The relationship between parental attitudes and the assessment of the benefits and risks of screen devices use among children in early primary school years

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Abstract: Nowadays, children increasingly choose screen devices as a form of communication and spending free time, which raises concerns about the potential harmfulness of excessive use of them. Therefore, it seems important to look at the issue of using screen devices from the perspective of parents and their attitudes towards children themselves, as well as in relation to the use of screen devices in everyday life. The aim of the presented study was to demonstrate the relationship between parental attitudes, parent's gender and the assessment of the benefits and risks associated with children's screen devices use. The research tools used in the study included The Parental Attitudes Scale (SPR) by Mieczysław Plopa (2008), covering six parental attitudes, and original The Screen Usage Questionnaire (KKE) to measure the attitude towards screen use by children. The article discusses theoretical aspects of parental attitudes towards children and screen use, as well as the benefits and risks of children's screen devices use in the early primary school years. The operationalization of variables in research tools was presented. The study involved 173 participants aged 29-44 years (M = 36.56; SD = 3.16; Me = 37), including 127 mothers and 47 fathers of children aged 7-10 from the Podkarpackie. No correlation was found between parental attitudes and their assessment of the benefits and risks associated with screen devices use. However, the differences were observed between mothers and fathers in the assessment of benefits and risks. The research results indicate the need for education on digital parenting. Mothers assessed the use of screens neutrally or negatively, while fathers assessed it neutrally or positively, hence the conclusion regarding preventive activities is to direct various educational interventions towards fathers and mothers. These findings indicate the need to support parents introducing children to the digital world in effective education regarding the use of screen devices.

Keywords: benefits and risks of screen devices use, children's screen exposure, media psychology, new media, parental attitudes

Introduction

In contemporary times, children increasingly choose screen devices such as computers, laptops, televisions, smartphones, gaming consoles, or tablets as a form of communication and leisure. This trend raises concerns about the potential harm of excessive screen use. The aim of this article is to examine the issue of screen usage from the perspective of parents and their attitudes. Parents face the challenge of shaping their children's screen behaviors, prompting reflection on how they perceive screen device use and its relationship to their parenting attitudes. The parent-child-screen triad presents a modern challenge that requires research to determine practical implications for supporting parents in ensuring safe, responsible, and creative screen use by children while harnessing the potential benefits and avoiding risks. Research indicates that the role of adults in guiding younger generations through the online world is crucial (Appelt, Jarzembowska, 2020).

1. Parental attitudes

Attitude refers to a relatively stable tendency for positive or negative evaluation of any object (Wojciszke, 2005). Parental attitude, like other attitudes, com-
prises three components: cognitive (beliefs about the child), affective (emotional stance), and behavioral (parental actions toward the child). This means that parents think about their child in a certain way, experience positive or negative emotions toward them, and express these feelings through their behavior (Ziemska, 1986). Consequently, parental attitude – whether positive or negative – significantly shapes parental behaviors toward their children (Zimbardo, Gerrig, 2018), leading to specific behavioral strategies such as approval, praise, protection, avoidance, or neglect (Aronson, 2012). The typology proposed by Plopa (2008) and forming the basis of The Parental Attitudes Scale (SPR) includes six parental attitudes: acceptance-rejection (perceiving vs. rejecting the child’s needs), excessive demandingness (lack of understanding of the child’s need for autonomy), autonomy (supporting and accepting the child’s needs), inconsistency (variable parental behavior), and excessive protectiveness (parental anxiety related to the child’s independence). The SPR was developed to assess parental attitudes, which are crucial for diagnosing family system quality.

Parental attitudes can influence a parent’s subjective perception of their child’s screen use and their evaluation of it as positive or negative.

2. Benefits and risks of screen devices use

Numerous studies have examined screen device use among children in early school age, revealing both objective opportunities and risks across various domains of development: language, physical, cognitive and socio-emotional. High-quality content and age-appropriate programs and activities on screens can enhance children’s skills in several areas, including prosocial behavior, satisfying their need for social belonging, facilitating learning, nurturing interests, boosting technological proficiency, stimulating curiosity, fostering independence, and enabling multitasking (Klichowski, Pyżalski, Kuszak, Klichowska, 2017).

However, negative effects also exist. Neuroimaging studies indicate that video game playing may impact the delayed development of brain microstruc-
Stunża, Pyżalski, Dębski, Bigaj, 2020). Furthermore, mothers and fathers differ in their views on children's screen device use. A study conducted in the United Kingdom found that fathers perceived more benefits in their children's use of screen devices and held more positive attitude toward new technologies (67%) compared to mothers (54%) (Internet Matters, 2022).

Studies emphasize the crucial role parents play in shaping healthy screen habits for their children (Uhls, 2016; Wojtasik, Dziemidowicz, 2019). These conclusions indicate the significant role of parents in educating themselves about screen usage and in active participation in their children's media lives (Tosun, Mihić, 2020). It is essential for parents to be aware of both the benefits and risks, monitor their child's online activities (especially for younger children), and engage in conversations about safe online behavior and internet trends (Fiwałkowska, 2021). Knowledge and effective communication skills are key, but parental attitudes toward their children and screen device use may prove equally significant.

Even before formal education begins, children often become proficient users of computers, consoles, and phones (Dębski, Bigaj, 2019). Research by the Office of Electronic Communications (2021) revealed that children as young as 7-8 years old commonly start using mobile phones and smartphones, which are considered the most threatening screen devices due to their frequent use (Pyżalski, Zdrodowska, Tomczyk, Abramczuk, 2019). Given the increasingly early exposure to screens among children, research on screen use during late childhood from the perspective of parents becomes particularly relevant.

4. Methods

The aim of own research was to establish the relationship between parental attitudes and the assessment of benefits and risks associated with screen devices use by children in early school age. Each parent exhibits an attitude that determines their response to a child's behavior, which potentially also implies an influence on the domain related to children's screen device use.

Within the specified research problem, a hypothesis and two research questions were formulated:

Hypothesis 1. Parent's gender is related to the assessment of benefits and risks associated with children's screen devices use.

Due to the lack of research on the relationship between parental attitudes and the assessment of benefits and risks associated with their children's screen devices use, the following research questions were posed:

Question 1. Does the type of maternal parenting attitude relate to the assessment of benefits and risks associated with children's screen devices use?

Question 2. Does the type of paternal parenting attitude relate to the assessment of benefits and risks associated with children's screen devices use?

In the study, two research tools were used:

1. *The Parental Attitudes Scale* (SPR) by Mieczysław Plopa (2008) consists of 50 statements to which parents respond on a 5-point Likert scale. The questionnaire identifies six types of parenting behaviors: acceptance-rejection, autonomy, excessive demandingness, inconsistency, and excessive protectiveness. The SPR demonstrates high reliability for both mothers and fathers (Cronbach's alpha ranging from 0.75 to 0.88). The theoretical validity was confirmed through factor analysis and correlations with other questionnaires.

2. Original *Screen Use Questionnaire* (KKE) designed to measure attitudes toward screen devices used by children, this questionnaire comprises 18 statements. Participants rated the benefits and risks of their children's screen devices use on a 5-point Likert scale. Three types of assessments were distinguished: positive (emphasizing benefits), neutral (similar number of benefits and risks), and negative (highlighting risks). The KKE exhibits very good psychometric properties (reliability with Cronbach's alpha = 0.91). To establish the internal structure of the scale, an exploratory factor analysis using the maximum likelihood method was conducted. Based on the scree plot criterion, two factors (benefits and risks) were revealed. Both factors explain 59% of the total variance in the results (KMO = 0.92).
The relationship between parental attitudes and the assessment of the benefits and risks of screen devices use...

5. Characteristics of participants

The study was conducted between September 2022 and March 2023. In the initial data collection phase, a paper-based method was used during meetings with parents in small schools in the Podkarpackie Voivodeship. Since the number of participants obtained through this method was small and predominantly consisted of mothers, an online survey was subsequently sent to the directors of four primary schools in Podkarpacie. These directors distributed the survey questionnaire to parents of children in grades 1-3 via the electronic school diary. The study group consisted of parents (127 mothers and 46 fathers) with children aged 7-10 years. A total of 173 individuals (aged 29-44 years, \( M = 36.56, SD = 3.16, Me = 37 \)) completed the survey. The youngest mother was 29 years old, while 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 was 44 years old (\( M = 37.91, SD = 2.46, Me = 37.5 \)). Their children attended either grade “0” (children with deferred compulsory schooling – 1% of participants) or grades 1-3 (grade 1 – 31% of participants, grade 2 – 39%, grade 3 – 29%).

6. Results

For statistical analysis, the IBM SPSS package was utilized. Using this software, were conducted analyses of basic descriptive statistics, the Shapiro-Wilk test, the Mann-Whitney U test for independent samples, the Student’s t-test for independent samples, the Welch’s t-test, Spearman’s rank correlation coefficient, and Pearson correlation coefficient. The significance level was set at \( \alpha = 0.05 \). However, results with probabilities in the range of \( 0.05 < p < 0.1 \) were interpreted as statistically significant at the level of trend.

In the initial step, basic descriptive statistics for the quantitative variables were calculated, along with the Shapiro-Wilk test to assess the normality

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Me</th>
<th>SD</th>
<th>Sk.</th>
<th>Kurt.</th>
<th>Min</th>
<th>Max</th>
<th>S-W</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s acceptance-rejection attitude</td>
<td>45.72</td>
<td>47.00</td>
<td>4.60</td>
<td>-3.75</td>
<td>24.91</td>
<td>11.00</td>
<td>50.00</td>
<td>0.85</td>
<td>0.001</td>
</tr>
<tr>
<td>Mother’s autonomy attitude</td>
<td>34.94</td>
<td>35.00</td>
<td>3.74</td>
<td>-0.94</td>
<td>2.48</td>
<td>18.00</td>
<td>43.00</td>
<td>0.98</td>
<td>0.603</td>
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<tr>
<td>Mother’s protectiveness attitude</td>
<td>25.49</td>
<td>24.00</td>
<td>8.62</td>
<td>0.49</td>
<td>-0.34</td>
<td>10.00</td>
<td>48.00</td>
<td>0.95</td>
<td>0.050</td>
</tr>
<tr>
<td>Mother’s demandingness attitude</td>
<td>26.08</td>
<td>25.00</td>
<td>8.01</td>
<td>0.18</td>
<td>-0.76</td>
<td>11.00</td>
<td>45.00</td>
<td>0.98</td>
<td>0.622</td>
</tr>
<tr>
<td>Mother’s inconsistency attitude</td>
<td>21.24</td>
<td>19.00</td>
<td>9.00</td>
<td>0.87</td>
<td>0.02</td>
<td>10.00</td>
<td>47.00</td>
<td>0.89</td>
<td>0.000</td>
</tr>
<tr>
<td>Mother’s attitude toward child’s screen use</td>
<td>41.69</td>
<td>42.00</td>
<td>10.25</td>
<td>0.44</td>
<td>1.08</td>
<td>19.00</td>
<td>78.00</td>
<td>0.96</td>
<td>0.075</td>
</tr>
<tr>
<td>Father’s acceptance-rejection attitude</td>
<td>42.04</td>
<td>42.00</td>
<td>4.59</td>
<td>-0.45</td>
<td>-0.10</td>
<td>31.00</td>
<td>50.00</td>
<td>0.97</td>
<td>0.275</td>
</tr>
<tr>
<td>Father’s autonomy attitude</td>
<td>37.43</td>
<td>38.00</td>
<td>3.31</td>
<td>0.44</td>
<td>0.14</td>
<td>31.00</td>
<td>46.00</td>
<td>0.97</td>
<td>0.307</td>
</tr>
<tr>
<td>Father’s protectiveness attitude</td>
<td>23.98</td>
<td>23.00</td>
<td>7.09</td>
<td>0.22</td>
<td>-0.74</td>
<td>11.00</td>
<td>40.00</td>
<td>0.97</td>
<td>0.279</td>
</tr>
<tr>
<td>Father’s demandingness attitude</td>
<td>30.26</td>
<td>31.00</td>
<td>7.18</td>
<td>0.00</td>
<td>0.39</td>
<td>15.00</td>
<td>49.00</td>
<td>0.97</td>
<td>0.353</td>
</tr>
<tr>
<td>Father’s inconsistency attitude</td>
<td>25.41</td>
<td>25.00</td>
<td>8.64</td>
<td>0.06</td>
<td>-0.46</td>
<td>11.00</td>
<td>46.00</td>
<td>0.97</td>
<td>0.222</td>
</tr>
<tr>
<td>Father’s attitude toward child’s screen use</td>
<td>67.17</td>
<td>69.50</td>
<td>12.79</td>
<td>-0.38</td>
<td>-0.50</td>
<td>38.00</td>
<td>90.00</td>
<td>0.97</td>
<td>0.412</td>
</tr>
</tbody>
</table>

M – mean; Me – median; SD – standard deviation; Sk. – skewness; Kurt. – kurtosis; Min and Max – minimum and maximum values of the distribution; S-W – result of the Shapiro-Wilk test; p – statistical significance
Table 2. Differences in parental attitudes between groups of mothers assessing children’s screen devices use neutrally and negatively (N = 127)

<table>
<thead>
<tr>
<th>Maternal parenting attitude</th>
<th>Negative maternal assessment of child’s screen devices use (n=59)</th>
<th>Neutral maternal assessment of child’s screen devices use (n=68)</th>
<th>t(125)</th>
<th>p</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s acceptance-rejection attitude</td>
<td>M = 45.95, SD = 5.513</td>
<td>M = 45.53, SD = 3.667</td>
<td>0.511</td>
<td>0.610</td>
<td>-1.21</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>2.05</td>
</tr>
<tr>
<td>Mother’s autonomy attitude</td>
<td>M = 34.59, SD = 4.328</td>
<td>M = 35.24, SD = 3.153</td>
<td>-0.964</td>
<td>0.337</td>
<td>-1.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.68</td>
</tr>
<tr>
<td>Mother’s protectiveness attitude</td>
<td>M = 26.68, SD = 9.066</td>
<td>M = 24.46, SD = 8.145</td>
<td>1.455</td>
<td>0.148</td>
<td>-0.80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.24</td>
</tr>
<tr>
<td>Mother’s demandingness attitude</td>
<td>M = 27.08, SD = 8.512</td>
<td>M = 25.21, SD = 7.508</td>
<td>1.322</td>
<td>0.189</td>
<td>-0.93</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.69</td>
</tr>
<tr>
<td>Mother’s inconsistency attitude</td>
<td>M = 21.63, SD = 9.791</td>
<td>M = 20.91, SD = 8.305</td>
<td>0.446</td>
<td>0.657</td>
<td>-2.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.89</td>
</tr>
</tbody>
</table>

*M = mean; SD = standard deviation; t = Student’s t-test result; p = statistical significance; CI = confidence interval; LL = lower limit; UL = upper limit

For variables where the test result was statistically significant, there were additionally verified the skewness values of their distributions. If the skewness fell within the range of +/- 2, it was assumed that the distribution of the variable was not significantly asymmetric relative to the mean. Such skewness values were observed for most of the variables. In conclusion, it was decided that parametric analyses would be conducted if the remaining assumptions were met.

To verify hypothesis H1, an analysis was conducted using the Welch’s t-test due to the lack of homogeneity of variance. The result of the Welch’s test t(67.00) = -12.173; p>0.001 was statistically significant.

In summary, based on the collected results, it can be concluded that fathers (M = 67.17; SD = 12.79) assess children’s screen use more positively than mothers (M = 41.69; SD = 10.25) (Figure 1). The analysis supports the acceptance of the hypothesis H1.

In the subsequent part of the study, it was examined whether mothers who neutrally assessed their children’s screen use differ in parental attitudes from mothers who evaluated it negatively. In the sample of participants, no mother assessed children’s screen use positively.

Table 3. The relationship between maternal parenting attitudes and the assessment of benefits and risks of children’s screen devices use (N = 127)

<table>
<thead>
<tr>
<th>Maternal parenting attitude</th>
<th>Negative and neutral maternal assessment of child’s screen devices use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s acceptance-rejection attitude</td>
<td>-0.086</td>
</tr>
<tr>
<td>Mother’s autonomy attitude</td>
<td>0.057</td>
</tr>
<tr>
<td>Mother’s protectiveness attitude</td>
<td>-0.016</td>
</tr>
<tr>
<td>Mother’s demandingness attitude</td>
<td>-0.030</td>
</tr>
<tr>
<td>Mother’s inconsistency attitude</td>
<td>-0.022</td>
</tr>
</tbody>
</table>

The table presents Spearman’s rank correlation (rho) values. **. Correlation significant at the 0.01 level (2-tailed). *. Correlation significant at the 0.05 level (2-tailed)
The results of the analysis indicated no statistically significant differences between the mothers who negatively or neutrally evaluated their children’s screen use and their parenting attitudes (Table 2).

To address research question P1, a Spearman’s rank correlation analysis was conducted. The results from mothers who assessed their children’s screen use negatively and neutrally (there were no positive responses) were combined due to the lack of statistically significant differences between these groups regarding the presented parenting attitudes.

The results of the analysis indicated no statistically significant relationship between maternal parenting attitudes and the assessment of benefits and risks of screen devices use by their children (Table 3).

Subsequently, it was verified whether fathers who neutrally evaluate their children’s screen use differ in terms of parenting attitudes from fathers who assess this use positively. In the sample of participants, no father evaluated screen use negatively. To explore this, the Mann-Whitney U test for independent samples was conducted.

The results of the analysis revealed no statistically significant differences between fathers who assessed their children’s screen use neutrally and fathers who evaluated it positively (Table 4).

In the subsequent part of the study, answers to research question P2 were sought. For this purpose, a Pearson correlation analysis was conducted. The results from fathers who assessed their children’s screen use positively and neutrally (there were no negative responses) were analyzed together due to the lack of statistically significant differences between these groups regarding the presented parenting attitudes.

The results of the analysis showed no statistically significant relationship between the type of parental attitude of fathers and the assessment of the benefits and risks of screen devices use by their children (Table 5).

7. Discussion

Numerous studies indicate that an increasing number of children spend most of their time online. Therefore, adult involvement is crucial to guide them...
Children in the younger school age require strong parental support, making it essential to determine how to empower parents in these efforts. Previous research on parental attitudes toward screen use has identified two types of parents: highly controlling, active guides, and parents who do not interfere with their children's screen device use (Uhls, 2016). These attitudes can be compared to parenting behaviors in everyday life. To understand the essence of this phenomenon, an analysis of the data obtained from a survey was conducted. This analysis served as the basis for finding answers to the research questions.

H1. Parent’s gender is related to the assessment of benefits and risks associated with children’s screen devices use.

The results of statistical analysis confirmed Hypothesis 1, showing differences between mothers and fathers in their assessment of benefits and risks. Mothers typically evaluate their children’s screen devices use neutrally or negatively, while fathers tend to assess it neutrally or positively. These findings align with the report “Children’s wellbeing in a digital world” by Internet Matters (2022). Additionally, there is a common belief that women dislike screen entertainment (Weiser, 2000). However, research by Game Story (Brief, 2020) reveals that 47% of a 17-million-player group consists of women. As they become mothers, their evaluation of electronic media usage changes. Nevertheless, this positive assessment does not extend to their children’s screen use. This discrepancy may be related to women’s heightened awareness of risks and their vigilance in protecting their children. Further research is needed to explore this issue.

The practical implication drawn from these analyses is to tailor different educational interventions toward fathers and mothers. Fathers should be equipped with knowledge about the negative effects of screen use. Mothers, on the other hand, should reflect on the benefits of screen devices use for children, such as fostering passions, interests, and peer relationships. Proper parental perception regarding screen devices use benefits supports children’s cognitive development and autonomy (Przybyla-Basista, Kołodziej, 2018).

Both sides should also receive education on preventive measures and wise introduction of children to the multimedia world.

Question 1. Does the type of maternal parenting attitude relate to the assessment of benefits and risks associated with children’s screen devices use?

Question 2. Does the type of paternal parenting attitude relate to the assessment of benefits and risks associated with children’s screen devices use?

Research has shown no correlation between parental attitudes and their assessment of the risks and benefits of screen devices use by children. This finding can be interpreted in two ways. First, screen devices in the hands of children are still a relatively new experience for many parents, and their approach toward screens may not have been fully integrated into their parental attitude and resulting actions. Simultaneously, in many families, screen devices function as a constant element of daily life, and parents may perceive children’s screen use as not requiring specific parenting interventions. However, this can raise concerns because without parental control, children may be exposed to potentially harmful experiences (Symons, Ponnet, Emmery, Walrave, Heirman, 2017). Underestimating the risks associated with screen device use is linked, according to Byrne and colleagues (2014), to an overly permissive parenting style characterized by acceptance attitude without setting expectations or requirements, as well as communication difficulties with the child. Research conducted in Poland reveals that over 10% of students cannot rely on parental assistance when something concerning occurs during screen devices use. Factors facilitating parental support for e-children include family context: communication, emotional climate, a sense of closeness, and parental attitudes toward screens (Dębski, Bigaj, 2019).

Secondly, parents’ attitudes toward children’s screen use may be related to a lack of comprehensive knowledge about this type of activity, and their approach to screens may not align with their parental attitudes. For instance, a negative assessment by a parent who presents an autonomy attitude might result from an emotional reaction to the phenome-
The relationship between parental attitudes and the assessment of the benefits and risks of screen devices use...

Currently, parents belonging to the generation of digital immigrants may feel uncertain in the world of screen devices, making it challenging for them to guide their children. Mothers’ and fathers’ knowledge about children’s screen activities varies, as do their approaches to introducing children to the multimedia world. Psychologists play a crucial role in supporting parents in this new and demanding parenting task. A key takeaway from the study results is the importance of conducting a comprehensive educational campaign for parents, presenting both the benefits and risks associated with screen devices use for younger children in a clear and factual manner.

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Bibliography


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