PERCEPTIONS OF CAREGIVERS TOWARDS SCREEN USE BY CHILDREN: A FOCUS GROUP STUDY

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Abstract

The recent advancement of technology has led to a significant increase in the access and use of digital devices by children of all ages. This study explores the perceptions of caregivers regarding the use of digital screens by children aged 0–13 years. To select the sample, an initial open webinar was held, involving approximately 100 participants. From this group, thirteen attendees volunteered to participate in a focus group, from which finally five mothers participated. During the session, the participants discussed the benefits and risks of technology, the guidelines and strategies they use to promote a healthy use of technology by their children, and their fears related to the topic. Results reveal that most of participants' children occasionally use digital devices in their leisure time and usually use the computer for homework. Their main concern is addiction, and although all of them apply strategies to regulate screen time. all feel that society pressures them to encourage children to use digital devices. They also highlight the need for further research to provide society with adequate digital education. These results are consistent with the literature and are useful for better understanding the concerns and strategies of parents regarding their children's screen time. The results of the study can be incorporated into the development of further outreach to families.

Keywords: Perceptions, focus group, caregivers, screen-time management, children

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1. Introduction

In modern society, families naturally incorporate digital devices, such as tablets, virtual assistants and smartphones, into their daily routines. Based on Instituto Nacional de Estadística (National Institute of Statistics [INE], 2022) data, 82.9% of homes in Spain have at least one computer or tablet, 96.1% have access to the internet, and 99.5% have a cellphone. Data shows that access to technology has experienced exponential growth, and children are no exception to this trend. Their usage is starting at increasingly earlier ages (Gottschalk, 2019). Technology offers many benefits and educational opportunities. However, it also raises concerns about its effects on children's development (Hartshorne et al., 2021). This situation presents new challenges for families, educational institutions, and society. Therefore, it is fundamental to establish new lines of research in this matter.

1.1. Digital devices and family routines

Technology is ubiquitous in families' daily activities. Frequently, individuals engage with their digital devices, especially smartphones, during various activities such as walking, doing household chores or even during social interactions. Moreover, it is increasingly common for families to come together while everyone remains immersed in their digital screens (Martinez-Roig et al., 2023). Technological devices are used to work, study, learn new skills, handle household chores, and provide entertainment during leisure time. Regulating the use of digital screens among children and young people becomes more complex because they use them not only for entertainment, but also for schoolwork and socializing. The versatility that makes technology so attractive also contributes to increased screen time in children's daily routines (Arufe-Giráldez et al., 2020). However, the overuse of these devices has the potential to harm the quality of the dynamics within families. Also, parental technology practices and attitudes regarding technology use are likely to influence the home environment and the child. Children often learn by imitation, and parents are the main role models (Lauricella et al., 2015). For this reason, it is important to consider parents' use of digital devices when analyzing children's screen time.

Families are the main agents responsible for regulating children's exposure to digital media, monitoring the content they consume, minimizing screen time and preventing the development of addictive behaviors (Nagy et al., 2023). In this regard, parents find themselves in a complicated position because today's society requires the constant use of technology. Parents should attempt to minimize the risks associated with technology while promoting the healthy use of screens (Jeffery, 2020).

Another challenge frequently faced by parents is that children and teens are highly skilled in the use of digital devices, which makes it difficult to limit their use. Parents generally adopt a variety of strategies to try to control this use, such as limiting screen time hours, installing parental control applications on their children's digital devices, or setting passwords for devices (Montoya et al., 2018).

1.2. Background of the study

The study of children's use of screens is a growing field in national and international research. However, on the basis of our findings of a previous study, many studies are focused only on analyzing screen-time from a health perspective. Fewer studies approach the problem from a holistic perspective, including the social and educational component (Conde-Gómez et al., 2022). Therefore, it is increasingly

relevant to study not only the screen time but also the context. Therefore, qualitative research is highly relevant in examining the contextual factors surrounding the issue. Zabatiero et al. (2018) identify four common lines of research to approach this topic:

1) Qualitative research focusing on in-depth case studies of children's technology use.
2) Exploring how adults perceive young children's learning with technology in home and educational settings.
3) Analyzing how parents and caregivers use technology with their children at home.
4) Analyzing educators' views on utilizing technology with young children and their ability to integrate technology in the classroom.

Morales-Domínguez et al. (2022) suggest a fifth line of research that highlights the need to analyze parental perceptions of their children's screen use.

1.2.1. Contributions from recent research

The COVID-19 restrictions resulted in a significant increase in screen time for families. As a result, research on the use of digital devices during childhood has intensified in recent years. Many studies analyze the time and pattern of use of digital devices before and after confinement. Medrano et al. (2021) found that Spanish children consume more screen time than recommended by experts before confinement and that this time increases after confinement. Research also suggests that families of lower socio-economic status may face challenges in managing their children's screen time. This is often related to the absence of guidelines, the difficulty in providing alternative extracurricular activities away from screens, and the use of digital devices as digital babysitters (Ortiz de Villate Fernández et al., 2023). Moreover, research has confirmed that caregiver stress is associated with increased screen time exposure for children. Likewise, attempting to manage screen time can lead to conflict, which results in more stress (Brauchli et al., 2024).

2. Purpose of the Study

The objective of the research is to understand the expectations, concerns and personal experiences of a selection of the main caregivers of children under 14 years of age in relation to their children's screen time. For this purpose, a focus group was conducted, and some sociodemographic data was collected as well.

3. Research Questions

i. What are the particular experiences and perceptions of children's screen time from the caregivers' perspectives?
ii. What strategies do the caregivers follow in order to promote healthy screen time?

4. Research Methods

For this study, the focus group method was used to obtain qualitative data that reflected the concrete experiences of the sample. To reach our target audience, we offered a free webinar with recommendations

for managing children's screen time. The webinar was promoted through school management teams and family associations in schools in Catalonia (Spain).

This first webinar was attended by 109 mothers, fathers and main caregivers of children under 16 years old. During the meeting, participants who were interested were encouraged to contact us to be part of the research by participating in a focus group. 13 of those who attended the webinar contacted us to participate in the research, and finally 5 attended the focus group. To establish the participants' profile, we conducted an initial survey that included their gender, age, educational level, the type of school their children attend (public, semi-private, or private), location, number of children, their children's age, and their level of concern regarding their children's screen time on a scale of 0 (not concerned) to 10 (extremely concerned). The profiles of those who offered to participate are as follows (refer to Table 1).

Table 1. Profile of interested participants

Caregiver	Age	Educational level	School	Children	Children's age	Concern
Mother 1	45-55	Postgraduate studies	Public school (Barcelona)	2	7 / 11	9
Mother 2	35-45	Degree	Semi-private school (Barcelona)	2	7 / 13	7
Mother 3	35-45	Postgraduate studies	Public school (Tarragona)	1	6	8
Mother 4	45-55	Higher vocational training	Public school (Barcelona)	1	10	8
Mother 5	35-45	Degree	Semi-private school (Barcelona)	1	2	7

The five participants had similar socio-demographic profiles: working mothers between 35 and 45 years old and with post-compulsory education. Their children were between 2 and 13 years old. They all reported a level of concern equal or higher than 7. This data is aligned with the profile of parents who attended the initial webinar: 82.8% were women, 90.7% were between 35 and 55 years old, 87.5% had higher education and 76.4 indicated a level of concern equal or higher than 7. With regard to the mothers who did not attend the focus group, three failed to respond to the invitation, two were unable to commit to any of the proposed meeting times, and the remaining three had unforeseen events at the last minute.

The second webinar with the five participants was conducted via "Google Meets" platform by the first author of this paper, acting as a moderator. She has previously moderated other webinars in Kenkolab[1]. This session was recorded for later transcription. The session lasted one hour and eight minutes and consisted of three phases:

1) Presentation. The moderator explained the research project, and the participants provided informed consent for the session to be recorded.

Conversation. In this phase, the moderator introduced some questions to guide the conversation among the participants in order to extract as much relevant information as possible for the study. Since we

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[1]It is a centre for the study of the healthy use of screens during childhood whose main objective is to create scientific evidence to find ways to improve health and development during childhood and to help families.

only had 5 participants, we wanted to glean as much qualitative data as possible; hence, the questions were kept to a minimum and left open-ended in order for participants to contribute their thoughts without any constraints.

The questions proposed were the following:

a. What is your reality regarding the use of screens by your children?

b. What worries you most about your children's use of screens?

c. How do you manage screen use with your children at home? Do you think it works?

d. Do you feel that you need more support or information to manage screen time?

e. What use do you make of screens when you are with your children?

These guiding questions were developed based on the previous webinar and literature to ensure that the conversation addresses the research questions mentioned above.

2) Closing. Finally, the participants were thanked for their time.

5. Findings

During the focus group webinar, the moderator's involvement was minimal. Participants shared their perceptions, expressed their concerns and experiences regarding their children's screen time, and also added new subtopics to the conversation. In addition, two new topics emerged spontaneously: the digitalization of schools and the social pressure to use technology (refer to Table 2).

Table 2. Findings

Topics of discussion	Mother 1	Mother 2	Mother 3	Mother 4	Mother 5
Children's everyday reality					
Use the computer for homework	x	x	x		
Use the computer to learn skills	x				
Use the cellphone to chat with the family	x				
Use the cellphone to chat with friends		x			
Watch TV during leisure time			x		x
Use devices to play games during leisure time				x	
Participants' main concerns					
Not knowing what they do with the devices	x	x			
Access to inappropriate content	x		x		
Addiction		x	x	x	x
Screen time management					
Limit daily leisure screen time	x	x			x
Communication	x	x	x		
Parental control application		x			
Offering unplugged activities		x			x
Co-viewing			x		x
Checking the search history				x	

Participants' needs					
Training for parents and children	x	x	x	x	
Training for parents					x
Participants' own screen time					
No relevant information expressed	x			x	x
Frequent use of the devices and belief that this can constitute a negative example		x	x		
Schools' digitalization and social pressure					
Believes that over-digitization complicates screen time management	x			x	
Feels pressure to buy a cell phone at the age of 12		x			
Believes isn't necessary to do homework on the computer at early ages			x		
Feels pressure to use the devices to prevent children from being annoying					x

5.1. Children's everyday reality regarding screen time

All participants, except Mother 5, commented that they tried to ensure the moderate usage of technology among their children. However, despite the fact that the children do not spend too much leisure time on the screens, they need to use the devices daily for school purposes. Mother 2 commented that her sons need to use digital devices in different contexts. Mother 3 agreed and added, "What we do is not let him use them, but it is true that in his daily life, at the age of 6, he has constant contact at school and even has a Google Classroom, and they (the school) propose to use the Google Classroom at home".

Another common point to highlight is that all participants, except for Mother 5, indicated that their children started using more devices or using them for longer periods of time after the COVID-19 pandemic. Mother 1 said, "they started using computers, especially after the pandemic, to do work in Google Classroom". In the case of Mother 4, the use of screens by her son, as a result of the pandemic was not due to her son's studies but to the need to combine work with caring for her son. "My son had never touched a tablet or anything technological until the pandemic came, and then, I had to telework, and he was at home, and I bought the tablet to be able to telework, because I'm a single mother, so of course, I bought the tablet." She had to work from home while taking care of her children on her own, so she felt the need to buy a tablet to help her balance family and work.

In the case of mother 5, her situation is very different because her daughter is only 2 and a half years old, and she has had little contact with screens except for watching movies: "In the evening she attends more to music than to screens, but she enjoys watching movies."

5.2. Participants' main concerns

Regarding the main concerns of the participants in relation to their children's screen time, we observed some differences according to the age of the children.

In the case of the older children, aged 11 and 13, Mother 1 and Mother 2 agreed that one of their main concerns is not knowing what their children are really doing with the devices. Mother 1 explained that "sometimes I think he will do the unfinished homework, but I go and see that he's on music and stuff,

and I'm a little scared". Mother 2 also shares a very similar situation: "You don't know if they're doing homework, if they're talking to friends, or if he's on I don't know what...".

They also expressed great concern about viewing inappropriate content. Mother 1 shared with us the following worry about her sons:

"The one thing that most worries me is the access to information that does not concern him, in particular, sex and drugs. The fact that they have access to information that, at their age, may not concern them. They start to see things that I haven't explained to them yet or that don't concern them, what do I do?"

In the case of the younger children, aged 2, 6, 7 and 10, the main concern is that children become addicted to digital screens and stop doing other things that are relevant to their age. Mother 3 illustrated this fear with a real experience in which her children, especially the youngest, spent the whole week thinking about the weekend because then they could play video games:

"We had a PlayStation, and the kids didn't even know it was a PlayStation because we never told them. Until they found out because a kid came home and said, "Ah, you have a PlayStation!" and that's when Pandora's box was opened. On the weekends they played a little bit, but we realized that the little one was always thinking about the weekend, "Oh, when the weekend comes, oh when will it come"."

Mother 4 didn't hesitate in admitting that her biggest fear was that her son would become addicted to screens: "What worries me the most is the addiction". Mother 3 replied, "Yes, and also the matter of addictions, because it absorbs them. They pick up a cell phone, especially my little one grabs it, and it is like he just looks at it and says, "I want more, I want more, I want more...". Mother 2 continued in the same direction and commented that her main concern was that he stopped doing other things to spend time with the screens: "Well, I'm worried that he'll miss out on life. Mother 5 added, "I'm concerned about the loss of interest in other things because I see it with my nephews; we meet, and they don't play, they don't have interaction..."

5.3. Screen time management

Mother 1 commented that they attempt to restrict the use of the screens to one hour on Saturday and one hour on Sunday: "Well, we have the Chinese law [2]rule, one hour on Saturday and one hour on Sunday, and that's the way it is. But of course, to do his homework, he has to look for information, and then he uses it." She also comments that she believes she doesn't manage her children's screen time in any way:

"I don't manage it, I mean, because for the big one, if he has to look up information, he accesses the dictionary, but also Google, and also YouTube; that is, he does it on his own; that is, I'm not managing anything; I just trust in communication and that if he finds something, he should tell me."

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[2] Since 2021, Chinese minors are only allowed to play video games for a maximum of three hours per week, with one hour permitted on Fridays, Saturdays, and Sundays.

Mother 2 uses a more direct management technique. She explained that with her eldest son, they use a parental control application to control both the time of use of the devices and the content he has searched for: "For example, what we decided to do was to install Qustodio (A parental control application) on his phone, which is wonderful because it even shows you the research he has done, he knows it, and obviously you can't install it everywhere, but well, it gives you information about what you can expect." She has also noticed that another way to help her children spend less time in front of the screens without having to fight is to provide them with many activities in their free time:

"The conclusion I have reached is to occupy their time doing sports, doing theater, whatever… To fight against them is to enter a war that, when they are older, you have everything to lose. But of course, if they do not have time to do things they like, you avoid the conflict a little".

Mother 4 commented that her son doesn't have a cell phone yet and only uses the tablet to play games and watch some YouTube videos. For this reason, for the moment, she does not think it is necessary to exercise control beyond watching the searches and videos he accesses: "I have the tablet's account linked to my cell phone, so I can see his searches and what he sees on YouTube".

In the case of Mother 3, she doesn't use any kind of parental control application but rather relies on co-viewing and communication as management strategies:

"We have not put YouTube Kids on, we put it on for adults, and we always tell him that if he watches it, he has to do it with us in front of him. But I have also told him many times that this has some dangers, and I have tried to explain it, but I don't know exactly how to explain it to a 6-year-old child."

Finally, mother 5 briefly comments that since her daughter is so young, she just decides when her daughter can watch a movie or a cartoon that she has previously selected to be appropriate:

"In my own case, since she is only two and a half years old, I decide when she can or cannot watch TV, and I always choose the movies or cartoons that I think are appropriate, I don't need any other control."

5.4. Participants' needs

Regarding the needs of the participants in relation to the screen time management, all of them expressed their doubts about how to manage children's screen time. Mother 1 showed her concern about not knowing what to do in certain situations to control the content accessed by her children:

"When they go on YouTube and start browsing things, they start seeing things that I haven't explained to them yet or that don't concern them because of their age. What do I do? How do I set up tools to restrict or comment on it, or... sometimes I don't know what to do".

Mother 2 continued the discussion started by Mother 1 and added:

"That is, because there is no experience, and then we lack everything. And they are trying to put patches like the Qustodio, the I don't know what, the time limiters of the Nintendo... But of course, in the end, all this is very big, very big, and you feel that you have time bombs at home, and you

give them to your children and hope that they don't explode. I don't know, I think this is it. That's why we are here to see if we can find more answers."

They mentioned that they had a need for quality information and training, both for the parents and for the children. In particular, they expressed that they found the previous webinar very useful and that they would like to attend more initiatives like this one. Mother 4 suggested that schools should provide training courses for children and teenagers on the risks of the misuse of new technologies: "I think there should be a subject in schools that talks a lot about these issues, about the risks, not just for parents."

They also commented that sometimes they feel that society does not offer them support to manage screen use. Mother 5 suggested that talking to other people in the same situation can be helpful in order to share experiences and not feel alone in such a complex situation: "In fact, talking to other parents is very helpful, it should be done more." The other participants agreed, and mother 2, for example, explained that "when you talk to other families, you see that you are not alone, that they have the same problems, and you can share tips, it is very encouraging".

5.5. Own device use

The question of adults' use of digital devices, despite being planned, emerged in the conversation between the participants without the need for intervention from the moderator. While Mother 2 explained that her children have very limited hours of screen use to prevent them from being constantly connected, she commented that "even adults do it too. When I receive the weekly report of the hours of use of my phone, I think, 'My God, and that's me'… But of course, I use it for everything, at home and at work." Then, Mother 3 concurred:

"Yes, the use we make of all the devices we have at home and the cell phone. I have two cell phones, one for work and the other is my personal one that I use to take pictures, I use it for the networks, and he sees me, and then I tell him no, no, just half an hour. What's the example? What do we have to do".

The rest of the participants didn't add any other comments on the point but nodded their heads as Mother 2 and Mother 3 spoke.

5.6. Society pressure and digitalization of the school

Participants naturally initiated a conversation around the feeling that families are under pressure from all sectors of society to use digital devices.

Mother 3 started the conversation by explaining that in her son's primary school, they use Google Classroom to send homework to the students: "In our case, he has a Google Classroom, a 6-year-old child has a Google Classroom! …They make a didactic use, but sometimes I think it is not necessary yet." Mother 1 continued explaining a recent experience: "The other day we went to lunch with some parents from my son's school, and we were worried about this issue. What we were saying was just this: "It is a problem to do everything on the computer at these ages." Then, Mother 4 continued, commenting that digitizing the

school causes children to spend more time in front of a screen. It also results in parents having to supervise that they are really using the devices to study:

> "Exactly, is that at some point they have to use the computer all day, and then you don't know if they are doing homework, if they are talking to friends, listening to music, playing Roblox... and now suddenly we have become policemen".

From this topic, Mother 5 turned the conversation to the social normalization of digital screen use at early ages. She explained that:

> "Sometimes, when we go out to eat or go on a trip with friends, they give the cell phone or tablet to their children, and they are surprised that we don't do the same with our daughter, it even seems to bother them that our daughter talks and moves".

The other mothers nodded in agreement, and mother 2 added that she had felt a similar sensation in relation to the purchase of the first cell phone. She related that when her son was in 6th grade, all her son's classmates started receiving a cell phone as a birthday or Christmas gift, which caused a conflict with her son:

> "Suddenly all my son's classmates had a cell phone, as if when he turned 12, it was a must. We didn't want to give him one because he doesn't need one, but this was a daily conflict: 'my friends are playing together, and I don't; we have to do a group project; I'm the weird one...' In the end, we conceded".

6. Conclusion

The participants of the initial webinar and the focus group share a similar socio-cultural and demographic profile: women between 35 and 55 years old with higher education. This data is consistent with the sociodemographic profile of the individuals who participated in the webinar conducted.

All five participants shared similar experiences regarding their children's screen time. Their children frequently use the computer for school work and use the computer and other devices occasionally as a leisure activity or to communicate with friends and family. 4 of the participants expressed great fear that their children might develop a screen addiction. As Livingstone & Byrne (2018) point out, today's families face new challenges as children gain access to the Internet and new devices. Common concerns about screen time or addiction only aggravate these difficulties. Therefore, participants feel insecure about not knowing if they were managing the issue properly. Despite these doubts, according to the information provided by the participants, these families are already performing aligned with the main recommendations of child health experts. According to Cartanyà-Hueso et al., (2021) these guidelines are:

- From 2 to 5 years old: limit screen time to one hour per day of high-quality content.
- From 5 to 17 years old: Limit leisure screen time to two hours per day.

They also expressed their concern about the digitalization of schools especially after covid-19 pandemic. In general, the participants considered that although schools promote an educational use of devices, the over-digitization adds too much screen time for students and generates some conflicts in relation to the device use management. The perception that, since the pandemic, screen time dedicated to

schoolwork has increased is supported by data provided by recent studies. Zancajo et al. (2022) indicate that the closure of schools due to confinement has accelerated certain digitization policies in Spain, including:

- Technological equipment of schools
- Reinforcing the development of digital competencies in teachers and students
- Providing students with digital devices

Participants were aware of the potential risks and benefits associated with the use of digital devices. Therefore, they applied some type of time restriction or content control to their children's devices. Some approached it in a more direct way (bans, parental control applications, history checks, etc.) and others used more indirect management techniques (co-viewing and periodic conversations about the issue). The sort of strategies that emerged during the focus group are consistent with the strategies found in other studies. For instance, in the study carried out by Bartau-Rojas et al. (2018) the following strategies were identified:

- Control strategies: establishment of rules, time-space organization, and direct supervision
- Support strategies: communication and teaching, modelling, and reinforcement of self-management

Moreover, the most frequently used strategies by the participants are to limit the daily leisure screen time and to explain to their children the risks associated with technology. Several studies suggest that parental restrictions and regulation on the use of digital devices are associated with less screen time for children. These studies also indicate that it is important to monitor the use of devices not only by children, but also by adults because there is a strong correlation between the amount of screen time that parents and children consume (Muppalla et al., 2023).

Participants reported a moderately high concern (7) for their children's screen usage in the initial survey. However, during the focus group, none of them expressed significant issues with their children regarding screen time management. This discrepancy could be due to the fact that the participants are highly involved caregivers. They probably dispose of many personal resources to manage the use of screens while being more aware of the potential risks. A sign of their involvement is the interest they have shown in participating in our study and the willingness to continue their learning. Moreover, several studies confirm that children belonging to families with a medium-high socioeconomic level tend to have better sleep patterns and mental health (Cartanyà-Hueso, et al., 2022). All these factors may also help explain the absence of major conflicts in relation to screen time management.

The point that generated the widest consensus was related to the need to receive more training on how to manage screen time with children. Participants were insecure in relation to this issue and consider that families are not adequately prepared to manage the problem. Therefore, participants showed great interest in attending training and believed that it should also apply to children.

The study's main limitation was its small sample size. Therefore, the results cannot be generalized to the entire population. Be that as it may, the study has produced findings which are consistent with previous studies and for this reason, the findings merit consideration and are relevant to the continued

research of this issue so that the results obtained can generate actions that would have a positive impact on society.

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Data Availability Statement

Data is available upon request.

Declaration of Conflicts Interests

The authors declare that they have no conflict of interest to disclose.

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References

Arufe-Giráldez, V., Cachón Zagalaz, J., Zagalaz Sánchez, M., Sanmiguel-Rodríguez, A., & González Valero, G. (2020). Equipamiento y uso de Tecnologías de la Información y Comunicación (TIC) en los hogares españoles durante el periodo de confinamiento. Asociación con los hábitos sociales, estilo de vida y actividad física de los niños menores de 12 años [Equipment and use of Information and Communication Technologies (ICTs) in Spanish homes during the period of confinement. Association with the social habits, lifestyle and physical activity of children under 12 years old]. *Revista Latina de Comunicación Social*, *78*, 183-204. https://doi.org/10.4185/RLCS-2020-1474

Bartau-Rojas, I., Aierbe-Barandiaran, A., & Oregui-González, E. (2018). Parental mediation of the internet use of primary students: Beliefs, strategies and difficulties. Comunicar. *Media Education Research Journal*, *26*(1). https://doi.org/10.3916/C54-2018-07

Brauchli, V., Sticca, F., Edelsbrunner, P., von Wyl, A., & Lannen, P. (2024). Are screen media the new pacifiers? The role of parenting stress and parental attitudes for children's screen time in early childhood. *Computers in Human Behavior*, *152*, 108057. https://doi.org/10.1016/j.chb.2023.108057

Cartanyà-Hueso, À., Lidón-Moyano, C., González-Marrón, A., Martín-Sánchez, J. C., Amigo, F., & Martínez-Sánchez, J. M. (2022). Association between leisure screen time and emotional and behavioral problems in Spanish children. *The Journal of Pediatrics*, *241*, 188-195. https://doi.org/10.1016/j.jpeds.2021.09.031

Cartanyà-Hueso, À., Lidón-Moyano, C., & Martínez-Sánchez, J. M. (2021). Tiempo y uso de pantallas en niños y adolescentes: revisión y comparación de las guías de cinco instituciones sanitarias [Screen time and use in children and adolescents: review and comparison of the guidelines of five health institutions]. *Boletín de Pediatría*, *61*, 174-179.

Conde-Gómez, A. L., Bofarull-De Torrents, I., & Cerrato-Lara, M. (2022). Preschool Children and Screen Exposure: a literature review comparing Spanish and International research. *Quaderns de Polítiques Familiars: Journal of Family Policies*, (7).

Gottschalk, F. (2019). Impacts of technology use on children: Exploring literature on the brain, cognition and well-being. *OECD Education Working Papers*, No. 195, OECD Publishing, Paris, https://doi.org/10.1787/8296464e-en

Hartshorne, J. K., Huang, Y. T., Paredes, P. M. L., Oppenheimer, K., Robbins, P. T., & Velasco, M. D. (2021). Screen time as an index of family distress. *Current Research in Behavioral Sciences*, 2, 100023. https://doi.org/10.1016/j.crbeha.2021.100023

National Institute of Statistics (INE). (2022). Equipamiento de productos TIC en las viviendas principales por tamaño del hogar, tipo de hogar, hábitat, ingresos mensuales netos del hogar y tipo de equipamiento [ICT Equipment in main dwellings by size of the household, habitat, net household monthly income and type of equipment]. Madrid: Instituto Nacional de Estadística.

Jeffery, C. P. (2020). Parenting in the digital age: Between socio-biological and socio-technological development. *New Media & Society, 146144482090860.* https://doi.org/10.1177/1461444820908606

Lauricella, A. R., Wartella, E., & Rideout, V. J. (2015). Young children's screen time: The complex role of parent and child factors. *Journal of Applied Developmental Psychology*, *36*, 11-17. https://doi.org/10.1016/j.appdev.2014.12.001

Livingstone, S., & Byrne, J. (2018). Parenting in the digital age: The challenges of parental responsibility in comparative perspective. In *Digital Parenting: The Challenges for Families in the Digital Age,* Yearbook 2018 (pp. 19–30).

Martinez-Roig, R., Domínguez-Santos, & Sirignano, F. M. (2023). La tecnoferencia en el ámbito familiar. La percepción de los padres en torno al uso del teléfono móvil y las interacciones con los hijos [Technoference in the family environment. Parents' perceptions of the mobile phone and interactions with their children]. *Research in Education and Learning Innovation Archives, 31*, 66-80. https://doi.org/10.7203/realia.31.27160

Medrano, M., Cadenas-Sanchez, C., Oses, M., Arenaza, L., Amasene, M., & Labayen, I. (2021). Changes in lifestyle behaviours during the COVID-19 confinement in Spanish children: A longitudinal analysis from the MUGI project. *Pediatric Obesity*, *16*(4), e12731. https://doi.org/10.1111/ijpo.12731

Montoya, Y. D. V., Castro, J. C., & Bonilla, M. H. (2018). Más allá del control parental: redefiniendo a la familia digital. *Cultura Digital*, 1-10.

Morales-Domínguez, Z., Raposo-Clavijo, B., Pérez-Moreno, P. J., & Torrico-Linares, E. (2022). Validación de las Escalas Uso Problemático de Medios con Pantallas y su versión corta en población Española [Validation of the Problematic Media Use Measure and its short version in the Spanish population.]. *Revista de Psicología Clínica con Niños y Adolescentes*, *9*(2), 65-73.

Muppalla, S. K., Vuppalapati, S., Pulliahgaru, A. R., Sreenivasulu, H., & kumar Muppalla, S. (2023). Effects of Excessive Screen Time on Child Development: An Updated Review and Strategies for Management. *Cureus*, *15*(6).

Nagy, B., Kutrovátz, K., Király, G., & Rakovics, M. (2023). Parental mediation in the age of mobile technology. *Children & Society*, *37*(2), 424-451. https://doi.org/10.1111/chso.12599

Ortiz de Villate Fernández, C., Gil Flores, J., & Rodríguez Santero, J. (2023). Variables asociadas al uso de pantallas al término de la primera infancia [Variables associated with the use of screens at the end of early childhood]. *Pixel-Bit: Revista de Medios y Educación, 66, 113-136.* https://hdl.handle.net/11162/241617

Zabatiero, J., Straker, L., Mantilla, A., Edwards, S., & Danby, S. (2018). Young Children and Digital Technology: Australian Early Childhood Education and Care Sector Adults' Perspectives. *Australasian Journal of Early Childhood, 43*(2), 14-22. https://doi.org/10.23965/AJEC.43.2.02

Zancajo, A., Verger, A., & Bolea, P. (2022). Digitalization and beyond: the effects of Covid-19 on post-pandemic educational policy and delivery in Europe. *Policy and Society*, *41*(1), 111-128. https://doi.org/10.1093/polsoc/puab016