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The use of mobile devices by 5th and 6th graders: parental supervision and risks

Antonio Daniel García-Rojas[1], Ángel Hernando-Gómez[1], M.ª del Pilar Gutiérrez-Arenas*[2] & Cinta Prieto-Medel[1]

[1] *Universidad de Huelva, Huelva (Spain)*
[2] *Universidad de Córdoba, Córdoba (Spain)*

Keywords

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Abstract

Digital devices such as smartphones and tablets have become easily accessible tools for schoolchildren born into the advancing knowledge society. However, most of them are unaware of the risks involved in this early use of Information and Communications Technology and are not prepared from a competence and maturity standpoint. So, the aim of this research is to discover the usage, frequency, and time employed by pupils in the use of mobile devices, the perception they have regarding the possible risks of their use, and to determine whether they are under parental supervision and control. A quantitative methodological research approach was applied, with a descriptive, non-experimental, and correlational methodological design. The instrument used was a questionnaire, administered to a sample of 273 pupils in the third cycle of Primary Education in the provinces of Cádiz, Córdoba and Huelva. The results reveal significant differences between parental control and the independent variables studied (sex, course, and educational level of the father and mother), which demonstrates the need to work with students on a critical attitude towards the media, the formative use of internet, and social networks.

El uso de dispositivos digitales de escolares de 5º y 6º de Educación Primaria: control parental y riesgos

Palabras clave

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Resumen

Los dispositivos digitales como los *smartphones* y las *tablets* se han convertido en herramientas de fácil acceso para los escolares nacidos en pleno avance de la sociedad del conocimiento. Sin embargo, la mayoría no son conscientes de los riesgos que conlleva este uso temprano de las Tecnologías de la Información y la Comunicación y tampoco están preparados desde el punto de vista competencial y madurativo. Es por ello que esta investigación tiene como objetivos conocer el uso, frecuencia y tiempo que emplea el alumnado en el uso de dispositivos móviles, la percepción que tienen sobre los posibles riesgos de su utilización y determinar si cuentan con supervisión y control parental. Se ha llevado a cabo una investigación con enfoque metodológico cuantitativo, un diseño descriptivo, no experimental y correlacional. Como instrumento se utilizó un cuestionario sobre una muestra de 273 estudiantes de tercer ciclo de Educación Primaria de la provincia de Cádiz, Córdoba y Huelva. Los resultados muestran que existen diferencias significativas entre el control parental y las variables independientes estudiadas (sexo, curso y nivel de estudios del padre y de la madre), lo que evidencia la necesidad de trabajar con el alumnado la actitud crítica ante los medios, el uso formativo de internet y de las redes sociales.

* *Corresponding author:* M.ª del Pilar Gutiérrez-Arenas. Facultad de Ciencias de la Educación y Psicología, Universidad de Córdoba, C/ San Alberto Magno, s/n, 14071, Córdoba, Spain. pilar.gutierrez@uco.es
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Children in today's "knowledge society" are beginning to use all kinds of digital devices in their daily lives as they develop and mature. Today, growing up surrounded by screens is now something normal, part of our social reality. According to Kabali et al. (2015), even young children have easy access to technology, as these tools have become strategic means for families to calm, entertain, and get their children to sleep, even when they are babies.

From a pediatric perspective, minors' widespread possession of smartphones and tablets and their excessive use are worrisome due to their potentially negative effects on minors' psychomotor development (Pedrouzo et al. 2020). According to the study by Fowler and Noyes (2017), excessive use of smartphones by students ages 8 to 14 can have a serious impact on their physical and mental health, ranging from muscle problems to damage produced by radiofrequencies to disturbed sleep and impaired academic performance.

The possession and use of smartphones and tablets by children

As Rodríguez-Gómez et al. (2018) point out, almost 70% of children ages 10 to 15 have mobile phones and, as they get older, they make more problematic use of them, both personally and at school. Recent studies, such as those by Solera-Gómez et al. (2022), indicate that more than 90% of 5th and 6th graders and secondary-level students have easy access to Information and Communications Technology (ICT) and their own mobiles, using them for about 12 hours during the school week, and for about 10 hours on weekends.

According to the Asociación para la Investigación de Medios de Comunicación (AIMC, 2019), before the pandemic, children in Spain (ages 6 to 13) spent an average of five hours a day on screens, and two hours more than that on weekends. According to said group, boys used them more than girls, and average use increased the older the children were. In this study, 41.5% of 12-year-old respondents indicated that smartphones were their favorite devices, on which they prefer to watch videos, interact on social media, and play games.

Núñez-Gómez et al. (2021), however, state that Spanish boys and girls have greater access to tablets than mobile phones, their main use being, in both cases, the viewing of audiovisual content and playing video games. That is, recreational and leisure use stands out, which includes playing music, reading, and taking photographs and videos as they get older. However, they also sometimes use them for learning purposes, accessing educational applications varying in quality (Crescenzi-Lanna & Grané-Oró, 2016) to learn, perform tasks (Bonilla-del-Río & Aguaded, 2018), and to expand on or review content covered at school.

Children also make communicative and social use of their digital devices on social media (Pérez Escoda & Contreras Pulido, 2018), calls, video calls, and instant messaging. Sometimes, as Besolí et al. (2018) point out, they make the same practical use of these devices that adults do (searching for information, making purchases, using agendas, etc.).

Thus, we can state that children are making use of digital tools in different ways and for varied purposes, and that they are currently integrated into the community of digital citizens described by Robles (2011). As such, they have become "prosumers": users who consume and produce content through ICT, actively participating on the different social networks and assiduously generating content and information (Jordán-Correa et al., 2017).

Risks arising from the use of mobile devices and time on the internet

One of the key issues addressed by this study is the risks to which 5th and 6th graders –that is, boys and girls ages 10 to 12– are exposed. The frequency with which they are immersed in the technological universe and the amount of time they spend there is directly related a well-known danger: the possibility of becoming addicted. In this regard, Menéndez-García et al. (2020) explain how addiction, whether to the internet, mobile phones, or video games can hamper minors' development by producing disorders.

As López et al. (2023) point out, nomophobia –smartphone addiction– is a disorder that generates general uneasiness due to the fear of being disconnected, causing anxiety, anguish, and restlessness in sufferers. Add to this is the fear of feeling excluded or missing out on experiences, and the result is increased use of mobile devisces (Santana-Vega et al. 2019).

Another of the most significant risks is cyberbullying, which is shaped by different personal variables (such as gender, self-esteem, and academic performance), and other contextual factors, such as schoolchildren's social adjustment (García-Fernández et al. 2021). Cuesta Sáez de Tejada et al. (2018) have recorded worrying data on Spanish minors' (between 10 and 16 years of age) involvement in virtual harassment dynamics, whether as abusers, victims, or both. This was corroborated by Sanmartín Feijóo et al. (2021), who also found no great differentiation between gender and that this risk increases as students get older.

In relation to exposed intimacy, according to Monsalve Lorente and García Tort (2021), some of the greatest dangers students face are sexting and sextortion. In this regard, we point to the study by Ojeda et al. (2020), in which, in a broad sample of 12-year-olds, they detected that this practice consisted of not only sending and receiving personal sexual content, but also sharing sexual content featuring other people, online, through mobile devices.

And, as Fernández-Montalvo et al. (2015) indicate, minors ages 10 to 13 engage in other risky behaviors, such as providing personal information (for example, where they live), falsifying identification data, or agreeing to meet strangers. Finally, we must mention other risks to which schoolchildren are exposed via small screens, such as scams, phishing (personal data theft), child grooming (deception by pedophiles or the cybersexual harassment of minors), malware, spam, racism, and homophobia (Sánchez Romero & Álvarez González, 2018).

Parental supervision, mediation and control

According to Spain's National Institute of Statistics (2021), 97% of Spaniards use smart screens and the internet, and 95.2% of children between the ages of 6 and 15 do, giving them the means to access all kinds of information online. Taking into account these high figures, supervision and mediation by families takes on great importance, so that, according to Martin-Criado et al. (2021), this work should be considered a protective factor for children against the risks posed by the problematic use of digital devices (Ramírez-García and Gómez-Moreno, 2020).

Therefore, the different agencies dedicated to protect children's health recommend that family members maintain an active presence, offer critical guidance, and orient children as regards digital content prioritization and adoption (Melamud & Waisman, 2019). The study carried out by the AIMC (2019) on parental control in Spain indicates more supervision results in 6.3% less usage, and less supervision, in 16.2% more. According to the study by Giménez et al. (2017), the most common supervision strategies are the tracking and limitation of time spent on devices, the asking of direct questions, reviewing usage histories (that is, regular verification of what is done or seen on them), and prohibiting expensive downloads.

As Jiménez-Morales et al. (2020) point out, although families normally set a series of rules, control over minors' type of device use, its frequency and the amount of time they spend in front of screens depend on the socio-educational level of the adults responsible for them. These authors found that the higher the parents' educational levels, the less time their sons and daughters spend on mobile phones.

We must also bear in mind that sometimes it is the parents themselves who are addicted to the internet, and even engage in the phenomenon known as "sharenting", a practice that, according to Hinojo-Lucena et al. (2020), puts the privacy, safety, and protection of minors at risk as their parents' constantly post their children on social media.

The role of schools

As Levis (2006) suspected, the digital revolution has spawned a challenge for schools. It is evident that technological progress and its devices are attractive to children, and that teachers have an important role to play in promoting the necessary skills and attitudes when devices are integrated inside and outside the classroom.

As Fombona et al. (2020) have suggested, teachers must consider ICT resources as tools for the development of knowledge and take advantage of their educational potential through didactic strategies and methodological proposals. But for this, before educating children, they need to educate themselves (Gonnet, 2003). As Fernández and Fernández (2016) have stated, teachers' level of technological-pedagogical competence has direct consequences and repercussions, both positive and negative, on students.

Currently, in the wake of the COVID-19 health crisis, the importance of digital competence among teachers has been spotlighted. For its part, the current national education law (LOMLOE, Ley Orgánica 3/2020) proposes that this key competence be developed with a "modern and broad" approach (p. 122, 871).

This competence, according to Gutiérrez and Tyner (2012), should not consist only of the development of technical skills, such as the use and management of technology. Rather, the instrumental side of it must be combined with critical attitudes and democratic values, responsibilities, awareness, and autonomy.

In the official curriculum for Primary Education (Royal Decree 157/2022), the operational descriptors that students who complete this level should have acquired in terms to digital competence are stipulated (p. 23). A specific block on Technology and Digitalization is included (p. 41) and the "safe, responsible and efficient" use of digital devices is cited as the first specific competence (p. 38), which includes an awareness of risks, with a view to avoiding or minimizing them (p. 28). In short, according to Area and Ribeiro (2012), we must support and commit to new literacies, since these are "a right of individuals and a necessary condition for the social and democratic development of 21st-century society" (p. 13).

Taking as a reference the points addressed in the introduction to this work, the objectives of this study are the following: 1) to understand the trend with respect to 5th and 6th graders' small screen (mobile device) usage, including frequency and time spent on them; 2) to determine whether children are subject to parental supervision and control as regards the use of mobile devices; and 3) to understand minors' perceptions of the risks to which they may be exposed through their use of mobile devices.

Method

The study's methodological design is quantitative, descriptive, non-experimental, and correlational. There is no manipulation of the variables.

Participants

The sampling carried out was non-probabilistic and based on convenience. The sample was made up of 273 5th and 6th graders from the provinces of Cádiz, Córdoba and Huelva. The descriptive variables of the sample are explained in Table 1.

Instruments

A questionnaire was used, that included descriptive variables such as gender, grade, father's and mother's level of education, and frequency of mobile device use. Three scales were also included: a) Purpose of mobile device use, with which it is intended to attain the first of the objectives set; b) Parental supervision, to determine whether or not they have such oversight (both scales with 5 levels, ranging from *Never* to *Almost never* and *Always* or *Almost always*); and a c) Mobile usage risk perception scale (with 5 levels, with 1 corresponding to low risk and 5 to high risk) to achieve the third objective. The authorship

of the scales is indicated in Table 2. These scales were chosen based on their relevance to the objectives set and on the ages of the subjects for whom the questions were intended. Each and every one of them has been validated, as indicated by their respective authors.

The reliability of the scales in this study is expressed in Table 2, indicating that they feature good internal consistency (González-Alonso & Pazmiño-Santacruz, 2015).

Procedure

Data collection was carried out in the months of January and February 2023 during school hours at each school. Authorization for the study was requested in advance from school administrations and families. Participation was voluntary and scales were completed anonymously on Google Forms via QR code. The sample was accessed in person by the researchers. The results were fed into a database only accessible by the authors of this article.

Data analysis

The data obtained was processed with the SPSS v.25 statistical program, and the level of statistical validity was $p < .05$. The non-normality of the responses made the use of non-parametric tests in the data analysis advisable.

Results

A 77.3% of students have their own mobiles; 75.1% usually use their own; 23.8% use one belonging to a parent; 0.4% use a friend's, and 0.7% use one belonging to someone else. A 30% started using a mobile at age 8 or younger; 20.2%, at age 9; 27.7%, at age 10; and 22.1%, at age 11 or older.

A 24.5% usually use their mobile phones between 0 and 30 minutes a day; 23.9% use it between 30 minutes and an hour; 33% use it between one and three hours; and 13.2% use it more than three hours daily. A 36.6% look at their mobile every 30

Table 1

Descriptive variables of the sample

Variables			Frequency	Percentage
Sex		Male	144	52.7
		Female	128	46.9
		Other	1	0.4
Grade		5th	110	40.3
		6th	163	59.7
Education Level	Primary	Father	9	3.3
		Mother	3	1.1
	ESO (Obligatory Secondary Education)	Father	17	6.2
		Mother	19	7
	Bachillerato (11th and 12th grades)	Father	17	6.2
		Mother	17	6.2
	Intermediate Vocational Training (VT)	Father	13	4.8
		Mother	10	3.7
	Advanced VT	Father	21	7.7
		Mother	22	8.1
	University	Father	83	30.4
		Mother	98	35.9
	I don't know	Father	113	41.4
		Mother	104	38.1

Table 2

Scale reliability analysis

Tests	Cronbach's alpha	No. of items
Purpose of mobile device use Besolí et al. (2018) and Sola Reche et al. (2019)	.885	20 items
Parental supervision Besolí et al. (2018) and Sola Reche et al. (2019)	.808	2 items
Mobile use risk perception (Castillo Fernández, 2020)	.824	8 items

minutes; 19.8%, every hour; 16.4%, every 2 hours; and 27.2%, every 3 hours or more.

With respect to the three scales, a descriptive analysis of them was performed as described below. It was verified (Table 3) that, above all, they use their mobile phones at home ($\bar{x}$ = 3.68), compared to using them at school ($\bar{x}$ = 1.01). They use their mobile phones mainly to do schoolwork $\bar{x}$ = 3.67), listen to music ($\bar{x}$ = 3.62), and chat ($\bar{x}$ = 3.58). The least common use was for online purchases $\bar{x}$ = 1.61). The main purpose for which they use their smartphones is entertainment ($\bar{x}$ = 3.98) and communication ($\bar{x}$ = 3.93). Learning ($\bar{x}$ = 2.78) is the least common purpose.

With respect to parental supervised (Table 4) exercised as regards mobile phones, it can be seen that parents supervise more *how long* their children are connected ($\bar{x}$ = 3.34) as opposed to *what exactly* they are doing on their phones ($\bar{x}$ = 2.97).

Finally, we show the descriptions with respect to perceptions of the risks posed by mobile device use (Table 5). Going to sleep later than they should is the option that had the highest average ($\bar{x}$ = 2.26), followed by the time they have left to engage in sports or other leisure activities ($\bar{x}$ = 1.99). It seems that mobiles do not cause them to often get involved in violent episodes, such as fights or harassment $\bar{x}$ = 1.48).

The non-parametric tests applied were U-Mann-Whitney and Kruskal-Wallis (to compare the means), according to each case.

Taking into account the independent variables considered in this study (sex, grade, and educational level of the father and mother), we found significant differences between these variables only on the parental supervision scale: sex (p = .012), grade (p = 019), educational level of the father (p = .035), and educational level of the mother (p = .006). But, if we take into account each of the items that make up these scales, we find significant differences between some of them, which we analyze below.

Taking the independent variable "sex" as a reference, we found that it is boys who play on mobile phones more frequently than girls (p = .004). However, girls use them more frequently to take pictures (p < .001) and to learn (p = .039). Regarding parental supervision, families seem to supervise girls' mobile use more than that of boys (p = .010). As for perceptions of risk, boys identify mobile use as a cause of them going out less with their friends (p = .004) and getting worse grades (p = .016) more than girls do.

Table 3

Mean and standard deviation of the purpose of mobile device use

	N	*M*	*SD*
1 Do you use your mobile at home?	268	3.68	1.36
2 Do you use your mobile phone at school?	271	1.01	0.12
3 Do you send or receive text messages? (chat)	269	3.58	1.38
4 Do you send or receive audio messages?	268	3.45	1.38
5 Do you make or receive voice calls?	271	3.22	1.4
6 Do you make or receive video calls?	267	3.09	1.37
7 Do you use social media? (like Tik-Tok, Instagram, etc.)	268	3.18	1.61
8 Do you look at websites?	268	2.33	1.32
9 Do you shop online?	266	1.61	1.11
10 Do you play on your mobile?	267	3.44	1.23
11 Do you watch videos or movies?	267	3.36	1.29
12 Do you take pictures with your mobile's camera?	266	3.34	1.4
13 Do you download apps?	267	3.32	1.23
14 Do you listen to music on your mobile?	265	3.62	1.39
15 Do you do schoolwork?	266	3.67	1.51
16 Do you share photos or videos via mobile?	264	2.77	1.4
17 Do you use any educational platforms to talk to your classmates?	264	2.61	1.56
18 Do you use your mobile to communicate?	266	3.93	1.31
19 Do you use your mobile to learn?	259	2.78	1.38
20 Do you use your mobile for entertainment?	266	3.98	1.23

Table 4

Mean and standard deviation of parental control

	N	*M*	*SD*
21 Does your family supervise what you do on your mobile?	272	2.97	1.55
22 Does your family supervise how long you use your phone?	268	3.34	1.6

Table 5

Mean and standard deviation of mobile device risk perception

Items	*M*	*SD*
23. I go to bed later than I should	2.26	1.35
24. I have difficulty falling asleep	1.92	1.21
25. I take longer to eat when I'm using my mobile	2.23	1.46
26. I suffer violence, such as fights, harassment…	1.48	1.09
27. I have less time for my leisure activities, such as sports	1.99	1.31
28. I argue with my parents	1.93	1.17
29. I go out less with my friends	1.71	1.21
30. I get bad grades, I don't do my homework	1.73	1.2

If the "grade" independent variable and the dependent variables analyzed that have been significant are taken into account, it is found that a lower percentage of 5th graders have their own mobiles ($p = .018$), so they tend to use one belonging to a parent more than 6th graders do ($p = .006$). Students in the lower grade began to use mobile phones at an earlier age ($p = .002$), so it appears that children today are beginning to use them earlier. However, it is older students who look at their mobile phones more frequently ($p = .012$).

Regarding the purpose of mobile use, 5th graders use them less frequently for text messages ($p = .019$), social networks ($p = .026$), online shopping ($p = .010$), and to communicate ($p = .016$). Instead, they use them more to play ($p = .003$). With regard to parental supervision, families exercise greater oversight over younger children; that is, 5th graders ($p = .010$).

Finally, the relationship was studied between the independent variables referring to the education levels of the fathers and mothers and other items significant for the study. The highest percentage of students who have their own mobiles ($p < .001$) is among those whose fathers and mothers have an intermediate level of Vocational Training (VT) (92.3% and 90% respectively) and the lowest percentage was among those whose fathers and mothers have university educations (60.2% and 58.2%). This seems to indicate that those parents with higher educational levels are less supportive of their children having their own mobile phones. These percentages are reversed in the case of children whose parents have university degrees ($p < .001$): since they do not have their own mobile phones, they tend to use their parents' more (42.2% and 41.8%).

When parents have lower levels of education, their children look at their mobile phones much more frequently ($p = .002$), the highest being the case of fathers and mothers with only an ESO level (up to 10th grade) of education (52.9% and 57.7%), and the lowest being children of parents with university-level educations (23.5% and 27.4). The percentage of children who use mobile phones more than three hours a day is higher when their mothers have primary-level educations ($p = .003$, 33.3%), in contrast to those whose mothers have university studies (4.1%), who present the lowest percentage. No significant differences were found in the case of fathers' studies regarding this variable.

If we look at where children use their mobile phones the most ($p = .001$), we can see that students whose parents have lower levels of education use their mobile phones at home more frequently. Students who use their mobile phones most often (*Always* or *Almost always*) to do homework ($p = .010$ fathers and $p = .014$ mothers) are those whose fathers have intermediate VT (84.6%) and whose mothers have advanced VT (66.7%). Mobile phones are used more for entertainment ($p = .029$) by children of parents with lower levels of education (87.5% of those with only primary studies compared to 23.8% of those with advanced VT).

Using the phone to communicate, through chats ($p = .027$), voice calls ($p = .022$), and social networks ($p = .016$), is only significant in the case of the mothers' educational levels. The biggest difference in the use of chats is when the students' mothers have intermediate VT compared to those only with primary studies (80% and 0%, respectively). In the case of voice calls, something similar happens again between the same two levels of studies: the highest frequencies correspond to intermediate VT (70%) compared to 0% with primary. Finally, in the case of social networks, the results are similar: students whose mothers have intermediate VT education continue to appear among those who report the highest frequency of use (70%), while it is mothers with university studies whose children use social networks the least (35%).

In the case of parental supervision ($p = .014$ fathers and $p = .008$ mothers), families monitor what their children do with their mobile phones more frequently in the case of parents with university educations (51.8% and 54.1%, respectively). In the case of mothers, something similar happens as regards supervision of how long their children are on their phones ($p = .015$): mothers with university educations supervise this more frequently (66%) than mothers with only primary studies (33.3%).

Finally, regarding risk perception ($p = .033$), it is observed that minors report that they take longer to eat due to their use of mobile phones when their parents have primary educations (77.7%), compared to 0% in the case of parents with an ESO (10th grade) level.

To verify whether there is a correlation between the scales analyzed (Table 6), Spearman's rank correlation coefficient was applied. The results yield a negative and poor correlation between parental control and risk perception ($\rho = -.209$, $p = .001$) and purpose ($\rho = -.162$, $p = .016$). In turn, a positive and weak correlation between risk perception and purpose is observed ($\rho = .329$, $p < .001$).

Table 6

Spearman's correlation between the scales analyzed

		Parental Supervision	Purpose	Risk perception
Parental Supervision	Correlation coefficient	1	-.162*	-.209**
	Sig. (bilateral)	.	.016	.001
	N	268	219	268
Purpose	Correlation coefficient	-.162*	1	.329**
	Sig. (bilateral)	.016	.	< .001
	N	219	219	219
Risk perception	Correlation coefficient	-.209**	.329**	1
	Sig. (bilateral)	.001	< .001	.
	N	268	219	273

* $p < .05$; ** $p < .01$.

Discussion

Regarding the first objective of the study, it can be concluded that the sample studied features the widespread possession of mobile devices, and uses them frequently and for considerable periods, coinciding with studies by other authors, such as Rodríguez-Gómez et al. (2018).

Regarding the second objective, it was found that children are subject to some supervision by their families, especially with regard to how long they use their mobiles. These results accord with those obtained by Marcos Ramos et al. (2020), who found that most fathers' and mothers' supervision of the audiovisual content consumed by their sons and daughters involves time limits (in 54.4% of cases), as compared to content limitations (25.9%).

In relation to the third objective, the results obtained in our study confirm the findings of Sánchez-Carbonell et al. (2008) as regards students' immaturity, vulnerability, and impressionability, as they tend to associate the possession of a smartphone with social status and exhibit a lack of awareness of the dangers its use entails. Thus, minors form part of an at-risk group in need of training in keeping with their status as digital subjects; that is, the development of instrumental, cognitive/intellectual, sociocultural, axiological, and emotional skills (Area & Ribeiro, 2012, p.18).

In summary, their risk perception is low. For them, mobile phones can make them to go to bed later and spend less time on sports and leisure activities. On the other hand, very few report that their smartphones have involved them in violent episodes, and it is mostly boys who recognize that time spent on screens can mean they go out less with friends, or get worse grades.

In short, the need to address media and digital literacy in the school environment is evident, so that students begin to navigate, consume, and produce digital content safely and critically. And, as indicated by Bonilla-del-Río and Aguaded (2018), this effort should be undertaken to help reduce problematic uses, avoid possible risks and, in turn, take advantage of the potential of ICT resources.

In addition, in view of the results obtained, it is advisable for schools (teachers and counselors) to propose training and disseminate information on parental supervision strategies, and convey the importance of family mediation in the use of mobile devices, with the aim of also raising awareness among adults about the risks to which students can be exposed. Parents must accept this worrisome issue as a family responsibility, for which it is important that they be aware of these phenomena. Echoing Pardo-Gonzalez and Souza (2022), we suggest the adoption of prevention and intervention strategies, such as open communication, the establishment of use and time rules, the monitoring of activity, and the promotion of positive behavior.

The findings of this study may lead to an increased awareness of the risks of the use of mobiles devices and the importance of families in preventing and detecting the dangers associated with it.

As regards the limitations found throughout the study, the lack of an existing validated and consolidated instrument on risk perception should be noted. In addition, the number of subjects in the sample was not great enough to be able to extrapolate the results, but it was sufficient to make possible a glimpse of the reality of the schoolchildren of the ages in question.

As future lines of research, we propose carrying out a similar longitudinal study, as well as the expansion of the age range, and including grades across all of primary education. This study could also be reproduced in other contexts (such as rural settings or countries varying in their levels of development), with perceptions of these risks by teachers and family members there being new research objectives that could enrich scientific knowledge and help detect other social needs.

Author contributions

Conceptualization: A.D.G.R.
Data curation: M.P.G.A.
Investigation: A.D.G.R.
Methodology: M.P.G.A.
Supervision: A.H.G., C.P.M.
Writing – original draft: M.P.G.A., A.D.G.R., A.H.G., C.P.M.
Writing – review and editing: M.P.G.A., A.D.G.R., A.H.G., C.P.M.

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Declaration of interests

The authors declare that there is no conflict of interest.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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