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Parenting style but not intensity of gadget use is associated with social-emotional development among preschool children in Surabaya

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Abstract

Introduction: Parenting behaviors and practices are widely accepted to play an important effect in the development of children. Parenting styles are defined as parents broad behavioral patterns that aim to manage and socialize their children, as well as parental attitudes and behaviors that establish an emotional backdrop or climate for parent-child relationships and child development. Inappropriate and excessive use of gadget can lead to addiction, interfere with physical, psychological, and emotional health, create social isolation, and harm development, particularly in children.

Objective: Explore the association between parenting style and intensity of gadget use on social-emotional development among preschool children in Surabaya, Indonesia.

Method: A cross-sectional approach was used in this study by involving 84 mothers. The sampling technique applied in this study was a simple random sampling in population of mothers in Genteng Health Center in Surabaya, Indonesia. This data was collected using an online questionnaire and analyzed statistically using bivariate test, specifically the chi-square test and logistic regression test using SPSS software.

Result: The results showed that the parenting style applied to preschool children was 65.4% of authoritative, 29.8% of authoritarian, and 4.8% of permissive. The intensity of gadget use was as high as 57.1% among children. Multivariate analysis proved that children with authoritative parenting style (OR = 0.08, 95% CI = 0.00-0.81) were significantly associated with social-emotional development of preschool children.

Conclusion: There was an association between parenting style and social-emotional development among preschool children. However, the intensity of gadget uses and social-emotional development among preschool was not showed a significant association.

Keywords: Parenting Style; Intensity of Gadget Use; Social-Emotional Development; Health Risk

1. Introduction

Preschool children aged 3-5 years old children are considered as "golden age" when the children's development can grow rapidly and need the right stimulus to optimize the development both quantitative and qualitative. As a result of the maturation process, the development is the ability to increase abilities (skills) or more complex body structures and

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functions in an orderly and predictable pattern. Physical and motor development, cognitive development, social development, language development, emotions, personality and art, and moral and religious appreciation are the seven types of developmental aspects in children. It is proven that a child who cries is in the context of making contact/relationship with other people, or the child appears to be holding activities of groping, smiling, if it is stimulated and reprimanded from outside (1–3).

Some studies have revealed that children who experience psychosocial problems as toddlers and early age children can have difficulty communicating, more prolonged tantrums, difficulty dealing with change, feel inferior, and dependent, and tend to be at risk for maladaptive behavior such as antisocial, delinquency, and even being involved in criminality in the future (2,4–6). Fulfilling the need for affection and emotional support through how parents educate and discipline their children is one way to form children's emotional and social (7). Moreover, parenting style had an effect on children's social-emotional development, all permissive parenting parents had children with less social and personal development (8). Furthermore, verbal abuse by their parents, which has been experienced by about 62% of children, has been proved to have a negative influence on socioemotional development (9).

In this modern era, the presence of gadgets is a dilemma for parenting practices. A gadget is a small electronic device with a variety of functions such as computers or laptops, tablet PCs, and cell phones or smartphones (10). According to a survey of parents in Indonesia, smartphones and tablets are the most frequently used gadgets by their children aged 4–6 years old; additionally, 11% of them already have a personal smartphone or tablet, and 26% of children show signs of gadget addiction, according to their parents. According to the data, 28% of children aged 4–6 years use smartphones and tablets for educational purposes, 22% for gaming, and 50% for both education and gaming, with an average daily usage of 62 minutes. Fighting and violence are common elements in the games that children enjoy playing (11). The use of technology has both positive and negative consequences. Regarding the positive social impacts of gadgets, such as supporting typing skills, reducing stress levels, and increasing children's imagination, as well as the negative social impacts on children, such as children becoming more passive, decreasing socialization skills, and becoming a habit, slow understanding lessons, and eye damage (10). This condition could be a dilemma for parents in providing stimulation to sharp children's abilities.

This study aimed to explore the association between parenting style and social-emotional development, as well as the intensity of gadget use and social-emotional development among preschool children in Surabaya.

2. Material and methods

2.1. Participants

This study was approved by the Universitas Airlangga School of Medicine Health Research Ethics Committee. This research used a quantitative type with a cross-sectional design. We use the total random sampling and found the population of 106 preschool children and their parents from two health center located in Genteng District, Surabaya. After applying the inclusions and exclusions criteria, we recruit 84 respondents to participate in this study. The inclusion criteria were including parents who had preschool children 36-59 months (3-5 years old), willing to become respondents. Exclusion criteria were parents who had children 36-59 months with genetic disorders and were not ready to be respondents. Data collection was carried out from October to November 2020.

2.2. Measures and Analysis

Informed consent was obtained from all individual participants included in the study. Data was collected using an online questionnaire. The questionnaire was delivered via the google form platform link and distributed through social media, such as WhatsApp, Instagram, and Facebook. The intensity of gadget use was measured in ten items consisting of the intensity of gadget use (duration and frequency), classified as high, medium, and low. In addition, we also examined the types of content used by children, the attitudes shown by children due to gadget use, and parental involvement in supervision to determine the effects of children's gadget use.

The parenting style variable was measured by the Parenting Style and Dimensions Questionnaire (PSDQ-Short version) (12) with a total of 32 items consisting of 15 questions about authority, 12 questions for authoritarians, and five questions for permissive parenting. The interpretation of the answers was never – always (score 1-5) on each question. Then the classification was carried out by calculating the average of each category. The highest average was the category of parenting style applied by parents. This questionnaire has been tested for the validity and reliability with the Cronbach's Alpha Coefficient as much as 0.86% for authority, 0.82% for authoritarians, and 0.64% for permissive parenting.

The variable of social-emotional development was measured using the Pediatric Symptom Checklist-17 (PSC-17) as many as 17 items (13). The interpretation of answers was never and often (score 0-2). If the total score reached ≥ 15 , it meant there was a problem in developing children's emotional and psychosocial behavior. Then a reliability test was also carried out with the result $\alpha = 0.822$ which means that the questionnaire has been reliable.

2.3. Data Analysis

The analysis of quantitative data was performed using SPSS 26 for Windows (SPSS Inc., Chicago, IL). Specific tests were applied based on the aims of the study, namely the logistic regression test with the statistical significance set at $p < 0.05$.

3. Results

Table 1 Socio-demographic characteristics of respondents (n = 84)

Characteristics	Frequency (n = 84)	Percentage (%)	X ² (p-value)
Age			0.82
< 20	0	0	(0.05)
20-35	60	71.4	
> 35	24	28.6	
Education			0.18 (3.34)
Primary	28	33.3	
Secondary	48	57.2	
Higher	8	9.5	
Occupation			0.94
Working	20	23.8	(0.00)
Not Working	64	76.2	
Income			0.66
Under Average	65	77.4	(0.18)
Average to High	19	22.6	
Parity			0.44 (0.58)
Primipara	19	22.6	
Multipara	65	77.4	
Supervision			0.72
Never	2	2.4	(0.64)
Seldom	4	4.8	
Often	78	92.8	
Knowledge of Gadget Use Effects			0.05
Know	80	95.2	(3.82)
Don't know	4	4.8	
Intensity of gadget usage			0.35
Low	11	13.1	(2.05)
Moderate	25	29.8	
High	48	57.1	
Parenting style			0.03 (6.74)
Authoritative	55	65.5	
Authoritarian	25	29.7	
Permissive	4	4.8	

This study included 84 children and their parents, that were distributed 84.5% (71) for unproblematic emotional development and 15.5% (13) for problematic emotional development among children. Based on the sociodemographic data, the majority of respondents were in the age group 20-35 years (71.4%) with intermediate education (57.2%). The domination of employment status was unemployed parents (76.2%) with under average income (77.4%). The status of parity was higher in multipara (77.4%) compared to primipara. The supervision of parents was highly likely in the often category (92.8%) compared to the others category. According to parents' knowledge about the impact of using the gadget, the number of parents have known about the impact of the gadget (95.2%) compared to those who did not know. While the intensity of the gadget usage by most preschool children was high among 48 respondents (57.1%). The parenting style applied was more likely authoritative in 55 respondents (65.4%) compared to the authoritarian style and permissive style (Figure 1 is depicted the distribution of social-emotional development by parenting styles). The data are depicted in Table 1.

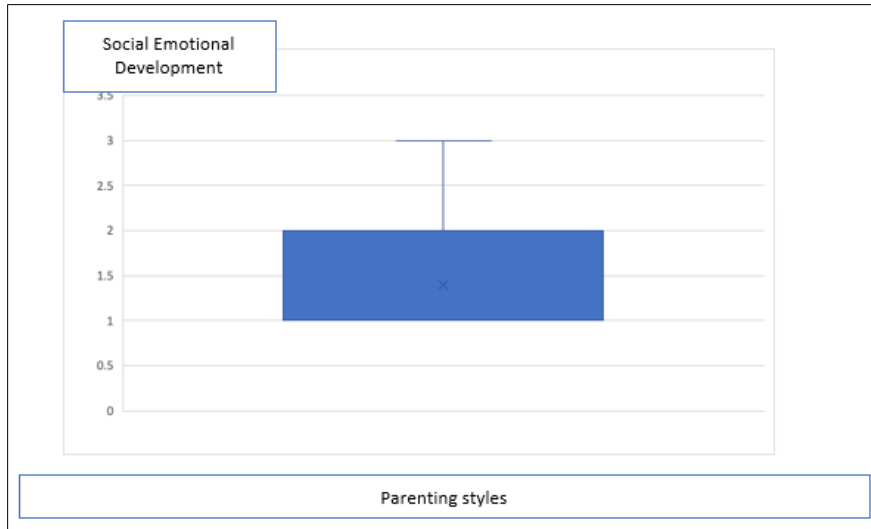


Figure 1 Distribution of Parenting Style by Social Development (PSC-17)

Table 2 Logistic Regression Analysis of Parenting Style and Intensity of Gadget Use with Social-Emotional Development

	OR	Sig.	95% C.I
Intensity of gadget usage			
Low (<i>Ref</i>)	1		
Moderate	1.10	0.93	0.10-11.21
High	2.80	0.13	0.72-10.84
Parenting style			
Permissive (<i>Ref</i>)	1		
Authoritative	0.08	0.03*	0.00-0.81
Authoritarian	0.28	0.27	0.03-2.67

OR: Odd Ratio, CI: Confidence Interval, * p-value < 0.05.

Based on multivariate analysis, children with authoritative parenting styles are more likely to have normal social-emotional development compared to children with permissive and authoritarian parenting styles (OR = 0.08; 95% CI = 0.00-0.81), meanwhile, the intensity of using gadgets did not show a significant difference in children's socio-emotional development. (Table 2).

4. Discussion

The analysis result showed that the authoritative parenting style plays a role exclusively in shaping social-emotional development in children, but not for other styles. It is contrary to a previous study that showed authoritative patterns contributed least to the social-emotional problems than permissive and authoritarian parenting styles (14). Another research showed that permissive and authoritarian parenting style has more negative impact than authoritative parenting style (15). Every parent considers the way they educate, guide, and discipline their children is deemed reasonable. However, sometimes parents are not aware that the method they use can hinder the development of their children. The impacts of permissive and authoritarian parenting styles are explained in the Baumrind Theory: the way parents treat their children will be very influential on the children's psychosocial (16,17). Authoritarian or demanding parents could shape children into timid, have low social skills, and show social behaviour problems. Meanwhile, permissive or less controlling parents could shape children to be free in behaving, without thinking about the consequences, not used to communicating and listening to others, which could lead to difficulties in adapting to their social environment. Based on the explanations, it can be concluded that the permissive and authoritarian parenting style is incompatible with helping children's social and emotional development. It is proved in the research's analysis that the permissive and authoritarian parenting style is the least effective compared to the authoritative parenting style in the accomplishment of the children's social-emotional development.

Authoritative parenting style in research's results showed the most impact in accomplishing the children's social-emotional development. Baumrind's Theory explained that an authoritative parenting style could shape children to excel in communication, have stable emotions, and have good conflict management (17,18). Based on the theory, it means that children get stimulated indirectly in controlling their emotions through parents who helped them to express their opinions or feelings and solve their conflicts or problems faced calmly. Based on this theory, it means that children are indirectly stimulated in controlling their emotions through parents who help them to express their opinions or feelings and resolve conflicts or problems they faced calmly and communicated well.

The present study showed no relationship between the intensity of gadget use and the social-emotional development of preschool children. This result aligns with a study about children at an early age that there is no relationship between gadget use and children's development (19). Another research also said no relationship between gadget use towards linguistic development in children at an early age (20).

Parental involvement is essential in gadget use, and parents need to know to prevent the negative impact. Similar to this research's result, despite the high intensity of gadget use in preschool children, the supervision and parents' knowledge about the gadget use is high, which may be the reason for the low incidence of children experiencing social-emotional problems. Not only that, but unemployed parents are also more dominant. This showed that parents have more time to supervise their children at home. According to the explanation, it can be one of the reasons why there is no relationship between the intensity of gadget use and preschool children's social-emotional development.

However, regardless of the analysis results in this research, we cannot turn a blind eye to the negative impact on children when they are addicted to gadgets. What is most feared is that children may experience nomophobia in the future (21). According to another research results, children with gadget addiction tend to respond aggressively or irritated when their gadget is taken, are unresponsive when called, and do not care about their surroundings (22). Technological advances in gadgets make children accustomed to instant things and not familiar with difficulties and slowness. This makes them demand others give them what they want immediately (19).

We cannot ignore and give gadgets to children easily without considering what might happen to them. That means, although the gadget use is high, prevention is still needed to avoid addiction by prioritizing children to play with toys that can hone their stimulation while at home with their parents or other family members, as well as supervision and provide clear explanations of the positives and negatives of gadget use. Children's closest environment is the family, which is one of the crucial aspects of the children in honing their social, emotional, literacy, and cognitive abilities because parents and family are the primary social contacts of children (8,23). The results of the study reveal the short-term impact of gadget usage, but the long-term impact could not be evaluated with the current data.

5. Conclusion

This study revealed that there is a correlation between parenting style and preschool children's social and emotional development in Surabaya. However, the intensity of gadget use has not shown any correlation with preschool children's social and emotional development. Children require a lot of guidance from their parents during their growth and

development. Even with the influence of the school environment, the community environment, and their family, the family is the foundation for the children to shape their personality, shape their mindset, and solve problems that arise. However, parents are the primary educators, particularly for children. Parents should not ignore their children. Parental control is important based on the proportion of children, not the proportion of adults, because the child does not want to be restrained, and if it is, the child will resist. If it occurs, parents will have difficulty educating and parenting their children. Parents must interact with their children, discipline them when they use technology, and teach them independence in managing the use of information technology or gadgets for positive and productive purposes.

Compliance with ethical standards

Disclosure of conflict of interest

All authors declare that no competing interests were disclosed.

Statement of ethical approval

Ethical clearance was approved by the Ethics Committee of Faculty of Medicine Universitas Airlangga, Surabaya, Indonesia (No.199/EC/KEPK/FKUA/2020) on 19 August 2020.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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