

Edition: April 2010

*The “**Study on safety and privacy in the use of mobile services by Spanish minors**” has been jointly produced by the National Communication Technologies Institute (INTECO) by means of the Information Security Observatory and France Telecom España (Orange), by means of its Secretariat General - Social Corporate Responsibility.*

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KEY POINTS

Mobile telephones have reached all sectors of the Spanish population, including children. Children and adolescents often have their own mobile phone from a very early age.

Using mobile telephones in adolescence may contribute to skills such as self-sufficiency and responsibility, but may also put the minor at risk: the degree of maturity and development associated to minors makes it a particularly vulnerable age group. Situations such as the excessive use that causes a disproportionate expenditure, sending photographs or videos with sensitive contents, using the telephone to make insults or threats, or receiving indiscriminate publicity, might constitute a risk for the minor. If the situations derived from access to Internet are added to these situations, and the possibility of accessing contents that are not suitable for the minor's age, the panorama acquires sufficient importance to justify carrying out a study like this.

The report constitutes a diagnosis of the use of mobiles among Spanish children and adolescents from 10 to 16 years of age: what is children's access to mobile telephony like, what is the real incidence of risks, how do they react to them and what safe habits do they adopt to use them. A double perspective of the minor and his/ her father or mother is offered, as the key player in the child's education.

To carry out the study, an opinion poll was conducted consisting of 644 personal interviews with 322 Spanish households, two interviews being carried out in each family: with the minor and with his/ her father, mother or legal guardian. The field work was carried out in January 2010. The study results are completed with contributions from 55 experts (professionals and institutions) from different fields of knowledge that have provided a qualitative and multidisciplinary approach to the research project.

The key points of the analysis are set out below.

I The mobile telephone among minors

Access to mobile telephony

The mobile telephone is widely used by Spanish minors. Thus, according to data provided by the National Statistics Institute (INE)¹, 68.4% of Spanish youngsters from 10-15 years of age had a mobile telephone in 2009, with constant growth since 2004. The data suggest that mobile telephone use is somewhat more usual among girls (73%) than among boys (64%).

¹ National Statistics Institute (INE) (2009). *Survey on Information and Communication Technologies Equipment and Use in households 2009*. Data available online at: <http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft25%2Fp450&file=inebase&L=0>

Having a mobile telephone increases with age and is widespread among adolescents from 15 to 16 years of age, 89.2% of whom have one. In younger age groups, the percentage is lower: 30.9% of boys and girls from 10-11 years of age and 67.6% of boys and girls from 12-14 years of age say they have their own mobile phone.

The age at which Spanish minors get their first mobile telephone is from 10 to 12 years of age.

With regard to the reasons why minors acquire a first mobile telephone, parents' peace of mind seems to be the main one. This is acknowledged by both the youngsters themselves and their parents. 48.1% of children acknowledge that the importance of acquiring a mobile telephone lies in that, in this way, parents feel more at ease and more confident. In the case of the adults in the study, an overwhelming 65.2% agree with the assertion.

The price of the handset is the main reason for choosing a telephone model for their children for 61.9% of the parents taking part in the study. Far behind the price, parents value the handset's basic functions, battery life, handset size, etc. (13.1%), the sales assistant or professional's recommendation (7.8%) and telephone design (6.8%).

Mobile telephony services used by minors

Spanish minors make the most of mobile phones' communication options, content generation, access to the latter and leisure. In the four usage dimensions analysed, very considerable usage levels are seen.

- **Communication.** Voice calls, missed calls, and text messages are the most used services related to communication: 94.7%, 92.9% and 90.7% of Spanish minors respectively say that they use each of these services.
- **Access to contents.** In this area, listening to music like mp3 format is undoubtedly the most usual use. 71.4% of Spanish children and adolescents from 10 to 16 years of age make this assertion.
- **Leisure.** 51.6% of Spanish boys and girls use the mobile phone to play games.
- **Creation of contents.** Finally, in this block, taking photographs is the most used service: 88.6% of minors say that they use the phone for this. After photographs, video recording is the second most important contents generation action. This is carried out by 48.5% of youngsters.

Expenditure on mobile telephony by the minor

In 85.1% of the families taking part in the study, it is the parents who pay their child's telephone bill. According to parents, mean monthly expenditure is €14 and median monthly expenditure €10.

Subjective perceptions: mobile telephone and development of the minor's skills

- The fact that the child has a mobile telephone gives parents a feeling of security. This idea is reinforced when 90.7% of minors agree with the assertion *Having a mobile helps my parents to keep better track of me*. (In keeping with this, 88.5% make the same assertion.)
- Without a doubt, having a mobile telephone has a positive impact on the privacy or intimacy of the minor's relations. 78.3% of youngsters (and 72% of their parents) agree with the assertion *Having a mobile helps me to be in contact with my friends in a more intimate and private way*.
- It is also interesting to analyse the possible relationship between having a mobile telephone and the development of social skills related to the minor's independence and self-sufficiency. It seems that both minors and their parents consider that there is a relationship: 69.6% of youngsters (59.3% in the case of the parents) agree with the idea that *Having a mobile gives me more independence and self-sufficiency*.
- 56.2% of minors assert that *the mobile does not replace face to face relationships, but rather encourages and increases them*. Somewhat lower is the percentage of agreement shown by their parents (48.4%).

II Risks in the use of mobile telephony by minors and adolescents

The experts taking part in producing this study agree that situations exist that may constitute risks for minors.

The existence of threats when using the mobile telephone is a reality and therefore requires thorough analysis. The approach of the authors of this study is based on the need for objective and realistic knowledge of the risks to recognise and combat them. Education occupies a key role. INTECO and Orange are committed to responsible mobile telephone use and knowing the potential risks as a basis for making the most of the benefits mobile telephony gives the minor.

For the purposes of the study, the risks have been systematised around seven themes:

- Excessive use of and addiction to the mobile telephone.

- Threats to the minor's privacy and sexting.
- Access to unsuitable contents (of a sexual and violent nature).
- Cyberbullying or harassment among minors via telematic means.
- Grooming or harassment by an adult of a minor with explicit or implicit sexual motives.
- Economic risk and/or fraud.
- Technical risks (virus and spam).

The seriousness perceived by parents and minors was analysed for each of the behaviours, the incidence (level in which it has effectively occurred) and the reaction of the minor and the parent to them.

Some of the conclusions are outlined below:

Seriousness perceived

- In general, the risks that most worry parents and children are to do with contents (violent, sexual, pornographic or fights with people from the minor's milieu), contact from unknown adults, and harassment from people in the minor's milieu (cyberbullying).
- Those considered less serious are behaviours that have to do with excessive use and addiction, technical risks and situations that can involve financial loss or fraud.
- For each of the situations analysed, the seriousness perceived by adults considerably exceeds that expressed by minors.

Incidence with minors

- The risks with the highest incidence are, precisely, those that are perceived as the least serious: spam (has been received by 42.9% of the children), situations related to excessive use (36%) and financial losses / fraud (29.2%).
- At the other extreme, some of the situations that worry parents the most display reduced incidence levels: the reception of pornographic or obscene contents from adults (0.6%), as well as SMS or calls from unknown adults (4%). 5.9% of minors declare that they have been victims of cyberbullying.
- In this case, minors claim to have experienced each of the situations more than adults think.

Reaction of the father or mother faced with the incident

When a situation of this type really occurs to the minor, the main reaction of the parents is, in all cases, to talk to their child to give them guidelines for acting.

Reaction of the minor faced with the incident

In the case of the minor, the main reaction, according to their declarations, is to deal with the incident on their own, without involving anyone else. It is only when the problem is to do with excessive expenditure, with grooming situations or with financial risks or fraud, that the most widely claimed stance of the minor is to tell his or her parents.

In this point, the adults' opinion is not in line with the youngsters' opinion, as they consider that, in the hypothetical case that their children suffer any of the situations analysed, they would go to them (parents) as a first option.

III Security in the use of mobile telephony

In the analysis of mobile telephone usage rules, the main condition imposed by parents is of a financial nature: 65.8% of parents (56.8%, in minors' opinion) say that they have set a monthly consumption limit. Banning downloading premium contents is laid down by 32.9% of parents (and confirmed by 25.5% of minors).

Another aspect parents stress when establishing usage rules is accessing Internet via the mobile telephone: 36.0% of adults say that they have banned their children from connecting to Internet (in the minors' opinion, 28% acknowledge this restriction).

Another important rule in the eyes of parents has to do with minors' contact with strangers. Thus, 35.7% of adults say that they have banned answering messages from unknown numbers.

Security in the use of the mobile telephone is a matter that undoubtedly worries parents. Therefore, 94.4% of the adults taking part in the study admit having talked about this with their children, either frequently (47.2%) or occasionally (47.2%). Only 5.6% admit never having done so.

The sources parents resort to to get information on the possible risks their child faces when using a mobile telephone (and the way to restrict them) are the family (50.6%) and television (38.5%). After these, Internet (17.7%), the children's school (16.1%) or the shop where the handset was bought (8.7%) are mentioned less.

In the case of minors, the figure they mainly resort to is the family, parents (68.3%). The remaining information sources are mentioned by the minors much less: school (11.2%), friends (10.6%), television (5.6%) and Internet (2.8%).

Most girls and boys taking part in the study (85.4%) think they know enough to use their mobile telephone safely. Parents' opinion coincides with their children's as 83.5% think that the latter have enough information in order to use their telephones properly.

Parents were asked who, in their opinion, is responsible for providing minors with information on safely using mobile telephones. Options given by parents are: family (88.8%), school (39.4%), telecommunications operators (19.6%) and mobile service suppliers (17.7%). The Administration (16.8%) and handset manufacturers (16.5%) are the players that are mentioned the least.

Minors feel very safe, as 87.9% say that they feel protected when they use their mobile telephone, compared to 5.9% that claim the opposite.

In the case of parents, 68.3% are confident that their child is protected when using the mobile phone. 17.1% say that they are not confident about this protection, and an additional 14.6% do not take a stance.

1 INTRODUCTION AND OBJECTIVES

1.1 Presentation

1.1.1 Instituto Nacional de Tecnologías de la Comunicación

The Instituto Nacional de Tecnologías de la Comunicación, S.A. (INTECO, Spanish National Communications Technology Institute), is a state agency attached to the Ministry of Industry, Tourism and Trade via the Secretary of State for Telecommunications and for the Information Society.

INTECO's mission is to be an innovative development centre of public interest at a national level and constitutes an enriching initiative to disseminate new technologies in Spain in clear harmony with Europe.

Its main objective is to serve as a tool to develop the Information Society with its own activities in the area of innovating and developing projects associated with Information and Communication Technologies (ICT), based on three fundamental pillars: applied research, service provision and training.

INTECO's mission is to provide citizens, SMEs, Public Administrations and the information technologies sector with value and innovations, by means of the development of projects that contribute to strengthening trust in Information Society services in Spain, while also promoting an international participation line.

For this purpose, INTECO, <http://www.inteco.es>, is active in the following areas:

- **Technological Security:** INTECO is committed to promoting increasingly secure Information Society services to protect the personal details of interested parties, their intimacy, the integrity of their information, while preventing attacks that put the services provided at risk. These services must, of course, strictly comply with legal regulations on ICT matters. INTECO therefore coordinates different public initiatives around ICT security; these take the form of the provision of services by the Information Security Observatory, the Security Technologies Showroom, the Security Incident in Information Technologies Response Centre (INTECO-CERT) and Internet User Security Office (OSI), which citizens, SMEs, Public Administrations and the technology sector benefit from.
- **Accessibility:** INTECO promotes more accessible Information Society services to eliminate the exclusion barriers, whatever the technical, training, etc., difficulty or deficiency, including disability, its users have. And they facilitate the gradual integration of all user groups, so that they can leverage the opportunities offered by the Information Society. It also develops projects in the accessibility field aimed

at guaranteeing citizens' and companies' rights to communicate electronically with the Public Administrations.

- **ICT Quality:** INTECO promotes increasingly higher quality Information Society services. This guarantees adequate services levels, which results in more robust applications and systems, commitment to availability and response times, adequate support for users, accurate and clear information on service function evolution, and in short, increasingly better services. Along these lines, it promotes competitiveness in the Software industry via the promotion of improved quality and certification of software engineering companies and professionals.
- **Training:** training is a determining factor to attract talent and improve companies' competitiveness. INTECO promotes the training of university graduates and professionals in the technologies that are most in demand in industry

The Observatorio de la Seguridad de la Información (Information Security Observatory, <http://observatorio.inteco.es>) works within INTECO's strategic line of action on Technological Security matters.

The Observatory was founded with the objective of systematically describing in detail the level of security and confidence in the Information Society and generating expert knowledge on the subject. In this way, it is at the service of the Spanish public, companies and public administrations to describe, analyse, assess and distribute the culture of Information Security and e-Trust.

The Observatory has designed an Activity and Study Plan aimed at INTECO producing specialised and useful knowledge on security matters, as well as drafting recommendations and proposals for defining valid trends for future public decision making.

In this action plan, research, analysis, study, advice and distribution work is carried out which will include the following strategies:

- Drafting of studies and reports on Information and Communications Technology security matters, with special emphasis on Internet Security.
- Monitoring the main indicators and public policies related to information security and trust in national and international fields.
- Generation of a database for the analysis and assessment of security and trust over time.
- Promotion of research projects in ICT security matters.

- Dissemination of studies and reports published by other national and international organisations and bodies, as well as information on national and European news on security and trust in Information Society matters.
- Consultancy service to Public Administrations on information security and trust matters, as well as support in the drafting, monitoring and assessment of public policies in this area.

1.1.2 Orange España

Orange, which belongs to the France Télécom Group, <http://www.orange.es>, is the alternative benchmark operator in the Spanish market, and one of the biggest investors in the telecommunications industry, with over 13 billion euros accumulated investment in Spain. With a strategy based on innovation and sustainable development, launching products and services that allow its users to save money and improve the client's experience, Orange is a core player in the sector in Spain, where it provides services to almost 13 million users.

Orange customers, both individuals and companies, enjoy the most advanced products and services in mobile and fixed telephony, broadband Internet and ADSL TV. All of these activities produced turnover of almost 4 billion euros for the company in 2009.

Corporate Social Responsibility forms part of its strategy as a company and is summarised in the constant search for balance between economic competitiveness, social progress and respect for the environment.

The main pillars of Orange's Corporate Social Responsibility policy are set out in the CSR Management Plan (2008-2011), that pervades all the company's activities, involving all Orange professionals in CSR principles. This plan envisages as many as 18 challenges for the 2008-2011 period; these encompass four major spheres of action: service quality, combating climate change, design for all and responsible use of ICT.

Orange recognises and is very much aware of the current importance of protecting minors, with constantly and quickly evolving information technologies. That is why it promotes initiatives that allow its customers to successfully face the challenge of guaranteeing minors safety using all the possibilities offered by ICT

In February 2007, France Telecom Group signed the Self-Regulation Agreement the "European Framework for safer mobile use by younger teenagers and children" along with the main European mobile operators. One of the commitments of this Agreement was to develop similar Codes of Practice in the different member states of the European Union.

To apply this commitment, in December 2007 Orange España, along with other Spanish operators, signed the "Mobile Operators' Code of Practice for the Promotion of

Responsible Use by minors when accessing Mobile Electronic Communications Content Services in Spain”. By signing this Code, Orange España undertakes:

- Contents classification: labelling contents that have been classified as not suitable for the under 18s according to European social standards.
- Access control mechanisms: preventing minors accessing contents classified for adults.
- Education and awareness raising: promoting awareness raising campaigns on the responsible use of mobile services.
- Combating the dissemination of illicit contents.

Orange not only collaborates with public organisations to achieve this objective, but also supports parents in the challenge represented by ensuring that their children are ready to safely use the possibilities offered by ICT.

Likewise, Orange collaborates with the Protégeles Association by giving talks in schools on safe Internet browsing and facilitating access from their webs to the report line on child pornography included in the portal www.protegeles.com, which is integrated in the Inhope hotlines network (international organisation that brings together European Union, North American, Austrian, Korean, Brazilian, etc. report lines) supported by the EU's Safer Internet Programme. This agreement strengthens Orange's commitment to protecting minors against improper use of the new technologies, complying with the obligations assumed by the company on signing the Mobile Alliance (action promoted by GSM Association and the “Code of Practice for Protecting Minors in Mobile Electronic Communications Contents Services in Spain”).

Finally, Orange has also collaborated in developing and launching the educational portal “Teach Today” www.teachtoday.eu, designed for the education sector to have a useful tool for training in responsible use of new technologies by minors.

1.2 Study on safety and privacy in the use of mobile services by Spanish minors

1.2.1 Study context and opportunity

The mobile telephone has entailed a revolution in the communication field and leisure. In a society like Spanish society of the 21st century, with over 52 million mobile telephone lines and 112.7 lines per 100 inhabitants², it seems difficult to imagine what life was like

² Telecommunications Market Commission (CMT) (2009). Press release. Available at: http://www.cmt.es/cmt_ptl_ext/SelectOption.do?nav=comunicados_prensa&detalles=09002719800864eb&hcomboAnio=2009&hcomboMes=9&pagina=1

without these devices (which, incidentally, were adopted en masse in Spain no more than 15 years ago).

Mobile telephones have reached all sectors of the population, including children. Children and adolescents often have a mobile telephone for their own use, and this is the case at younger and younger ages.

The mobile telephone, designed as a personal communication tool, has now gone beyond the use it was initially designed for. Added to making voice calls and sending and receiving text messages (SMS) are uses associated to leisure, such as taking photos or recording videos and sending them to contacts and friends, playing games, listening to music or connecting to the Internet.

The early age at which mobile telephones are now used and the increasingly sophisticated terminals that enable Web browsing are two of the circumstances given special consideration when carrying out this study. Effectively using mobile telephones in adolescence may contribute to skills such as self-sufficiency and responsibility (in addition to motor and cognitive skills), but may also put the minor at risk: the degree of maturity and development associated to minors makes it a particularly vulnerable age group. Situations such as the excessive use that causes a disproportionate expenditure, sending photographs or videos with sensitive contents, using the telephone to make insults or threats, or receiving indiscriminate publicity, might constitute a risk for the minor. If the situations derived from access to Internet are added to these situations, and the possibility of accessing contents that are not suitable for the minor's age, the panorama acquires sufficient importance to justify carrying out a study like this.

It is true that there are still not many who use the mobile handset to connect to the Internet (as will be seen later on), but it is also true that the spread of latest generation web-enabled telephones makes it likely that Internet access via mobile devices will increase in the short term.

In any event, the perspective from which INTECO and Orange are carrying out this study is as follows:

- Minors accessing the technological phenomenon (where mobile telephony is also included) is a natural experience. Those born at the end of the 20th century have coexisted with information and communication technologies (ICT) since their childhood. Fascinated by Internet, the mobile and video games, they find a channel of communication, knowledge and leisure in these technologies: the reality is that ICTs are currently an important and essential element in their lives.
- The use of mobile telephones by children and adolescents requires that the minors themselves behave responsibly. Ensuring this responsibility is a joint task for

parents and educators, but also for the rest of the players (Administrations, operators, handset manufacturers).

- Objective and realistic knowledge of the risks that may exist when using the mobile telephone is essential in order to recognise and combat them. Education occupies a key role. INTECO and Orange are committed to responsible mobile telephone use and to knowing the potential risks as a basis for leveraging the benefits mobile telephony gives minors.

With this study, INTECO is continuing along the lines mapped out in 2009 with the publication of the *Study on safe habits in the use of ICT by children and adolescents and e-trust of their parents*³. On that occasion, the study analysed the use of Internet, mobile telephones and video games by Spanish minors, comparing minors' and parents' perceptions. The study we are presenting here, only the use of mobiles by Spanish children and adolescents from 10 to 16 years of age is explored further: what is children's access to mobile telephony like, what is the real incidence of risks, how to they react to them and what safe habits to they adopt to use them. A double perspective of the minor and his/ her father or mother is offered, as the key player in the child's education.

1.2.2 General objective

The study's general objective is to diagnose the current situation in Spain regarding the use minors make of mobile telephones, and the involvement of parents as regards promoting practices for safely using them.

More particularly, the study endeavours to:

- Identify the risks and vulnerabilities Spanish children and youngsters face when they use a mobile telephone, their perception, incidence level and reactions to the latter.
- Raise society's awareness of everything to do with the risks of mobile telephony, without succumbing to alarmist rhetoric and without demonising the role of technologies.
- Help to create practical tools to minimise and combat risks.
- Provide parents, guardians and educators with information and advice on protecting children in mobile telephone use.

³ INTECO Information Security Observatory (2009). *Study on safe habits in the use of ICT by children and adolescents and e-trust of their parents*. Available online at:

http://www.inteco.es/Seguridad/Observatorio/Estudios_e_Informes/Estudios_e_Informes_1/Estudio_ninos

1.2.3 Specific objectives

The aforementioned objectives are operatively broken down into the following specific objectives, which serve in turn to structure the study's content.

The mobile telephone and minors

- To know the age at which Spanish minors start to use mobile telephony.
- To identify the reasons behind children and adolescents accessing mobile telephony, and compare them with their parents' reasons.
- Ascertain aspects regarding the mobile telephone handset used by the minor: who buys it, the role parents play in selecting the model, and how price, design or telephone features influence its selection.
- To know the use minors make of the mobile telephone and find out how often they use the different services. Specifically, to study in depth the amount of text messages sent by the minor daily.
- To determine how much the minor spends on mobile telephony a month and establish who pays for it.
- To ascertain in what situations the minor has the mobile telephone turned on.
- To find out to what extent the use of the mobile telephone by the minor contributes to the development of emotions and/or skills, such as self-sufficiency, responsibility, etc.

Risks in the use of mobile telephony

- Find out what risks in the use of mobile telephones most worry parents.
- Describe the risks of excessive use and addiction to the mobile telephone, threats to privacy and sexting, access to contents unsuitable for the minor's age, cyberbullying, grooming financial and/or fraud risks and technical risks.
- Analyse for each of the blocks of risks studied, the direct incidence (on the minor) and indirect incidence (on the minor's environment) and the reactions of minors and adults to them.
- In the cases where the data allows, contrast the data in the incidence of risks using the mobile telephone with data on the same risk with the Internet.

(Information on risks in the Web has been taken from the *Study on safe habits in the use of ICTs by children and adolescents and e-trust of their parents*⁴.)

Security in the use of mobile telephony

- Know the type of rules that exist in Spanish households to control the use minors make of the mobile telephone.
- Identify the sources of information minors and adults resort to in order to learn about security aspects in the use of the mobile telephone.
- List the players on which, in the parents' opinion, the responsibility for teaching minors the safe use of the mobile telephone falls.
- Know the degree of general trust adults and minors have in the youngsters make of mobile telephony.

⁴ Op. Cit. 3.

2 METHODOLOGICAL DESIGN

The research team has combined quantitative and qualitative analysis techniques, which are dealt with sequentially in the following work phases:

- **Phase 1:** Documentary search and analysis of reports and studies that, given their contents, methodology or approach, are considered as reference material in the study on the use of ICT and mobile telephones by minors.
- **Phase 2:** Interviews with experts in disciplines related to the use of ICT and/or minors with the objective of providing a professional and qualitative point of view.
- **Phase 3:** Interviews with families with minors from 10 to 16 years of age who use a mobile phone, carrying out two interviews in each family: one with the minor and one with the adult guardian.
- **Phase 4:** Preparation of this report, which includes the analysis and conclusions of the previous phase, together with the action recommendations.

The specific methodology of each of the phases is further explored below.

2.1 Phase 1: Documentary search and analysis of reports and studies

The objective is to study secondary research sources to enrich and direct the research project. Secondary source is understood as all documents that, having occurred before the current research, contain data that can be exploited in a different context to the one existing in their production.

In Appendix I: Bibliography includes a list of the publications considered in producing the report.

2.2 Phase 2: Interviews with experts (qualitative research)

The objective of this phase is to obtain a qualitative and multidisciplinary vision to enrich the project. The partial results of this second phase have allowed a first diagnosis to be established: knowing the actions being carried out in the area which is the subject of study, understanding the theoretical reflections of experts, and exploring future perspectives.

55 experts (professionals and institutions) have taken part belonging to five knowledge areas, which are listed below. The participation of experts from heterogeneous sectors allows different stances and concerns that stimulate reflection and debate to be identified.

- Group 1: Private sector: industry and private associations.
- Group 2: State Security Forces and Public Prosecutors' Office.
- Group 3: Ombudspersons and Children's Commissioners.
- Group 4: Regional and municipal education ministries and directorate generals.
- Group 5: Associations, foundations, projects and public and private institutions for the protection of minors and/or promoting the safe use of new technologies.

The interviews were carried out from 13 to 29 January 2010, based on a structured script that covered the following blocks:

- 1) Risks on security and privacy matters minors are faced with when using mobile services.
- 2) Role of legislation and self-regulation of operators to minimise risks.
- 3) Proposals for improvement in security matters.
- 4) Major initiatives implemented to combat security risks in the use of mobile telephones by minors.
- 5) Suitable level of training and information for minors and parents.

The institutions and professionals who have collaborated in carrying out the study are listed below:

- 6) **Abanlex Abogados.** Joaquín Muñoz Rodríguez, *Partner.*
- 7) **Andalusian Innovation and Development Agency.** María José Aguilar Porro, *Innovation Technician, Information and Communication Technology Sector.*
- 8) **Andalusian Ombudsman and Andalusian Children's Commissioner.** M^a Teresa Salces Rodrigo, *Consultant in charge of the area of Minors and Education.* **Catalan Data Protection Agency.** Esther Mitjans Perelló, *Director.*
- 9) **Ararteko, Ombudsman of the Basque Country.** Gonzalo Torquemada de la Hoz, *Minor Area Consultant.*
- 10) **Attorney General of the Castile and Leon Commons.** Elena Fernández-Cañamaque Rodríguez, *Legal Consultancy.*
- 11) **Autonomous Region of Navarre.** Francisco Javier Sanjuán Villafranca, *Education Department Coexistence Consultant.*

- 12) **Catalan Data Protection Agency.** Esther Mitjans Perelló, *Director.*
- 13) **Children's Commissioner in the Madrid Autonomous Region.** Arturo Canalda González, *Children's Commissioner in the Madrid Autonomous Region.*
- 14) **CTIC Information Society Foundation.** Paco Prieto Díez, *Director.*
- 15) **Data Protection Agency of the Madrid Regional Government.** Emilio del Val Puerto, *Deputy General Director of Inspection and Rights Tutelage.*
- 16) **Dédalo Foundation.** Fernando Ferrer Molina, *President.*
- 17) **EUKids Online II.** Maialen Garmendia Larrañaga, *Director of the Spanish Team.*
- 18) **European Consumer Centre, National Consumption Institute.** Julio Cortés del Olmo, *Consumption Consultant and International Relations Manager.*
- 19) **Germán Sánchez Ruipérez Foundation.** Javier Iglesia Aparicio, *Coordinator of technology, International Centre of Advanced Technologies in the Rural Environment.*
- 20) **Google Spain.**
- 21) **Government of Andalusia Ministry of Education. Directorate General of Educational Participation and Innovation.** Rafael García Rivas. *Head of the Educational Innovation Service.*
- 22) **Government of Aragon.** Carlos Gurpegui Vidal, *Pantallas Sanas Programme Coordinator.*
- 23) **Government of the Canary Islands. Ministry of Social Welfare, Youth and Housing.** *Directorate General of Youth of the Government of the Canary Islands.*
- 24) **Indra.** Jesús Ángel García Sánchez, *Senior Expert Technological Innovation.*
- 25) **Innovation, Science and Business Ministry, Government of Andalusia.** José María Sánchez Bursón, *Prospective Director Innovation and Participation Observatory.*
- 26) **Instituto Nacional de Tecnologías de la Comunicación (INTECO, Spanish National Institute of Communication Technologies).** Pablo Pérez San-José, *Manager of the Information Security Observatory (Observatorio de la Seguridad de la Información).*

- 27) **Instituto Nacional de Tecnologías de la Comunicación (INTECO, Spanish National Institute of Communication Technologies)**. Susana de la Fuente Rodríguez, *Project Coordinator of the Information Security Observatory (Observatorio de la Seguridad de la Información)*.
- 28) **Internet User Association**. Ofelia Tejerina Rodríguez, *Lawyer*.
- 29) **iTelnet Consulting GM S.L.** David Garcia-Muñoz Hita, *Director*.
- 30) **Justicia Aragón** María Victoria Arenere Mendoza, *Responsible Adviser*.
- 31) **KSI Seguridad Digital**. Pedro José Latasa López, *General Manager*.
- 32) **Madrid Minors' Public Prosecutor's Office**. Javier Urra Portillo, *Psychologist of the Public Prosecutor's Office of Madrid and Director of Urrainfancia*.
- 33) **Office for the Defence of Minors' rights of the Balearic Islands** Antoni Bennàssar Moyà, *General Manager*.
- 34) **Ombudsman of Castile-La Mancha**. Alejandra Martínez Valiente, *Consultant of the Ombudsman's Office of Castile-La Mancha*.
- 35) **Orange Spain**. Jesús Guijarro Valladolid, *Corporate Social Responsibility Director*.
- 36) **Orange Spain**. María Eugenia de Blas Sanz, *Corporate Social Responsibility*.
- 37) **PantallasAmigas**. Jorge Flores Fernández, *Director*
- 38) **PasswordBank Technologies, SL**. Alfredo Arnaiz, *COO*.
- 39) **PasswordBank Technologies, SL**. Josep Bardallo, *CTO*.
- 40) **People & Videogames**. Carlos González Tardón, *Coordinator*.
- 41) **Polytechnic University of Valencia**. María de Miguel Molina, *Contracted Doctor Professor and Main Researcher in the M-Menor research project: Protecting minors against mobile telephone information society services*.
- 42) **Red.es**. M^a Dolores Gonzalo Tomey, *Coordinator of Education Management*.
- 43) **Red.es**. Sebastián Muriel Herrero, *General Manager*.
- 44) **Robotiker – Tecnalía**. Francisco Javier Herrera Lotero, *Manager of Innovation in Security*.

- 45) **Safelayer Secure Communications, S.A.** Helena Pujol Martínez, *Coordinator of R&D projects.*
- 46) **Sandetel S. A.** Joaquín López Lérida, *Projects Director – Information Society.*
- 47) **Síndic de Greuges de Catalunya.** Xavier Bonal Sarró, *Deputy Director of the Union for Children's Rights.*
- 48) **Solventia Foundation.** M^a Ángeles Osorio, *Director.*
- 49) **Spanish Association of Entertainment Software Distributors and Editors (aDeSe).** Carlos Iglesias Redondo, *General Secretary.*
- 50) **Systems Engineering for the Defence of Spain, ISDEFE.** Luis Manuel Fernández Simón, *Security Consultant (Security Management).*
- 51) **Technology Institute of Galicia Foundation.** Juan Luis Sobreira Seoane. *Director of Technological Innovation.*
- 52) **Telefónica.** *Corporate Responsibility Management*
- 53) **Thales España.** Emilio del Prado, *Manager of Mobility Solutions Offerings.*
- 54) **Tomás F. Serna & Asociados, Abogados.** Tomás F. Serna, *Lawyer and Managing Partner.*
- 55) **Tuenti Technologies, S.L.** Natalia Martos Díaz, *Legal and Privacy Director.*
- 56) **University of Seville.** José Ramón Cerquides Bueno, *Permanent University Professor.*
- 57) **University of the Basque Country / Euskal Herriko Unibertsitatea.** Gemma Martínez Fernández, *MEC (FPU) researcher, attached to the University of the Basque country / Euskal Herriko Unibertsitatea. Member of the Spanish research team of the European EUKids Online project (Safer Internet Programme).*
- 58) **Vintegris.** José María Jiménez de la Concepción, *Chief Technical Officer*
- 59) **Vodafone España S.A.U.** José Manuel Sedes García, *Corporate Responsibility Manager.*
- Xnovo, Technology Law.** Alonso Hurtado Bueno, *Partner – Lawyer.*

2.3 Phase 3: Interviews with families (quantitative research)

Following the guidelines given by INTECO and ORANGE, the company Sigmados conducted an opinion poll in January 2010 which consisted of carrying out 644 personal interviews in 322 Spanish households, two interviews being carried out in each family: with the minor and with his/ her father, mother or legal guardian. One of the study's points of interest lies in analysing the differences in perception and assessment of minors compared to parents. Therefore, and given that there are really two samples, the results from parents and children have been tabulated separately, so that we have results as if two studies had been carried out.

The margin of error is $\pm 5.57\%$ for $p=q=0.5$ and for a confidence level of 95.5%. The methodology used to prepare the study guarantees comparing the answers from parents and children, one of the project's objectives. In spite of the sample's consistency, the margin of error existing in any quantitative research process makes it advisable to interpret the results globally, and more like trends than absolute assertions.

The details corresponding to this phase are explored in the following sections.

2.3.1 Study universe and opinion subjects

The universal subject of the study is made up by all Spanish families with children between 10 and 16 years of age who have a mobile telephone for their own personal use.

In each family two opinion subjects have been identified:

- The minor, girl or boy, from 10 to 16 years of age.
- The father, mother or legal guardian of each of the minors taking part in the study.

2.3.2 Sample size and distribution

A representative sample of 322 families has been extracted where a total of 644 interviews have been carried out: 322 with minors from 10 to 16 years of age, and 322 with their legal guardians, father or mother. Field work was carried out from 7 to 25 January 2010 in the following provinces:

- A Coruña
- Barcelona
- Madrid
- Seville
- Valencia
- Valladolid
- Vizcaya
- Zaragoza

The sample design is based on random routes with interview distribution in different areas of the selected municipality in order to be representative of all sociodemographic strata.

The definitive sample applied in the research was as follows:

Table 1: Sample distribution

	Boys			Girls			TOTAL
	10 to 12 years	13 to 14 years	15 to 16 years	10 to 12 years	13 to 14 years	15 to 16 years	
A Coruña	5	6	7	5	9	6	38
Barcelona	6	7	7	6	7	6	39
Madrid	7	7	10	6	7	7	44
Seville	7	8	8	6	8	8	45
Valencia	7	9	7	6	7	7	43
Valladolid	6	6	7	7	6	7	39
Vizcaya	7	6	8	4	6	6	37
Zaragoza	6	6	7	5	6	7	37
Total Age	51	55	61	45	56	54	322
Total Sex	167			155			

Source: INTECO

2.3.3 Interviewing technique and informed consent

Given the study's special characteristics (age of the children interviewed and need for interviewing parents and children), the following considerations have been borne in mind:

- Informed consent: in order to comply with minor protection legislation and international indications on protecting their rights, in addition to complying with the international CCI/ESOMAR code, informed consent was requested from both the legal guardian and the minor. At the start of all of the interviews, parents were informed in writing of the content of the study and the questionnaire minors would be asked to complete. After getting the adult's consent, the minor was informed and his/her consent was asked for. In this way, all the minors who have taken part in this study have given their consent in writing.
- Separate interview: for parents' opinions not to influence their child's answers (or vice versa) authorisation was requested to be able to interview the parent and child separately. All questionnaires were carried out in this way.

2.3.4 Sample error

Sample error levels for each age and sex group of the interviewed minors are presented below. Sample error calculation has been carried out working on the assumption that $p=q=0.5$, for a confidence level of 95.5%.

Table 2: Sample error levels per minor sex and age group

	Sex		Total	
	Boys	Girls	Amount	Margin of error
From 10 to 12 years	51	45	96	± 10.2
From 13 to 14 years	55	56	111	± 9.49
From 15 to 16 years	61	54	115	± 9.32
Total	167	155	322	± 5.57
Margin of error	± 7.74	± 8.03		

Source: INTECO

In the case of the father and mother sample, which also had a size of 322 cases, the sample margin of error is ± 5.57% for the same confidence level.

2.3.5 Language and sex

Throughout the report the terms girl/s, boy/s, daughter/s, son/s, or minor/s are used without distinction, to refer to the minors, and father/s, mother/s, adult/s to refer to the legal guardians. Please understand that occasionally, to make the report more dynamic and easy to understand, the generic terms children and parents are used to refer to the male and female sexes.

In some cases where the sex is a variable that influences perceptions, behaviours or appraisals it has been explicitly highlighted.

3 SOCIODEMOGRAPHIC CHARACTERISTICS

The sociodemographic analysis of households with children is a preliminary step for understanding the framework environment of this study.

This chapter deals with sociodemographic matters such as the sex and age of the parents, their job and level of education.

In general, the profile of the households surveyed is defined by the following characteristics: young parents (51.9% from 30 to 44 years of age), working (80.1%) and with a considerable educational level (46% have completed secondary education and 28.3% are university graduates). As regards income, 43.2% of families earn between €1,200 to 2,400 a month.

3.1 Households: fathers and mothers

3.1.1 Sex and age

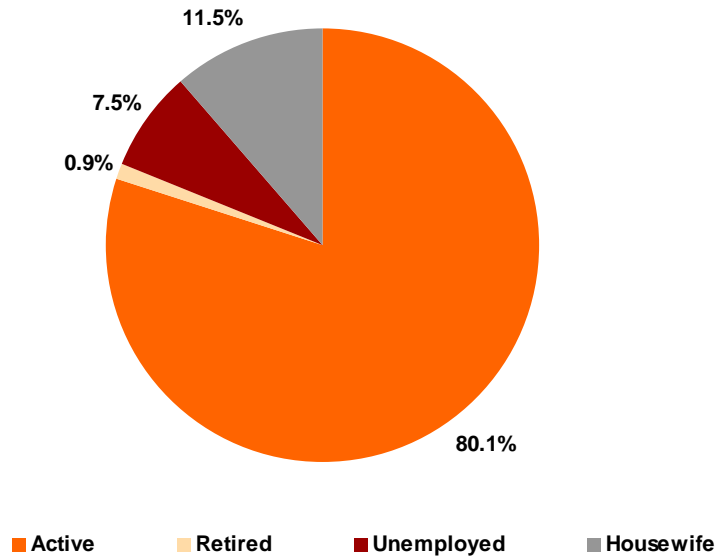
The selection of the adult to interview (father or mother) was carried out randomly, trying to identify the parent who controls or protects their daughter or son in the use of the mobile telephone. Following these guidelines, proportionally more mothers (69.3%) than fathers (30.7%) answered the questionnaire.

51.9% of adults are in the 30 to 44 year old age bracket, and 47.5% are older.

3.1.2 Professional occupation

Most of the fathers and mothers are people working outside the home. In the group of households, 80.1% of the adults are in this situation. 11.5% are housewives and an additional 7.5% say that they are unemployed. Only 0.9% say that they are retired.

Graph 1: Mothers' and father's occupation



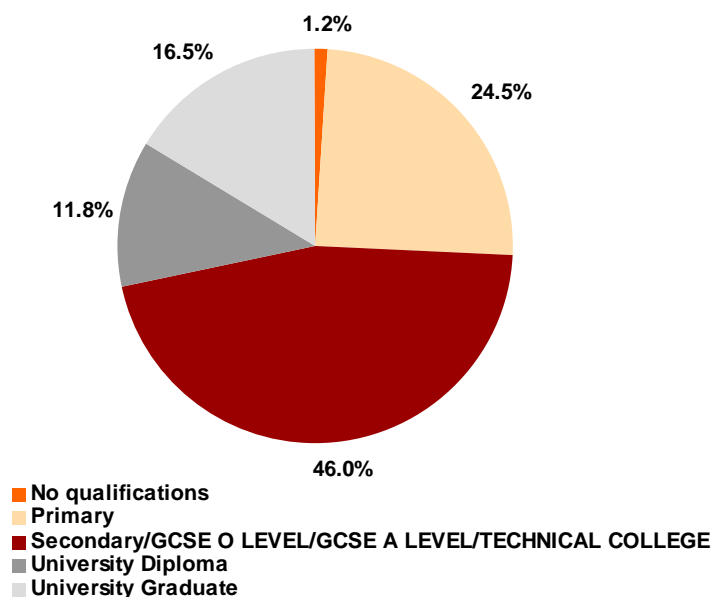
Base: fathers and mothers (n=322)

Source: INTECO

3.1.3 Training

The educational level of the fathers and mothers taking part in the study is high: 46.0% of the adult interlocutors have a level of education equivalent to Secondary Education, GCSE O levels, GCSE A levels or Technical College education, 28.3% have university education, either a diploma (11.8%) or university degree (16.5%).

Graph 2: Mothers' and fathers' education (%)



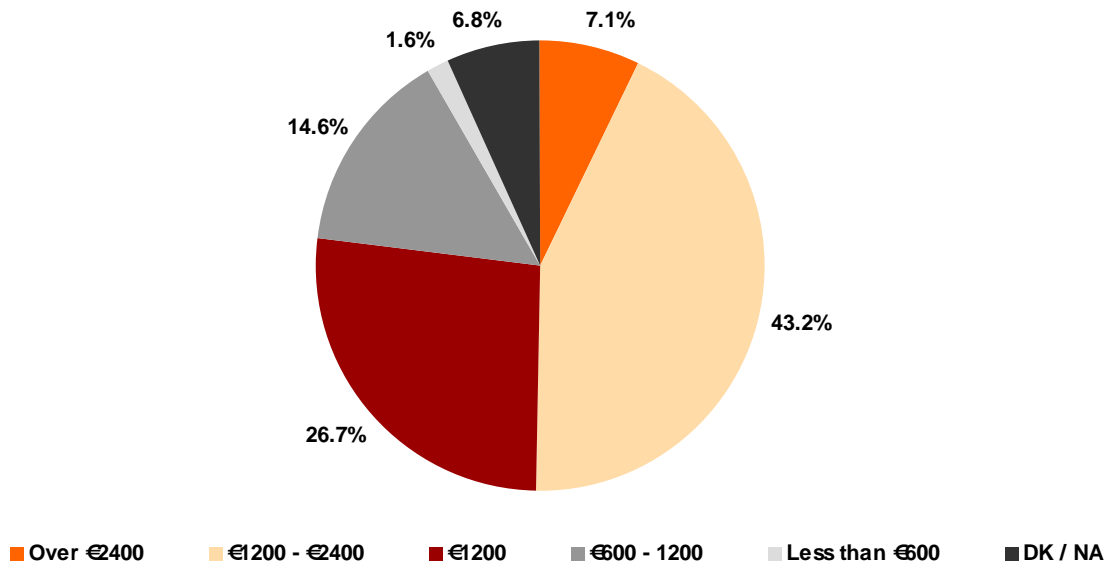
Base: fathers and mothers (n=322)

Source: INTECO

3.1.4 Socio-economic level

43.2% of families earn from €1,200 to 2,400 a month, and 7.1% earn over €2,400. An additional 26.7% say that the family earnings are around €1,200 a month.

Graph 3: Monthly family earnings (%)



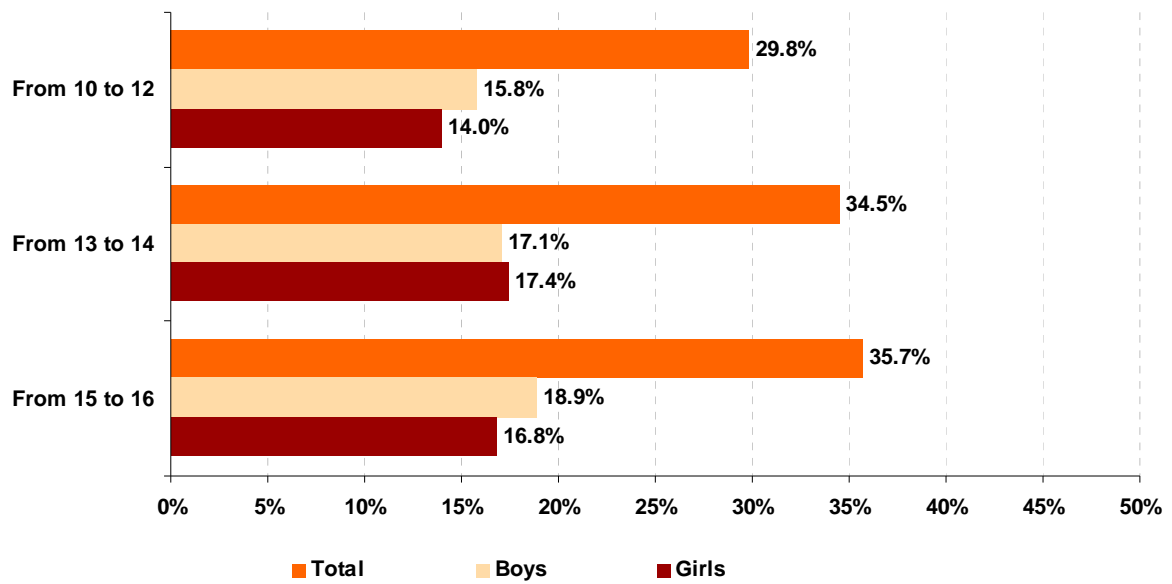
Base: fathers and mothers (n=322)

Source: INTECO

3.2 Minors

The sex and age structure of the minors interviewed is reflected in Graph 4 and responds to the sample design set to carry out the research. Therefore, this does not respond to the distribution of the 10 to 16 year old Spanish population, as a proportional distribution per province has been made, to achieve more balanced margins of error.

Graph 4: Minor sex and age (%)



Base: minors (n=322)

Source: INTECO

4 THE MOBILE TELEPHONE AMONG MINORS

4.1 The importance of mobile telephony in present day society

Mobile telephony is confirmed as one of the ICT services with most penetration among the Spanish population. In September 2009, the Telecommunications Market Commission reported that the amount of lines had risen to over 52 million, which gives a penetration rate of 112.7 lines per 100 inhabitants. Mobile telephony extension reaches all ages and social classes.

The conclusion is clear: in Spain, from 2006, there are more mobile telephone lines than inhabitants. Graph 5 visually illustrates this assertion.

Graph 5: Mobile and fixed telephony evolution in Spain: number of lines and population



Source: Telecommunications Market Commission (CMT) and National Statistics Institute (INE)

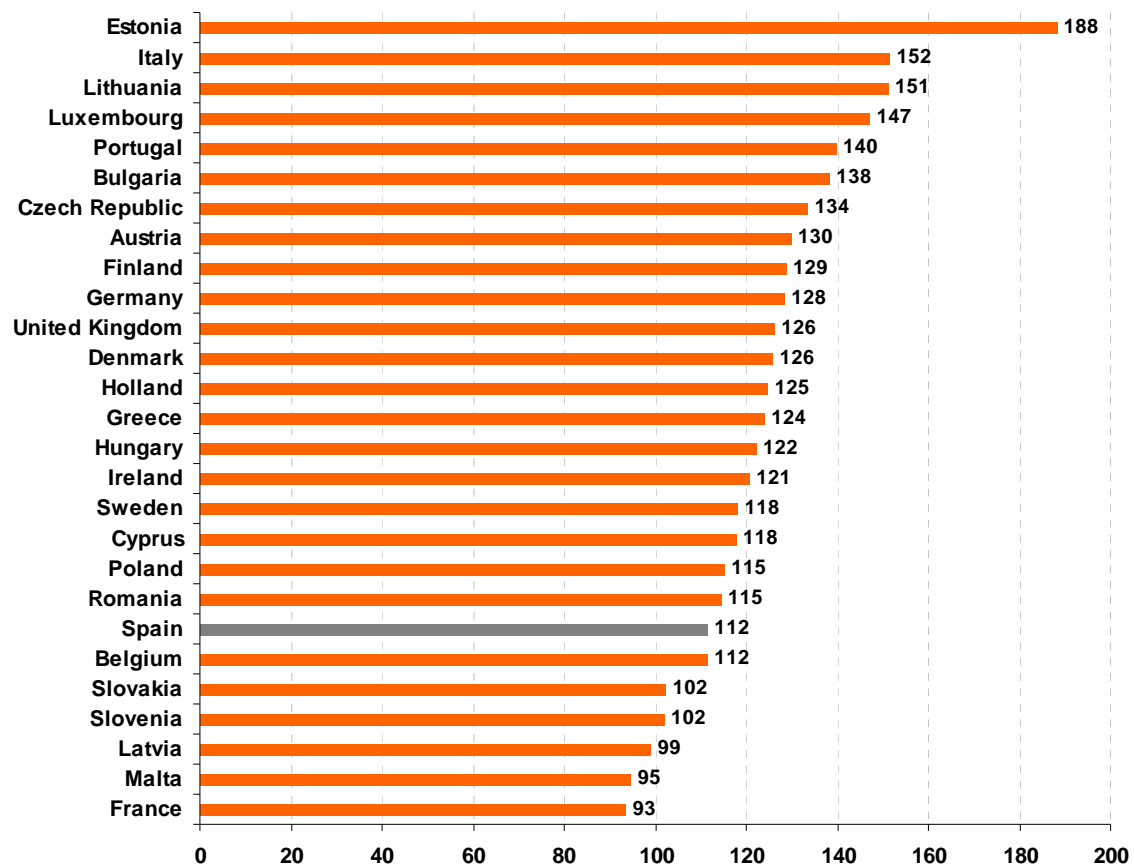
This trend of the number of mobile telephone lines exceeding the country's population is frequent in western societies. Graph 6 shows, in ascending order, the penetration of the mobile phone in the 27 member states of the European Union, measured in percentage of subscribers over the country's total population. They are data provided by the *International Telecommunication Union (ITU)* for 2008.

Spain, with a penetration of 112% (or, in other words, 1.12 telephone lines per citizen⁵), shows a penetration in line with countries such as Belgium Rumania or Poland. Only in

⁵ The figure given by the Telecommunications Market Commission (CMT) for 2008 is slightly lower, 107.6%. The difference may derive from the national population sizes considered in the two cases.

three of the 27 analysed countries (Latvia, Malta and France) is the ratio under one mobile telephone line per inhabitant.

Graph 6: Penetration of mobile telephony in the EU-27, in % of subscribers over the total population (data from 2008)



Source: International Telecommunication Union (ITU)⁶

Broadly speaking, this sketches out the general context of mobile telephone use in Spain: it is unquestionably a device used en masse. Having defined the scenario, we shall now analyse the group which is the subject of study: Spanish minors and adolescents.

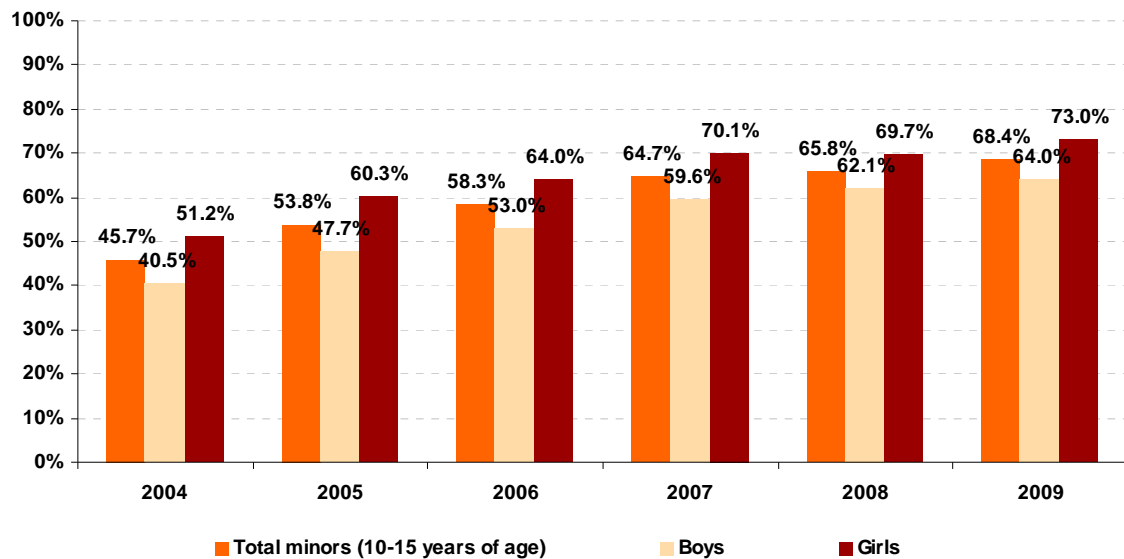
4.2 Access to mobile telephony by minors

Logically, such a widespread and rapid extension of mobile telephony has reached children and adolescents. The National Statistics Institute, in its *Survey on Information and Communication Technologies Equipment and Use in households*, analyses the use of

⁶ Statistics available online at: http://www.itu.int/ITU-D/icteye/Reporting/ShowReportFrame.aspx?ReportName=/WTI/CellularSubscribersPublic&RP_intYear=2008&RP_intLanguageID=1

the mobile telephone by minors from 10 to 15 years of age. The results are shown in Graph 7: in 2009, 68.4% of Spanish youngsters from 10-15 years of age had a mobile telephone, with a constant growth since 2004. The data suggest that mobile telephone use is somewhat more usual among girls (73%) than among boys (64%).

Graph 7: Evolution of Spanish minors (10-15 years of age) who have a mobile phone (%)

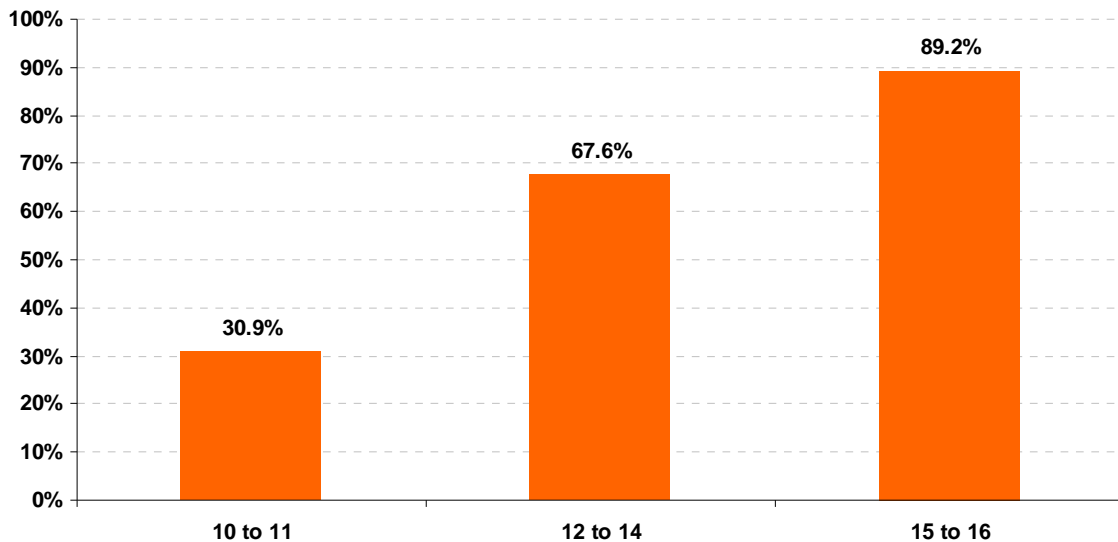


Source: National Statistics Institute (INE)⁷.

If the data are broken down by age, considerable differences are seen among the youngest and oldest children. Having a mobile telephone increases with age and is generalised among adolescents (girls and boys) from 15 to 16 years of age, where 89.2% have one. In younger age groups, the percentage is lower: In 2008, 30.9% of boys and girls from 10-11 years of age and 67.6% of boys and girls from 12-14 years of age said that they had their own mobile phone.

⁷ National Statistics Institute (INE) (2009). *Survey on Information and Communication Technologies Equipment and Use in households 2009*. Data available online at: <http://www.ine.es/jaxi/menu.do?type=pcaxis&path=%2Ft25%2Fp450&file=inebase&L=0>

Graph 8: Spanish minors who have a mobile phone according to their age (2008 data) (%)



Base: minors (n=625)

Source: INTECO⁸

4.2.1 Age when starting to use mobile telephony

There is absolutely no doubt that access to mobile telephony has been different in the case of children and adults. Minors, often called digital natives, have been born and have grown up with the mobile telephone. Their approximation to the technological phenomenon has been (and is) more natural and based on their own experience. In the case of parents, digital immigrants, joining the mobile telephony world has taken place as when they were adults and were more aware, which is less natural. Children have been born with it, while adults have had to learn. This determines the different approach of each group to technology.

The age for starting to use mobile telephony among Spanish minors is from 10 to 12 years of age, as shown in Graph 9. 24.2% of the minors taking part in the study (23%, if we heed the parents' opinion) would have acquired a mobile telephone for the first time at 10 years of age, and an additional 23.6% would have done so at 12 (25.2%, according to adults).

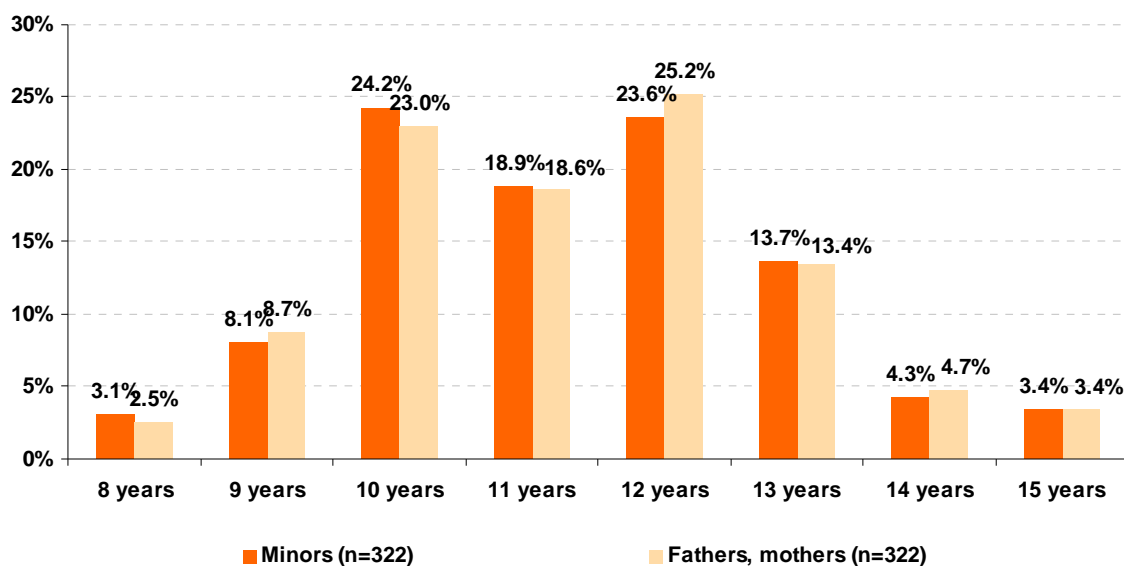
Cross-checking this fact with some of the sociodemographic variables analysed, two factors that may influence the age of acquiring the first mobile telephone are identified.

⁸ INTECO Information Security Observatory (2009). *Study on safe habits in the use of ICTs by children and adolescents and e-trust of their parents*. Available online at:

http://www.inteco.es/Seguridad/Observatorio/Estudios_e_Informes/Estudios_e_Informes_1/Estudio_ninos

- The first is the parents' age: the older the parents, the later their children are introduced to mobile telephony. Young parents (30 to 44 years of age) tend to acquire their children's mobile earlier on, while older parents do so from 12 years of age⁹.
- The second is the level of education: parents without education or with primary education acquire a mobile telephone for their children at a younger age than parents who have completed secondary or higher education¹⁰. Apparently, there is no reason for this. A possible explanation is that parents with more education analyse in detail the positive and negative aspects associated to their child having a mobile telephone, and act more cautiously.

Graph 9: Age of acquiring first mobile telephone (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

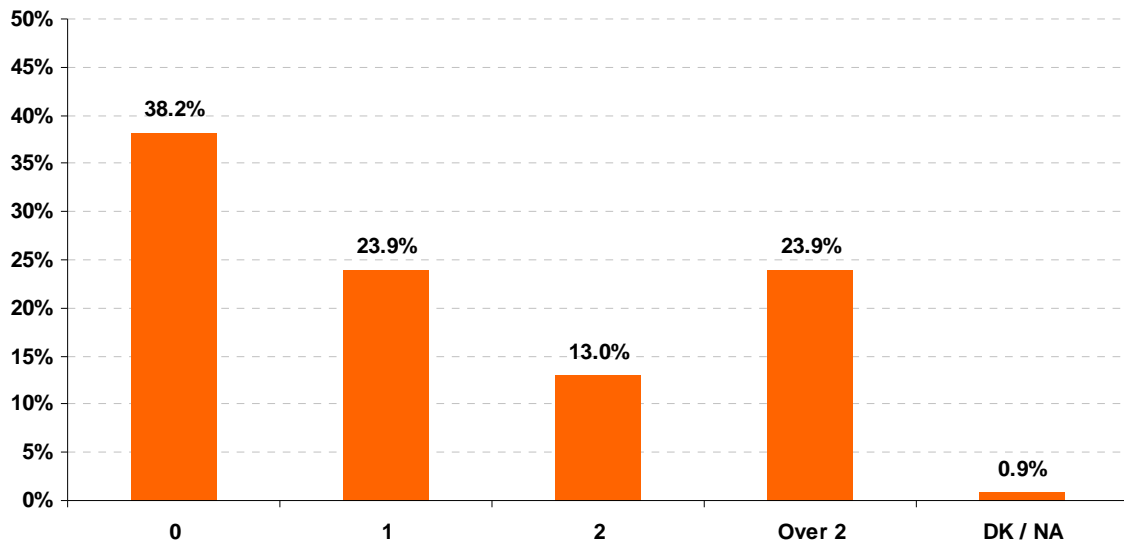
38.2% of the minors taking part in the study admit they never had an mobile telephone before the one they have now. Compared to them, 23.9% claim to have had one (in addition to the current one), 13% two and 23.9% say that they have had more than two mobile telephones before their current one (Graph 10).

⁹59.5% of parents from 30 to 44 years of age acquire the first mobile telephone for their child before 12 years of age, compared to 40.5 who do so when they reach this age, or even older. In the case of parents over 45 years of age, the proportion is the other way around: a minority (45.5%) say that the age their child first accessed mobile telephony is before 12 years of age, compared to a majority 54.5% that waits at least until the minor is 12 years of age.

¹⁰ 59% of parents without education (or with primary education) acquire the mobile telephone for their child before they are 12 years old. In the case of parents with university education, the percentage is 40.7%.

Logically, the older the minor, the greater the number of mobiles they have had. Thus, for example, among adolescents from 15 to 16 years of age, 36.5% say that they have had more than two telephones. In the 10 to 12 year old age bracket, this percentage is 9.4%.

Graph 10: Number of terminals the minor has had before the present one (%)



Base: minors (n=322)

Source: INTECO

4.2.2 Factors and reasons determining acquiring a mobile telephone. Parental role in the decision

Different hypotheses have been considered in the analysis of the reasons that contribute to accessing mobile telephony:

- **Mobile telephone as a symbol of initiation into adolescence.** Based on this concept, the determining factor when acquiring a mobile telephone would be, simply, the fact of having reached the age when he or she usually should, or *must*, have one.
- **Mobile telephone as an instrument to reassure parents.** The concept refers to the supervision and control bond that would be generated by the adult towards the child with a mobile. When the minor has a mobile telephone, the parent feels more reassured and has the feeling of controlling them more.
- **Mobile telephone as an instrument to protect the minor.** Under this notion, the predominant reason for accessing mobile telephony would be the reassurance, protection and care it gives the minor on having a tool to be able to communicate in any situation.

- **Mobile telephone as an instrument of integration in the environment with their equals.** In this case, the factor for acquiring a mobile telephone is the influence from the environment: the fact that their friends and classmates have one has an influence on the decision.

To know which of the four reasons has more weight, each of the minors taking part in the study, and their father or mother, were asked to choose the assertion they most agreed with, regarding the reasons for acquiring a mobile telephone for the first time. Each answer option summarises each of the previously described concepts, as shown in the following equivalence table.

START OF ADOLESCENCE	<i>Having a mobile telephone is essential when the child reaches a certain age.</i>
REASSURANCE OF PARENTS	<i>Having a mobile telephone is important, because as parents we feel more reassured and confident.</i>
PROTECTING THE MINOR	<i>Having a mobile telephone is important, as in this way my child feels more reassured and confident.</i>
INTEGRATION IN THE ENVIRONMENT	<i>Having a mobile telephone is important, as the rest of the children in my child's environment have one.</i>
NOT IMPORTANT	<i>Having a mobile telephone is not important. If he or she did not have one it would not have any particular effect on either myself or my child.</i>

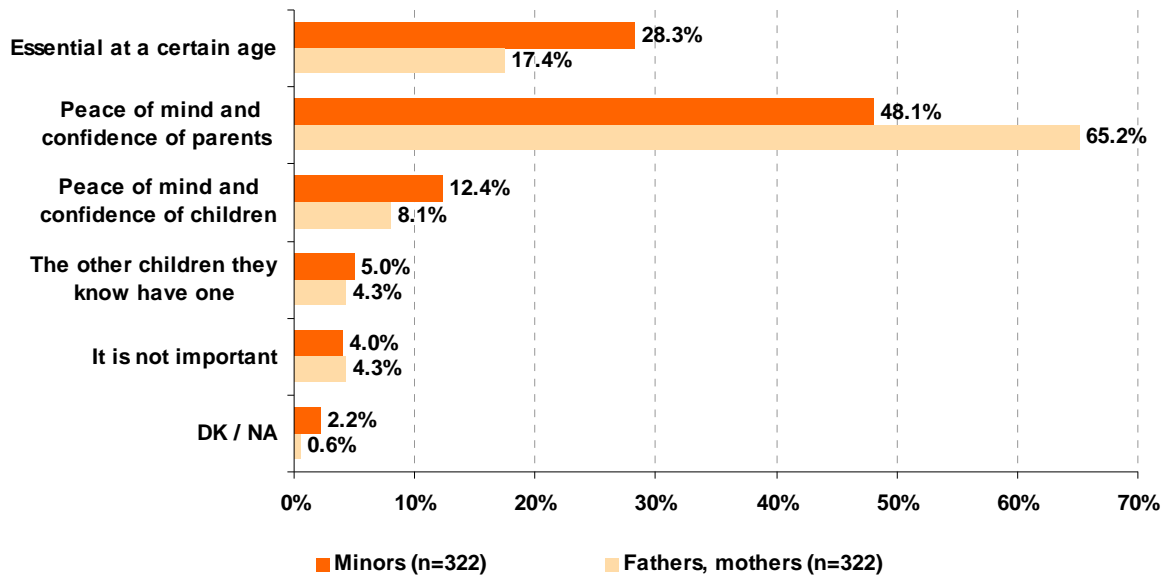
From the answers of the participants in the study (Graph 11), it seems that parents' reassurance is the main reason for minors accessing mobile telephony. An overwhelming 65.2% of adults recognise this, and 48.1% of minors support the idea.

Behind this, the perception of the mobile telephone as an initiation into adolescence acquires a major role: 28.3% of the minors taking part in the study agree with the assertion *Having a mobile telephone is essential when the child reaches a certain age*. In the case of parents, 17.4% agree with this idea.

In other words, an agreement seems to exist in which minors have a mobile telephone for their parents to feel more reassured and confident but, although for parents this is practically the only reason to be considered, for minors there is a second important factor, which would be to consider it essential when they reach a certain age.

The age of minors somewhat determines the different attitudes: considering the mobile as an essential tool when reaching a certain age is more accepted among adolescents from 15-16 years of age (39.1%) than among 10-12 year olds (17.7%). The opposite trend is seen when assessing the mobile telephone as an instrument that guarantees parents' reassurance and confidence: children from 10-12 years of age agree with this idea more than older children from 15 to 16 (53.1% compared to 40%).

Graph 11: Predominant reason for accessing mobile telephony (%)



Base: minors (n=322); fathers and mothers (n=322)

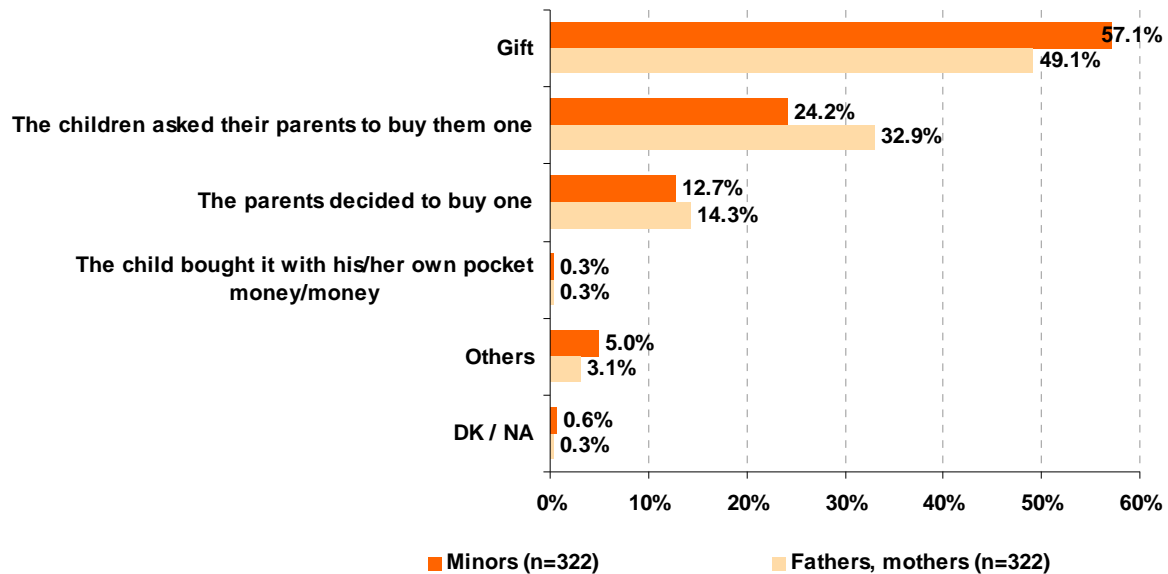
Source: INTECO

It is interesting to observe how the rest of the possible reasons exercise very little influence on the minor deciding to access mobile telephony (at least, consciously. We should remember that the study methodology is based on an interview). Even the effect of the environment (understood as the child's classmates), which a priori would seem to be a decisive factor when acquiring a mobile for the minor, is only taken into account by 5% of minors and 4.3% of adults.

The way in which Spanish minors from 10 to 16 years of age got their first mobile telephone is analysed below. For the vast majority (57.1% according to their own statements or 49.1% in the adults' opinion), the first phone was a gift (Graph 12).

In second place, the parent purchasing the phone at the request of their child is mentioned by 24.2% of minors and 32.9% of adults. The parent purchasing the telephone without the minor having asked for one also acquires certain importance: 12.7% of youngsters and 14.3% of parents make this claim.

Graph 12: Way of getting the first mobile phone (%)



Base: minors (n=322); fathers and mothers

Source: INTECO

4.3 Mobile telephone handset

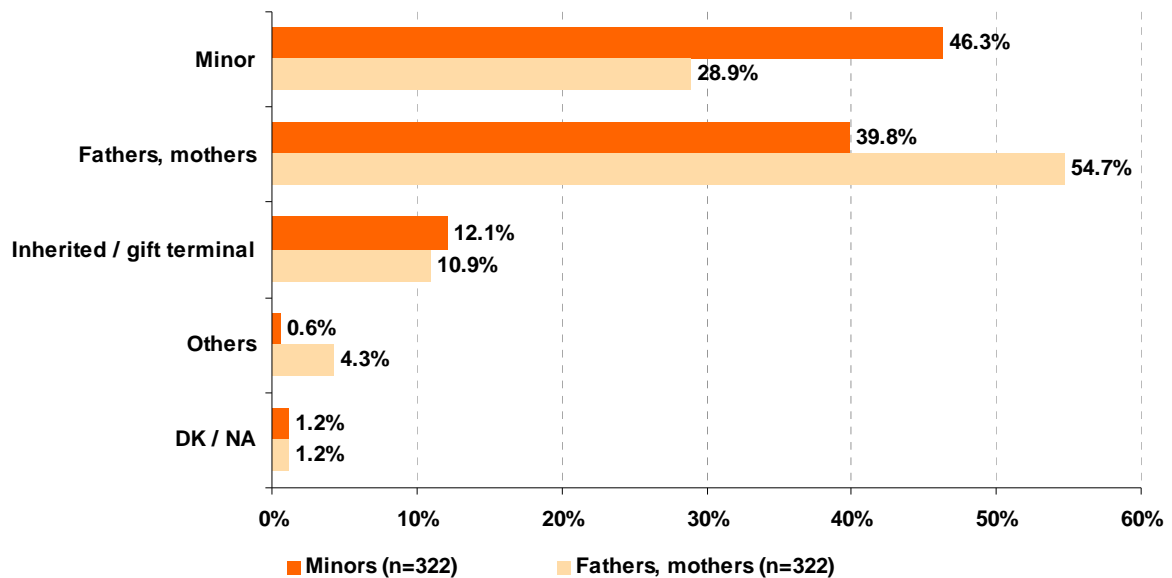
Up to now we have talked about minors accessing mobile telephony (in general). This epigraph goes into the mobile telephone handset in depth: who takes part in choosing the model (minors, parents or the two together) and what type of features they look for (price, features or design). The following paragraphs analyse these matters.

4.3.1 Parents' role in deciding the mobile telephone model

According to minors' statements, they chose the mobile telephone model they currently use themselves (46.3%). It is surprising that the parents think that they (the parents themselves) made this decision (54.7%). The data in the survey are not conclusive since, as in any survey, they show the perception of the person interviewed, which does not always coincide with reality. Both, parents and children, probably have an influence on what telephone to buy, and this choice is not as autonomous as each of them think.

What does seem to be clear is that the age of the minors determines a greater involvement in the selection of the handset. Hence, the percentage of children who claim that they chose their present handset is 31.3% in the 10-12 year old age bracket and this stands at 62.6% in the case of the 15 to 16 year olds. In line with the above, 51.0% of youngsters from 10-12 years of age consider that their parents chose the telephone, compared to 27% of adolescents from 15-16 years of age who chose this option.

Graph 13: Who chose the mobile phone model the minor is currently using (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

4.3.2 Determining factors for choosing the mobile: price, features or design

The different phases of maturity of a market may influence the product characteristics most highly valued by the consumer. A good example is the car market: in its first phases basic features were considered, such as engine power or speed. As industry advanced and the use of cars became increasingly popular among the population, consumers have turned their attention to advanced features (inner space, safety) and even to design and make aspects.

To analyse what is happening in the mobile telephony market in Spain, the parents taking part in the survey were asked to choose the characteristic (only one) they give the most priority to when selecting their child's mobile telephone.

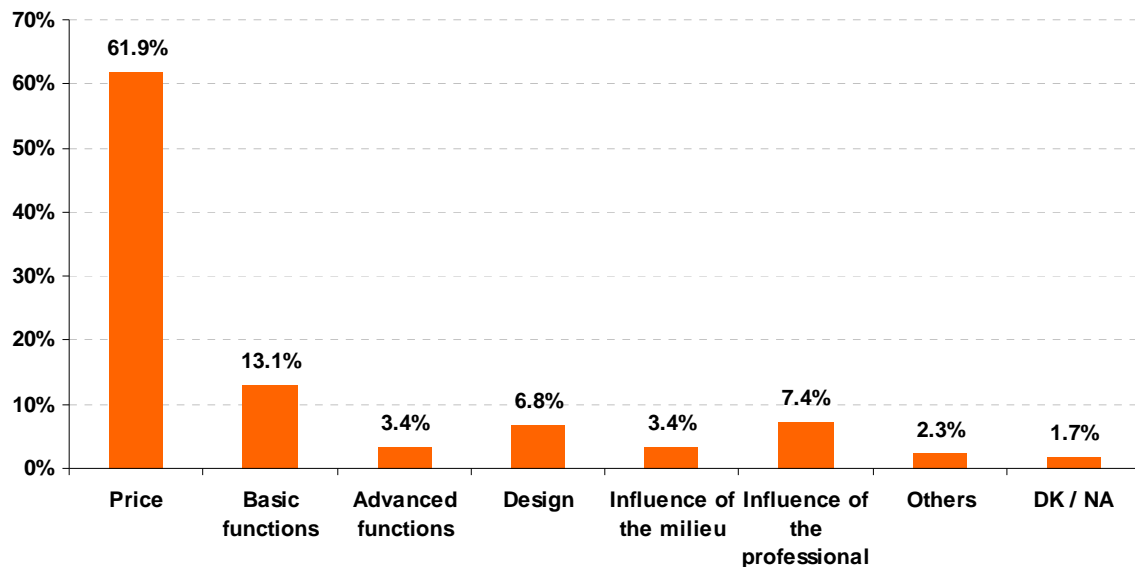
- **Price:** *Price/points.*
- **Basic functions:** *It should be more convenient (longer lasting battery, handier size, etc.)*
- **Advanced functions:** *It should have more technological features.*
- **Design:** *Design.*
- **Influence of the milieu:** *It should be fashionable or a friend should have it.*
- **Influence of the professional:** *I follow the advice given by the sales assistant.*

The results of the analysis are shown in Graph 14.

The price of the handset is the main reason for choosing a telephone model for their children with 61.9% of the parents taking part in the study. (Curiously, the parent's sex seems to have something to do with it, as the percentage is somewhat more evident among mothers, 63.6% than fathers, 58.6%)

Far behind the price, parents value the handset's basic functions, battery life, handset size, etc. (13.1%), the sales assistant or professional's recommendation (7.8%) and telephone design (6.8%). The rest of the options are chosen to a much lesser extent.

Graph 14: Characteristic the parents give most priority to when selecting the minor's mobile (%)



Base: parents who chose their child's mobile handset model (n=176)

Source: INTECO

4.4 Services used

When we presented this study we said that currently the mobile telephone goes beyond the basic communication usage it was originally designed for. Advanced terminals include more and more features and allow taking and posting photos and videos, listening to music, connecting to the Internet, etc.

Along these lines, in the research study *The interactive generation in Spain*¹¹ new mobile telephone uses were suggested based on five dimensions, namely, Illustration 1: communication, access to contents, leisure, creation of contents and organisation.

¹¹ Ariel – Fundación Telefónica (2009). *The Interactive Generation in Spain. Children and adolescents in front of screens.* Available at: http://www.generacionesinteractivas.org/?page_id=1678

Illustration 1: Activities carried out with the mobile (10-18 years of age)



Source: The Interactive Generation in Spain.

Except for the *organisation* dimension (according to its authors, services such as the clock, agenda and calculator belong to this), which has not been analysed in this study, Table 3 shows the usage data declared by minors regarding a series of services. Each of the uses analysed has been associated to the dimension they belong to, according to the previous pyramid. The statements of minors and their fathers or mothers is presented in a comparable way.

Spanish minors make the most of mobile phones' communication options, content generation, access to the latter and leisure. In the four usage dimensions analysed, very considerable usage levels are seen.

Voice calls, missed calls, and text messages are the most used services related to communication: 94.7% of Spanish minors (93.8% in the parents' opinion), 92.9% (90.6%) and 90.7% (89.5%), respectively, say that they use each of them.

In the chapter on access to contents, listening to music in mp3 format is undoubtedly the most common use. 71.4% of Spanish children and adolescents from 10 to 16 years of age (67%, according to parents' declarations) make this claim. After this answer are downloading ringtones or screensavers, given by 26.5% of minors (23.9% considering their legal guardians' answers), and downloading music from the Internet (20.5% of minors from their own declarations, 17.7% from the adults' statements).

As regards the *leisure* dimension, 51.6% of Spanish girls and boys use the mobile telephone to play games. Parents' perception is in line with this information (49.7%).

Finally, in the creating contents block taking photos is the most used service: 88.6% of minors (83.6% in their parents' opinion) say that they do this. After photographs, video recording is the second most important contents generation action. This is done by 48.5% of children (35.4%, considering adults' answers).

It is relevant to mention that the age of the minor seems to indicate a more intensive use of each of the services. Hence, carrying out all of the uses analysed increases the older the child.

Table 3: Mobile telephone uses by the minor daily, normally and sporadically. Comparing the declarations of the minor and the mother / father (%)

	Uses	Minors	Fathers, mothers	
COMMUNICATION	SMS	90,7	89,5	
	Voice calls	94,7	93,8	
	Missed calls	92,9	90,6	
	Chat / Instant messaging	12,4	10,9	
CONTENTS (ACCESS)	Watching videos on the web	16,1	11,1	
	Listening to music like an mp3	71,4	67,0	
	Downloading music from the web	20,5	17,7	
	Downloading ringtones or wallpaper	26,5	23,9	
	Visiting websites and information searching	10,6	8,7	
	E-mail consultation	8,0	7,1	
	Profile consultation in social networks	7,1	7,1	
	Television	7,2	6,2	
	LEISURE	Games	51,6	49,7
CREATION	Taking photographs	88,6	83,6	
	Sending photographs to others	48,2	44,3	
	Posting photographs on the web	20,8	18,6	
	Making videos	48,5	35,4	
	Sending videos to others	23,0	17,7	
	Posting videos on the web	10,3	6,8	

Source: INTECO

Using the mobile telephone in order to go online is still done by a minority of children. Only 10.6% visit websites to search for information with their telephone, 8% consult their e-mail, 7.1% look at their profile in social networks and 12.4% say that they chat or access instant messaging services with their mobile. Somewhat more acceptance, although in no case with generalised adoption rates, is enjoyed by downloading music from the Internet (20.5%) and posting photographs (20.8%) or videos (10.3%) on the web.

In general, the opinion of parents is in line with the statements made by minors, which means that they are aware of the use their children make of the mobile telephone. Discrepancies between answers are not very significant in most cases, except for the uses that are to do with making and posting videos using the mobile telephone. In these cases, minors carry out these activities more than their parents think: 23% of minors send videos to other people (17.7% in the parents' opinion), 16.1% admit to watching videos on the Internet (only 11.1% of adults are aware of this), 48.5% use the mobile to watch

videos (35.4%, from the statements of the adults) and, finally, 10.3% of youngsters post videos on the Internet using their mobile (6.8%, according to the parents).

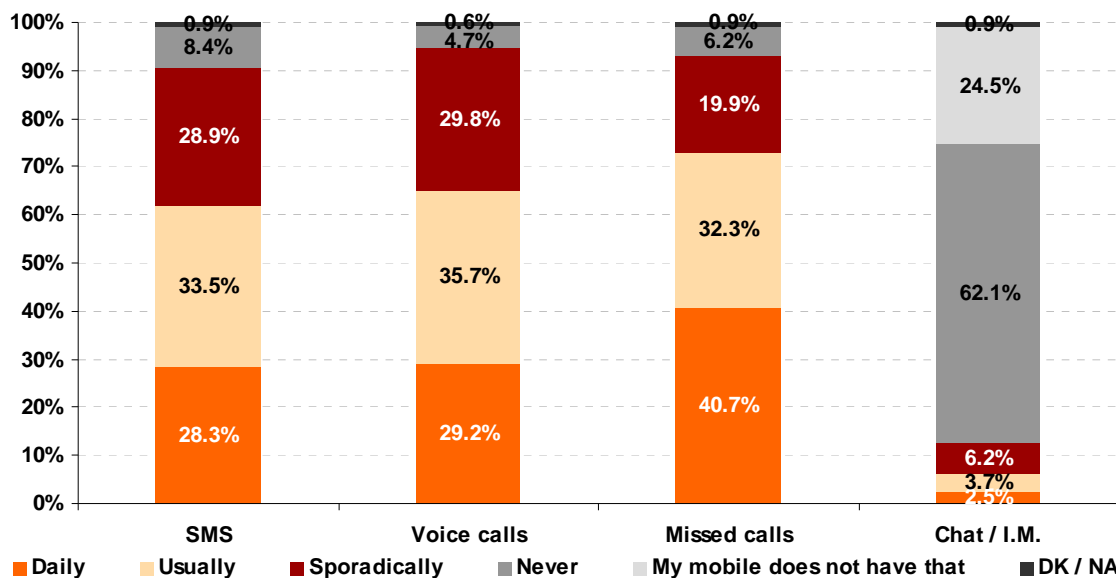
The frequency with which youngsters carry out these activities with their mobile telephone is analysed below. Services related to communication (Graph 15), access to contents (Graph 17), leisure (Graph 18) and content creation (Graph 19) are presented separately.

Spanish minors use mobile telephone services to do with communication intensively. Thus, 29.2% of them make voice calls every day (35.7% do so regularly, and an additional 29.8%, sporadically). Using the short messaging sending or reception service is also very common among minors: 28.3% send or receive texts every day, 33.5% regularly and 28.8% do so at least sporadically.

Making missed calls is also frequent for 40.7% of minors, who do so daily.

The opposite happens with the frequency of using the mobile telephone to chat or exchange instant messages (I.M.). The percentage of youngsters who say they use this service every day, normally or sporadically exceeds 10%. In this case, the most frequent answer is that they never use it (62.1%) or that the handset does not allow this option (24.5%).

Graph 15: Frequency of use of services related to communication (%)



Base: minors (n=322)

Source: INTECO

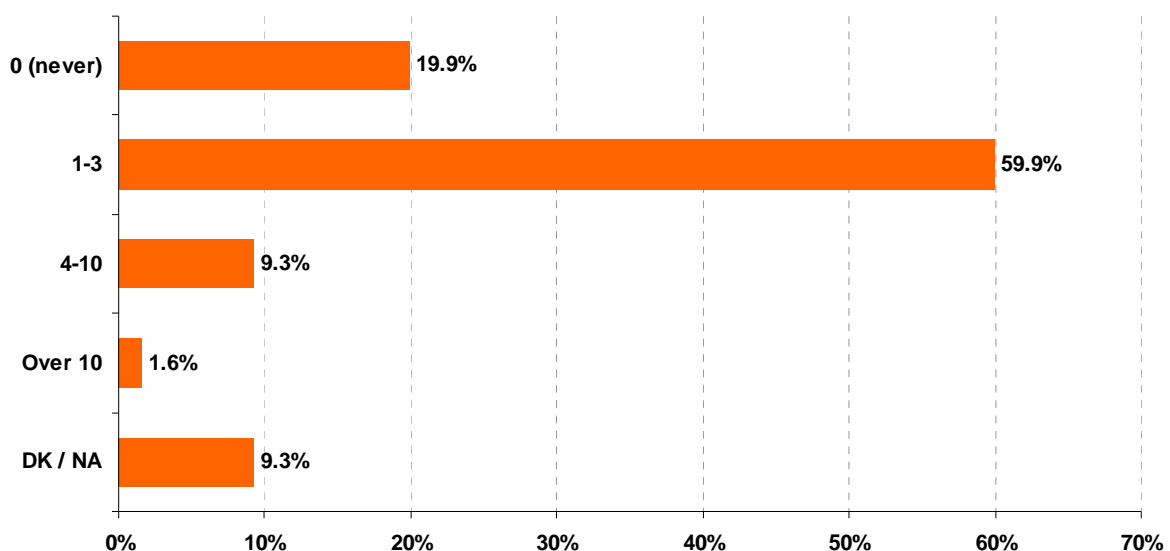
Let's further explore Spanish minors sending text messages. The data confirm that they are widely used by Spanish youngsters from 10-16 years of age. At that time, the favourable reception of text messages among youngsters was surprising, to the point of

using *thumb generation* to identify present day adolescents, from using their thumb much more skilfully than previous generations as a result of sending texts¹².

The number of messages sent by the girls and boys taking part in this study stands at 1 to 3 a day for 59.9% of those interviewed. 9.3% say that they send 4 to 10 texts a day and only 1.6% admit exceeding this volume.

It seems clear that also in this case, age determines a more intensive use: thus, 67% of adolescents from 15-16 years of age say that they send 1 to 3 texts a day (in the 10-12 year old age bracket the percentage is 52.1%) and 15.7% of youngsters from 15-16 years of age send 4 to 10 text messages a day (whereas, in the case of girls and boys from 10-12 years of age, this option is not answered by any of those interviewed).

Graph 16: Number of texts sent by the minor daily (%)



Base: minors (n=322)

Source: INTECO

Among the uses that are to do with access to contents, music in mp3 format is the most frequently adopted use by Spanish minors: 36% do this daily (a higher percentage than the youngsters who send texts or make calls every day, for example).

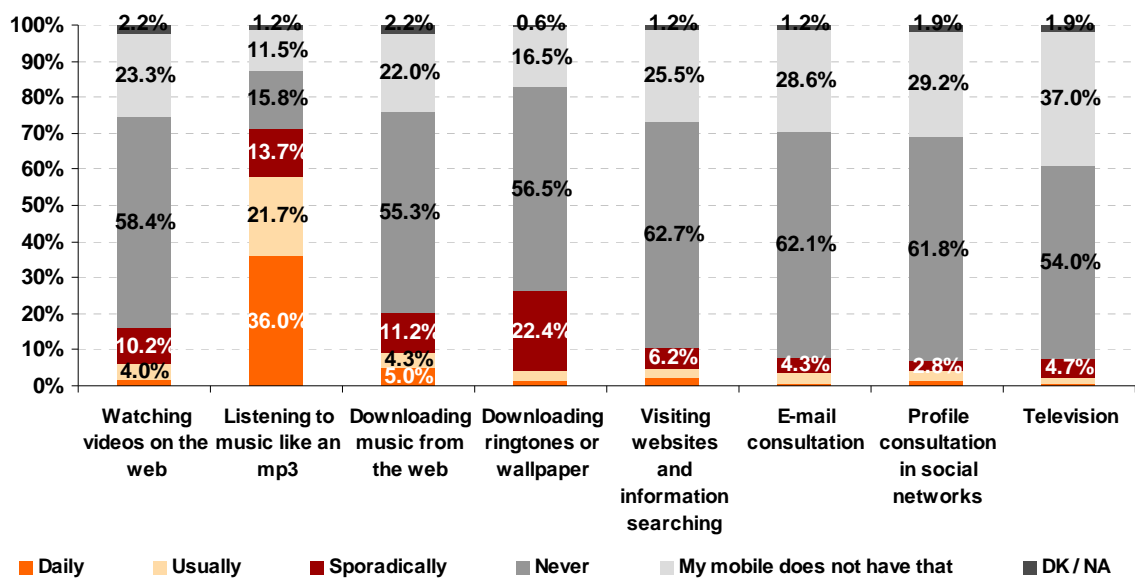
The rest of the services are used occasionally, as reflected in Graph 17: the minors interviewed only buy ringtones or screensavers sporadically (22.4%), download music on the Internet (11.2%) or watch videos on the Web (10.2%). The most common answer, in these cases, is that they are never used.

¹² General Foundation of the Complutense University of Madrid and the Institute of Youth (2007). Communication and youth languages through ICTs. Available at: <http://www.injuve.mtas.es/injuve/contenidos.item.action?id=541229710&menuId=572069434>

In general, the services to do with accessing Internet from the mobile telephone are used very occasionally: 62.7% have never visited websites using their telephone, 62.1% have never looked at their e-mail and 61.8% have not accessed their profile in social networks using their mobile. In all of these cases, there is a considerable proportion of people interviewed who say that their mobile does not have this function.

Equally low is accessing television from the minor's mobile telephone: the usage level, whether daily, normally or sporadically, is only 7.2%, while a majority 54% say that they have never done this and an additional 37% say that their telephone does not allow this option.

Graph 17: Frequency of use of services related to access to contents (%)

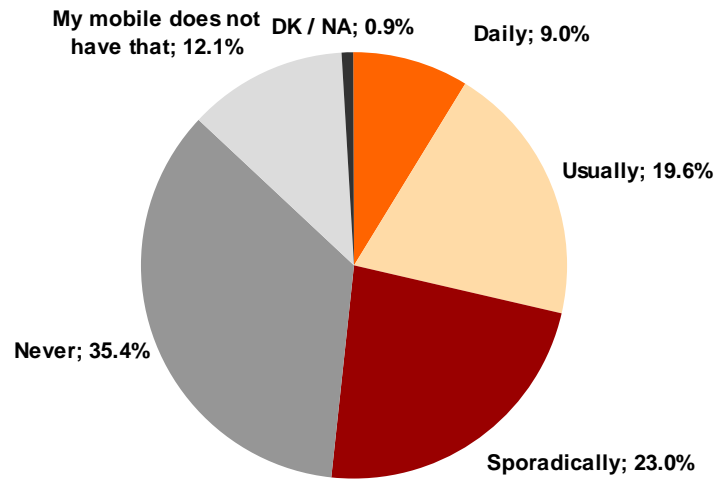


Base: minors (n=322)

Source: INTECO

For 9% of minors playing games with the mobile telephone is a daily practice, regular for 19.6% and sporadic for 23%. Even so, 35.4% of girls and boys taking part in the study say that they have never done this.

Graph 18: Frequency of use of services related to leisure (%)



Base: minors (n=322)

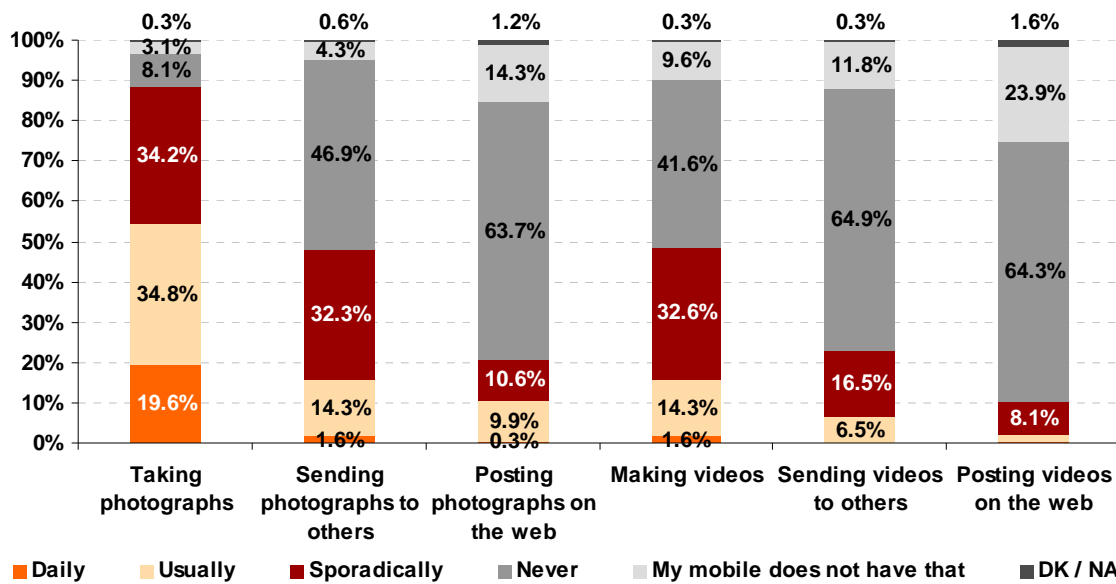
Source: INTECO

As regards the minor creating (and posting) contents, taking photographs with the mobile telephone as the only service that acquires a certain significance amongst youngsters is noteworthy, with 19.6% who do this daily, and an additional 34.8% and 34.2% who do so normally and sporadically, respectively.

Sending photographs to other people is an occasional phenomenon (32.3%) or, at the most, normal (14.3%), and more uncommon is posting these photographs in (63.7% of the minors interviewed have never done so).

Recording videos with the mobile telephone is less common than taking photographs: 32.6% of youngsters say that they have done this sporadically, and only 1.6% do this every day. Along the same lines, 64.9% of those interviewed have never sent videos to other people and 64.3% have never posted them on the Internet.

Graph 19: Frequency of use of services related to creation of contents (%)



Base: minors (n=322)

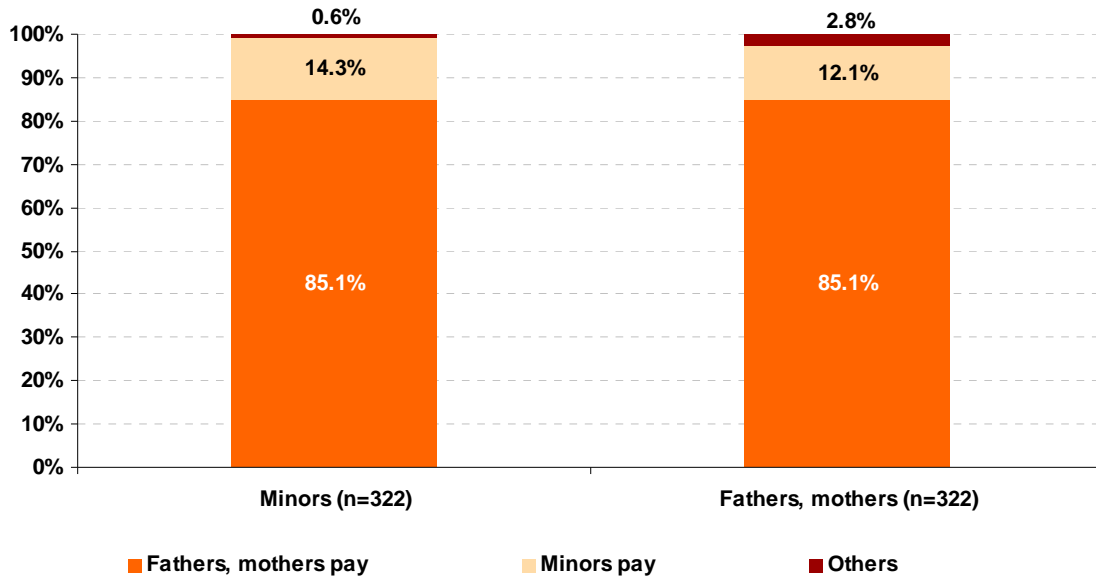
Source: INTECO

4.5 Consumption

The minor's mobile telephone, whether it be with a contract or prepaid, obviously has a cost that in most cases is paid by the parent: In 85.1% of the families taking part in the study, it is the parents who pay their child's telephone bill. In this case, as seen in Graph 20, the minors and adults agree with each other.

Only 14.3% of children (or 12.1%, in the parents' opinion) say that they pay their own telephone bill with their pocket money. (It is not surprising that this percentage increases proportionally with the age of the children: among minors from 10-12 years of age, only 11.5% say that they have to pay themselves, whereas the percentage reaches 18.3% of adolescents from 15-16 years of age.)

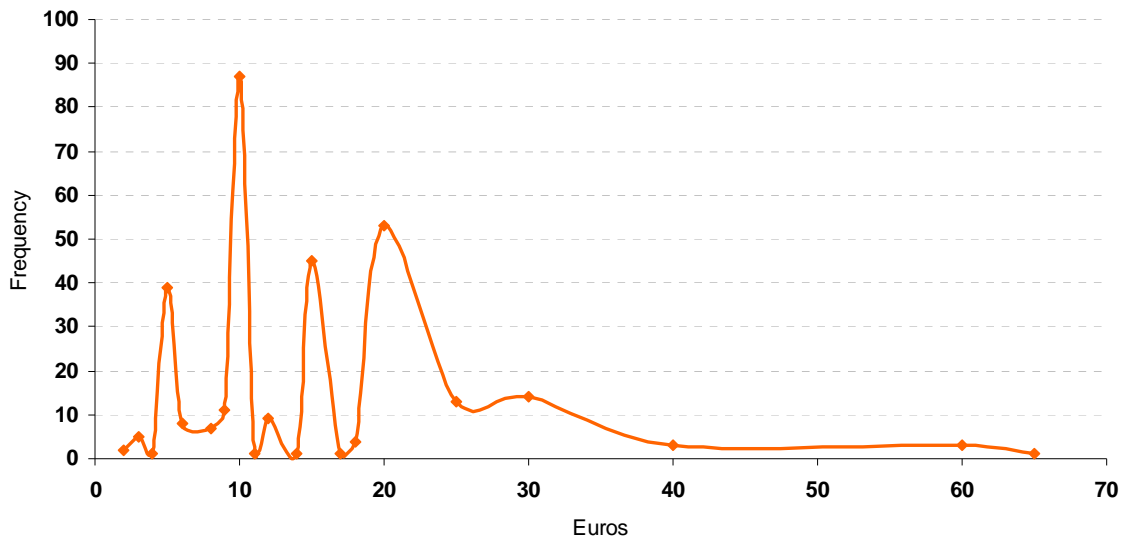
Graph 20: Who pays for what the minor spends with the mobile telephone (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

Graph 21 shows the monthly expenditure distribution curve of the minor's mobile telephone, made from the answers offered by the parents taking part in the study. Mean monthly expenditure stands at €14 and median monthly expenditure at €10. (The median is the value situated in the centre of the distribution, with half of the values below it and the other half above it. The interest behind presenting this statistic lies in that, unlike the arithmetic mean, it is not distorted by the possibility of abnormally high or low data.)

Graph 21: Minor's monthly expenditure on the mobile phone (%)


Base: father, mothers (n=322)

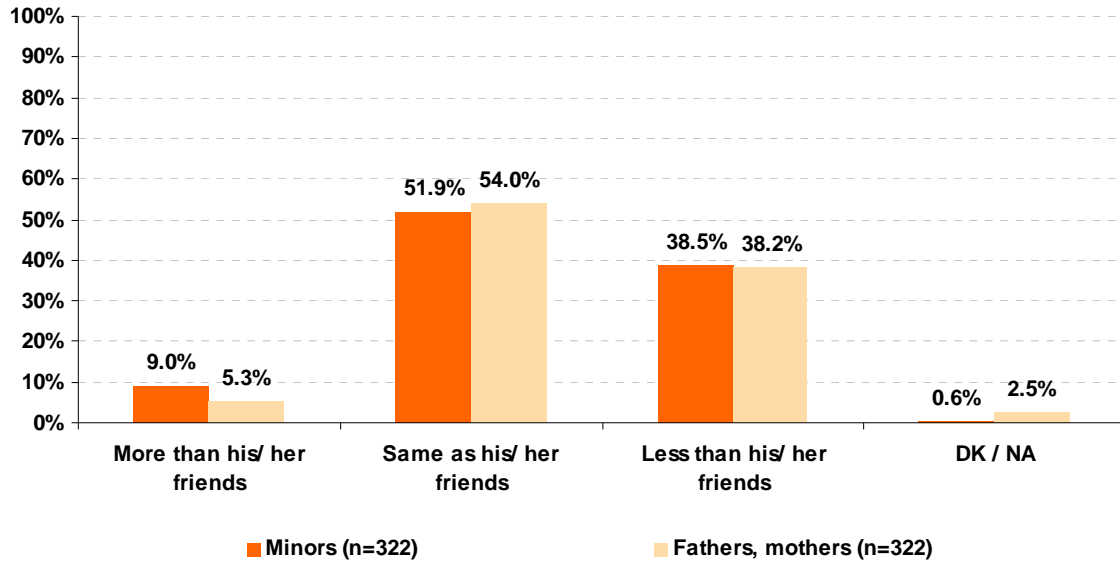
Source: INTECO

Parents and children were asked how much time they thought minors spend on the mobile telephone. To this end, an external reference element was included in the answer (in this case, the time their friends spend on the mobile telephone).

Over half of the minors interviewed (51.9%) consider that their use of the mobile telephone (in terms of time) is normal, understanding normal as the same as what their friends do. 38.5% say that they do not use it very much, less than their classmates. Only 9.0% admit that they use it a lot. Parents coincide, in general, with their children's answers.

In the analysis of age groups it is observed that, as the minor's age increases, so does the tendency to show a perception of greater use: 4.2% of 10-12 year olds considers that the time devoted to the mobile is greater than their friends, whereas the percentage reaches 11.3% of 15-16 year old adolescents. In contrast, 64.8% of 10-12 year children say that they use the mobile telephone less than their friends, compared to 27.8% who have this perception in the 15-16 age bracket.

Graph 22: Assessment of the time devoted by the minor to the mobile telephone (%)



Base: minors (n=322); fathers and mothers (n=322)

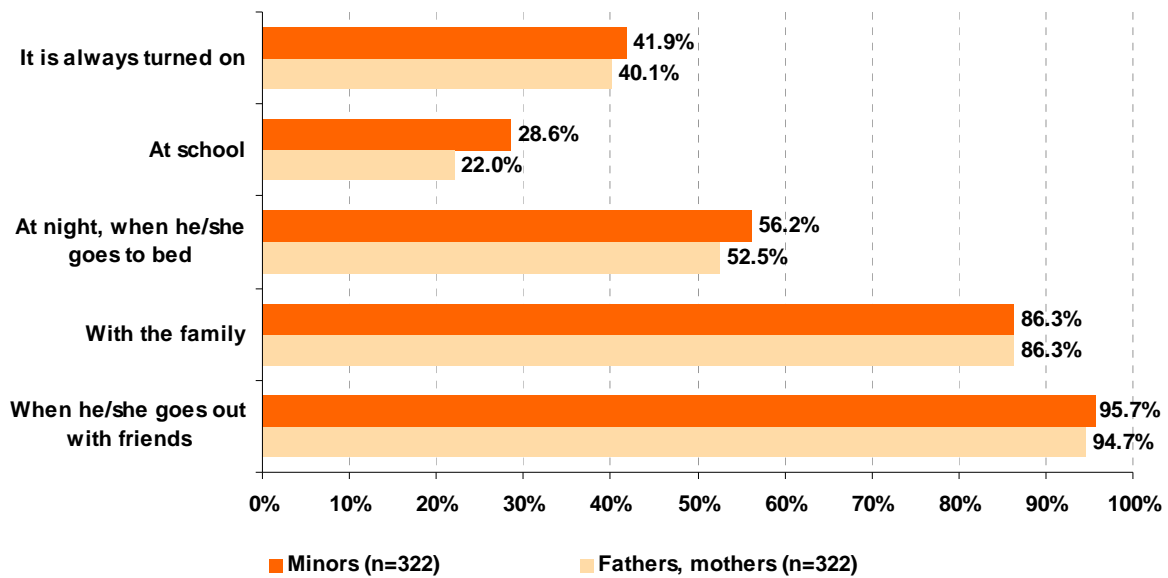
Source: INTECO

4.6 Minor's mobile telephone use habits

In what situation or situations Spanish minors keep their mobile telephone turned on are analysed below. The data are provided in Graph 23, and confirm the high availability of mobile telephones among youngsters. For 41.9% (40.1%, if we consider parents' answers), the mobile is always on and 56.2% (52.5%, according to their parents) say that the telephone is also on at night. Even in school (a place where, a priori, one would expect youngsters not to use their telephones), 28.6% of minors keep it turned on. In situations that are more leisure related, such as family get-togethers (86.3%) or going out with friends (95.7%) leaving the telephone on is a general trend.

Once again, age is the essential element in terms of the action of always leaving the mobile telephone turned on: 25% of children from 10-12 years of age say that they adopt this attitude, whereas the percentage among 15-16 year old adolescents stands at 52.2%.

Graph 23: Availability: situations when the minor has his/her mobile turned on (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

These data are really interesting, and would allow us to assert that the mobile telephone is such a normal thing in the minor's life that analysing the times, places and situations of use does not perhaps make too much sense.

4.7 Subjective perceptions: affinity and development of skills

The data shown up to now, where an intensive use of the mobile telephone is confirmed on behalf of Spanish minors, are an indication that the youngsters like this device. We wanted to take a further step in the study: what is the minor's level of affinity to the mobile telephone, in comparison with other technological devices?

To answer this question, minors were asked about their preferences between the mobile telephone, Internet, video games and television. To do so, each person interviewed was given three pairings to choose between (mobile-Internet, mobile-video games and mobile-television); minors were asked to indicate, from each pair, which one he or she liked most. The results are shown in Table 4:

Most of the children put Internet, video games and television before the mobile telephone, especially highlighting the Internet (preferred by 73.6% of the children). At the same time, 54.7% prefer TV and another 54% put video games before the mobile.

In conclusion: Spanish minors like mobile telephones, but not as much as video games or television, and nowhere nearly as much as the Internet.

Table 4: Level of minor's affinity with... (%)

	Internet	Video games	Television
I like it more than the mobile telephone	73.6	54.0	54.7
I like it less than the mobile telephone	18.9	41.3	37.3

Base: minors (n=322)

Source: INTECO

There is no doubt that minors having a mobile telephone has some type of influence on their development. The possible influence of the fact of having a mobile telephone exerts on skills such as the child's maturity, their level of responsibility, the way they relate socially, etc., is analysed below. To try to determine a relationship, minors and adults were asked to say if they agreed or disagreed with a series of assertions, reproduced in Table 5.

It is clear (and this was also observed when analysing parents' and children's reasons for accessing mobile telephony, see Graph 11), that the fact of children having a mobile telephone makes parents feel safe. This idea is yet again reinforced when 90.7% of minors agree with the assertion *Having a mobile helps my parents to keep better track of me*. The older the child the more this assertion is reaffirmed. (In keeping with this, 88.5% make the same assertion.)

Without a doubt, having a mobile telephone has a positive impact on the privacy or intimacy of the minor's relations. 78.3% of youngsters (and 72% of their parents) agree with the assertion *Having a mobile helps me to be in contact with my friends in a more intimate and private way*. Once again, age determines affinity with this stance: 83.5% of adolescents from 15-16 years of age agree, compared to 68.8% in the case of the 10-12 year olds. On this occasion, the minor's sex also influences the perception: girls (85.2%) value this aspect of intimacy and privacy in their relationships more than boys (71.9%).

It is also interesting to analyse the possible relationship between having a mobile telephone and the development of social skills related to the minor's independence and self-sufficiency. It seems that both minors and their parents consider that there is a relationship: 69.6% of youngsters (59.3% in the case of the parents) agree with the idea that *Having a mobile gives me more independence and self-sufficiency*.

The child's privacy, intimacy, independence and self-sufficiency are competences that both minors and adults think are somewhat related to the fact of having a mobile telephone. Does this mean that children with mobile telephones are individualists or have a tendency to being alone? This does not seem to be the case, according to the opinions of the people interviewed. Thus, 56.2% of minors assert that *The mobile does not replace face to face relationships, but rather encourages and increases them*. Somewhat lower is the percentage of agreement shown by their parents (48.4%).

Where no relationship seems to exist, or at least not in the high levels shown in the rest of the assertions analysed up to now, is in the minor's responsibility. Only 44.7% of youngsters think that having a mobile telephone helps them to be more responsible. In the case of parents, this percentage is 35.1%.

Finally, we wanted to find out if having a mobile enables minors to escape more easily from parental control. Only 19.3% of children and 18.6% of adults think that.

Table 5: Percentage of people who agree with the statements

		Minors	Fathers, mothers
PARENTAL SUPERVISION	Having a mobile helps my parents to know where I am better. <i>My child having a mobile helps us as parents to know where he or she is better.</i>	90.7	88.5
PRIVACY WITH FRIENDS	Having a mobile helps me to be in contact with my friends more intimately and privately. <i>Having a mobile helps my child to be in contact with his/ her friends more intimately and privately.</i>	78.3	72.0
INDEPENDENCE	Having a mobile gives me more independence and self-sufficiency <i>Having a mobile helps my child be more independent and self-sufficient</i>	69.6	59.3
SOCIAL RELATIONSHIPS	The mobile does not replace face to face relationships, but rather encourages and increases them. <i>The mobile does not replace face to face relationships, but rather encourages and increases them.</i>	56.2	48.4
RESPONSIBILITY	I am more responsible since I have had a mobile. <i>My child is more responsible since he/she has a mobile.</i>	44.7	35.1
ESCAPE PARENTAL CONTROL	The mobile allows me to escape my parents' control. <i>The mobile allows my child to escape our control as parents.</i>	19.3	18.6

Source: INTECO

5 RISKS IN THE USE OF MOBILE TELEPHONY BY MINORS AND ADOLESCENTS

Up to now, the report has described minors starting to use the mobile telephone, from the double perspective of boys or girls (or adolescents) themselves or of their father or mother. This chapter introduces the matter of risks: what specific situations minors face in the use of the mobile telephone and to what extent.

The experts taking part in producing this study agree that situations exist that may constitute risks for minors. Mention is made, for example, of technological addiction, recording or sending images with violent contents, calls to premium numbers or receiving indiscriminate publicity. The situations are various and belong to heterogeneous fields.

The existence of risks when using the mobile telephone is a reality and therefore requires thorough analysis. The approach of the authors of this study is based on the need for objective and realistic knowledge of the risks to recognise and combat them. Education occupies a key role. INTECO and Orange are committed to responsible mobile telephone use and knowing the potential risks as a basis for making the most of the benefits mobile telephony gives the minor.

For the purposes of the study, the risks have been systematised around seven themes:

- Excessive use of and addiction to the mobile telephone.
- Threats to the minor's privacy.
- Access to unsuitable contents.
- Cyberbullying or harassment among minors via telematic means.
- Grooming or harassment by an adult of a minor with explicit or implicit sexual motives.
- Economic risk and/or fraud.
- Technical risks.

In Table 6 the seven risks studied and associated behaviour with each one of them are studied. In epigraphs 6 to 12 a monographic analysis of each of the risks is carried out. The associated behaviour of each situation is explored in them analysing the direct incidence (on the minor) and indirect incidence (on the minor's environment) of each of them, as well as the child or adolescent's reaction and that of their father or mother to them. The purpose is to offer an objective and realistic diagnosis of the risk incidence

situation among Spanish minors, without using alarmist rhetoric that may have appeared in some media occasionally.

Table 6: Lists of risks and behaviours analysed in the report

Risks	Behaviours associated to each risk
1 EXCESSIVE USE AND ADDICTION	Excessive expenditure. Feeling worried if they do not have the mobile phone at hand
2 THREATS TO THE MINOR'S PRIVACY AND SEXTING	Posting images of the minor without his/her consent The minor recording and sending images of other people without getting their consent Active sexting (taking photos/videos of themselves in a sexy, provocative or inappropriate way) Passive sexting (receiving photos/videos from people in their environment in a sexy, provocative or inappropriate way)
3 ACCESS TO INAPPROPRIATE CONTENTS	Access to photos or videos with sexual content Access to photos or videos with racist or violent content
4 CYBERBULLYING	Passive cyberbullying (receiving messages or calls from other boys or girls with insults or threats) Active cyberbullying (insulting or threatening a classmate over the mobile) Access to photos or videos of jokes or fights with people from the minor's environment
5 GROOMING	Getting calls or texts from unknown adults Getting pornographic or obscene contents/videos/photos from unknown adults
6 ECONOMIC RISK AND/OR FRAUD	Financial loss or fraud
7 TECHNICAL RISKS	Virus Spam

Source: INTECO

5.1 Situations that worry minors and adults

Spanish parents with children from 10 to 16 years of age with a mobile telephone are worried about what their children do with the telephone to the same extent as they are worried about what they do on the Internet, playing video games and watching television. In general, the technical phenomenon worries parents, but there are not big differences between the channels analysed (see Table 7). It is true that 44.7% of parents who, from the mobile telephone – Internet duo, say that they are less worried about the former than the latter (regarding the use their children make of the two). On the other hand, there are also 31.7% who are more worried about the mobile telephone than television.

Internet seems to be the technology that most worries parents. In any case, the answers are quite balanced.

In this chapter we shall analyse the threats minors face when they use the mobile telephone, analysing to what extent they have suffered them and their reactions.

Table 7: Level of parents' concern as to what children do with their mobile telephones (regarding Internet, video games and television) (%)

	Internet	Video games	Television
What my child does with the mobile telephone worries me more than what he/she does with...	11.8%	27.0%	31.7%
What my child does with the mobile telephone worries me the same than what he/she does with...	40.4%	44.7%	43.5%
What my child does with the mobile telephone worries me less than what he/she does with...	44.7%	23.3%	20.2%
DK / NA	3.1%	5.0%	4.7%

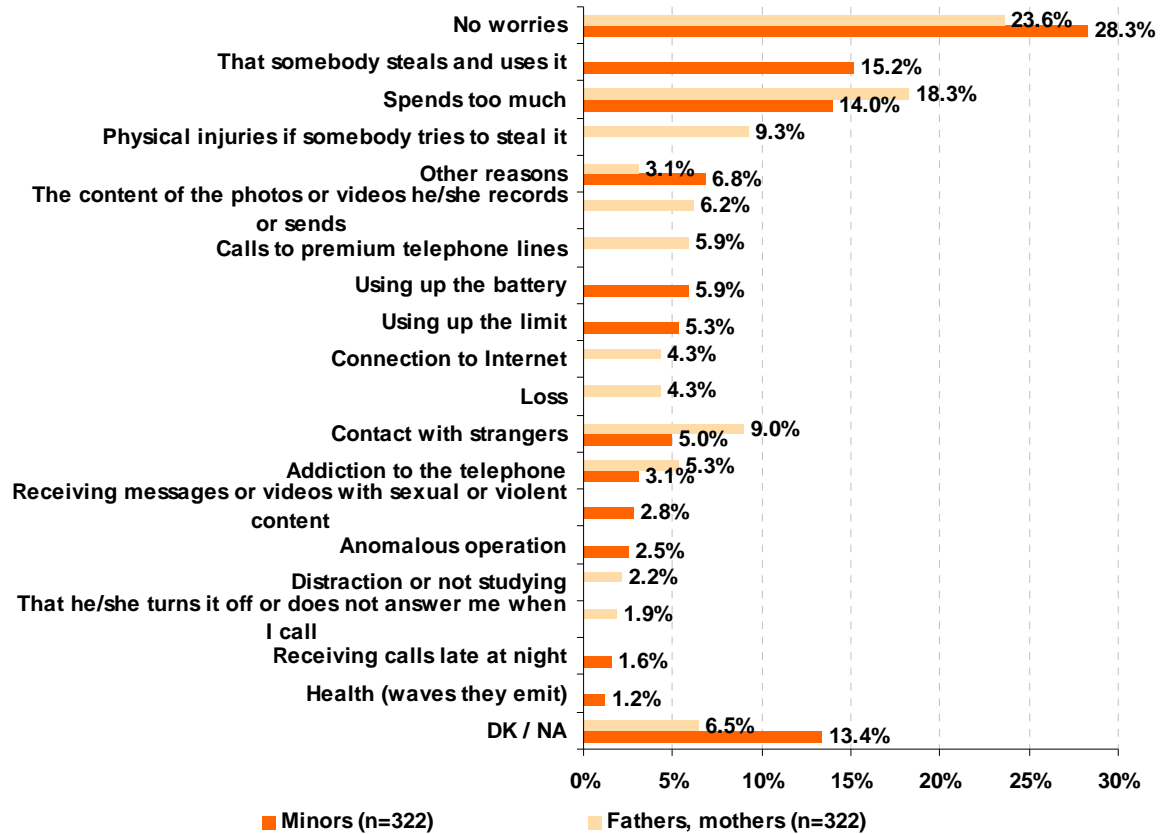
Source: INTECO

Parents and children were asked to mention, spontaneously, what risks related to the mobile telephone of the minor they were most worried about. The answers are heterogeneous and are included in Graph 24. With 28.3% of mentions from minors and 23.6% of answers from parents, the most common decision - that the mobile does not worry them at all - is worth mentioning.

Among youngsters, the situations they are most worried about is someone stealing their handset and using it (15.2%) or spending too much (14%). Parents coincide with the worry about expense (18.3%) and are worried about possible physical injuries the minors may suffer if someone tries to steal their telephone (9.3%).

In general, and except for situations of excessive expenditure and, to a certain extent, the risk of contact with strangers and mobile telephone addiction, parents and children's worries are different. Minors are worried about someone stealing their telephone and using it, while what the parents are worried about in this case, is the child being physically injured in the attempted robbery. To a certain extent, adults are worried about the content of the photos or videos their child records or posts on the mobile telephone, and that he or she connects to Internet, or neglects school work due to excessive use of the telephone. None of the minors expresses these options; in contrast, they are worried about their battery running out, running out of money, or the phone not working properly.

Graph 24: Risks that worry them most (spontaneous mentions) (%)



Base: minors; fathers and mothers

Source: INTECO

The data shown up to now are based on the analysis of spontaneous mentions from minors and fathers/mothers. An examination based on suggested answers is shown below. In other words, the open question *what worries you about the use you (or your child) make (or makes) of the mobile telephone?*, is not used; rather the interviewed person is asked, for each of the given situations, to assess its seriousness.

The results are shown in Table 8, and presented in descending order of the seriousness perceived by the minors. The most notable conclusions are the following:

- In general, the risks that worry parents and children are the same and are mostly to do with contents (violent, sexual, pornographic or fights with people from the environment), contact from unknown adults, and harassment from people in the environment (cyberbullying).
- For each of the analysed situations constituting a risk, the seriousness perceived by adults considerably exceeds that expressed by minors. In the cases in which the risk situation actively affects the minor, the gap is even wider. Thus, active cyberbullying is considered to be very serious by 48.1% of children (compared to

67.1% of parents). Similarly, 44.4% of the kids consider active sexting to be very serious, while 59.9% of the adults share this opinion.

- In this analysis, it is surprising that the least serious are precisely the behaviours that are related to overuse and addiction (recalling the data presented in the chart above analysing unprompted mentions, where it was excessive spending that most concerned parents and children). Technical risks and situations that may involve financial loss or fraud also show up in the ranking of perceived seriousness.

Table 8: Percentage of children and adults who consider each of the risks to be very serious

	Minors	Fathers, mothers
4 Access to photos or videos of jokes or fights with people from the minor's environment	59.9	68.9
5 Getting pornographic or obscene contents/videos/photos from unknown adults	58.7	69.3
3 Access to photos or videos with racist or violent content	58.1	67.1
5 Getting calls or texts from unknown adults	53.4	66.1
4 Passive cyberbullying (receiving insulting or threatening messages or calls from other boys or girls)	53.1	67.4
2 Passive sexting (receiving photos/videos from people in their environment in a sexy, provocative or inappropriate way)	51.2	60.2
3 Access to photos or videos with sexual content	49.7	60.6
4 Active cyberbullying (insulting or threatening a friend via mobile phone)	48.1	67.1
2 Active sexting (taking photos or videos in a sexy, provocative or inappropriate pose)	44.4	59.9
2 The minor recording and sending images of other people without getting their consent	43.8	51.2
2 Posting images of the minor without his/her consent	42.2	51.2
7 Virus	28.0	29.5
6 Financial loss or fraud	22.4	31.1
1 Excessive spending	20.8	25.2
7 Spam	17.7	23.9
1 Feeling worried if they do not have the mobile phone at hand	17.4	23.0

Source: INTECO

After monographically analysing each of the risks in Chapters 6-12, a detailed examination of the data will be performed.

5.2 Situations that have happened to minors

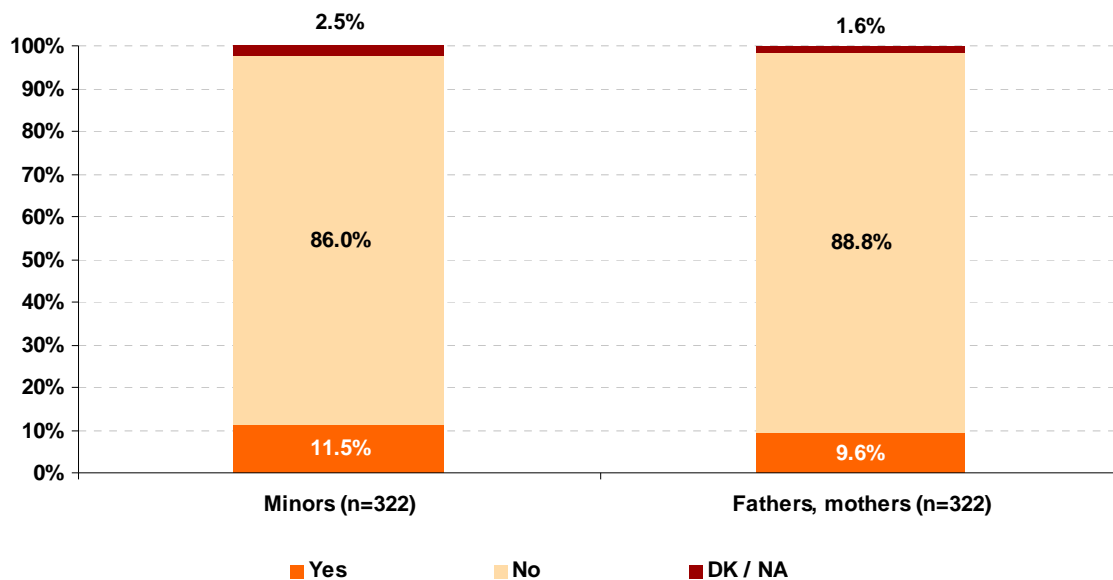
When the parents were asked if their children have experienced a situation that made them feel bad while using the mobile phone, only 9.6% answered yes. To the same

question, 11.5% of the children answered yes (in the age 13-14 group, the figure rises to 17.1%, a more representative age bracket for this matter).

The specific situations described (unprompted) by 9.6% of the parents who answered yes were *damage or injuries inflicted on children in attempts to steal their mobile phone, excessive consumption or spending and sending inappropriate photos or videos.*

For their part, the children reported having experienced *excessive use* and *recording and broadcasting images that they should not have*. They also admit to having a phone lost or stolen, but do not mention any injuries resulting from it.

Graph 25: The incidence on the minor of any situation that made him/ her feel bad in mobile phone use (%)



Source: INTECO

The incidence analysis from suggested answers are shown in Table 9. The behaviours are given in descending order of reported incidence by the child. Subsequent chapters will explore an individual analysis of each of the situations. Some conclusions are revealed here:

- In this case (and contrary to what occurred in the seriousness analysis, where parents perceived greater seriousness than children), children said they had experienced each of the situations to a greater extent than adults think.
- The risks with highest incidence are precisely those that are perceived to be less serious: spam, situations related to excessive use and economic loss / fraud.

Table 9: The incidence on the minor of risk situations (%)

	Minors	Fathers, mothers
7 Spam	42.9	35.7
1 Excessive spending	36.0	34.8
6 Financial loss or fraud	29.2	23.0
1 Feeling worried if they do not have the mobile phone at hand	15.8	14.0
4 Access to photos or videos of jokes or fights with people from the minor's environment	11.5	5.6
3 Access to photos or videos with racist or violent content	8.4	3.1
2 Passive sexting (receiving photos/videos from people in their environment in a sexy, provocative or inappropriate way)	8.1	2.8
3 Access to photos or videos with sexual content	6.8	3.7
4 Passive cyberbullying (receiving insulting or threatening messages or calls from other boys or girls)	5.9	1.2
2 The minor recording and sending images of other people without getting their consent	5.6	3.4
2 Posting images of the minor without his/her consent	5.0	4.0
4 Active cyberbullying (insulting or threatening a friend via mobile phone)	5.0	0.6
2 Active sexting (taking photos or videos in a sexy, provocative or inappropriate pose)	4.0	2.8
5 Getting calls or texts from unknown adults	4.0	0.9
7 Virus	0.6	0.3
5 Getting pornographic or obscene contents/videos/photos from unknown adults	0.6	-

Source: INTECO

6 EXCESSIVE USE AND ADDICTION

It is obvious that the excessive use of mobile phones (or any other tool) can grow to be a problem. First, because the most direct effect (overspending) is a tangible effect. Second, because it can lead to situations such as poorer school performance, family arguments, or, in severe cases, issues related to dependence or addiction.

For the purposes of this study, we analyse two behaviours associated with the risk of excessive use and addiction; the transcriptions of the questionnaire provided to children in the study are outlined below:

❶ EXCESSIVE USE AND ADDICTION	
Excessive spending	<i>I have spent much more than usual</i>
Feeling worried if they do not have the mobile phone at hand	<i>I feel anxious when I don't have my mobile phone nearby</i>

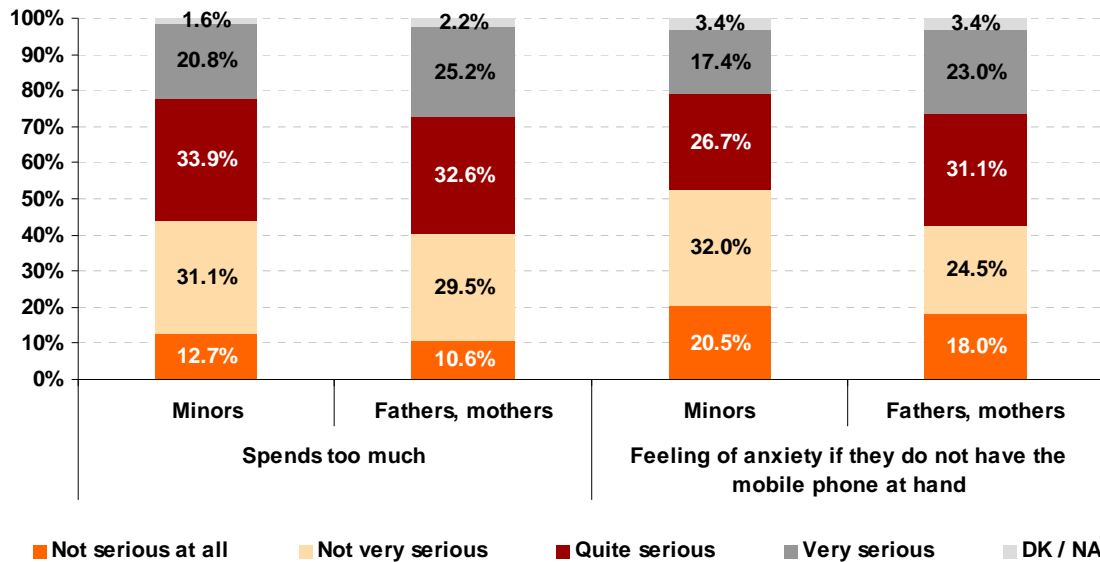
6.1 Perceived seriousness

20.8% of the children participating in the study consider experiencing excessive mobile phone spending to be very serious. For parents, the percentage is slightly higher, 25.2%.

With respect to behaviour identified as anxiety when a mobile phone is not at hand, 17.4% of children and 23.0% of adults consider it to be very serious.

As seen in Table 8 in analysing the seriousness given by children and adults to all the situations studied, behaviours of excessive use and addiction are not what most concerned children and grown-ups in Spain.

Graph 26: Seriousness perceived by children and adults in situations of excessive use and addiction (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

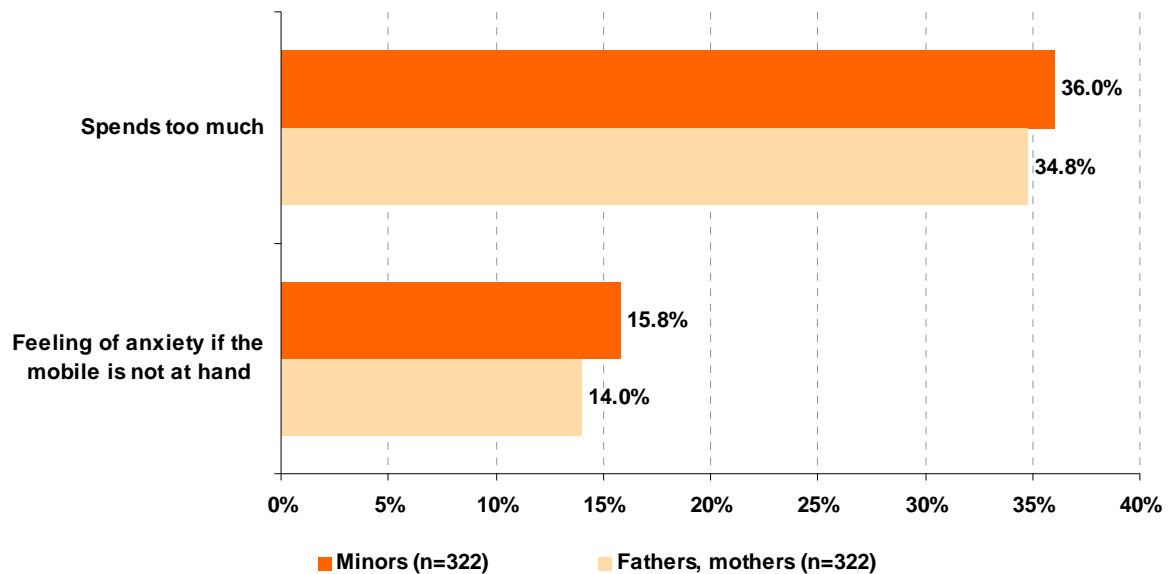
6.2 Direct incidence (to the child)

36.0% of children participating in the study acknowledge having spent a lot more than usual with their mobile phone and 15.8% say they feel anxious when they don't have their mobile phone nearby. The perception of parents is similar, although in both cases the percentages are slightly lower: 34.8% in the first case and 14.0% in the second (Graph 27).

The child's age appears to influence the incidence of these situations. While in the 10-12 age group, 22.9% admit to having experienced excessive mobile phone spending, this figure rises to 37.8% among children aged 13-14, and to 45.2% among 15 to 16 year old adolescents.

A similar trend was seen in the incidence of the situation described as anxiety when not having the mobile phone nearby: only 4.2% of children aged 10-12 claimed to have felt this, compared to 18.9% of 13-14 year olds and 22.6% of 15-16 year old adolescents. In this case, gender also markedly influences results: 21.3% of girls said they feel anxious without their mobile phone, compared to 10.8% of boys.

Graph 27: Direct incidence (to the child) of conduct associated with excessive use and addiction (%)



Base: minors; fathers and mothers

Source: INTECO

Mobile phone dependence is acknowledged by a similar proportion of parents and children when analysing the level of agreement with the statement *I couldn't live without my mobile phone*, (adapted formulation on the parents' questionnaire is *My child thinks that he/she could not live without his/her mobile phone*). The percentages are very similar (and minorities, in any case): 32.3% of parents and 31.1% of children agree with the statement.

Table 10: Level of agreement or disagreement with the following statement (%)

	Agree		Disagree		DK / NA	
	Minors	Fathers, mothers	Minors	Fathers, mothers	Minors	Fathers, mothers
I could not live without my mobile phone <i>My child thinks that he/she could not live without his/her mobile phone</i>	31.1	32.3	64.9	65.8	4.0	1.9

Source: INTECO

As children grow up, the feeling of need for the mobile phone increases. This is reflected in Table 11. When the children participating in the study are asked, *What would happen if you spent two weeks without your mobile phone?*, the majority response was that their lives would remain the same (62.4%). 29.5%, however, think that their lives would be worse. In the analysis by age, it was surprising to see that in the 15-16 age group, the

percentage of those who think their life would be worse is 38.3% (compared to 32.4% between 13-14 and 15.6% in the case of the younger 10-12 year olds).

Table 11: What would happen if you spent two weeks without your mobile phone? (%)

	Total	Age		
		10-12 years	13-14 years	15-16 years
My life would be better	1.6	2.1	1.8	0.9
My life would be worse	29.5	15.6	32.4	38.3
My life would remain the same	62.4	76.0	58.6	54.8
DK / NA	6.5	6.3	7.2	6.1

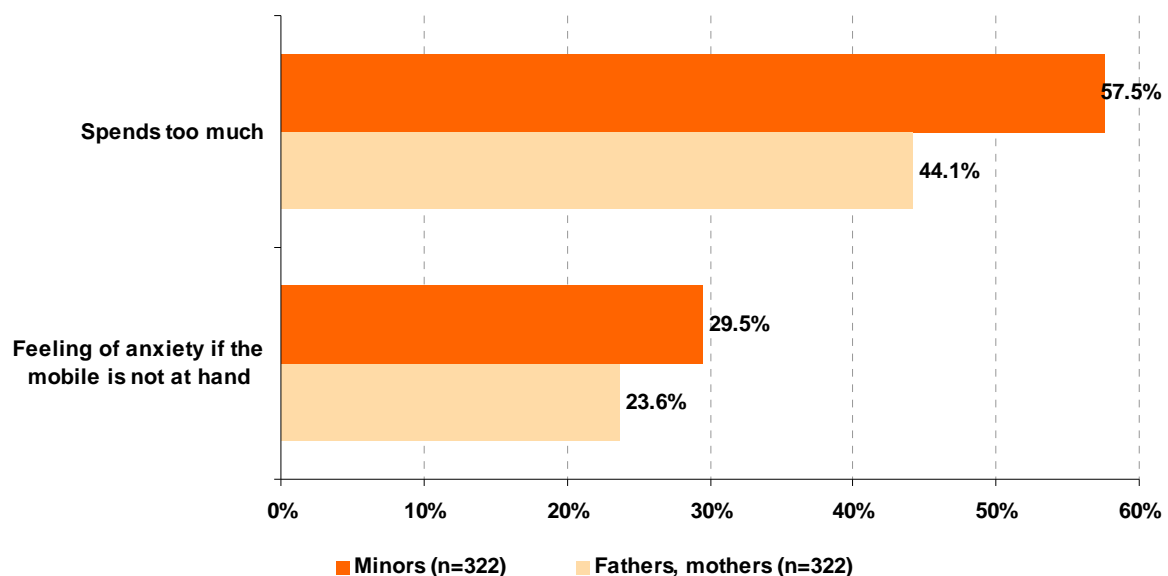
Source: INTECO

6.3 Indirect incidence (to the child's peers)

57.5% of the kids claim to know a peer that has faced excessive mobile phone spending, and 29.5% say that someone in their circle was occasionally anxious due to not having a mobile phone nearby.

For parents, the levels are lower: 44.1% admitted that one of their child's peers has spent too much, and 23.6% think that a friend of their child has experienced anxiety.

Graph 28: Indirect incidence (to the child's peers) of conduct associated with excessive use and addiction (%)



Base: minors; fathers and mothers

Source: INTECO

6.4 Response to the incidence

This section takes as a basis those children who acknowledge having experienced situations of abuse or addiction (or, where appropriate, parents who report that their children have experienced this). The size of the sub-samples is indicated in each graph. Keep in mind that the small sample size recommends caution in drawing conclusions.

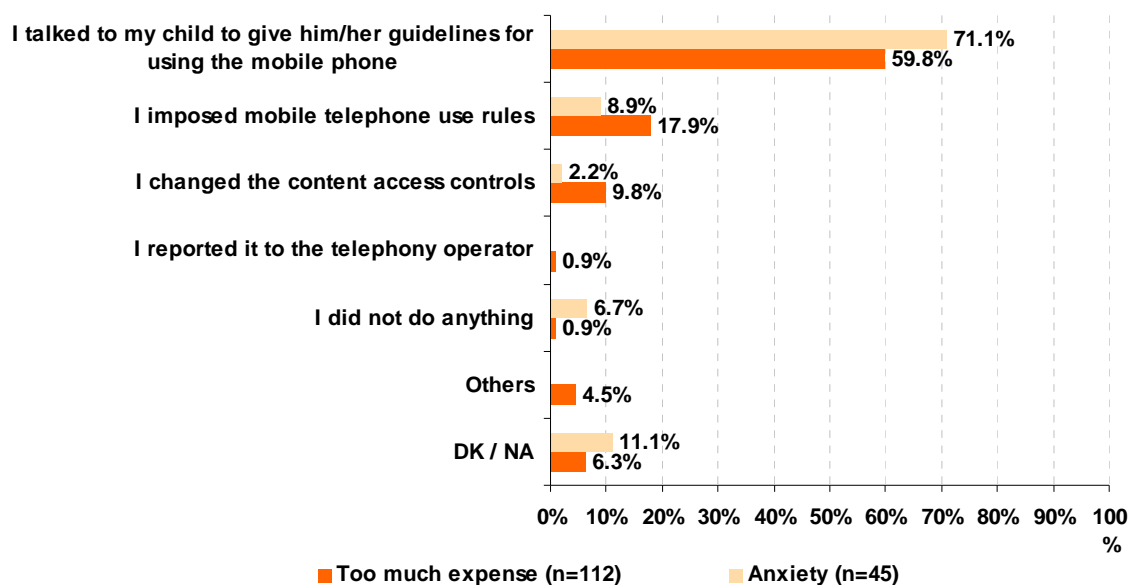
6.4.1 Parents' responses

The most common response among parents, in the incidence of risks associated with abuse and addiction, is to talk with their children to provide them with guidelines for action. (In later chapters we will see that this trend is repeated in all the risks in this study.)

59.8% of parents who acknowledge that their child has experienced excessive spending admit having spoken with him/her to provide recommendations; with parents who say their child has felt anxiety due to not having a mobile phone nearby, the proportion of those who have spoken with the child rises to 71.1%.

A response taken to a lesser extent is the imposition of rules (17.9% with excessive spending and 8.9% in situations of anxiety). The remaining responses are mentioned to a lesser extent, as reflected in Graph 29.

Graph 29: Parents' response to the incidence of risks of excessive use and addiction by the child (%)



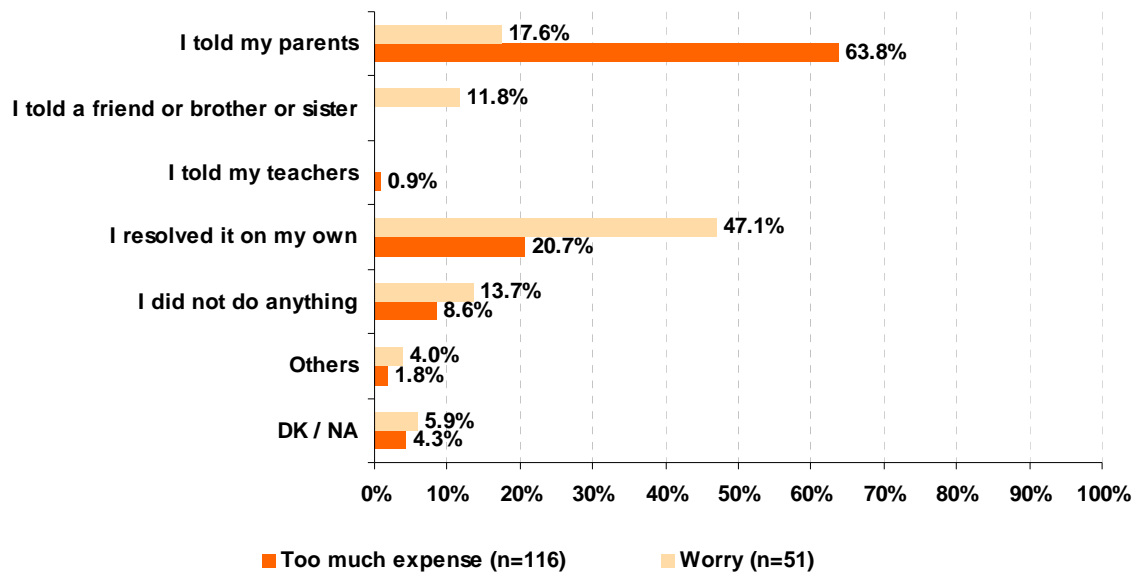
Base: parents who say their children have experienced excessive spending or anxiety Source: INTECO

6.4.2 Children's responses

Beyond the responses of parents, the study analyses how the child reacts after experiencing a situation related to abusive use. 63.8% of the kids who have suffered

excessive mobile phone spending reacted by telling their parents, while in the case of experiencing anxiety due to not having the phone nearby, the overwhelming preference (47.1%) is to deal with it themselves.

Graph 30: Child's response to incidence of risks of excessive use and addiction (%)



Base: <i>children who have experienced excessive spending or anxiety

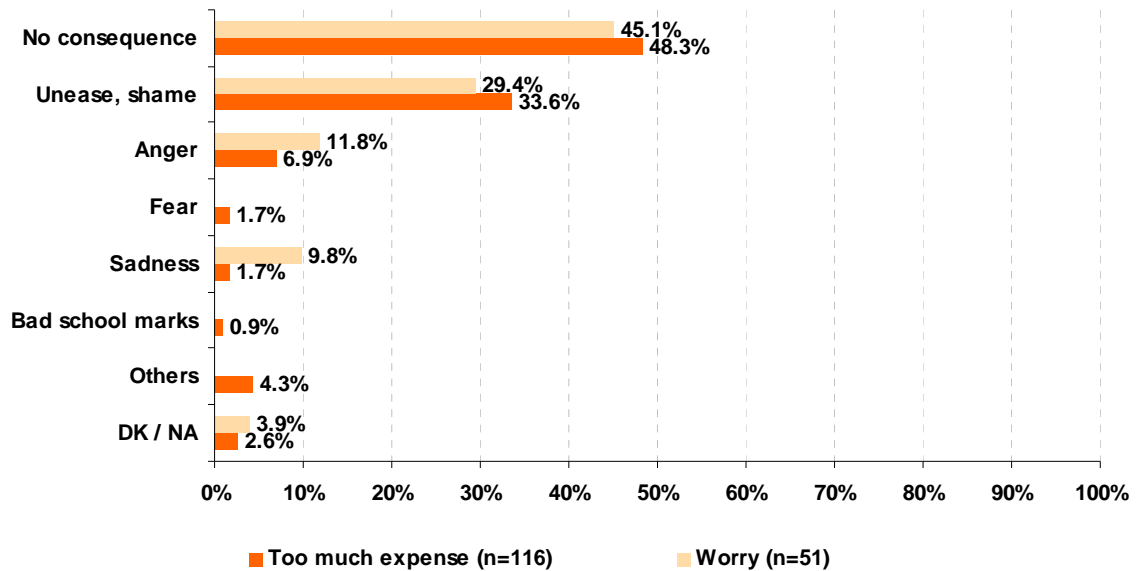
Source: INTECO

6.4.3 Consequences for children

It seems that experiencing situations of excessive use does not have a noticeable effect on the child. 48.3% of those who have experienced episodes of excessive spending and 45.1% of those who acknowledge anxiety due not having the phone nearby say neither of these situations had any effect on them.

Discomfort or embarrassment is the only effect admitted to by a somewhat significant proportion (33.6% in the case of those who suffered excessive spending and 29.4% among those who suffered anxiety). Other effects, such as anger, fear, sadness, or a negative impact on school performance are reported to a much lesser extent. (Graph 31)

Graph 31: Consequences for children due to excessive spending and anxiety (%)



Base: children who have experienced excessive spending or anxiety

Source: INTECO

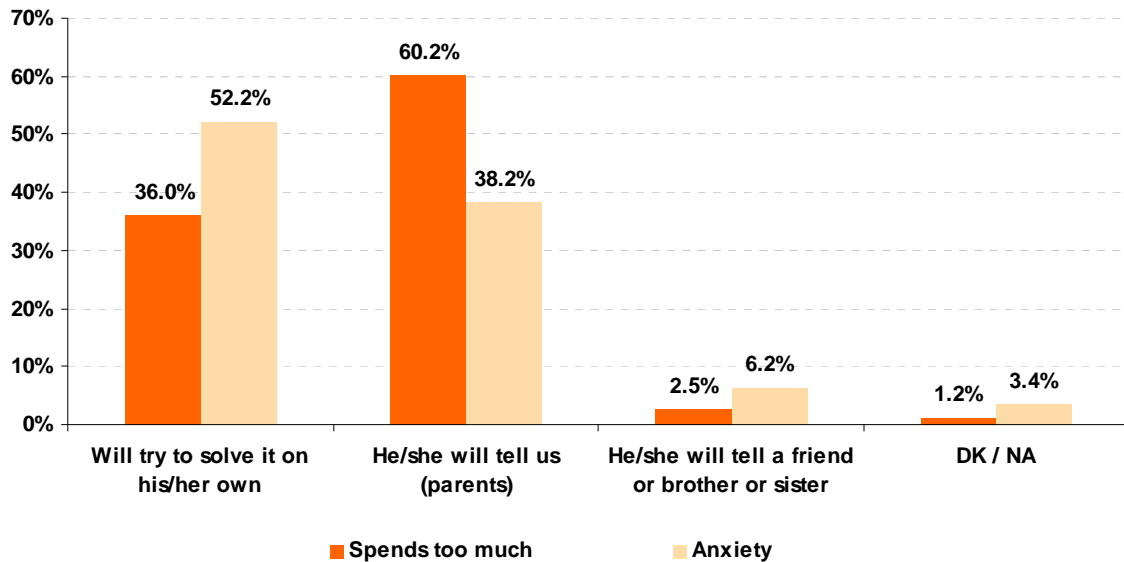
6.4.4 Expected responses

To conclude the analysis of responses to occurrences, parents were asked what they thought would be the response of their children if they experienced one of the situations of abusive use analysed.

In the case (hypothetical, here) that the child faced a situation of excessive mobile phone spending, 60.2% of parents believe that the child would come to them first. In contrast, adults believe that if their child experienced a feeling of anxiety due to not having the phone nearby, the kids would deal with it independently (52.2% stated this option.)

The opinion of parents is close to the reality reflected by the children in Graph 30.

Graph 32: Responses that the parents expect of their children in the hypothetical incidence of excessive use and addiction (%)



Base: fathers and mothers (n=322)

Source: INTECO

6.5 Excessive use of mobile phone vs. excessive Internet use

The issue of risks facing Spanish children in their Internet use was widely discussed in the *Study on safe habits in the use of ITC by children and adolescents and the e-trust of their parents*, produced by the INTECO Observatory of Information Security, published in March 2009. Excessive use was identified as one of the things that could happen to children and adolescents using the Internet. In that time, two behaviours were analysed, identified as *Dependence or excessive use* and *Social isolation*.

42.8% of parents surveyed found it fairly or very serious that their children suffered dependency or excessive Internet use, and 34.5% stated the same for social isolation resulting from abnormally high use. From this data, it seems that parents are more concerned about excessive use behaviour and Internet addiction than mobile phone use. (Recalling the data presented in section 6.1, the percentage of parents who considered excessive mobile phone use to be very serious was 25.2%, and 23% thought the same for anxiety suffered by the child when the mobile phone was not nearby.)

7 PRIVACY THREATS AND SEXTING

Analysing the uses of mobile phones by children in section 4.4, the regularity of taking and distributing images was tested: 88.6% of the respondents admitted taking pictures with their handset, and 48.2%, in addition, report sending them to their contacts.

The possibility that images may contain sensitive personal information can be a threat to the privacy of the child. This study refers to the use of mobile phones by children, but the privacy assessments may extend to the use of other technologies that allow the exchange of images (e.g. the Internet).

In recent years, a practice known as sexting, which is the capturing of images (photos or videos) of erotic or, at least, daring content has begun to be discussed in the media. In these cases the child is the one who, consciously, takes a sexy photo or video (or allows one to be taken) and distributes or posts it voluntarily. It seems clear that the child is not perceiving a threat against his/her privacy, nor is he/she aware of the implications from the point of view of safety. It may be (as reported by some of the experts participating in the study) that adolescents demonstrate a craving for fame and notoriety that leads them to situations that may endanger their privacy. The problem is greater because there is less perceived risk and adolescent culture does not have an ethos of privacy.¹³

The threat in this case is clear, in that there may be violations of various fundamental rights: data protection, privacy, self-image, honour, etc.

This study has taken the following behaviours into account:

2 PRIVACY THREATS TO CHILDREN AND SEXTING

Posting images of the minor without his/her consent	<i>Other people have distributed pictures or videos of me out without my permission</i>
The minor recording and sending images of other people without getting their consent	<i>I have recorded and sent images of my friends without their permission</i>
Active sexting	<i>I have taken photos / videos of myself in a sexy pose</i>
Passive sexting	<i>I have received photos / videos of boys or girls I know in a sexy pose</i>

7.1 Perceived seriousness

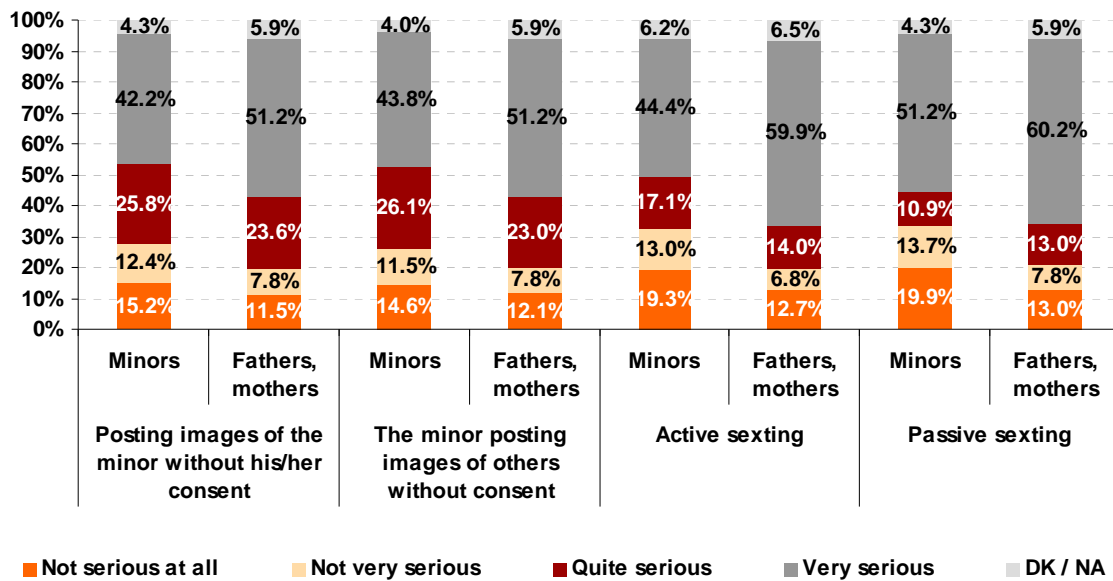
Children and adults (especially the latter) tend to think that behaviour that involves threats to children's privacy and sexting are very serious. In particular, situations that have to do with sexting are considered to be very serious by 60.2% of parents in the case of passive

¹³ El País, 22 February 2010. *Flirting risks 2.0*. Available at: http://www.elpais.com/articulo/sociedad/riesgos/flirteo/elpepusoc/20100222elpepusoc_7/Tes

sexting (receiving pictures of acquaintances in a sexy posture) and 59.9% for active sexting (posing in a sexy position.)

Children also consider these situations to be serious, but always less so than their parents (see Graph 33).

Graph 33: Perceived seriousness by children and adults of situations of privacy threats and sexting (%)



Base: minors (n=322); fathers and mothers (n=322)

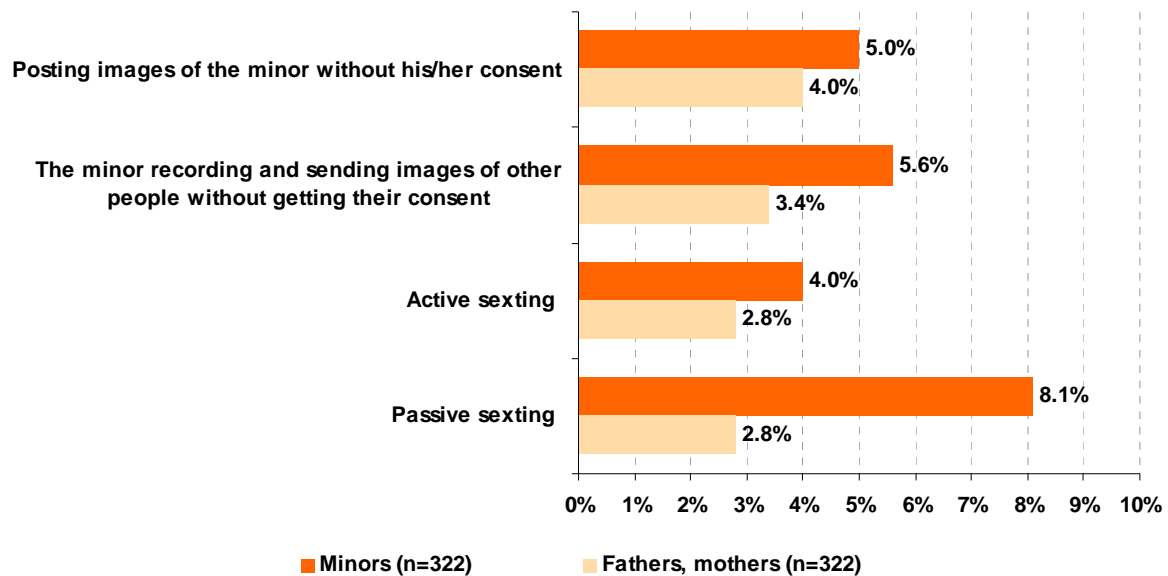
Source: INTECO

7.2 Direct incidence (to the child)

Direct incidence is acknowledged more by children than parents in every case. Between the two behaviours related to privacy threats to the child, recording of images or video of friends without permission has the highest incidence for children (5.6%, with children of the 13 and 14 age group exceeding this figure, 9.0%) over the distribution of images of themselves without their permission (5.0%, also exceeded by the 13 and 14 year olds, 8.1 % -).

As for sexting behaviour, children most experience receiving photos or videos of their peers in provocative or inappropriate poses (8.1%), compared to 4.0% who acknowledge that pictures or videos have been taken of them in provocative or inappropriate poses (the direct incidence is somewhat higher among adolescents aged 15 to 16, 6.1%).

Graph 34: Indirect incidence (to the child) of conduct associated with privacy threats and sexting (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

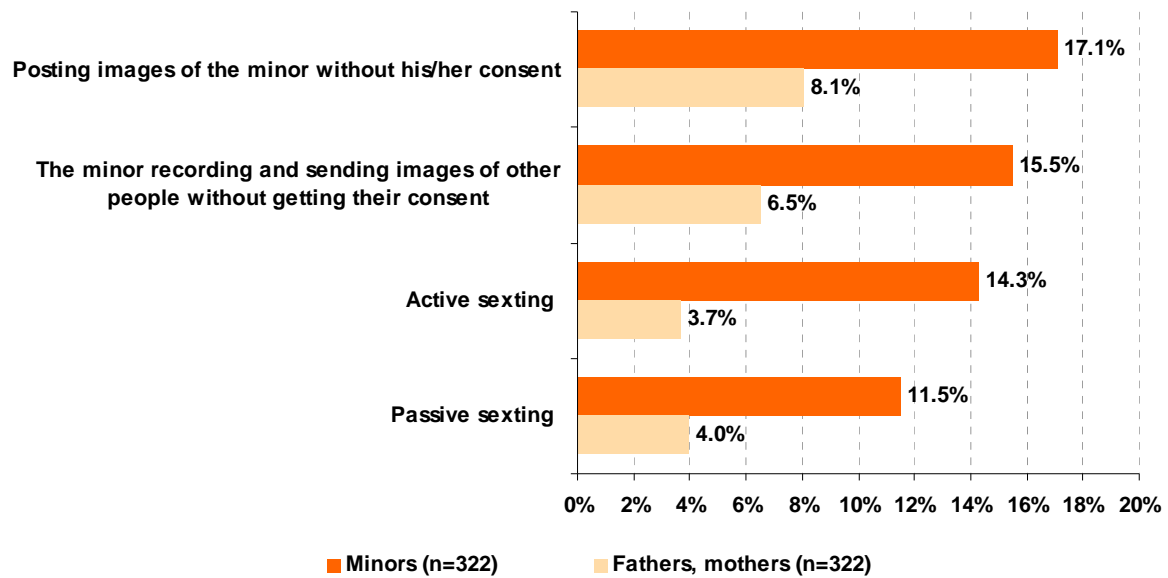
7.3 Indirect incidence (to the child's peers)

When it comes to the existence of behaviour involving privacy threats and sexting from the child's peers, indirect incidence, both in the opinion of parents and children, supersedes direct incidence (Graph 35).

17.1% of the kids said they know of incidents of friends whose images were distributed without their consent, and 15.5% say they have friends who have recorded and distributed images of others without their consent. (The parents' responses were 8.1% and 6.5%, respectively.)

Regarding sexting behaviours, it is also the children, more than the parents, who to a greater degree admit being aware of these cases in their milieu: 14.3% of children know a friend who has taken erotic or daring photos, and 11.5% know a peer who has received such images.

Graph 35: Indirect incidence (to the child's peers) of conduct associated with privacy threats and sexting (%)



Source: INTECO

7.4 Response to the incidence

7.4.1 Parents' response

The analysis of parents' responses shown in Table 12 should be interpreted with caution. The low incidence of these situations results in a minimal sample size and an increase in sampling errors. Therefore, the data is presented more as trends than as robust statistical claims.

The tendency of parents, in the case of an incidence of any of the four scenarios analysed, is to talk with the children to provide them with guidelines for action.

Table12: Parents' response to the incidence of privacy threats and sexting (%)

	Posting images of the minor (n=13)	The minor recording and posting images (n=11)	Active sexting (n=9)	Passive sexting (n=9)
I spoke with my child to provide him/her with guidelines for action	53.8	45.5	66.7	55.6
I set rules for mobile phone use		9.1	11.1	
I changed the content access controls	7.7			
I reported the incidence to my child's teachers	7.7			11.1
I reported the incidence to the police and to the appropriate body		9.1		
I did nothing			11.1	22.2
Others	7.7			
DK / NA	23.1	36.4	11.1	11.1

Base: parents who claim that their children have experienced each of the situations Source: INTECO

7.4.2 Children's response

Also in this case, the reduced sample size demands caution in interpreting the data presented in Table13.

The usual response of children, in all cases, is to deal with the situation themselves.

Table13: Child's response to incidence of privacy threats and sexting (%)

4	Posting of images of the minor (=16)	The minor recording and posting images	Active sexting (n=13)	Passive sexting (n=26)
I told my parents about it	18.8	5.6	15.4	15.4
I told a friend or sibling about it		11.1		
I forwarded it or posted it on the Internet		5.6	7.7	
I dealt with the situation myself	56.3	44.4	69.2	57.7
I did nothing	12.5	27.8	7.7	15.4
DK / NA	12.5	5.6		11.5

Base: children who have experienced each of the situations

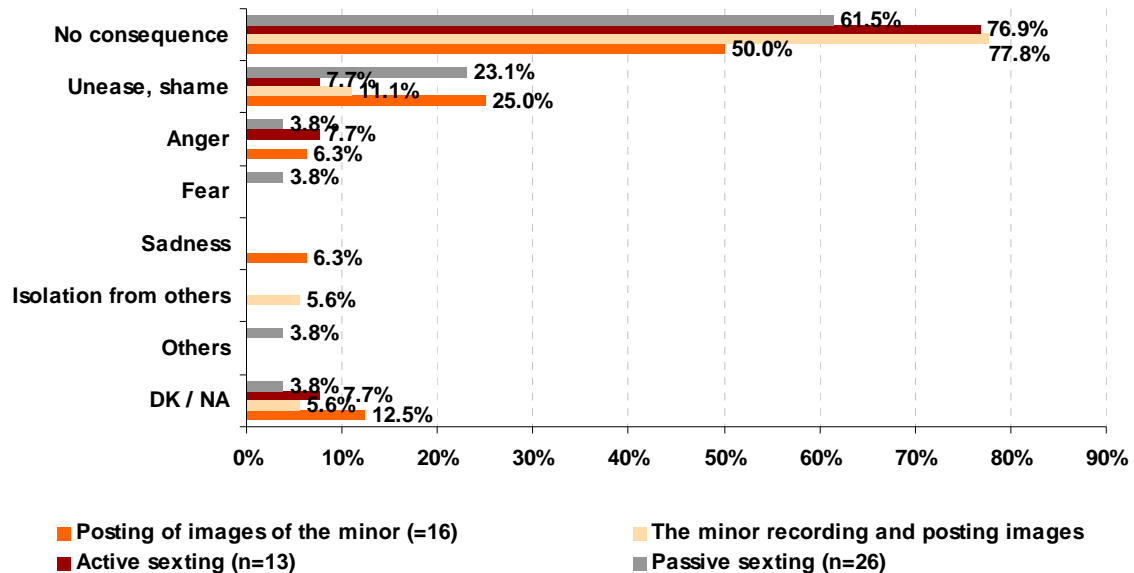
Source: INTECO

7.4.3 Consequences for children

Among the few children who have experienced the situations discussed in this chapter, the majority tendency is not to perceive any significant consequence. This is true especially in cases in which the child participates as an active subject (i.e. recording and distributing images of others without their consent and active sexting situations, recording themselves in provocative poses). In situations where the child is a passive subject,

although the majority response shows an absence of significant consequences, there is a significant proportion of children who express unease or embarrassment.

Graph 36: Consequences of privacy threats and sexting for the child (%)



Base: children who have experienced each of the situations

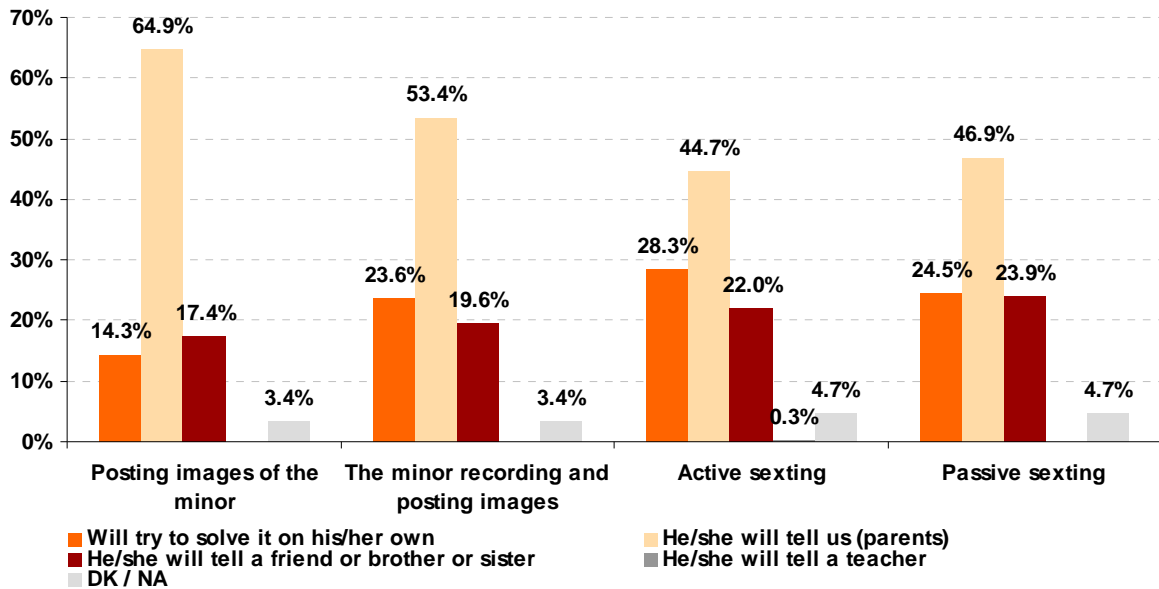
Source: INTECO

7.4.4 Expected responses

In the analysis of the responses that parents think their children will display, in a hypothetical incidence, there is a curious situation. If the reader recalls the data presented in Table13, in analysing the stated response of the child that he/she had indeed experienced a privacy threat and/or sexting, it was concluded that children dealt with it themselves, without involving the parents (this was done using reduced sample sizes and therefore higher levels of error; thus, this data was presented merely as possible trends). The data of Graph 37 show how parents think that the majority response would be that their children would turn to them in an incident related to their own privacy.

Parents should take this circumstance into account when addressing security in mobile phone use by their children: children tend to consider themselves more independent than their parents think, even in occurrences of this type, and therefore going to an adult to deal with problems is not always an option for them.

Graph 37: Responses that parents expect from children in the hypothetical incidence of privacy threats and sexting (%)



Base: father and mothers (n=322)

Source: INTECO

7.5 Privacy threats to children via mobile phone vs. Internet

The mobile phone facilitates the generation and distribution of content that can affect the privacy of its author. This is confirmed by the fact that the incidence of situations such as the *distribution of images of children without their consent* and *children's recording and distributing inappropriate images* is greater when done via mobile phone than when done from a computer connected to the Internet.

The *Study on safe habits in the use of ITC by children and adolescents and e-trust of their parents* showed quite low incidence rates for these situations on the Internet: only 1.2% of children surveyed admitted that images of them had been distributed without their consent (versus 5% for mobile phones, as shown in Graph 34). On the active side, 1.1% of children claimed to have recorded and distributed inappropriate images via the Internet (5.6% do so with mobile phones).

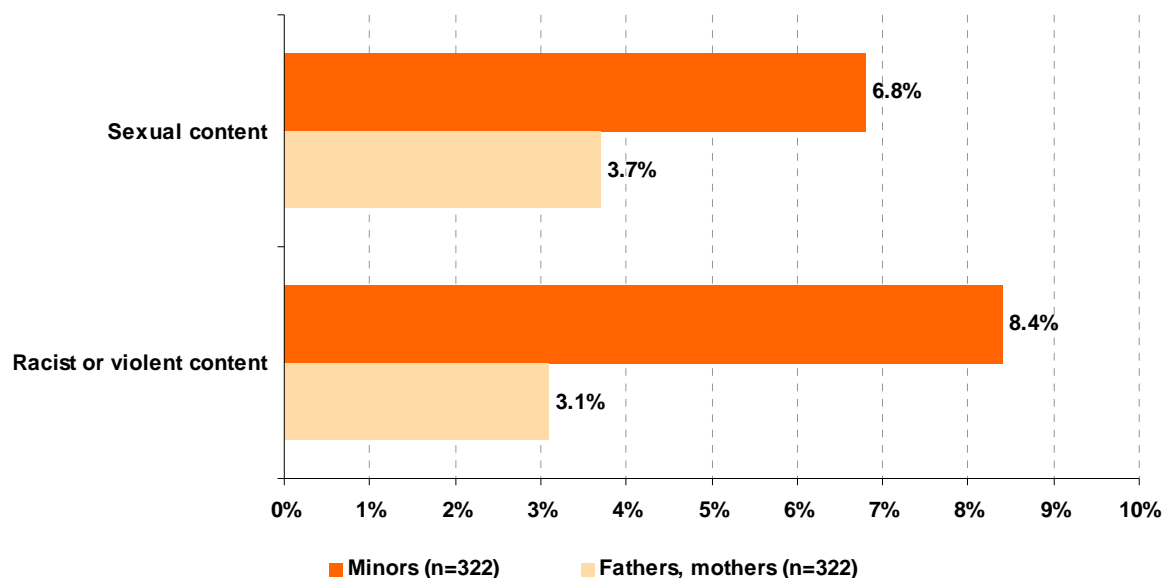
Is there a cause for this? One hypothesis could be that the portability of mobile phones and their independence of use by children facilitates these behaviours (as opposed to the more fixed or stable nature of the computer and the control that parents can exert over it.) Another possibility, perhaps more realistic, lies in the span of time between the completion of both surveys (January 2008 for the Internet and January 2010 for mobile phones). It is possible that the higher incidence rate of behaviours of distribution of images via mobile phones simply reveal a growth trend in these situations, regardless of the channel through which they are done.

8.2 Direct incidence (to the child)

6.8% of children say they have seen inappropriate sexual images on a mobile phone, and 8.4% have accessed photos or videos of racist or violent content. In both cases, the incidence rate is highest among adolescents aged 15 to 16 years (11.3% for each).

The perspective of parents is not entirely aligned with that of children, since less than 4% are aware that their children have accessed sexual content (3.7%) or racist/violent content (3.1%).

Graph 39: Direct incidence (to the child) of conduct associated with access to inappropriate content (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

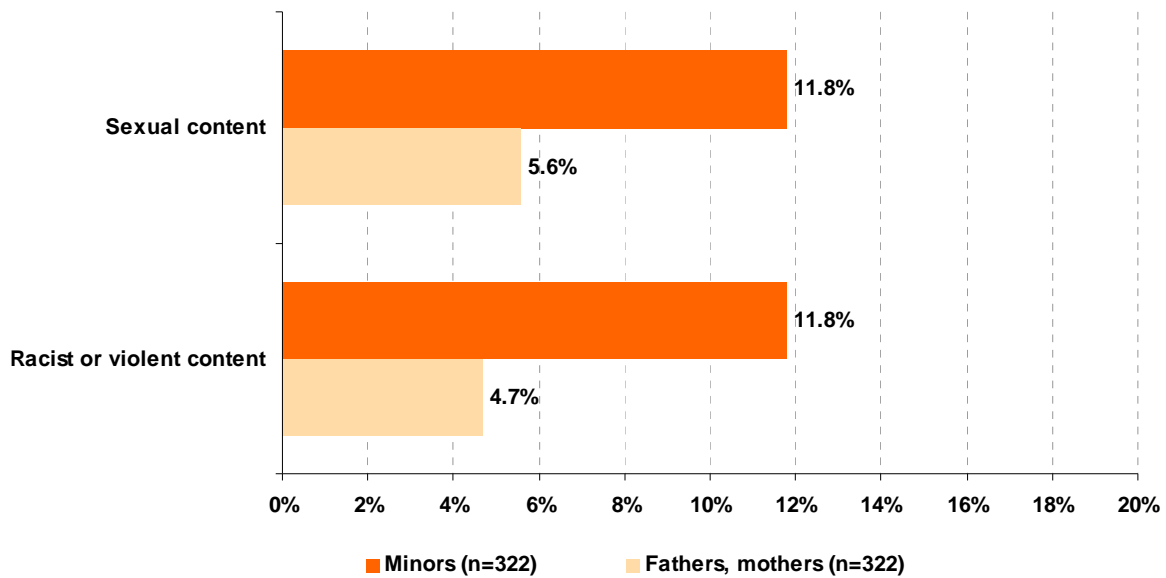
8.3 Indirect incidence (to the child's peers)

Indirect incidence is higher than direct, which means that both children and adults believe that the child's peers have greater access to inappropriate content than they the child him/herself. Again in this case, the incidence reported by children is higher than that perceived by parents. (Graph 40)

11.8% of the kids participating in the study claim to know a peer who has accessed inappropriate sexual content. The percentage is the same in the case of violent or racist images or videos.

With parents, 5.6% think that their child's friends access sexual content and 4.7% say the same about violent or racist content.

Graph 40: Indirect incidence (to the child's peers) of conduct associated with access to inappropriate content (%)



Base: minors; fathers and mothers

Source: INTECO

8.4 Response to the incident

8.4.1 Parents' response

Again, the measure adopted by parents in these situations is to talk with their children, as shown in Table14. (The reader should take into account that the sample sizes are very small in both cases.)

Table14: Parents' response to incidence of access to inappropriate content by children (%)

	Sexual content (n=12)	Racist or violent content (n=10)
I spoke with my child to provide him/her with guidelines for action	75.0	60.0
I set rules for mobile phone use	16.7	10.0
I reported the incidence to my child's teachers		10.0
DK / NA	8.3	20.0

Base: parents who claim that their children have experienced each of the situations Source: INTECO

8.4.2 Children's response

In a situation like this, children try to deal with the problem themselves, without involving adults or friends. The percentages are reflected in Table15.

Table15: Children's response to incidence of privacy threats and sexting (%)

	Sexual content (n=22)	Racist or violent content (n=27)
I told my parents about it	4.5	14.8
I told a friend or sibling about it		14.8
I told my teachers	4.5	
I forwarded it or posted it on the Internet		
I dealt with the situation myself	45.5	51.9
I did nothing	22.7	3.7
Others	9.1	7.4
DK / NA	13.6	7.4

Base: children who have experienced each of the situations

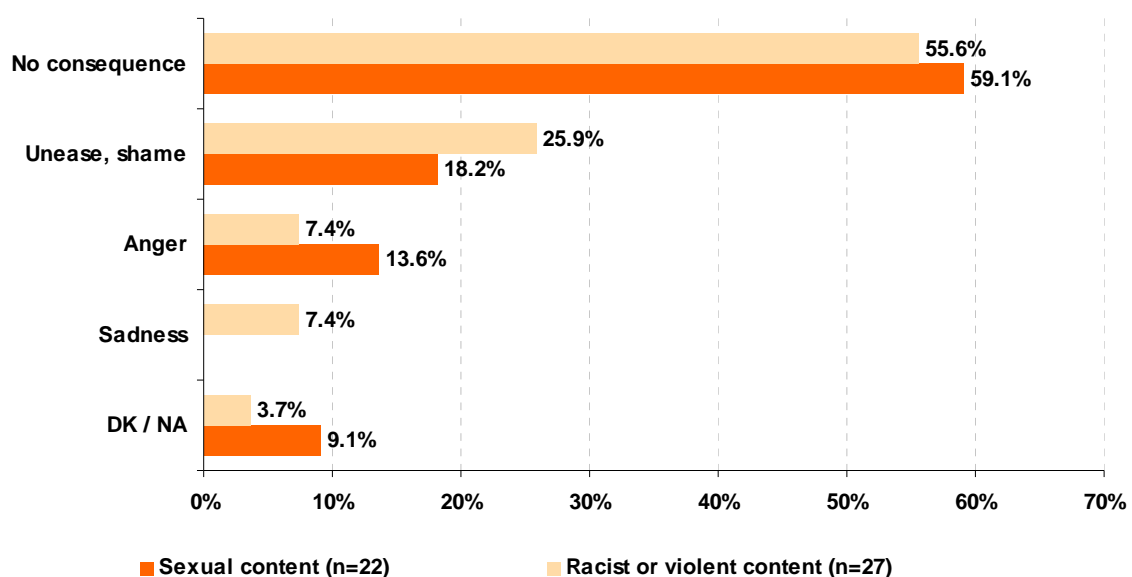
Source: INTECO

8.4.3 Consequences for children

The reality is that accessing sexual, racist or violent content via mobile phones has no consequences for the child, according to their own statements. This is expressed by the 59.1% who have accessed sexual content and the 55.6% who have acknowledged accessing racist or violent content.

Unease or embarrassment is a consequence stated by 18.2% for sexual content and 25.9% among those who saw racist or violent images. Anger and sadness are barely mentioned as consequences in the context of this analysis.

Graph 41: Consequences for the child in accessing inappropriate content (%)



Base: children who have experienced each of the situations

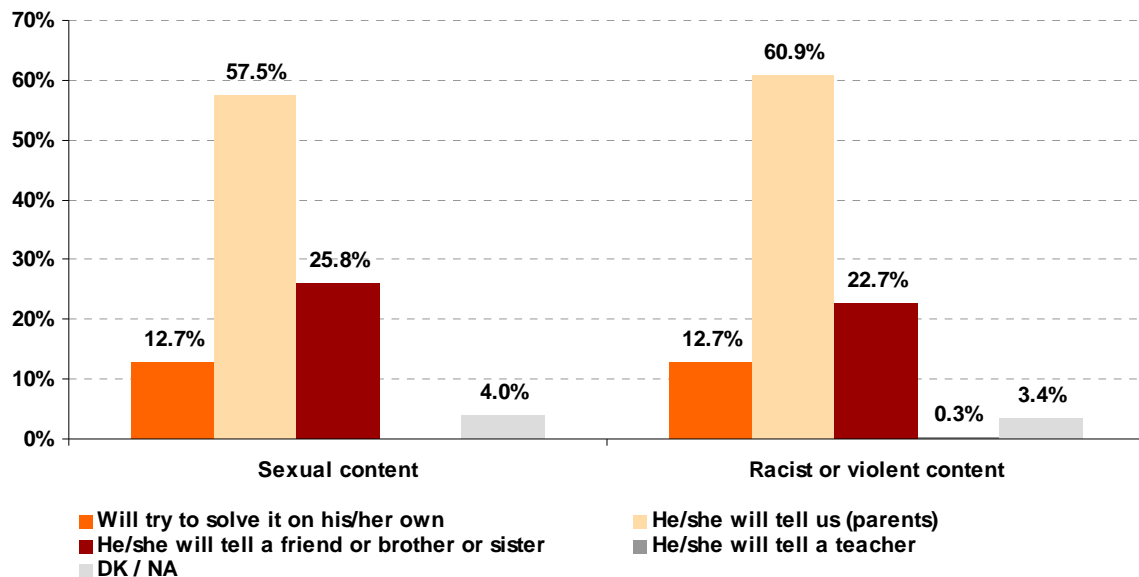
Source: INTECO

8.4.4 Expected responses

The responses that parents expect of their children (if they suffer one of the two incidents in the future) are different from the responses that their children have actually had when these incidents occurred (which are analysed in the Table15).

Thus, the vast majority of parents surveyed think that, if their children accessed inappropriate content on their mobile phones, they would tell them about it and try to find a solution. This is the majority opinion, both in the case of sexual content (57.5%) and in that of racist or violent content (60.9%).

Graph 42: Responses that parents expect of children in the hypothetical incidence of access to inappropriate content (%)



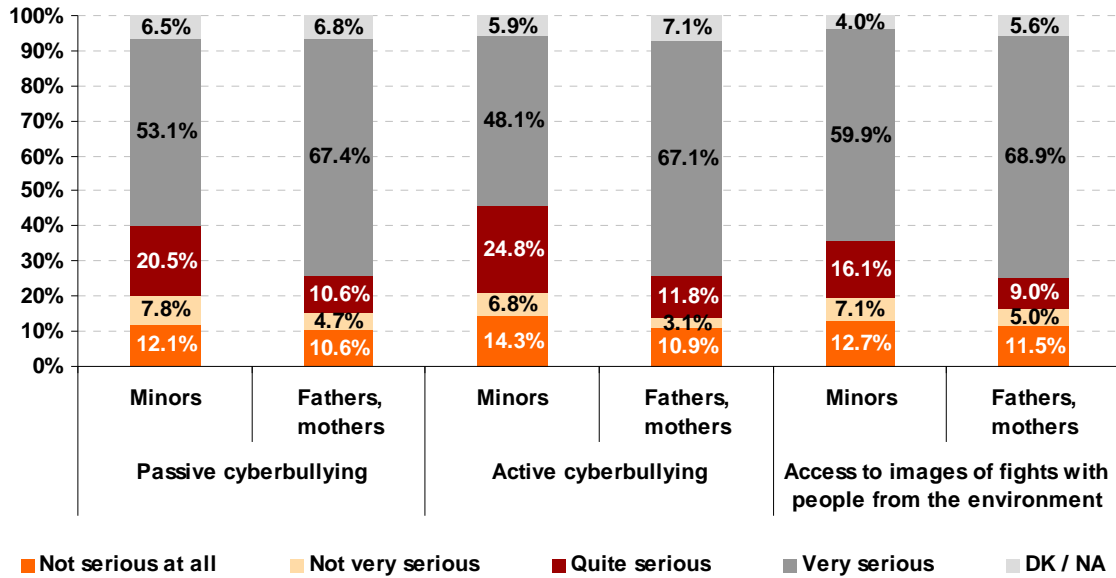
Base: father and mothers (n=322)

Source: INTECO

8.5 Access to inappropriate content via mobile phone vs. Internet

In the chapter on access to sexual content by children, more differences between the Internet and mobile phone will be seen: 31% of Spanish children aged 10 to 16 years claimed to have visited at some time (intentionally or unintentionally) Web pages with inappropriate sexual content; the percentage drops to 6.8% for kids who say they have accessed sexual content via mobile phones.

Graph 43: Perceived seriousness by children and adults of situations of cyberbullying (%)



Base: minors (n=322); fathers and mothers (n=322)

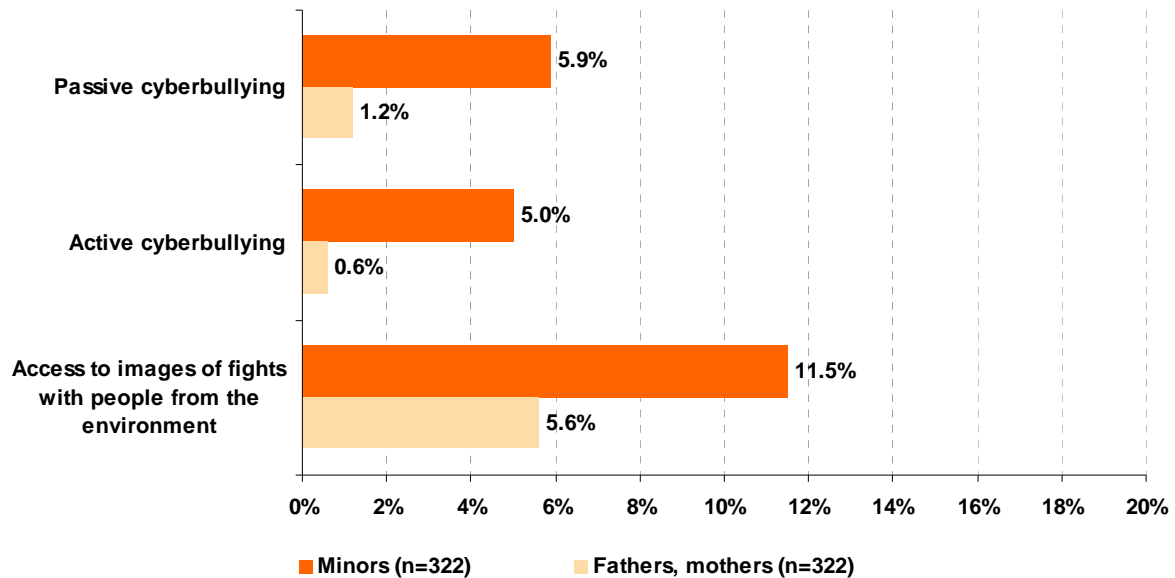
Source: INTECO

9.2 Direct incidence (to the child)

5.9% of children surveyed claimed to have received messages or calls from other children picking on them, and 5% reported having used mobile phones for sending offensive messages or calls. 11.5% admitted having had access to images of peers fighting. In all three cases, the stated direct incidence is higher among adolescents aged 15-16 years (respectively, 9.6%, 7% and 17.4%).

In this case, too, parents have a different perception of reality. Only 1.2% of adults state that their children have been bullied by peers, and an even smaller proportion (0.6%) are aware that their children have sent offensive or harassing messages or calls. The percentage of parents who know that their children have access to images of peers fighting is also a minority (5.6%).

Graph 44: Direct incidence (to the child) of conduct associated with cyberbullying (%)



Base: minors; fathers and mothers

Source: INTECO

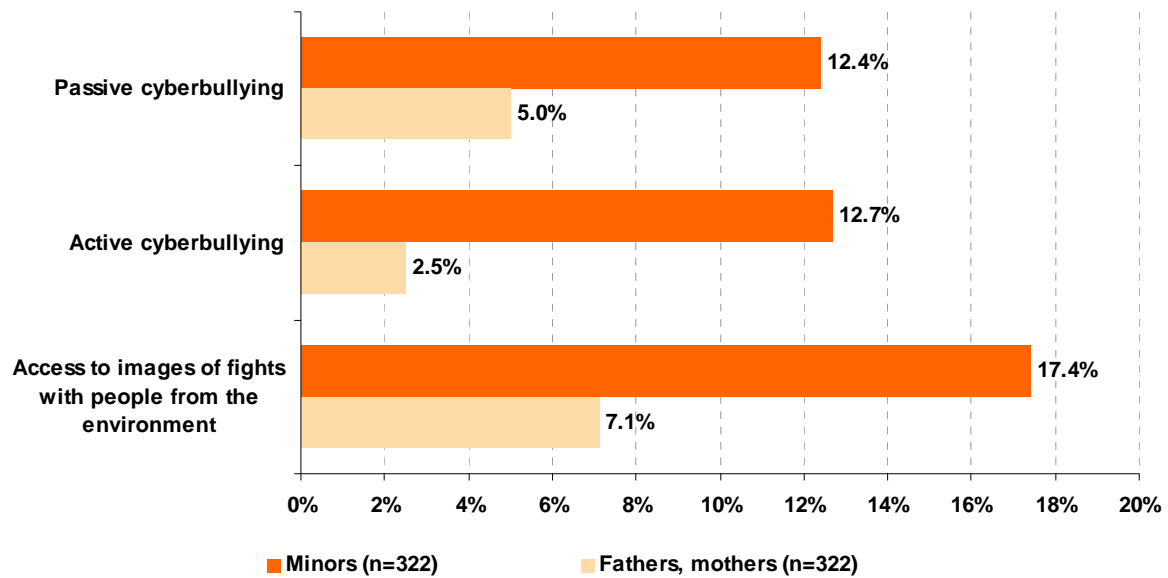
9.3 Indirect incidence (to the child's peers)

Also with cyberbullying, parents and children acknowledge a higher incidence to the child's peers than to the child him/herself.

Thus, 12.4% of children surveyed know a peer who has suffered passive cyberbullying, and 12.7% say they know of a peer who has sent offensive messages or calls to other people. Finally, 17.4% admitted that friends of theirs have accessed images of fights or aggression with a peer.

The perception of parents is, as in the other situations, lower in all three cases: 5%, 2.5% and 7.1% respectively.

Graph 45: Indirect incidence (to the child's peers) of conduct associated with cyberbullying (%)



Base: minors; fathers and mothers

Source: INTECO

9.4 Response to the incidence

9.4.1 Parents' response

In the analysis of the response of parents who admit that their children have experienced any of the three cyberbullying situations described, the small sample size is an important factor, causing the margins of error to skyrocket. In any case, the data is collected in Table16, with explicit indication of the sample sizes. The most common response is, once again, talking to the child.

Table16: Parents' response to occurrences of cyberbullying to the child (%)

	Passive cyberbullying (n=4)	Active cyberbullying (n=2)	Access to fights with people from the environment (n=18)
I spoke with my child to provide him/her with guidelines for action	75.0	50.0	66.7
I changed the content access controls			5.6
I reported the incidence to my child's teachers			5.6
I reported the incidence to the police and to the appropriate body			5.6
DK / NA	25.0	50.0	16.7

Base: parents who claim that their children have experienced each of the situations

Source: INTECO

9.4.2 Children's response

The same assessment made in the previous subheading on the small sample sizes must be taken into account in the analysis of children's response to situations of cyberbullying shown in Table17. In any case, with the proviso of caution due to high sampling errors, the overwhelming preference is for the child to deal with the situation him/herself, without involving other adults or children.

It is surprising, to some extent, that none of children who have been victims of passive cyberbullying has considered the option of telling their teachers about it.

Table17: Children's response to incidents of cyberbullying (%)

	Passive cyberbullying (n=19)	Active cyberbullying (n=16)	Access to fights with people from the environment (n=37)
I told my parents about it	36.8		16.2
I told a friend or sibling about it	5.3	12.5	13.5
I told my teachers			2.7
I dealt with the situation myself	47.4	68.8	48.6
I did nothing	5.3	12.5	13.5
Others			5.4
DK / NA	5.3	6.3	

Base: children who have experienced each of the situations

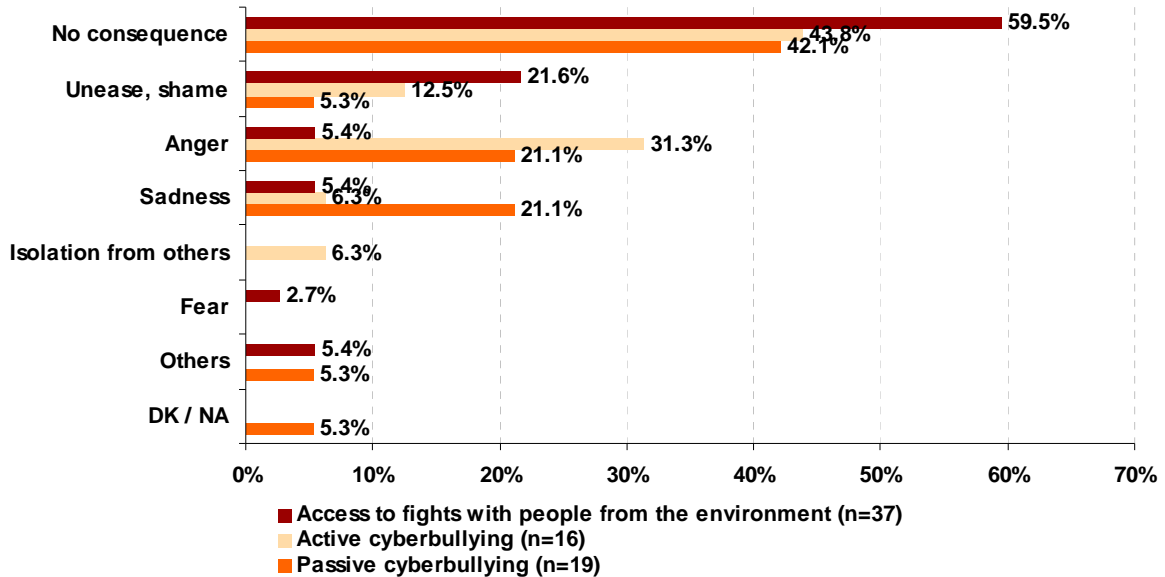
Source: INTECO

9.4.3 Consequences for children

The children do not acknowledge, in general, experiencing any consequence after experiencing any of the three cyberbullying-related situations studied. This is particularly evident in the case of access to images of peers fighting, where a majority of 59.5% said that this did not cause any consequences for the child.

Anger was described by one-third of those who had experienced passive cyberbullying and one-fifth of those who had sent threatening messages or calls.

Graph 46: Consequences of incidents of cyberbullying for children (%)



Base: children who have experienced each of the situations

Source: INTECO

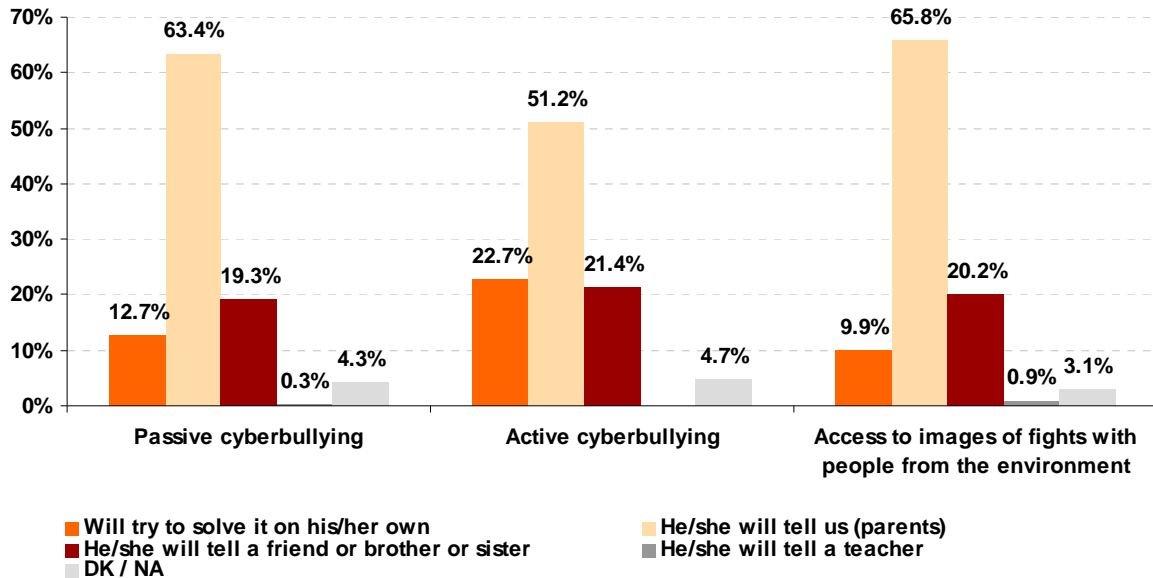
9.4.4 Expected responses

The parents' view of what their children would do in a hypothetical case of cyberbullying does not seem to coincide with the responses provided by the children after experiencing some of these situations.

In Table 17 we saw how children, after suffering an incident of cyberbullying, admitted dealing with it themselves, without involving anybody else. In Graph 47, in contrast, a majority of parents say that in the event their children experienced any of the three situations studied, they would no doubt seek the help of an adult. The trend is repeated in the case of passive cyberbullying (63.4%), active cyberbullying (51.2%) and access to images of peers fighting (65.8%).

As in the previous case, the option of discussing the incident with teachers is not stressed by parents

Graph 47: Responses that parents expect from children in the hypothetical incidence of cyberbullying (%)



Base: father and mothers (n=322)

Source: INTECO

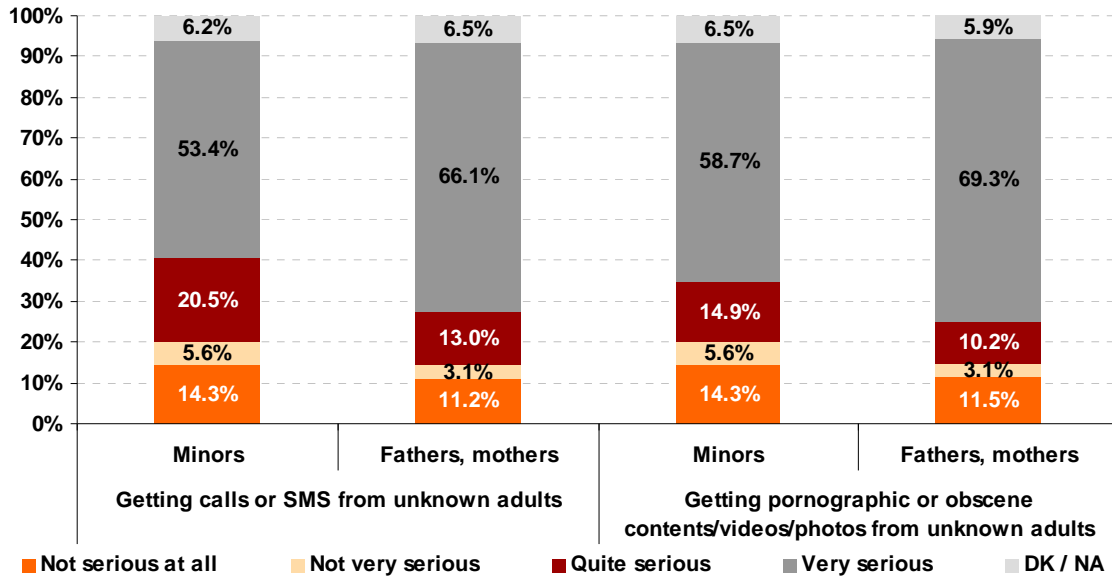
9.5 Cyberbullying via mobile phone vs. Internet

The joint analysis of the results of this report and those of the *Study on safe habits in the use of ITC by children and adolescents and e-trust of their parents*, which explores Internet cyberbullying, offers interesting results.

First, it appears that parents' concern is greater when the harassment is done by telephone than when it occurs on the Internet: 67.4% of parents find it very serious if their child is harassed by a peer via mobile phone, compared with 34.2% for the Internet. Similarly, 67.1% of parents consider it to be very serious if their child harasses other peers using a mobile phone, while for the Internet the percentage falls to 47.1%. (Please remember, once again, the time lapse between the Internet behaviour analysis survey - January 2008 - and the mobile telephone conflicts survey carried out in January 2010). Behind this data may be the fact that concern or sensitivity to the phenomenon of cyberbullying grew between 2008 and 2010, and not that the difference depends on the channel used to carry out the harassment.

The real incidence data is interesting: 5.9% of Spanish children aged 6 to 10 have been harassed by mobile phone, the same proportion that in 2008 expressed having been harassed via the Internet.

Graph 48: Perceived seriousness of grooming situations by adults and children (%)



Base: children (322); parents (322)

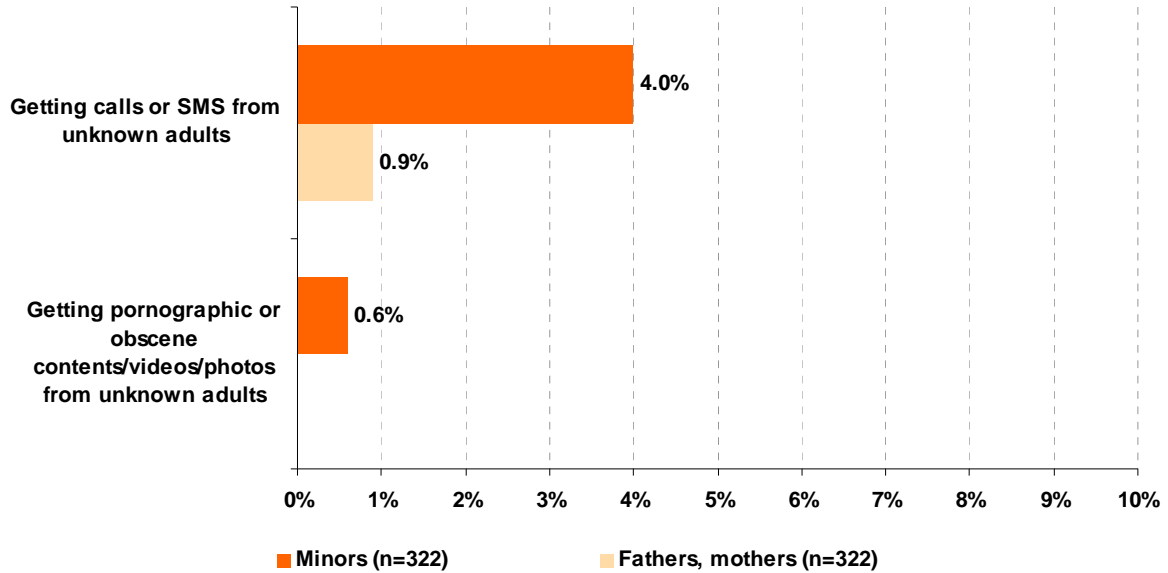
Source: INTECO

10.2 Indirect incidence (to the child)

4% of children surveyed acknowledged having received calls or messages from adult strangers with the intention of meeting them, compared to only 0.9% of parents believing that this has happened to their children. Receiving pornographic or obscene content from an adult stranger is a more unusual situation: only 0.6% of children (and no adults) admitted having experienced this situation.

Despite the low incidence, more girls (5.8%) than boys (2.4%) have received communications from strangers.

Graph 49: Direct incidence (to the child) of conduct associated with grooming (%)



Base: minors; fathers and mothers

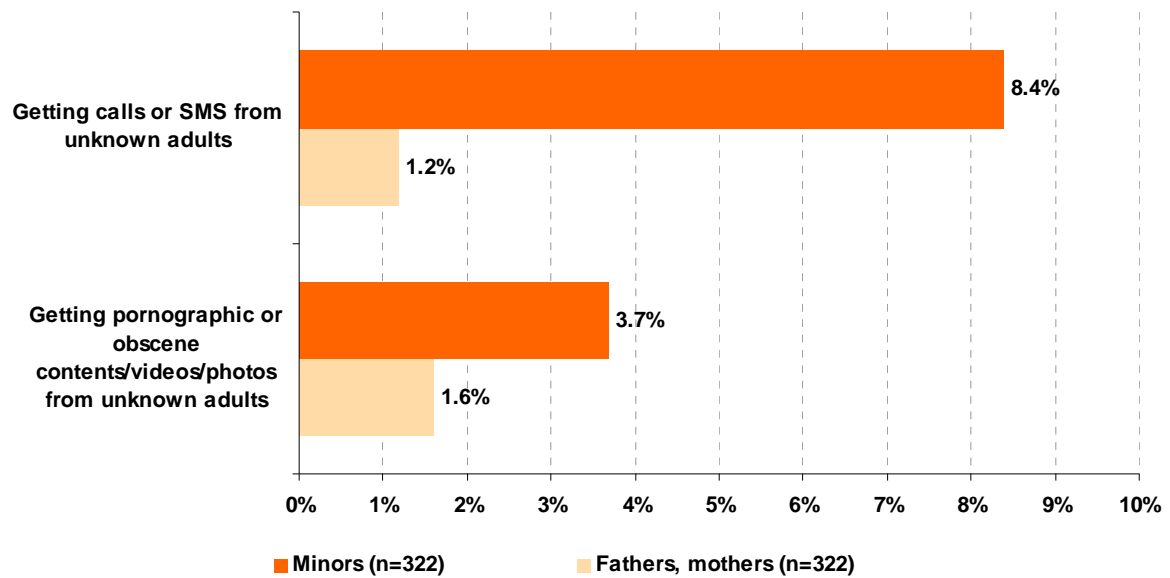
Source: INTECO

10.3 Indirect incidence (to the child's peers)

The indirect incidence of situations related to grooming is higher than that of direct incidence, in the opinion of both children and their parents.

In this sense, the kids and adults report knowing of an incident involving grooming such as the ones analysed in this study among the child's peers: receiving calls or SMS from an adult stranger (8.4% of children and 1.2% of parents) and receiving pornographic content (3.7% of children and 1.6% of adults).

Graph 50: Indirect incidence (to the child's peers) of conduct associated with grooming (%)



Base: minors; fathers and mothers

Source: INTECO

10.4 Response to the incident

10.4.1 Parents' response

Given the low direct incidence of situations related to grooming reported by adults (note that only 0.9%, the equivalent of 3 people, acknowledged that their child had received calls or messages from adult strangers, and no parent answered yes to the question about whether their child had received pornographic content), it did not seem appropriate to carry out a statistical analysis of the responses.

10.4.2 Children's response

In the case of incidents related to grooming, and despite the minimum calculation bases determined by a low incidence rate, children acknowledge turning to their parents. (Recalling data presented in previous headings on children's responses to other occurrences of safety, in which the majority response was for the child to deal with the situation independently.)

Table18: Children's response to incidents of grooming (%)

	Calls or SMS from unknown adults (n=13)	Getting pornographic or obscene contents/videos/photos from unknown adults (n=2)
I told my parents about it	46.2	50.0
I dealt with the situation myself	38.5	
I did nothing	7.7	50.5
DK / NA	7.7	

Base: children who have experienced each of the situations

Source: INTECO

10.4.3 Consequences for children

It seems that in the case of experiencing situations related in some way to grooming, the majority of children's responses point to not experiencing any consequences. Unease, embarrassment and fear were reported to some extent.

Table19: Consequences of grooming incidents for children (%)

	Calls or SMS from unknown adults (n=13)
No consequence	46.2
Unease, embarrassment	30.8
Fear	23.1

Base: children who have experienced the situation analysed

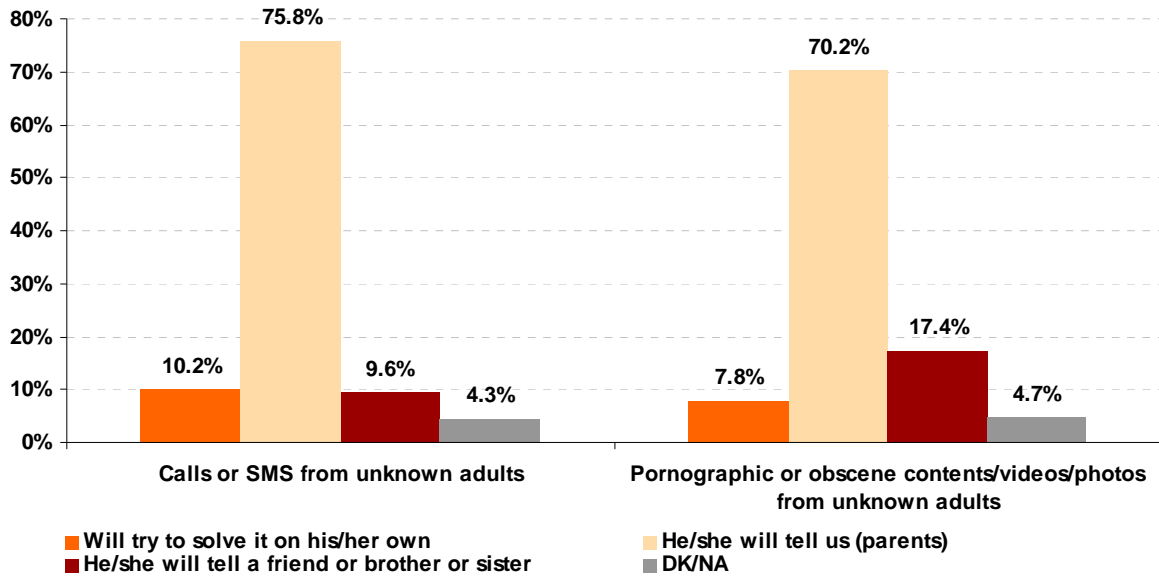
Source: INTECO

10.4.4 Expected responses

Parents trust that if their children receive a call or sexual content from an adult stranger on their mobile phone, they would tell their parents. The same is believed by 75.8% in the case of children receiving communications from adult strangers with the intention of meeting them, and 70.2% in the case of receiving pornographic content from adults.

In this case, the perception of parents does seem to be aligned with the reality of children, who acknowledged turning to their parents after suffering a grooming situation (see Table18).

Graph 51: Responses that parents expect of children in the hypothetical incidence of grooming (%)



Base: father and mothers (n=322)

Source: INTECO

10.5 Grooming via mobile phone vs. Internet

There is no doubt that grooming, due to the physical and psychological repercussions it can have on a child, is a risk that is worrisome to parents, regardless of whether it is carried out via mobile phone or online. In the *Study on safe habits in the use of ITC by children and adolescents and e-trust of their parents*, 60.1% of parents considered harassment of children via the Internet to be very serious.

The incidence rates of these situations are certainly in the minority. The study shows that 2.1% of parents and 1.3% of children stated that children had been exposed to situations that they identified as grooming or sexual harassment (via the Internet).

11 FINANCIAL RISK AND/OR FRAUD

From a strictly monetary standpoint, the use of mobile phones may have negative implications for users. Section 6 addressed the issue from the point of view of abusive use of mobile phones, which includes excessive spending. This chapter explores the use of certain special services: premium-rate numbers and file download services (audio, video, games, etc.) with financial conditions that are unclear or that may constitute fraud.

The following behaviour is analysed:

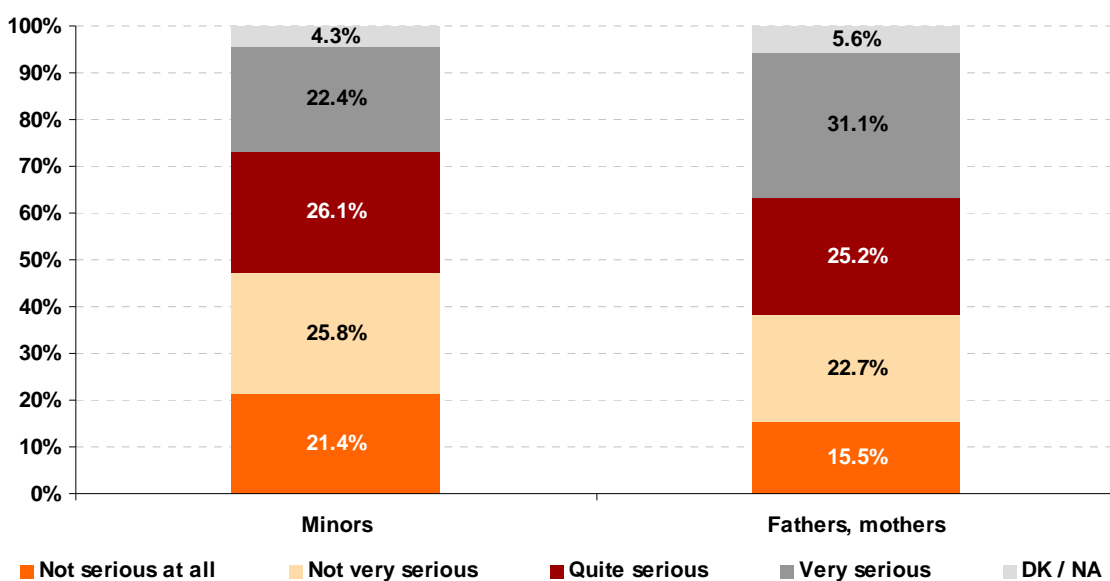
6 FINANCIAL RISK AND/OR FRAUD	
Financial loss or fraud	<i>I have sent a message to participate in a special offer or to download a ring tone, wallpaper or game which turned out to be more expensive than I thought</i>

11.1 Perceived seriousness

The situations which may cause financial loss are not perceived to be highly serious, in the eyes of both adults and children.

31.1% of parents considered this situation of financial risk to be very serious, a higher proportion than that obtained from children (22.4%), including another 47.2% who believe this situation to be barely serious or not serious at all.

Graph 52: Perceived seriousness of situations of financial risk and/or fraud by children and adults (%)



Base: minors (n=322); fathers and mothers (n=322)

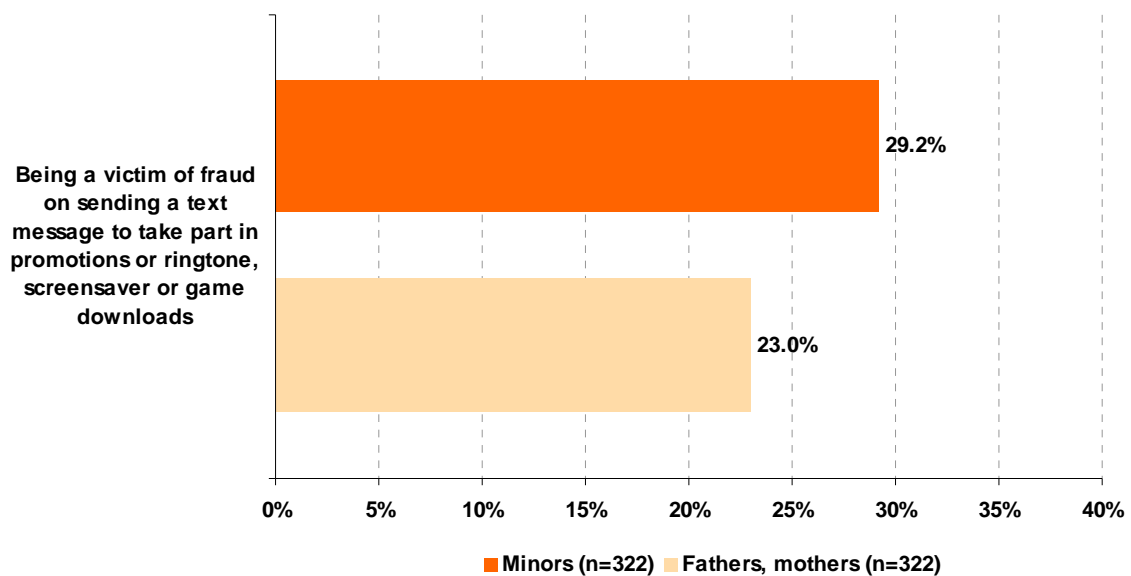
Source: INTECO

11.2 Direct incidence (to the child)

The incident included in this risk has a substantial incidence: almost three in ten children have suffered it (29.2%). In the 13-14 years age group, the proportion is even higher (36.9%).

The parents' perspective of the matter tends to underestimate the direct incidence rate stated by their children: only 23.0% of adults report that their children have experienced a situation of financial loss associated with fraud in the context of mobile phone use.

Graph 53: Direct incidence (to the child) of conduct associated with financial risk and/or fraud (%)



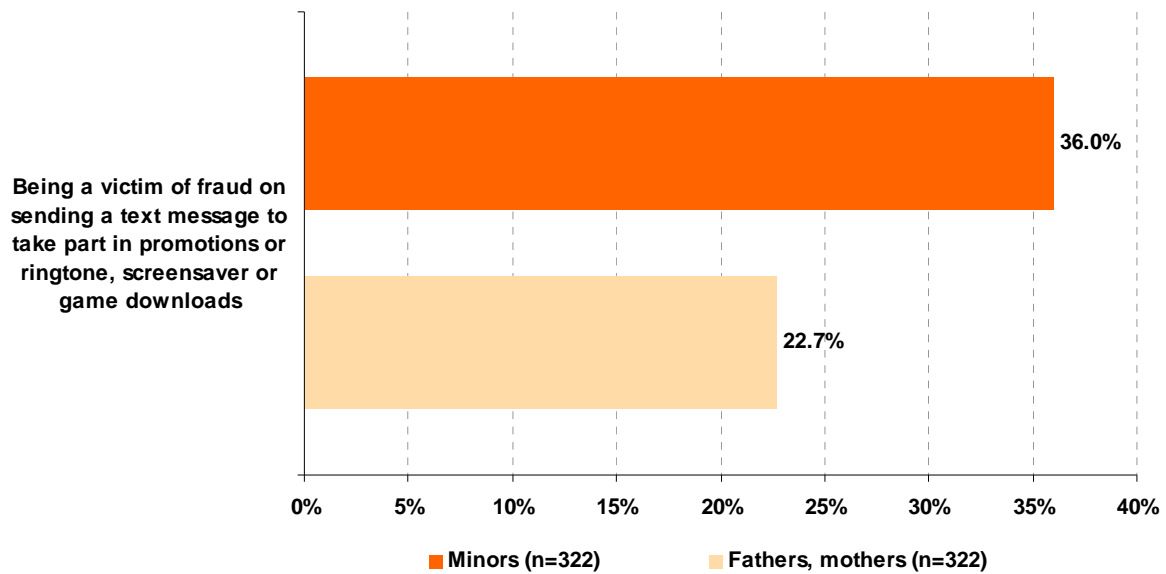
Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

11.3 Indirect incidence (to the child's peers)

36% of children know a peer who has been a victim of this type of fraud via mobile phone. In the case of parents, the proportion falls to 22.7%. The results are reflected in Graph 54.

Graph 54: Indirect incidence (to the child's peers) of conduct associated with financial risk and/or fraud (%)



Base: minors (n=322); fathers and mothers (n=322)

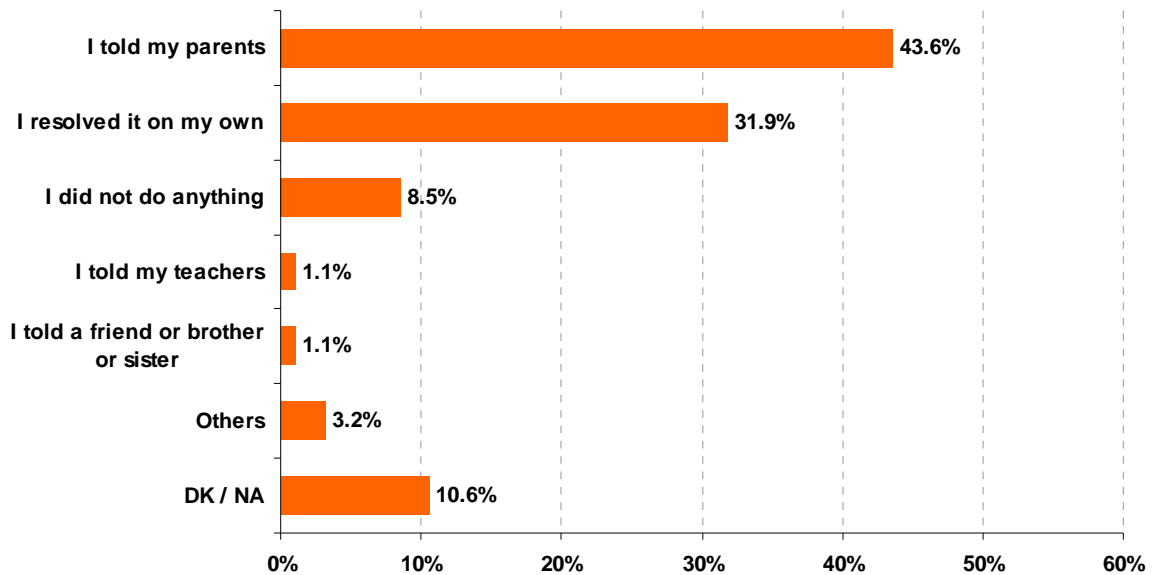
Source: INTECO

11.4 Response to the incidence

11.4.1 Parents' response

Once again, the most common response of parents was to talk with their children to provide them with guidelines for action (54.1%). After this, changing the settings on the child's mobile phone (9.5%), the imposition of rules (9.5%), and a formal complaint to the mobile phone operator (9.5%) were also options taken to some extent by parents. 8.1% admit doing nothing.

Graph 56: Minors' reaction to the incidence of financial risk and/or fraud (%)



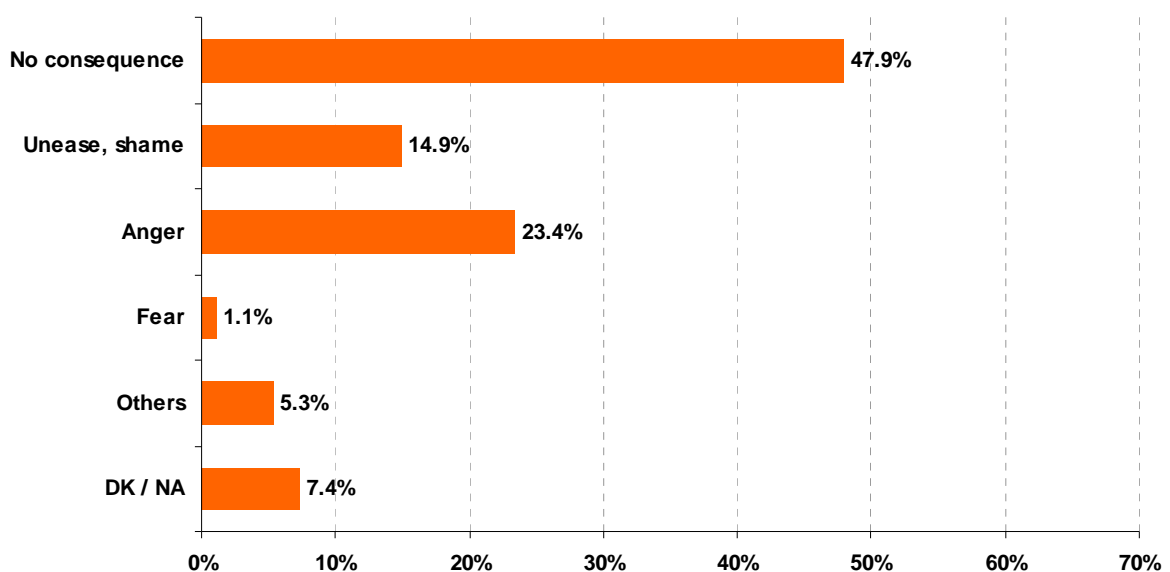
Base: minors who have experienced the situation analysed (n=94)

Source: INTECO

11.4.3 Consequences for minors

For 47.9% of children surveyed, the situation did not have any consequences for them. 23.4% experienced anger and an additional 14.9% experienced unease or embarrassment.

Graph 57: Consequences of the incidence of financial risk and/or fraud for children (%)



Base: minors who have experienced the situation analysed (n=94)

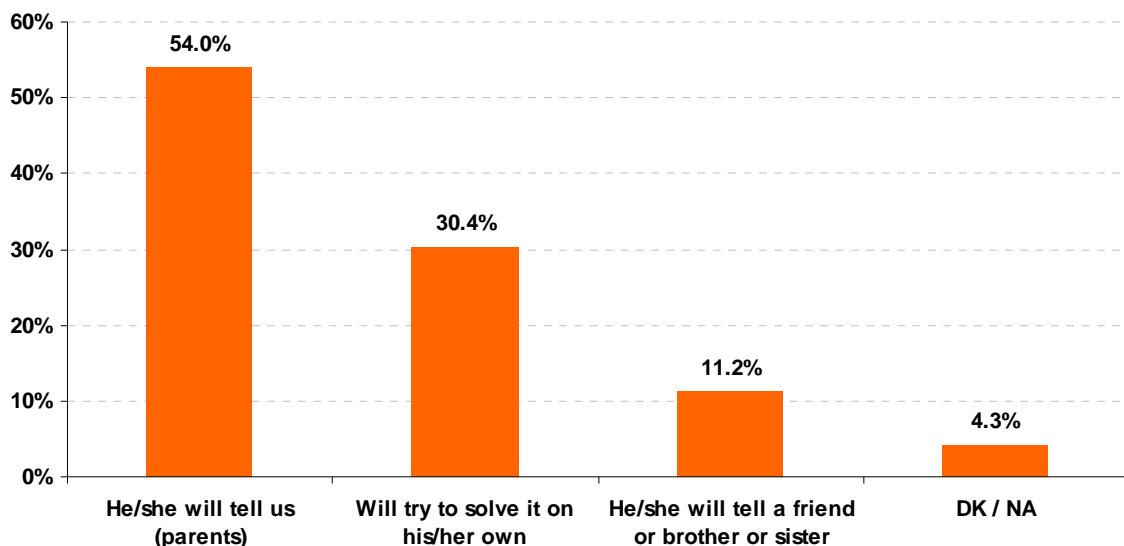
Source: INTECO

11.4.4 Expected responses

In this case, what parents believe their children would do if this situation occurred is well aligned with what children said they did after experiencing financial loss with their mobile phone.

Thus, 54% of adults surveyed believe that, in case of an incidence, their children would tell them, while 30.4% are convinced that their children would deal with the problem alone, and an additional 11.2% think their children would involve a friend or sibling in the situation. (In Graph 56, in analysing children's response to these occurrences, we saw that the majority response was to tell their parents, followed by dealing with them independently.)

Graph 58: Responses that parents expect their children to have in the hypothetical incidence of financial risk and/or fraud (%)



Base: father and mothers (n=322)

Source: INTECO

11.5 Financial risk and/or fraud via mobile phone vs. Internet

Probably, situations entailing financial loss are more worrisome in the context of the Internet than in the context of the mobile phone. Thus, the *Study on safe habits in the use of ITC by children and adolescents and e-trust of their parents* reflected that 47% of parents considered that the fact that their children were victims of fraud and scams on the Internet to be a fairly serious or very serious situation.

In contrast, in the analysis of the incidence reported, it appears that situations of financial loss or fraud are more common via mobile phone. We recall that 36% of children surveyed acknowledged having suffered some type of financial loss via mobile phone. In the context of the Internet, only 1.5% of children reported experiencing some case of fraud or scam.

12 TECHNICAL RISKS

The last risk block encompasses situations that involve a technical component. In particular, situations of receiving spam and malware on mobile phones are analysed (the technical component of spam in the case of mobile phones is only partial, since it is a strategy of mass advertising).

The evolution of malware for mobile devices will grow as their capacity continues to increase. Also noteworthy is the receiving of every kind of advertising message, the risk that may be constituted by those that are deceptive or encourage the consumption of services such as contests or games of chance.

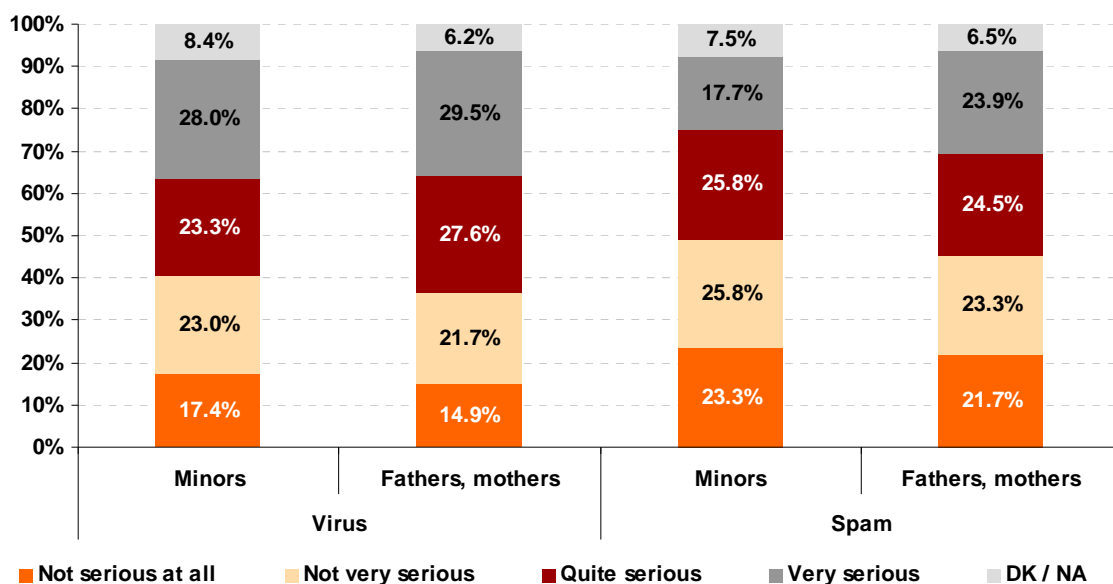
The behaviours associated with this risk that are analysed in this study are:

- Viruses. *I have had a virus on my mobile phone.*
- Spam. *I have received unwanted advertising (spam) on my mobile phone.*

12.1 Perceived seriousness

Viruses and receiving spam are not perceived to be very serious occurrences by adults and children. In the case of viruses, 14.9% of adults did not consider them to be serious (17.4%, according to the responses of children). Similarly, receiving spam was considered not to be serious by 21.7% of parents and 23.3% of children.

Graph 59: Perceived seriousness of situations of technical risk by children and adults (%)



Base: children (322); parents (322)

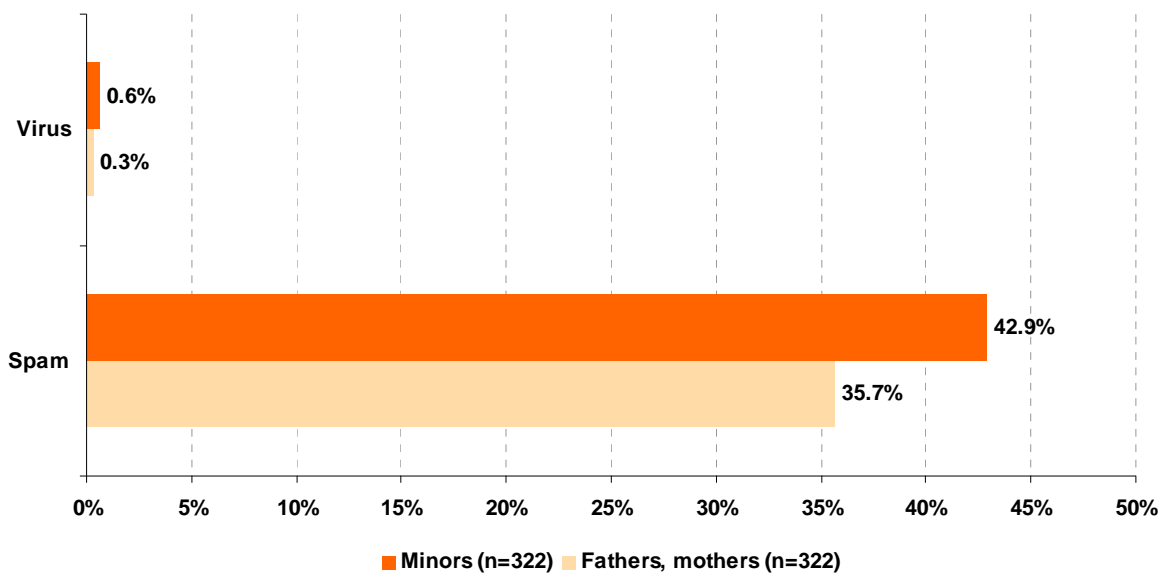
Source: INTECO

12.2 Direct incidence (to the child)

In the context of this study, the receiving of spam on children's mobile phones is a very frequent phenomenon, whereas virus attacks are certainly less common.

Viruses have only affected 0.6% of children's phones (0.3% in the opinion of parents). Receiving spam, however, has a direct incidence rate of 42.9%, the highest of all the risks studied (in the opinion of parents, 35.7%).

Graph 60: Indirect incidence (to the child) of conduct associated with technical risks (%)



Base: minors; fathers and mothers

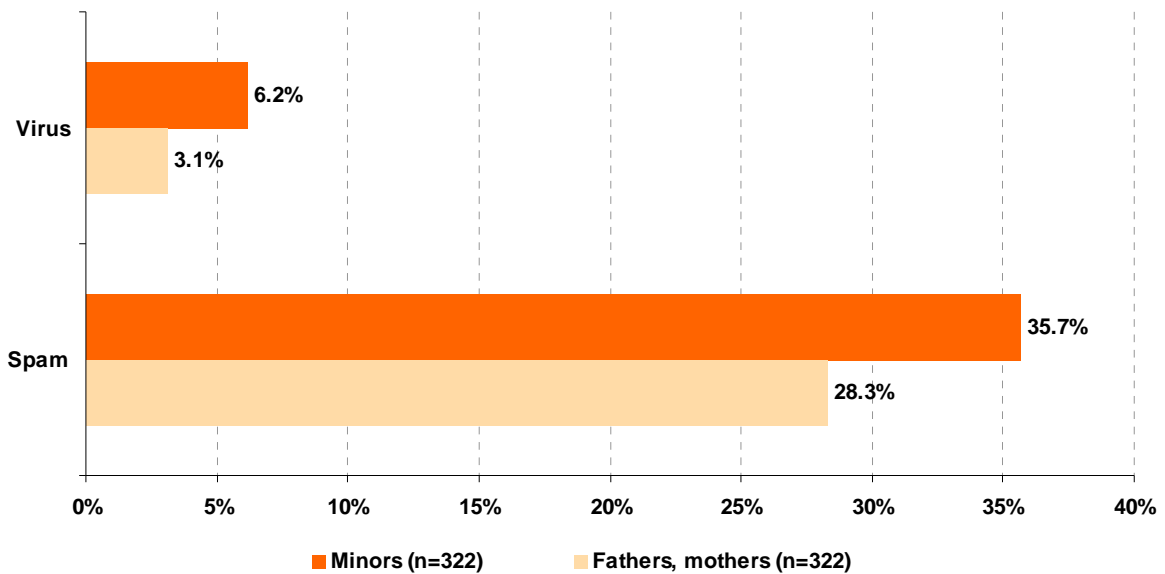
Source: INTECO

12.3 Indirect incidence (to the child's peers)

In the analysis of incidence to children's peers, mobile malware may have affected 6.2% of the peers of children surveyed (3.1%, according to the parents).

With regard to spam, children acknowledge a lower incidence for their peers than for themselves (35.7% versus 42.9% for direct incidence) as do their parents (28.3% versus 35.7%). This is the only security incident, of the 16 analysed in this study, where the indirect incidence stated by children and adults does not exceed the direct incidence.

Graph 61: Indirect incidence (to the child's peers) of conduct associated with technical risks (%)



Base: minors; fathers and mothers

Source: INTECO

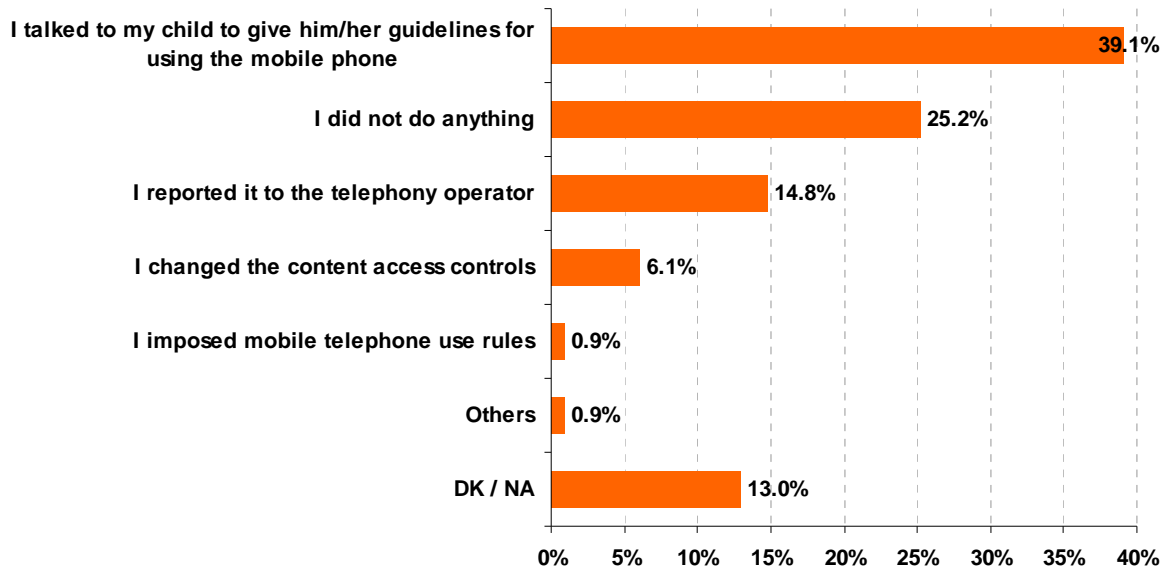
12.4 Response to the incidence

12.4.1 Parents' response

Speak with the child (39.1%) and *do nothing* (25.2%) are the responses most reported by parents to the incidence of their children's receiving spam. 14.8% reported it to the telephone company and an additional 6.1% said they had changed the access controls.

The data can be found in Graph 62.

Graph 62: Parents' reaction to children's receiving spam in their mobile phone (%)



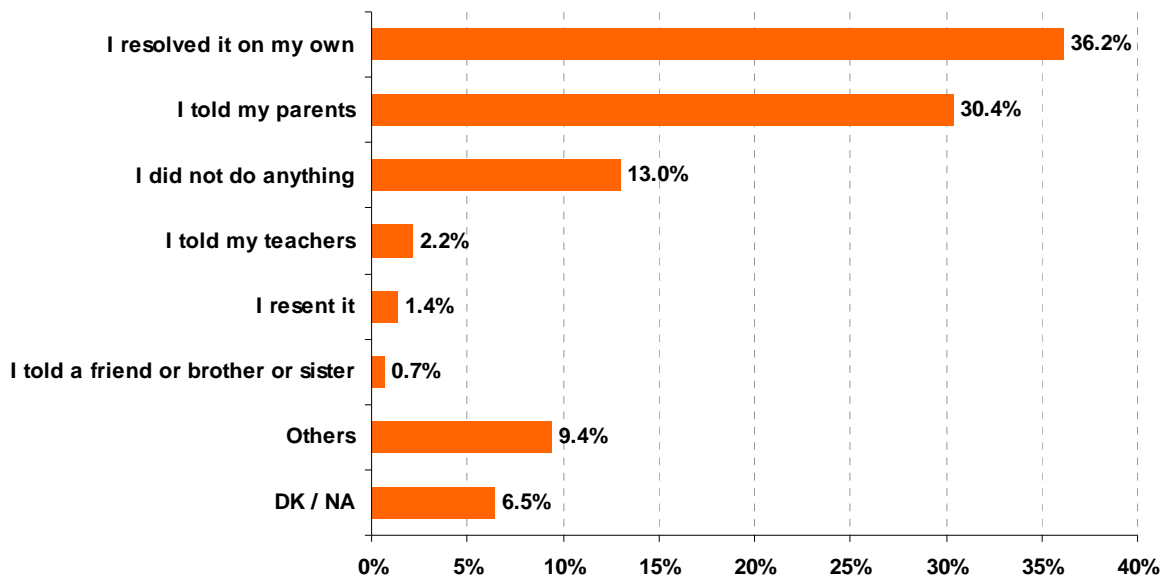
Base: parents who state that their children have experienced the situation analysed (n=115)

Source: INTECO

12.4.2 Children's response

36.2% of children say that when they have received some sort of unwanted advertising on their mobile, their reaction was to deal with it themselves. Three in ten (30.4%) acknowledge telling their parents about it, and 13.0% did nothing.

Graph 63: Children's response to receiving spam on their mobile phone (%)



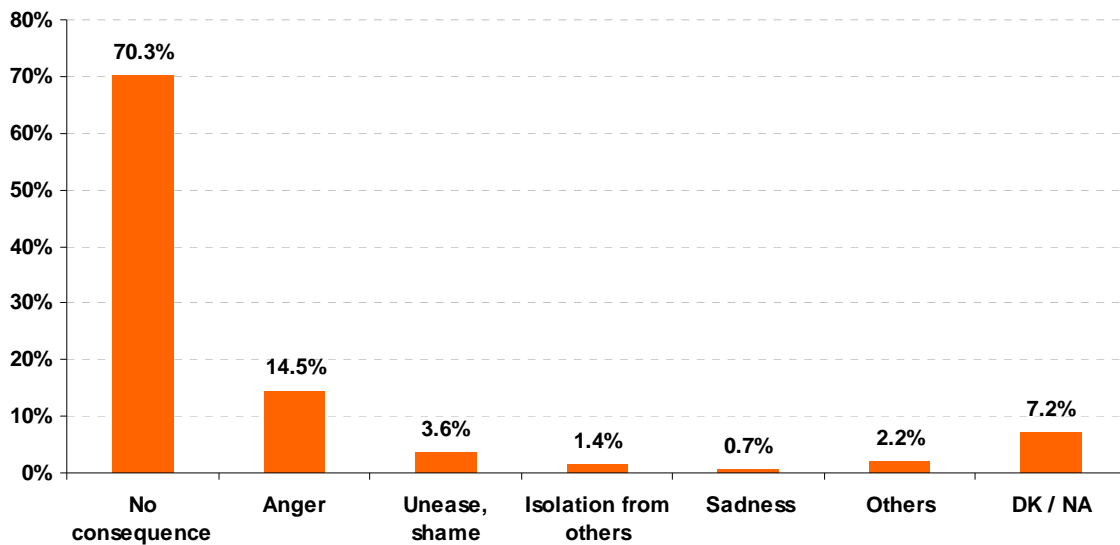
Base: children who have experienced the situation analysed (n=138)

Source: INTECO

12.4.3 Consequences for the children

For 70.3% of children surveyed, having received spam on their mobile phone did not affect them in any way. Only 14.5% of children admitted to getting angry, and an additional 3.6% showed some unease or embarrassment.

Graph 64: Consequences for children of receiving spam on their mobile phone (%)



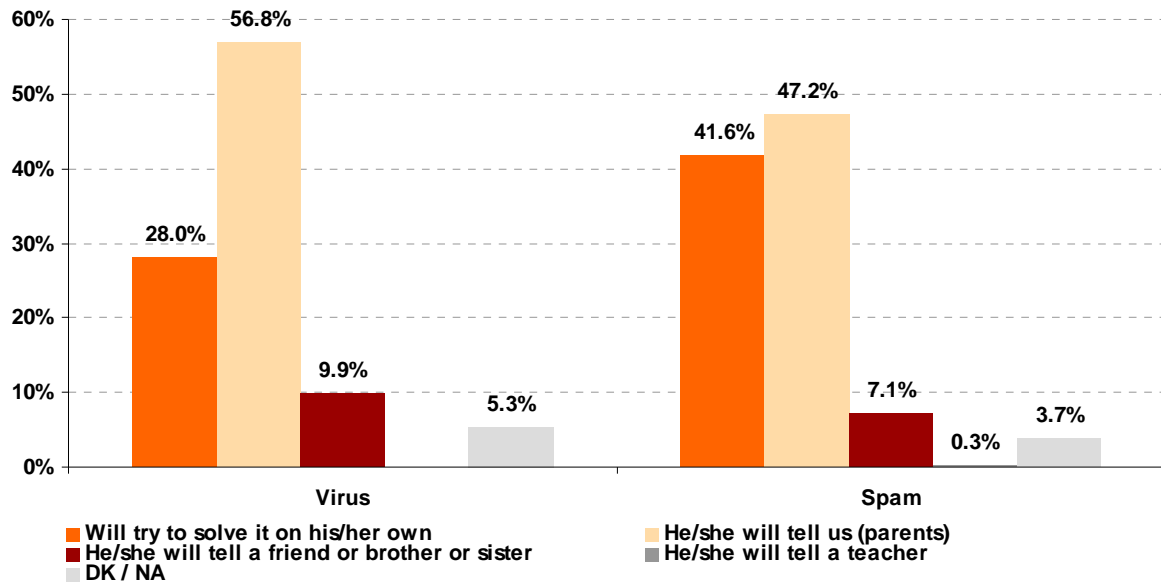
Base: children who have experienced the situation analysed (n=138)

Source: INTECO

12.4.4 Expected responses

Once again, parents are confident that, in either of the two situations considered to be technical risks, their children would turn to them to deal with it, both for viruses (56.8%) and for spam (47.2%).

Graph 65: Responses that parents expected from their children in the hypothetical incidence of technical risks (%)



Base: father and mothers (n=322)

Source: INTECO

12.5 Technical risks via mobile phone vs. Internet

Comparing the data from this study, about mobile phones, with the information published in the *Study on safe habits in the use of ITC by children and adolescents and e-trust of their parents*, of data related to risks occurring primarily through the Internet, the conclusion is clear: the incidence of viruses on the computers of Spanish children of 10-16 years (65.2%) is substantially greater than the presence of malware on mobile phones of children (0.6%).

The opposite occurs in the case of spam, which seems more likely to occur via mobile phone (42.9%) than online (29.8%).

13 SAFETY IN MOBILE PHONE USE

Children must learn to use mobile phones safely. As we have seen thus far in analysing risks, many parents worry about their children's mobile phone use, especially about the security incidents that may occur.

This chapter describes the security aspects of mobile phone use: introduction of rules of use, communication between children and adults about safety issues, information sources which parents and children can turn to, and general trust that children and adults feel towards mobile phones.

13.1 Existence of rules for mobile phone use

In order to identify the extent to which Spanish children are subject to rules on mobile phone use, kids and adults were asked what kind of measures existed for them. 26.4% of children participating in the study said they do have any rules of use. From the parents' point of view, only 15.8% of them admit to not having imposed mobile phone use rules on their children. It seems that there is a mismatch between the perception of parents and children on this point: Perhaps adults are setting rules that are not reaching their children. Corroborating this hypothesis is the fact that, for each and every one of the limitations analysed, the proportion of parents who confirm having set them exceeds the children's mentions of them (see Graph 66).

The type of rules imposed have been arranged into five blocks, depending on the stated objective to be achieved by each one:

- **Financial:** limitation of monthly spending, banning downloads or other paid services.
- **Type of use:** banning access to the Internet (or to certain content), banning games.
- **Contact:** banning responding to messages from strangers.
- **Time and place of use:** limitations imposed by schools, limitation of use (certain days and places).
- **Children's privacy:** banning the creation of personal codes, banning the distribution of photos or videos of the child.

The main constraint imposed by the parents is clearly financial: 65.8% of parents (and 56.8% of children) indicate that they have set a monthly usage limit. Among children, more girls (60.6%) than boys (53.3%) admit to being subjected to this rule. Regarding

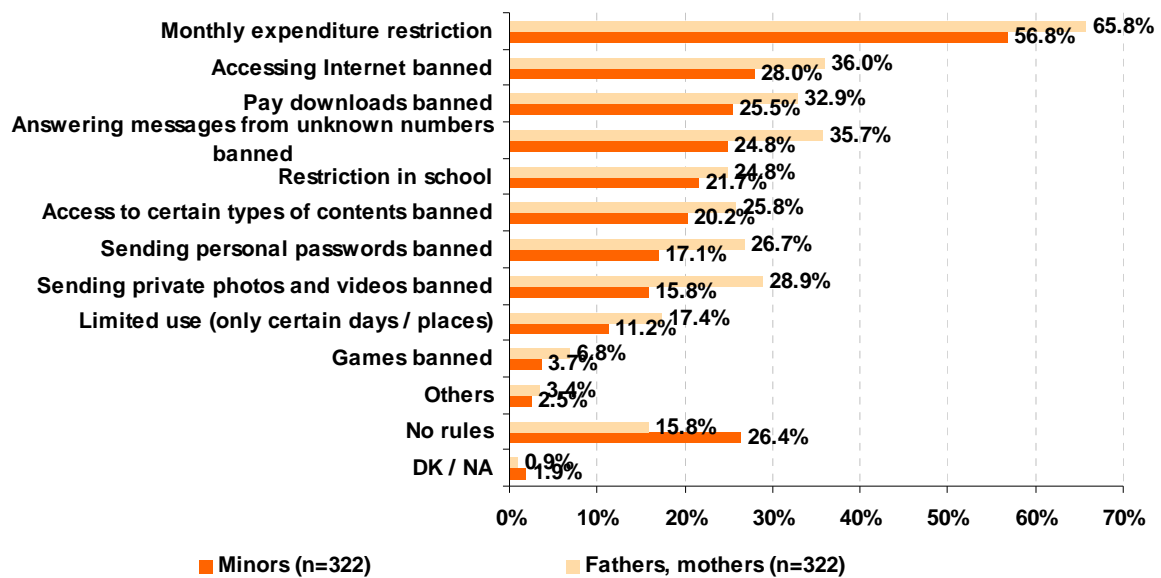
setting financial limits, 32.9% of parents ban paid downloads (as confirmed by 25.5% of children).

Another area in which parents have more impact when setting rules of use is Internet access via mobile phone: 36.0% of adults say that they have banned their children from connecting to Internet (in the minors' opinion, 28% acknowledge this restriction).

Another important rule in the eyes of parents has to do with minors' contact with strangers. Thus, 35.7% of adults say that they have banned answering messages from unknown numbers. Only 24.8% of children see it that way.

Surprisingly, with the majority of rules, there is a gap between the perceptions of parents and children.

Graph 66: Presence of rules on mobile phone use (%)



Base: minors; fathers and mothers

Source: INTECO

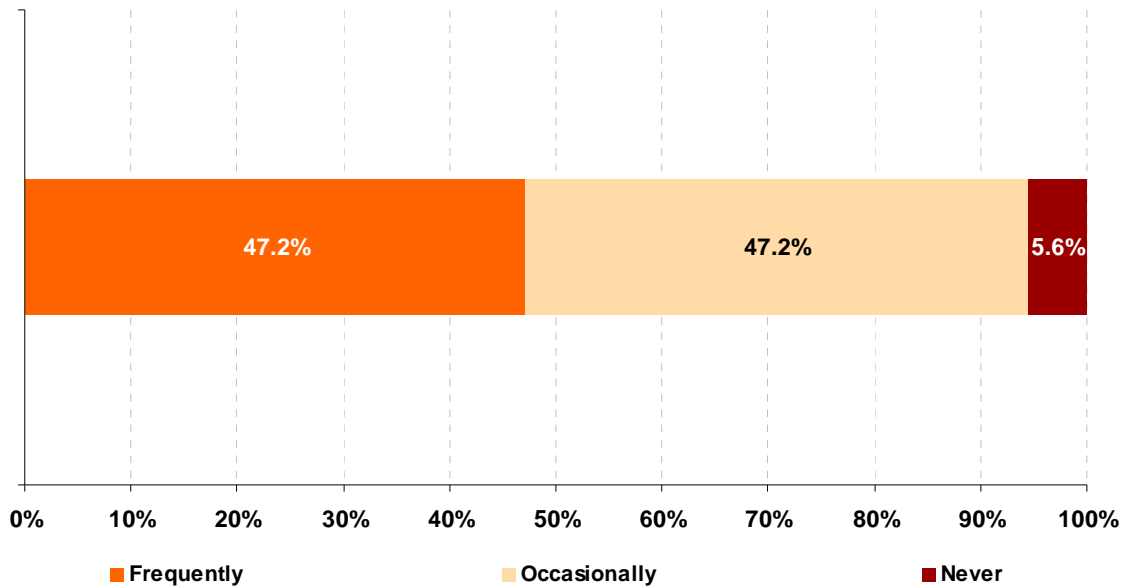
13.2 Safe mobile phone use: guidelines and sources of information

Security in the use of the mobile telephone is a matter that undoubtedly worries parents. Therefore, 94.4% of the adults taking part in the study admit having talked about this with their children, either frequently (47.2%) or occasionally (47.2%). Only 5.6% admit never having done so.

The educational and age levels of parents determine a higher propensity to talk often with their children about how to make safe use of their phones. Thus, 56% of college-educated parents talk frequently with their children, compared to 28.9% of adults with

basic education. In the analysis by age group, 50.6% of parents of 45 years or more acknowledge speaking frequently, while with younger parents, the percentage is 44%.

Graph 67: Do you openly talk to the minor on the way to safely use his/her telephone? (%)



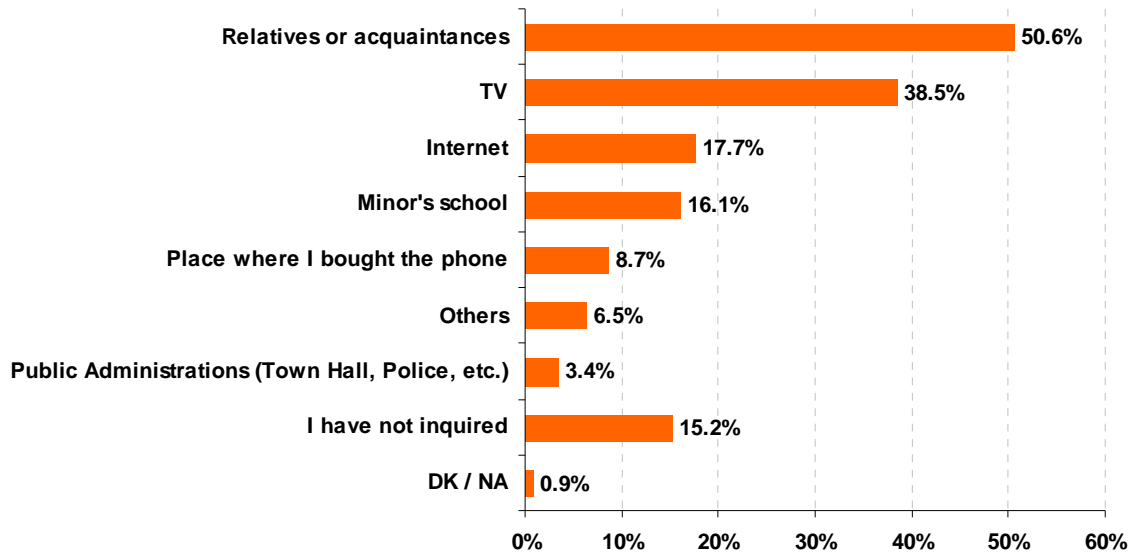
Base: father and mothers (n=322)

Source: INTECO

The sources parents resort to to get information on the possible risks their child faces when using a mobile telephone (and the way to restrict them) are the family (50.6%) and television (38.5%). After these, Internet (17.7%), the children's school (16.1%) or the shop where the handset was bought (8.7%) are mentioned less. Only 3.4% of adults acknowledge having sought information through public services.

Women, more than men, proactively search for information. Thus, 52% of mothers (compared with 47.5% of fathers) seek information through family and friends, and 44% of women (25.3% of men) do so through television. By contrast, 20.2% of men admit to not having sought information, and only 13% of women.

Graph 68: Sources of information parents can turn to to reduce the risks facing children in their mobile phone use (%)



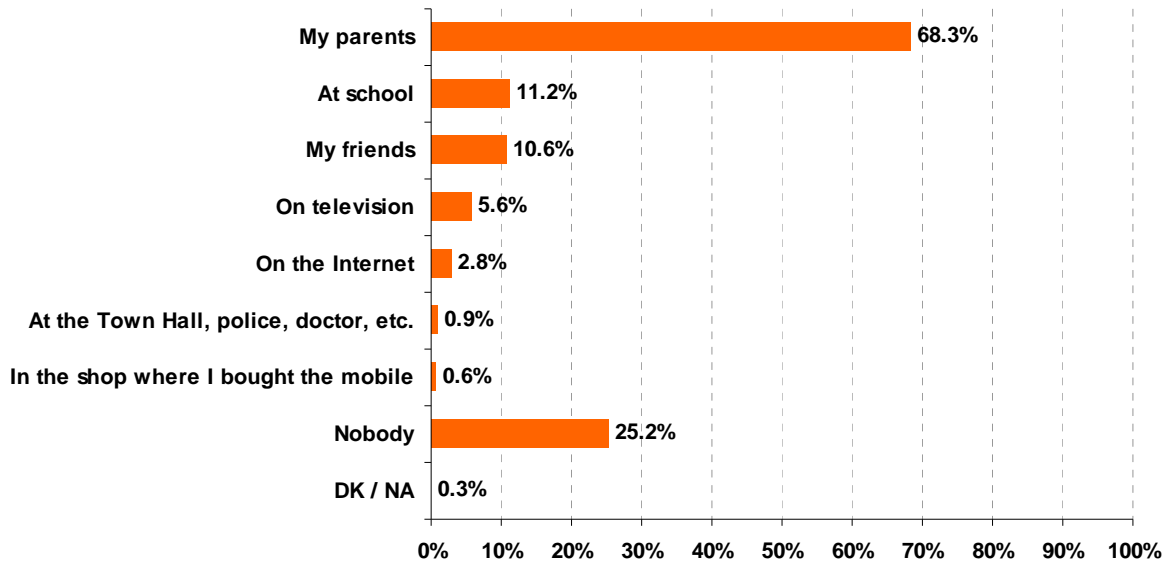
Base: father and mothers (n=322)

Source: INTECO

With children, the source of information they turn to most is the parental figure (68.3%), as stated in Graph 69. In the analysis by gender of respondents, more girls (71.6%) than boys (65.3%) do so. There are also differences depending on the age group considered. Thus, among the youngest (10-12 years), 82.3% said they turn to their parents to learn about ways to reduce the risks they face in mobile phone use; as children grow up, they seem to lose this dependency on their parents for information: of adolescents aged 15-16 years, 60.9% admit to seeking information from their parents.

The remaining information sources are mentioned by the minors much less: the children's school (11.2%), their friends (10.6%), television (5.6%) and the Internet (2.8%).

Graph 69: Sources of information that children can turn to to reduce the risks they face in their mobile phone use (%)



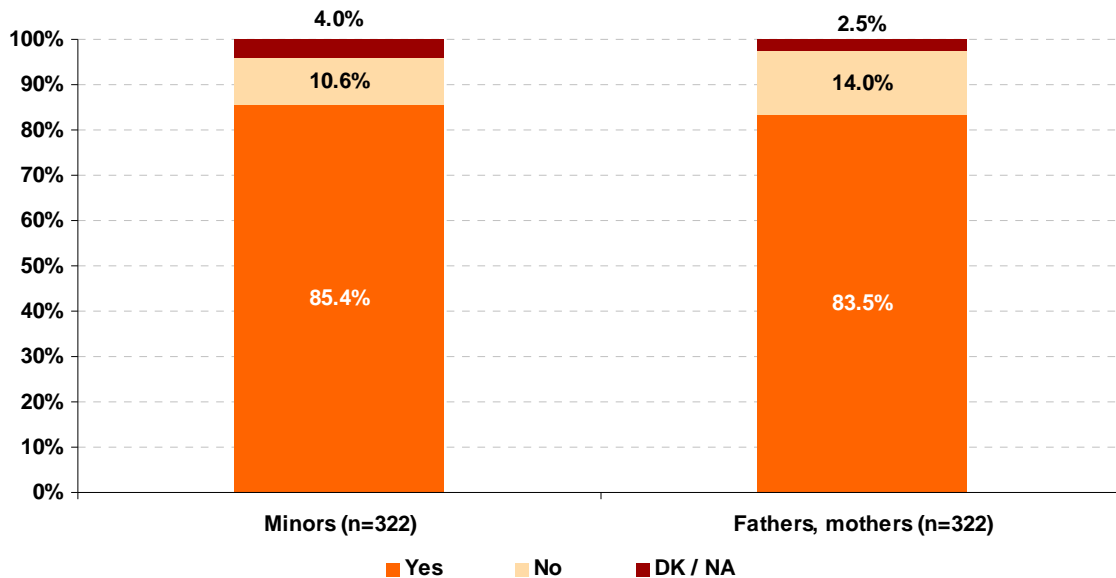
Base: minors (n=322)

Source: INTECO

Most children participating in the study (85.4%) believe they know enough to make safe use of their mobile phone, an opinion which is held more strongly among males (89.2%) compared to girls (81.3%). Age is also a differentiating factor, since the perception of safety is greater among older kids (90.4% of adolescents aged 15-16 years) than among younger ones (76% of kids in the 10-12 age group).

Parents' opinion coincides with their children's as 83.5% think that the latter have enough information in order to use their telephones properly.

Graph 70: Perception of having sufficient information in order to make safe use of the mobile phone (%)



Base: minors (n=322); fathers and mothers (n=322)

Source: INTECO

Obviously, parents want their children to learn how to use mobile phones safely, so they were asked about who, in their view, has the responsibility for providing information to children about safe mobile phone use. The answers can be found in Table20. Options given by parents are: family (88.8%), school (39.4%), telecommunications operators (19.6%) and mobile service suppliers (17.7%). The Administration (16.8%) and handset manufacturers (16.5%) are the players that are mentioned the least.

Table20: Who has the responsibility of providing information to children about safe mobile phone use (%)

Responsible parties	%
The family	88.8
The school	39.4
Telecommunications companies	19.6
Mobile service providers	17.7
The government	16.8
Handset manufacturers	16.5
DK / NA	1.2

Base: father and mothers (n=322)

Source: INTECO

13.3 Trust in mobile phone use

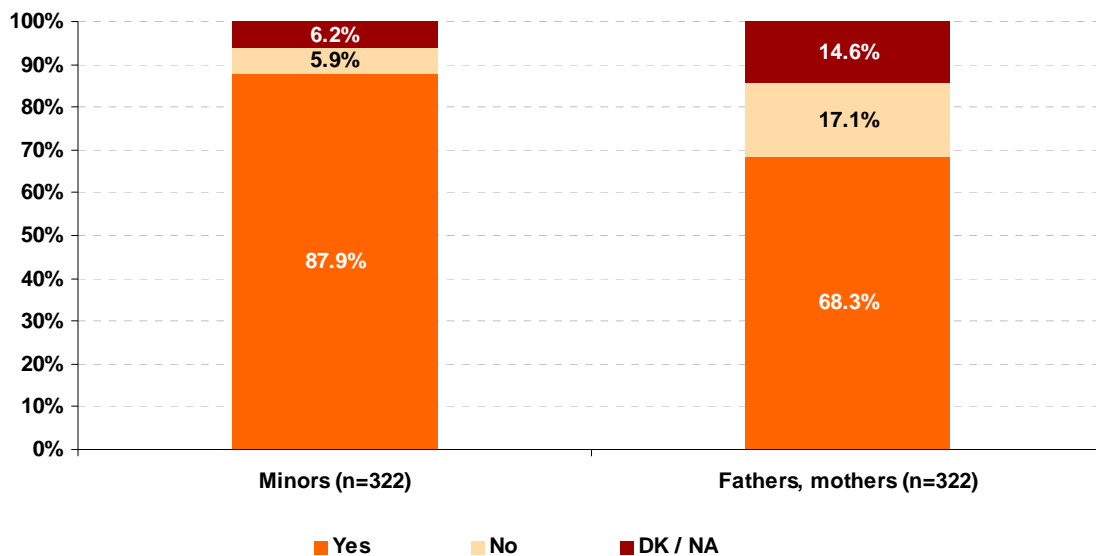
Finally, the general trust that children and adults have about kids' mobile phone use is analysed. To this end, parents and children were asked if they trusted that children are protected when using mobile phones. The answers to this question appear in Graph 71.

Minors feel very safe, as 87.9% say that they feel protected when they use their mobile telephone, compared to 5.9% that claim the opposite.

In the case of parents, 68.3% are confident that their child is protected when using the mobile phone. 17.1% say that they are not confident about this protection, and an additional 14.6% do not take a stance.

In general, parents and children trust that children are protected when using mobile phones, but it is true that this perception is stronger among kids than among adults.

Graph 71: Trust that children are protected when using mobile phones (%)



Base: minors; fathers and mothers

Source: INTECO

14 CONCLUSIONS AND RECOMMENDATIONS

14.1 General conclusions and recommendations

It is a fact that Spanish children and adolescents use mobile phones, and do so intensively, maximising the possibilities for communication and entertainment such devices permit. Parents feel reassured knowing that their children have mobile phones, and that is the determining factor when determining children's access to mobile phones (which, moreover, usually occurs between 10 and 12 years).

For the kids to leverage the opportunities that mobile phones allow, they must have a thorough understanding of the situations (threats and risks) that may occur. For the purposes of the study, these situations have been grouped into seven blocks, which in turn are the areas identified by the experts consulted:

- 1) Excessive mobile phone use, which might involve disproportionate spending or even (in more serious cases) may suppose a technological addiction disorder (isolation, impact on school performance, inattention to social commitments ...)
- 2) Situations that may jeopardise the privacy of the child, either voluntarily (the child him/herself distributes personal data via mobile phone) or involuntarily (a third person distributes personal data - or images - of the child.) In this regard, the issue of consent is practically insignificant, since in many cases the child him/herself "consents to" the creation and distribution of the images. The critical point here is the privacy of the child.
- 3) Access to content that is inappropriate for the child's age, whether legal or illegal. The study analyses two types of inappropriate content: that of a sexual nature and that involving racism or violence. This content may be accessed via the Internet or via pictures or videos sent to the child's phone. The risk, in this case, lies in the impact that viewing images that are not appropriate for his/her maturity level could have on the child.
- 4) Situations of cyberbullying (intimidation or harassment among children) can occur through sending threatening or offensive messages or calls or the distribution of images of aggression among children. In this case, the risk is identical to that produced by harassment occurring in the physical world, and has to do with the psychological consequences that may be triggered in the victim. The gravity of carrying out this type of behaviour through electronic means lies in two aspects: in the first place, the anonymity permitted by mobile phones can facilitate episodes of abuse or threats that might not be carried out face-to-face; secondly, as mobile phone or Internet bullying transcends any physical or temporary boundary, it can happen anywhere, anytime.

- 5) Grooming situations refer to the process of seduction or coaxing carried out by an adult, where a child is the victim, toward an implicit or explicit sexual end. This broad definition covers a heterogeneous and complex mix of cases. In general, the different scenarios have as common ground the adult using his position of power over the child to, by resorting to deception or blackmail, get something from the child (images of sexual content or real-life meetings.)
- 6) Situations that could cause financial loss or constitute fraud. This no longer pertains to high costs resulting from excessive use, but to the use of services (downloads, sending messages to participate in promotions and contests, etc.) which, apart from having a high associated financial cost, may have confusing or misleading terms of use.
- 7) Situations that are related to the infection of mobile phones with malware or receiving spam (unsolicited advertising). Mobile phone malware, although still rare, may pose a technical risk to the handset. With spam, the situation is different: receiving unwanted advertising relates to situations that may be misleading.

A thorough understanding of these situations by children and adults requires being able to identify the risks associated with them, how to prevent or combat them, and the measures to be adopted against possible occurrences. As seen in the analysis conducted in this study, on this point (response to occurrences) the views of parents and children are not aligned: parents think that children would turn to them if faced with a situation of this type, while the kids are in favour of dealing with the occurrences themselves. At all events, it seems that education in responsibility is the key to ensuring security in mobile phone use by children.

For INTECO and Orange, this begins with working for prevention, ensuring that parents and children are sufficiently trained in the use of new technologies and are able to react responsibly to possible occurrences.

The *Study on safe habits in the use of ITC by children and adolescents and e-trust of their parents*¹⁴ identifies a number of recommendations to governments for promoting safe and responsible use of new technologies by children and adolescents. Recommended courses of action adapted to the reality described in this study are summarised below, supplemented by new suggestions and proposals made by the experts who collaborated on this project:

¹⁴ Op. Cit. 3

- Continue efforts to inform children about the importance of a thorough understanding of new technologies, in particular mobile phones, ensuring that the training covers the existence of risks and how to prevent and combat them. Key courses of action should consider a constant course of training and awareness aimed at children and adults. This effort requires a necessary interrelationship between all the partners involved: families, of course, but also governments, mobile phone operators, industry, educational authorities and non-profit organisations (NGOs). Each and every one of them, from its area of expertise, must activate the mechanisms necessary to create a safe environment for the use of mobile phones by children.

The study draws interesting conclusions in this regard, which can outline some features that future training activities should bring together:

- The training activity must be aimed at providing specific guidelines to identify risks and how to tackle them. Effective information should be provided to allow parents and children to feel safe and comfortable using ITCs, particularly mobile phones. Only with a thorough understanding of the threats present on the Internet, can the latter be attacked and addressed. In this sense, it would be useful to have guidelines that allow parents and children to diagnose whether or not a risk definitely exists. In the context described in the study, and given the dynamic nature of the material, a tool is necessary to know whether indeed one is in a situation which may pose a threat.
- We must reach groups of adults and children, while finding a way to bridge the digital divide between the two groups. Mobile phones are almost as common among adolescents as among adults. Along with identifying training initiatives aimed at both groups, it might be useful to take advantage of these synergies to present awareness initiatives in which both groups (either simultaneously or successively) form the target audience.
- In measures to raise awareness of ITCs, the mobile phone and video games should not be neglected. So far, training activities have focused on the safe use of the Internet as a priority over other ITCs. In any case, the objective should be that parents and children know that situations can also take place in alternative channels to the Internet (for example, cyberbullying or access to violent or inappropriate content via mobile phones) in order to know how to combat them.
- Training in the risks present in mobile phones must be rigorous and practical, avoiding alarmist rhetoric. Parents and children handle mobile

phones with ease and confidence; the training activities should be built on a means of communication that provides safety to the user.

- Training should be reinforced with effective responses to an incidence of a safety problem. Most of the risks analysed in the study should be addressed in educational activities that promote good judgement, rather than with physical or technical measures. This responsibility, shared between public services and industry, is clear from the study data: apart from "talking to the child to provide guidelines for action", parents are not taking other actions in security incidences. The option of filing a report or a formal complaint with the State Security Forces is hardly considered at all.
- Maintain, consistently and decisively, the effort being made by public services to train and educate the public on the safety aspects of technology use by children.

At the time of this study's release, several initiatives to pursue this goal of education and awareness have been identified in Spain. In general, measures being adopted not only take children into account, but also involve their parents and educators, as well as other members of the educational community. The way in which different Government Services are implementing actions with the goal of awareness and training is varied: development of guides and interactive teaching materials, distribution of good practices, publication of studies, creation of websites, giving talks, seminars and courses, etc.

Among the initiatives carried out by INTECO, we may mention:

- Creation of a Web department called "Protected Child", with information and resources for both adults (parents and teachers) and children themselves. The department is available at: the website of the Office of Internet User Security: [http://www.osi.es/Protegete/Menores protegidos/](http://www.osi.es/Protegete/Menores_protegidos/) and at the INTECO Web site: [http://cert.inteco.es/Proteccion/Menores protegidos](http://cert.inteco.es/Proteccion/Menores_protegidos).
- Publication of guides and free materials such as: the Children's Internet Guide for Parents, the Child's Internet Guide, the Home Security Toolkit, the Practical guide on how to enable and configure parental controls of operating systems, the Guide for the legal protection of children using the Internet, the Guide to social networks, Minors and privacy on the Internet, and the Guide for protection and safe use of your mobile phone, which are all available at www.inteco.es
- The launch of SecuKid®, a mobile phone game aimed at children and adolescents of 11 years and older. The game is designed to teach some of

the risks of the Internet, their effects and how to prevent them. It is available at: <http://www.secukid.es/>

- The development and online publication of TriviRal®, a set of questions and answers about Internet threats. The game is available online at <http://www.navegacionsegura.es/>.
- Ensure the organisation and systemisation of existing information on the subject, aimed at giving those involved a better basis for decision making. We propose creating an up-to-date repository of terms related to threats in ITC use by children, bringing together criteria in connection with basic concepts in this area (grooming, cyberbullying, child abuse, stalking, etc.) which are not being sufficiently made use of. In this way, the identification of potential emerging threats to children could allow preventive measures to be implemented.
- Make an inventory of tools and safety practices. The key is to provide information not only about risks, but also about safety solutions: software tools and solutions supporting the role of parental control (antivirus for mobile phones, systems to control access to content, etc.). It would be advisable to have an information point that unifies the various safety solutions, be they technical or educational.
- Create a Web portal on which to post all reports, data and relevant studies related to the protection of children's ITC use, in particular the mobile phone. Similarly, it would be advisable to promote an agreement to facilitate the establishment of a methodology and a common research framework.
- A serious and rigorous diagnosis that objectively analyses the data and reveals the real incidence of inappropriate ITC use by children is necessary. This study is a starting point. Research should be based on analysis methodologies to deal with issues not addressed in the published works on the subject. These shortcomings have been detected by the Spanish team of EU Kids Online. INTECO, in designing the methodology of this study, took into account the following circumstances:
 - Research also aimed at smaller children. Most Spanish reports do not include children under 12 years, which means the study leaves out one of the most important study groups (children aged 10 to 11 years). For this reason, in defining the study's scope, Spanish children aged 10 to 16 years were included.
 - Specific research in mobile telephone use. Existing studies tend to address Internet access in general, regardless of whether it is done via mobile phones or other devices.

- Research that includes new and unexpected risks, such as *sexting*, are also included in the analysis.
- Research focused on how children (and their parents) respond to and should respond to the risks they face.
- Research which enables those who are particularly vulnerable or at risk among the entire population of children to be identified. Analysis segmented by the gender and age of the child permits this.
- Create help lines for children and for formal complaints. Establish a children, adults and citizens advice service concerning the present risks in ITC, and more specifically in mobile phone use. In this regard, the Office of Internet User Safety (OSI, above) is an interesting initiative.
- Effectively publicise the presence of the existing channels for formal complaints. In the European framework and under the auspices of the *Safer Internet Action Plan* the INHOPE network has been created (*International Association of Internet Hotlines*), to co-ordinate European complaint hotlines (managed in Spain by Protégeles via www.protegeles.com). Some autonomous regions, like Andalusia, have also implemented telephone helplines and channels for receiving formal complaints of this nature.

Also, if the situation could constitute a crime, it must be brought to the attention of the State Security Forces:

- National Police. Technological Investigation Squad.

<http://www.policia.es/bit/index.htm>

delitos.tecnologicos@policia.es

denuncias.pornografia.infantil@policia.es

Telephone: 915.822.751 / 752/ 753 / 754/ 755

- Civil Guard. Data Transmission Crime Group. Central Operational Unit.

<https://www.gdt.guardiacivil.es>

- Promote the establishment of permanent communication channels, and periodic meetings between the various agents (school representatives, consumer organisations, parents associations, security forces, child protection agencies, telecommunications service providers, etc.) thus increasing the level of knowledge

and, in particular, shortening the length of time between a problem's incidence and society's response.

- Encourage good practices and self-regulation by operators and service providers, through codes of conduct, as a way to address safety and privacy risks. One of the situations being detected at European level is that the law always lags behind technological changes. This makes self-regulation and coregulation carried out by telephone operators, Internet service providers, government measures to stimulate action and initiatives and NGOs of great importance in helping achieve safe mobile phone use. Drawn from the *European framework for safer mobile phone use by children and adolescents*, Spanish network operators signed the *Code of Conduct for Mobile Phone Operators for the Promotion of Responsible Use by Minors in Access to Mobile Electronic Content Services in Spain* in December 2007. By signing this Code of Conduct, operators pledged to emphasise actions that were already being developed such as:

- Access control mechanisms

Operators undertake not to sell adult content without providing access control measures in advance. They also commit to making access control mechanisms for restricting access to adult-rated content by minors available to parents, guardians or caretakers.

- Content rating

Operators undertake to label content that has been classified as not suitable for children under 18 years and to make this rating known to users prior to his/her accessing such content .

- Education and awareness

Mobile phone operators will provide information on responsible use of mobile services, which will include the measures that parents, guardians and educators can take to ensure their children use them responsibly.

In the same way, mobile operators will encourage their clients who are parents to talk to their children about the best way to deal with matters related to responsible mobile phone use.

Mobile phone operators will work actively with schools, organisations devoted to children and public service institutions to distribute messages and campaigns for responsible mobile phone use in schools and childcare centres.

Mobile phone operators commit to creating a mechanism for addressing user concerns and complaints relating to the responsible use of content via mobile phones to be available to their users.

o Illegal content

Mobile operators will continue to work with the State Security Forces to comply with their obligations in relation to content deemed illegal from the standpoint of criminal law, in particular content that could adversely affect the childhood and adolescent development.

Mobile operators agree to remove or limit access to any hosted content that has been declared illegal by the competent judicial authority. Removing or blocking access to illegal content will be done within the period prescribed by the court order classifying such content as illegal under criminal law.

Similarly, when a competent administrative authority publishes a list of web pages with content that should be considered illegal under Spanish law, in the way that has been implemented in other European countries, mobile operators commit to installing filters that prevent access to these websites.

Mobile phone operators pledge to support public and private entities of recognised prestige in their fight against illegal content, particularly content relating to child pornography propagated on the Internet, and will work with them to detect and then block access to such content.

14.2 Specific measures

Below are more specific recommendations which include proposals for safety improvements in mobile telephone use (in terms of infrastructure, technology, operation, etc.) as well as actions that would be needed to ensure safer use of mobile phones by children. These are measures that address different areas of action. The multidisciplinary nature comes precisely from the heterogeneity of the experts participating in the study, whose contributions have been taken into account when identifying specific recommendations. Listed below are the measures about which most agreement has been reached.

- Avoid issues arising from unwanted calls from strangers by restricting incoming calls using "white lists", so that, controlled by parents and guardians, the child can only receive calls to his/her mobile phone from those numbers that have been previously authorised and can in no case receive calls from unidentified numbers.

- Create mechanisms to identify that a particular mobile phone number is used by a child and therefore not allow its registration in social networks or other online services targeted at adults, or in general control the types of use that can originate from that number, all without needing to identify the child.
- Apply existing protection systems to prevent access to inappropriate content. For example the PEGI¹⁵.
- Pair a child's mobile phone contract with an adult's contract. These contracts should include a checkbox that verifies that the associated number will be used by a child. In this way, a series of security filters will automatically determine the limits on service use.
- Create specific child service departments at the operators, so that if the blocking of certain services is requested, it will be carried out immediately.
- Extend Internet legislation to mobile phones so that a mobile phone can be considered a small computer with a telephone.
- Require a compulsory electronic identity card for children who wish to use mobile phones.
- "GPS" service for parents for location of the child's mobile phone. These services should be offered free of charge by operators and always accompanied by a detailed set of rules of use provided by company personnel
- Create an easily accessible public portal in each country, allowing parents to purchase filtering tools and easy access to information that positively contributes to safer mobile phone use by children.
- Create awareness campaigns through the same tools used to ensure safe use of mobile phones by minors. For example, awareness campaigns using new channels, not merely the press or television, could be considered. The greatest impact would be obtained using social networks such Facebook or Twitter.
- Configure default settings to block access to adult content.
- Create technological tools that enable compliance with current legislation, such as user age verification in services prohibited for children, or those in which authorisation by a parent or guardian is necessary.

¹⁵ The age rating system established by Pan-European Games Information (PEGI) was established in order to help European parents make informed decisions when purchasing computer games. Information about PEGI available at: <http://www.pegi.info/es/>

- Carry out private initiatives to conduct awareness campaigns, which could be organised as a thematic caravans or buses going around to different cities, perhaps giving a playful orientation to the campaign, to attract children.
- Distribute documented information to children in class to be examined, or at least clearly respond to feedback of what they have studied and understood; the problem is that knowledge will not last if they do not come to a total understanding of the problems and dangers they face.
- Ban anonymous calls in the same way that sales calls and direct sales to children's mobiles are neutralised.
- Include safety tips in users' phone bills.
- Untangle the complication involving data retention and forensic use. This requires improving *data mining* systems based on patterns of misconduct.
- Make tracking systems for lost or stolen devices common, including remote reset.
- Implement a national registry of phone numbers used by adolescents / children. Voluntary listing therein, similar to the "Robinson Lists"¹⁶ and consultation and registration is mandatory for operators and service providers for mobile handsets.

¹⁶The Robinson List Service is a service of advertising exclusion managed by the Federation of Electronic Commerce and Direct Marketing, established in accordance with the provisions of the Data Protection regulations. This service is encompassed within advertising directed to a person's name and a mailing address, an E-mail address or a particular phone number.

15 ADVICE FOR FATHERS AND MOTHERS, GUARDIANS AND EDUCATORS

A set of guidelines targeted at parents is presented below. The aim is to provide them with tools that can help them monitor and control their young children's mobile phone use.

The advice provided here is preliminary. The parents will, after evaluating the particular circumstances of their home, define specific rules.

On the age of access to mobile phone use

Although the recommended age for a child to have a personal mobile phone is up to parents, it is advisable to make an objective evaluation in this regard. According to the report's findings, the age of access to mobile phone use by Spanish children would be between 10 and 12 years old. In general, it is advisable to delay the possession of a mobile as long as possible.

On the imposition of rules for mobile phone use

It is important to agree, together with the child, to house rules for mobile phone use. Rules of use should take into account the child's specific circumstances, and be adapted to the child's age. It is advisable to establish the following regulations:

- Areas for mobile phone use.
- Times for mobile phone use.
- Uses and services of the mobile phone (music, Internet access, games, content, paid services, etc.)

On parent-child communication about mobile phone use

Complete and rigorous information on present risks in mobile phone use and how to combat them form the basis for children to use the mobile responsibly. Parents, as key figures in the development and supervision of kids, play an important role. The difficulty rests, sometimes, with the parents' own ignorance of the situations that may occur with mobile phones.

We have seen in the report that, when risk situations occur, children choose to deal with them themselves, without involving their parents. However, adults are convinced that, in an incidence, children would resort to them. Parents should be aware of this situation when defining the framework to communicate with their children about mobile phones.

Thus, adults face the dual challenge of getting information themselves (as a step to transmitting ideas regarding safety to their children) and creating a climate of trust with their children to ensure transparent communication. In the present context, where mobile phones form an indispensable part of life for children and adults, it is not a good idea to restrict mobile phone use as the only response to the incidence of threats. It is more important to educate responsibly.

It is also a good idea to share experiences with other parents.

Some of the areas where it is advisable to take measures are proposed below:

- Make children aware of the time they spend talking and sending messages.
- Transmit to children the importance of privacy issues, both their own and other children's.
- Raise awareness among children of the importance of behaviour associated with cyberbullying, both active and passive, and inspire enough trust in them to involve adults in the case of an incidence. It is also important to pay attention to possible telltale signs that might be evidence that the minor is suffering harassment (anger, irritability, etc.).
- Warn of the danger of organising meetings in person with strangers.
- Agree with children on what kind of content is recommended for them to see and what is not. Through the telephone operator, access to adult content from the child's computer can be blocked. In any case, blocking does not guarantee that children will not access certain content (via the Internet, or from a friend's phone, for example). Therefore, the proposal from INTECO and Orange is to approach the issue of access to content by appealing to the responsibility of the child, not by imposing restrictions.

Table21: Advice to parents

Age of access	Delay as much as possible the possession of a mobile phone.
Rules of use	Establish rules about: <ul style="list-style-type: none"> - Space - Time - Mobile phone uses / services
Information and communication	<ol style="list-style-type: none"> 1. Keep abreast of the possibilities the child's mobile phone offers, the risks that may occur and how to prevent and/or combat them. 2. Share experiences with other parents. 3. In communicating with the child, emphasise sensitive issues: <ul style="list-style-type: none"> - Mobile phone dependence - Privacy - Cyberbullying - Meetings in person with strangers - Appropriate content for the child's age

Source: INTECO

16 ADVICE FOR CHILDREN

The following are some tips and guidelines aimed at boys, girls and adolescents in order to help them to use their mobile phones more safely:

- It is important that you respect the rules of use your parents impose as regards times and places of phone use and the services you can access.
- You should also observe restrictions on the use of camera phones in some public places: swimming pools, schools, gymnasiums, etc.
- It is not wise to send photographs that may embarrass or compromise other people. This is especially important with photos taken of other children. The best thing to do is to treat others as you would want them to treat you.
- When you take compromising photographs or videos, remember that, once they are sent they are out of your control. They can reach people you didn't intend, and can have a larger impact than we can imagine.
- You have to be aware of people, mostly adults, who can take photos of you or your friends.
- If you receive an image of aggression against another person, save it and show it immediately to your parents, teachers or an adult you can trust.
- Try not to send personal data that can identify you (for example, your address or any piece of information that can give a clue as to where you live or what places you frequent).
- If you receive threatening messages or calls that cause you unease, save them as evidence and tell your parents.
- As much as possible, it is not advisable to reply to messages from strangers.
- It is important to treat others as you'd like them to treat you: with respect and without mocking anyone.
- If you feel harassed, talk to your parents. Also tell them about any strange or annoying thing that happens to you on the phone.
- Don't get together with people who you only know through your mobile phone. If you do, bring your father or another adult you trust, and always do so in a public place.

- To avoid receiving spam, carefully read the terms and conditions of use of forms before giving your telephone number or e-mail address. In addition, we suggest that you ignore SMS or MMS messages of unknown origin that lead to downloading or accessing potentially dangerous sites.
- Before answering spam messages, or calling the number that appears in the message, keep in mind that the price of the call could be very high. If you have doubts about it, let your parents handle it.
- Use the security settings available on your mobile phone.
- Regarding Bluetooth, it should be deactivated if you are not using it, and set to not accept connections from unknown devices to avoid unwanted content transfers.
- Disable location services (such as GPS) when you're not using them or when you don't need them.
- In case of theft or loss, you should block the SIM card as soon as possible, to prevent third parties from charging expenses to your account.
- When you connect to social networks from your mobile phone take these guidelines into account¹⁷:
 - Read carefully and completely the privacy policy and terms of use of the social network you use.
 - Use privacy options in the social network.
 - Don't accept friendship offers from strangers.
 - Don't let anybody view your profile or personal information without your consent.
 - Never send sensitive information.
 - Choose carefully the images, videos or information to be published on social networks.
 - Be careful about what you post about another person and, if in doubt, it is better to ask permission before doing so.

¹⁷ "Practical advice to users on how to stay safer online, anywhere, anytime" published by ENISA (European Network and Information Security Agency) available at <http://www.enisa.europa.eu/act/ar/deliverables/2010/onlineasithappens/>

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