



How does Parental Media Mediation Regulate the Association between Digital Parental Awareness and the Parent-Child Relationship?

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Abstract

The parent-child relationship is evolving due to the influence of technology in the digital age. Traditional family dynamics are changing, prompting parents to rethink their approach to children's development and learn how to interact effectively in digital environments. In light of these considerations, this study aims to examine the role of parental media mediation in the relationship between digital parental awareness and the parent-child relationship. The research was conducted as a cross-sectional survey study based on a quantitative research method. The sample consisted of 291 parents with preschool-age children. Data collection tools included the Demographic Information Form, Digital Parental Awareness Scale, Parental Media Mediation Scale, and Child-Parent Relationship Scale. GLM Mediation Model was performed for data analysis. The analysis revealed that parental mediation behaviors partially mediate the parent-child relationship across all dimensions of digital parental awareness, including being a negative role model, digital negligence, efficient usage, and protection from risks.

Keywords Digital parenting · Early childhood · Parental mediation · Parent-child relationship · Digital childhood

Introduction

Digital technologies have become important actors of daily life and are actively used by all individuals, regardless of different purposes, pointing to the importance of research on the use of digital technology. In particular, the fact that the use of digital technology in daily life follows in the direction of adulthood to childhood makes it important to understand

how the adult-child relationship evolves in the digital environment. This importance is related to the content of digital technologies as well as to the purpose, how, for how long, and with whom adults and children use digital technologies. In recent times, research into the role of digital technologies in parenting and parent-child relationships has proliferated. It has recently been observed that research (Ata-Aktürk & Akman, 2024; Everri et al., 2022; Johnson & Rogers, 2024; Kulaksız & Toran, 2023; Paus-Hasebrink et al., 2013; Shin et al., 2021; Toran et al., 2024; Wong et al., 2020) on the role of digital technologies in parenting and parent-child relationships has become widespread. This proliferation is related to the regulation of parent-child relationships in the newly emerging digital environment.

In the contemporary era, where digital technologies are pervasive, an understanding of parent-child relationships and the ways in which parents adapt their roles within this dynamic is a crucial aspect of child development (Kulaksız & Toran, 2023). The advent of digital technologies has introduced a duality of risks and opportunities pertaining to children's development and the quality of the parent-child relationship (Gür & Türel, 2022; Yang et al., 2022).

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Therefore, it is very important to examine the quality of the relationship between the child and the parent, the parental attitudes that evolve into digital parenting, and the mediating role of parents in the use of digital technologies. In addition, revealing the role of parental mediation in the parent-child relationship in the digital context and understanding how digital parenting is determined is very important in both supporting parents and children. In light of the aforementioned considerations, this study concentrated on analyzing the function of parental media mediation in the context of the parent-child relationship and digital parenting.

Theoretical Background

Parental Media Mediation

Digital technologies present both opportunities and risks, children's use of digital technologies is constantly being regulated, primarily by the parents who are directly involved in the child's care. This regulation is sometimes done in relation to parental attitudes and sometimes to parent's digital literacy. Livingstone and Helsper (2008) portray this regulatory process as a struggle between parents and children. However, the parents' actions aim to leverage the benefits of digital technologies for children while minimizing their potential risks. This has led to the emergence of media mediation strategies, such as restrictions, rule-making, and joint monitoring, which are influenced by parental attitudes (Austin, 2001).

The concept of mediation originated in response to parents' evaluation of their children's television viewing habits (Desmond et al., 1985), including the duration of their exposure to screen media and the suitability of the content they were using (Dorr, 1989). In response to these observations, parents develop strategies to regulate their children's media usage (Austin, 2001; Clark, 2011; Warren, 2005). The concept of media mediation explained as parents managing the relationship between children and the media by using strategies such as talking to children, interpreting, and monitoring in a way that is beneficial to children (Livingstone & Helsper, 2008). In addition, Warren (2001, p.212) explains mediation as "any strategy parents use to control, supervise, or interpret content". In her parental mediation theory in digital age, Clark (2011, p. 325) defines media mediation as "parents utilize different interpersonal communication strategies in their attempts to mediate and mitigate the negative effects of the media in their children's lives". When these three commonly used definitions of media mediation are re-evaluated and adapted to the present era, media mediation can be defined as *accompanying digital natives in the digital*

world using strategies that consider the best interests of the child.

A body of research on parental media mediation strategies (Gözüm & Kandir, 2020; Livingstone & Helsper, 2008; Nathanson, 1999; Nikken & Jansz, 2014) revealed the existence of numerous strategies pertaining to children's use of various media, including television, the internet, and digital media tools. These mediation strategies with media have been classified as active, restrictive, co-viewing mediation strategies (Nathanson, 1999; Valkenburg et al., 1999); co-using/co-playing, supervision mediation strategies (Nikken & Jansz, 2006, 2014), monitoring mediation strategy (Livingstone & Helsper, 2008); and laissez-faire, technical, active co-play mediation strategies (Gözüm & Kandir, 2020). These media mediation strategies are guidelines that parents can use to ensure that their children's best interests are considered when using media and digital technologies. However, the use of these strategies is directly related to parenting which is evolving from traditional parenting to digital parenting.

Digital Parenting

Digital parenting is about the use of digital technologies that are decisive in the parent-child relationship (Huang et al., 2018). Digital parenting is defined as the efforts and practices of parents to understand, support and regulate children's activities in digital environments and these practices and efforts emerge as the "mediator" role of parents in children's digital activities (Benedetto & Ingrassia, 2021). The concept of digital parenting encompasses not only parents' attitudes towards their children's use of technology, but also their own digital literacy (Banić & Orehovački, 2024; Mikelić Preradović et al., 2016; Türen & Bağçeli Kahraman, 2024).

The quality of digital parenting can be determined by numerous factors such as including the parents' digital literacy (Isikoglu Erdogan et al., 2019), their knowledge of the functions of digital tools, their ability to present digital tools to their children in an appropriate manner, their ability to choose digital tools that are suitable for their children (Benedetto & Ingrassia, 2021), and their ability to evaluate digital tools (Livingstone et al., 2017; Toran et al., 2024). Therefore, all these add to a proliferation of discourse surrounding digital parenting because digital technologies are pervasive and accessible to all, particularly in the context of parent-child relationships (Benedetto & Ingrassia, 2021; Fidan & Seferoğlu, 2020).

Parent-Child Relationship

The parent-child relationship is a dynamic and complex process for both parent and child (Gao & Cummings, 2019). But also, the parent-child relationship is affected by many elements including the parent-child attachment (Ranson & Urichuk, 2008), the quality of communication between parent and child, parents' attitudes (Baumrind, 1991), individual and developmental characteristics of the child, socioeconomic and cultural status of the parent, and the environment of the family in which the child is raised (Kulaksız & Toran, 2023).

A positive parent-child relationship is demonstrated to support several key aspects of the child's development. These include their emotional well-being (Feinberg & Kan, 2008), emotional security, resilience, and self-confidence (Harold et al., 2004). Additionally, a positive relationship between parent and child has been linked to the child's stress management, self-esteem, effective use of social skills (Yue et al., 2024), healthy relationships, problem-solving skills, and academic success (Dubow et al., 1991). Conversely, a negative parent-child relationship is associated with a range of adverse outcomes, including emotional and behavioral problems, aggressive behavior, emotional neglect, social isolation, feelings of worthlessness, and an inability to cope with challenges (Toran et al., 2024; Wen et al., 2024). Additionally, the amount of time parents and children spend together is also a significant determinant of the quality of the parent-child relationship (Toran et al., 2024; Toran & Özden, 2022).

The Current Study and Research Aim

A review of the literature on parental mediation revealed that parents tend to be restrictive in their children's use of digital technologies (Ata-Aktürk & Akman, 2024). However, parents can mitigate the negative effects of digital technologies by employing certain mediation strategies (Collier et al., 2016). For instance, active mediation and restrictive mediation were shown to reduce children's problematic media use, based on a literature review study result (Fam et al., 2023). Additionally, restrictive mediation was found to be more effective than active mediation in reducing the amount of time children spend on media (Chen & Shi, 2019). Nevertheless, parents employ restrictive mediation strategies about their children's online security and privacy (Banić & Orehovački, 2024).

The use of digital tools, which plays a significant role in parent-child relationships, is associated with increased conflict between children and their parents. This is particularly evident in cases where parents employ overly restrictive mediation strategies, which can intensify conflict.

Conversely, children who engage in joint mediation tend to experience reduced conflict (Beyens & Beullens, 2017). Furthermore, it has been established that parents who utilize technology effectively and protectively have a positive impact on the quality of their relationship with their children (Toran et al., 2024). The use of digital technologies in parenting practices can positively influence the quality of the parent-child relationship, fostering mutual transparency between the two parties (Shin et al., 2021). Also, digital parenting competence has a positive impact on the parent-child relationship (Huang et al., 2018). However, it is important to recognize that digital parenting practices vary according to the demographic characteristics of parents and children and that this has significant implications for understanding the parent-child relationship (Kulaksız & Toran, 2023).

Upon examination of the studies conducted, it becomes evident that many studies focus on parental mediation, the parent-child relationship, or digital parenting individually, without the aim of understanding their dynamics. There is a dearth of research that directly addresses the role of parental mediation in the relation between digital parenting and the parent-child relationship. The role of parental mediation with digital parenting can be determined directly, which in turn allows for the measurement of digital parenting attitudes and the evaluation of the quality of the relationship between parent and child. It is therefore anticipated that this research will make a significant contribution to the existing literature on the subject. Therefore, this research aims to examine the parental media mediation role between digital parental awareness and the parent-child relationship. So, the following hypotheses are tested:

1. Parental media mediation mediates the parent-child relationship by being a negative role model.
2. Parental media mediation mediates the parent-child relationship with digital negligence.
3. Parental media mediation mediates the parent-child relationship with efficient usage.
4. Parental media mediation mediates the parent-child relationship with protection from risks.

Method

In this study, a cross-sectional survey was employed within the quantitative paradigm. Digital parental awareness (including efficient usage, protection from risks, being a negative role model, and digital negligence) served as the independent variable. Parental media mediation was the mediator variable, and the parent-child relationship was the dependent variable.

Sample of the Study

The study adopted convenience sampling, where the researcher selects a location that is easily accessible and has a high number of willing participants. This approach facilitates the recruitment of volunteers and accelerates the research process (Fraenkel et al., 2012). The study was conducted with 327 parents whose children were enrolled in ten independent kindergartens in Türkiye. Parents, whose children in preschool education in independent kindergartens located in the central district of Ağrı province of Türkiye, participated in this study.

The sample size was determined using the G*Power tool. Based on a medium effect size, a 5% error margin, and a 95% confidence interval, it was calculated that data from 276 participants would be required. To account for potential extreme values, data were collected from 327 parents. Upon reviewing the data, 7 responses were found to be incomplete, however, the missing data were distributed around the mean. Then, data from 36 parents were removed due to being extreme values. The final analysis was conducted with data from 291 parents. The socio-demographic characteristics of the participants are presented in Table 1.

The demographic characteristics of the participants in the study show that 64.6% were mothers and 35.4% were fathers. Of the participants, 49.1% were employed, while 50.9% were unemployed. Regarding educational level, 11.3% had completed primary school, 10.7% had completed secondary school, 23% had a high school diploma, 10.3% held an associate degree, 37.5% had an undergraduate degree, and 7.2% had a postgraduate degree. In terms of age distribution, 29.2% of the parents were 31 years old or younger, 56.0% were between the ages of 32 and 37, and

14.8% were 38 years old or older. Additionally, it was found that 44.0% of the parents spent 1–1.5 h on the Internet daily, 32.0% spent 2–2.5 h, 16.5% spent 3–3.5 h, and 7.6% spent 4 h or more online each day.

Instruments

In this study, the Demographic Information Form, Digital Parental Awareness Scale, Parental Media Mediation Scale, and Child-Parent Relationship Scale were used.

Demographic Information Form

This form, prepared by the researchers, collected data on parents' age, gender, educational background, employment status, and personal internet usage time.

Digital Parental Awareness Scale

This scale developed by Manap and Durmuş (2020) was utilized. The scale consists of 16 items divided into four sub-dimensions: digital negligence (4 items), efficient usage (4 items), protection from risks (4 items), and being a negative role model (4 items). The items are rated on a 5-point Likert scale: 1=Never, 2=rarely, 3=Sometimes, 4=Frequently, 5=Always. Each sub-dimension is evaluated independently, with scores ranging from 4 to 20. Higher scores in the efficient usage and protection from risks sub-dimensions indicate greater digital parental awareness, while higher scores in the digital negligence and being a negative role model sub-dimensions indicate lower digital parental awareness. The Cronbach Alpha values for the sub-dimensions range from 0.634 to 0.799 (Manap & Durmuş, 2020).

Parental Media Mediation Scale

The “Early Childhood Parent Media Mediation Scale” developed by Şen et al. (2020), was employed to assess the media mediation behaviors of parents. The scale consists of 43 items, including 2 reverse-coded items, and is divided into 6 dimensions: active-supportive (14 items), restrictive-supportive (11 items), restrictive-limiting (6 items), active-interpreter (4 items), restrictive-blocker (4 items), and active-limiting (4 items). Responses are rated on a 5-point Likert scale: 1=Never, 2=Rarely, 3=Sometimes, 4=Most of the time, 5=Always. In factor analysis, the structure measured by the scale was treated as a single dimension, and it was noted that calculations based on the total score were more valid and reliable. The Cronbach alpha values for the scale ranged from 0.59 to 0.92 (Şen et al., 2020). Based on the total scale score, parents were categorized as follows:

Table 1 Demographics of the participants

Variable		N	%
Parental type	Mother	188	64.6
	Father	103	35.4
Work status	Employed	143	49.1
	Unemployed	148	50.9
Educational level	Elementary school	33	11.3
	Middle school	31	10.7
	High school	67	23.0
	Associate degree	30	10.3
	Bachelor's degree	109	37.5
	Postgraduate degree	21	7.2
Age	31 and lower	85	29.2
	32–37	163	56.0
	38 and above	43	14.8
Parent's daily internet use in hours	1–1,5	128	44.0
	2–2,5	93	32.0
	3–3,5	48	16.5
	4 +	22	7.6
Total		291	100

Table 2 Descriptive statistics and cronbach alpha values

Variable	N	Min	Max	M	SD	Skewness	Kurtosis	α
Parental media mediation	291	113	206	166.84	20.00	−0.354	−0.357	0.911
Child-parent relationship	291	28	80	52.61	10.95	0.363	−0.294	0.792
Being a negative role model	291	4	18	8.00	2.80	0.747	0.642	0.674
Digital negligence	291	4	20	9.57	3.19	0.412	0.240	0.794
Efficient usage	291	6	20	16.49	2.49	−0.824	0.840	0.636
Protecting from risks	291	7	20	15.02	3.25	−0.219	−0.872	0.607

Table 3 Pearson correlation analysis results

Variable	1	2	3	4	5	6
Parental media mediation ¹	1					
Child-parent relationship ²	−0.354*	1				
Being a negative role model ³	−0.272*	0.416*	1			
Digital negligence ⁴	−0.330**	0.377*	0.440*	1		
Efficient usage ⁵	0.522*	−0.393*	−0.393*	−0.312*	1	
Protecting from risks ⁶	0.431*	−0.309*	−0.241*	−0.371*	0.485*	1

* $p < 0.05$

those scoring below 50 were defined as active mediators, those scoring between 51 and 65 as variant mediator, and those scoring 66 and above as restrictive mediator.

Child-Parent Relationship Scale

The scale, originally developed by Pianta (1992) and adapted into Turkish by Akgün and Yeşilyaprak (2010), was designed to assess the parent-child relationship. In the Turkish context, the scale features a two-factor structure with 24 items, including 8 reverse-coded items. The two factors are conflict (14 items) and positive relationship (10 items). Responses are rated on a 5-point Likert scale: 1=Absolutely Not Appropriate, 2=Not Very Appropriate, 3=Undecided, 4=Very Appropriate, 5=Absolutely Appropriate. The Cronbach alpha values for the scale range from 0.73 to 0.85 (Akgün & Yeşilyaprak, 2010). A high score on the scale indicates a negative-conflictual relationship, whereas a low score suggests a positive relationship.

Data Collection and Analysis

The survey form was printed and distributed to 10 kindergarten principals. School administration and teachers were informed about the research, and teachers were asked to voluntarily deliver the survey forms to parents. A week later, the completed survey forms were collected by visiting the respective school principals. The purpose of the study was explained to participants, emphasizing that their responses would remain confidential and that they could withdraw from the study at any time. A consent form was provided, and contact information was shared for any questions during

the process. Ethical approval for the study was obtained from İstanbul Kültür University.

For data analysis, the GLM Mediation Model in the Medmod module of Jamovi 2.3.21 was employed to analyze the mediation models. This method is based on determining the level of influence of an independent variable on a dependent variable through a mediator variable, using a bootstrap bias of 5000 and a corrected 95% confidence interval, as recommended by Nelder and Wedderburn (1972). The indirect effect is considered statistically significant if the 95% confidence interval does not include zero. The significance level of $p < .05$ was used in the analyses.

Findings

Preliminary Analysis

The descriptive statistics of the scales are presented in Table 2. The reliability of the Parent Media Mediation Scale was found to be 0.911, while the reliability of the Child Parent Relationship Scale was 0.792. For the Digital Parental Awareness Scale, the Cronbach Alpha values were calculated as follows: 0.674 for being a negative role Model, 0.794 for the Digital Negligence, 0.636 for the Efficient Usage, and 0.607 for the Protection from Risks subdimension. Participants with extreme values were removed from the data set based on their z-scores. According to the skewness and kurtosis coefficients, the responses provided by the parents fell within the ± 1 range, which is considered the normality threshold (Field, 2009). This was further supported by the examination of histogram graphics.

The relationships among digital parental awareness, parent media mediation, and child-parent relationship were examined using Pearson correlation analysis (Table 3).

A negative correlation was discovered between parental media mediation and child-parent relationship ($r=-.354$). The analysis revealed a negative relationship between digital negligence with parent media mediation ($r=-.330$) and with child-parent relationship ($r=-.377$). Additionally, there was a negative correlation between being a negative role model with parent media mediation ($r=-.272$) and a positive relationship with child-parent relationship ($r=.416$). Furthermore, a positive relationship was observed between the efficient usage and parental media mediation ($r=.522$) and a negative relationship with child-parent relationship ($r=-.393$). A negative relationship was identified between protection from risks and child-parent relationship ($r=-.309$) and a positive relationship with parental media mediation ($r=.431$). All presented correlations in Table 3 were significant. As a next step, the mediation effect of parent media mediation on the relationship between digital parental awareness and the child-parent relationship was examined.

Hypothesis Analysis

Hypothesis 1- Parental Media Mediation Mediates the Parent-Child Relationship by Being a Negative Role Model

Figure 1; Table 4 provide results of the Parental Media Mediator role in the effect of being a negative role model on the Child-Parent Relationship.

Considering the relationships between variables, the mediating role of parent media mediation in the effect of being a negative role modeling on the child-parent relationship was examined. The analysis revealed an indirect effect with $\beta=0.071$, $z=3.43$ ($p<.01$). When breaking down the components, it was found that being a negative role model had a significant negative effect on parent media mediation ($\beta=-0.272$, $z=-4.83$, $p<.01$), and parent media mediation, in turn, had a significant negative effect on the child-parent relationship ($\beta=-0.259$, $z=-4.87$, $p<.01$). The direct effect of being a negative role model on the child-parent relationship was also significant ($\beta=0.346$, $z=6.49$, $p<.01$), and the total effect was $\beta=0.417$, $z=7.80$ ($p<.01$). Notably, when the mediation model was applied, the direct effect of being a negative role model on the child-parent relationship

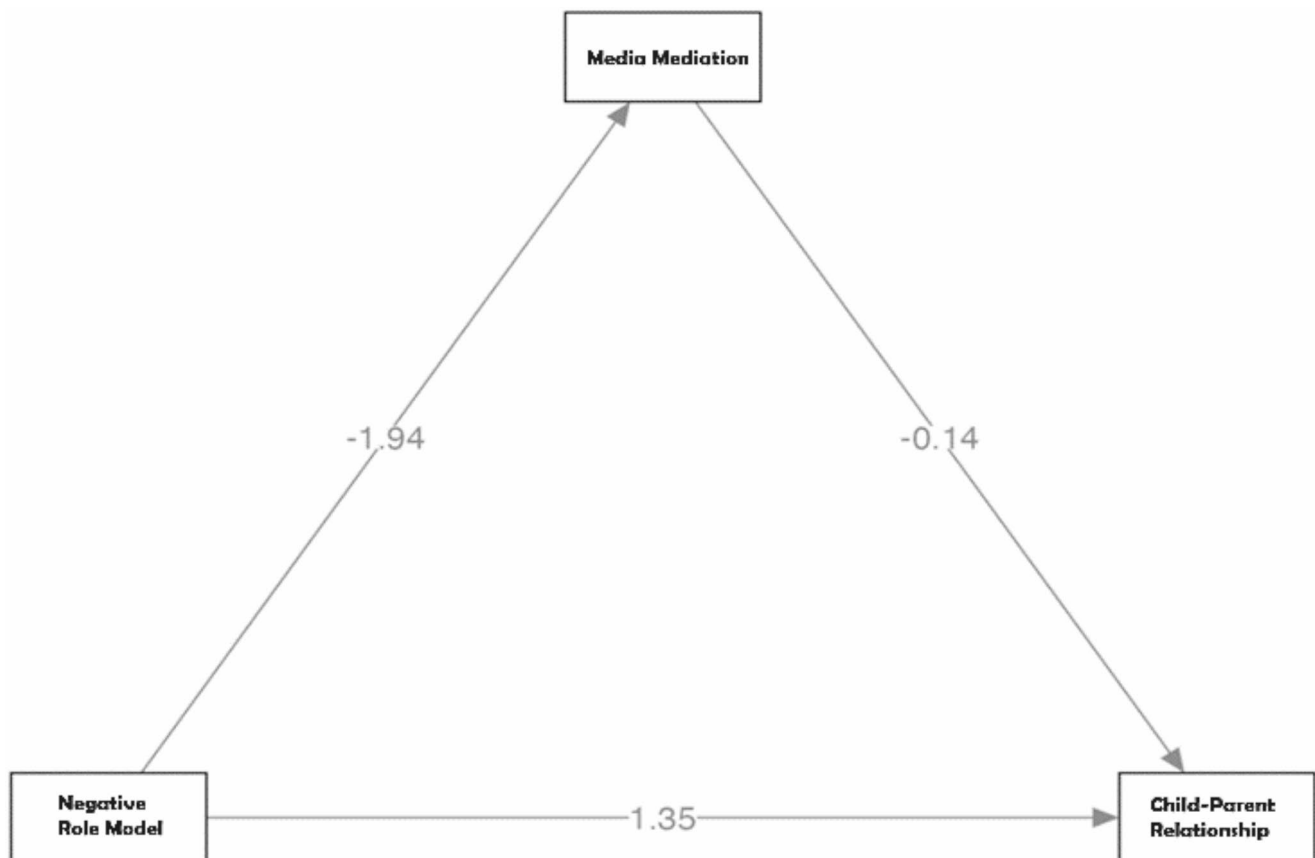


Fig. 1 The mediating role of parental media mediation in being a negative role model

Table 4 Predictions of the mediating role of being a negative role model through parental media mediation

Type	Effect	Coefficient	SE	CI-lower	CI-upper	β	z
Indirect	Being a negative role model $\Rightarrow$ Parental media mediation $\Rightarrow$ Child-parent relationship	0.276	0.08	0.12	0.43	0.071	3.43*
Components	Being a negative role model $\Rightarrow$ Parental media mediation	-1.943	0.40	-2.73	-1.15	-0.272	-4.83*
	Parental media mediation $\Rightarrow$ Child-parent relationship	-0.142	0.03	-0.20	-0.08	-0.259	-4.87*
Direct	Being a negative role model $\Rightarrow$ Child-parent relationship	1.351	0.21	0.94	1.76	0.346	6.49*
Total	Being a negative role model $\Rightarrow$ Child-parent relationship	1.627	0.21	1.22	2.04	0.417	7.80*

* $p < .01$; SE = Standard Error; CI = Confidence Interval

Table 5 Predictions of the mediating role of digital negligence through parental media mediation

Type	Effect	Coefficient	SE	CI-lower	CI-upper	β	z
Indirect	Digital negligence $\Rightarrow$ Parental media mediation $\Rightarrow$ Child-parent relationship	0.291	0.08	0.14	0.45	0.085	3.66*
Components	Digital negligence $\Rightarrow$ Parental media mediation	-2.068	0.35	-2.75	-1.39	-0.330	-5.96*
	Parental media mediation $\Rightarrow$ Child-parent relationship	-0.141	0.03	-0.20	-0.08	-0.257	-4.64*
Direct	Digital negligence $\Rightarrow$ Child-parent relationship	1.003	0.19	0.63	1.38	0.292	5.26*
Total	Digital negligence $\Rightarrow$ Child-parent relationship	1.294	0.19	0.93	1.66	0.377	6.92*

* $p < .01$; SE = Standard Error; CI = Confidence Interval

decreased, but it remained significant. This indicates that parent media mediation had a statistically significant partial mediation between being a negative role model and the child-parent relationship.

The mediation effect was calculated to account for approximately 17% of the relationship between being a negative role model and the child-parent relationship, determined by the ratio of the indirect effect ($\beta = 0.071$) to the total effect ($\beta = 0.416$). In summary, the analysis supporting the first hypothesis found that parent media mediation partially mediates the relationship between being a negative role model and the child-parent relationship. This shows that the effects of being a negative role model are reduced by the parent's media mediation behaviors, and this has a positive effect on the child-parent relationship.

Hypothesis 2- Parental Media Mediation Mediates the Parent-Child Relationship with Digital Negligence

Table 5; Fig. 2 provide results of the Parental Media Mediator role in the effect of digital negligence on the Child-Parent Relationship.

Considering the relationships between variables, the mediating role of parent media mediation in the effect of digital negligence on the child-parent relationship was examined. The analysis revealed an indirect effect with $\beta = 0.085$, $z = 3.66$ ($p < .01$). When examining the components, it was found that digital negligence negatively influenced parent media mediation ($\beta = -0.33$, $z = -5.96$, $p < .01$), and parent media mediation, in turn, had a significant negative effect on the child-parent relationship ($\beta = -0.257$,

$z = -4.64$, $p < .01$). The direct effect of digital negligence on the child-parent relationship was significant as well ($\beta = 0.292$, $z = 5.26$, $p < .01$), with a total effect of $\beta = 0.377$, $z = 6.92$ ($p < .01$). The direct effect of digital negligence on the child-parent relationship decreased when the mediation model was applied, but it remained significant. This indicates that parent media mediation serves as a statistically significant partial mediator between digital negligence and the child-parent relationship.

The mediation effect was calculated to account for approximately 22% of the relationship between digital negligence and the child-parent relationship, as determined by the ratio of the indirect effect ($\beta = 0.085$) to the total effect ($\beta = 0.377$). In summary, the analysis supporting the second hypothesis found that parent media mediation partially mediates the relationship between the digital negligence sub-dimension of digital parental awareness and the child-parent relationship. This suggests that the negative effects of digital neglect are reduced by parents' media mediation behaviors, which may mitigate the negative impact on the child-parent relationship.

Hypothesis 3- Parental Media Mediation Mediates the Parent-Child Relationship with Efficient Usage

Table 6; Fig. 3 provide results of the Parental Media Mediator role in the effect of efficient usage on the Child-Parent Relationship.

By considering the relationships between the variables, the mediating role of parental media mediation in the effect of efficient usage on the child-parent relationship was examined. The analysis revealed an indirect effect with $\beta = -0.106$,

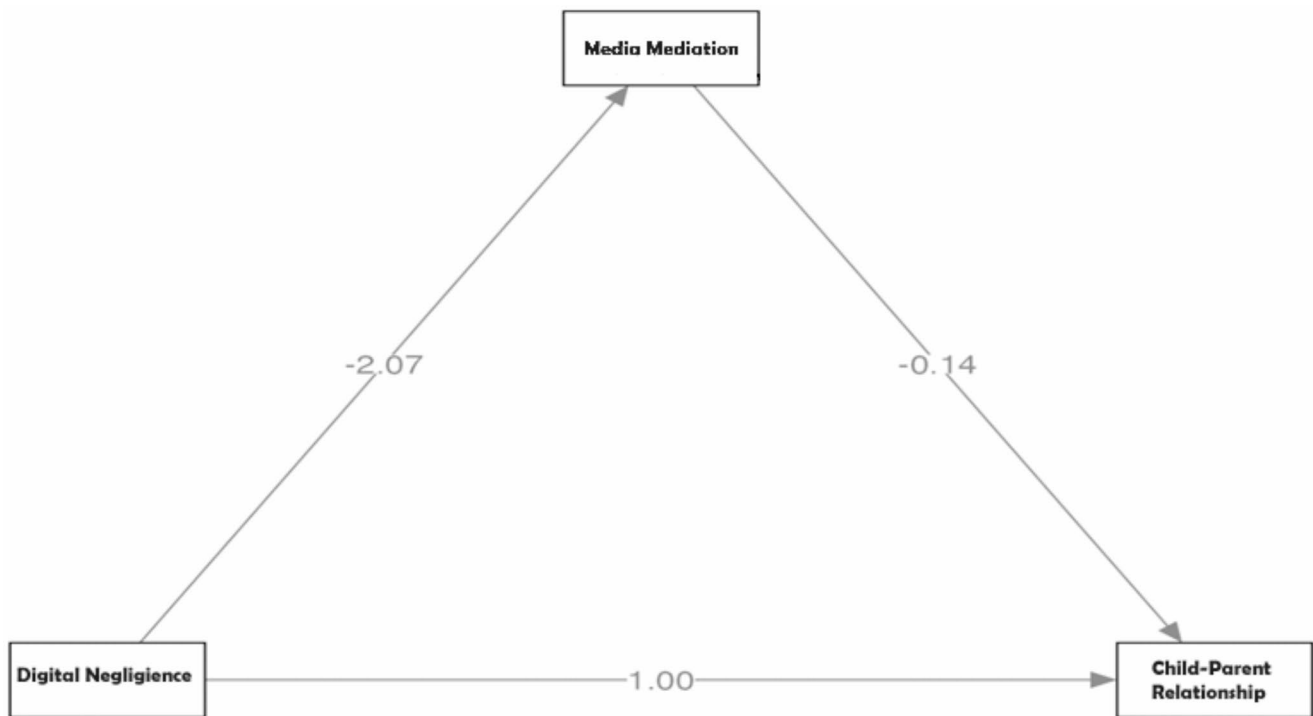


Fig. 2 The mediating role of parental media mediation in digital negligence

Table 6 Predictions of the mediating role of efficient usage through parental media mediation

Type	Effect	Coefficient	SE	CI-lower	CI-upper	β	z
Indirect	Efficient usage $\Rightarrow$ Parental media mediation $\Rightarrow$ Child-parent relationship	-0.469	0.15	-0.76	-0.18	-0.106	-3.13*
Components	Efficient usage $\Rightarrow$ Parental media mediation	4.201	0.40	3.41	4.99	0.522	10.45*
	Parental media mediation $\Rightarrow$ Child-parent relationship	-0.112	0.03	-0.18	-0.04	-0.204	-3.28*
Direct	Efficient usage $\Rightarrow$ Child-parent relationship	-1.262	0.27	-1.80	-0.73	-0.287	-4.62*
Total	Efficient usage $\Rightarrow$ Child-parent relationship	-1.731	0.24	-2.20	-1.26	-0.393	-7.28*

* $p < .01$; SE = Standard Error; CI = Confidence Interval

$z = -3.13$ ($p < .01$). When the components were analyzed, it was found that efficient usage positively influenced parental media mediation ($\beta = 0.522$, $z = 10.45$, $p < .01$), and parental media mediation had a significant negative effect on the child-parent relationship ($\beta = -0.204$, $z = -3.28$, $p < .01$). The direct effect of efficient usage use on the child-parent relationship was also significant ($\beta = -0.287$, $z = -4.62$, $p < .01$), with a total effect of $\beta = -0.393$, $z = -7.28$ ($p < .01$). When the mediation model was applied, the direct effect of efficient usage on the child-parent relationship decreased, but it remained significant. This indicates that parental media mediation serves as a statistically significant partial mediator between efficient usage and the child-parent relationship.

The mediation effect was calculated to account for approximately 26% of the relationship between efficient usage and the child-parent relationship, based on the ratio of the indirect effect ($\beta = -0.106$) to the total effect ($\beta = -0.393$). As a result of the analysis conducted to test the third hypothesis, parental media mediation was found to be a

significant factor in digital parental awareness, acting as a partial mediator between the efficient usage sub-dimension and the child-parent relationship. This suggests that as efficient usage increases, the negative impact on the child-parent relationship can be mitigated through effective parental media mediation.

Hypothesis 4- Parental Media Mediation Mediates the Parent-Child Relationship with Protection from Risks

Table 7; Fig. 4 provide results of the Parental Media Mediator role in the effect of protection from risks on the Child-Parent Relationship.

Considering the relationships between variables, the mediating role of parental media mediation in the effect of protection from risks on the child-parent relationship was examined. The analysis revealed an indirect effect with $\beta = -0.117$, $z = -3.96$ ($p < .01$). When the components were

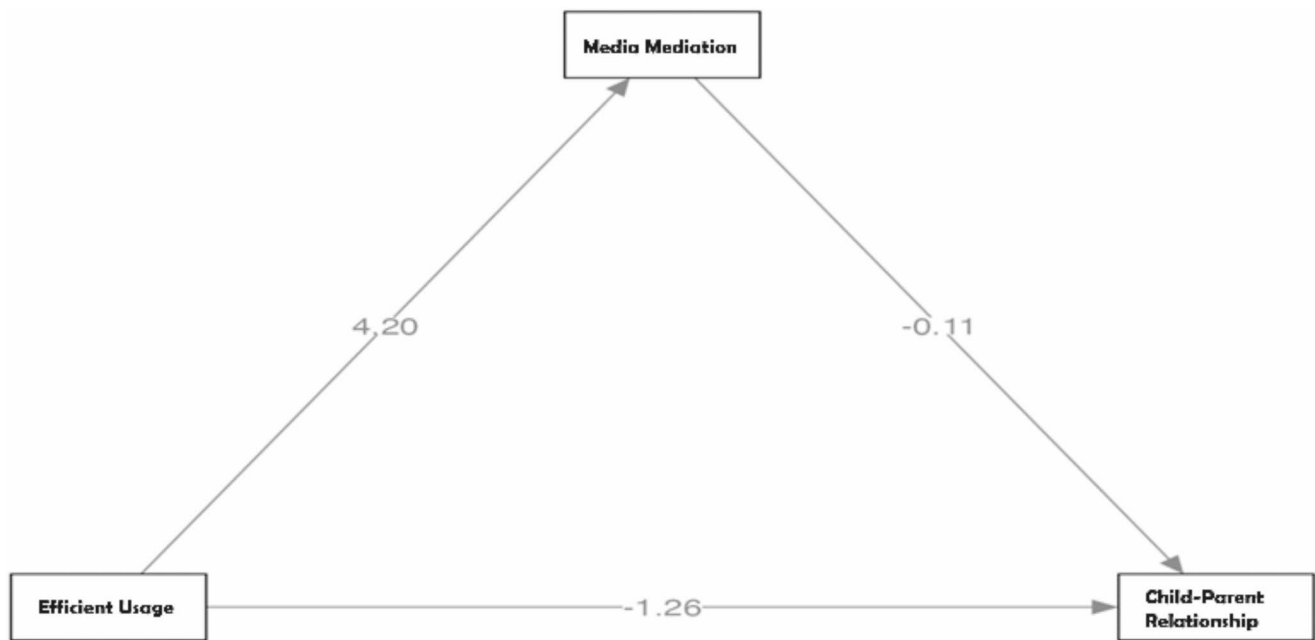


Fig. 3 The mediating role of parental media mediation in efficient usage

Table 7 Predictions of the mediating role of protection from risks through parental media mediation

Type	Effect	Coefficient	SE	CI-lower	CI-upper	β	z
Indirect	Protection from risks $\Rightarrow$ Parental media mediation $\Rightarrow$ Child-parent relationship	-0.393	0.10	-0.59	-0.20	-0.117	-3.96*
Components	Protection from risks $\Rightarrow$ Parental media mediation	2.656	0.33	2.02	3.29	0.431	8.15*
	Parental media mediation $\Rightarrow$ Child-parent relationship	-0.148	0.03	-0.21	-0.08	-0.271	-4.53*
Direct	Protection from risks $\Rightarrow$ Child-parent relationship	-0.648	0.20	-1.04	-0.25	-0.192	-3.22*
Total	Protection from risks $\Rightarrow$ Child-parent relationship	-1.042	0.19	-1.41	-0.67	-0.309	-5.53*

* $p < .01$; SE = Standard Error; CI = Confidence Interval

analyzed, it was found that protection from risks had a positive effect on parental media mediation ($\beta = 0.431$, $z = 8.15$, $p < .01$), and parental media mediation had a significant negative effect on the child-parent relationship ($\beta = -0.271$, $z = -4.53$, $p < .01$). The direct effect of protection from risks on the child-parent relationship was also significant ($\beta = -0.192$, $z = -3.22$, $p < .01$), with a total effect of $\beta = -0.309$, $z = -5.53$ ($p < .01$). When the mediation model was applied, the direct effect of protection from risks on the child-parent relationship decreased but remained significant. This indicates that parental media mediation serves as a statistically significant partial mediator between protection from risks and the child-parent relationship.

The mediation effect was calculated to account for approximately 37% of the relationship between protection from risks and the child-parent relationship, based on the ratio of the indirect effect ($\beta = -0.117$) to the total effect ($\beta = -0.309$). As a result of the analysis conducted to test the fourth hypothesis, parental media mediation was found to be a partial mediator between the protection from risks sub-dimension of digital parental awareness and the child-parent

relationship. This suggests that as protection from risks increases, the negative impact on the child-parent relationship can be mitigated through effective parental media mediation.

Conclusion, Discussion, and Implications

This cross-sectional survey study aimed to test four hypotheses to explore the role of parental media mediation in digital parental awareness and parent-child relationships among parents of kindergarteners. The results supporting the first hypothesis indicated that parental media mediation plays a mediating role in the relationship between parents being a negative role models and the quality of the child-parent relationship. Specifically, parents' negative exemplary behaviors can influence family dynamics through the media mediation strategies they employ. When parents lack sufficient knowledge about digital parenting, they may resort to restrictive behaviors that negatively impact their relationship with their children (Kaşıkçı et al., 2014). Furthermore,

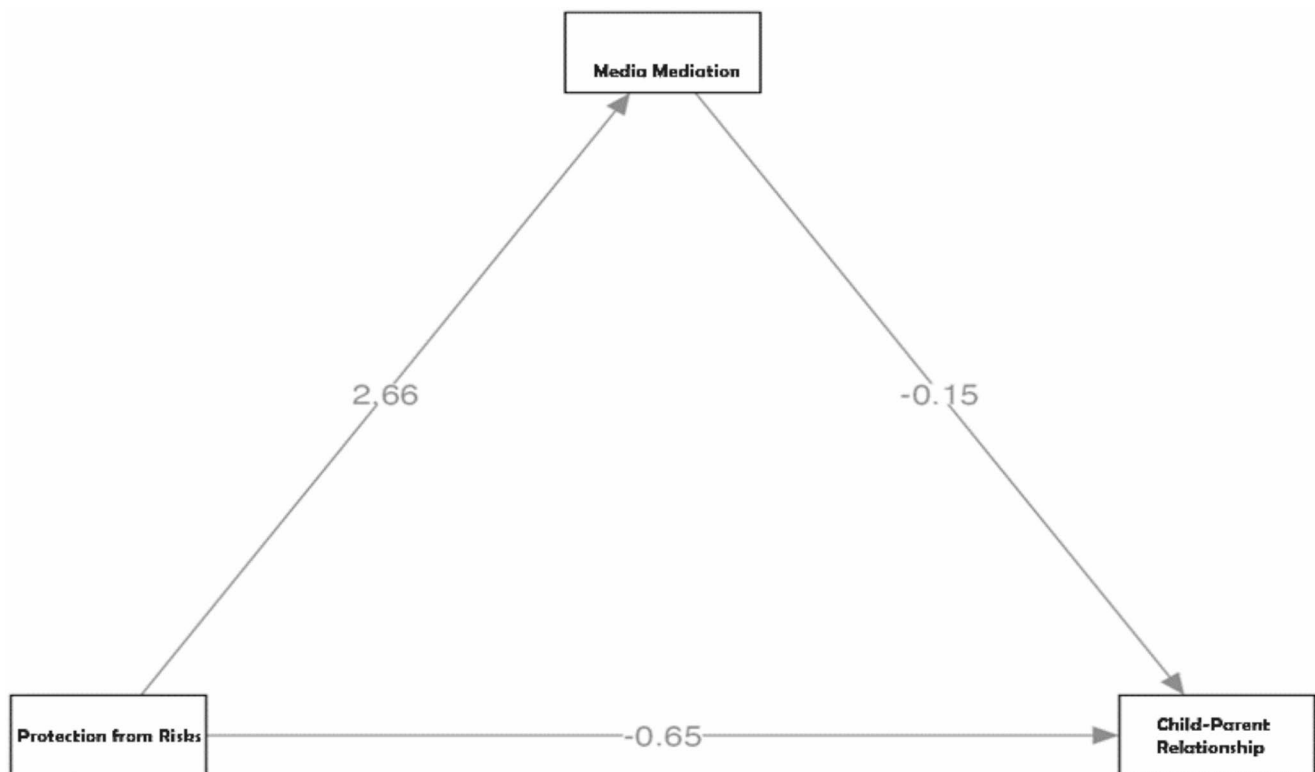


Fig. 4 The mediating role of parental media mediation in protection from risks

restrictive and active mediation strategies lower the screen time of children and the problematic media use, according to the systematic review and meta-analysis study conducted by Fam et al. (2023). To counteract this, parents should actively guide their children in becoming responsible internet users and steer them toward developmentally appropriate content. By doing so, they can adopt an active supporting role, avoiding potential conflicts that may arise from restrictive mediation practices (Gözüm & Kandır, 2020; Turgut & Aslan, 2016; Zehir et al., 2019). However, children increasingly spend more time with digital content over real-life and social interactions, and parents often resort to restrictive mediation out of concern for their child's well-being (Benedetto & Ingrassia, 2021; Livingstone & Helsper, 2008).

The second hypothesis demonstrated that parental media mediation plays a crucial role in moderating the connection between parents' digital negligence and the child-parent relationship. This finding suggests that the negative impacts of digital negligence on the child-parent relationship can be mitigated when parental media mediation strategies are effectively employed. Ayas and Horzum (2013) identified a negative relationship between parental media mediation and digital parenting behaviors, specifically in digital negligence and negative modeling. This suggests that as parents become less attentive or model negative behaviors in their digital interactions, their ability to mediate their children's

media use diminishes. Paus-Hasenbrink et al. (2013) further emphasized the importance of parental influence, finding significant positive relationships between children's digital content use and the quality of parental relationships, as well as between parents' digital behaviors and their mediation strategies. In the context of children's media use, Bağcı (2021) noted that children with tolerant or neglectful parents tend to have higher levels of media use, whereas children with authoritarian parents typically exhibit lower levels. This aligns with the nature of parental guidance significantly impacts children's interaction with digital media. Additionally, Coyne et al. (2017) highlighted the potential negative consequences of parents' excessive use of digital materials, which can strain parent-child relationships.

The third hypothesis revealed that parental media mediation plays a mediating role in the relationship between the efficient usage of technology by parents and the child-parent relationship. This suggests that when parents effectively use digital tools, it positively influences the parent-child relationship through the mediation strategies they use. Efficient usage of technology by parents can enhance communication and interaction with their children, promoting a healthier and more supportive relationship, especially when mediated through thoughtful media strategies. While passive screen time is negatively related to the executive function of preschool children, active screen time is positively associated

with executive function (Altun, 2022). Chaudron and Beutel (2015) conducted a study that highlighted the significant influence of parents' attitudes toward digital devices on their children's attitudes and usage habits regarding digital content and devices. Also, Wang et al.'s (2023) meta-analysis study result indicates that parents with negative attitudes towards media is the main predictor of the restrictive mediation behaviours, meanwhile, active mediation was heavily influenced by parents' involvement actions in the use of media with children. This suggests that different media mediation strategies can be predictive in explaining how parents mediate their children's digital engagement effectively. Hwang et al. (2017) further emphasized that higher parental self-efficacy, including communication skills, correlates with an increase in positive mediation behaviors and a healthier parent-child relationship. Conversely, parents who exert lower levels of control over their children, such as those with permissive or neglectful parenting styles, are more likely to have children exposed to high levels of screen time (Bentley et al., 2016; Coyne et al., 2017; Nikken & Schols, 2015). On the other hand, supportive parents who exert higher levels of control, often seen in authoritarian parenting styles, tend to use active and restrictive mediation strategies more frequently (Clark, 2011; Coyne et al., 2017). This body of research underscores the critical role that parental attitudes and mediation strategies play in shaping children's digital behaviors and the parent-child relationship.

The final hypothesis results demonstrated that parental media mediation is a significant mediator between parents' protection from internet risks for their children and the parent-child relationship. These findings indicate that parents' protective behaviors when combined with media mediation strategies, improve interactions between mothers, fathers, and their children. Studies by Ata-Aktürk and Akman (2024) and Yıldırım (2021) show that this restrictive parental role involves strictly limiting media exposure. Research by Chen and Shi (2019) and Rodideal (2020) supports the effectiveness of restrictive mediation in reducing children's screen time, while active mediation and joint use of media with children are more effective in mitigating media risks and promoting educational benefits. However, excessively restrictive or permissive mediation strategies may have adverse effects. Shin and Li (2017) and Rodideal (2020) found that such extremes could increase the risk of digital addiction among children. Conversely, studies by Collier et al. (2016), Lissak (2018), and Şen et al. (2020) indicate that active media mediation by parents can help mitigate problem behaviors associated with excessive screen time. Despite the intention to protect, overly authoritarian restrictions on digital media use can lead to conflicts within the family, as noted by Van Petegem et al. (2019). These

findings highlight the importance of balanced and active parental media mediation strategies in managing children's digital media use effectively.

Given these findings, it is crucial for parents to regulate their digital behaviors and actively guide their children in the appropriate use of digital media. This includes imparting essential self-protection and self-control skills for navigating the digital world. Through regular engagement, parents may greatly enhance their children's digital activities, moreover, these interactions get better at comprehending and managing their emotions during the activities (Konca & Tantekin Erden, 2021; Türen & Bağçeli Kahraman, 2024). It is also strongly recommended by Reich et al. (2025) to parents educate their children about media use and become a positive role model in this context; furthermore, not only focusing on screen time but also on how to interact and what to do with digital devices. To effectively support their children in acquiring these skills, parents must be well-informed about the digital environment, exhibit age-appropriate behaviors, and maintain strong communication with their children. Additionally, parents should adjust their media mediation strategies to align with their children's emotional needs and social development.

Furthermore, some practical recommendations are provided to teachers, school counselors, school principals, parents and more, based on the findings of this study. We believe that these recommendations aim to empower parents with the knowledge and skills needed to foster healthy digital environments for their children, promoting safety, learning, and balanced technology use:

1. Parents should receive training to guide their children in developing essential skills such as digital literacy, and information literacy. These skills are crucial for children to navigate and utilize technology responsibly.
2. Schools can implement programs that provide guidance for parents and children on digital parenting practices. These initiatives can include workshops, resources, and counseling sessions to help parents better understand and manage their children's digital behaviors.
3. Comprehensive training for parents on conflict resolution strategies in digital parenting can provide valuable tools for handling disagreements related to children's digital device usage.
4. Parents should test and familiarize themselves with devices, applications, and programs before allowing their children to use them. This practice ensures parents can assess the suitability and safety of digital tools for their children.
5. Parents should be trained to support their children's digital communication development in ways that align with

their developmental stages. For working parents, these trainings can be offered as part of workplace programs.

6. Digital parenting training programs should be tailored to suit parents' educational backgrounds. This personalized approach ensures accessibility and effectiveness for diverse groups.
7. Civil society organizations and educational institutions can offer accessible guidance services to parents on media mediation, parent-child relationships, and digital parenting. Easy access to these services is vital for promoting effective support.

Parental media mediation involves a set of behaviors that parents develop to monitor, guide, and regulate their children's digital media use, ensuring that the media content is appropriate, and that usage duration is controlled (Banić & Orehovački, 2024; Nevski & Siibak, 2016). These roles are influenced by various factors originating from mothers, fathers, and children (Anderson, 2016; Clark, 2011; Nikken & Schols, 2015; Shin & Li, 2017). Given this complexity, future studies should explore parental mediation strategies that address digital negligence and negative role modeling while also supporting the effective use of technology and protecting children from the risks of the digital environment. Experimental and factorial design studies would be particularly valuable in this context.

Limitations and Future Research Directions

This study contributes to the digital childhood and parenthood literature by proposing different statistical media mediation models. However, it also has some limitations that need to be addressed in future research. First, a convenience sampling strategy was employed. While this was deemed the best choice for our aim—allowing researchers to collect data from parents who voluntarily participated, were easily accessible, and within the constraints of time and paper-based data collection—it limited the sample to ten independent kindergartens. This limited sample size may affect the generalizability of the study. Nevertheless, a G-Power analysis with a 5% error margin and a 95% confidence interval suggested a minimum of 276 participants, which was surpassed in our dataset. Additionally, extreme and missing values were excluded to mitigate potential biases in the sample. For future studies, we recommend using online tools such as Google Forms or LimeSurvey and employing more systematic sampling strategies, such as stratified or cluster sampling.

Second, the survey relied on self-reported data, which might introduce uncertainties stemming from individual cognitive processes (Bound et al., 2001). To enhance the

validity and reliability of future research, combining self-reported surveys with additional instruments such as observational rubrics or interviews are advised. Thirdly, data were collected from a single city in Türkiye due to the convenience sampling strategy. This geographic limitation may reduce the generalizability of the findings. Future studies should consider including cultural variables to explore potential differences or similarities in parents' attitudes and behaviors in digital home contexts across different groups. This multi-faceted approach could lead to more robust and comprehensive insights into media mediation models in the digital childhood and parenthood literature.

In conclusion, while this study offers significant contributions by modeling parental media mediation processes within digital parenting contexts, its limitations highlight the need for careful methodological planning in future research. Addressing sampling constraints, diversifying data collection methods, and incorporating cultural comparisons can provide a more nuanced understanding of parental media mediation and its impact on digital childhood experiences. These steps will help strengthen the generalizability and practical application of findings in broader contexts.

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Data Availability The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics Approval The ethics committee approval was obtained from the ethics committee of İstanbul Kültür University.

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