean	SD	p-value
The control group				
Pretest	17	75.4	4.51	0.257
Posttest		79.8	4.77	
The experimental group				
Pretest	17	81.06	11.64	0.006
Posttest		68.1	15.23	

Table 4: The difference in the average score of gadget addiction in the control and experimental posttest groups

Group	N	Mean	SD	p-value
The control group	17	79.8	4.77	0.023
The experimental group	17	68.1	15.23	

4. Discussion

4.1 The Characteristics of respondents

From the results of the study, it was found that the gender of preschool children was mostly female. However, the results of research by [19] state that boys have a higher average tendency to gadget addiction, which is 51.53 compared to girls at 47.62. This is in line with Lee & Kim (2018) [20] research which state that men tend to use technology compared to women and spend more time on laptops, smartphones and computers than women.

Most children are in the age range of 5 - 6 years. Where, this age is a critical age which is often referred to as the golden age because all aspects of child development experience extraordinary development so that it will influence and determine further development**.** Preschool-age children have important developmental characteristics such as learning by practicing and playing, learning to express and control emotions, gross motor development (by walking, running, and exploring the environment), fine motor development (such as cutting, coloring, washing, and assembling things), language development, social-emotional, and communication needs, especially with parents. All these developmental tasks must be achieved at preschool age [21]. Therefore, it is very important to stimulate preschool children so that developmental tasks can be achieved before the end of this golden age.

Based on the results of the study, it was found that the majority of the respondents' parents' occupations were civil servants. Parents' work takes up a lot of time, they can't fully accompany their children to play together. The busier parents are, the less time is used to stimulate and play with children. Whereas preschool age is a golden age in development, where at this age period really needs stimulation such as educational games that can improve gross motor development, fine motor skills, language, and personal-social. Moreover, the games must help children's physical, social, and mental development [22] For this reason, stimulation from parents is needed so that all child development can be achieved at this age by playing with

children using educational games. Parents need to realize that gadgets are not a tool that can replace parents in parenting that can stop their child's crying. No matter how busy, parents must have time to take care of their children, pay attention to their growth and development and ensure that there are no delays or disturbances in their child's growth and development [23].

Parental education also affects the choice of children's games. The results study showed that most of the parents' education was undergraduateThe higher the education of parents, the more information they get and more knowledge about the impact of excessive use of gadgets. This is in accordance with research conducted by Farizal (2018) [24] on 100 children aged 2-5 years which showed that there is a relationship between parental knowledge about the use of gadgets in preschool children to the impact of using gadgets. Parental knowledge is very necessary in the use of gadgets in children. Parental knowledge is an external factor that can help children use gadgets and can reduce the negative impact of gadgets on children.

Parents are the closest people to children who spend a lot of time with children at home, in charge of controlling and supervising children's use of gadgets, choosing which content children can see and not, and ensuring that the content they view is age-appropriate without pornography or violence, and not exceeding the recommended time limit [23].

4.2 The level of addiction to preschoolers' gadgets before being given parent-child games intervention

The results showed that the description of the level of gadget addiction of preschool children in the control group and the experimental group was in the high category, namely 52.9% and 58.8%. Researchers argue that the development of gadgets today is not only for adults but also for children because the features displayed in a gadget really attract the attention of preschoolers so they prefer to use it instead of playing with props. Nowadays, gadgets have taken over the roles and duties of parents in parenting children. gadgets because they do not want their children to cry [23].

This is in accordance with the opinion of Arnani & Huarnanisna (2021) [19] that one of the causes of children being addicted to gadgets is because parents are too busy and children often see their parents playing with gadgets so that children are allowed to play with them. Furthermore, Radesky *et al*., (2016) [25] stated that children often use gadgets when there are no friends to play with, and/or to calm them down. Moreover, children use gadgets to play games, watch entertainment on YouTube, and also to learn to read and count [23].

Gadgets not only contain learning applications to recognize letters or pictures but there are entertainment applications, such as social media, videos, pictures, and even video games. In fact, children will use their gadgets more often to play games than to study or play outside the house with friends their age [26]. Children who use gadgets become more focused when playing gadgets, do not answer when their parents call, sometimes whine when they are not given permission to play with gadgets, children also seem to have problems with their speaking skills, even though the child is 6 years old but there are still many words spoken by the children still cannot be understood [23]. Parents can prevent negative things from using gadgets by accompanying children when using gadgets, making sure not to view content that is not appropriate for the child's age [23].

4.3 The level of addiction to preschoolers' gadgets after being given parent-child games intervention

The level of gadget addiction of preschoolers after being given intervention in the form of education on the dangers of gadgets in the control group was still high (58.8%). Meanwhile, in the experimental group, it was found that after giving parent-child games intervention, the level of gadget addiction in preschool children decreased in the high category, namely 11.8% from 58.8% with a difference of 47%. According to the researcher's assumption, parent-child games intervention is more effective in reducing the level of gadget addiction in preschoolers than only providing education on the dangers of gadgets. This is because in providing parent-child games interventions, children are given different educational games every day for five days such as drawing and coloring, playing puzzles, sensory play by sticking seeds according to children's creativity, storytelling, and asking children to repeat the story, and playing catch the ball with the objective of reducing the use of gadgets at home so that children do not feel bored and the gadget addiction can be reduced.

Playing is an activity that has a major influence on the development of preschool children. By playing, children will learn to explore, develop themselves in emotional, social, physical, and intellectual development, and they can learn various skills through educational game tools with enjoyment without any coercion. However, children who use gadgets will sit more for long periods than do physical activities. This can cause muscles and bones to not develop which has an impact on decreasing the body metabolism, slowing growth in height, and can lead to obesity. Playing without using gadgets will increase children's skeletal muscle activity, train hand and eye coordination, and improve their intelligence and other developments [27].

Parents play an important role in children's play activities such as motivating, supervising, and being partners in children's play activities. The role of good parents in playing activities will also have a good impact on the various developments of preschool-aged children. By providing motivation, children will be more confident in their talents and abilities. Supervision in playing is also very important regardless of the type of game to prevent the risk of injury. The role of parents as play partners will create cohesiveness and train children to be able to work together while playing [28].

4.4 The effect of parent-child games on the level of gadget addiction in preschool children

The results of statistical tests showed that there is an effect of parent-child games on the level of gadget addiction in preschool children (p-value: 0.003). This is in accordance with Pupaningtyas' research (2018) [29] which showed that parent-child games are effective in reducing *smartphone addiction* in children. This is also reinforced by the research of Dewi *et al*., (2021) [30] on 87 preschool children showed that there is a difference in the duration of gadget use after the involvement of parents in making used cardboard games (p-value 0.000) where the duration of using gadgets before parents involved in children's games, it was found that the use of gadgets was more than 1 hour/day, namely 78.9, but

after parental involvement, the duration decreased <1 hour/day, which was 86.8%.

According to Nurfadilah *et al*., (2019) [31] that parental involvement can reduce children's attention to gadgets. Parental control over the use of gadgets in children affects the level of gadget addiction in children. Parents have a role as first and foremost educators in supervising, assisting, directing, and controlling the use of gadgets for children [32]. In addition, parents are also obliged to interact with children to provide good and appropriate explanations when children use gadgets. The low control over the use of gadgets in children by parents will have a high risk of causing gadget addiction in preschoolers [33]. This is supported by Sakina & Latifah's research (2019) [34] on 122 parents of preschool children showing that parental involvement and control over the use of gadgets in children can reduce the level of gadget addiction in children.

Chusna's research (2017) [35] found that excessive use of gadgets without parental control will have a negative impact on children who show addictive behavior such as aggression, especially if there is interference when using gadgets, lack of attention to the surrounding environment, decreased desire for other activities such as playing and socializing with peers and cause attention deficit disorder and hyperactivity in preschool children. This is because gadget addiction can affect children's brain development because excess production of the dopamine hormone can lead to impaired maturation of the prefrontal function of the cerebral cortex which functions as emotional control, self-control, decision making, responsibility, and other moral values [10]. Therefore, parental supervision in the use of gadgets in children determines the positive or negative impact of using gadgets [36] so that gadgets can be used wisely in preschool children.

5. Conclusion

The level of gadget addiction in preschool children is in the high category, namely 58.8%, but after the intervention of parent-child games showed a decrease in the level of gadget addiction, namely the medium category by 64.7%. The results of the analysis show that there is an effect of parent-child games on the average score of gadget addiction before and after the intervention (p-value = 0.003) and there is a difference in the average score for gadget addiction between the control group and the experimental group (p-value = 0.023).

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7. Conflict of interest

The authors declare no conflict of interest.

8. References

1. Kabali HK, Irigoyen MM, Nunez-Davis R, Budacki JG, Mohanty SH, Leister KP, *et al*. Exposure and use of mobile media devices by young children. Pediatrics. 2015; 136(6):1044-1050.
2. Da Conceição Guedes S, Nobre JNP, De Souza Morais RL, De Oliveira Mascarenhas R, Santos LR, De Oliveira Martins-Reis V, *et al*. Effect of interactive media on the development of children and adolescents: Systematic review with meta-analysis. Motriz Rev Educ Fis. 2020; 26(4):1-10.
3. Common Sense Media. Major Spike in Mobile Media Use and Device Ownership by Children Age 0 to 8 [Internet], 2017. Available from: https://www.commonsensemedia.org/press-releases/new-research-by-common-sense-finds-major-spike-in-mobile-media-use-and-device-ownership-by-children-age
4. Ministry of Communication and Informatics RI. Pengguna internet di Indonesia capai 82 juta. [Internet], 2014. Available from: https://kominfo.go.id/index.php/content/detail/3980/Kemkominfo%3A+Pengguna+Internet+di+Indonesia+Capai+82+Juta/0/berita_satker%0A
5. Zaini M, Soenarto S. Persepsi Orangtua Terhadap Hadirnya Era Teknologi Digital di Kalangan Anak Usia Dini. J Obs J Pendidik Anak Usia Dini. 2019; 3(1):254.
6. Louis C. Many Children Under 5 Are Left to Their Mobile Devices, Survey Finds, 2015. Available from: https://www.nytimes.com/2015/11/02/health/many-children-under-5-are-left-to-their-mobile-devices-survey-finds.html
7. Bernard JY, Padmapriya N, Chen B, Cai S, Tan KH, Yap F, *et al*. Predictors of screen viewing time in young Singaporean children: The GUSTO cohort. Int J Behav Nutr Phys Act. 2017; 14(1):1-10.
8. American Association of Pediatrics. American association of pediatrics announce new recommendations for children media use [Internet], 2016. Available from: https://www.aap.org/en-us/about-the-aap/aap- press-room/Pages/American-Academy-of-Pediatrics-Announces-New-Recommendations-for-Childrens- Media-Use.aspx
9. Tanjung F sri, Huriyati E, Ismail D. Intensitas penggunaan gadget pada anak prasekolah yang kelebihan berat badan di Yogyakarta Intensity of gadget use among overweight preschool children in Yogyakarta. Ber Kedokt Masy. 2017; 33(12):603-608.
10. Setianingsih, Ardani A, Khayati F. Dampak Penggunaan Gadget Pada Anak Usia Prasekolah Dapat Meningkatan Resiko Gangguan Pemusatan Perhatian Dan Hiperaktivitas. Gaster. 2018; 16(2):191.
11. Nirwana, Mappapoleonro AM, Chairunnisa. The Effect of Gadget toward Early Childhood Speaking Ability. Indones J Early Child Educ Stud. 2018; 7(2):85-90.
12. Felix E, Silva V, Caetano M, Ribeiro MVV, Fidalgo TM, Rosa Neto F, *et al*. Excessive Screen Media Use in Preschoolers Is Associated with Poor Motor Skills. Cyberpsychology, Behav Soc Netw. 2020; 23(6):418-425.
13. Tamana S, Ezeugwu V, Chikuma J, Lefebvre D, Azad M, Moraes D. Screen-time is associated with inattention problems in preshcoolers: Results from the CHILD birth cohort study. PLoS One. 2019; 14(4).
14. Gralczyk A. Smartphone and Tablet in the Everyday Life of Preschool Children. Impact and Educational Options in the Opinion of Parents and Teachers of Kindergarten. Soc Commun. 2019; 5(2):85-102.
15. Sulistiani W. Penerapan metode bermain untuk meningkatkan kemampuan sosial anak usia dini. J Ilm Psikol dan Psikol Kelautan-Kemaritiman. 2009; 3(2).
16. Mayar F. Perkembangan Sosial Anak Usia Dini Sebagai Bibit Untuk Masa Depan Bangsa. Al-Ta lim J. 2013;

20(3):459-464.
17. Ramanda A. Parent-child games untuk mengurangi smartphone addiction pada anak usia 8-10 tahun, 2018.
18. Kurniawan igy, Rustika IM, Aryani LNA. Artikel asli Uji validitas dan reliabilitas modifikasi smartphone addiction scale versi Bahasa Indonesia. Medicina (B Aires). 2016; 47(3):1-9.
19. Arnani N, Husna FH. Perbedaan kecenderungan adiksi gadget siswa sekolah dasar ditinjau dari jenis kelamin. Psycho Idea. 2021; 19(1):65-78.
20. Lee EJ, Kim HS. Gender Differences in Smartphone Addiction Behaviors Associated with Parent-Child Bonding, Parent-Child Communication, and Parental Mediation among Korean Elementary School Students. J Addict Nurs. 2018; 29(4):244-254.
21. Kolucki B, Lemish D. Communicating with Children. Vol. 22, MCN The American Journal of Maternal Child Nursing. United Nation Childrens Fund (UNICEF), 2011, 108-111.
22. Wilson D, Hockenberry MJ, Rodgers CC. Wong's essentials of pediatric nursing. Amerika Serikat: Elsevier Health Sciences, 2021.
23. Rahayu N, Elan, Mulyadi S. Analisis Penggunaan Gadget Pada Anak Usia Dini. J PAUD Agapedia. 2021; 5(2):202-210.
24. Farizal binti ekry. Hubungan Pengetahuan Orang Tua Tentang Penggunaan Gadget Pada Anak Usia 2-5 Tahun Terhadap Dampak Penggunaan Gadget Di Wilayah Kerja Puskesmas Berseri Pangkalan Kerinci Kabupaten Pelalawan Tahun 2018. Menara Ilmu [Internet]. 2018; 12(9):140-147. Available from: file:///C:/Users/sarip/Downloads/1377-3242-1-SM (1).pdf
25. Radesky JS, Peacock-Chambers E, Zuckerman B, Silverstein M. Use of mobile technology to calm upset children: Associations with social-emotional development. JAMA Pediatr. 2016; 170(4):397-399.
26. Nurrachmawati. Pengaruh Sistem Operasi Mobile Android pada Anak Usia Dini. J Univ Hasanuddin, 2014.
27. Sucipto, Huda N. Pola bermain anak usia dini di era gadget siswa PAUD Mutiara Bunda Sukodono Sidoarjo. J Ilm Fenom. 2016; 3(6):274-347.
28. Herentina T, Yusiana MA. Peran orang tua dalam kegiatan bermain dalam perkembangan kognitif anak usia prasekolah (5-6 tahun). J STIKES. 2012; 5(2):1-12.
29. Pupaningtyas O. Efektivitas parent-child games untuk mengurangi smartphone addiction pada anak, 2018.
30. Dewi NLMA, Astutik W, Widayati K. Pengaruh Keterlibatan Orangtua Membuat Mainan Kardus terhadap Durasi Penggunaan Gadget Anak Prasekolah Media Karya Kesehatan : Volume 4 No 1 Mei 2021. Media Karya Kesehat [Internet]. 2021; 4(1):99-108. Available from: http://bit.do/permainan-kardus
31. Nurfadilah F, Zaman B, Romadona N. Upaya Orang Tua Untuk Mencegah Ketergantungan Anak Terhadap Penggunaan GadgeT. EDUKIDS J Pertumbuhan, Perkembangan, dan Pendidik Anak Usia Dini. 2019; 3(229):1-9.
32. Alia T Irwansyah. Pendampingan Orang Tua pada Anak Usia Dini dalam Penggunaan Teknologi Digital. A J Lang Lit Cult Educ. 2018; 14(1):65-78.
33. Prasanti D. Perubahan Media Komunikasi Dalam Pola Komunikasi Keluarga Di Era Digital. J Commed. 2016; 1(1):2527-8673.
34. Sakina H, Latifah M. The influence of mother-child attachment and parental control on gadget use of children toward gadget's addictive level on children. In: Proceeding the 2nd International Seminar on Family and Consumer Issues in Asia Pacific: Challenging Family in Digital Era IPB University: Bogor. Bogor: Department of Family and Consumer Sciences, Faculty of Human Ecology, IPB University, 2019, 63-72.
35. Chusna PA. Pengaruh Media Gadget Pada Perkembangan Karakter Anak. Din Penelit Media Komun Sos Keagamaan [Internet]. 2017; 17(2):315-30. Available from: https://e-resources.perpusnas.go.id:2093/doi/abs/10.1142/S0192415X20500500
36. Sunita I, Mayasari E. Pengawasan Orangtua Terhadap Dampak Penggunaan Gadget Pada Anak. J Endur. 2018; 3(3):510.