

## Media convergence, risk and harm to children online

### *La convergencia mediática, los riesgos y el daño online que encuentran los menores*



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**Abstract:**

Mobile media allow children to have more flexible and personalized habits, and create new opportunities for privacy when using them in the home, school and public spaces. *The Net Children Go Mobile*<sup>1</sup> project in which Denmark, Italy, the United Kingdom, Romania, Belgium, Ireland, Portugal and Spain have participated, is based on the analysis of this new reality and its possible consequences for children. This study presents the most significant results of this project in Spain from a survey of 500 Spanish children between 9 and 16 years of age who are Internet users, along with their father or mother. Parents were asked about their children's use of the Internet and mobile devices, parental mediation strategies, along with socio-demographic information and educations. One of the main findings of this study is that online risk experiences do not necessarily lead to harm. In fact, the **EU Kids Online** research project showed that children who face the greatest number of online risks are not necessarily the ones who suffer the most harmful consequences; on the contrary, they are usually the ones who have greater skills to deal with such issues and to develop more resistance.

**Keywords:**

Internet, children, risks, harm, cyberbullying, sexting.

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**Resumen:**

Los medios móviles (smatphones y tabletas) les permiten a los menores tener unos hábitos más flexibles y personalizados, y crear nuevas oportunidades de uso privado dentro del hogar, la escuela y el espacio público. El proyecto *Net Children Go Mobile*, en el que han participado Dinamarca, Italia, Reino Unido, Rumanía, Bélgica, Irlanda, Portugal y España, se basa en el análisis de esta nueva realidad y de sus posibles consecuencias para la infancia. Este estudio presenta los resultados más significativos de este proyecto en España a partir de la encuesta realizada a 500 menores españoles usuarios y usuarias de internet de entre 9 y 16 años y a su padre o a su madre. Uno de los mayores hallazgos de este proyecto es que las experiencias de riesgo online no conducen necesariamente al daño, tal y como indicaron los propios menores. De hecho, la investigación **EU Kids Online** mostró que los niños y niñas que se encuentran con mayor número de riesgos online no son necesariamente quienes sufren consecuencias más dañinas; por el contrario, normalmente son ellos quienes demuestran más habilidades y desarrollan más resiliencia.

**Palabras claves:**

Internet, menores, riesgos, daño, ciberacoso, sexting.

## 1. Introduction

Children are growing up in a system of media convergence (Ito *et al.*, 2009), which provides them with opportunities for socialization, self-expression, learning, creativity, and participation through online media, and increasingly through mobile media (Hjorth & Goggin, 2009; Goggin, 2010; Goggin & Hjorth, 2014). However, in addition to the opportunities offered by Internet, children are also exposed to risks, indicating the interdependence of both (Livingstone, Haddon, Görzig & Ólafsson, 2011): the more children use Internet, the greater the range of opportunities they have, and the greater the exposure to risky experiences.

Mobile media (smartphones and tablets) allow children to have more flexible and personalized habits, and create new opportunities for private use within the home, school and public spaces. The **Net Children Go Mobile**<sup>2</sup> project is based on the analysis of this new reality and its possible consequences for children and their families.

Over the past decade, the number of investigations regarding the risk to minors on the Internet has been substantial (Ólafsson, Livingstone & Haddon, 2013). However, most studies have focused on specific risks in certain countries rather than addressing the experience of risk and harm as a whole from a comparative perspective. One notable exception is the

1 This was a quantitative study carried out in Spain, funded by the Ministry of Economy and finance (MINECO) Project CSO2013-47304-R.

2 The Net Children Go Mobile project involved Denmark, Italy, United Kingdom, Romania, Belgium, Ireland, Portugal and Spain. The quantitative research carried out in Spain was funded through the Project CSO2013-47304-R from MINECO

**EU Kids Online** project, which interviewed more than 25,000 children aged 9-16, along with their parents, in 25 European countries.

This study presents an analysis of the most relevant results in Spain of the aforementioned **Net Children Go Mobile** project, based on the issues listed below.

## 2. Risk and harm

One of the major findings of this project is that the experience of online risk does not necessarily lead to harm, as indicated by the children themselves (Livingstone *et al.*, 2011). In fact, the **EU Kids Online** research showed that children who encountered the greatest number of online risks are not necessarily the ones who suffer the most injurious consequences; on the contrary, they are usually the ones who demonstrate the greatest skill and develop the most resistance. Children who are less exposed to opportunities as well as risk tend to feel more upset and worried when they encounter a negative online experience (*ibid.*; see also Livingstone, Hasebrink, & Görzig, 2012). Among older people, who are exposed to more risk but are more resistant, as well as among children, who participate in fewer activities and therefore face fewer risks, online and offline vulnerability go hand in hand.

### 2.1. Bullying

While cyberbullying is a recurring issue in both research and in public and political agendas, there is no standardized definition of the term due to the fact that the phenomenon itself is in constant evolution (Schrock & Boyd, 2008; see also Levy *et al.*, 2012). Most definitions are based on the meaning of the term bullying itself and its features. Bullying has been described as a form of aggression that is: intentional, repetitive and implies an inequality of power between the victim and aggressor. Consequently, cyberbullying is defined as intentional and repeated aggression using any type of technological device such as Internet or the mobile phone.

Although cyberbullying is a deliberate and repeated activity that seeks to harass or ridicule another person, and also implies inequality of power that has been mentioned, research has shown that the specific characteristics of online or mobile communication reinforces the features of traditional bullying by adding new elements to the problem. For example, a concealed identity “may increase the threatening nature of a cyberbullying act, or the resulting victim’s sense of helplessness” (Levy *et al.*, 2012, p. 11), and may also increase the power imbalance between victim and aggressor. Anonymity, however, may not be exclusive to online communication (and in fact, the school environment may facilitate anonymous acts of bullying, as Levy and his colleagues point out). Moreover, while an act of cyberbullying may not necessarily repeat itself over time (Levy *et al.*, 2012), the features of media audiences –persistence, traceability, replication, and invisible audiences (Boyd, 2008)– potentially amplify the duration of cyberbullying and its harmful consequences as broader audiences may be involved.

The preceding investigation has shown that while cyberbullying is less common than offline bullying (Livingstone *et al.*, 2011; Ybarra & Mitchel, 2014), the experience is very disturbing and harmful (Livingstone *et al.*, 2011). The shift from offline to online spaces implies that the boundaries of space and time are losing their meaning: one cannot abandon a space

and assume that bullying will end; in fact, bullying is also more likely to occur after school through various platforms (Kernaghan & Elwood, 2013). Furthermore, compared to face-to-face ways of bullying, in the case of online bullying, it is much more difficult to draw the boundary lines between the role of victim, aggressor and spectator (Lampert & Donoso, 2012).

## 2.2. *Sexual Messages*

Children are using the Internet and mobile phones as part of their social interaction and sexual exploration (Lenhart, 2009; Livingstone *et al.*, 2011). This practice has been called “sexting” (from the words sex and texting), and has been defined in various ways. One approach restricts the definition of sexting to the exchange of images via mobile phone. Lenhart defines sexting as “creating, sharing and disseminating sexually suggestive images of nudity or semi-nudity” of oneself or an acquaintance through mobile phones (2009, p. 2), thus excluding sexually suggestive text as well as the rest of the communication platforms. The **EU Kids Online** survey, on the other hand, adopted a more inclusive notion of sexting, which takes into account both images and text, and considers all forms of online communication beyond that of the mobile phone to fall within the definition of sexting (Livingstone *et al.*, 2011).

The Pew Internet Study (Lenhart, 2009) identifies three basic assumptions of sexting at the moment when the exchange of sexual images occurs: (a) it is part of adolescent experimentation with sexual identity and intimacy even if its protagonists are not yet sexually active; (b) it occurs between two partners as part of a sexual relationship; (c) as a prologue to sexual activity between two people who do not yet have a relationship, but at least one of whom would like to have one. In fact, most sexting can be contextualized within a peer relationship as a form of “bargaining chip” in the relationship (Lenhart, 2009, p. 8). However, the specific nature of technology and the social availability of ICT can amplify the boundaries, meanings and audiences of sexting: images and texts exchanged within the context of a romantic relationship, via instant messaging (WhatsApp, Snapchat, etc.), or through social networks can be easily distributed, published in more online spaces, and therefore shared with wider audiences. Therefore, sexual messages can have unintended consequences and can become unpleasant or problematic experiences for some children. The above research maintains that the exchange of sexually explicit images, messages or invitations is linked to harassment and bullying, and therefore leads to a form of “sexual cyberbullying” (Kofoed & Ringrose, 2012; Ringrose, Gill, Livingstone, & Harvey, 2012).

## 2.3. *Contact with strangers*

One of the biggest sources of anxiety with regard to young peoples’ online communication is defined as ‘stranger danger’, or in other words, the idea that young people might meet someone through the Internet, be persuaded to contact that person offline, and end up being abused in a face-to-face encounter. In fact, previous research has suggested that “meeting strangers” can encompass diverse circumstances and experiences, and it cannot be assumed that these are universally problematic (Barbovschi, Marinescu, Velicu, Anca & Laszlo, 2012; Ito *et al.*, 2009); at the same time, other previous studies have shown that the risk of being harmed in a face-to-face encounter with someone who has been met online is low (Livingstone *et al.*, 2011).

One of the main reasons for this is the way in which online sociability works. Children tend to extend their online contacts network by activating “latent links” (e.g. people with whom they share friends, hobbies or locations), rather than by looking for people with whom they have no connection in the offline environment.

In fact, most face-to-face encounters with people previously contacted online are with “friends of friends” and not with complete strangers (Barbovschi *et al.*, 2012). Therefore, the first step is to understand how online communication works and the process by which internet users contact people they have previously met only online, and then identify the process by which these users meet these people offline.

#### 2.4. *Sexual images*

Pornography, and more specifically, the negative influence that pornography has on minors, is a controversial topic of study. The belief that pornography has been taken out from “under the bed” and placed onto the screen as a result of the absence of censorship and the consequential ease with which pornographic content circulates over the Internet has generated considerable public anxiety (Rovolis & Tsaliki, 2012, p. 173). However, the pervasiveness of sexual content on the internet has been addressed in multiple studies (see among others Ey & Cupit, 2011), and as an example, the **EU Kids Online** project revealed that one in four children has encountered pornographic content, yet only 14% have accidentally or intentionally encountered online sexual images (Livingstone *et al.*, 2011). Similarly, the data have also shown that while viewing sexual images is more common among older boys and adolescents, younger children and girls are more likely to be displeased with the content they encounter.

#### 2.5. *Other inappropriate content*

The Internet has allowed for the unprecedented circulation of a massive amount of content generated by users themselves, which are not produced or distributed on a large scale by companies, but are produced by individuals (User-Generated Content). While the creation and sharing of content is one of the fundamental opportunities offered by the web, and a very important element within digital literacy processes, there is certain user-generated content that could be considered problematic: those that promote eating disorders; encourage behaviour that causes self-harm or drug use, or online materials that advocate discrimination and violence against certain groups, are among the main examples of negative user-generated content. Although there is some evidence that exposure to such messages is relatively common among minors (Livingstone *et al.*, 2011), the issue has received less attention from legislators and researchers than others such as bullying, sexting, contact with strangers, and pornography.

#### 2.6. *Other Risks*

These include economic risks such as losing money as a result of falling victim to online fraud; technical risks such as viruses or malware, and risks related to the misuse of personal information. The latter includes being a victim of email account theft or profile hacking on social networks; inappropriate use of personal information and photos of a victim that a third party claims is him or herself (e.g. creating false profiles); and people impersonating others, or ‘catfishing’.

### 3. Method

The results presented in this work are based on data collected in Spain by means of a survey involving a sample of 500 internet users who were minors between 9 and 16 years of age, and either their father or mother. This field work took place between April and June of 2015. In each house, the parent who was most involved in the child's online activity was interviewed.

The most relevant features of the survey were the following:

- A cognitive test with eight children from different age groups (9-10, 11-12, 13-14, 15-16) to check the children's understanding and reactions to the questions.
- A stratified random selection of 500 minors (from 9-16 years of age), all of whom were internet users.
- Conduct the questionnaire in the children's homes, face to face, with a self-administered section for the most sensitive issues.
- Conduct the questionnaire with the father or mother of the minor, selecting the one who is most involved in the internet activity of the minor.

Parents were asked about their use of Internet and mobile devices and their mediation strategies, as well as socio-demographic issues and education levels.

### 4. Results: Overall perception of risk and harm

Measuring experiences of risk and harm online is present in the methodology and operational framework of **EU Kids Online** (Livingstone *et al.*, 2011). For this reason, the harmful impact was measured subjectively in terms of what the children's responses to risky experiences indicated. About 18% of the children (see Table 1) said they have become upset by something seen on the Internet over the past year. Although still a minority, this percentage is higher than that found by the 2010 **EU Kids Online** survey. Neither gender nor age differences can be considered significant: 17% of boys and 18% of girls said they were disturbed by an Internet-related issue. By age category, the group with the lowest percentage of affirmative answers is the youngest, aged 9-10, but there are only two percentage points difference between this group and the group with the highest percentage of minors reporting negative experiences (19% for the 11-12 year old group). The differences are much more noticeable depending on the educational level of the parents. Children whose parents have lower education levels are more likely to have experienced something on the Internet that has bothered them.

**Table 1. Children who have had online experiences that have bothered them by gender and age<sup>3</sup>**

Gender and age	% Of all minors who use the internet
Boys	17
Girls	18
9-10 years of age	17
11-12 years of age	19
13-14 years of age	18
15-16 years of age	18
TOTAL	18

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

In general, with regard to the impact of online experiences that have been disturbing, there are no substantial differences between the children who use the tablet daily (18%) and the smartphone (17%). And the truth is, there are also no significant differences between these users and those who do not use mobile devices to surf the Internet on a daily basis (16%). There are some small variations by gender: boys are more likely to have disturbing experiences through the smartphone, and girls through their tablets.

We could draw two conclusions from this. Firstly, we can speak of a slight increase in the probability that children will say that something has bothered them, which can be associated with the use of smartphones and tablets to access the Internet. Secondly, this partnership reinforces the so-called “theory of use”: the more children use the Internet, the more opportunities they have, but they are also exposed to more risky experiences.

#### 4.1. Bullying

About one-third of children have experienced some form of online or offline bullying. Twelve percent (12%) said they were “very” upset, and 12% said they were “slightly” upset about what had happened. The bullying experience is marginally biased by gender; girls are more likely to have experienced it (35%) and to have been upset by it (26%), as compared to boys, of whom 29% reported having suffered it, and 22% having been upset by it. There are also differences according to age, with a confirmed difference between the younger age groups and that of the 15-16 year olds. In the latter group, the incidence of bullying seems to decrease and the percentage of minors who say they have felt displeased by these experiences also decreases by half. Thus, older children report much more moderate rates of harm than the rest (6% vs. the average of 12%).

<sup>3</sup> The decimals of the averages shown in the tables have been deleted.

**Table 2. Ways in which boys and girls have suffered bullying in the last 12 months**

<b>Types of bullying</b> (%) Percentages based on all children using the Internet	9-10 years of age	11-12 years of age	13-14 years of age	15-16 years of age	TOTAL
In person, face to face	27	27	27	20	25
Mobile phone calls	0	1	2	3	1
Through messages in my phone (SMS or MMS)	0	1	2	3	1
On a social network (Twitter, Facebook, Tuenti, etc.)	1	4	6	8	4
On a platform (Youtube, Instagram, Flickr)	2	3	6	2	3
By instant messaging (MSN, WhatsApp, Skype)	2	4	7	9	5
In a chat	3	6	4	2	4
By email	0	0	0	0	0
Online betting	0	0	0	0	0
Other	0	0	0	0	1
Some form of bullying via the internet or mobile devices	8	13	14	15	12

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

While 12% of children report being victims of harassment through the internet or mobile devices, cyberbullying is not the prevailing form of aggression. In fact, the percentage of minors who consider themselves to be victims of face-to-face bullying is more than double that of those who have suffered cyberbullying (12%). The channels through which cyberbullying most commonly takes place are instant messaging, which in our environment is currently assimilated into WhatsApp (53%), social networks (4%), and chats (4%). With regard to the relationship between the impact of online bullying and offline bullying, there are certain differences depending on age, although the differences are small. Younger children indicate a higher prevalence of offline bullying compared to online bullying: face-to-face bullying remains at 27% from the ages of 9-14, whereas it stands at 20% for the 15-16 year age group (see Table 2). In the opposite way, the general incidence of cyberbullying increases very progressively as the age of adolescence increases. In the 15-16 year age group, cyberbullying cases are most frequent via social networks, instant messaging, calls or messages received on a mobile phone.

The most common form of bullying is face-to-face. The figure of 19% of the girls and boys surveyed claim to have harassed others in an offline context, while the combination of all forms of cyberbullying, due to the fact that they recognized having used some form of online communication channel to carry out the harassment, appears in 8% of the minors surveyed, and was done mainly through social networks, instant messaging and chats. The highest incidence of reported bullying, both online and offline, appears among the 13-14 year age range, far surpassing the averages of harassment through messages, networks, platforms, instant messaging, and in general, any of the options considered.

Comparing the incidence of bullying and cyberbullying, it is worth noting that in five years, the percentages of boys and girls who claim to have been victims of harassment have doubled in all age groups (see Table 3) and through the use of all channels (see Table 4). In this sense, the total average figure reflects a reality that can be considered disturbing: if in 2010



15% of children from 9-16 years of age stated having suffered bullying of any type, 5 years later this figure had risen to 31%. With regard to the proportion of minors who claim to have bullied others, the figure has increased by a similar proportion. However, even without the intention of underestimating the quantitative importance of these figures and the portrait they paint of a childhood and adolescence facing problems in the management of peaceful coexistence, the fact that the population claiming to have been harassed has doubled should be understood in a context of growing social concern regarding situations of abuse and unprotected children. Institutional initiatives to raise awareness and protect affected minors are related to a media agenda in which terms such as harassment, bullying, cyberbullying and child abuse are relatively common. There is greater public attention to the phenomenon, more campaigns, and in short, more sensitivity. Moreover, this may be related to a greater ability to identify situations of abuse and harassment by the victims, who may have previously felt that school harassment was normal, or that it was not even a problem (“children’s things”).

**Table 3. Children who have suffered bullying or cyberbullying**

<b>Gender/Age</b> % Of all minors who use the internet	<b>2015</b>	<b>2010</b>
Boys	35	13
Girls	28	17
9-10 years of age	33	12
11-12 years of age	32	13
13-14 years of age	33	16
15-16 years of age	28	18
TOTAL	32	15

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

It is also necessary to take into account the difficulties inherent in defining harassment, as well as describing what it is, and what it is not, and the close relationship with the personal experience of each of the people who consider themselves victims of abuse: under the umbrella of bullying there is room for objective and undeniably degrading situations, but there is also room for other situations, which depending on the sensitivity and resilience of each victim, have a level of seriousness that is relative.

**Table 4. Ways in which minors have suffered bullying in the last 12 months.**

Ways that bullying has been experienced in the last 12 months (%) Of all children who use the Internet	2015	2010
Face to face	25	10
On the Internet	8	4
By phone (calls or messages)	6	2
Online or offline	32	16

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

With regard to the role played by communication technologies in the increase in the number of people who define themselves as victims of harassment, it should be noted that the escalation of face-to-face harassment cases during this five-year period was significantly greater than even the increase in cases of cyberbullying carried out on Internet.

#### 4.2. Sexual messages

Overall, 31% per cent of children have received sexual messages of some kind, and 14% say they have felt “very” upset (5%) or “slightly” upset (9%) as a result of these acts. The experience of receiving sexual messages varies somewhat by gender. The percentage of girls who say they have received such messages is 28%, and among boys the figure is 35%. However, the probability of being upset by the experience is also different: girls are more likely to feel “very” or “slightly” upset (7% and 10% respectively) by sexting when compared to boys, of whom 3% and 8% felt “very” or “slightly” upset (respectively). More than twice as many boys as girls reported having received sexual messages without being upset by them. Sexting increases with age: 19% of children from 11-12 years of age claim to have received messages of this kind, and the percentage is as high as 34% for the 13-14 year age group, and 42% for the 15-16 year olds. However, the percentage of children who feel affected by this experience also varies. The figure of 11% of 11-12 year olds and 20% of 13-14 year olds felt “very” or “slightly” upset, but in the 15-16 age group only 10% of both boys and girls were upset by having received sexual messages. Differences based on parental studies are not relevant, although children whose parents are less educated reported receiving a higher percentage of sexual messages. Children received sexual messages in large measure through social networks (6%) and platforms (5%), but mainly through instant messaging services (see Table 5). In fact, 15% of children reported having received sexual messages via this route, and the figure rises to 19% and 35% for minors aged 13-14 and 15-16 years of age, respectively.

**Table 5. Ways in which children received sexual messages in the last 12 months**

Way of receiving sexual messages % On the basis of all minors who use the Internet	11-12 years of age	13-14 years of age	15-16 years of age	TOTAL
Mobile phone calls	1	1	4	1
Through messages on my phone (SMS or MMS)	0	1	2	1
On a social network (Tuenti, Facebook, ...)	3	9	11	6
On a platform (YouTube, Instagram, Flickr)	3	10	8	5
By instant messaging (MSN, WhatsApp, Skype)	8	19	35	15
In a chat	5	4	2	3
By email	0	2	1	1
In a gaming community	0	0	0	0

Source: Prepared by the authors. Basis for the study: All children between the ages of 11 and 16 who use the Internet.

There has been a dramatic increase in the percentage of children who receive sexual messages. One in ten children in 2010 in the 11-16 year age group said they had received such messages, and in 2015 nearly one in three answered yes to the same question.

With regard to gender, while in 2010 the number of children who received sexual messages had risen, by 2015 the proportion had changed even further: among both genders, boys and girls, there were a lot more children who answered yes to that question, yet the percentage among girls now exceeds that of boys (see Table 6).

**Table 6. Gender and Age of minors who have received sexual messages.**

Gender and age % On the basis of all minors who use the Internet	2015	2010
Girls	35	7
Boys	28	11
11-12 years of age	19	3
13-14 years of age	34	10
15-16 years of age	42	13
TOTAL	30	10

Source: Prepared by the authors. Basis for the study: All children between the ages of 11 and 16 who use the Internet.

With respect to the ways in which these messages were sent, the number of messages received through mobiles, chats, and most of all through social networks and instant messaging, has increased, which is in line with the levels of technological equipment and current browsing habits and routines.

### 4.3. Contact with strangers

One in five children (21%) has had online contact with people they had not previously met in person. While there are some differences according to gender, with more girls than boys answering this question affirmatively, the real difference is among age groups: online contact with strangers increases with age. Remarkably, in the transition between the ages of 11-12 and 13-14, the percentage of minors who contact someone online who they do not know is three times higher. Differences according to parents' educational background are also significant, as there is less probability of online contact with strangers if the children come from families with higher educational status.

Contact among people who meet each other through Internet, *per se*, does not necessarily have to be negative or involve risk. In fact, such contact sometimes provides children with the opportunity to share interests and hobbies with others (Ito *et al.*, 2009). On the other hand, not all online contacts necessarily lead to offline encounters, and more importantly, not every face to face meeting with someone a person has met on Internet has harmful consequences.

Eleven percent (11%) of the children said they have met face to face with someone they had previously met online, and 1% (one in ten) were "very" or "slightly" upset with the experience. There are hardly any differences between boys and girls who participated in these types of encounters, and how they felt afterward. The probability of meeting offline with online contacts increases with age, from 2% recorded in the 9-10 year age group to 25% for the 15-16 age group (see Table 7).

Considering that the relationship between risk and harm is complex and non-linear, even in situations where meeting physically with online contacts is not harmful, campaigns that seek to raise awareness are always appropriate, as well as security programs that promote responsible management of contacts through the Internet.

The children who contacted people who they finally met face to face did so mainly through social networks (6%) and instant messaging (6%). To a lesser extent, platforms such as YouTube, Instagram and Flickr, as well as chats, are also involved (3% in both cases). There are significant differences according to age: 15-16 year olds are more likely to make contact online, and tend to do so through social networks (16%), instant messaging (MSN, WhatsApp, Skype) (13%), platforms (9%), and to a much lesser extent through messages received in a chat (4%) or phone calls (3%).

In spite of the fact that during the five year period from 2010 to 2015 the habit of meeting face to face with a person someone had previously contacted only online became prevalent - in absolute terms the children who said they had experienced it numbered 9% in 2010 and 11% in 2015 - there are some differences in age distribution. It can be seen that among the younger groups of children, the percentage of those who have met someone offline who they had previously contacted online drops by half. In 2010, it could already be observed that this practice had the least statistical weight among the youngest children, and logically so. It bears mentioning that even though the percentage of older children who become involved in this potentially risky practice is higher, younger children seem to have internalized messages of caution or prudence in this regard.

**Table 7. Minors who contacted people they had met online. Evolution 2010-2015**

<b>Gender and age</b> % On the basis of all minors who use the Internet	<b>2015</b>	<b>2010</b>
Boys	12	9
Girls	11	9
9-10 years of age	2	5
9-10 years of age	2	4
13-14 years of age	18	8
15-16 years of age	25	7
<b>TOTAL</b>	<b>11</b>	<b>9</b>

Source: Prepared by the authors. Basis for the study: All minors who use the Internet.

#### 4.4 Sexual images

In general, only one in three children exposed to online sexual content reported having been upset about the experience, although considerable cross-cultural variation exists (ibid.). From these findings, Rovolis and Tsaliki (2012) conclude that due to the fact that approaches from cultural studies have been defending this idea for some time (Attwood & Smith, 2011; Buckingham & Bragg, 2004), concern about the negative effects of pornography is exaggerated in the media.

More than half of the minors (52%) say that they have seen sexual images, whether online or offline (see Table 8). Viewing sexual images is partly gender related - with 48% of girls reporting this experience versus 56% of boys - and more consistently age-related: 70% of older adolescents have seen sexual images, compared to 36% of younger children.

With more than half of the minors having experienced sexual content online or offline, 20% of them were upset with this experience, yet only 7% said they were very upset about it. Girls who are exposed to sexual images are more likely than boys to feel "slightly" offended (15%) by what they have seen. The percentages of very upset boys and girls are equivalent (6 and 7 percent respectively).

The relationship between risk and harm varies with age: more than half of the boys and girls in the 9-10 year old age group who watched sexual content felt "very" or "slightly" upset about it; less than one in four of the minors among the 15-16 year olds who saw sexual content said they were upset by it.

Television and film (31%) continue to be the most common way in which sexual images are viewed, followed by magazines and videos (16%), pop-ups on the Internet (13%), and videos on platforms such as YouTube (12%). The tendency for exposure to increase with age is noteworthy. As children grow older, they are more likely to see sexual images in all types of media. Exposure to sexual images is still a fairly common experience, both offline and online. While older boys tend to be more resilient toward it, younger boys and girls feel more vulnerable to the negative consequences of sexual content. As has been pointed out in describing the evolution of other risks, the percentage of children who have seen sexual images

has increased exponentially in recent years. In 2015, half of the boys and girls from 9-16 years old said they had been in contact with this content, while in 2010 only 11% of those interviewed responded affirmatively to this question. However, a distribution according to age, gender and educational levels of the parents has persisted, which can be considered more or less equivalent: the age groups that in those years reported having seen sexual images in greater proportion –more boys than girls, and obviously adolescents 15-16 years of age, while differences in parental education were not significant– are the same today.

**Table 8. Number of children who have seen sexual images.**

<b>Gender and age</b> % On the basis of all minors who use Internet	<b>2015</b>	<b>2010</b>
Boys	56	13
Girls	49	8
9-11 years of age	36	8
11-12 years of age	50	3
13-14 years of age	57	15
15-16 years of age	70	17
<b>TOTAL</b>	<b>52</b>	<b>11</b>

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

It is undisputed that the Internet, and in particular mobile Internet and devices for personal use, which are more complicated for families to control, have facilitated access to content that can often be considered pornographic. In this regard, the way in which access to sexual images via mobile phones has increased tenfold in the last five years, and access via web pages, has more than doubled. As mentioned above, this is related to the increase of the number of mobile phones and access, as a whole, to all Internet resources. However, it is important to pay close attention to increases in access to sexual images that have been produced in ways that are not primarily through the Internet. Therefore, in five years, despite the evident increase in the percentage of minors who have seen sexual images, those who have accessed this content through magazines, books, television, film or DVD, far from being less, have increased significantly.

#### 4.5. *Other unsuitable content*

Inappropriate and potentially harmful online content (see Table 9) has been viewed by 32% of minors. This exposure has increased since 2010, the year in which 19% of Spanish youth from the ages of 11-16 had found one or more types of these pages.

**Table 9. Children (11-16 years old)<sup>4</sup> who have seen potentially harmful content on websites, by age**

<b>Age</b> % On the basis of all minors who use the Internet	11-12 years of age	13-14 years of age	15-16 years of age	TOTAL
Content viewed on web pages about ways to harm others or yourself	13	18	19	17
Content about ways to commit suicide	3	12	14	10
Pages that promote eating disorders (anorexia, bulimia, etc.)	8	14	21	14
Content with hate messages that attack certain groups or individuals (e.g. racism or religious attacks)	14	13	29	18
Content related to drug experiences	2	11	16	10
Some of these	23	32	42	32

Source: Prepared by the authors.

Basis for the study: All children between the ages of 11 and 16 who use the Internet.

Although there is some variation among different age groups, children are more likely to be confronted with messages that promote hatred or attacks against individuals or groups based on race, religion or other issues (18%), messages indicating how to injure others or engage in self-harm (17%), and proanorexia or probulimia content (14%), rather than pages related to the experience of drug use or suicide. However, though the percentage is relatively small, it is important to note that 10% of Spanish minors have encountered pages on which there was talk of ways to commit suicide. Exposure to inappropriate content also increases with age: 23% of boys and girls 11-12 years of age have encountered at least one type, compared to 42% of those 15-16 of age.

Access to inappropriate content increased from 2010 to 2015 (see Table 10), indicating much more likelihood, as well as enhanced ease, in accessing user-generated pages on which inappropriate content is shared. While in 2010 the most popular pages were those promoting hate speech in the form of attacks on different groups, along with those that promoted eating disorders, today websites that incite hatred have the same level of popularity as those that talk about self-injury or hurting others. In general, it is more common nowadays to access this type of content.

<sup>4</sup> For ethical reasons, this question was not addressed to 9 and 10 year olds.

**Table 10. Minors (11-16 years old) who have seen potentially harmful content on websites.**

<b>Harmful content</b> % On the basis of all minors who use Internet	<b>2015</b>	<b>2010</b>
Injuring others or self-injury	17	8
Drug Experiences	10	7
Hate Messages	18	12
Eating disorders	14	11
Ways to commit suicide	10	5
Some of these	32	22

Source: Prepared by the authors.

Basis for the study: All children between the ages of 11 and 16 who use the Internet.

#### 4.6. Other risks

While the literature on this issue is still dispersed, there is some evidence that abuse and misuse of personal information deserves attention. According to data from **EU Kids Online**, 9% of 11-16 year olds have experienced one or more of the three forms of misuse of personal information investigated, with the most common experiences being someone using children's passwords or trying to impersonate them (see Table 11).

Technical viruses are the biggest risk for minors, one in four, which also increases with age, going from 13% among the youngest children to 32% for the older ones. On the other hand, if a mobile phone is infected with a virus, it is only reported by a minority of minors (5%), yet reporting is more common among the older ones, logically.

Among the risks associated with the misuse of personal information, this is comparable to the percentage of minors who had risky experiences related to privacy, as they detected that someone used their personal information in a way they did not like, or they detected that someone used their password or phone to access their information or impersonate them. Although a minority of minors are exposed to the latter risk (5%), the percentage rises to 7% for the 15-16 year age group.

Losing real money as a result of Internet scams is less common, perhaps suggesting that children have learned how to prevent these difficult situations, or in their browsing routines there are no opportunities to be a victim of these deceptions.



Table 11. Minors who have suffered other negative experiences online, by age group

Age % On the basis of all minors who use the Internet	9-10 years of age	11-12 years of age	13-14 years of age	15-16 years of age	TOTAL
Someone used my personal information in a way I didn't like.	2	3	8	4	5
The computer was infected with a virus	13	20	29	32	23
My mobile phone or smartphone was infected with a virus	0	5	5	8	5
I lost money because I was cheated on the internet	1	1	1	2	1
Someone used my password/phone to access my information or impersonate my identity	0	2	11	7	5
Some of these	15	26	39	39	29

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

While the data reported may be considered acceptable due to the low numbers, we should not minimize the relevance of the risk associated with the misuse of personal information; as shown by the qualitative evidence on which we have also worked, children are particularly sensitive to privacy issues (Garmendia *et al.* 2016).

## 5. Conclusions: Reacting to risk

Most online experiences are not necessarily harmful, and in fact, minors do not have to perceive them as dangerous or problematic (Livingstone *et al.*, 2012; Vandoninck, d'Haenens & Roe, 2013). However, when faced with negative experiences on the internet, minors develop a series of strategies to adapt to the situation and reduce the emotional and psychological stress resulting from these circumstances. For minors, facing online risk implies adopting "strategies to solve specific Internet problems" after having endured a negative online experience (Vandoninck *et al.*, 2013, p. 61). The **EU Kids Online** survey (Livingstone *et al.*, 2011) has identified three types of coping strategies: Passive responses, including resigned attitudes (stopping Internet use for a period of time) and self-accusatory postures (feeling guilty about what has happened); proactive responses (such as reporting or denouncing inappropriate content or inappropriate contacts, blocking unwanted contacts, etc.); and communicative responses (talking about what has happened with parents, peers, teachers or other trusted adults). Learning how to manage negative experiences effectively, as well as identifying the most appropriate and effective responses on each occasion, is part of the process of building resistance (Vandoninck *et al.*, 2013; Vandoninck & d'Haenens, 2018) and adapting to the environment.

The strategy for dealing with online risk most commonly adopted by minors involves seeking support from their social environment, although in most cases they tend to combine two strategies (Livingstone *et al.*, 2011). Previous research has shown that children who receive more support from their peers are more resistant to negative experiences on the Internet, and that both parents and faculty are in the best position to mediate in building online resilience if they are actively involved in the online activities and internet safety in which children participate (Vandoninck *et al.*, 2013).

Mothers (84%), as well as fathers (76%) and friends (58%), represent sources of support to which children turn in a way that is either “very” or “quite” probable after having suffered upsetting experiences on the Internet (see Table 12). On the other hand, the majority of minors would be “very” or “quite” unlikely to turn to teachers (60%) or people professionally dedicated to helping children who have suffered negative online experiences (59%).

**Table 12. The people who children are likely to talk to about Internet issues that have upset them**

% Of all minors who use the Internet	Very likely	Quite likely	Quite unlikely	Very unlikely	Not applicable
Father	48	28	8	8	8
Mother	61	23	6	5	6
A brother or sister	19	15	14	24	28
Other family members	13	20	20	31	16
Friends	28	30	14	18	10
Teachers	4	14	19	41	21
Someone professionally dedicated to helping minors	8	11	16	44	20
A trusted adult	12	20	18	34	16

Source: Prepared by the authors. Basis for the study: All minors who use the internet.

Younger children are more likely to talk to their father or mother than to any other person, highlighted by the fact that boys as well as girls are more likely to talk to the mother. The importance of parents as a primary source of support in the case of unpleasant experiences decreases with age, particularly among boys. In the same way, adolescents are more likely than younger children to turn to their peers for support. Gender also plays an important role: adolescent girls tend to talk to their friends, and even more so with their mothers, and in general girls are more likely to talk to all of the suggested interlocutors except their father. While minors generally do not consider the option of talking to their teachers, younger boys and girls are more inclined to see them as a source of support as opposed to adolescents, who hardly consider them to be potential interlocutors. The likelihood of talking to people who are professionally dedicated to helping minors, brothers and sisters, other family members, or trusted adults, also decreases, though at different rates, as the age of the minors increases.

It is likely that 82% of children will talk to at least one person after a negative online experience. There are hardly any substantial differences according to age and gender. The percentage of children willing to talk to at least one person about what has bothered them on the Internet is somewhat higher for the youngest children (84%) and girls (83%) than for older children (80%) and boys (82%), but the figures are similar. However, variation related to the level of education of the parents is, comparatively, the most striking factor. Children from families with less education (and probably with fewer digital skills) are less likely to turn to someone to share an unpleasant online experience.

These findings suggest that children highly value the role of fathers, mothers and their peers, and that these individuals should therefore be highly considered in regulatory initiatives. On the other hand, 18% of children say they would not

turn to anyone if they encountered unpleasant experiences on the Internet. When designing action policies in this regard, authorities should ensure that all children find the necessary social support, whatever type it may be.

However, there is a growing awareness of online risk among parents and children that is manifested in greater involvement by parents in mediating children's safety online, helping children to develop defensive skills, and adopting preventive measures.

Exposure to online risk has increased in recent years, especially among children who use mobile phones and tablets to navigate the Internet. The motto of "more opportunities, more risks", is a valid framework for understanding the changes related to smartphones and tablets, and such changes have led to a more ubiquitous and omnipresent Internet in the daily lives of children.

Due to the fact that the percentage of internet users at earlier ages is increasing, and that children are accessing Internet from more devices and in more varied contexts, it is not surprising that exposure to online risk is also increasing. It should be noted that the increase in those who have suffered harm as a result of risky experiences has not increased in the same proportion.

Harassment continues to be the risk that causes more harm to those who suffer it, but despite a certain amount of social and media discourse, and the options that social networks offer in amplifying situations of abuse, there are still far more cases of cyberbullying as an extension of face-to-face bullying than those that take place, in the words of those affected, in online spaces.

Family mediation is essential in preventing and managing internet risk and inappropriate use. In nearly all of the groups observed, there are shortcomings in this area, and in many cases it is due to the low digital literacy of the parents. Digital tools for socialization can be useful to facilitate integration: networks such as WhatsApp (and others) allow them to socialize with their classmates outside of school.

In any case, despite the fact that minors are more aware of the dangers associated with cyberbullying and other potentially conflictive situations, there is still a need to promote safer and more responsible use of mobile communication. This could involve raising awareness regarding privacy issues, applications designed for the purpose of denouncing or blocking, control and geolocation functions, and the risk associated with the escalation of exchanges that sometimes occur in online conflicts (Marwick & Boyd, 2014).

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