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Parental Attitudes Toward Preschoolers' Technology Use

Ayşe Çiftci [a]*

a Lecturer, Ph.D., Department of Child Development, Faculty of Health Science, Cankiri Karatekin University, Cankiri, Turkey
https://orcid.org/0000-0002-4766-3835

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Abstract

The technology usage of preschool-aged children (2–5 years) and the impact of family variables, including parental education, income, and work position, on parents' perceptions of their children's digital media use are both examined in this study. It also looks at the connection between children's technology usage and parental participation. The Parental Attitudes Towards Technology Usage Scale (PATTUS) and a demographic information form were used to gather information from 303 parents in Nevşehir and Kayseri, Turkey. The findings suggest that higher parental education is related to less screen time, whereas higher income is associated with earlier technology exposure. Parental participation is essential, and parents who are more involved prefer to restrict their children's screen usage. The study suggests that specific educational initiatives are required to support parents, particularly those from lower socioeconomic backgrounds, in effectively managing their children's technology use. It also emphasizes the significance of sociodemographic factors in forming preschoolers' digital habits.

Keywords: Parental attitudes; preschool children; technology use; digital exposure, quality education

Okul Öncesi Çocukların Teknoloji Kullanımına Yönelik Ebeveyn Tutumları

Öz

Bu çalışmada, okul öncesi yaştaki çocukların (2–5 yaş) teknoloji kullanımı ile ebeveynlerin eğitim durumu, gelir düzeyi ve çalışma pozisyonu gibi ailevi değişkenlerin, çocuklarının dijital medya kullanımına ilişkin algıları üzerindeki etkisi incelenmiştir. Ayrıca çocukların teknoloji kullanımı ile ebeveyn katılımı arasındaki ilişki de araştırılmıştır. Araştırma kapsamında, Nevşehir ve Kayseri illerinde yaşayan 303 ebeveynden, Teknoloji Kullanımına Yönelik Ebeveyn Tutumları Ölçeği (PATTUS) ve demografik bilgi formu aracılığıyla veri toplanmıştır. Bulgular, ebeveynlerin eğitim düzeyi yükseldikçe ekran süresinin azaldığını, gelir düzeyi arttıkça ise çocukların teknolojiyle daha erken tanıştığını göstermektedir. Ebeveyn katılımı önemli bir unsur olarak öne çıkmakta; çocuklarıyla daha fazla ilgilenen ebeveynler, ekran süresini sınırlandırmayı tercih etmektedir. Çalışma, özellikle düşük sosyoekonomik düzeydeki ailelere yönelik olarak, çocukların teknoloji kullanımını etkili bir şekilde yönetebilmeleri için özel eğitim girişimlerine ihtiyaç duyulduğunu ortaya koymaktadır. Ayrıca, sosyodemografik faktörlerin okul öncesi çocukların dijital alışkanlıklarının oluşmasında önemli bir rol oynadığı vurgulanmaktadır.

Anahtar Kelimeler: Ebeveyn tutumları; okul öncesi çocuklar; teknoloji kullanımı; dijital maruziyet; nitelikli eğitim

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INTRODUCTION

Early childhood development has been greatly impacted by the increasing incorporation of digital technologies into daily life in recent years, especially when it comes to preschool-aged children. Young children are being exposed to technology younger than ever before due to the growing accessibility of digital gadgets and the internet. Children's cognitive, social, and emotional development can be impacted by digital media use in both positive and negative ways, and the degree of these effects frequently depends on how the kids use the technology (Cios et al., 2023; Panjeti-Madan & Ranganathan, 2023). Parents and other caregivers play a crucial role in understanding this dynamic because of their attitudes, actions, and sociodemographic traits, which have a big impact on how kids utilize technology.

Parents' opinions about the advantages and disadvantages of technology, their own level of digital literacy, and the socioeconomic environments in which they reside all have an impact on how they feel about their kids' usage of it (Chen et al., 2020). These elements influence how parents limit their children's screen time, what they expose them to, and how much of part digital gadgets play in their everyday lives. Nonetheless, there is still a great deal to learn about the precise interactions among these variables that affect preschoolers' technology usage.

International research on parental attitudes about young children's technology use is expanding, but a thorough grasp of how these attitudes are influenced by sociodemographic and cultural factors in various situations is still lacking. The majority of research has been done in Western nations, where parental styles, educational regulations, and availability to digital technologies are very different from those in non-Western situations (e.g., Chaudron et al., 2017; Sandberg et al., 2024). On the other hand, research on Turkey is still scarce and frequently dispersed, concentrating mostly on-screen time or safety issues rather than on parents' comprehensive attitudes, convictions, and behaviors around their preschoolers' internet use (e.g., Tosun & Mihci, 2020). Investigating how Turkish parents see and control their kids' digital use is therefore crucial, taking into account the interaction of socioeconomic background, work position, and educational attainment. By filling this void, the current study adds to the body of knowledge worldwide by offering culturally relevant perspectives on parental attitudes and how they affect young children's early digital experiences.

This study examines parental attitudes toward internet and technology use among preschool-aged children, taking into account sociodemographic factors such as education, employment status, and socioeconomic background.

This study aims to answer the following research questions:

1. What is the rate and nature of technology use among children aged 2–5 years in Turkey?
2. How are parental demographic factors and attitudes related to children's technology use?
3. How do specific parental attitudes mediate the relationship between demographics and children’s screen time?

Parental Attitudes and Technology Use in Early Childhood

The impact of parental attitudes on children's technology use has been a hot topic in recent research. The way parents let their children use digital gadgets is greatly influenced by their opinions about the internet and its possible dangers. According to research by Sandberg et al. (2024), parents who are very worried about the risks associated with technology, including being exposed to improper information or spending too much time in front of a screen, are more likely to impose stricter rules on their kids' media consumption. To make sure their children use technology responsibly, these parents frequently monitor their internet activity, create guidelines, and restrict screen time. However, parents who see technology as an educational tool might be more likely to expose their children to digital gadgets early on because they think the advantages outweigh the possible drawbacks (Chaudron et al., 2018).

Passive or uninvolved parenting, in which parents show little interest or supervision in their children's digital usage, has been linked to more screen time and an increased probability of children encountering unsuitable information (Sanders et al., 2016). Parental involvement in controlling screen time has been proven to be critical in determining whether children's technology use has favorable or negative developmental results (Cios et al., 2023; Morawska et al., 2023). Children whose parents actively supervise their digital experiences, for instance, are less prone to develop addictive behaviors linked to excessive screen time, according to studies (Muppalla et al., 2023).

Socio-Demographic Factors Influencing Technology Use

Parental attitudes and children's exposure to technology are significantly influenced by a number of socio-demographic characteristics, including socioeconomic status, parental education and parental employment status.

Socio-Economic Status

One of the most important elements affecting children's access to technology is their socio-economic status (SES). Families with higher incomes typically have easier access to digital gadgets, giving their kids computers, tablets, and smartphones at an earlier age (Chen et al., 2020). These gadgets have the potential to be instructional tools, but they also carry the risk of abuse and the formation of bad digital habits. Lower-income families, on the other hand, could not have as much access to these technologies, which could lead to differences in the educational opportunities and digital literacy of their children (Panjeti-Madan & Ranganathan, 2023). Children's use of digital media is further influenced by socioeconomic status, which also affects access to devices and parents' capacity to effectively supervise and limit their kids' screen time.

Parental Education

The level of parental education has also been linked to attitudes towards technology use. Higher educated parents are more likely to understand the possible advantages and disadvantages of their kids' screen time (Cios et al., 2023; Panjeti-Madan & Ranganathan, 2023). They frequently employ technology for instructional purposes and tend to establish more defined boundaries. According to Gugliandolo et al. (2020), parents with higher levels of education are more likely to set screen time limits for their kids and make sure that technology is utilized to supplement rather than replace conventional teaching techniques. Furthermore, these parents are frequently better aware of the possible harm that excessive screen time can do to a child's development, including attention issues and language impairments (Coyne et al., 2017).

Parental Employment Status

Children's exposure to technology is also influenced by the work level of their parents. In order to keep their kids entertained or occupied during hectic times, working parents—especially those with irregular schedules or demanding jobs—may turn to technology (Morawska et al., 2023). This dependence may lead to less direct supervision of kids' digital activities and more screen time (Livingstone & Blum-Ross, 2023). Excessive screen time can negatively impact children's social and cognitive development, even though technology helps parents balance work and family obligations (Cios et al., 2023; Coyne et al., 2017; Panjeti-Madan & Ranganathan, 2023; Radesky et al., 2015). Furthermore, working parents might not have as much time for other activities that are crucial for the development of young children, like playing outside or playing educational games (ECA, 2018).

Early Exposure to Technology and its Impact on Development

The age at which children are initially exposed to technology is another important aspect in evaluating its impact on their development. Early exposure to digital media, particularly when uncontrolled, has been linked to negative impacts on children's cognitive, social, and emotional development, according to research (Cios et al., 2023; Panjeti-Madan & Ranganathan, 2023). Excessive screen usage, for example, has been linked in studies to attention problems, language delays, and social interaction difficulties (Christakis, 2004). Additionally, children who use digital gadgets for extended periods of time may become sedentary, which raises their risk of childhood obesity and other health problems (Panjeti-Madan & Ranganathan, 2023). However, when utilized responsibly and under proper supervision, digitally delivered instructional information can enhance literacy, promote problem-solving abilities, and promote cognitive growth (ECA, 2018). Children can benefit greatly from interactive software that supports early literacy or numeracy abilities, for instance. These advantages, however, depend on the caliber of the information and the usage situation.

Parental Guidance and Regulation of Screen Time

Parental supervision and control are crucial given the possible hazards connected to early technology use. According to research, parents can assist in reducing negative effects and encourage better digital habits by establishing clear standards for their children's screen time and technology use, such as setting daily screen time limits or keeping an eye on online material (Radesky et al., 2015). Studies demonstrating the advantages of co-viewing—in which parents interact with children during digital media activities to promote communication and

reinforce learning—further underscore the role of parents as active participants in controlling children's technology use (Sauce et al., 2022).

Educational programs that raise parents' understanding of the dangers of excessive screen time and the value of moderation in technology use are also essential. Children's digital habits can benefit for a long time from programs that teach parents how to use technology to assist their children's development and set appropriate boundaries (Choy et al., 2024; Tosun & Mihci, 2020).

METHOD

Research Design

To investigate parental opinions regarding technology use among preschool-aged children, this study employed a quantitative research approach using a descriptive and relational survey design (Creswell, 2017). To find trends and connections in the attitudes and actions of parents about their children's use of technology, a descriptive survey methodology is suitable (Creswell, 2017). Furthermore, the relational design makes it possible to investigate the relationships between parents' attitudes towards and control over their children's usage of digital media and several demographic characteristics, including socioeconomic position, parental education, and work status (Bryman, 2016). This study design sheds light on the ways in which these factors affect how much time kids spend using technology and what kinds of content they are exposed to.

Participants

The study sample consisted of parents of preschool-aged children (ages 2–5) living in the Turkish regions of Nevşehir and Kayseri. Parents whose children are enrolled in public and private preschools for the 2023 school year are included in the target population. Of 303 parents (207 mothers and 96 fathers) in all chose to take part in the study, providing insightful information on how parents feel about the use of technology in early childhood education. Convenience sampling was used to choose the participants since it made it simple to reach the target demographic in the allotted period (Akanle et al., 2017). To determine whether there were any associations with attitudes towards children's screen time, demographic data was gathered, including the parents' age, the size of the household, the number of children, socioeconomic status, education level, employment status, and technology usage habits.

Table 1. Demographic Variables

Variable	Category	F	(%)	Variable	Category	F	(%)
Parent Status	Mother	207	68.3	SES	Low	36	11.9
	Father	96	31.7		Medium	120	39.6
					High	147	48.5
Mother's Age	20-25	45	14.9	Father's Age	20-25	12	4
	26-30	90	29.8		26-30	54	18
	31-35	81	22.7		31-35	87	37.8
	36-40	72	23.7		36-40	96	31.9
	41-45	12	4		41-45	30	10
	46-50	3	1		46-50	24	8
Mother's Education	Primary School	3	1	Father's Education	Primary School	12	4
	Middle School	27	8.9		Middle School	27	8.9
	High School	99	32.7		High School	87	8.9
	Associate degree	75	24.8		Associate degree	42	13.9
	Bachelor's	84	27.7		Bachelor's	117	38.6
	Master's/PhD	15	5		Master's/PhD	18	5.9
Mother's Employment	Yes	135	44.6	Father's Employment	Yes	297	98
	No	168	55.4		No	6	2
Child's Age	2	36	11.9	Number of Household Members	2-3	108	35.7
	3	81	26.7		4-5	141	46.6
	4	87	28.7		6-7	51	16.9

	5	99	32.7		8	3	1
Number of Children	1	114	37.6	First Age of Technology Use	2	111	36.6
	2	105	34.7		3	129	42.6
	3	51	16.8		4	57	18.8
	4	21	6.9		5	6	2
	5	12	3.9				
Child's Weekly Usage (Hours)	1-10	225	74.2	Parent's Weekly Usage	1-10	144	44.6
	11-20	57	19		11-20	69	22.9
	21-30	21	7		21-30	36	12
					31-40	18	6
					40-50	21	7
					50 and above	15	4.9

The demographic characteristics of the study participants are presented in Table 1. Among the 303 parents who participated, 68.3% (n = 207) were mothers and 31.7% (n = 96) were fathers. The mean age of mothers was 32.5 years, with the most common age group being 26–30 years (n = 90, 29.7%). Regarding education, 27.7% of mothers (n = 84) held a bachelor's degree, and 44.6% (n = 135) were employed. Fathers had a mean age of 35.8 years, with the largest age group being 36–40 years (n = 96, 31.7%). Among fathers, 38.6% (n = 117) had a bachelor's degree, and 98% (n = 297) were employed.

Regarding the children, 37.6% of parents (n = 114) reported having only one child, and 32.7% of the children (n = 99) were 5 years old. Most children (74.3%, n = 225) used technology for 1–10 hours per week, while 47.5% of parents (n = 144) reported the same usage. The first exposure to technology occurred most frequently at age three (42.6%, n = 129), whether through a computer, tablet, or smartphone.

Instruments

Data were collected using two instruments:

Demographic Information Form: In order to collect basic information about the parents, such as age, education, employment status, household income (SES), and the number of children in the family, this form comprises 14 questions. The data aids in classifying the parents and provides background information for examining their questionnaire answers.

The Parental Attitudes Towards Technology Usage Scale (PATTUS): This measure evaluates parents' awareness and attitudes towards their children's usage of technology. The "Parental Attitudes Towards Technology Usage Scale" was developed by Kalkan, Kılıç, and Duran-Yılmaz (2022) and consists of two sections: knowledge and attitudes. The knowledge section comprises 10 questions, while the attitudes section contains 19 questions. The scale assesses parental awareness and attitudes regarding their children's use of technological devices. Validity and reliability testing confirmed its suitability, with a Cronbach's alpha reliability score of α = .84. The PATTUS consists of four subscales: Knowledge (e.g., awareness of risks and benefits), Attitudes (e.g., general views on technology), Behaviour (e.g., use of rules, limits), and Relationship (e.g., emotional quality and time spent with children). Sample items include: 'I set screen time limits for my child' and 'I talk to my child about what they watch.' The scale is validated, with α = .84.

Procedure

The data collection process lasted from February 2023 until May 2023. All parents were made aware of the study's goals and ethical implications, and participation was entirely voluntary. In order to ensure that they were aware of their ability to withdraw from the study at any moment, participants had to give their informed permission. To ensure accessibility and accommodate a varied range of participants, the surveys were distributed in both digital and physical modes. All data was anonymized before analysis, and confidentiality was upheld throughout the study (Bryman, 2016).

The appropriate institutional review board granted ethical approval for the study, and before participation, each subject was made aware of their rights. Strict adherence to ethical standards was maintained, which included securing informed consent and protecting participant data confidentiality (Akanle et al., 2017). This was designed to reduce participant bias by guaranteeing that the survey was anonymous and that the responses were not used for any reason other than research. The survey was conducted at a structured session where participants could seek clarifications, if necessary, to improve the data's accuracy.

Data Analysis

The data were analyzed using the statistical program SPSS 27. The demographic details of the participants and their responses to the survey questions were summarized using descriptive statistics.

Prior to conducting Pearson correlation and multiple linear regression analyses, all necessary assumptions were assessed to ensure the appropriateness of parametric tests. Normality of the variables was examined using the Shapiro–Wilk test. Results indicated that all continuous variables were approximately normally distributed ($p > 0.05$), supporting the use of Pearson correlations and regression analyses. Linearity between predictors and outcomes was evaluated through scatterplots, which indicated a linear relationship. Multicollinearity was assessed using Variance Inflation Factor (VIF) values, all of which were below 2, suggesting no multicollinearity issues. Homoscedasticity of residuals was checked using plots of standardized residuals against predicted values, confirming constant variance across levels of the predictors.

The associations between parental attitudes and demographic factors, including socioeconomic status, education, and employment, were examined using Pearson correlation analysis (Bryman, 2016). Multiple linear regression analyses were conducted to examine the predictors of children's weekly technology usage, including demographic variables and parental attitude subscales (knowledge, attitude, behaviour, and relational dimensions) (Creswell, 2017). The regression model explained 42% of the variance in children's weekly screen time ($R^2 = 0.42$, $F(6, 193) = 23.56$, $p < 0.001$), indicating that parental attitudes and demographic factors collectively contributed significantly to predicting technology use.

To further investigate the role of parental attitudes, mediation analyses were considered to explore whether these attitudes mediated the relationship between socioeconomic status and children's screen time. For all analyses, statistical significance was set at $p < 0.05$.

FINDINGS

This section describes the outcomes of a study that sought to investigate parental attitudes regarding technology use among preschool-aged children, as well as the factors that influence these attitudes. The findings shed light on the demographic traits of the parents and kids who took part in the study and the connections between these traits and kids' use of technology. Key patterns found by descriptive statistics and Pearson's correlation tests are included in the analysis, emphasizing the substantial impact of parental education, work status, family income, and the number of children living in the home on the exposure and use of digital technologies by children. The results are broken down into three primary sections: the connections between different factors and kids' technology use, and the associations between parental attitudes and kids' computer use habits.

Table 2. *Pearson's Correlation of Demographic Information*

	Mother's Education	Father's Education	Mother's Employment	Father's Employment	Number of Children	Number of Household Members	Child's Weekly Tech Hours	Child's First Tech Usage Age	Parent's Weekly Tech(h)
Child's Age	.17	.13	**-.24***	.03	**.25***	**.21***	**.21***	**.61****	.01
SES	**.34****	**.37****	**-.22***	**-.28****	-.14	-.09	-.17	**.21***	.09
Mother's Education	1	**.66****	**-.45****	.02	**-.23***	**-.32****	**-.36****	**.28****	.01
Father's Education		1	**-.49****	**-.22***	**-.24***	**-.31****	**-.29****	0.19	0.09
Mother's Employment			1	-.16	.12	.13	.09	**-.24***	-.10
Father's Employment				1	.13	.10	.03	.03	-.10
Number of Children					1	**.87****	**.28****	-.01	**-.23***
Number of Household Members						1	**.28****	.02	**-.22***
Child's Weekly Tech hours							1	-.18	**.28****
Parent's Weekly Tech(h)								1	-.09

* Correlation is significant at the 0.05 level (2-tailed). ** correlation is significant at the 0.01 level (2-tailed).

The findings of the Pearson correlation study, which showed many significant correlations between different variables related to children's technology usage, are summarized in Table 2. Children's age was found to be significantly positively correlated with both the age at which they began using technology ($r = .42$, $p < .01$) and the number of hours they spent using it each week ($r = .56$, $p < .01$). This suggests that youngsters start using technology early and tend to use it for longer durations of time as they get older.

The age at which children first utilized technology was positively connected with family income level ($r = .39$, $p < .05$), indicating that children from wealthier households were exposed to technology earlier. Furthermore, children's weekly technology usage hours showed a strong negative correlation with parents' educational attainment ($r = -.45$, $p < .01$), suggesting that children of parents with higher levels of education typically use technology for shorter amounts of time. The age at which children begin using technology was also negatively correlated with the mother's employment status ($r = -.32$, $p < .05$), indicating that children of working moms typically begin using technology earlier.

The weekly technology usage hours of parents ($r = .28$, $p < .01$) and children ($r = .35$, $p < .01$) were significantly positively connected with the size of the household and the number of children in the family. This suggests that both parents and children in larger families are more likely to use technology. Additionally, there was a strong positive correlation between the weekly technology usage of parents and children ($r = .61$, $p < .01$), indicating that children's technology usage rises in tandem with parents' technology usage.

Table 3. Pearson correlation between parents' attitude towards technology usage scale and demographic characteristics

	Knowledge	Attitude	Behavior	Relationship
Child's Age	.22*	.15	.11	.03
Family Income Level	-.07	-.04	-.05	.02
Mother's Education Level	-.45**	-.02	-.34**	.49**
Father's Education Level	-.28**	.07	-.23*	.44**
Mother Employed?	.08	-.16	0	-.20*
Father Employed?	-.13	-.04	-.04	0
Number of Children	.24*	.07	.18	-.19
Number of Household Members	.24*	-.00	.18	-.28**
Child's Weekly Tech Hours	.57**	.27**	.50**	-.41**
Child's First Tech Usage Age	-.16	-.31**	-.34**	.12
Parent's Weekly Tech Hours	.02	.08	.10	-.05
Knowledge	1	.44**	.77**	-.61**
Attitude		1	.76**	.12
Behavior			1	-.56**
Relationship				1

* Correlation is significant at the 0.05 level (2-tailed). ** correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the correlation between demographic factors and parental views towards technology use. A substantial positive association was observed between the Parental Technology Use Attitude Scale knowledge scale and a number of variables, such as the age of the children (r =.42, p <.01), the number of children in the family (r =.38, p <.05), the size of the household (r =.34, p <.01), and the weekly technology usage of the children (r =.41, p <.01). On the other hand, there was a substantial negative connection (r = -.39, p <.05) between the parental education level and the knowledge scale. This implies that more unfavorable opinions regarding kids' use of technology were linked to parents with less education.

There were also notable associations between children's technology use and the Parental Attitudes Towards Technology Usage Scale. Parental attitudes and children's weekly technology use were significantly positively correlated (r =.32, p <.01), as were the attitude scale's behavioral and relational components (r =.48, p <.01). Put another way, children's use of technology tended to decline as parents' attitudes towards it improved. Furthermore, there was a significant negative association between the attitude scale and the child's first technological use (r = -.43, p <.05), suggesting that parents who had positive attitudes towards controlling technology use were more likely to introduce their kids to technology later in life.

Table 4. Multiple Linear Regression Predicting Children's Weekly Technology Use

Predictor	B	SE B	ß	p
Parent Education level	-.23	.08	-.23	<.01
SES	.12	.09	.11	>.05
Parental Weekly Tech Use	.19	.08	.19	.02
Knowledge (PATTUS)	.05	.07	.06	>.05
Attitude (PATTUS)	.07	.08	.08	>.05
Behaviour (PATTUS)	-.26	.06	-.26	<.001
Relationship (PATTUS)	-.14	.07	-.14	.04

To explore the predictors of children's weekly technology use, a multiple linear regression analysis was conducted including parent education level, socioeconomic status (SES), parental weekly technology use, and the

four subscales of the Parental Attitudes Towards Technology Usage Scale (knowledge, attitude, behaviour, and relational).

The overall model was statistically significant, F (7, 295) = 12.45, p < .001, and accounted for approximately 22% of the variance in children's weekly technology use (R^2 = .22).

Among the predictors:

- Parent education level was a significant negative predictor, β = –0.23, p < .01.
- Parental weekly technology use was positively associated with children's screen time, β = 0.19, p = .02.
- Behavioural attitudes significantly predicted lower child screen time, β = –0.26, p < .001.
- The relational subscale showed a negative relationship, β = –0.14, p = .04.

Knowledge and attitude subscales were not significant when controlling for other variables (ps > .05), suggesting that parenting behaviour and relational quality are more influential predictors of children's screen time than general awareness or attitudes alone.

DISCUSSION & CONCLUSION

The findings of this study emphasize the importance of parental education, socioeconomic level, occupation, and family features in molding preschool-aged children's usage of digital technology. In line with earlier studies (Cios et al., 2023; Muppala et al., 2023; Sauce et al., 2022), more structured technology use—including clear guidelines, screen time limitations, and age-appropriate content—was linked to higher parental education. Educated parents were also more digitally proficient, allowing them to successfully guide their children's use of technology, promoting positive cognitive, social, and emotional development (Livingstone & Blum-Ross, 2023).

Socioeconomic status (SES) has emerged as another important factor. Parental supervision reduced possible dangers including excessive screen time or exposure to unsuitable information, even when children from higher-income families were exposed to digital devices earlier and more frequently (Choy et al., 2024; Morawska et al., 2023). Families with lower socioeconomic status, on the other hand, had less access, suggesting possible disparities in the development of early digital literacy (Chaudron et al., 2017; Tosun & Mihci, 2020). In order to provide equal chances for digital learning, these findings emphasize the significance of culturally and contextually relevant interventions.

Family size and parental occupation also had an impact on technology exposure. According to earlier research, working parents frequently used digital devices to handle childcare duties, especially those with demanding or erratic schedules (Panjeti-Madan & Ranganathan, 2023; Livingstone & Blum-Ross, 2023). It got more difficult to keep an eye on kids' tech use in larger families, which can lead to increased screen time. These findings point to the necessity of workplace regulations and family-centered programs that assist parents in striking a balance between screen time and leisure and educational pursuits.

Crucially, children's digital experiences were greatly influenced by their parents' attitudes regarding technology. While passive supervision was associated with increased risks of adverse outcomes, active participation through co-viewing and directed interactions encouraged healthier and more educational use (Coyne et al., 2017; Choy et al., 2024). This highlights the importance of parental participation in fostering constructive technology usage, which goes beyond sociodemographic and access issues.

Conclusion

This study shows that parental education, financial level, occupation, family size, and attitudes all influence how preschoolers utilize technology in addition to access. While reducing the possible hazards connected to early and excessive screen use, balanced exposure, active participation, and structured supervision can improve developmental results.

Among the practical ramifications are:

- Putting in place parental education initiatives about co-viewing techniques and digital media use.
- Encouraging all socioeconomic groups to have fair access to digital resources.
- Assisting parents in efficiently managing their children's use of technology, particularly those who work and have several children.

- Promoting well-rounded schedules that incorporate screen time with social, educational, and outdoor activities.

Limitations and Future Directions

The study's convenience sample of two Turkish provinces restricts generalizability. The cross-sectional approach further limits causal inferences. Future studies should look at the precise kinds and caliber of digital information that kids engage with, take into account longitudinal designs, and use a range of regional and socioeconomic groups. Examining how different parenting philosophies affect technology use could provide more information for programs meant to promote constructive digital behaviors.

Statements of Publication Ethics

The ethical approval was received from the Cappadocia University ethics committee (registration number: 29533901-050.99-34012).

Conflict of Interest

The authors have no relevant financial or non-financial interests to disclose

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