Journal of Child and Family Studies (2020) 29:2890–2904
https://doi.org/10.1007/s10826-020-01760-y

ORIGINAL PAPER

Parental Concerns about their School-aged Children's Use of Digital Devices

Marie Danet[1]

Published online: 25 June 2020

Abstract

Mobile devices are widely used throughout parent–child routines and family life. Emerging research suggests several concerns about the effects of their use on children's socio-emotional development. These concerns have led to a proliferation of prevention messages. The recommendations focus mainly on infants/preschoolers and adolescents, and very little on school-aged children. Despite growing concerns among health and childhood professionals, there are few studies regarding children's use of digital devices focusing on the developmental period between 6 and 12 years of age. In order to frame guidelines for the use of digital devices in the home, it is important to know parents' questions and/or difficulties arising from their use. The aim of this study was to question parents of school-aged children (6–12 years) regarding their fears, questions, and concerns relative to digital device use in the home and, more generally, raising children in a digital world. One hundred and forty-seven French parents responded to an anonymous online survey. The questions addressed school-aged children's digital device use, parental concerns and parental experiences of the place of digital devices in the home. Parent's reports of their children's use of digital devices were analyzed as a function of their children's age, gender, birth order and parent's sociodemographic characteristics. Results showed that the use of screens by children is a source of concern for 53.1% of parents, while 62.6% of parents consider that the use of information and communication technology in the home affects (positively or negatively) their relationship with their child.

Keywords School-aged children · Parental perception · Child development · Practices · Mobile technologies · Parent–child relationship

Highlights

- The place of informationa and communication technology (ICT) in the home raised questions to parents of school-aged children.
- Parents were concerned that ICT could harm child development.
- Parents thought that ICT had an impact on family functioning and relationships.
- Parents difficulties could be summarized as controlling use, content and screen-time.

In many countries, today's children are growing in a digital world (Kemp 2019) and, "are surrounded by and immersed in a digital environment" (Chassiakos et al. 2016, p. 1). Like in other OECD countries (OECD 2019), in France, where the current study took place, households with access to the Internet have steadily increased; 86% of households had access to the Internet in 2016, compared to 31% in 2003 (INSEE 2017). This societal evolution leads us to question the place of information and communication technology (ICT) in the home. It raises concerns about digital parenting. Indeed, from an early age, many children are exposed to screens, directly or indirectly, and parents often wonder how to deal with ICT use and media exposure (Danet et al. 2017). Public service prevention and awareness messages have proliferated over the last ten years (Council on Communications and Media 2016a, 2016b; Picherot et al. 2018). They have addressed the influence of digital devices and

✉ Marie Danet
marie.danet@univ-lille.fr

[1] Univ. Lille, ULR 4072 - PSITEC - Psychologie: Interactions Temps Émotions Cognition, F-59000 Lille, France

media on child development. They have also provided guidelines to help parents and professionals manage media use. For example, it is recommended that toddler's media exposure be limited, especially before 18 months. For adolescents, professionals focus on the content of websites and objectionable online exchanges (e.g., cyberbullying). Recommendations for school-aged children draw on studies concerning the influence of digital media on children's physical health (e.g., obesity, sleep reduction). Yet, studies have predominantly focused on pre-school children and adolescents (Danet and Billieux 2017), even with regard to parents' perceptions of the impact of mobile technology on child development and family life (Radesky et al. 2016).

Due to the pace of change of ICT, research often lags behind the eager adoption of novel devices and applications by individuals. Thus, in order to draw adequate and accurate guidelines for parenting in the digital age, and to measure compliance with these guidelines, it is important to understand parents' views on digital device use by family members and by children in particular (Radesky et al. 2016). By interviewing parents of children under 8 years of age, Radesky et al. identified three main sources of parental concerns and confusion regarding their children's use of ICT (Radesky et al. 2016). First of all, parents expressed preoccupations with the effects of mobile technologies on child development. They thought that children should learn to use ICT early, but also, paradoxically, that this could harm their reasoning skills. Secondly, despite their acceptance of the use of digital devices, parents had a sense of losing control of this use. Finally, ICT was both a source of tension and a means of reducing tension during family time (i.e., interference with parent–child interaction vs. calming an upset child) (McDaniel and Radesky 2018; Radesky et al. 2016).

Regarding adolescence (broadly, ages 12–20 years), George and Odgers (2015) reviewed media reports, parental surveys and interviews to highlight common fears about the effects of ICT use on adolescents' development. The authors identified "seven common fears". The first fear expressed by adolescents' parents concerned online safety and privacy (i.e., whom the adolescent is interacting with on the Internet, the risk of meeting strangers, shared content and online reputation). The second fear concerned cyberbullying, especially victimization. Compared to "traditional harassment", this fear is raised by the specific features of cyberbullying such as possible anonymity and pervasiveness in daily life. The third fear concerned the adolescents' *hyperconnectivity*, which is viewed as interfering with opportunities to enhance friendships and social competencies in real life. The potential *technoference* in parent–child relationships caused by the use of digital devices was spotted as the fourth fear. "Technoference" is defined by McDaniel and Coyne (2016) as, "everyday interruptions in interpersonal interactions or time spent together that occur due to digital and mobile technology devices" (McDaniel and Radesky 2018, p. 1). The fifth fear inventoried by George and Odgers (2015) was that, "adolescents are experimenting with alternative identities online while leaving a digital archive that may damage their sense of self and future lives" (p. 842). Impairment of cognitive development that might be caused by multitasking on digital devices was the sixth expressed concern. Finally, the seventh was the sleep loss adolescents could suffer due to ICT use.

In France, a study found that common fears held by parents of teens were the possibility of cyberbullying, contact with online predators and/or sharing intimate content (Fontar et al. 2018). Little data on parental concerns related to school-aged children's media use are available. A wide survey conducted in the US outlined that the type of media content their children used was more a concern for parents of tweens (8–12 years old) than the amount of time their children spent using media (Rideout 2015). In France, data on the concerns of school-aged children's parents are lacking despite digital media use in school-aged children differing in some points from that of adolescents. For example, Rideout (2015) found that school-aged children used less social media, smartphones and computers than adolescents. On the contrary, they were more likely to use tablets, but for shorter times than adolescents (Rideout 2015). There are also developmental changes between preschoolers, school-aged children and teens. As children grow up, their autonomy increases and seeking parental support, unless confronted with stressful life events, tends to decrease (Zimmer-Gembeck and Skinner 2011). It seems that digital parenting also changes depending on children's age. As children grow up, parents tend to reduce monitoring on digital media use. In a US sample, "tweens [reported] that their parents know and talk more about media than the parents of teens do" (Rideout 2015, p. 72). When their child owns a mobile device (i.e., smartphone, tablet), parents of tweens monitor time spent and activities on digital devices to a greater extent than parents of teens (Rideout and Robb 2019). Data from a German sample showed that parents' engagement in ICT parenting activities (i.e., rule-setting and co-use) decreased as the children grew up (three age groups: 1–6 years/7–10 years/11–15 years) (Grobbin 2016; Pavlick 2018). Nevertheless, it might be different in France where parents favor restrictive mediation, more than in other European countries (Livingstone et al. 2017). "Restrictive mediation is negatively associated with child-initiated support suggesting that parental restrictions discourage children's agency and may even create a negative dynamic whereby children with restrictive parents learn not to draw parental attention to their Internet use. […], possibly leaving parents less informed about or able to guide their child" (Livingstone et al. 2017, p. 98). Livingstone et al. (2017) found that restrictive mediation increased when parental online risk perception rose. Therefore, it seems important to be aware of

the concerns of school-aged children parents. Moreover, school-aged children are a source of growing concern for professionals, who see a rise in mental health consultations in France (Amiel 2017). Knowledge and understanding of parental views about the use of digital devices by children and other family members are essential for developing targeted recommendations for digital parenting.

We conducted a survey on media use (tablets, smartphones, laptops, computers; excluding TV) in the home aimed at French parents of school-aged children. The aims were to explore parents' experiences of digital parenting and to identify key concerns about digital device (tablets, smartphones, laptops, computers; excluding TV) use in the home and during family time. We took a broad perspective so as to better understand the need for advice and support related to questions and/or difficulties that may arise from the use of screens by school-aged children and their parents. Additionally, we took some sociodemographic characteristics of parents and children into account in order to explore their potential link with children's ICT use (as reported by parents) and digital parenting. For example, screen-time tends to increase as children grow up (Rideout and Robb 2019). We thus expected a positive link between children's age and reported screen-time/frequency of ICT use (tablets, smartphones, laptops, computers; excluding TV). Younger children tend to use more tablets than computers/laptops/smartphones than their older counterparts (Rideout 2015). Thus, a difference in the frequency of these devices' use was expected according to children's age. Drawing on the same national US survey (Rideout and Robb 2019) and on French data (Ipsos 2018), we expected smartphone owners to be older than the owners of other devices in our sample. Regarding gender, we expected higher screen-time for boys than girls (Rideout and Robb 2019). Otherwise, Rideout (2015) found no gender difference in smartphone ownership in teens (the number of tweens who owned a smartphone was too small for a meaningful analysis) but Nielsen's Fourth-Quarter 2016 Mobile Kids Report conducted among 4646 parents of children aged 6–12 found that more boys tended to receive a smartphone (The Nielson Company 2017). We thus examined the proportion of girls and boys who owned a smartphone in our sample. Having an older sibling was linked to higher mobile screen use by younger siblings (Paudel et al. 2017). The influence of older siblings on younger sibling's digital device use would be on content as well as on screen-time (Nevski and Siibak 2016). As a consequence, higher reported screen-time and frequency of ICT use was expected for younger siblings, compared to first born children. Considering parents' education levels, Rideout and Robb (2019) found that the higher the education level of parents, the less time children spent on screens. A negative association was thus expected between parent's level of education and reported screen-time /frequency of ICT use. Finally, children whose parents were younger would have more opportunities to use digital devices (Livingstone et al. 2017). Thus, the association between children's reported digital device use and parental age was explored.

Method

Participants

The sample included 147 French parents (20 fathers, 124 mothers and 3 others) of children of between 6 and 12 years of age ($N = 147$; $M_{age} = 8.54$ year, SD = 1.96; 51% boys). Demographic information is shown in Table 1.

Procedure

The survey was conducted online in 2018 over a period of 2 weeks. To recruit participants, advertisements with a link to the survey were posted and shared on Facebook and Twitter pages (administered by the researcher, associations and individuals). Emails were also sent to schools and professional contacts encouraging them to share the link to the survey. Participants had to have at least one child between 6 and 12 years of age. Parents who had more than one child between 6 and 12 years old were asked to answer all the questions with respect to only one child between the ages of 6 and 12 whose birthday was coming up next. The survey was introduced as follows: "*The aim of this survey is to increase understanding of the need for advice and support related to the issues and/or difficulties that children and parents may experience when using digital devices*". Participants anonymously completed the online questionnaire, which was designed to collect data on children's screen use and possession, parental concerns and questions, and demographic variables that might shed light on the findings (e.g., parental occupational status and level of education).

Measures

Demographic questionnaire

A demographic questionnaire targeted parents' and children's age and gender, children's birth order, and parent's level of education, career and occupational status.

Children's use of digital devices

The kinds of devices used, the amount of use (frequency and time spent (min.)), smartphone, tablet, computer and/or

Table 1 Characteristics of parents and children ($N = 147$)

Characteristic	*n*	%
Parent's age		
25–29 years	3	2.0
30–34 years	22	15.0
35–39 years	56	38.1
40–44 years	48	32.7
45–49 years	11	7.5
50–54 years	6	4.1
55 or older	1	0.7
Educational attainment		
High School diploma or less	23	15.6
Bachelor's degree	46	31.3
Master's degree	49	33.3
Ph.D.	21	14.3
Profession		
Farmer	1	0.7
Artisan, business owner	2	1.4
Middle manager	33	22.4
Senior manager	22	15.0
Employee	60	40.8
Worker	4	2.7
Other	25	17.0
Occupational status		
Full-time employment	91	61.9
Part-time employment	36	24.5
Unemployed	11	7.5
Relationship to child		
Mother	124	84.4
Father	20	13.6
Other	3	2.0
Child's age		
6–7	50	34.0
8–9	49	33.3
10–11	36	24.5
12	12	8.2
Child's gender		
Girls	72	49.0
Boys	75	51.0
Child's birth order		
First born	98	66.7
Middle born	16	10.9
Last born	22	15.0

Eight parents did not provide information about their educational attainment, nine about their occupational status, and eleven about their child's birth order

laptop possession and age at first smartphone possession were assessed by a set of nine questions. Frequency of device use regardless of type (overall) was assessed using a scale from 5 = every day to 1 = never ("My child uses a screen: every day, every other day, twice a week, a few times a month, never. By screen, we mean ICT such as tablets, smartphones, laptops, computers"). In order to assess the use of each device, the frequency of computer, laptop, smartphone and tablet use was measured separately ("Among ICT mentioned below, which of the following does your child use: computer, laptop, smartphone and/or tablet"). Parents had to answer the question by rating use on a scale from 3 = very often to 0 = never for each device. Overall time spent was estimated by parents. Some parents reported time spent in minutes, others in hours. The latter were transformed and all were reported in minutes.

Parental concerns, questions and remarks about digital devices in the home

We asked six "yes/no" questions about concerns, questions and remarks with respect to the use of digital devices by children when alone and in the family context. For each of the six questions, when they answered "yes", participants were asked to explain their choice by filling in a text box. Firstly, parents were asked if they had any questions about their child's digital device use ("Are you wondering about the use of screens by your child? If yes, what are your questions?"). Secondly, they were asked if the child's device use was a source of concern ("Is the use of screens by your child a source of concern for you? If yes, why?"). A third question asked about the effects of device use on parent–child relationships (negative or positive) ("Do you think that your use of screens has an impact (positive or negative) on your relationship with your child? If yes, in what way?"). Parents were also asked if their child commented on parent's digital device use ("Does your child sometimes comment on your use of screens? If yes, what do they say (please give some examples)?"). A fifth question asked whether the management of digital devices was difficult in the home ("Is the management of screens within the family difficult? If yes, in what way?"). The need for advice on the management of devices in the home was also examined ("Would you appreciate advice on how to manage screens in the family? If yes, what would you like advice about (please give some examples)?"). Finally, there was an open-ended question on difficulties encountered with children's use of devices ("What are the possible difficulties that you may encounter in connection with the use of screens by your child?").

Data Analyses

After the descriptive statistics, the analyses were conducted in two phases. First, children's device (tablets, smartphones, laptops, computers; excluding TV) use, as reported by

Table 2 Frequency of all screen use without distinctions (parental estimates) by children ages 6 to 12 years as a function of children's gender and birth order and parental sociodemographic features

	Few times a month	Twice a week	Every other day	Every day	Total	*p* value
Child gender						0.21[a]
Girls	8 (11.1%)	13 (18.1%)	15 (20.8%)	36 (50.0%)	72	
Boys	4 (5.3%)	19 (25.3%)	9 (12.0%)	43 (57.3%)	75	
Child birth order						0.98[b]
First born	9 (9.2%)	23 (23.5%)	16 (16.3%)	50 (50.1%)	98	
Youngest born	3 (7.9%)	8 (21.0%)	7 (18.4%)	20 (52.6%)	38	
Smartphone's owner	1 (3.4%)	4 (13.8%)	1 (3.4%)	23 (79.3%)	29	
Parental age						0.08[b]
25–34 years	1 (4.0%)	4 (16.0%)	3 (12.0%)	17 (68.0%)	25	
35–39 years	7 (12.5%)	11 (19.6%)	8 (14.3%)	30 (53.6%)	56	
40–44 years	1 (2.1%)	15 (31.2%)	12 (25.0%)	20 (41.7%)	48	
Older than 44 years	3 (16.7%)	2 (11.1%)	1 (5.5%)	12 (66.7%)	18	
Parental level of education						0.17[b]
High School diploma or less	3 (13.1%)	5 (21.7%)	4 (17.4%)	11 (47.8%)	23	
Bachelor's degree	2 (4.3%)	8 (17.4%)	7 (15.2%)	29 (63.1%)	46	
Master's degree	5 (10.2%)	17 (34.7%)	7 (14.3%)	20 (40.8%)	49	
Ph.D.	2 (9.5%)	1 (4.8%)	5 (23.8%)	13 (61.9%)	21	
Total	12 (8.2%)	32 (21.8%)	24 (16.3%)	79 (53.7%)	147	

[a]Chi-squared analyses

[b]Fisher's exact test

parents, was examined as a function of children's and parents' demographic characteristics. Except for the children's age (years), all demographics were treated as nominal (i.e., child's gender, parental career, and occupational status) or ordered categorical variables (i.e., birth order, parental age, and parental level of education), and their relationships with the children's device use frequencies and device possession were tested using Chi-squared or Fisher's Exact test (when at least one cell was expected to count <5). As many cells were lower than 30 and as the average reported daily duration of digital device use was not normally distributed, the distribution of children's reported device use frequencies (independent variable) according to children's age (dependent variable) was analyzed using a Kruskal–Wallis H test as was the average daily duration of digital device use (dependent variable), parent's age (independent variable), level of education (independent variable). The association between children's ages and the average reported daily duration of digital device use was explored using Spearman's correlation (r_s). A Mann–Whitney U test was used to compare children's age and the possession/non-possession of digital devices. Gender differences in the average daily duration of digital device use, and in the children's mean age of first smartphone ownership, were also examined using a Mann–Whitney U test as were birth order differences in the average daily duration of digital device use, and in the children's mean age of first smartphone ownership. The age of first smartphone ownership (dependent variable) in relation to parent's age (independent variable) and level of education (independent variable) was explored using a Kruskal–Wallis H test. The statistics were computed using SPSS 20.0. Statistical significance was signaled by $p < 0.05$. Following the above analyses, the parental answers to qualitative questions were analyzed using Nvivo 11.4.3 (QSR International, Melbourne, Australia). For each question, thematic groupings were established by the author in order to group all answers that touched on the same topic. The thematic grouping was based on content analysis and frequency count of categories of responses using Nvivo 11.4.3 (QSR International, Melbourne, Australia).

Results

Sample Characteristics

Children's reported use of all screens without distinction are displayed in Table 2.

The average reported daily duration of digital device (tablets, smartphones, laptops, computers; excluding TV) use was 64.59 min (SD = 58.85, range 0–360 min per day, $n = 134$). According to participant responses, 30.6% of children had their own tablet/computer/laptop (18 boys and 27 girls) and 19.7% their own smartphone (20 boys and 9

girls). The mean age of first smartphone possession was 9.91 years (SD = 1.71, range 5–12 years).

Among participants, 63.9% of parents had concerns or questions about their child's use of digital devices. Children's device use was of concern to 53.1% of parents; 62.6% thought that digital devices might have an influence (negative or positive) on parent–child relationships; 40.1% reported receiving comments from their child about their own digital device use. The management of digital devices in the home was perceived as difficult by 31.3% of the parents, and 37.4% would value advice on management. The qualitative explanations accompanying these answers are considered below.

Quantitative Analysis

Children's characteristics and digital device use

The reported frequency of children's device use did not differ significantly across age ($\chi^2_{(3)} = 2.17$, NS). A series of Kruskal–Wallis H tests was conducted with regard to children's frequency of use of each digital device as the independent variables and their age as the dependent variable. There were significant age differences in the frequency with which children used laptops ($\chi^2_{(3)} = 15.72$, $p = 0.001$) and smartphones ($\chi^2_{(3)} = 8.96$, $p = 0.03$). However, when only children who owned a smartphone were taken into account ($N = 29$), there was no significant age differences in frequency of smartphone use ($\chi^2_{(2)} = 0.06$, NS). There were no significant age differences in frequency of computer ($\chi^2_{(3)} = 5.11$, NS) or tablet ($\chi^2_{(3)} = 0.92$, NS) use. Age was significantly—but only modestly—correlated with the average daily duration of device use ($r = 0.18$, $p < 0.05$). Children who possessed their own tablet/computer/laptop were significantly older than those who did not ($U = 1762.50$, $p = 0.02$). The mean age of tablet/computer/laptop's owners was 9.11 years (SD = 2.07, range 6–12 years), compared to 8.28 years for nonowners (SD = 1.86, range 6–12 years). The same result was observed for the children who had their own smartphone ($U = 383.00$, $p < 0.001$). The mean age of smartphone owners was 10.76 years (SD = 1.35, range 7–12 years), compared to 8.00 years for nonowners (SD = 1.69, range 6–12 years).

The reported frequency of children's device use did not differ by gender ($\chi^2_{(3)} = 4.52$; NS) (see Table 2). Considering each device separately, there were also no significant gender differences in the frequency of computer (Fisher's exact test, NS), laptop (Fisher's exact test, NS) or tablet ($\chi^2_{(3)} = 2.70$ NS) use. However, boys tended to use smartphones more often than girls (Fisher's exact test, NS). There was no gender difference on average daily duration of digital device use ($U = 2044.50$, NS; for boys: $M = 69.23$, SD = 61.84; for girls: $M = 59.60$, SD = 55.67), but girls tended to possess a tablet/computer/laptop more often than boys (37.5 vs. 24%, $\chi^2_{(1)} = 3.15$, NS). By contrast, possession of a smartphone was significantly more common for boys than for girls (26. vs. 12.5%, $\chi^2_{(1)} = 4.66$, $p = 0.03$), even though age of first smartphone ownership did not differ across gender ($U = 75.00$, NS; for boys: $M = 10.1$, SD = 1.69; for girls: $M = 9.56$, SD = 1.81).

Given that middle born and last born categories reported in Table 1 had lower cell frequencies than the first born category, we combined these two categories into one category labeled "younger siblings". Birth order was not related to the reported frequency of device use (Fisher's exact test, NS) (see Table 2) or to reported frequency of individual device use: computer (Fisher's exact test, NS), laptop (Fisher's exact test, NS), tablet ($\chi^2_{(3)} = 3.69$, NS), smartphone (Fisher's exact test, NS). Mann–Whitney U test revealed that the average daily duration of device use differed by birth order, with higher duration for youngest siblings than first born ($U = 1101.00$, $p = 0.013$; for first born: $M = 55.12$, SD = 51.62; for youngest siblings: $M = 84.97$, SD = 74.41). The possession of a tablet/computer/laptop differed by birth order ($\chi^2_{(1)} = 5.97$, $p = 0.015$), with fewer first born children owning their own devices (23.5% of first born vs. 44.73% of youngest siblings). By contrast, birth order was not related to possession of a smartphone ($\chi^2_{(1)} = 1.77$, NS), or to the age of first smartphone ownership ($U = 74.00$, NS; for first born: $M = 9.87$, SD = 1.59; for youngest siblings: $M = 9.95$, SD = 2.06).

Parents' sociodemographic characteristics and children's use of digital devices

Given that several categories of parental age reported in Table 1 had low cell frequencies, we combined the first and second categories and the last three. As a consequence, we ran analyses with four categories of parental age: 25–34 years old ($N = 25$), 35–39 years old ($N = 56$), 40–44 years old ($N = 48$) and more than 44 years old ($N = 18$). Parental age tended to be related to the reported frequency of children's device use (Fisher's exact test, NS) (see Table 2). Fisher's exact tests were also conducted pitting frequency of each device's use vs. parental age. Parental age was not related to the frequency of the use of any devices (computer: Fisher's exact test, NS; laptop: Fisher's exact test, NS; tablet: Fisher's exact test, NS; smartphone: Fisher's exact test, NS); nor was parental age related significantly to the average reported daily duration of device use ($\chi^2_{(3)} = 1.75$, NS), or the possession of one's own tablet/computer/laptop ($\chi^2_{(3)} = 1.21$, NS) or smartphone (Fisher's exact test, NS), or the age of first smartphone ownership ($\chi^2_{(3)} = 0.56$, NS).

In general, children's reported frequency of digital device use did not vary as a function of parental education

Table 3 Parental questions about their child's use of digital devices

Theme	Details	Number of responses	Percentage of responses
Impact on child's socio-emotional and cognitive development	Might digital device use negatively affect child behaviors, regulation of emotions, attention? Do they harm physical development (sleep, vision, neuronal system, …)? Does the use of digital devices have consequences on learning (positive and negative)?	26	29.54
Frequency and screen time	How to decrease children's screen time? What is a reasonable duration of use? What is the right frequency of use?	24	27.27
Uses and contents	How to be sure that the child is not exposed to inappropriate content? What does the child do and watch on digital devices?	17	19.32
Risk of addiction	Is there a risk of addiction? Can the child still play without a screen? How can we avoid problematic use of digital devices?	17	19.32
Harmful or not	What are the potential harms and benefits?	14	15.90
Find a balance	How to find a just balance between essential mastery of digital devices and a healthy use for children? How to find the right balance between screen time and others activities?	7	7.95
Parental control	What kind of games and what duration to allow? The control of what the child watches on his or her screens	6	6.82
Child autonomy	How to teach their child, allow them to master the digital devices and be autonomous in their uses.	3	2.27
Age-appropriate	How to adapt use to the age of the child?	2	2.27
Management in siblings of different ages	How to deal with the presence of younger children?	2	2.27
Minimize the influence of peers	How to reduce the influence of peers on digital device use?	1	1.14

88 parents responded to this open-ended question (out of 94 who answered "yes"), corresponding to 59.86% of the whole sample ($N = 147$)

(Fisher's exact test, NS) (see Table 2), nor did the frequency of the use of separate devices (computer: Fisher's exact test, NS; laptop: Fisher's exact test, NS; tablet: Fisher's exact test, NS; smartphone: Fisher's exact test, NS). Parental education was also not significantly related to the average daily duration of their children's device use ($\chi^2_{(3)} = 0.73$, NS), or possession of a tablet/computer/laptop ($\chi^2_{(3)} = 3.85$, NS) or smartphone (Fisher's exact test, NS), or age at first smartphone ownership ($\chi^2_{(3)} = 5.00$, NS).

Qualitative Analysis: Parental Concerns, Questions and Remarks about Digital Device Use by Their Child During Family Time

Parental questions about the use of digital devices by their child

Regarding parental questions about the use of digital devices by their child, five main topics, as shown in Table 3, were identified: parents wondered if the use of digital devices was harmful to their child (e.g., "What is harmful?"; "What consequences for their development?"); whether it had an impact on the child's socio-emotional or cognitive development (e.g., "Problem for his eyes and getting up in the morning"; "Repercussions on attention, exploration, imagination"; "Influence on his mood?"; "Effect on learning (positive/negative), socialization/desocialization"); if there was a risk of addiction related to digital devices (e.g., "How to prevent my child from becoming addicted?"; "I am appalled by the children that I see zombified by a screen at two years old, or groups of teens glued to their smartphone at 12. For the moment their use is limited to SMS's to their grandparents and, at most, the exchange of emails with good friends far away, which is great. It's the grandmothers who put clips on Youtube!"); what was the "right" frequency and amount of screen time (e.g., "I am both worried that he uses them "too much" and at the same time worried that he has little knowledge on how to use them compared to friends of his age"; "What duration can be harmful?"); and what children did with digital devices (use and content) (e.g., "Is he doing language exercises, or is he watching videos discreetly?"; "On which website does he spend most of his time? Sites for research or documentation or illicit content or inappropriate content for his age and their influence on his behavior"). Some parents provided a response that could be categorized into two themes (e.g., 4 parents' answers could be categorized in both "Impact on child's socio-emotional and cognitive development" and "risk of addiction"; 4 parents' answers could be categorized in both "frequency and screen time" and "harmful or not"; 4 parents' answers could be categorized in both "frequency and screen time" and "use and content"). An overarching

theme covers the five main topics: "parental concerns about digital devices harming children", which encompasses the responses of 76 out of the 88 respondents to this open-ended question (86.4%). Table 3 also discusses less common, but no less important questions.

Children's digital device use as a source of concerns for parents

Asked about their concerns, 69 parents explained their choice (out of 78 who answered "yes"), corresponding to 46.94% of the whole sample ($N = 147$). Some parents (31.88%) feared that their child's device use would turn into a pervasive activity (i.e., risk of the child's life being taken over by devices, tendency to withdrawal, difficulty stopping) (e.g., "The time viewing screens must not be at the expense of time spent on other activities. We therefore limit it and try to focus it on "educational" activities"; "This is his main topic of conversation"). Impacts on children's socio-emotional or cognitive development (i.e., fear of deteriorated vision, cognitive delay, decrease in attention, reduced emotional regulation) were also a concern (27.54%) (e.g., "We worry about the effects and make sure he does not look too much"; "I'm afraid his eyes and brain are getting damaged"; "Fear of consequences on cognitive and emotional development"). Some (18.84%) also worried about the content being viewed (i.e., access to inappropriate content) (e.g., "fear that he will be exposed to inappropriate images (untimely advertising between two kid's videos)") and the risk of addiction (18.84%) (e.g., "Fear of search results, and addiction. Irritation after screen time"; "I'm afraid he does not know how to handle himself and if I'm not here to limit the time he can't stop himself"; "Because she tends to withdraw and to lie more and more"). Few parents (8.70%) expressed concerns about parental control (i.e., difficulties controlling content, duration of use) (e.g., "Because you have to constantly set limits so that he does not spend too much time on it. And we worry about the future with social networks"; "Support the discernment regarding use").

Impacts (negative or positive) of digital device use on parent–child relationship

Many parents (62.6%) thought that digital devices might have an impact (negative or positive) on parent–child relationships. Eighty-three parents explained their choice (out of 92 who answered "yes"), corresponding to 56.46% of the whole sample ($N = 147$). Some parents (33.73%) thought that the use of digital devices reduced parent–child interactions (i.e., reduction of interaction due to parents (work, leisure) and child's use of devices, decrease of parental attention and availability, disrupted communication) (e.g., "in the negative, giving him permission to spend time on the computer is sometimes just a little free time"; "Cut the bond"; "Decreases the time of our exchanges, he is "obsessed" by some video games and speaks about them constantly"; "He communicates less… with his entourage"). However, some parents (24.10%) also allowed for device-related sharing of activities, interests and discussions with the child (i.e., games, videos, movies) (e.g., "We share many things together (games, discussions, outings)"; "We look at crafts that she would like to do and we make them. She writes e-mails to her grandparents"; "It's one more game we do together, a talking point for cartoons. Jingles that we sing loudly"). Some parents (22.90%) suggested that the impact on their child could relate to his/her imitation of parental behaviors (i.e., parent as a model) (e.g., "Negative impact, I do not show him a good example"; "I work on my iPhone and they do not see how this is different from a game. They think I play all the time"; "The time spent in front of the screens. How can we be credible, if we do not limit our time spent in front of screens?"). Digital device use could also represent a source of parent–child conflict (i.e., source of conflict and blackmail, disputes related to the interruption of use) for some parents (15.67%) (e.g., "Huge frustration at stopping the screens"; "Maybe I'm too strict and too stressed compared to the screens, so sometimes he blames me for it, he feels out of step with his friends"; "He complains and gets angry if I refuse").

Children's comments regarding parental use of digital devices

As previously mentioned, 40.1% of parents reported receiving comments from their child about their own use of digital devices. Fifty-seven parents explained their choice (out of 59 who answered "yes"), corresponding to 38.77% of the whole sample ($N = 147$). Half of those parents had been criticized for spending too much time on devices (i.e., time used on digital devices, overusing, still on digital devices, still working) (e.g., "You're always in front of your computer screen!"; "And you are also on your screens, you work all day on a screen"). Parents (28.1%) also reported their children reproaching them for the mismatch between limits set on children's screen time and parents' own screen time (i.e., children notice that parents limit children's device time while they indulge in a great deal themselves, children's feelings of injustice and incomprehension) (e.g., "They notice that we limit their screen time while we spend a lot of time on screens"; "Why do you have more right than me to screens?"; "When I work on my computer or smartphone, he complains that I'm more exposed to the screen than him. He would like to have more rights in that regard"). Technoference was also a critique reported by parents (15.79%) (i.e., children blaming them for not listening because of interference by parents' use of devices)

Table 4 Difficulties of management of digital devices in the home

Theme	Details	Number of responses	Percentage of responses
Parental control	Difficulties to control content and screen time, tendency to use restrictive mediation (rule making).	11	24.44
Parental use	Parents felt they themselves overuse digital devices and found it difficult to deal with their own use and the education of their child on digital device use (especially on allowable duration of use).	10	22.22
Source of conflict	Source of parent–child conflict but also source of conflict between parents or between parents and other family members (e.g., grandparents) because of dissident views on digital device use by children. Digital device use also engenders conflict between siblings.	10	22.22
Time limitation	Parents had difficulty limiting screen time and digital device use during family time (e.g., meals).	9	20.00
Mismatch between family habits and social environment	According to parents, children reported greater use of digital devices in their friends' families. Habits of digital device use differ from family to family.	6	13.33
Difficult switch-off	Parents reported children have difficulty interrupting their digital device use.	5	11.11

45 parents responded (out of 46 who answered "yes"), corresponding to 30.76% of the whole sample ($N = 147$)

(e.g., "you do not listen to me when you're on your screen"; "Breaking the relationship in a moment when they're in need of my presence"; "But can't it wait? You come looking for me but you do not care!"; "Mom you don't listen to me, you're always on your phone"). Children asking parents to turn off their devices was also evoked (10.53%) (e.g., "Stop looking at your phone"; "turn off your phone"; "Mom, leave your phone!").

Difficulties of management of digital devices in the home

Parents reported difficulties with parental control of children's device use (e.g., "We must constantly repeat the rules and readjust the rules for a 7-year-old. Hold out despite the fact that some friends already have phones"; "Difficulty in enforcing the rule of not using a mobile phone at mealtime"; "Permanent control. Help with control software and control of the internet box") and limiting time spent (e.g., "it's hard to make them respect the time limit"; "We must constantly limit the time of tablet or television use and encourage him to play outside, he complains, we must hide the tablet") (respectively 24.4 and 20%, see Table 4). In the home, parents reported difficulties related to their own digital practices (22.2%) (e.g., "Dad is sometimes absorbed by his smartphone"; "Difficult to say no when I have things to do and they must be calm"; "we try to spend less time on our smartphones"; "I have a compulsive behavior with my phone") and faced familial conflicts due to their device use (22.2%) (e.g., "Our two children are fighting over access to the computer"; "Divergence of points of view with his father who is more tolerant"; "Source of disputes").

Need for advice on management of digital device use in the home

Need for advice on management of digital device use in the home mainly revolved around limiting screen time (40.7%) (e.g., "How to help them relativize the importance of screens?"; "How to limit the frequency?"; "How to impose "screen" time?"; "On the limits that I do not know how to situate very well: when, how, how long? Should we yield more screen time to him so as not to penalize him in relation to the progress of his friends on the subject?") and online content viewed by their children (21.4%) (e.g., "Filter content, how best to manage the inevitable introduction to social networks?"; "How to limit inappropriate scenes and comments?") (see Table 5). Parents would also appreciate advice on how to explain online risk to their children (19.05%) (e.g., "I wonder about the safe use of the internet in the coming years"; "How to teach the good and bad sides of the Internet?"; "How to protect children while gently introducing them to the digital world?") and how to foster age-appropriate uses (19.05%) (e.g., "At what age should he get a telephone subscription?"; "Time spent according to age"; "How to reach adolescence without setting a hyper-rigid framework that will not work, or be totally lax and risk seeing his child wasting time on futile crap?").

Difficulties encountered with children's use of digital devices

Many parents encountered difficulties with children's use of digital devices. Thirty-six percent of parents experienced

Table 5 Needs for advice on management of digital device use in the home

Theme	Details	Number of responses	Percentage of responses
Time	How to impose time limits on digital device use? On the basis of what criteria? What is a reasonable duration of use of digital devices per day?	17	40.48
Content	What content is suitable for children? How to avoid inappropriate content?	9	21.43
Explaining risks to children	How to teach the good and bad sides of the Internet? How to help children understand risks of using digital devices (i.e., content, amount of use)	8	19.05
Age-related use	How to adjust duration of use, parental control, content, and smartphone ownership, depending on child's age?	8	19.05
Family rules and society	How to apply family rules in the use of digital devices, to allow other activities, without completely cutting the child off from the digital society? And what rules would be appropriate and practical?	7	16.67
Parental control	How to control children's use of digital devices (duration, content, …) without resorting to restrictive mediation (rule making)?	5	12.50
Parents need for information about risks.	Information on the risks associated with the use of digital devices and means of risk avoidance.	4	7.69

42 parents responded (out of 55 who answered "yes"), corresponding to 28.57% of the whole sample ($N = 147$)

difficulties unplugging their children from devices (e.g., "Difficult detachment"; "He thinks about it too much even when he's not playing"; "She gets angry when we turn off"; "Forced to confiscate screens to limit use") and 23% found it difficult to limit their child's screen time (e.g., "Time limitation"; "Difficulties of self-limitation"; "Imposing a maximum duration and endless negotiations to stop"; "Difficulty managing the time spent on it and having it turned off") (see Table 6). Nineteen percent of parents also explained that it was difficult to control both the child's use of devices and the content being viewed (e.g., "control what he's doing on the tablet"; "Very easy access to things inappropriate for his age"; "I never know what to teach him and what not to teach him, what information to give him, I feel a little lost"; "Exposure to advertising. Problem of content control").

Discussion

Given the importance of parental thoughts and comments for the design of preventive guidelines, our study aimed to highlight French parents' questions and concerns about digital device (tablets, smartphones, laptops, computers; excluding TV) use in the home. We focused on parents of school-aged children (ages 6–12 years) due to a glaring lack of data regarding this specific developmental period. We also questioned parents about their children's digital device use.

Quantitative Analysis

In line with Rideout (2015), in our sample, parents reported that older children tended to spend more time on screens and to use smartphones and laptops more often than younger children. This finding might be explained by the fact that parents monitor children's time spent on digital devices less and less as children grow up (Rideout and Robb 2019). As expected, children who possessed their own smartphone or other devices were found to be older (Ipsos 2018). Contrary to Rideout (2015), we found no gender difference in the reported daily duration of ICT use. This result might be explained by the low amount of daily duration of ICT use reported by the parents in our sample. This point is discussed in the limitations of the study. In our sample, boys were more numerous to own a smartphone than girls whereas girls possessed more tablets and other screens than boys. This is consistent with The Nielson Company (2017) for boys and Rideout (2015) for girls. In our sample, having an older sibling was related to a higher amount of reported screen time and screen ownership (excluding smartphones). This is in line with previous findings that highlighted the impact of siblings on ICT use and management (Domoff et al. 2019; Nevski and Siibak 2016; Nikken and de Haan 2015). Neither parental age nor parental education level were linked to children's digital device use (as reported by parents), whereas Rideout and Robb (2019) found that the higher the level of parent's education, the less time children spent on screens. The

Table 6 Difficulties encountered with children's use of digital devices

Theme	Details	Number of responses	Percentage of responses
Difficult unplugging	Children have difficulties to switch-off digital devices and got angry, thought often about it	36	36
Limit duration	It's difficult to manage the time spent on digital devices (to enforce a specific time and to teach children to manage screens time)	23	23
Control of use and contents	It's sometimes hard to know what are children doing on digital devices, whom are they talking to, what are the contents they are exposed to. It's also difficult to avoid advertisement and control access to inappropriate contents. Limits on what are the contents allowed depending on age are not easy to draw	19	19
Child difficult socio-emotional behaviors	Parents reported difficulties on concentration and attention, irritability and aggression, sleep disturbance, withdrawal	14	14
Pervasiveness	Children in case of boredom often request digital device use. It's hard to get kids to do other activities	8	8
Control discrepancy	Habits in the use of digital devices are different from family to family, or even within the parental couple. The balance can be hard to find, especially in case of separated parents	6	6

100 parents responded, corresponding to 68.03% of the whole sample ($N = 147$)

failure to reproduce Rideout and Robb (2019) findings could be explained by the high proportion of highly educated parents in our sample.

Qualitative Analysis

Our results showed that almost two-thirds of school-aged children's parents had questions about the place of ICT in the home. The topics addressed were the impact that digital device use might have on children's cognitive and socio-emotional development, and its potential harmfulness, especially the risk of addiction. Questioning themselves about how to manage the frequency and duration of screen use, parents in our sample also wondered about the content viewed by their children and how to find a balance between fostering the opportunities afforded by the digital world vs. protecting against its ever-present risks.

Data from our survey suggest that ICTs were a source of concern for more than half of the parents in the sample. The topics of concern were much the same as the questions outlined above. Indeed, many parents were deeply worried that digital device use might became a pervasive activity for children and could lead to addictive behaviors. Previously identified by Radesky et al. (2016), these fears and questions were also mentioned by George and Odgers (2015). It seems that they have to be taken into account throughout child development. Another important parental concern, also voiced by toddlers' and adolescents' parents (George and Odgers 2015; Radesky et al. 2016), was the potential risk of harming child development. This fear is justified by findings such as the link, however weak, between preschool children's media exposure and their failures at self-regulation. Nevertheless, a current review of evidence by Stiglic and Viner (2019) suggests that, "there was weak evidence for associations of screen time with behavior problems, anxiety, hyperactivity and inattention, poorer self-esteem, poorer well-being and poorer psychosocial health, metabolic syndrome, poorer cardiorespiratory fitness, poorer cognitive development and lower educational attainments and poor sleep outcome" (p.1). All the same, these authors found evidence that increased screen time can be associated with problems such as depression and obesity (Stiglic and Viner 2019), although the question of causation remains. More research is needed to address this, especially among school-aged children. Our results suggest that French parents who responded to the survey were more preoccupied by risks and by screen time, and this seems to have parallels in other recent findings (Livingstone et al. 2017; Paus-Hasebrink et al. 2013): "French parents favor restrictive mediation" (rule-making) (Livingstone et al. 2017, p. 95) more often than parents from other European countries.

Almost two-thirds of interviewed parents thought that ICT had an impact on family functioning and parent–child relationships, whether positive or negative. The interference of device use with the parent–child relationship, called technoference by McDaniel and Coyne (2016), and the resulting conflicts, appeared to be a major parental perception of technology in family time, as previously shown by studies of families with young children (under 8; Radesky et al. 2016) and with tweens and adolescents (ages 10–17 years: Hiniker et al. 2016). These perceptions could be explained by the fact that digital device use might reduce the child's interactions with the family to the extent that

ICTs are time-consuming. Tensions might arise from the parent's use of technology as well as the child's. Tension can also result from a misalignment perceived by tweens, "between parents' rules and tweens' actual digital media use" (Kim and Davis 2017). That could be particularly true in the French context given parents' propensity to favor restrictive mediation over active mediation (Livingstone et al. 2017). Our findings also showed that some parents in our sample might face difficulties managing their child's digital device use, which can spawn tensions in the relationship. Likewise, children reproached their parents for their parents' digital device use and the consequent reduction of attention afforded to them. In a longitudinal study among families with children under eight, McDaniel and Radesky (2018) found that parent's use of ICT and child behaviors were bidirectionally linked; that is, the greater the parent's use, the greater the child's internalizing and externalizing behavior problems, and conversely. Given the child's reduced need for attention with age, research is needed to examine whether these links between parent ICT use and child behavior problems are observable with older children. It is noteworthy that many school-aged children's parents in our study also mentioned positive effects of technology in the context of family activities; digital devices allowed sharing time and activities such as co-viewing and co-playing (Connell et al. 2015; Costa and Veloso 2016; Subrahmanyam et al. 2001). However, even if relationships between adolescents and parents may benefit from digital technology co-use, it remains an open question for toddlers (Strouse and Ganea 2017) and school-aged children (Yuill and Martin 2016).

Just under half of the parents in our study reported receiving comments from their child about the parent's use of devices. Children's comments were mostly related to the parent's extensive use of digital technology and the consequent decreased attention paid to the child. This perception of technoference due to parent's device use is associated with negative outcomes for adolescents (ages 10–20 years) such as anxiety, depression and cyberbullying (Stockdale et al. 2018), depending on the adolescent's perceptions of parental warmth that mediated the association between parental technoference and the teens' negative behaviors. Future studies should examine this link for school-aged children while taking into account the quality of the parent–child relationships. In our sample, children were also reported to criticize their parents for the inequity between parental limits on children's device use and their parent's own more liberal use. This finding suggests the need to strike a balance between parental control and parental device use. Furthermore, it's important to note that parental device use stands as an implicit model for the child to emulate (Vaala and Bleakley 2015).

For the parents interviewed, difficulties with managing digital devices in the context of family time, and difficulties encountered with children's use of digital devices on their own, were quite similar. Note, however, that parents of school-aged children in our sample expressed more difficulties related to their child's *use of digital devices* per se than related to managing digital devices in the home (more than two-thirds of respondents vs. almost a third). Parental difficulties outlined in this survey could be summarized as controlling use, content and screen-time, and getting children to put down their mobile devices, but also to put them down on their own without parental intervention. These results are consistent with the study by Hiniker et al. (2016), in which parents of tweens and teens also found it challenging to follow their own technology rules (or *restrictive mediation* as specified by Hiniker et al.) and that they—the parents—overused digital technologies. Other difficulties expressed by some respondents, apparently related to children's screen use, were children's negative behaviors such as irritability, sleep disturbance, withdrawal, decreased concentration and attention. Yet recent outcomes suggest only a weak association between technology use and adolescent well-being (Orben and Przybylski 2019). More research focused on this question with school-aged children is certainly warranted. Negative outcomes for children reported by parents to be linked to digital media use might also be related to parent's technology use (McDaniel and Radesky 2018), parent–child relationship quality (Stockdale et al. 2018), and prior child behavior problems (Radesky et al. 2016). At this point, it is difficult to know how these factors interact in school-aged children.

Despite the number of participants saying they faced difficulties with their child's device use, it was surprising that only a little more than a third of parents interviewed said they needed advice on managing the use of digital technologies in the home. This amount could partially be explained by the fact "that rules for and monitoring of various types of screen time decrease as children increase in age" (Sanders et al. 2016, p. 5). Nonetheless, parents expressed a need for support on how to monitor their child's device uses relative to age-appropriate criteria (i.e., how long, what content, when they should possess their own mobile technology) and how to help the child find a balance between device use and other activities. Consistent with Twenge and Campbell (2018), our results showed that screen time was correlated with children's age. We also note that the amount of children's screen time in our study was lower than that previously observed in French children by Ngantcha et al. (2018) (respectively 64.6 min vs. 180 min). This difference might be explained by the fact that children were younger in our study (8.54 (±1.96) years vs. 14.5 (±0.8) years), yet one might still wonder if our

parents had underestimated their children's screen time. This difference might also be partly explained by the high proportion of highly educated parents in our sample. Indeed, Rideout and Robb (2019) found that the higher the level of parental education, the less time children spent with screens. Another difficulty for parental monitoring arose from dealing with siblings' age differences; as previously mentioned, participants reported greater screen time and a higher frequency of possession of their own digital device (except for smartphones) for younger siblings than older siblings. Parental support was also needed to allow safe Internet use by their children; specifically, to avoid age-inappropriate content and to explain risks to children. Apart from this last point, probably because children were older in our survey, our findings mirror a recent study with younger children (Nikken and de Haan 2015). As children grow up, parents would increasingly involve them in deciding how to handle the use of digital technologies.

In summary, the parents of school-aged children in our survey had contrasting views of digital device use in the home, although several concerns and difficulties emerged. The recurring topics concerned the impacts of digital technologies on child development and family relations, and parental mediation regarding screen time and content. It is necessary to replicate these findings in a larger and more representative sample in order to take them into account in the design of digital parenting guidelines. Indeed, according to Sanders et al. (2016), understanding parents' perceptions of digital technologies is essential because those perceptions could interact with their handling of screens and are related to parenting styles (see also Brito et al. 2017). For example, given recent studies suggesting that average screen time is not as harmful for older children's outcomes as previously supposed, we suggest that guidelines should focus not only on risks but also on parent–child relationships surrounding the use of digital technologies and positive opportunities afforded to children in the digital age. We endorse Blum-Ross and Livingstone's (2018) emphasis on, "helping parents understand the content of what their children watch and do on and with screens, the context of where they watch and do, and the connections they make (or do not make) while watching and doing" (p. 185). Digital technologies could be more or less beneficial or harmful depending on individuals' characteristics and environmental features at play.

Based on our results and on the American Academy of Pediatrics' recommendation, we also suggest to create a health Family Media Use Plan with each family. Indeed, Family Media Plan could help parents to deal with siblings' age differences in managing screen time. By defining screen time and screen-free time, Family Media Plan could help parents to reduce their own media use, and could result in less technoference in parent–child activities and less familial conflicts due to media use, reported by our participants. Family Media Plan also "encourage age-appropriate critical thinking and digital literacy, and support open family communication and implementation of consistent rules about media use"(Chassiakos et al. 2016, p. e1). Finally, we suggest to improve digital skills of both parents and children to reduce fears and enable parents to support their children's media use (Livingstone et al. 2017). Future research is needed to outline risk and protective factors in order to meet the aims of Livingstone et al. (2017): "maximizing opportunities and minimizing risks for children online".

Limitations

This study is limited. The first limitation concerns the participating parents' level of education as compared to the overall French population: 78.9% of our participants had completed at least a bachelor's degree compared to 22.4% of French adults in general (INSEE 2018). Parents' level of education is reported to influence parental mediation styles, with less educated parents using more restrictive mediation and less active involvement (Nikken and de Haan 2015). Previous findings also suggest that there are differences in risks and opportunities regarding children's use of digital devices depending on their parents' level of education. Less education in parents is related to more inconsistent rules (Nikken and Schols 2015), fewer opportunities for children and fewer online risks (Livingstone et al. 2017). However, in the current study we found no relationships between parental education level and children's frequency of digital technologies use, their daily screen time, or their possession of digital devices (as reported by parents). Given the uniformly high education of our participants, this failure to find parental education to be related to the child variables may be regarded as an instance of restricted range of variation. This limitation could be related to the online self-recruitment of participants; parents who responded to the survey might be heavy users and/or more concerned about child's use of devices than others. Our sample was a convenience sample which was not representative of the general population. Another limitation was our failure to distinguish between weekdays and weekends when assessing screen time. Given the relatively short times reported by parents, one might assume that they were referring to children's screen time during weekdays. Our study focused on parent's concerns and perceptions and one might assume that parents underestimated their children's screen time. Parent reports cannot be considered objective measures of the frequency and duration of children's digital device use. Indeed, a recent study found that parents are not accurate in estimating even of their own media use (Yuan et al. 2019). The scales used for the estimation of the frequency of digital device use could have been more precise, with more levels

of graduation, to provide more information regarding actual use and to avoid a ceiling effect (i.e., more than half of the children were reported to use digital devices every day). It is also important to note that the survey attempted to exclude TV as a digital device, but that it is quite possible that participants reported their perceptions of TV screen use in their responses to some of the items. In this study we only examined parental views. It would be profitable to take into account children's perspectives on the use of digital technologies, especially within the family group context, and children's perspectives regarding their parents' efforts to mediate their device use (Livingstone et al. 2017). Haddon (2015) found that tweens and teens (ages 9–16 years) sometimes disagreed with parental mediation, particularly when parental monitoring was inconsistent and conducted in an insensitive way. It would also be important to consider parent, family and child well-being (e.g., mental health, child behaviors, parental stress, and attachment) as these variables might have some bearing on parental concerns.

Compliance with Ethical Standards

Conflict of Interest The author declares that she has no conflict of interest.

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