Online parental mediation strategies in family contexts of Spain

Estrategias online de mediación parental en contextos familiares de España

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ABSTRACT

This article explores online parental mediation strategies in Spain and their association with sociodemographic and family context factors. The results of a survey conducted at the end of 2018 are presented herein, based on a sample of 2,900 Spanish minors between 9 and 17 years of age who use Internet. The impact of the diverse parental mediation strategies applied to Internet use has been calculated by taking into account the sociodemographic factors of the participating minors (age and gender). Association analysis was performed using the SPSS statistical analysis programme. In this case, an extra analysis was carried out with regard to the relationship of influence between different strategies and the rules of behaviour and family support in the household context as perceived by the minor. Findings suggest that enabling and restrictive mediation strategies are very common in Spanish families, while technical mediation strategies have a very limited presence. It is noteworthy that restrictions and security strategies generally apply more to girls than to boys. Household rules related to the behaviour of minors have a positive correlation with an increase of influence of nearly all strategies. However, there is no relevant association between family support perceived by children and restrictive strategies and techniques applied by parents.

RESUMEN

Este artículo explora las estrategias de mediación parental online en España y cómo los factores sociodemográficos y del contexto familiar se asocian con ellas. Se presentan los resultados de una encuesta realizada a una muestra de 2.900 menores españoles usuarios de Internet, entre 9 y 17 años encuestados a finales del año 2018. La incidencia de las diferentes estrategias de mediación parental en el uso de Internet se ha calculado atendiendo a factores sociodemográficas de los menores (edad y sexo). Mediante un análisis de asociación realizado con el programa de análisis estadístico SPSS se explora también la relación de la incidencia de las diferentes estrategias con las reglas de comportamiento y el apoyo familiar en el contexto del hogar percibidas por el menor. Las estrategias de mediación habilitantes y restrictivas tienen una presencia importante en las familias españolas, mientras que las técnicas tienen una presencia muy limitada. Es remarcable que las restricciones y las estrategias de seguridad, generalmente se aplican más a las niñas que a los niños. Las reglas del hogar relacionadas con el comportamiento de los menores se correlacionan positivamente con el aumento de incidencia de casi todas las estrategias, sin embargo, no existe una asociación significativa entre el apoyo familiar percibido por niños y niñas y las estrategias restrictivas y técnicas aplicadas por los padres y las madres.

KEYWORDS | PALABRAS CLAVE

Internet, mediation, strategies, behavior, family, children, parents, intervention.
Internet, mediación, estrategias, comportamiento, familia, menores, padres y madres, intervención.

1. Introduction and state of the art

Internet, social networks and mobile devices are all part of the Internet of Things (Mascheroni & Holloway, 2019), and an integral part of children's daily lives. Children access the web autonomously in increasing numbers and they tend to identify more with their own peer group (Ito et al., 2010; Shin & Lwin, 2017; Vincent, 2015). Over the last decade, access and domestic use of the Internet and other digital communication technologies within Spanish families has varied significantly from the point of view of parental mediation (López-de-Ayala & Ponte, 2016; Ramos-Soler et al., 2018; Torrecillas-Lacave et al., 2017).

According to O'Neill (2014), the search for the "magic strategy" of parental mediation that allows the child to take maximum advantage of online opportunities, while avoiding harmful online risks is a "shared responsibility" of parents, teachers and other representatives responsible for formulating Internet policy or regulations. Such regulations must ensure a media environment that respects children's rights and is adapted to their needs and competencies, as well as to the values and priorities of their parents (Helsper et al., 2013; Mascheroni et al., 2016; Torrecillas et al., 2017).

The definition of "parental mediation" is subject to various interpretations, depending on the approach used for its research. Warren (2001, p.212) defines it as "any strategy that parents use to control, supervise or interpret media content for both children and adolescents". Sasson and Mesch (2019) view parental mediation as the variations of the different interactions established between parents and children that revolve around the use and consumption of different media.

This paper considers the classification of Livingstone et al. (2017) as a reference, which is an evolution of previous models of mediation strategies (Livingstone et al., 2011) based on the standard classification of parental mediation of television use posed by Valkenburg et al. (1999). The proposal by Livingstone et al. (2017) groups the strategies into two macro-categories: enabling mediation and restrictive mediation and adds a new category that considers the child's agency as an active element in parental mediation on the Internet, which involves requesting help from parents and offering it as well.

On this basis, the present study is set forth with two differences. Firstly, the child's agency has not been analysed as a strategy in order to focus exclusively on the strategies initiated by parents. Secondly, technical mediation is analysed independently to obtain specific information on the use of technical strategies by families, a relevant aspect for promoting awareness campaigns (Ponte et al., 2019) with regard to Spain, where the level of influence of these strategies is very low (Martínez & Casado, 2018).

Another fundamental aspect in the latest work on online parental mediation is the child-centred approach (Clark, 2011; Lobe, et al., 2008; Smahel & Wright, 2014), a perspective that gives high regard to the possibility of divergence between adults and children in relation to interests and concerns such as the autonomy of minors, privacy, their way of playing, and their right to self-expression (Shin & Lwin, 2017).

Based on this approach, this research aims to analyse the impact of mediation strategies (enabling, restrictive, and technical) by taking into account, on the one hand, the predictive factors such as age and gender of the child, and on the other hand, the establishment of factors of behavioural control and family support perceived by the child in the household context.

Previous results in Spain show that the demographic characteristics of Spanish children (gender and age) influence the way in which mediation takes place. With regard to gender, mediation has a higher level of influence on girls than on boys (Düerager & Livingstone, 2012; Livingstone et al., 2011; Garmendia, et al., 2016; Ramos-Soler et al., 2018; Smahel et al., 2020). This is due to the fact that parents worry more about girls, yet this can also be a "digital disadvantage" (Bartau-Rojas et al., 2020; Hasebrink et al., 2011). In terms of age, younger children experience more mediation than older children, as parents recognize differences in digital competency and resilience to risks, as well as the right to privacy and autonomy as age increases (López de Ayala et al., 2019, Martínez & Casado, 2018; Livingstone et al., 2017).

Relationship patterns between different household members can also influence parental mediation (Dedkova & Smahel, 2019; Eynon & Helsper, 2015; López de Ayala et al., 2019; Shin & Li, 2017). Several studies have observed a relationship between parenting styles -which include authoritarian, authoritative, permissive and laissez faire- from the dual perspective of control levels (or demand) and

involvement (warmth) (Baumrind, 1991), plus the types of strategies applied to online use (Livingstone et al., 2017; Valkenburg et al., 2013). Specifically, Eastin et al. (2006) and Valcke et al. (2010) demonstrate that authoritarian parents apply the most restrictive strategies on their children. In contrast, authoritative and permissive styles are associated with fewer restrictions and tend to combine more strategies, with a strong preference mainly for those that are active.

2. Materials and methods

The results of this work are based on a survey conducted in schools using a representative sample of 3,107 minors from 9 to 17 years of age. The age range was deliberately broad so as to allow for the observation of how parental mediation strategies are modified in families according to the degree of maturity of the children. In order to carry out the surveys, an interviewer was present in each classroom while the interviewees answered the questionnaire. To guarantee representativeness on a national level, the most populated Autonomous Regions were chosen as follows: Madrid, Catalonia, Andalusia, Valencia Region, Galicia, Basque Country, and Extremadura. Ten schools, either public or subsidised, were selected in each autonomous region except for Extremadura, where nine centres were chosen. The sample was also stratified by habitat: 80% of the schools were located in capital cities, and 20% were in smaller municipalities. School ownership was also considered, maintaining proportionality between the two predominant models in Spain: in Primary Education, 77.84% of the schools were public and 22.16% were subsidised, and in Secondary Education, 60.37% were public and 39.63% were subsidised. The fieldwork was carried out between October and November of 2018. In total, students from 138 classrooms were surveyed using two classes from different courses at each school. Finally, the surveys of minors who had not declared their gender and those who had not indicated their age, or who were more than 17 years of age, were taken out, reducing the final sample to 2,900 children. Just over half of the children surveyed (51%) were boys, and 49% were girls. The figure of 53% of the minors were aged 9-12, and 47% were aged 13-17. A total of 98% of the children lived with their mother, father, or both. The confidence level of the survey was 95.5% and the sampling error was $\pm$ 1.87%.

These results are part of a larger survey on children's relationship with the Internet that was carried out in 18 other European countries and was previously conducted within the international research project known as Global Kids Online.

The original survey underwent diverse cognitive tests in order to establish its validity. In an initial phase, 20 interviews (14 with children and 6 with parents) were conducted in England using the original English questionnaire. Once the necessary adjustments had been made, the questionnaires were translated into the languages of the different countries involved in the research, and four additional interviews were conducted with minors from different age groups to ensure that all of the issues raised were correctly understood. A pilot survey was carried out prior to the fieldwork in order to test all of the survey procedures. The questionnaire (2017-18) was revised by taking into account all technological advances and validated through previous tests with minors of different ages. The questionnaires used, as well as more complete information on their development, can be found at www.eukidsonline.net

Before carrying out the survey, the collaboration and approval of the school's administration was requested, and the parents' permission was obtained. The researcher informed the children about the objective and protocol of the study. They were informed that they had the right to refuse to participate or to withdraw at any time. Their anonymity was maintained throughout the process, and the questionnaire included the options of "I don't know", or "I prefer not to answer", in the event that a child felt uncomfortable with the questions asked. The data presented in this article have been obtained by using the SPSS programme, as well as by conducting variable association tests using chi-square non-parametric statistical analysis. In those cases, in which three variables were used, the analysis was carried out through the procedure of variable neutralisation.

The variables "support of the child in the home", and "rules of behaviour" of the child in the home, around which part of the analysis revolves, have been developed using the answers the children gave to different questions posed on the questionnaire. To assess whether the children felt supported in their homes, they were asked, "How true are the following statements about your home and family? 1) "When

I talk at home, someone listens to what I say"; 2) "My family really tries to help me"; and 3) "I feel safe at home".

For the purpose of this research, family support is considered to exist when the child answers true, or very true, to at least two of the three questions. Fully, 88.8% of the children answered affirmatively, compared to 11.2% who did not acknowledge any, or only one, of these kinds of support.

Similarly, when considering children who have rules of behaviour, the extent to which the following statements are true for the child is considered: 1) "My father/mother/caretaker appreciates my good behaviour", and "My father/mother/caretaker establishes rules about what I can do". An answer is considered to be affirmative when the child says that both statements are true either always, or very frequently, which is 61.6% of the cases as opposed to 38.4%, who say that none, or only one, of the two statements is true.

3. Analysis and results

In general, the influence of enabling strategies -related to the positive use of the Internet and including forms of active mediation and online security- is higher than that of restrictive and technical mediation. The frequency of influence of all the strategies is higher for older minors.

3.1. Enabling mediation

In enabling mediation (Table 1), which involves primarily communicative strategies that promote or assist the online safety of the minor, two relevant aspects can be identified. Firstly, all strategies involve a significant association (though not in all age groups) between gender and the impact of mediation, except for the strategy described as, "they encourage me to discover things on the Internet", which despite not being widespread (approximately one in five minors), is more prevalent among boys than among girls. In the rest of the mediation strategies, there is a greater influence on girls than on boys, which is more accentuated in the 13-17 age group. In other words, in those strategies more directly linked to internet safety, girls receive more mediation, while boys are encouraged to "discover and learn new things on the internet" more often than girls.

Age is also shown to be a relevant factor in mediation. A decline in mediation among boys can be observed with a significant association with all strategies. Among girls, however, even though mediation strategies such as, "they talk to me about what I do on the Internet", and "they help me when something bothers me", decrease somewhat with age, this decline is not significant. These results suggest that for girls, the influence of these mediation strategies is higher and more sustained over time.

Table 1. Enabling mediation strategies by gender and age					
Mediation strategy (frequently or very frequently)	**Gender**	**Age (two groups)**		**Total**	**P (age)**
		9-12	**13-17**		
They encourage me to discover things on the Internet (N=2,560)	Boy	25.6%	18.6%	21.9%	.002
	Girl	20.9%	16.2%	18.5%	.035
	Total	23.2%	17.5%	20.3%	.000
	P (gender)	.050	.268	.034	
They suggest ways for me to use the Internet more safely (N=2,554)	Boy	43.3%	32.5%	37.7%	.000
	Girl	54.9%	40.6%	47.7%	.000
	Total	49%	36.4%	42.6%	.000
	P (gender)	.000	.002	.000	
They talk to me about what I do on the Internet (N=2,547)	Boy	27.1%	18.2%	22.5%	.000
	Girl	31.6%	29.1%	30.3%	.332
	Total	29.3%	23.4%	26.3	.001
	P (gender)	.082	.000	.000	
They help me when something has bothered me (N=2,423)	Boy	42.1%	27.5%	34.5%	.000
	Girl	50.4%	46.0%	48.2%	.132
	Total	46.2%	36.3%	41.1%	.000
	P (gender)	.004	.000	.000	

With regard to the relationship between enabling mediation strategies and the presence of behavioural rules and family support in the home, Table 2 shows a significant association (.000 in all cases). The presence of both rules and family support is associated with a higher impact of all mediations. The

distribution of percentages also shows that in all cases in which the male or female child receives behavioural rules or family support, the influence of mediation is higher than in those households in which the child does not perceive the presence of such rules or support. For example, it can be pointed out that in those households where the child feels family support, 48.8% of the children are given suggestions on safe ways to use the Internet, while in those homes where the child does not feel that same support, the percentage drops to 28.6%. This is a notable difference, since the average influence of this mediation is 42.6%, as shown in Table 1. Similarly, in households where more rules of behaviour are detected, 55.1% of the children receive suggestions for safe ways to use the Internet, yet 30.6% do not receive such advice. This suggests consistency between online rules applied by parents and those established in the family context, as well as in the support offered to children. Children in households where they perceive that their parents talk more with them about what they do online and offer them advice on how to use the Internet, or encourage them to discover new things online, also feel that there are more rules of behaviour and family support. In any case, despite the presence of rules and family support perceived by the children, when this mediation is reduced, there is a very high percentage of children who do not experience enabling mediation strategies.

Table 2. Enabling mediation by household type							
Mediation strategy **(frequently or very frequently)**		**Rules of behaviour**			**Family support**		
		No	Yes	p	No	Yes	p
They encourage me to discover things on the Internet (N=2,483)	%	13.5%	27.7%	.000	13.4%	23.4%	.000
	n	173	334		102	408	
They suggest ways for me to use the Internet more safely (N=2,476)	%	30.6%	55.1%	.000	28.6%	48.8%	.000
	n	388	666		217	853	
They talk to me about what I do on the Internet (N=2,469)	%	15.7%	37.6%	.000	16.8%	30.9%	.000
	n	199	452		127	537	
They help when something has bothered me (N=2,353)	%	29.6%	53.5%	.000	23.4%	49.2%	.000
	n	355	618		170	813	

3.2. Restrictive mediation

Restrictive mediation strategies show a similar pattern. As the age of the child increases, the prevalence of restrictions decreases, with a significant association (p .000) for both girls and boys. Table 3 shows that between the two age ranges, the number of children allowed to do these activities increases with age, and the percentage of restrictions decreases as well.

Table 3. Restrictive mediation strategies					
Mediation strategy **(frequently or very frequently)**	Gender	Age (two groups)		Total	P(age)
		9-12	13-17		
My father/mother/caretaker allows me to use the camera on my mobile phone or computer at all times (N=2,423)	Boy	35.7%	58.0%	47.4%	.000
	Girl	27.4%	57.9%	42.9%	.000
	Total	31.5%	57.9%	45.2%	.000
	P(gender)	.002	.965	.025	
My father/mother/caretaker lets me download music or films at all times (N=2,516)	Boy	51.4%	77.6%	65.2%	.000*
	Girl	46.8%	78.6%	62.8%	.000*
	Total	49.1%	78.1%	64%	.000
	P(gender)	.109	.679	.217	
My father/mother/caretaker allows me to use social networks at all times (N=2,496)	Boy	35.9%	69.1%	53.3%	.000
	Girl	30.8%	68.0%	49.6%	.000
	Total	33.3%	68.5%	51.4%	.000
	P(gender)	.062	.669	.063	

As far as gender is concerned, although a significant association can only be found in the case of permission to use the camera among children between 9 and 12 years of age, remarkable differences do appear. In the 9 to 12-year age group, the percentage of boys allowed to carry out the different activities is higher than for girls, while in the 13 to 17 age group, these percentages are nearly equal. These results suggest that parents are developing a strategy that focuses more on protection for girls than for boys by

prohibiting them from engaging in activities that they believe may be potentially harmful to girls, especially at younger ages.

In Spanish households, where more rules exist, the percentage of children with permission to use these technologies is lower than in households with fewer rules, with a significant association in all cases except in the use of the mobile phone or computer camera. The average number of children with permission to use the camera on their mobile phone or computer is always 45.2%, yet, among those children with rules, this percentage drops to 42.6%, and among those who do not have rules, it rises to 48.1. Among those with rules, 61.3% can download music or films, as compared to 67.5% among those without rules, with the average percentage of those with permission standing at 64%. Finally, 47.1% of those with rules can use social networks at all times; this percentage is lower than for those without rules, which is 57.1%. The average stands at 51.4% (Table 4).

However, in relation to the sense of family support, no significant relationship can be observed with the imposition of rules for the use of technologies. In all cases, there are very similar percentages among those children who answered affirmatively to questions related to family support and those who did not.

Table 4. Restrictive mediation by household type							
Mediation strategy (frequently or very frequently)		**Rules of behaviour**			**Family support**		
		No	**Yes**	**p**	**No**	**Yes**	**p**
My father/mother/caretaker allows me to use the camera on my mobile phone or computer at all times (N=2,326)	%	48.1%	42.6%	.008	47.7%	44.7%	.177
	n	573	483		338	735	
My father/mother/caretaker lets me download music or films at all times (N=2,405)	%	67.8%	61.3%	.001	64.2%	64.7%	.818
	n	833	721		472	1.098	
My father/mother/caretaker allows me to use social networks at all times (N=2,386)	%	57.1%	47.1%	.000	53.6%	51.5%	.322
	n	697	549		390	869	

3.3. Technical mediation

Regarding the use of technical mediation strategies, there is no significant association in relation to gender, although a significant decrease does occur with age in both boys and girls with the use of "programs to control or block certain online content" and "programs to monitor content or applications". The only case in which this decline is not significant is in the use of technology "to track where the child is located" (Table 5).

Table 5. Technical mediation strategies					
Mediation strategy (frequently or very frequently)	**Gender**	**Age (two groups)**		**Total**	**P (age)**
		9-12	**13-17**		
My father/mother/caretaker uses a programme to monitor or block certain online content (N=2,285)	Boy	18.3%	11.2%	14.5%	.001
	Girl	22.0%	11.3%	16.4%	.000
	Total	20.1%	11.3%	15.4%	.000
	P (gender)	.134	.968	.199	
My father/mother/caretaker uses some tracking programmes to monitor the content or apps I use (N=2,260)	Boy	16.1%	9.7%	12.6%	.001
	Girl	17.1%	9.9%	13.3%	.000
	Total	16.6%	9.8%	13%	.000
	P (gender)	.650	.911	.618	
My father/mother/caretaker uses technology to keep track of where I am (N=2,315)	Boy	16.7%	14.5%	15.5%	.304
	Girl	14.6%	11.7%	13.1%	.154
	Total	15.6%	13.2%	14.3%	.094
	P (gender)	.349	.150	.102	

The existence of rules in the home has a significant relationship with parents' use of tools to monitor what their children are doing on the Internet, or even the child's own activities beyond the Internet through the use of technology such as tracking applications to locate the child. Although the presence of these technical mediation strategies is not very high in Spain, in all cases they have a greater presence in households where there are more rules (Table 6).

The average percentage in the use of control or blocking programmes for certain online content is 15.4%. In households where children perceive more rules it reaches 18.9%, and then falls to 12.3% when

there are fewer rules. In the use of programmes or apps to monitor content, the average is 13%. In households with rules, the percentage rises to 15.9%, while in those with fewer rules it falls to 10.2%. Finally, tools to track location are used in 14.3% of households, a percentage that reaches 16.9% when there are more rules, and drops to 12.1% when there are fewer rules.

On the contrary, the variable of family support felt by the child is not significant in any case, and the percentages of the presence of these mediation strategies are very similar.

Table 6. Technical mediation by household type							
Mediation strategy **(frequently or very frequently)**		**Rules of behaviour**			**Family support**		
		No	**Yes**	**p**	**No**	**Yes**	**p**
My father/mother/caretaker uses a programme to monitor or block certain online content (N=2,203)	%	12.3%	18.9%	.000	15.2%	15.4%	.893
	n	140	202		103	240	
My father/mother/caretaker uses some tracking programmes to monitor the content or apps I use (N=2,182)	%	10.2%	15.9%	.000	13.2%	13.1%	.931
	n	114	170		88	202	
My father/mother/caretaker uses technology to keep track of where I am (N=2,236)	%	12.1%	16.9%	.001	13.9%	14.3%	.799
	N	139	184		94	228	

4. Discusion and conclusions

In line with previous results for Spain (Bartau-Rojas et al., 2020; Garmendia et al., 2011; Garmendia et al. 2016; López de Ayala et al., 2019; Martínez, 2018; Martínez & Casado, 2018; Ramos-Soler et al., 2018), and as pointed out by Livingstone et al. (2017), in comparison with other European countries, Spanish parents prefer enabling mediation to restrictive or technical mediation.

Coinciding with previous evidence in the Spanish context, a higher incidence of mediation has been detected for girls than for boys (Bartau-Rojas et al., 2020; Martínez, 2018; Martínez & Casado, 2018), especially for restrictive and enabling strategies related to internet safety (Garmendia et al., 2016). This can be interpreted as increased parental concern for the online safety of their daughters, which may also imply a digital disadvantage for them. Moreover, this disadvantage has to be taken into account when designing inclusive digital educational policies. With increased age, the incidence of mediation strategies decreases (Dürager & Livingstone, 2012; Helsper et al., 2013; Sonck et al., 2013). This may be an indicator of greater respect for the privacy and autonomy of older children, and may also suggest that they are considered to be more digitally literate (López-de-Ayala et al., 2019; Ramos-Soler et al., 2018).

The results also show a link between contextual factors in the home and online mediation. If there are more rules in the home, the incidence of all of the strategies is higher. This indicates that those parents who exercise more control offline also do so in the online environment. Specifically, a significant difference has been found between all enabling strategies and households where the child perceives that there are more rules of behaviour and family support. These results, which are in line with the existing literature (Clark et al., 2011; Shin & Li, 2017; Shin & Lwin, 2017; Valcke et al., 2010; Valkenburg et al., 2013) are relevant in the Spanish context, due to the fact that the child's feeling of support in the home and his or her perception of the rules imposed is positively linked to those mediation strategies in which there is a communication relationship with the family and taking advantage of online opportunities.

The results for restrictive and technical strategies show a different trend. While restrictive and technical mediation is more related to rules in the home, there is no significant relationship between restrictive and technical mediation and the perception of family support. These results are not very encouraging for the Spanish context, because in addition to being detrimental to taking advantage of opportunities, restrictions are more often applied in households where the child feels a lack of family support. This demonstrates the importance of homes based on the concept of the democratic family and models of mediation by distance or deference, pointed out by López de Ayala et al. (2019), in which there is a supportive environment for the child together with control of his or her behaviour, as these aspects are related to a more positive online mediation that is better for the child. In the Spanish context, there is still a need for digital literacy initiatives aimed at parents and children that stress the importance of enabling

strategies (Helsper et al. ,2013; O'Neill, 2014), with special emphasis on girls (Bartau-Rojas et al., 2020; Smahel et al., 2020), thereby avoiding possible digital disadvantages.

It should be noted that the data presented in this paper are only from surveys of children, thus excluding parents, which is a limitation. Although some studies indicate that the answers given by parents may overestimate their real mediation activity in search of social acceptance (Rideout et al., 2010), studies of adolescents' point to an underestimation of the impact of mediation strategies for the purpose of demonstrating a higher degree of independence from their parents (Ergin & Kapci, 2019).

This research provides new evidence with regard to the family context and its influence on online mediation that shows the complexity of the mediation process, and points to the need for further study of the effectiveness of these strategies through multivariate analysis, focusing primarily on promoting opportunities for minors.

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