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Parental attitudes and screen time in early primary school children: The role of digital prevention[1]

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Abstract: In the context of the increasing digitalization of society, the ways in which early primary school children spend their time are undergoing significant transformation, necessitating a thorough analysis of its consequences. Parents play a crucial role in this process by mediating their children's interactions with digital technologies, which has a substantial impact on their cognitive, emotional, and social development. This article presents a detailed examination of how various parenting practices, including screen time monitoring, shape children's engagement with digital media. The aim of this study was to explore the relationship between parental attitudes and children's screen exposure time, as well as the identification of preventive measures most frequently undertaken by parents. The study involved 173 participants aged 29 to 44 years (M = 36.56; SD = 3.16; Me = 37), including 127 mothers and 46 fathers of children aged 7 to 10 years from Podkarpackie Voivodeship in Poland. The research employed the *Parental Attitudes Scale* (Skala Postaw Rodzicielskich, SPR) by Mieczysław Plopa (2008) and a self-constructed questionnaire aimed at collecting data on the number and type of preventive actions taken by parents in the context of screen education and children's screen time. The findings indicate that fathers' autonomous attitudes are negatively correlated with children's screen time – less autonomy granted by fathers is associated with longer screen exposure. Furthermore, the number of preventive actions taken by mothers is negatively correlated with overprotective and inconsistent parental attitudes, suggesting that more protective and inconsistent mothers engage in preventive measures less frequently. Conversely, among fathers, an accepting attitude and support for the child's autonomy (an autonomous attitude) are linked to greater involvement in preventive actions. The qualitative analysis of parental responses suggested that their efforts focus primarily on controlling screen time, highlighting the need for further education and support in digital mediation. The study's conclusions emphasize the importance of parental mediation, media literacy education, and the implementation of effective preventive strategies to minimize digital risks.
Keywords: digital prevention, media literacy education, parental attitudes, parental mediation, screen time

Introduction

The continued digitalization of contemporary society is profoundly altering the patterns of time use among early school-aged children, particularly in relation to their engagement in daily activities. This transformation calls for a comprehensive, multidimensional analysis of its implications across the domains of developmental psychology, pedagogy, sociology, and neuroscience. Recent research underscores the long-term consequences of children's interactions with digital technologies, encompassing both the development of cognitive abilities and the acquisition of social and emotional competencies. Emerging evidence further highlights the importance of individual differences – including child temperament, family dynamics, and parental mediation strategies – in shaping patterns of digital media engagement. Parental concerns predominantly centre around the amount of time children spend on screen-based activities (Canadian Paediatric Society, 2019; Christakis, Hale, 2025; Globokar, 2018; Hassinger-Das, Brennan, Dore, Golinkoff, Hirsh-Pasek, 2020; Kardefelt-Winther, 2017). A significant number of parents attempt to regulate their children's screen time and voice

1 Article in Polish language: https://stowarzyszeniefidesetratio.pl/fer/62P_dank.pdf

concerns about potential negative consequences, especially with regard to ocular health (Internet Matters, 2018; Ofcom, 2023).

However, a growing body of research emphasizes that parental mediation – defined as "any strategy parents use to control, supervise or interpret media content for children" (Warren, 2001, p. 212) – should extend beyond time restrictions alone. There is growing recognition that the quality of children's interactions with digital media, alongside the proactive involvement of parents as guides and facilitators, constitutes a crucial influence on children's digital experiences. Several studies question the efficacy of strict screen time restrictions, advocating instead for a more nuanced, context-sensitive approach that emphasizes access to developmentally appropriate educational content and encourages shared media engagement between parents and children (Przybylski, Weinstein, 2017). The establishment of explicit household guidelines for media use – such as setting daily screen time limits, implementing device-free routines prior to bedtime, and monitoring media content – continues to represent a key element of effective parental mediation (Uhls, 2016). However, evidence suggests that optimal outcomes are achieved when parents take an active role in their children's digital experiences, co-using devices and providing guidance within the media landscape (Canadian Paediatric Society, 2019; Pyżalski, Klichowski, Przybyła, 2014). Modelling healthy technology use and fostering self-regulation and media literacy in children have therefore become central aims of contemporary digital parenting practices (Clark, 2011; Valcke, Bonte, De Wever, Rots, 2010). Equally vital is the development of parental awareness concerning the influence of digital media on everyday life, alongside a sustained commitment to continuous learning within this rapidly evolving landscape (Bębas, Jędrzejko, Kasprzak, Szwedzik, Taper, 2017). Moreover, researchers emphasize the importance of promoting a balanced engagement between screen-based activities and face-to-face social interactions, the latter being essential for fostering healthy social-emotional development (Uhls, 2016).

In recent years, there has been a growing scholarly focus on *co-use mediation* – a form of parental involvement defined by active engagement in children's digital activities. In this approach, parents assist children in interpreting media content and foster the development of critical thinking and reflective skills (Livingstone, Third, 2017; Sanders, Parent, Forehand, Sullivan, Jones, 2016). In the context of the growing prevalence of remote learning and the widespread availability of screen-based technologies, the development of integrative strategies that combine educational and preventive dimensions of digital parenting has become a pressing imperative (Livingstone, Blum-Ross, 2020).

1. The role of parents in shaping children's screen media habits

The existing body of literature consistently highlights parents as central agents in shaping and mediating children's interactions with digital technologies. By setting clear usage guidelines and actively engaging with digital technologies alongside their children, parents can significantly influence various dimensions of children's development, including cognitive, emotional, and social domains (Ofcom, 2023). Media psychology research distinguishes among several regulatory strategies employed by parents, including a restrictive model (limiting access to digital technologies via time limits and content filtering), a monitoring model (tracking children's online activities and reviewing browsing histories), and an educational model (discussing online risks and teaching safe and responsible Internet use) (Uhls, 2016). Parental influence on children's technology use encompasses not only screen time management but also the quality of media content and the nature of children's media interactions (Canadian Paediatric Society, 2019). Scholars emphasize that parental attention should extend beyond the mere duration of media exposure to include the types of content engaged with and the cognitive and emotional processes involved in interpreting such content (Przybylski, Weinstein, 2017).

Recent studies further underscore the importance of dynamic parental involvement in children's use of digital technologies, highlighting the value of modelling balanced screen-use behaviours and fostering positive digital habits (Saltuk, Erciyes, 2020). An in-

creasing body of research advocates for interactive mediation strategies, wherein parents assume the role of co-participants in their children's digital experiences, rather than functioning solely as gatekeepers regulating media access. In this context, cultivating children's critical thinking skills and promoting intentional and responsible technology use are identified as core objectives of contemporary media education (Clark, 2011; Livingstone, Third, 2017; Sanders i in., 2016; Valcke i in., 2010). This issue assumes particular significance in light of shifting family dynamics and the growing role of remote education, which necessitates the expanded use of screen-based devices in instructional contexts (Livingstone, Blum-Ross, 2020). Accordingly, parental mediation should be understood not solely as a means of shielding children from digital risks, but as a proactive strategy aimed at fostering children's developmental competencies and enhancing their adaptive capacities within an increasingly digitalized environment.

1.1. Parental attitudes and digital mediation strategies

Empirical research highlights substantial variation in parental digital mediation strategies, shaped by factors such as parental educational attainment, socioeconomic status, and access to educational resources. Cultural context and prevailing social norms regarding acceptable levels of children's digital media use also play a significant role (Haddon, Vincent, 2015). Studies indicate that in highly technologized societies, children encounter digital media at an earlier age and exercise greater autonomy in their use, as parents in these contexts often prioritize the development of their children's digital competencies. By contrast, in developing countries – where access to technology, parental digital literacy, and digital competencies are often limited – and within more traditional cultural contexts, restrictive and controlling forms of digital mediation continue to predominate (Livingstone et al., 2017). Comparable patterns were observed by Nikken and Opree (2018), who investigated variations in parental mediation strategies as a function of socioeconomic status. Their findings suggest that parents from higher socioeconomic backgrounds are more inclined to encourage children's autonomy and the development of digital competencies, while those from lower socioeconomic strata tend to adopt more controlling strategies.

Mróz and Solecki (2017) investigated the relationship between parental attitudes and adolescents' engagement in entertainment-related, risky, and social online activities. Their analysis revealed that lower levels of autonomy granted by parents and greater parental control were associated with higher frequencies of entertainment-oriented Internet use among adolescents. Moreover, maternal control was found to be positively associated with adolescents' involvement in risky online behaviour (e.g. online gambling), as well as with their participation in social activities such as the use of social networking platforms and content commenting. Notably, parental control by both parents was linked to higher scores on Internet addiction measures.

Further evidence comes from Hsieh et al. (2018), who explored multidimensional parenting practices and their association with problematic media use. The authors observed significant correlations between certain parenting practices and Internet addiction in children. Specifically, parental excessive control – characterized by excessive supervision and restrictions on Internet use – was positively associated with higher levels of online addiction. These findings suggest that increased parental control may paradoxically elevate the risk of Internet overuse, undermining its intended protective function. The authors propose that stringent restrictions and heightened surveillance may foster frustration and oppositional behaviour in children, potentially driving them toward escapism within virtual environment.

Van den Eijnden, Spijkerman, Vermulst, van Rooij, and Engels (2010) also examined bidirectional parent-child relationships in the context of compulsive Internet use among adolescents. Their findings highlight the critical role of family dynamics in shaping the emergence and progression of problematic online behaviours. Specifically, negative parent-child relationships – characterized by limited parental support and heightened levels of control – were associated with increased tendencies toward compulsive media use. Conversely, high levels of

Internet use were found to contribute to deteriorating parent-child relationships, creating a reinforcing negative cycle. These results underscore the significance of parental involvement as a key factor in both the prevention and remediation of problematic screen media use during adolescence. Moreover, the authors advocate for prevention programmes that explicitly address family relationship dynamics, emphasizing the promotion of positive parenting styles marked by warmth, support, and understanding, alongside clearly defined boundaries – rather than excessive control. Accordingly, family relationships and parenting style are frequently cited in psychological research as influential factors shaping children's and adolescents' online behaviours.

1.2. The role of parental digital prevention

In an era characterized by the pervasive availability of digital media to children, the parental role in cultivating healthy technology use habits has gained heightened significance. Parental digital prevention encompasses a range of strategies aimed not only to safeguard children from online risks, but also to facilitate the development of their digital competencies. Research indicates that effective interventions in this domain should integrate elements of educational mediation, parental control, and joint participation in screen-based activities (Livingstone, Blum-Ross, 2020).

A substantial body of research on parental mediation – understood as the diverse strategies parents employ to regulate their children's digital media use – investigates how specific approaches, such as restrictive measures, co-viewing, and content-related discussions, impact children's screen time and exposure to associated risks. Numerous studies have demonstrated a relationship between children's screen time and the preventive actions undertaken by parents. For instance, Livingstone (2009) found that prolonged use of screen devices by young children under parental supervision may lead to a decreased parental awareness of potential online risks, as media use becomes normalized within the context of constant monitoring. Conversely, heightened parental perception of online risks tends to be associated with an increase in preventive interventions. Similarly, Valkenburg, Piotrowski, Hermanns, and de Leeuw (2013) demonstrated that parents who adopt restrictive mediation practices – actively limiting media access and exercising parental control – exhibit greater awareness of potential risks associated with their children's media use. In a related study, Beyens, Valkenburg, and Piotrowski (2019) examined the developmental trajectory of parental mediation strategies, analysing how these approaches change across early and middle childhood. Their findings suggest that parents who rely more frequently on restrictive or controlling mediation strategies tend to perceive a higher level of potential risks related to children's media use.

Addressing the impact of screen devices on children in early childhood necessitates a multidimensional approach that integrates psychological, social, and educational perspectives. Of particular concern is the growing body of research on the neurobiological effects of intensive early exposure to digital technology, which points to potential alterations in the functioning of the brain's reward systems and mechanisms underlying emotion regulation (Neumann, 2015). Within the context of research on brain neuroplasticity, scholars also emphasize that excessive exposure to audiovisual stimuli may contribute to impairments in attentional regulation, emotional processing, and a diminished capacity for deep information processing (Kardaras, 2018). In this regard, parents' approaches and their ability to consciously manage children's screen time represent key protective factors against the negative consequences of early and prolonged technology use. Particularly harmful effects of excessive screen use may become evident when combined with other factors, such as parental attitudes, the nature of consumed media content, parental modelling of screen-related behaviours, and specific characteristics of both parents and children (Konca, 2022).

Given the rapid pace of technological advancement and the increasing centrality of digital media in children's lives, continued research is imperative to deepen our understanding of how parental strategies shape children's media engagement. It is particularly important to identify which parental attitudes foster the implementation of effective preventive and educational practices, and how these practices impact

children's long-term development. A major challenge in digital prevention lies in striking an appropriate balance between setting boundaries and fostering children's autonomy in their use of screen devices. Excessive parental control may elicit psychological reactance and inadvertently enhance the attractiveness of prohibited content, while the lack of clearly defined guidelines increases the likelihood of unregulated exposure to potentially harmful content (Hsieh et al., 2018). Consequently, it is essential to develop strategies that are tailored to both the child's developmental stage and individual needs, combining protective elements with an educational approach to technology use.

2. Methods

The issues discussed above served as inspiration for conducting the research presented in this article. The aim of the study was to analyse the relationships between parental attitudes and both the amount of children's exposure to screen technologies and the number and types of preventive actions undertaken by parents with regard to children's use of screen devices in early school age. The implementation of preventive strategies aimed at mitigating digital risks plays a crucial role in supporting children's cognitive, social, and emotional development from a long-term perspective. In addition, an important aspect of the study was to identify which preventive measures are most commonly employed by parents. Accordingly, the research aimed to gain a deeper understanding of the relationship between parental attitudes and their actual practices in guiding children's screen-related experiences. This study represents an effort to advance knowledge on children's exposure to digital technologies, with particular attention to familial mediation processes and their influence on the development of children's digital competencies.

In the context of the research problem outlined above, one hypothesis and two research questions were formulated:

- Hypothesis: The amount of time a child spends using screen devices is related to the type of parental attitude.

Previous research (Mróz, Solecki, 2017) suggests that a controlling attitude exhibited by both parents is associated with higher scores on Internet addiction tests among children. On the basis of these findings, it may be hypothesized that autonomy-supportive parenting is associated with variations in the duration of children's screen time. More specifically, a reduced degree of autonomy afforded to children appears to be linked with longer periods of screen engagement. Support for this hypothesis can also be found in the studies of van den Eijnden et al. (2010) and Hsieh et al. (2018), which demonstrated that a controlling parenting style is associated with increased screen time in children.

The implementation of preventive actions concerning children's screen use is widely recognized by researchers as an important task for contemporary parents. Many studies have explored the role, primary goals, and target groups of such preventive actions (Livingstone, 2009; Valkenburg et al., 2013; Beyens et al., 2019). However, the literature includes relatively few studies examining the relationship between parental attitudes and the number of preventive actions undertaken by parents to protect children from harmful screen use. Therefore, the study formulated the following research question:

- Research Question 1. Is the number of preventive actions regarding children's use of screen devices related to the type of parental attitude?

To further explore the phenomenon under investigation, a supplementary question was posed:

- Research Question 2. Which preventive actions concerning children's use of screen devices are most frequently undertaken by parents?

Two research tools were employed in the present study:

1. *The Parental Attitudes Scale* (Skala Postaw Rodzicielskich, SPR) by Mieczysław Plopa (2008) consists of 50 statements to which parents respond using a five-point Likert scale. The author of the questionnaire identified six types of parental attitudes. The positive (adaptive) attitudes

include *accepting* and *autonomous*, while the negative (maladaptive) attitudes comprise *rejecting*, *overprotective*, *overdemanding*, and *inconsistent*. The tool demonstrates high reliability indices for both the mother and father versions (Cronbach's α ranging from 0.75 to 0.88). Its theoretical validity has been supported by factor analysis and demonstrated through significant correlations with other established measurement instruments.

2. A self-constructed questionnaire comprising both closed- and open-ended questions, designed to gather information about the number and types of preventive actions undertaken by parents regarding screen-related education, as well as the amount of time their children spend using screen devices on weekdays and weekends. According to the theoretical definition of attitudes, although individuals may express various beliefs, their actual attitude is reflected in behaviour – that is, in the behavioural component. For this reason, the study incorporated two objective indicators for assessing opportunities and risks related to children's use of screen devices: the amount of time children spend in front of screens, and the preventive actions implemented by parents.

3. Characteristics of participants

The study was conducted between September 2022 and March 2023. In the initial phase, data were collected using paper-based questionnaires distributed during parent meetings at small schools in the Podkarpackie Voivodeship. Given the relatively small sample size obtained through this method and the gender imbalance among participants – attributable to the predominance of mothers attending such meetings – the subsequent phase of data collection involved distributing an online version of the questionnaire. The online survey was distributed via school principals from four primary schools in the Podkarpackie region, who shared the questionnaire with parents of children in grades 1-3 using the school's electronic communication system. The study sample comprised parents (127 mothers and 46 fathers) of children aged 7 to 10 years. A total of 173 individuals completed the questionnaire, with participant ages ranging from 29 to 44 years (M = 36.56; SD = 3.16; Me = 37). The youngest mother was 29 years old, and the oldest was 44 years old (M = 36.08; SD = 3.26; Me = 36). Among the fathers, the youngest was 33 years old and the oldest 44 years old (M = 37.91; SD = 2.46; Me = 37.5). The children of the participating parents were enrolled in either a pre-primary class ("grade 0"; children with deferred compulsory schooling – 1% of the sample) or in primary grades 1-3 (grade 1 – 31% of the sample, grade 2 – 39%, grade 3 – 29%).

4. Results

The statistical analysis was conducted using the IBM SPSS software package. Descriptive statistics, the Shapiro-Wilk test, and Spearman's rank-order correlation analysis (*rho*) were performed. A significance level of $\alpha = 0.05$ was adopted; however, probability values in the range of $0.05 < p < 0.1$ were interpreted as indicative of a statistical trend.

In the first step, basic descriptive statistics were calculated for the quantitative variables under study, along with the Shapiro-Wilk test to assess the normality of their distributions (see Table 1). For most of the variables analysed, the Shapiro-Wilk test yielded non-significant results, indicating that the distribution of these variables did not significantly deviate from normality. For variables where the test result was statistically significant, additional verification of the skewness values was performed. If the skewness value fell within the range of +/-2, the distribution was considered not substantially asymmetric relative to the mean. The skewness values for most variables fell within this acceptable range. However, due to violations of normality assumptions (most notably the elevated kurtosis value of 24.91 for the maternal acceptance–rejection scale) it was deemed appropriate to employ non-parametric statistical analyses.

To verify Hypothesis H, separate Spearman's *rho* rank correlation analyses were conducted for mothers and fathers to examine the relationship between parental attitudes and the number of hours their child spent using screen devices on weekdays and weekends. For mothers, the analysis results re-

Table 1. Descriptive statistics for mother and father attitudes (*N* = 173)

Parental attitudes	*M*	*Me*	*SD*	*Sk.*	*Kurt.*	*Min.*	*Maks.*	*S-W*	*p*
Mother's accepting –rejecting attitude	45.72	47.00	4.60	-3.75	24.91	11.00	50.00	0.85	0.001
Mother's autonomous attitude	34.94	35.00	3.74	-0.94	2.48	18.00	43.00	0.98	0.603
Mother's overprotective attitude	25.49	24.00	8.62	0.49	-0.34	10.00	48.00	0.95	0.050
Mother's overdemanding attitude	26.08	25.00	8.01	0.18	-0.76	11.00	45.00	0.98	0.622
Mother's inconsistent attitude	21.24	19.00	9.00	0.87	0.02	10.00	47.00	0.89	0.000
Father's accepting –rejecting attitude	42.04	42.00	4.59	-0.45	-0.10	31.00	50.00	0.97	0.275
Father's autonomous attitude	37.43	38.00	3.31	0.44	0.14	31.00	46.00	0.97	0.307
Father's overprotective attitude	23.98	23.00	7.09	0.22	-0.74	11.00	40.00	0.97	0.279
Father's overdemanding attitude	30.26	31.00	7.18	0.00	0.39	15.00	49.00	0.97	0.353
Father's inconsistent attitude	25.41	25.00	8.64	0.06	-0.46	11.00	46.00	0.97	0.222

M – mean; *Me* – median; *SD* – standard deviation; *Skew*. – skewness; *Kurt.* – kurtosis; *Min* and *Max* – minimum and maximum value of the distribution; *S-W* – Shapiro-Wilk test result; *p* – significance level

vealed no statistically significant correlations. These findings indicate that maternal parental attitudes are not significantly associated with the number of hours children spend using screen devices on either weekdays or weekends. Accordingly, Hypothesis H was not supported in the case of mothers (see Table 2).

In the subsequent phase of the analysis, the relationship between the number of hours children spend using screen devices and paternal parental attitudes was examined. The results showed that the number of hours the child spends on screen devices during the week is significantly correlated with the father's autonomous attitude. This correlation is negative and moderately weak (r = -0.292). No statistically significant correlations were found for the remaining variables. In summary, the results suggest that lower levels of autonomy granted by fathers are associated with increased screen time among children on weekdays (see Table 3), thereby providing support for Hypothesis H regarding fathers' attitudes.

The next step was to examine the relationship between fathers' parental attitudes and the number of hours children spend using screens on weekends. The results revealed that the number of hours the child spends on screen devices during the weekend is significantly correlated with the father's autonomous attitude. This correlation is negative and moderate (r = -0.320). No statistically significant correlations were found for the remaining variables. In summary, the results indicate that the less autonomy a child is granted by the father, the more time the child spends using screen devices on weekends (see Table 3), which supports the proposed Hypothesis H with regard to fathers' attitudes.

In the next step, Research Question *Q1* was addressed. To this end, a Spearman's rank correlation analysis was conducted to examine the relationship between parental attitudes and the number of preventive measures undertaken with regard to children's use of screen devices. The results indicated that the number of preventive actions taken by fathers was positively correlated with the scales of acceptance and autonomy. Both correlations reached statistical significance: the association with the accepting attitude was weak (r = 0.294), while the correlation with the autonomous attitude was moderate in strength (r = 0.489). No statistically significant correlations were found for the remaining variables (see Table 4). For mothers, the number of preventive actions correlated negatively and significantly with the overprotection scale (r = -0.237), and the inconsistency scale (r = -0.304). Both correlations were weak. No statistically significant correlations were found for the remaining variables (see Table 4).

To answer the Research Question *Q2*, both quantitative and qualitative analyses were conducted on the responses obtained from the survey questionnaire. The results are presented in Table 5.

Table 2. Relationship between the mother's parental attitude and the number of hours the child spends using screen devices on weekdays and weekends (*N* = 127, Spearman's *rho)*

Mother's parental attitude	Number of hours the child spends using screen devices	
	on weekdays	on weekends
Accepting – rejecting attitude	-0.018	-0.060
Autonomous attitude	0.094	0.092
Overprotective attitude	0.008	-0.038
Overdemanding attitude	0.072	0.133
Inconsistent attitude	0.135	0.149

Table 3. Relationship between the father's parental attitude and the number of hours the child spends using screen devices on weekdays and weekends (*N* = 46, Spearman's *rho)*

Father's parental attitude	Number of hours the child spends using screen devices	
	on weekdays	on weekends
Accepting – rejecting attitude	0.016	0.111
Autonomous attitude	-0.292*	-0.320*
Overprotective attitude	0.095	0.057
Overdemanding attitude	0.063	0.017
Inconsistent attitude	-0.008	0.048

Table 4. Relationship between parental attitudes and the number of preventive actions taken by parents regarding children's use of screen devices (*N* = 173, Spearman's *rho)*

Parental attitude	Number of preventive actions taken by	
	mothers (*n* = 127)	fathers (*n* = 46)
Accepting – rejecting attitude	0.161	0.294*
Autonomous attitude	0.075	0.489*
Overprotective attitude	-0.237*	-0.097
Overdemanding attitude	-0.189	0.190
Inconsistent attitude	-0.304*	0.125

Table 5. Preventive actions taken by parents regarding children's use of screen devices (*N* = 173)

Preventive actions	Mothers (*n* = 127)	Fathers (*n* = 46)
Monitoring the duration of screen use	95%	91%
Engaging in discussions with the child about potential screen-related risks	84%	65%
Familiarizing themselves with the websites, games, and applications used by the child	72%	72%
Verifying age restrictions for films or games	59%	59%
Using parental control applications	53%	59%
Setting the applications, websites, and games the child is allowed to use	60%	50%
Implementing filtering software to restrict access to inappropriate content	46%	50%
Maintaining physical presence while the child is using screen devices	27%	30%
Establishing and enforcing rules for the safe use of screen devices	31%	20%

5. Discussion

Previous research indicates that parental attitudes play a significant role in shaping children's habits related to screen device use and may also influence the risk of excessive exposure to digital technologies (Ulman, 2011). Effective prevention in this domain necessitates not only media literacy education for children but also the enhancement of parental competencies and the implementation of appropriate regulatory strategies. Understanding the factors that determine the frequency of children's screen device usage is crucial for designing effective preventive strategies. A growing body of research confirms that children are spending increasing amounts of time engaged with screen-based media (Ofcom, 2023), highlighting the critical need for active involvement of both parents and educators in promoting safe and balanced technology use. Younger school-aged children, in particular, need parental support in this regard. The study by Uhls (2016) on parenting attitudes towards children's screen device use identified distinct types of parents: highly controlling,

active guides, and those who are disengaged from their children's screen lives. These categories can be compared to parental attitudes observed in everyday life. To better understand the nature of this phenomenon, an analysis of data obtained from a survey study was conducted. This analysis served as the basis for addressing the proposed hypothesis and research questions.

5.1. Hypothesis: The amount of time a child spends using screen devices is related to the type of parental attitude.

The verification of Hypothesis H revealed no statistically significant relationships between mothers' parental attitudes and the number of hours their children spent in front of screens, either on weekdays or weekends. One possible explanation for this finding is that mothers tend to hold predominantly negative perceptions of children's screen use. As demonstrated in previous research, mothers tend not to assess their children's use of screen devices positively – none of the surveyed mothers expressed a positive attitude; all were either neutral or negative (Dankiewicz, Kotowicz, 2024). This may result in less maternal involvement in digital mediation and media education compared to fathers, and thus a reduced influence on children's screen-related behaviour, regardless of the specific parental attitude adopted.

In contrast, verification of H for fathers revealed a significant relationship: an autonomous parenting attitude was negatively correlated with children's screen time on both weekdays and weekends. This suggests that children whose fathers grant them less autonomy tend to spend more time in front of screens. This result aligns with the findings of Mróz and Solecki (2017), who indicated that excessive parental control may increase the risk of Internet addiction. Similar conclusions were drawn by van den Eijnden et al. (2010) and Hsieh et al. (2018), who noted that a restrictive parenting style fosters compulsive screen use. A controlling parenting style may contribute to the development of problematic Internet use, and is consequently associated with increased time spent by children on screen devices.

Several potential mechanisms may explain this effect. First, excessive parental control may undermine a child's capacity for self-regulation, thereby increasing the risk of compulsive screen use as a means of coping with psychological tension or stress (Bae, Yang, 2023). Second, limiting autonomy can paradoxically increase the attractiveness of technology as a "forbidden object", a phenomenon explained by psychological reactance theory (Brehm, 1966). As such, a more effective approach appears to be modelling healthy screen-use behaviours and engaging actively in children's digital experiences. Moreover, behavioural therapy theory suggests that effective behaviour control requires managing environmental stimuli and applying appropriate reinforcements. Currently, screen device use functions as one of the most powerful reinforcers for younger school-aged children. By providing immediate gratification, screens act as a form of strong positive reinforcement, significantly influencing and shaping children's behaviour (Muppalla, Vuppalapati, Reddy Pulliahgaru, Sreenivasulu, 2023). Faced with a choice between engaging in screen use or performing a task that requires effort, children often choose the screen, which is consistent with the principles of operant conditioning. Therefore, strategies such as simply controlling screen time, punishing children by restricting access to screen devices, or implementing total bans are insufficient. Research indicates that parental interventions – particularly those that limit screen time – can be effective, especially when combined with other strategies such as jointly setting rules, offering alternative activities, and promoting parental mediation (Muppalla et al., 2023). It is crucial that these interventions are consistent, age-appropriate, and paired with positive reinforcement of desirable behaviours (Nikken, 2017).

5.2. Research Question 1: Is the number of preventive actions regarding children's use of screen devices related to the type of parental attitude?

Statistical analysis revealed that maladaptive maternal attitudes – overprotective and inconsistent – were negatively correlated with the number of preventive

actions undertaken. This indicates that mothers who exhibit these attitudes are less likely to engage in their children's media education.

An overprotective attitude may involve restricting access to media, which – paradoxically – can hinder the development of children's critical thinking skills and their ability to cope with potential risks. This result is consistent with a broader body of research on parental mediation. Studies have demonstrated that restrictive mediation (characterized by prohibiting and limiting access to media) is not effective as a long-term strategy for managing children's media use. More effective strategies involve active parental engagement in media education, such as co-viewing, discussing media content, and developing children's critical media literacy skills (Clark, 2011; Livingstone, Third, 2017; Mendoza, 2013; Ofcom, 2023; Przybylski, Weinstein, 2017; Saltuk, Erciyes, 2020; Sanders i in., 2016; Uhls, 2016; Valcke i in., 2010).

Inconsistency in maternal behaviour refers to a lack of stability and coherence in decision-making and responses to parenting situations. The observed negative correlation between inconsistent maternal attitude and the number of preventive measures undertaken suggests that mothers who display greater inconsistency and unpredictability are less likely to engage in systematic efforts to educate their children about appropriate media use. This finding can be interpreted in the context of literature on parental styles – consistent parenting, based on clear rules and coherent communication, fosters a child's sense of safety and predictability, which in turn supports emotional and social development. The literature on parental mediation and the effectiveness of preventive strategies emphasizes the critical importance of consistency in parenting practices. Studies confirm that a lack of consistency in enforcing parenting decisions and rules can lead to behavioural issues and hinder children's internalization of norms and values (Gardner, 1989; Weller, Parker, Reynolds, Kirisci, Michaels, 2024). Children need clearly defined and consistently enforced rules to feel secure and understand parental expectations. This principle also applies to media use, as parents who are inconsistent in other areas of parenting may also neglect their children's media literacy training. Inconsistency in enforcing rules related to screen time or media content may contribute to children's confusion, increased boundary-testing behaviours, and a diminished effectiveness of parental interventions. In contrast, consistent rule enforcement – combined with open dialogue and shared rule-setting – helps children form healthy media habits and navigate the digital world safely (American Academy of Pediatrics, 2016).

This result may also suggest that mothers who are overprotective or inconsistent may have a limited ability to cope with digital risks – and consequently, a limited repertoire of preventive strategies – despite being aware of potential threats and perceiving their children's screen use negatively. A solely negative assessment of screen device usage may result in more stringent restrictions on access; however, this does not necessarily correspond to the implementation of the most effective preventative strategies, nor does it contribute to enhanced support or the informed and constructive integration of children into the digital environment (Dankiewicz, Kotowicz, 2024; Nikken, Schols, 2015). Similarly, strict limitations on screen time imposed by parents do not necessarily improve the quality of technology use or support the development of children's digital competencies (Przybyła-Basista, Kołodziej, 2014). Therefore, an overprotective parenting attitude in daily life does not inherently lead to the implementation of effective preventive actions, which may consist solely of monitoring screen time and may be inconsistently applied. These findings point to the need for media education programmes specifically aimed at mothers (particularly those demonstrating overprotective and inconsistent parenting styles) focused on the prevention of screen-related risks.

In contrast, the study showed that fathers who demonstrated adaptive parenting attitudes – accepting and autonomous – were more likely to undertake preventive actions, including those based on dialogue with the child. Previous research indicates that parental mediation grounded in conversation and co-participation is more effective than restriction-based strategies (O'Keeffe, Clarke-Pearson, 2011). Moreover, many scholars in the field of digital risk prevention emphasize the importance of communication and setting rules for ensuring children's

online safety, particularly when combined with other strategies such as parental supervision, media education, and co-use of media (Muppalla i in., 2023; O'Keeffe, Clarke-Pearson, 2011). The findings of the present study indicate that discussions with children about screen-related risks occurred more frequently in the context of positive parenting attitudes.

5.3. Research Question 2: Which preventive actions concerning children's use of screen devices are most frequently undertaken by parents?

An analysis of mothers' responses indicates that the most commonly used preventive strategy is time control (reported by 95% of participants), followed by discussions with their children (84%). Among fathers, time control also ranked highest (91%), while the second most frequent strategy was familiarizing themselves with the content (websites, games, and applications) used by the child (72%). These results point to a discrepancy between theory and practice. Although existing literature underscores that the establishment of clear and consistent rules represents the most effective parental mediation strategy for managing children's technology use (Livingstone, Blum-Ross, 2020), empirical findings from the present study reveal that this approach is among the least frequently applied in practice (reported by only 31% of mothers and 20% of fathers). Similarly, research commissioned by the Office of Electronic Communications in Poland (Garlicki et al., 2022) revealed that 81.9% of parents tend to regulate their children's digital activities through various restrictions, such as parental control applications and software. This pattern may reflect a lack of knowledge about effective preventive strategies and a tendency to rely on the most accessible and intuitive forms of control, such as screen time limitation (Garlicki et al., 2022).

Summary

The findings of the present study, which explored the relationship between parenting styles and mediation practices, suggest that positive parental attitudes – characterized by acceptance and support for children's autonomy – are associated with a greater frequency of preventive measures implemented by fathers. Conversely, negative parenting styles, such as overprotectiveness and inconsistency observed among mothers, appear to hinder the effectiveness of such interventions. These results point to the need for targeted educational initiatives aimed at equipping digital parents with effective mediation strategies, particularly those that promote constructive and developmentally appropriate engagement with digital media. Among the preventive measures undertaken by parents, the most effective strategies should predominate – those based on open dialogue about screen-related risks and focused on establishing and implementing clear rules for safe media use. Consistent guidelines regarding screen time and the types of content accessed are essential components of effective digital prevention.

An important implication of these findings is the need to promote participatory mediation strategies rather than relying solely on control-based approaches. Supporting the child's autonomy while setting clear expectations regarding media use may provide more effective protection against online risks than the exclusive use of restrictive strategies. This parenting model fosters the development of children's self-regulation and critical thinking skills in the digital environment. Educational interventions should therefore prioritize the enhancement of parental competencies that support the development of relationships based on mutual respect and trust – foundational conditions for open and effective communication about digital media use. Furthermore, such initiatives should aim to foster children's self-regulation, critical thinking, and digital literacy, thereby contributing to the cultivation of a more informed, reflective, and responsible media culture.

In an era of ubiquitous access to digital media, the parental role in shaping healthy technology habits is increasingly critical. Adults are expected to demonstrate technological proficiency, awareness of digital risks, and responsibility for media education (Tosun, Mihci, 2020). Effective digital parenting should thus combine educational mediation, supervisory control, and shared screen-based activities – an ap-

proach supported by empirical research (Livingstone, Blum-Ross, 2020). Consistency in parenting is vital for creating an environment conducive to a child's development in a digital world. However, consistency should not be conflated with rigidity; rather, it entails the ability to adjust parenting approaches to the individual needs of the child while preserving coherence in underlying values and established rules.

Daily screen activity presents an ongoing challenge for parents, particularly since media supervision should be implemented in a natural, non-invasive manner so that it is not perceived by the child as excessive monitoring. Research conducted in Poland shows that more than 10% of students report receiving no support from their parents when encountering risks associated with screen media use (Dębski, Bigaj, 2019). Therefore, identifying the factors that facilitate parental involvement is key. These factors primarily include elements that promote a positive family context, such as open communication, a supportive emotional climate, a sense of closeness, and parents' positive attitudes toward technology (Krzyżak-Szymańska, 2018; Lunkenheimer, Dunning, Diercks, Kelm, 2023; Shah, Phadke, 2023). Parents should become their children's first educators in digital prevention, helping them develop critical thinking skills, information management competencies, and safe practices in navigating digital technologies (Nikken, 2017). Prevention and education are essential for supporting children in developing healthy habits and attitudes toward screen use, grounded in an awareness of both the opportunities and risks associated with digital engagement. There is, therefore, an urgent need to support parents in formulating and consistently applying clear rules for screen media use in daily life, in order to protect digital children from the potential risks associated with the online environment.

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