# Parental mediation in online practices of the Spanish minors: a review of empirical research

# La mediación parental de las prácticas online de los menores españoles: una revisión de estudios empíricos

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#### **Abstract:**

We hereby examine the main thematic and methodological characteristics of scientific research on the strategies of parental mediation of online activities of Spanish minors. The work is based on systematic literature review of articles, reports and other documents that have been published in the last decade taking into account both the academic and institutional projects. After analysing the most recent contributions on parental mediation in Spain in comparison to neighbouring European countries we prepare a report on the main deficiencies, gaps and biases in this field. We note little development and maturity in this field of research in Spain.

### Key words:

Parental mediation; Internet; children; adolescents; minors.

#### Resumen:

Se examinan las principales características temáticas y metodológicas de la investigación científica sobre las estrategias de mediación parental de las prácticas online de los y las menores españoles. El trabajo se basa en una revisión bibliográfica sistemática de los artículos, informes y otros documentos publicados en la última década, con una dimensión doble que toma en consideración tanto las iniciativas académicas como las institucionales. Después de analizar las aportaciones más recientes de las estrategias de mediación parental en España en comparación con los países de su entorno europeo, elaboramos un diagnóstico de las principales carencias, lagunas y sesgos de la producción científica en este campo. Se destaca el escaso desarrollo y madurez de este objeto de estudio en la investigación en España.

#### Palabras clave:

Mediación parental; Internet; niños, adolescentes; menores.

## Parental mediation in the online activities of Spanish minors: A review of empirical research

This article examines the thematic and methodological characteristics of scientific research on the strategies of parental mediation of the online doings of Spanish minors. The work is based on systematic literature review of articles, reports and other documents published in the last decade with a double dimension that takes into consideration both academic initiative as well as institutions. After analysing the most recent contributions to the strategies of parental mediation in Spain in comparison to its neighbouring European countries we elaborate a diagnosis of the main deficiencies, lacunas and biases of scientific work in this field.

#### 1. Introduction

At the turn of the century, the growing use of the internet and mobile technology by children has generated notable interest in the scientific community and in the society in general. Compulsive use or internet addiction, contact with strangers, face to face contact with acquaintances, access to content considered inappropriate, cyber-bullying, sexual assault or the preservation of personal data on the internet are some of the most studied issues (Hasebrink et al., 2009).

Evidence of these dangers and the attribution of the role of socialization and children's safety to fathers and mothers have focused the attention of experts on the role of mediation in online activities. In this sense parental mediation is understood as the intervention of parents so as to avoid or minimize the dangers that can affect their children on the internet.

Parents can opt for a wide variety of protection tactics that can in turn be combined in various ways giving rise to various strategies of parental intervention. Following the typologies developed many years ago for the television, with some adjustments, most of the authors coincide in the establishment of three models of parental mediation in online activities: restrictive mediation where they try to control the amount of time, place and content to which minors have access by establishing rules or technical filter systems, active mediation whereby parents try to guide their children through discussion and co-use when parents share navigation activities with their children, giving them advice and helping them with the use of the internet (Lee and Chae 200, Livingstone and Bovill, 2001, Nathanson, 2001).

In respect to this last point, we point out the special case of online surfing which, in comparison to the television, is complicated to share and control through a simple look at the screen (Livingston and Bober, 2006; Livingstone and Helsper, 2008; Byrne and Lee, 2011). That is the reason why some authors have limited the strategies researched on to restrictive and active or evaluative mediation. Lwin et al. (2008) have clarified that the first one comes before the activity and involves the creation of rules for it. The second one develops alongside the activity which means that parents are near their children when they surf, they talk about the internet use or check the computer screen. On the other hand, Mesch (2009) emphasizes the active participation of children in the evaluative mediation.

Parting from the combination of these two types of mediation, active versus regulated, and the intensity with which they are applied, Lwin et al. (2008) describe four types of parental mediation strategies; selective mediation involves a highly regulated mediation and low active mediation, promotive mediation has a high active mediation and low regulated mediation and finally laissez-faire which involves low levels of both active and regulated mediation.

Livingstone et al (2015) register up to five parental mediation strategies on the internet and mobile technology that have been validated by empirical research (Livingstone and Helsper, 2008; Duerager and Sonck, 2014). Restrictive mediation means that there is a limit to the connection time and places where the activity can be carried out or that certain activities are prohibited. Technical mediation refers to the use of software and technical tools to filter, restrict and make track online activities. Monitoring is the tracking of online activities after they have been carried out – pages to which they have got into, contacts and content of online conversation. Finally they differentiate between active mediation of activities which includes talking about online content and activity, sitting close by while the children surf and share their experiences; and active security mediation which aims to warn and raise awareness about the dangers of the internet or to give advice on its safe and responsible use.

In a review of 1,500 entries with empirical evidence of the experiences of European children on the internet and mobile technologies and registered in the database of EU Kids Online network, Olafsson et al (2014) find that although since 2009 scientific work has increased in an excellent manner, there are still deficiencies in research on parental mediation and its efficiency.

In the scientific work on this matter four core concepts of empirical research can be identified:

- Description of strategies and patterns of parental mediation.
- Identification of variables that impact on the mediation strategies of fathers and mothers.
- Analysis of the efficiency of parental intervention strategies in the reduction of risk in general and of certain threats in particular.
- Assessment of the reaction of minors to the measures put in place including the evasion of these control measures.

As is the case with relatively recent phenomena and in constant evolution, a considerable part of the research is descriptive. The objective of such work is to establish the social impact the strategies and measurements adopted by parents, the type of norms imposed as well as their distribution according to some basic variables.

The selection of the informants utilized in the research, whether parents or children is a key issue in the methodological character that conditions the results arrived at. The work done has revealed discrepancies between the degree of family regulation reported by either group, it is higher between parents (Wang et al., 2005; Livingstone and Bober, 2006;

Livingstone and Helsper, 2008). The fact has been emphasized by numerous researchers who alert on the recourse to parents as their responses may be influenced by what is considered socially desirable (European Commission, 2008).

As Ponte and Simoes (2009) demonstrate, the manner in which data is collected/generated which may differ according to the methodology employed, leads to the activation of various repertoires in those interviewed that affect their answers. The absence of ambiguity and the contextualization in closed questions result in the reporting of more elevated indexes of mediation in direct relation to the preoccupation over the risks posed to minors than open questions or those answered in face to face interviews. Consequently it is pertinent to interpret results along with the methodology adopted and the manner in which the questions are formulated in relation to issues of what is considered socially desirable as far as the answers of fathers and mothers are concerned.

In any case, empirical research in Europe has demonstrated preference for active mediation strategies in comparison to those of a restrictive character and, in particular emphasize the low incidence of technical mediation (Livingstone etal., 2011). On the contrary, the active mediation for safety and the tracking down of online activities are usually done when the child has already suffered an unpleasant online incident, with the aim of preventing future problems (Duerager and Livingstone, 2012).

Researchers have also examined variables that predict parental mediation perceived by parents and their children. One dimension that is explored is the socio-demographic characteristics of the minors. Various researches have noted the influence of children's gender and/or age on the manners of parental intervention (Berrioset al., 2015; Lopez de Ayala, 2013; Lee, 2012; Livingstone et al., 2011; Valcke et al., 2011; Livinstone and Helsper, 2008; Rosen et al., 2008). According to Talves and Kamus (2015), we may think that strategies of parental mediation do not depend on gender (or age) of the minors in a simple and direct manner but in a complex interrelationship with other factors. In this sense, some studies have focused their attention on aspects that are closely linked to these variables such as the parental perception of the level of internet use (Valcke et al., 2011; Nikken and Schols, 2015) or of self-control by their children (Lee, 2012).

The characteristics of fathers and mothers constitute another of the dimensions studied. Valcke et al. (2010 and 2011) warn that mothers, younger parents and those that have university studies are more controlling. Wang et al., 2010; Cho and Cheon, 2005), or their attitude towards the internet, which could be more or less positive. (Metzger et al., 2015; Valcke et al., 2010; Livingstone and Helsper, 2008).

In an initial study, Livingstone and Helsper (2008) did not find evidence that this influenced the forms of parental mediation, but in a later study (2011) they discover that it influences the active mediation of activities, a little more on the active mediation of security and has little incidence in restrictive mediation. In this sense, fathers and mothers with higher levels of education tend to use active mediation while socially disadvantaged families with less educational level support

themselves more on restrictive regulation (Livingstone et al., 2015). According to Paus-Hasebrink et al. (2012), the availability of time and competencies for the open discussion of those themes, the levels of internet use and consequently, confidence and knowledge of the theme or the effects of social desirability could explain these differences.

Finally some studies analyse how the communication and interaction styles in the family with the ways of online regulation (Youn, 2008; Valcke et al., 2010). And from a macro-social perspective, Kirwil (2009) and Mertens and d'Haenens (2014) focus their attention on cultural values as elements that explain the differences observed between countries. More concretely, Hasenbrink et al. (2009) note that values such as collectivism and individualism can condition the social aspirations of parents and these, in their turn, influence parental mediation.

From a different angle, Nikken and Haan (2015) analyse the problems that fathers and mothers of children under 7 go through in parental mediation and their needs for parental support as well as the relationship between both aspects with the characteristics of parents, the family and the children. They conclude that negative opinions on the effects of media, the presence of older siblings and an active profile of the boy or girl in the social media hurt competence and favour the perception of problems in the development of this task. A new line that orients the investigation on the theme tries to reveal the influence of the prevention strategies on the activities that minors carry out on the internet and their effectiveness. In the face of a dilemma on the type of informants that are more adequate in the field of efficiency of parental mediation, Youn (2008) concludes that their influence is determined by the perception that adolescents have of the latter more than due to the real mediation that parents report.

In this sphere, it is necessary to highlight the proliferation of research that examines the influence of parental mediation on the amount of time dedicated to the activity, impulsive, pathological or problematic consumption or addiction to the internet (Kalmus et al., 2015; Chang et al., 2015; Chai et al., 2015; Chng et al., 2015; Van den Eijnden et al., 2010; Lin et al., 2009; Lee and Chae, 2007), with contradictory results.

Another very productive line refers to raising awareness on the problems of privacy and the revelation of information on the internet. Various studies note that dialogue in the family is more effective than the establishment of norms on the raising of awareness on online privacy (Fleming, 2006; Youn, 2008; Shin and Kang, 2015). And Liu et al. (2003) conclude that active mediation restricts the revelation of personal information both in a direct way, educating on protective measures and due to increase in awareness on the issue while restrictive mediation only makes its decrease indirectly due to the increase in the concern for privacy.

Focusing their attention of cyber-bullying, Law et al. (2010) conclude that parental control and asking children about it does not predict online aggression and Chang et al. (2015) find that restrictive mediation limits both addiction to the internet and cyber assault. From a different perspective Mesch (2009) and Navarro et al. (2013) find that following (restrictive

mediation) and the establishment of rules on the websites that they visit (evaluative mediation) would reduce the risks of falling victim to cyber bullying.

In another sphere, restrictive mediation based on the imposition of norms reduces online contact with unknown people (Van den Heuvel et al., 2012; Liau et al., 2005). Lee and Chae (2007), however, they do not find any relationship between restrictive behaviour of the parents and the content that minors have access to. In the same line Valcke et al (2007) observed that those that have explicit parental control report less risky behaviour although subsequent studies reveal that this hardly explains the little proportion of variation in unsafe use (Valcke et al., 2011). While Duerager and Livingstone (2012) emphasize that restrictive mediation limits exposition to online dangers but active mediation results into less risk and also less damage which permits more opportunities.

In relation to the efficiency of technical systems of blocking and filtering of content, Mitchell et al. (2003) finds that they reduce exposure to inappropriate content and Benrazavi et al. (2015) reveal their usefulness in the face of problematic online games. On the contrary, Fleming et al. (2006) and Duerager and Livingstone (2012) do not find them effective in order to reduce exposition to online dangers.

In conclusion, research into the effectiveness of supervisionary measures and parental control does not always arrive at conclusive results although it notes that social factors such as age, (Hasenbrink et al., 2009; Lwin et al., 2008), styles of family socialization and the quality of child-parent relationships (Chng et al., 2015; Appel et al., 2012; Van den Eijnden et al., 2009; Vandoninck et al., 2010; Eastin et al., 2006; Cho and Cheon, 2005; Mitchell et al., 2003) may measure the effectiveness of strategies adopted. However, limitations of multivariate analysis should not be obviated. It establishes correlation between variables without determining the direction of causality, and cannot therefore differentiate between whether parental intervention measures are in reality responses to risk situations detected (Van den Heuvel et al., 2012).

In general terms results show that dialogue on the dangers of adequate internet use seems more effective in the limitation of risk than in restrictive measures whose effectiveness can be hindered because these risks occur in spaces considered secure by parents or by evasion behaviour by minors to these restrictions (Appel et al., 2012). In any case, it seems that the effectiveness of these measures depends on the type of risk to which we refer and the willfulness or no of the exposure, elevating debate on the acceptance and conformity of measures implemented in the family.

The last line of the research refers to the perception, valuation and reaction to measures implemented by fathers and mothers. The theme has been dealt with marginally in the literature (Haddon, 2015), in spite of the relevance in clarifying the effectiveness of parental mediation, especially in cases where there exists effective to skip parental prevention measures.

In this sphere, Livingstone et al., (2011) reveals that the majority of the children accept parental intervention while 8% ignore what the latter tell and a third do so only a little. According to what Livingstone and Bober (2006) have found out,

many of these minors share tactics with their peers in order to preserve their privacy without taking into account the justification that fathers and mothers may have for this tracking.

We also need to highlight the work of Byrne and Lee (2011), who contrast domestic supervisory measures preferred by parents for their children and suggest that the lack of agreement may generate resistance.

For his part, Haddon (2015) finds that, from the children's perspective, advice from fathers and mothers are not always articulated and justified which undermines their credibility. It also explains that social expectation of independence, confidence and privacy change with the age of the minors and influences their evaluation of parental supervision.

A qualitative study of the European Commission (European Commission 2007) concludes that in general the younger children turn to their parents (or brothers and sisters) when they see themselves immersed in risky online situations while older children avoid this measure except for the most serious cases. The desire for privacy among older children and the fear of being punished limits their turning to their parents. This aspect was corroborated by the EU Kids Online survey where children say that they prefer to talk to their friends rather than to their parents (Livingstone et al., 2011), due to fear of being punished or anger them (Haddon, 2015). On this evidence, Haddon (2015) concludes that a style of socialization in support of autonomy can be more efficient.

In Spain there has been an increasing amount of research on the relationship between minors with the internet which may be in tune with interest in the international sphere (García et al., 2012). Parental mediation is a key issue as it conditions the internet use and experiences of children and adolescents. As far as these parameters are concerned, it is interesting to know the state of empirical research on parental mediation in Spain, detect its strong points and limitations with the objective of orienting future research on this issue.

# 2. Objectives

The general objective of this work is to identify the main thematic and methodological characteristics that have examined parental mediation and online activity of minors in Spain in the last decade using primary data with special attention to initiatives of an institutional character. We will then embark on a qualitative review of recent scientific research for relevant information on the current situation in Spain in relation to neighbouring countries.

## Specific Objectives:

- 1. To discover how research efforts have evolved in this field during the period analysed; 2005 2015.
- 2. To identify the main themes addressed in empirical investigation on parental mediation and online activity of Spanish minors.

- 3. To identify y the scope of the studies under analysis, from both the point of view of the minors ages as well as the geographical sphere examined in the studies.
- 4. To get to know the methodological approaches to the study of parental mediation in Spain.
- 5. To find out the modes of financing that support this type of research and which, obviously, condition the size and depth of the studies.
- 6. To identify the role of the respondents utilized in this research, a crucial aspect that has notable incidence in the results.
- 7. To show relevant thematic evidence that can be deduced from studies carried out.

This study aims to identify the main research trends and known relevant aspects that serve as reference and orient reflection among the scientific community on the treatment of this phenomenon in Spain with the objective of identifying the strong points as well as the biases, lacunas and deficiencies and to suggest novel aspects or research themes that have not been sufficiently worked on.

## 3. Methodology

In accordance with the objectives, a literature review of articles, books, reports and doctoral theses that address various dimensions of parental mediation of online activity by Spanish minors between 2005 to November 2015 has been carried out.

#### 3.1. Databases and sources consulted

Identification and compilation of documents from the academic sphere has been done from the Scopus bibliographic database, which has summaries and citations of scientific articles subject to peer review which proceed from scientific reviews, books and talks. This source has been included because the peer review demanded of scientific reviews in order to certify their quality and because it is the biggest database of this type, it is bigger than the number of journals indexed to WoS (De Granda-Oriveet al., 2013).

To complement the results of this prestigious European database which primarily compiles articles in English, we have utilized the website for diffusion of scientific work in Spanish, Dialnet, meant to give visibility to scientific work done in Spanish speaking countries. It is one of the biggest bibliographic sites in the world which compile review articles and collective works, theses and books which permits one to have access to complete texts.

Finally, these results have been completed with output from the "European Evidente Database" of the EU Kids Online, a European network which is a standard and essential reference in the study of the experience of European minors with the

Internet and mobile devices. This source holds about 1,500 documents on online activities by children and youngsters and the dangers that go with it as well as safety measures.

The descriptors utilized in the search are: "parental mediation and Internet", "family and internet", "parental control and the Internet", and their English homonyms; "parental mediation + Internet", "parenting +Internet" and "parental control + Internet". For their part, the descriptors used in the database from EU Kids Online are: "Spain + parental mediation" and "Spain + parenting".

The interest to establish parental mediation practices in reference to the online dangers posed to minors is not limited to the academic sphere, diverse private and public institutions have sponsored research that addresses this perspective. Finding documentation in this area is not easy, for this reason we do not want to obtain an exhaustive collection of all of them but to make the most important ones visible.

To locate official documents and statistics in the national sphere we have done a scan of available publications on their respective web pages on the National Institute of Statistics (INE) and the centre for sociological research (CIS) as well as National Institute on Cyber Security (INCIBE, before it was known as INTECO), one of whose competencies is to do research on cyber security.

Revision of bibliographic references of all the documents found, visits to web pages from diverse institutions concerned with child welfare as well as searches in EU Kids Online database have served to complement studies generated from the institutional sector.

From all the results registered, empirical research that deals with family mediation in the online activities of children under 18 have been selected. Another requirement was that the fieldwork should have been carried out between 2005 and 2015 taking into account that the date in which information collection was done was 2015. Finally works whose data had been compiled in Spain including those that refer to only parts of the country were selected.

Often diverse articles, books and other publications are generated in the framework of the same project and correspond to the use of the same data although it does not always happen that way in the projects that utilized a mixture of methodologies. Those registers have been filtered to select a single reference for each research project from which primary data is taken.

Reports that INCIBE published each trimester between 2009 and 2012 using a panel survey as its basis are treated differently, this specific case has been treated as a longitudinal study and been taken as one project.

On the contrary, studies that refer exclusively to Spain that are part of the EU Kids Online framework, a European macro project, and that have employed different methodologies in varying times have been counted as independent projects.

## 3.2. Variables analysed in the study

- 1. Type of documents published: scientific articles, books, doctoral theses, reports or survey results.
- 2. Theme of the document: mediation, activities and mediation; risks and mediation; and activities, risks and mediation.
- 3. Thematic axes of mediation: description of mediation (strategies, modes of control and norms); variables that are indexed in the modes of mediation, efficiency of mediation, and perception, assessment and responses of minors.
- 4. Year of the collection of information. In this section it is important to point out that it has not been possible for us to identify the date on which field work was carried out for two of the projects; in another one only the academic year has been referred to and the first year is taken into account. Finally, an INCIBE study based on a panel survey that is repeated each trimester between 2009 and 2012 had been taken into account only once in those years, another study that collected data in two consecutive years has been treated in the same manner.
- 5. Funding; public, private or both.
- 6. Geographical scope of the study: national, autonomous community, provincial, municipal and others.
- 7. Ages of the minors that take part in the study.
- 8. Methodology: quantitative and qualitative.

#### 4. Results

#### 4.1. Thematic characteristics of the documents

Our search has generated thirty nine documents published in the last decade that are part of the parameters outlined and that are detailed in table 1. The majority of them are reports and scientific articles of an institutional character. It is important to point out that out of the twenty reports collected on institutional initiative, fourteen are from one institution, the INTECO (now known as INCIBE), and eleven of them are from a panel survey that was done each trimester between 2009 and 2011.

Table 1: Documents by general themes and thematic axes of parental mediation in online activities of Spanish minors.

GENERAL THEMES	ARTICLES	MEDIATION THEME		
	Gabelas y Marta (2008)	Descriptive		
	Sureda, Comas y Morey (2010)	Description by age and gender		
		Description by age and gender;		
Mediation	López de Ayala (2013)	perception and evaluation; reaction of		
- Induition		minors		
	Garmendia, Casado, Martínez y Garitaonandia (2013)	Description by age and gender		
	Jiménez, Garmendia y Casado (2015)	Perception and evaluation		
	Arrizabalaga, Airbe y Medrano (2010 )	Description and variables that explain		
	Arrizabaiaga, Airbe y Mediano (2010)	(TDAH)		
	Martínez, Sendín y García (2013)	Description; perception and evaluation		
Internet use and	Álvarez, Torres, Rodríguez, Padilla y Rodrigo (2013)	Variables that explain ( parents attitude		
mediation	Alvarez, Torres, Rouriguez, Faulia y Rourigo (2013)	and socialization models)		
mediation	Catalina, López de Ayala y García (2014)	Reaction of minors		
	Martínez de Morentin, J.I.; Cortés, A.; Medrano, C.	Description		
	y Apodaca, P. (2014)	Description		
	Padilla et al (2015)	Efficiency		
Risks and mediation	Navarro, Serna, Martínez y Ruíz-Oliva (2013)	Efficiency		
	Ballesta, Lozano, Cerezo y Soriano (2015)	Descriptive		
	THESIS			
Risks, use and		Description by age and gender;		
mediation	López de Ayala (2007) (tesis)	perception and evaluation; reaction of		
mediation		minors		
Uses and mediation	Tolsá (2012)	Descriptive		
OTHERS				
Mediation	Sotomayor (2008)	Descriptive		
Risks, uses and	Garitaonandia y Garmendia (2009)	Perception and evaluation, reaction of		
mediation	Surrasmandia y Surmendia (2005)	minors		

GENERAL THEMES	ARTICLES MEDIATION THEME				
REPORTS					
	Andalusian Infancy Observatory (2008)	Descriptive			
	INTECO (2009a,b,c,d; 2010a,b,c,d; 2011a,b; 2012)	Descriptive			
	(11 annual and quarterly reports)	Descriptiva			
	INTECO (2009e)	Descriptive			
II:	INTECO (2010e)	Descriptive			
Uses, risks and mediation	INTECO (2011c)	Descriptive			
	Andalusian infancy Observatory; Andalusia (2010)	Description by age and gender			
	Pfizer Foundation (2009)	Description by age and gender			
	Ministry of Home Affairs (2014)	Descriptive			
	Bringué y Sádaba (2009)	Descriptive			
	García Galera (2008)	Descriptive (mobile telephone)			
SURVEYS					
Mediation	CIS (2015)	Descriptive			
Uses and mediation	INE (2007)	Descriptive			

Only two doctoral theses have been found in this field. The first one analyses the modes of mediation as one more element in the consumption/use of information technology and communication within the family (Lopez de Ayala, 2007). The second one, derived from the project Interactive Generations, includes parental mediation among the variables that describe different types of users (Tolsa, 2011).

The surveys found correspond to studies carried out by Centre for Sociological Research (CIS, 2015) and National Institute of Statistics (INE, 2007) and includes some marginal questions on dialogue between parents and children (12-29 years) on the use of digital technology and the use of content filters respectively.

The majority of documents belong to a wider sphere of interest on the uses, and risks, parental mediation often constitutes a lesser theme. The twenty registered reports may be situated in this section, while exclusive attention on supervision and control by parents is only contemplated in seven articles and in one chapter of the book. Most of the works describe the ways of intervention by parents, one studies the variables that affect it, four of them examine the responses of minors and two of them are on their efficiency.

As for the variables that influence mediation, two thirds of those documents are centred only on age and gender and except for one of the articles, they only classify the modes of mediation according to these factors without much in-depth analysis of its causal impact.

#### 4.2. Research characteristics

We will now shift focus from characteristics of registered documents to the projects that are backed by these works of which we have registered twenty five. The research peaked in 2009. Reduction in projects in the last years do not necessarily respond to a reduction in research but may be due to the time required to make the results of the research visible, especially when it involves peer revision.

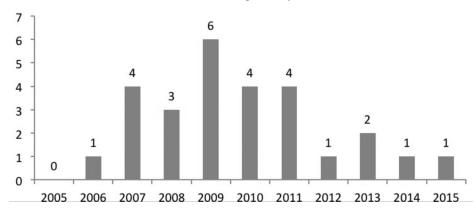


Table 2: Number of studies according to the year of the data collection

Another issue that should be pointed out is the important effort of public initiative whether through programmes for research development sponsored by diverse public bodies and put at the disposition of politicians, researchers and ordinary citizens.

Mixta 2
Privada Pública 3
0 2 4 6 8 10 12 14 16 18 20

Table 3: Number of studies according to type of finance<sup>1</sup>

As for the geographic area that is covered in the research, most of the projects cover the entire nation and autonomous communities. It is important to emphasize that all the research for exclusively private initiative acquire a national dimension.

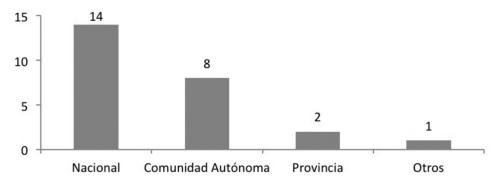


Table 4: Number of studies according to geographic cover that spans the study.

Source: author' sown

The disparity of the age range analysed makes a specific comparison difficult according to age group. Because of this we have opted to examine how many studies addressed each of the ages contemplated: from 3 years, the minimum age aforementioned, up to 18 years. In table 5 we can see that the majority include adolescents from 12 to 17 years in their study that coincide with Compulsory Secondary Education. In spite of growing internet access between the smallest one due, above all, to a range of available digital tools that keeps getting wider (Rideout, 2013), very few examine parental mediation between minors of nine years old and the inclusion of those that have less than seven years is testimonial.

<sup>&</sup>lt;sup>1</sup> One of the studies does not specify any funder and the other is from a doctoral thesis.

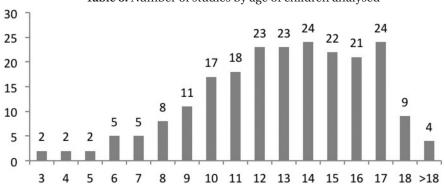


Table 5: Number of studies by age of children analysed

A relevant aspect in any research makes reference to the type of methodology implemented, quantitative and qualitative. Both approximations imply supposed differences of parting, use different methods to obtain information on reality, require different criteria of trustworthiness and validity and generate different results (Olafsson et al., 2014).

A substantial part of the research adopts quantitative methodologies looking to weigh that measure parental regulation and control. These methodologies also permit for the establishment of causal relations that explain the prevalence of patterns of parental intervention or its effects on the practices and risks that affect minors. However, the near generality of works that contemplates the use of multivariate analysis with this explanatory objective which also suggests more demanding and complex research design.

Recourse to qualitative methodologies is more limited and fundamentally utilizes group discussions so that from what the minors and their parents themselves say, they can analyse their perception on activities, risks and different parental mediation strategies. Except for some exceptions, the general nature of these documents is limited to a very brief description of parental intervention measures without getting into the universe of meanings that, when shared socially, configure and shape parental practices or the minors' answers.

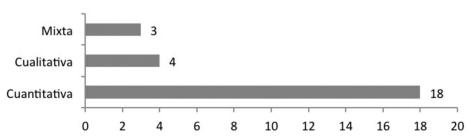


Table 6: Number of studies according to type of methodology utilized

Only three studies deal with the use of qualitative and quantitative research techniques and, except for one of them, have generated segregated documents that lack the integrity that would permit the achievement of a holistic vision of the theme.

In the final analysis, recourse to parents and children as informers is conditioned by the age and methodology utilized.

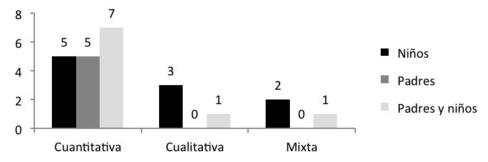
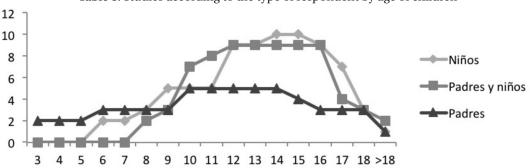


Table 7: Studies according to the type of respondent by type of methodology utilized

Source: author's own

Parents are required as unique informers in studies that will employ exclusively quantitative techniques and it is habitual the study sphere that includes young children. Studies have included children from the age of five and six years, more children from the age of twelve to seventeen years that coincide with Compulsory Secondary Education.



**Table 8:** Studies according to the type of respondent by age of children

## 4.3. Intervention measures of Spanish parents

Literature review of empirical research on parental mediation in Spain shows us a primarily descriptive trend. However, the diversity of indicators and measures utilized in the formulation of questions and response options, as well as the delimitation of the sphere of study by age and informants, is an obstacle to the comparison of results. In this section is the most recent data on strategies and tactics utilized by parents to measure the relationship that minors have with the internet in the national sphere and in relation to our neighbouring countries.

Among the most recent works we find the Survey on habits of internet use and security by minors and young people in Spain (Home Affairs Ministry 2014). The survey, that covers the entire country, was done by boys and girls between the age of 10 and 17 years of age (n=1506) and their fathers and mothers (n=1006). Beyond this study, we have to reach back to 2012 to obtain information in the national sphere on the strategies of parental mediation and concretely to the Study on information security and e-confidence in Spanish homes (INTECO, 2012. Based on a panel survey of parents of boys and girls under 15 years, it permits us to examine the evolution of some of the items consulted in respect to other previous edition. This same body has carried out other specific research among which we highlight a more specific survey on the theme and that targets parents with children between 10 and 16 years and to the latter (INTECO, 2009e).

Another relatively recent study is derived from the project "Analysis of use and consumption of media and social network on the internet between Spanish adolescents. Characteristics and risky practices", done by a team of professors and researchers of the Rey Juan Carlos University of Madrid. The study is based on a survey (n=2077) and discussion groups, included school children between 12 and 17 years in its sphere of study. Poll data was collected at the end of 2011. Table 9 is a summary of the main results of norms and prohibitions implemented by parents according to the studies mentioned, all have a representative sample of the national sphere.

Table 9: Prohibitions and limitations of internet use of children according to the perception of parents and children.

2009: 10-16 year, responses of parents and children	2011: 12-17 years, children's responses	2014: 10-17 years, responses of parents and children <sup>2</sup>		
	Temporaly limitation to access	1		
-Limit on days, connection and session length *Parents: 64,1% *Children: 64,4% -Limit on connection timetable *Parents: 59,6% *Children: 61,5% -Access when nobody is home * Parents: 5,6% * Children: 5,2%-	-Being connected for too long.  *Children: 53,0%  -Connection on school and exam days.  *Children: 34,9%  -I am only permitted to Access the internet when adults are present  *Children: 2,5%			
	Other type of prohibitions			
-Payment by Internet *Parents: 15,1% *Children: 14,3% -Personal data *Parents: 13,3% *Children: 10,7% -Chatting with unknown people * Parents: 15,8% *Children: 18,2% - online video games *Parents: 10,1% *Children: 10,4% -Access to pages with violence *Parents: 11,9% * Children: 10,6%	- Purchases.  * Children: 48,3% -Provide personal information.  *Children: 45,2% -Sending emails to mobiles.  *Children: 12,3% -Access to chats /forums.  *Children: 8,4% -Access to social networks  *Children: 6,2% -Use of Messenger. * Children: 3,5% -Uploading photos/videos: * Children: 0,6% - Games. * Children: 8,2% -Downloading of music and films / series. *Children: 4,7% -Access to information by adults. *Children: 37,3%	-Internet shopping *Parents: 86,4% *Children: () -Provision of personal information. *Parents:71,1% *Children: 65,1% -To have own profile in the social networks *Parents: 40% *Children: 27,3% -Use of Messenger, WhatsApp *Parents: 12,9% *Children: 8% -Upload photos, videos and music to share them *Parents: 37,4% *Children:28,8% -Downloading music, films or Internet *Parents: 32,8% * Children 26,6%		

<sup>&</sup>lt;sup>2</sup> Results are collected for the option "they never permit me to do so".

Source: Author's own chart base don INTECO (2009e), new data from "Analysis of the use and consumption of the media and social network on the Internet among Spanish adolescents. Risk characteristics and practices (URJC) and Home Affairs Ministry (2014).

In spite of comparative difficulties we observe that prohibitions that are commonly referred to by parents and children are those on the amount of time spent on the internet, online shopping, giving of personal information or access to adult content although the results are conditioned by the response options facilitated and according to the informers consulted.

67.4% of the children (10-16 years) declared that they had norms on internet use (INTECO, 2009e), this percentage increased to 83.1% in 2011 for adolescents (12-17 years). In line with the aforementioned, a growing trend is observed in the establishment of norms: for online purchases, for the availing of personal data, uploading photos and videos or on the use of Messenger. This development is corroborated by the prohibition to buy online by the INTECO panel (2009b and 2012) with an increment from 77.6% to 95.2% according to parents' declarations.

**Table 10:** Measures of education, communication and dialogue that parents adopt in order to protect your children and online risk.

2009 y 2012: 10-16 years, parents'	2011: 12-17years, children's	2014: 10-17 years, responses by parents	
responses	responses	and children	
-I caution my child about the problems	- I have been told something	-Explain him why some web pages are	
of giving out his personal information	about the risks on the internet	bad or good.	
(name, address, telephone, password,	*Children: 33,9%	*Parents: 79,1%	
photos) or people close to him and his	-I have been frequently informed	-Indicate to him ways of using the	
family.	about internet risks.	internet safely.	
*2009: 92,2% *2012: 91,9%	*Children: 29,4%	* Parents: 68,7%	
-In addition to the benefits, he also	-I have been recommended sites	-To be with him while he utilizes the	
informed I have also informed by 2012	in which to surf and been given	internet	
about the threat that the internet poses.	advice on how to go about it.	* Parents: 66,4%	
*2009: 91,4% *2012: 91,8%	* Children: 5,8%	-Suggest to him how to behave towards	
-I have asked him to inform me of any	-No, my parents know that I am	other people.	
behaviour or contact that may be	responsible.	*Parents: 60,3%	
uncomfortable or suspicious for him.	*Children: 19,8%	-To talk about what he would do if	
*2009: 81,6% *2012: 88,7%		something in the internet worried or	
2009: responses of parents and children		upset him:	
		*Parents: 53,8%	

2009 y 2012: 10-16 years, parents'	2011: 12-17years, children's	2014: 10-17 years, responses by parents		
responses	responses	and children		
-I surf the internet always or almost		-Encourage your son or daughter to		
always with my parents		explore and learn things on the internet		
*Parents: 14,9% *Children: 15,7%		by him/herself.		
		*Parents: 33,2%		
		-To share activities and make purchases		
		with him / her on the internet.		
		*Parents: 31,8%		
		-Share keys and passwords to compare		
		or register on the internet.		
		*Parents: 8,7%)		
		He had received advice on how to use		
		the Internet in a safe manner from his		
		father/mother or guardian.		
		*Children: 88,6%		

Source: Author's own chart base don INTECO (2009d, 2009e and 2012), unpublished data from "Analysis of the use and consumption of the media and social network on the Internet among Spanish adolescents. Risk characteristics and practices (URJC) and Home Affairs Ministry (2014).

Spanish parents show a preference for dialogue as a form of mediating in their children's relationship with the internet. However, this dialogue can be understood and registered in very different ways such as warnings, advice, petition of information and true free and spontaneous dialogue on risks in the network and how to deal with them or of how to make better use of online resources. 88% of the children recognize that they have received advice from their parents on how to use the internet in a safe manner. From the parent's perspective, explaining to them why some web pages are good or bad is the most common form of actively mediating their children's online activities (79.1%) (Home Affairs Ministry, 2014). However, the diversity of indicators utilized in the studies notably made comparison difficult. Neither did INTECO (2009d and 2012) present us with a clear trend in this sense, except on an increase in requests to children to inform of uncomfortable or suspicious experiences on the internet.

Table 11: Control systems and tracing of the internet use by children according to parent and children's perceptions.

2009 y 2012: 10-16 years responses by	2011: 12-17 years, responses by	2014: 10-17 years, responses of	
parents	children	parents and children	
-I watch over and limit connection time *2009: 75,7% *2012: 85,1% -I supervise content to which they have Access after each session (record). *2009: 55,8% *2012: 71,1% -I have created a limited user account for the minor's internet Access. *2009: 29,5% *2012: 43,1% -I am keen on their internet friends *2009: 72,9% *2012: 77,7% -I know the username and profile that my child uses in chats/social network. *2009: 67,1% *2012: 70,9% 2009: parents and children responses -Operating system has parental control incorporated. *Parents: 2,7% Children: 1,4% -Filter provider at source. *Parents: 2,1% *Children: 1,2% - I ask the minor always or almost always about what they do on the internet. *Parents: 27,6% * Children: 26,7% -Monitoring of surfing record. *Padres: 28,1% * Children: 24,6%	- They come, look and asked what I am connected to and what I am doing"  *Children: 67,9% -They control and limit the amount of time I spend online.  *Children: 58,8% -They track down of the pages that I surf.  *Children 15% - Follow up of conversations online  * Children: 6,4% -They are included in my social network profile.  * Children: 41,1% -I am only allowed to access the internet if an adult present  * Children: 2,5% -They activate content filters  *Children: 13,6%	-*Parents: Check on  • Web pages visited (61,8%)  • Composition of WhatsApp /Messenger groups (37,6%)  • His/her social network or online community profile (34,9%)  • amigos o contacto añade a su perfil de red social (34,1%)  • E-mail messages or instant messaging service. (33,1%)  - Parental control or other type of programmes in order to block some types of web pages.  *Parents: 38,1% * Children: 21,5%  - Parental control or other types of software to track web pages visited  *Parents: 19,2% * Children: 10,5%  - Service or contract that limits time spent on the internet  *Parents: 5,7% *Children: 3,9%	

Source: My own with data from INTECO (2009d, 2009e y 2012), unpublished date from the project "Analysis of use and consumption of media and social networks in the internet among Spanish adolescents. Characteristics and risky practices" (URJC) and Home Affairs Ministry (2014).

The scarce incidence of technical control tools for parental control and filter is noteworthy even after having experienced risk situations, only 1.6% of the parents used them (INTECO, 2009e). However, notable growth of their use is projected to increase with time. The supervision of online activity is more frequent and it has seen a certain increase through time.

In the European context, Spain, along with southern European countries, is characterized by a combination of increased use for both restrictive and active mediation (Duerager and Livingstone, 2012; Helsper et al., 2013).

More concretely, Spanish minors (9-16 years) declare that their parents try to be near or to sit with them while they surf the internet more than the rest of the Europeans (70% and 50% respectively compared to 57.7% and 43% average in Europe). They also report more than their parents have explained them why some webs are good and others bad (73.8% in comparison to 67.5% of Europe) and to indicate ways of using the internet in a secure manner (68.3% and 63.1% respectively).

However, comparative results show that their parents are more restrictive than the rest of the Europeans in the prohibition to provide personal information (90% compared to 85.4%), but display less respect in the downloading of music and films, seeing videoclips or using instantaneous message service (44.3% compared to 46.1%) (Garmendia et al., 2013).

## 4.4. Perception, valuation and reaction of minors to the supervision of parents.

In general, Spanish children don't usually break tax norms imposed by their parents in relation to the internet. A significant percentage reneges on the prohibition against access to social networks, information on sex and the use of Messenger. However, except for access to adult content, the low degree of the establishment of these norms limits their incidence in absolute terms. The oldest adolescents are the ones who break the norms while the influence of gender varies by function of the norm in question.

Table 12: Control systems and supervision of internet use by minors according the perception of parents and children.

	Total	It is prohibited but they access	From 12 to 14 years	From 15 to 17years	Men	Women
Shopping	48,3%	4,4%	2,6%	6,5%	5,1%	3,7%
Providing personal information	45,2%	18,5%	17,9%	19,2%	16,8%	19,8%
Access to adult content	37,3%	50,0%	54,8%	44,7%	55,7%	45,6%
Uploading photos/videos	10,6%	27,5%	27,8%	27,3%	33,4%	22,7%
Access to chats /online forums	8,4%	11,7%	5,2%	20,6%	10,4%	12,5%
Playing games	8,2%	19,4%	18,9%	19,7%	38,6%	0,2%
Access to social networks	6,2%	53,7%	1,4%	86,7%	35,5%	67,6%
Downloading music files/films/series	4,7%	18,6%	9,8%	35,6%	8,8%	29,2%
Use of Messenger	3,5%	47,1%	34,5%	56,6%	48,0%	45,9%

Significant statistical differences for  $\chi 2 < 0.05$  of sex and age appear in bold

Source: My own chart with unpublished data of the Project "Analysis of the use and consumption of social media in the internet among Spanish adolescents. Risk practices and characteristics"

According to Catalina et al. (2014), 18% of the adolescents in 2011 were avoiding programs and mechanisms used by parents to control sites they visited on the internet. Although 9.7% more say that they would like to be able to avoid those controls. Male adolescents between 15 and 17 years are the ones that stand out on the use of tactics to elude parental control.

From a comprehensive perspective, the minors perceive that it is an obligation of the parents to protect their children by controlling their activities. But at the same time they manifest the circumvention of parental control as an indicator of maturity by which they try to preserve their privacy and demonstrate to their peers their autonomy. (Lopez de Ayala, 2013).

Children and adolescents (10-17 years) affirm that when they do not like or are worried about something in the internet they talk about it to their parents (71.1%), 57.6% of them talk with friends, 19.1% with siblings and 8.3% to no one. (Home Affairs Ministry, 2014) Jimenez et al. (2015) also point out that children recognize that it is their parents that can help them in the best way when they have a problem, but they do not confide in them for fear of reprimand or of disappointing them.

From a comparative European perspective, 14% of Spanish minors say that they ignore what they their parents tell them while only 7% do so on average in the rest of Europe (Haddon and Livingstone, 2012). However, 19% claim more interest from their parents for what they do online in comparison to 61% of the parents who say that they should do so more; in both cases it is above the European average: 15% and 53% respectively.

In the entire group of European countries, 15% of the parents say that they have changed their mediation strategies due to something that has bothered their children online but only 6% of the children say it in the same manner. The statistics are very similar in Spain. On the other hand, 72% of the children, even more among adolescents, are in conformity with the interest that their parents show towards their activities online.

### 5. Conclusions and discussion

Revision of the themes and methodology following by studies that examine parental mediation of internet use by Spanish minors permits them to establish:

- 1.- The marginal treatment of the issue to the extent in which a trend that puts the studies in a wider perspective that centres around the use and risks of the internet and mediation makes up a small part of the research. At the same time increasing research activity is observed throughout the 21st century as the use of the internet increases in the Spanish society and among minors in particular. However after peaking in 2009, research went through a slight relapse. However it is not possible to categorically conclude that there was a decrease in interest on parental mediation on internet use by minors, it is fair to observe the relevance of an issue that requires continued follow up and updating as new devices and services come up that permit online access.
- 2.- The attention that this issue has attracted in the institutions is worth highlighting and in particular efforts by INCIBE (before INTECO), a public body that holds an important amount of research on the use of the internet by minors and the risks it poses.

In the same vein we should mention the importance of public finance for research development on an issue of public interest; especially if we take into account that a considerable amount of the research is backed by survey techniques that require a lot of funds especially if they cover the entire national sphere.

3.- The state of immaturity that characterizes this object of study in Spain, as ratified by the descriptive character of a substantial part of the studies that try to quantify the ways in which parents intervene and that discriminate, at best, basic variables such as age and gender of the parents and the minors. On the contrary, there is little interest in in-depth research on the factors that affect parental mediation and its efficacy, which are basic aspects that should inform policies that are directed towards parents.

4.- In the same way, the interest in the analysis of patterns of parental mediation among adolescents of both sexes is evident. This readiness is accompanied by difficulties in methodologies for carrying out research with children and worsens with decreasing age. Most of the data collection techniques require the mediation of discourse and that the respondents do so verbally to a number of questions formulated by the researcher. However, it is from the age of nine and especially at twelve that the children are able to articulate more complex answers and understand the questions better in order to respond to the questions. On the other hand the fact that they have undergone compulsory schooling facilitates the preparation of sample frameworks to carry out representative surveys, access to them in educational centres reduces research costs and the need to obtain parental permission.

These reasons may explain why there are hardly any children under the age of five to seven years appear in the studies and why they range from the age of twelve to seventeen years which coincide with the compulsory secondary education phase, when they are required more. In this sense it is necessary to note that due to growing access to new mobile digital technologies by younger children it is pertinent to expand research to these ages.

5.- Quantitative methods predominate in the approach to this research subject of inquiry and there is a tendency to quantify parental intervention measures more than to explain the factors that predict these practices or analyse their efficiency. In this sense, recourse to multivariate analysis becomes residual and limited to samples that are not representative.

We also find lacunas in the use of restricted qualitative methodologies. Available research does not go past group discussion with children to describe their perceptions of what measures their parents use to measure their online relations. In-depth qualitative analyses on the motives of adults practices are lacking drawing us closer to current beliefs in family social space and the difficulties that come up in relation to other fields that support their behavior. In this respect, it is necessary to consider parents and children as builders and interpreters of meanings taking into account different directions that condition the practices of one group and the evaluation and response of the other.

Deficiencies in the descriptive methodologies of some documents require special mention, they do not explain the data collection process in detail and essential information such as the date of field work is not included.

6.- Research that combines both methodologies rarely articulates them in such a manner as to provide us with a holistic vision of the phenomenon. In general, the results are presented in reports or independent articles without recourse to qualitative results to obtain further information in the interpretation and comprehension of quantitative data. Neither is it possible to confirm their use in an exploratory manner in order to support the formulation of questionnaires and the elaboration of hypotheses in quantitative methodology.

- 7.-Formulation of questions to parents and children as informants constitutes a key decision that determines the results. There is no doubt that methodological difficulties associated to deficiencies on the use of the language of the young ones is determinant in the selection of parents as informers on mediation practices with their little children.
- 8.-The analysis of contributions of research gathered shows that Spanish parents have a preference for dialogue measures but also certain predisposition to the adoption of restrictive measures (norms) and to make a follow up of their children's activities. The increase in awareness raising and parental concern about online risks, alerted by communication media and the dominant social discourse is manifested in a growing intervention in relationship that their children have with the internet. As for the type of norms implemented, the common use of questions with the option of closed questions conditions the responses of parents and children in part also due to the effect of social desirability (Ponte and Simoes, 2009).
- 9.- International comparison makes us aware of the diversity of patterns that parents adopt to protect their children from the dangers posed by the internet. Consequently, this perspective permits us to overcome the idea that own approach constitutes what is natural and normal and it contributes to the analysis, permitting us to obtain a richer and more objective vision of parental practices and to discover the causal relations that they explain.

It is important to underline that the European Union has fostered international research in its geographical sphere with the objective of comparing the situation of different countries. In addition to the Eurobarometer and qualitative and quantitative reports that have been appearing since 2003 under the umbrella of the programme Safer Internet, we should emphasize the special significance of Kids Online, the European macro-project within which an especially fruitful line of work has permitted us to relate the situation of Spain to that of neighbouring countries. It is important to highlight relevant teamwork that Spain represents in this project.

However, it is pertinent to clarify that the diversity of socio-demographic, cultural, economic and political circumstances in a group of the countries studies advises a more detailed comparative analysis by country, instead of limiting ourselves to comparing the situation in Spain with the European average.

Finally it is convenient to state that decision on the database consulted may have some incidence on the studies registered. However, the relevance of the sources utilized permits us to think that the most important research is included although there are more doubts in relation to institutional initiatives that are more complicated to gather.

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