THE CORRELATION BETWEEN PARENTING AND GADGET SCREEN TIME ON SOCIAL INTERACTION OF SCHOOL-AGE CHILDREN

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ABSTRACT

Introduction: The prevalence of social interaction disorders among school-age children remains high. Parental influence and excessive device usage are two key factors that affect children's social interactions. This study aims to examine the relationship between parenting styles, the duration of gadget use, and social interactions in school-age children. **Methods:** A cross-sectional design with a correlational analytical approach was employed in this study. The population consisted of 75 children, and a simple random sampling technique was used, resulting in a sample of 63 children. Data were collected using the Parental Authority Questionnaire (PAQ), a closed-ended survey instrument. The data were tabulated and analyzed using the Chi-square test. **Results:** The results revealed that most parents (38.1%) adopted a democratic parenting style, the majority of children (54.0%) spent more than two hours using technology, and the majority of children (52.4%) exhibited adaptive social interactions. The statistical analysis yielded a p-value of 0.000, indicating a significant correlation ($p < 0.05$) between school-age children's social interactions and the duration of gadget use. **Conclusions:** Based on these findings, it is recommended that parents closely monitor their children's technology use and establish time limits to prevent potential negative impacts on their social interactions with others.

INTRODUCTION

Social interaction refers to the relationships between individuals, individuals and groups, and groups with one another. It occurs within the context of social relationships and can involve direct or indirect communication (through intermediaries). Social interaction, therefore, serves as a model for all forms of social life (Batinah et al., 2022). Social interaction skills are crucial for children because, through interaction, children learn how to live in society. They are guided by various roles, such as self-identification, and they receive abundant information from the surrounding social environment. When children feel comfortable interacting with their peers and surroundings, their social development is optimized (Asiah & Sofiah, 2019).

According to data from the WHO in 2020, approximately 222 out of every 10,000 primary school children worldwide experience social interaction disorders, amounting to around 67 million children. In Indonesia, in 2019, approximately 532,000 primary school children, or 15-20 per 10,000, faced social interaction disorders.

In East Java Province, around 47,286 children experienced these issues, and in Malang Raya, approximately 20 out of every 1,000 children had difficulties with social interaction or exhibited a fear of communicating with unfamiliar individuals (Bulu, 2021).

Parenting, the surrounding environment, peer relationships, and unsupervised device use are factors that can contribute to children's social interaction problems (Batinah et al., 2022). The conditions for social interaction are classified into: 1) the presence of social contact, which requires the components of conversation, mutual understanding, and cooperation between communicators and recipients; and 2) communication, where verbal and non-verbal cues are used to convey understanding of others' feelings. Characteristics of effective communication include openness, sympathy, support, and similarity (Endri, 2017).

Parenting is a critical factor in children's social interactions. Children who grow up in families where mutual understanding exists and

the opinions of family members are valued tend to develop into open, initiative-driven, and confident individuals (Batinah et al., 2022). Both nature and nurture play a significant role in shaping how children interact with one another, which helps them realize their full potential. Parents are not only responsible for providing materially for their children, but they must also actively contribute to their children's personal and academic development. Since children lack the life experience necessary for guiding their own development toward maturity, it is essential that they receive proper parenting. For a child to grow into an autonomous and capable adult, parental support and guidance are crucial (Adhani, 2019; Viandari & Susilawati, 2019). The excessive use of gadgets by children poses a risk to their social relationships, as children tend to be individualistic. Gadgets are often more enjoyable to use, making them difficult to control when an addiction develops. Furthermore, the constant use of gadgets can hinder children's brain development, as it interferes with their ability to engage in other activities (Asiah & Sofia., 2019).

Gadget addiction affects individuals, and addressing this issue requires actions from peers, the school environment, and parenting. Continuous gadget use negatively impacts the social interactions of children who are frequently engaged with these devices. The role of teachers in guiding and directing social interactions among peers is essential for fostering dynamic social engagement in the child's environment. Parents also play a crucial role in monitoring their children's gadget use and setting time limits, as excessive use can hinder children's ability to interact socially with their surroundings.

Based on a preliminary study conducted at MI Islamiyah Karang Tinggil, which observed 10 children, 30% of children with social interaction disorders were unwilling to cooperate, 30% showed indifference to their environment, 20% exhibited difficulty interacting and were preoccupied with themselves, and 20% displayed good social interaction by caring for others. From these observations, the research problem identified is that many students still experience social interaction disorders. The purpose of this study is to examine the relationship between parenting styles, the duration of gadget use, and the social interactions of school-age children at MI Islamiyah Karang Tinggil Pucuk Lamongan.

MATERIALS AND METHODS

The research received ethical approval from the Faculty of Health Sciences, Universitas Muhammadiyah Lamongan, with the ethical certificate number 304/EC/KEPK-S1/10/2024. The research design employed correlational analysis with a cross-sectional approach. The population for this study consisted of school-age children at MI Islamiyah Karang Tinggil Pucuk Lamongan, totaling 75 children. Using simple random sampling, a sample of 63 children was selected. The inclusion criteria for this study were students at MI Islamiyah Karang Tinggil Pucuk Lamongan, aged 7-12 years, who were willing to participate and provided informed consent. The exclusion criteria were children who did not attend class.

Data were collected using the Parental Authority Questionnaire (PAQ), which is a closed-ended questionnaire containing 30 questions: 10 questions related to authoritarian parenting, 10 related to permissive parenting, and 10 related to democratic parenting (Buril Adpriyadi & Sudarto, 2020). (Buril Adpriyadi & Sudarto, 2020). The independent variable, the duration of gadget use, was measured using one question. The dependent variable, social interaction, was assessed using a closed-ended questionnaire containing 19 questions, based on indicators from Miraningsih in Endri (2017), Endri (2017), and was tested for validity and reliability, with an R table value of 0.374. Data analysis was conducted using the chi-square test. This research was conducted at MI Islamiyah Karang Tinggil, Pucuk District, Lamongan Regency, from February to March 2023.

RESULTS

Table 1. Characteristics respondents based on gender, age and class at MI Islamiyah Karang Tinggil Pucuk Lamongan, 2023.

Gender	Frequency (F)	Percentage (%)
Male	32	50,8
Female	31	49,2
Total	**63**	**100**
Age	**Frequency (F)**	**Percentage (%)**
7-9	28	44,4
10-12	35	55,6
Total	**63**	**100**

Class	Frequency (F)	Percentage (%)
1-3	27	42,9
4-6	36	57,1
Total	63	100

Based on Table 1, it can be seen that the majority of respondents were male (50.8%), most were aged 10-12 years (55.6%) and in grades 4-6 (57.1%).

Table 2. Characteristics of respondents based on parenting, length of gadget use, and social interaction at MI Islamiyah Karang Tinggil Pucuk Lamongan, 2023.

Characteristics	Frequency (F)	Percentage (%)
Parenting		
Authoritarian	22	34,9 %
Permissive	17	27,0 %
Democratic	24	38,1 %
Length of Gadget Use		
More than 2 hours	34	54,0 %
Less than 2 hours	29	46,0 %
Social Interaction		
Adaptive	33	52,4 %
Maladaptive	30	47,6 %
Total	63	100 %

Based on Table 2, It can be observed that the majority of the children's parents apply democratic parenting (38.1%), most children use gadgets for more than 2 hours (54.0%) and the majority of children experience adaptive social interactions (52.4%).

Table 3. Relationship between parenting patterns and social interaction of school-age children at MI Islamiyah Karang Tinggil Pucuk Lamongan, 2023.

Parenting	Social Interaction					
	Adaptive		Maladaptive		Total	
	F	%	F	%	F	%
Authoritarian	5	22,7	17	77,3	22	100
Permissive	8	47,1	9	52,9	17	100
Democratic	20	83,3	4	16,7	24	100
Total	33	52,4	30	47,6	63	100
Chi-square test p = 0.000 < 0.05						

Based on Table 3, it can be seen that nearly all parents who apply democratic parenting report adaptive social interactions (83.3%), while most parents who apply permissive parenting report maladaptive social interactions (52.9%). The results of the chi-square test, analyzed using SPSS 22, reveal a significant relationship between parenting patterns and social interactions among school-age children at MI Islamiyah Karang Tinggil, with a p-value of 0.000 ($p < 0.05$). This indicates that there is a relationship between parenting patterns and the social interactions of school-age children at MI Islamiyah Karang Tinggil, Pucuk Lamongan.

Table 4. Relationship between screen time and social interaction of school-age children at MI Islamiyah Karang Tinggil Pucuk Lamongan, 2023.

Length of Gadget Use	Social Interaction					
	Adaptive		Maladaptive		Total	
	F	%	F	%	F	%
More than 2 hours	10	29,4	24	70,6	34	100
Less than 2 hours	23	79,3	6	20,7	29	100
Total	33	52,4	30	47,6	63	100
Chi-square test p = 0.000 < 0.05						

Based on Table 4, it can be seen that most children who use gadgets for more than 2 hours experience maladaptive social interactions (70.6%), while nearly all children who use gadgets for less than 2 hours experience adaptive social interactions (79.3%). The results of the chi-square test, analyzed using SPSS 22, show a significant relationship between the duration of gadget use and social interactions among school-age children at MI Islamiyah Karang Tinggil, with a p-value of 0.000 ($p < 0.05$). This indicates that there is a

relationship between the length of gadget use and the social interactions of school-age children at MI Islamiyah Karang Tinggil, Pucuk Lamongan.

DISCUSSION

The results of this study indicate that nearly all parents who apply democratic parenting report adaptive social interactions. The chi-square test analysis revealed a significant relationship between parenting patterns and social interactions among school-age children. Parenting patterns describe the interaction between parents and children, where parents express attitudes, behaviors, values, interests, and expectations in caring for their children and meeting their needs (Viandari & Susilawati, 2019) Parenting plays a crucial role in the formation of children's character, as what children learn from their parents—both through words and actions—is applied in interactions with their peers. For example, children who are frequently scolded by their parents may yell at their friends, believing it is normal because their parents often exhibit this behaviour (Wahyuni & Minawati, 2018).

Social interaction skills, including communication, cooperation, participation, sharing, adaptability (in the form of affection and empathy), problem-solving, and adherence to discipline as per applicable regulations, are essential for children's development. Children with strong and resilient self-awareness are prepared to live harmoniously with others (Putriana et al., 2019). The parenting patterns applied by parents can significantly impact children's social interaction skills. By learning from parental figures, children can adopt communication and interaction methods that they apply when engaging with their peers (Viandari & Susilawati, 2019). The ability to improve social relationships is also greatly influenced by the education provided by parents. The success of parents in educating their children is evident in their role in managing their children's lives. A democratic parenting style, in particular, can enhance children's social interaction skills within their environment (Batinah et al., 2022).

The research findings suggest a relationship between parenting and children's social skills. Parents exert the strongest influence on their children, meaning that parenting can affect children's socialization abilities. According to theory, one of the roles of parents and the chosen parenting style significantly influences children's socialization skills (Farasari, 2022). Parents who adopt a democratic parenting style positively influence children's socialization skills because children grow up in a family environment that offers love, warmth, and harmonious interactions. As a result, children develop good social adaptation

skills and can grow and develop optimally (Viandari & Susilawati, 2019). This aligns with other research, which suggests that families with democratic parenting are typically balanced, characterized by harmonious relationships between father and mother, father and child, and mother and child. This dynamic has a more favorable impact on child development (Viandari & Susilawati, 2019).

The results of this study show that the majority of children who exceed two hours of screen time experience maladaptive social interactions. The chi-square test results indicate a correlation between school-aged children's social interactions and the amount of time they spend using electronic devices. Gadgets are a popular form of technology today, used by people of all ages, from children to adults. The use of electronic devices is considered high intensity when it exceeds 120 minutes per day, or 2 hours (Sari & Mitsalia, 2016; Marsal et al., 2017).

Unsupervised device use is one factor that can impact individuals' ability to interact socially. In children, excessive use of electronic devices leads to a decline in social skills, increased introversion and impatience, and a generalized sense of isolation (Suhana, 2017). When children become dependent on electronic devices and engage in prolonged play without adult supervision, they stop interacting with others. They may feel that playing alone is enjoyable and may no longer see the need to engage with their peers (Maulida et al., 2019).

This study found that children's social development is influenced by both parental styles and the amount of time they spend interacting with electronic devices. Since children are still developing their social skills, they may be less likely to act in morally and ethically appropriate ways, as they are unable to adapt to their environment. When children lose interest in their surroundings due to excessive and inappropriate screen time, it can lead to social isolation. Parents play a pivotal role in helping children realize their maximum potential. As children strive to fulfill their desires and life goals, it is essential that parents support their plans for the future.

CONCLUSION

Parenting and screen time are both related to social interactions in school-age children. Social interaction is crucial for school-age children because inability to interact socially or a lack of communication skills can significantly impact their

social development. As children grow, they begin to develop social attitudes, such as sympathy for others.

AUTHORS' CONTRIBUTIONS
All authors contributed to the concept and design of the study and are responsible for the analysis, interpretation, and results. All authors contributed to the production of the manuscript, and they all reviewed and approved the journal's final edition.

CONFLICT OF INTEREST
The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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