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EU Kids Online 2020

Survey results from 19 countries

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EU Kids Online 2020: Survey results from 19 countries. This report maps the internet access, online practices, skills, online risks and opportunities for children aged 9–16 in Europe. Teams of the EU Kids Online network collaborated between autumn 2017 and summer 2019 to conduct a major survey of 25,101 children in 19 European countries.

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The EU Kids Online network is a multinational research network. It seeks to enhance knowledge of European children's online opportunities, risks and safety. It uses multiple methods to map children's and parents' experiences of the internet, in dialogue with national and European policy stakeholders. Now working in more than 30 countries, the network integrates research expertise across multiple disciplines and methods.

For all reports, findings and the technical report of this survey, as well as full details of national partners, please visit www.eukidsonline.net

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Key findings

This report presents the findings from a survey of children aged 9–16 from 19 European countries. The data were collected between autumn 2017 and summer 2019 from 25,101 children by national teams from the EU Kids Online network.

A theoretical model and a common methodology to guide this work was developed during four phases of the network's work, and is discussed at the outset of this report. The main findings from the key topic areas are summarised, which correspond to the factors identified in the theoretical model: Access, Practices and skills, Risks and opportunities, and Social context.

Throughout the report, findings are presented according to the countries surveyed, and the gender and age of the children. The survey findings are comparable across countries, and the methodology section presents the common methods followed. We also note where the methodology varied across countries: throughout the report, the differences among countries should be interpreted with caution.

These new findings raise many points to think about. The last section includes findings from national data by country, to provide some national contextualisation, and also to report on findings from country-specific questions. We conclude by drawing together the findings from within countries and across countries, relating these to the theoretical model. Important research gaps and policy implications for children's online opportunities and risks in Europe are also discussed.

Access

The nature and frequency of children's internet access and use shapes their outcomes in a digital world. For most children across Europe, smartphones are now the preferred means of going online. This often means that they have 'anywhere, anytime' connectivity, with the majority of children reporting using their smartphones *daily or almost all the time*.

- The findings reveal a substantial increase in both the proportion of smartphone-using children and the amount of internet use compared with the EU Kids Online survey in 2010. The time that children spend online each day has almost doubled in many countries – for example, from about one to three hours per day in Spain, and from about two to three-and-a-half hours in Norway.
- Children aged 15–16 are more likely to use smartphones daily compared with younger children, and spend about twice as much time online than 9- to 11-year-olds.
- In some countries, girls are slightly more likely than boys to access the internet from their smartphones daily. On most measures of access, there are few gender differences, except that overall, boys spend a little longer online than girls.
- As the devices for internet access continue to change, in most countries less than half of the children aged 9–16 access the internet through a desktop computer or notebook. On the other hand, between 3% and 15% of the children connect though wearable device and 1% to 18% via a connected toy.

Practices and skills

- Children's online experiences have changed considerably over the past decade, with YouTube becoming increasingly popular, and with national social networking sites giving way to Instagram and other prominent apps.
- Watching videos, listening to music, communicating with friends and family, visiting a social networking site and playing online games top the list of activities that children do on a daily basis. Country differences are considerable, however. For instance, watching videos daily ranges between 43% of 9- to 16-year-olds in Slovakia and 82% in Lithuania.
- Now that in most of the countries over half of all of the children use social networking sites at least weekly, it is perhaps more noteworthy that not all of the children do so: half of Spanish children and slightly over 40% of those in France, Germany and Malta never or hardly ever visit a social networking site.
- Although it is commonly thought that girls especially favour socialising online, the survey showed that there are only small or no gender differences in visiting social networking sites in most countries (as was also the case for the EU Kids Online survey in 2010). On the other hand, playing games is still gendered – in most countries, around twice as many boys as girls play games online daily.
- Age differences are much greater, in part reflecting the age limits set by most platforms as well as the greater interest in online socialising of older than younger children. Despite these limits, however, we found that a considerable number of 9- to 11-year-olds report visiting a social networking site every day, ranging from 11% in Germany to 45% in Serbia.

- Older children were asked to report on their competences regarding several types of digital skill in the survey. Across the countries, most children aged 12–16 scored highly on operational and social skills. Information navigation skills were found to be uneven across countries, and particularly low in Switzerland, Germany, Spain, France and Italy. Countries were also uneven for creative skills, though in most of them, fewer than half of the children said they could edit or make basic changes to online content, for instance.

Risks and opportunities

The EU Kids Online survey asks children about harm in general, as they see it, before specific questions about risky activities are presented to them.

- The question asked of 9- to 16-year-olds was*: In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)?* The proportion of children who said 'yes' varied among countries, ranging from 7% (Slovakia) to 45% (Malta).

- In most of the countries, the proportion of children who said 'yes', something online had bothered or upset them, is smaller than the proportion in each country who reported the more common risks, such as sexting or meeting new people on the internet. This suggests that not all risk results in self-reported harm to a child.

- The proportion of children reporting such a negative online experience rises with age, although there are few or no gender differences in most countries.

- Among those children who said they had had a negative experience online, most said it had happened a few times, but not frequently.

- Number of children who reported that they told no one about their negative experiences ranges between 4% (France) and 30% (Estonia). Most often, children told about the negative experience a parent or friend or both (rarely did they tell a teacher or professional whose job it is to help children).

- In addition to telling someone, the children tried a range of strategies – closing the window or app, blocking a troublesome person and, for some, ignoring the problem or even feeling guilty about what had happened. Between 3% (Italy) and 35% (Poland) of children reported the problem online.

- However, most children said that they usually knew how to react to the online behaviours of others they did not like.

The survey asked the children about several kinds of online activities and experiences that can result in harm for some children. Some of these activities or experiences have a greater potential for harm, whereas some have greater potential for benefit.

- In most of the countries, less than 10% of the children reported being a victim of online bullying which happened on a monthly basis, while less than 5% reported bullying others monthly online. There were no substantial gender differences. Of those who had been the victim of such behaviour online, a fifth reported no harm and another fifth reported intense harm.

- The survey asked only older children (12- to 16-year-olds) about exposure to a range of potentially harmful content. The majority of children aged 12–16 in most of the countries have not seen ways of physically harming or hurting themselves in the past year online on a monthly basis. Most, too, have not seen ways to be very thin on the internet in the past year, although in some countries, slightly more girls than boys report seeing such content. However, in the majority of the countries, the most common of the potentially harmful content we asked about was exposure to hate messages – from 4% (Germany) to 48% (Poland) – with no gender differences.

- The most common experience related to data misuse is getting a virus or spyware. Also, more boys than girls reported that they spend too much money on apps or games; overall, personal data misuse increases with age.

- The survey also asked about excessive internet use and measured five criteria or this problem. Few children reported that they have gone without eating and sleeping because of the internet daily or weekly, and more children – from 4% (Slovakia) to 21% (Flanders) – have daily or weekly spent less time with family, friends or doing schoolwork because of time spent online. However, the majority of the children in all of the countries do not experience any of the criteria of excessive internet use. All five of the criteria of excessive internet use are experienced by 0% to 2.1% of children.

- Exchanging sexual messages ('sexting') may be an opportunity or a risk. Among 12- to 16-year-olds, the percentage who received a sexual message in the past year ranged between 8% (Italy) and 39% (Flanders) – more were older than younger, but gender differences were minor. Sending sexual messages is less prevalent than receiving such messages, ranging between 1% (France) and 18% (Germany). Such messages may be wanted or unwanted: when asked about receiving unwanted sexual requests online, the findings showed that more girls and older children experienced such unwanted requests.

- The percentage of 9- to 16-year-olds who reported seeing some kind of sexual image in the past year ranged from 21% (France) to 50% (Serbia). Again, more boys and older children saw these images. The internet was a more common means of such exposure than traditional media (television, films, magazines). The largest proportion of children said seeing such images did not affect them negatively or positively. In most countries, the proportion of children who were happy or fairly or very upset is similar, stressing the notion that seeing sexual images could be both a risk and an opportunity. However, more girls felt upset after this experience.

- Between one in four and one in two children have communicated online with someone they not met face-to-face before, but fewer – generally around one in six – have met such a person offline. More older children and boys interact with unknown people than younger children or girls, although few gender differences were found for face-to-face meetings. Most children reported being happy after a face-to-face meeting with their online contacts, again suggesting that this activity can be an opportunity rather than just a risk.

- The majority of the children say they find it easier to be themselves online at least sometimes. In some of the countries, boys more often than girls say this. In about half of the countries, a majority of children also said they talk about different things online than offline at least sometimes. However, the majority of the children in all of the countries said they never talk about personal things online that they do not talk about face-to-face.

Social context

- Who supports children as they go online? In most of the countries, most of the children say that their parents engage in active mediation at least sometimes (talk to them, encourage them, help them and suggest ways to use internet safely). In previous research such actions have been associated with higher levels of digital skills and more online opportunities. However, parents focus more on encouraging safe use of the internet than on encouraging children to explore the opportunities that the internet offers.

- Parents are the main source of help when something bothering or upsetting happens online to the children. In all of the countries, more than half of the children say their parents help them at least sometimes. Friends are reported as sources of help by a lower number of children. In most of the countries, teachers are the least commonly used source of help.

- The findings show that in most of the countries, over four in five children receive advice on safe internet use from parents, friends or teachers. On the other hand, in most countries, between one in ten and one in four young internet users say that they have never or hardly ever received any safety advice from parents, teachers or friends.

- In most of the countries girls and younger children more than boys and older children talk to their parents about their online activities.

- Parents are generally preferred as a source of support, although the children consider that teachers encourage them to explore and learn new things online as well as ways to use the internet safety.

- The survey asked about three technological options parents can use: whether parents use parental control software that would block or filter the content on the internet, whether parents keep track of applications or online activities the child engages in, and whether parents use any technology to track the location of the child such as GPS. In most countries, a minority of children reported that their parents use any of these technological controls.

- The results show that parents don't often use restrictive mediation – only a few children are not allowed to use webcams, download content or go on social networking sites. In most of the countries there are no gender differences in restrictions on use of social networking sites. However, younger children more often than older children are not allowed to use social networking sites.

- Parents are not always a source of support. In most of the countries, up to a third of the children said their parents had published something online about them without asking them. Between 3% (Lithuania) and 29% (Romania) have asked their parents to remove things they have published from the internet.

- In all countries, about one in ten children never feel safe online. More negatively, between 3% (Norway) and 44% (Spain) of the children never find other people are kind and helpful on the internet.

- Regarding 'reverse mediation', the survey found that a sizeable minority of children, and in some countries a majority of children, help often or very often their parent(s) when they find something difficult on the internet (ranging between 12% in Germany and 69% in Serbia). This may indicate a continuing generation gap, where parents lag behind their children in digital skills. More positively, it may suggest that parents are not afraid to let their children help them, and that families are sharing the challenge of learning to manage the digital environment together.

Introduction

About this report

During the past three decades, use of the internet and digital technologies has become an inextricable part of the daily lives of European citizens. Responding to the needs for mapping and understanding the risks and benefits experienced by children, the EU Kids Online project conducts robust international research on children's use of the internet and digital technologies (see 'EU Kids Online project').

In this report, we follow up work from the EU Kids Online 2010, in which the network published an international report based on a survey taken among children and parents in 25 European countries.[1] Following its huge impact on policy and prevention and intervention efforts at both national and international levels, our aim is to again provide crucial information highlighting the patterns of current technology use and the related positive and negative experiences of children aged 9–16. To fill this goal, between autumn 2017 and summer 2019, with the joint cooperation of teams from the EU Kids Online network, a survey was carried out among children in 19 European countries (see Figure 1). It should be noted that this initiative was solely based on funding sourced or ensured by each national team, and we thank all involved members and contributing parties for their contributions (see 'Acknowledgements').

The new survey partially followed earlier research from EU Kids Online 2010. However, in the current survey and also in this report, we recognised significant changes that have happened in the past decade with regard to the digital environment. These include the rapid proliferation of smartphones and fast mobile internet resulting in increased access to internet by mobile phones or tablets.[2] New services and digital worlds for children have also been developed, such as Instagram and TikTok. Consequently, and in line with the development of touch-screen devices, children are also using the internet at earlier ages.[3] On the other hand, policy and legal actions such as the GDPR (General Data Protection Regulation) have also responded to these changes, resulting in the restriction of certain services. In response to all these changes, this report provides findings based on wide and robust cross-culture research. The main goal of this report is to map the online access, practices, skills and current risks and opportunities of internet use among European children.

This report is centred on several areas of interest that correspond to the theoretical model presented next in the section Theoretical background of the project. Multiple chapters with findings cover the topics also presented in EU Kids Online 2010.[4] In this report, we specifically describe four main areas: (1) access (how children access the internet and how much time they spend there); (2) practices and skills (what children do online and how skilled they are when using the internet); (3) risks and opportunities (the specific activities or experiences that can lead to harm or to a positive outcome, including overall negative experiences, online aggression and cyberbullying, encountering potentially harmful content, experiencing data misuse, excessive internet use, sexting, seeing sexual images, meeting new people online and preference for online communication); and (4) social context (other actors who affect children's engagement with the internet with specific focus on mediation, sharenting and children's perceptions of the online environment). The last part of the report comprises country profiles of the 19 countries that participated in the survey. These highlight the most interesting findings from the national surveys, including questions that are not addressed in this report and more profound analyses of data. The results in the country profiles may differ slightly from results in other sections, due to different age groups, variations in analytic approach, etc.

[1] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents.* EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

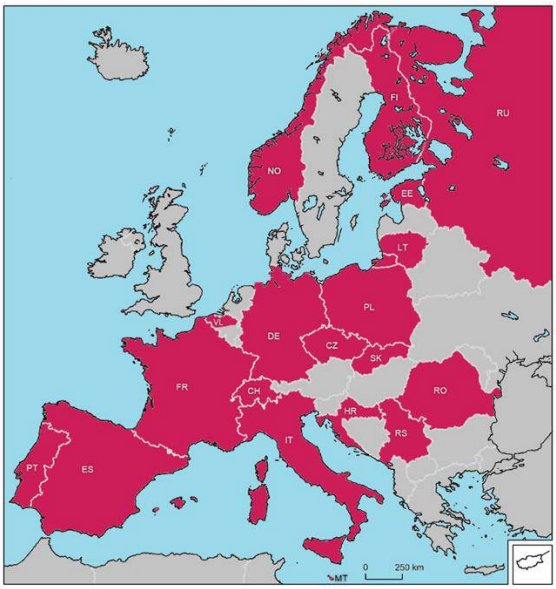
[2] Mascheroni, G. & Ólafsson, K. (2014). *Net Children Go Mobile: Risks and opportunities* (second edition). Educatt. http://netchildrengomobile.eu/reports/

[3] Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J., Lahmar, J., & Scott, F. (2018). Play and creativity in young children's use of apps. *British Journal of Educational Technology, 49*(5), 870–82. https://doi.org/10.1111/bjet.12622

[4] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents.* EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

All findings are based on the questionnaire developed by members of the EU Kids Online network in cooperation with members of the Global Kids Online network (see www.globalkidsonline.net). As noted above, although the questionnaire was adapted from the 2010 version, changes were made to reflect changes in the digital environment, which limits direct comparison between the two projects (see below 'How to read the findings'). In this report, we focus only on the basic descriptive results of the core questions of this survey, i.e., questions that were intended to be used in each and every country and cover areas that are of the greatest interest for all parties. However, interested readers are invited to read the upcoming short reports that will go into more depth in selected areas and also cover several topics that have not been included in this report (such as the cyberhate phenomenon). These reports will be available on the EU Kids Online website (www.eukidsonline.net). Readers of this report may also be interested to read the Global Kids Online report,[5] which maps internet use by children in 11 countries worldwide.

Figure 1: Countries that participated in the survey (in red)



Thus, the findings provided in this report cover the main topics that are of academic, policy and public debate in relation to children's use of technology. These are presented within each country participating in the survey. It should be noted that because of the absence of a central funding body, the methodology used varied between countries. Readers are strongly urged to read 'How to read the findings' to gain the necessary background to be able to interpret correctly the presented findings. For parsimony, this report also focuses predominantly only on age and gender differences, with examination of other links pursued in the short reports.

This report is intended to be of access and use for a broad audience. This includes academics, who can use the report to understand the global picture of different opportunities and risks in various countries and in further research. Stakeholders and policy-makers could use the report to plan future steps. The report may also help organisations that are carrying out preventive and intervention programmes for children, such as the Safer Internet network (see www.betterinternetforkids.eu). Last, but not least, the report may also be interesting to parents striving to gain a better insight into their children's technology use and to get a broader picture about the issues being debated, such as those concerning online risks. To summarise, we believe that this report will be interesting and beneficial for anyone who would like to know more about children's risks and opportunities in internet use.

EU Kids Online project

EU Kids Online is a multinational research network. It seeks to enhance the knowledge of European children's online opportunities, risks and safety. It uses multiple methods to map children's and parents' experiences of the internet, in dialogue with national and European policy stakeholders. Founded in 2006 by Sonia Livingstone and Leslie Haddon (London School of Economics and Political Science, hereafter LSE), EU Kids Online is established as the primary source of high-quality, independent and comprehensive evidence underpinning a better and safer internet for children in Europe. Now working in more than 30 countries, the network integrates research expertise across multiple disciplines and methods. It has built constructive relationships with governments, media, industry, policy-makers, educators and practitioners at national, European and international levels. Its findings and reports are widely referred to in policy statements, having guided numerous initiatives to improve children's online experiences.

The network's organisational structure is rather informal and builds on the close cooperation and mutual trust of all members. The countries involved include all EU member states as well as Iceland, Israel, Norway, Russia, Serbia, Switzerland and Turkey. There is one national coordinator for each country who coordinates the respective national team. The whole network is coordinated by a Management Group, with Uwe Hasebrink and Claudia

[5] Livingstone, S., Kardefelt Winther, D., Hussein, M., & UNICEF Office of Research - Innocenti (2019). *Global Kids Online: Comparative Report.* UNICEF Office of Research – Innocenti. www.unicef-irc.org/publications/1059-global-kids-online-comparative-report.html

Lampert (Germany), Leen d'Haenens (Belgium), Sonia Livingstone (UK), Giovanna Mascheroni (Italy), Kjartan Ólafsson (Iceland), Brian O'Neill (Ireland), Cristina Ponte (Portugal), David Smahel (Czech Republic) and Elisabeth Staksrud (Norway).

From 2006 until 2014, the network was funded by the European Commission's Better Internet for Kids programme. After that, given the accumulated expertise of the network and its eminent role as an actor providing solid empirical evidence for multistakeholder processes on the European as well as on the national level, the network members decided to continue their collaboration and to develop new cooperative projects. Among others, the network members were involved in the establishment of Global Kids Online (see globalkidsonline.net), in an effort to map the implementation of Better Internet for Kids policies in Europe. In 2019 the network successfully proposed a project 'Children Online: Research and Evidence' (CORE) within the HORIZON 2020 framework. In the years 2020–22 this project will conceptualise, implement and disseminate a comprehensive knowledge base on the impact of technological transformations on children and young people.

From 2017 to 2019, the network designed a second representative survey of children and online risks and opportunities. Based on the enthusiasm and engagement of the national teams and the generous support of different sources of national funding (see 'Acknowledgements'), the network succeeded in conducting surveys in 19 European countries. This report presents the findings of this new survey (see 'About this report').

Theoretical background of the project

The approach of the EU Kids Online network to the research field is holistic, and we draw from the competences and expertise of researchers from many academic disciplines, including, but not limited to, media and communication, psychology, sociology, education, history and political science. While we differ in and employ a wide range of theoretical concepts and research methods, we are united in our focus on conceptual clarification, mapping and collecting new evidence and debunking myths. In this we emphasise the value of systematic research-based documentation and mapping the role the internet, mobile phones and computer games play in children's lives. This is to inform not only the wider research community, but also the public and policy-makers, enabling informed debates and decisions about what the risk and opportunities of children's online engagements, and how this influences their rights and well-being.

In this report we work with a theoretical-analytical model that considers individual, social level and national factors.[6] The model serves as a basic roadmap showing the various factors influencing children's online experiences, and the impact of these experiences on children's well-being.

The model (see Figure 2), inspired by Bronfenbrenner's Ecological Systems Theory,[7] builds on the existing evidence about children and online media. When designing our questionnaire for the this survey, our aim was to include questions that would enable us to seek a deeper understanding of how children's engagement with the internet is dependent on individual factors, including age and gender, their socioeconomic and cultural background, personality traits, disabilities, opportunities to access the internet, level of different types of skills and how they use the internet. This includes how general psychological well-being, such as feelings of safety and belonging, is linked to (digital) well-being. On a social level we see that not only parents but also extended family with siblings and grandparents can play a role in the likelihood of an online experience being something leading to harm or something that the child has the skills to cope with and move on from. We also seek to understand the role and influence of peers, educators (such as, but not limited to teachers), and the larger community to which children belong. And importantly, we include the concept of 'digital ecology', the influence that may come for the technologically mediated communication children experience online, such as visiting online communities, multiplayer online games or other virtual environments. The perception of these online environments is crucial because it shapes children's online behaviours.

It should be noted that because of the complexity of the model, it is not possible to encompass findings related to all the mentioned areas in one report. Therefore, in this report, we present only selected findings related to access, practices and skills, opportunities and risks and social context, and consider the effects of gender and age (see 'About this report'). Further topics will be pursued in the upcoming short reports.

Finally, we include what we call 'country-level mediators/moderators', recognising how societal stratification, regulation, infrastructure, education and values in a country can play a role in mediating the outcomes of well-being. Recognising how the internet is now something that is integrated into most children's lives, used for information-seeking,

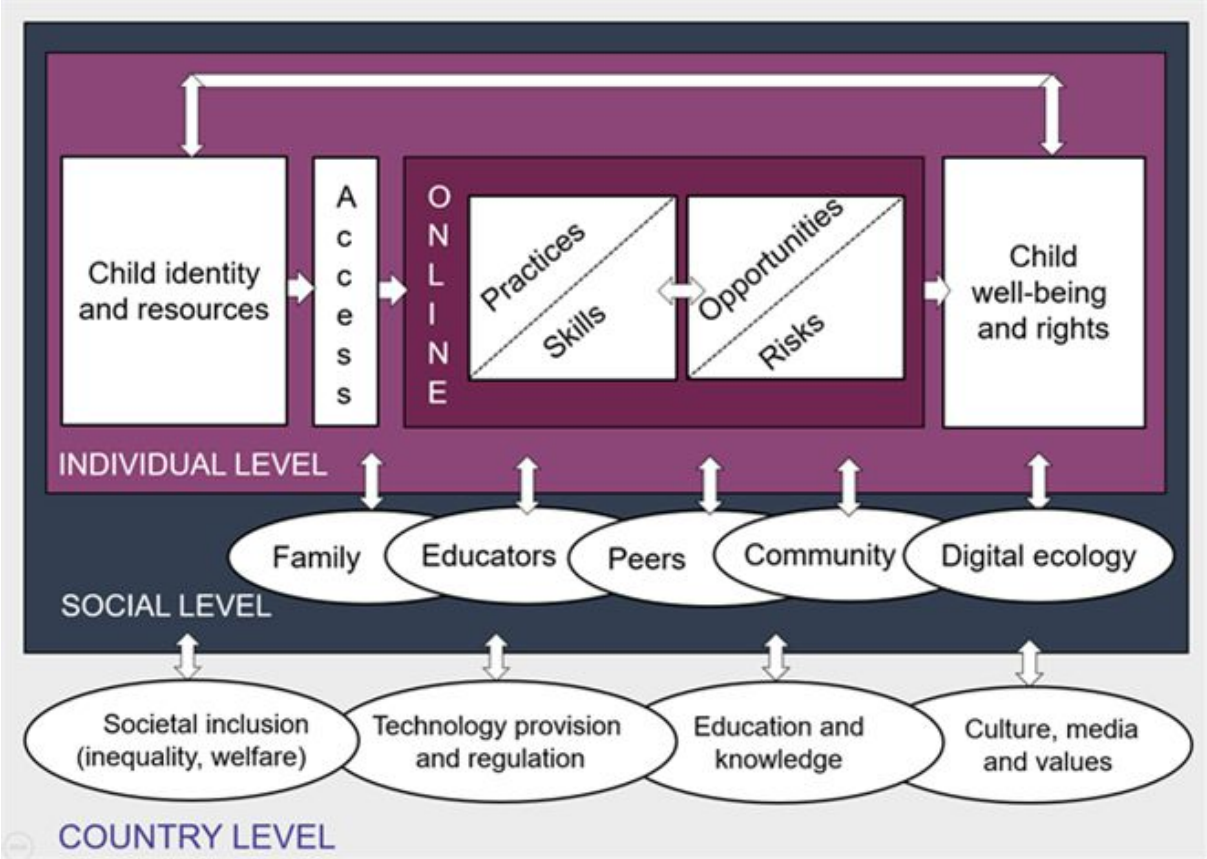
[6] Livingstone, S., Mascheroni, G., & Staksrud, E. (2018). European research on children's internet use: Assessing the past and anticipating the future. *New Media & Society, 20*(3), 1103–22. https://doi.org/10.1177/1461444816685930

[7] Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by design and nature*. Harvard University Press.

communication, learning and socialising, our model seeks to shift the agenda from how children engage with the internet as a medium to how they engage with the world mediated by the internet. This shift is what enables us to foreground children's agency, and to adopt a child-centred approach that simultaneously contextualises children's internet use in particular countries or contexts of childhood, assumes the interconnections between risks and opportunities as a starting point, and is aimed at designing research and policy that respects children's lives holistically and at eschewing moral panics in favour of the contribution of rigorous theory and evidence.

For a more detailed explanation of our analytical framework and how European research in the area of children and the internet has developed over the past two decades, please read the relevant article by Livingstone et al.[8]

Figure 2: The EU Kids Online theoretical model



[8] Livingstone, S., Mascheroni, G., & Staksrud, E. (2018). European research on children's internet use: Assessing the past and anticipating the future. *New Media & Society, 20*(3), 1103–22. https://doi.org/10.1177/1461444816685930

Methodology

This report is based on findings from surveys conducted in 19 European countries focused on internet users aged 9–17 (see Table 1), with a total of 25,101 participants. The data were collected between autumn 2017 and summer 2019. In this report, we present findings from a subsample of 21,964 children aged 9–16.

In this section, we summarise the most important aspects of the methods used in the survey preparation and data collection. Full details of the project methodology, materials, fieldwork, data management and research ethics are available in the Technical report of the EU Kids Online IV project at www.eukidsonline.net.

The questionnaire

The full master questionnaire in English and also its national translations are available at www.eukidsonline.net. The questionnaire is based on the tool used in the EU Kids Online survey in 2010[9] and the Global Kids Online survey[10] that were thoroughly adjusted to correspond to the current state of technology and patterns of internet use. The development of the new questionnaire was based on the co-operation and expertise of members of the EU Kids Online network, led by Professor Elisabeth Staksrud (University of Oslo, Norway) and researcher Kjartan Ólafsson (University of Akureyri, Iceland). Researchers as well as stakeholders were invited to participate in the process.

The questionnaire includes two types of questions – core questions, which represent the main focus of this survey, and optional questions that inquired into selected topics in more depth or asked about additional issues. The countries were instructed to use all the core questions and to choose from the optional questions in line with their preferences. The findings presented in this report are from the core questions only.

Considering the length of the questionnaire, and the complex and sensitive nature of some items, in most countries (except Spain, Finland, Croatia, France, and Flanders) the questionnaire was distributed in two forms: a full version for older children and a shorter version for younger children (9–10). In the master questionnaire, it was proposed that a block of questions be excluded from the version for younger children; however, each country had the option to decide itself which questions should not be asked of younger children.

The translation of the questionnaire was coordinated and supervised by expert members of the EU Kids Online within each country. In several countries (Czech Republic, Estonia, Italy, Lithuania and Switzerland), cognitive testing was conducted to assure the comprehensibility of the questionnaire and its national translation.

Sampling and population

The target survey population were children aged 9–17 who use the internet. However, several countries did not collect data from 17-year-olds. To maximise the number of countries and the comparability of the overall findings, we thus only analyse data from children aged 9–16 in this report.

Two sampling methods were recommended: sampling via households and via schools. Each participating country selected the method depending on available resources and country and cultural context. The following criteria were proposed to provide the best combination of representativeness and viability: the age of the child, the gender of the child, region (usually NUTS2) and urban/rural areas. The application of these criteria was tailored to the national context to provide data that would be representative of the targeted population.

Variants of household sampling include random walk, quota sampling and random recruitment/selection of households from a specific register. Countries that used household sampling were Croatia, Estonia, France, Germany, Italy, Lithuania, Norway, Russia and Slovakia (9 countries). The sampling and data collection in France was carried by using the online panel of the agency OpinionWay.

For sampling via schools, the guidelines defined for ESPAD 2015 (i.e., the European School Survey Project on Alcohol and other Drugs) were recommended. The general target population was defined as students aged 9 to 17 who were present in the classroom on the day of the survey. Students enrolled in regular, vocational, general and academic studies were included. Those who were enrolled in either special schools or special classes for students with learning disorders or severe physical disabilities were not included. Countries that used school sampling were the Czech Republic, Finland, Flanders, Malta, Poland, Portugal, Romania, Serbia, Spain and Switzerland (10 countries).

Three countries, Belgium, Finland and Russia, used specific sampling that also precluded the weighting options. Data from Belgium were designed to reflect only pupils from the Flanders region (thus the Belgian contribution for this survey is referred to as Flanders) while also excluding Brussels. Moreover, urban and regional profiles of surveyed schools differ from the

[9] See www.lse.ac.uk/media-and-communications/research/research-projects/eu-kids-online/toolkit/survey-questionnaires

[10] See www.globalkidsonline.net/tools/survey/

distributions in population. In Finland, the final sample deviates from population distributions of both the age and region. In Russia, the survey only took place in larger cities, unrepresentative of the regional distributions of the population. These countries also excluded younger children from the survey (age 9–11). Consequently, the data from these countries are not weighted and the comparability of the findings must be interpreted with regard to this limitation.

Fieldwork

The data collection by trained administrators was conducted by professional agencies, affiliated institute, or by national teams (Table 1). In all countries, the administration of the questionnaire strived to minimise bias due to interview conditions. This included consideration of bias caused by the feeling of non-anonymity of the participant, which should be diminished by obligation to ensure the participant's anonymity as much as possible and protection from the influence of outside sources (in households these could generally mean the presence and influence of parents/family, in schools, of teachers or other students).

Most countries using the household sampling method also used some form of incentives (except for Germany, Lithuania and Russia). The individual nature of the incentive ranged from a symbolic gift serving as a thank you to monetary compensation for time provided.

Table 1: Overview of the fieldwork

Country		Place of interview	Fieldwork	Method of interview	Survey carried out by	In 2010 survey
CH	Switzerland	School	10/2018 to 01/2019	PAPI	GFS Zürich agency	No
CZ	Czech Republic	School	10/2017 to 02/2018	CASI/CAWI	CZ EU Kids Online team	Yes
DE	Germany	Household	06/2019 to 07/2019	CASI/CAWI	Ipsos agency	Yes
EE	Estonia	Household	05/2018 to 07/2018	CASI/CAWI	Turu-uuringute AS agency	Yes
ES	Spain	School	10/2018 to 12/2018	PAPI	CPS Estudios de Mercado and Opinión agency	Yes
FI	Finland	School	01/2019 to 04/2019	CASI/CAWI	FI EU Kids Online team	Yes
FR	France	Online survey	05/2018 to 06/2018	CASI/CAWI	OpinionWay agency	Yes
HR	Croatia	Household	09/2017 to 10/2017	CAPI	Ipsos Puls agency	No
IT	Italy	Household	11/2017 to 12/2017	CAPI	Ipsos agency	Yes
LT	Lithuania	Household	01/2018 to 05/2018	CAPI	Spinter research agency	Yes
MT	Malta	School	03/2018 to 05/2018	PAPI	MT EU Kids Online team and Personal, Social and Career Development (PSCD) educators	No
NO	Norway	Household	06/2018 to 10/2018	CASI/CAWI	Ipsos agency	Yes
PL	Poland	School	05/2018 to 06/2018	CASI/CAWI	Edbad agency	Yes
PT	Portugal	School	03/2018 to 07/2018	CASI/CAWI	Intercampus SA agency	Yes
RO	Romania	School	04/2018 to 04/2019	CASI/CAWI	The Romanian Institute for Evaluation and Strategy (IRES)	Yes
RS	Serbia	School	11/2018 to 01/2019	PAPI	RS EU Kids Online team	No
RU	Russia	Household	09/2018 to 10/2018	CAPI	RU EU Kids Online team	No
SK	Slovakia	Household	04/2018 to 06/2018	CAPI	Kantar Slovakia agency	No
VL	Flanders	School	03/2018 to 11/2018	CASI/CAWI	The Institute for Media Studies at KU Leuven	*Yes

* All regions in Belgium were included in the EU Kids Online 2010 survey.

The data were collected via three base methods:

- CASI/CAWI (computer-assisted self-interviewing/computer-assisted web interviewing), in which interviewed children filled in the questionnaire on their own in the tablets/notebooks/computers while instructed by trained interviewers. The exception for this was France, where the children filled in their responses alone on their household computers.
- CAPI (computer-assisted personal interviewing), in which interviewers asked the children each question and marked the answer using an electronic tool. The children were handed the data-collecting tool in cases where the national research team deemed some questions to be too sensitive.
- PAPI (paper-assisted personal interviewing), in which the children were handed paper versions of the questionnaire to fill in during interviews, in

the presence of trained administrators. This method was used mostly in countries that used school sampling for their survey.

See Table 1 for the overview of used methods.

Ethical aspects

In all countries, the administration of the questionnaire followed base ethical guidelines, adhering to the national rules and conditions. Before the questionnaire was introduced, informed consent of the legal representatives and written or oral consent from the child was obtained. Children were guaranteed anonymity and were given the opportunity to choose the option I don't know or Prefer not to say for each of the questions, or they were allowed to skip any of the questions. For this reason, the number of participants providing answers to individual questions varies. During the data collection, special effort was made to provide comfortable conditions for the participants. This included maximising the anonymity of the participants and limiting interference from other parties.

Limitations

The findings presented in this report should be interpreted with regard to several limitations that relate to the nature of the data as well as their depiction in the text, figures and tables.

- Base limitation relates to the cross-sectional nature of the study, which in most cases precludes causal inferences.
- Moreover, the data are self-reported, and possible error and bias due to social desirability or trouble with recall should be considered.
- The variations in methodology also pose a limitation. As described above, the countries used both school- and household-based sampling and data collection. Comparisons of differently sampled data should be done with caution.
- In household data collection, the parent/carer could be present during the interview. This might have an influence on the answers the children provided. In data collection in a classroom context, the administration was conducted with regard to whole group and not with individual participants. Nevertheless, in each country, precautions were taken to ensure the most comfortable conditions for the children to be able to provide honest answers.

Data analysis

- The data used for analyses were weighted, with the exception of data from Flanders, Finland and Russia (see the description of sampling above). The weights for each country were prepared individually. They were created using the criteria of gender, age and region (or other additional criteria, such as schools type, if applicable). Weighting is a statistician correction technique that we used to improve the accuracy of the survey estimates according to a representative population of the relevant country.
- The results in this report were computed from valid data only. However, the data also included several types of missing data (including the options Don't know and Prefer not to say), shares of which differed across countries and also across different questions. All types of the missing data were excluded from the analyses.
- In some countries, the definition of younger children differed from the recommended one (i.e., 9–10). To account for country differences in this regard, we define the youngest category as consisting of children aged 9–11, followed by children aged 12–14, and the oldest age category comprising children aged 15–16.

How to read the findings

This section helps readers to understand the findings, their presentation, and their interpretation.

How to approach comparisons

In this report, the main focus is on the findings of each individual country and less on comparison between the countries.

- As described in the 'Methodology', this varied across countries, which contributes to variations in the children's answers across the countries. Therefore, the differences between countries must be interpreted with caution.

If readers want to directly compare two or more different countries, we recommend looking at the methods and sampling used in the respective countries (see Table 1).

- In line with Cohen's recommendation for interpretation of effect sizes,[11] in this report we considered the differences equal or below 5 percentage points as negligible, the differences between 6–15 percentage points as small, 16–25 as medium, and higher as large.
- While the prevalences are described by percentages (%), the differences between two percentages are described by percentage points (i.e., arithmetical difference between two percentages).
- The smaller the prevalence of a phenomenon, the more caution we advise when evaluating the country, gender and age differences. This applies especially for phenomena with prevalences under 10% (such as online risks).
- In the figures and tables in the report, we provide an average that is computed from the displayed percentages (Ave). This can be used to compare results across gender and age, or to compare the prevalence of different items. However, this average is 'the mean of means' and not the data average or the European average. We recommend not comparing country results against the average.
- All of the data are weighted. The exceptions are data from Flanders, Finland and Russia, which were not weighted because of the specific sampling (see 'Methodology'). We recommend great caution in comparing these countries to other countries.
- Note that due to rounding the sum of numbers in certain graphs might add up to between 99% and 101%.

Which data are presented

- In some figures and tables, data from certain countries are omitted (such countries are denoted by an asterisk). This was done if the country did not ask any respective questions or the question was asked only of a subset of children that was different than in the other countries.
- If a sufficient amount of data was not available for younger children, the countries were not included in the presentation of overall findings across the countries and in the gender comparison. The available data is, however, presented in findings depicting age differences.
- Across the whole report, due to absent data from younger children, Flanders, Finland and Russia are omitted from overall findings across countries and the gender comparison. Other countries are omitted depending on their choice of specific design of shorter versions of the questionnaire for younger children.

Comparison with EU Kids Online 2010

Possibilities for direct comparison with EU Kids Online 2010, both the data and most reports published from these data (including the key report from 2011[12] are limited for several reasons:

- Sampling and data collection: the sampling and data collection method in all countries was not the same in the EU Kids Online 2010 survey.
- Questionnaire: the questionnaire was thoroughly updated and the wording of many questions and answers changed to better fit the current situation and trends in technology development.
- Participating countries: from 19 countries in this report, only 12 comparable countries participated in both the EU Kids Online 2010 and in this survey (Czech Republic, Estonia, Finland,

[11] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge.

[12] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents*. EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

France, Germany, Italy, Lithuania, Norway, Poland, Portugal, Romania and Spain). Belgium also participated in 2010, but in the current survey, only the data was only collected in Flanders, thus the comparison is not possible.

- Age categories: the age categories used in this report are different than those used in EU Kids Online 2010. In this report, we created the age categories 9–11, 12–14 and 15–16, while in the report from EU Kids Online 2010, the age categories were 9–10, 11–12, 13–14 and 15–16; also data intended only for older children were presented for 12-year-olds and older, unlike in the prior report (where it was 11-year-olds and older).

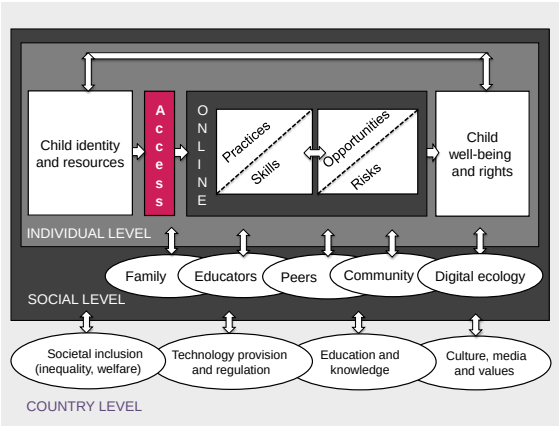
As a result, we do not recommend directly comparing the findings from the EU Kids Online 2010 survey with findings provided here.

Whenever comparisons were possible, we provide them in this report. The comparisons in this report are based on new analyses that include only countries that participated in both surveys and with analogous age groups. Still, changes in methodology must be considered.

Access

As described in 'Theoretical background of the project', EU Kids Online work is based on the model that helps to identify the outcomes of technology use on children's lives, and which factors influence these outcomes. The description of the main findings from this EU Kids Online survey thus starts with the basic precondition of this overreaching aim: in essence, in order to examine the effect of internet use, children first have to use it. Hence, we first focus on the children's access to technology, specifically on how they go online (which devices they use) and how much time they spend online. These two basic technology usage factors frame children's online practices and inevitably shape their online experiences (see Figure 3).

Figure 3: Theoretical model, focusing on Access (in red)



Devices

Internet access shapes the conditions under which children are taking advantage of online opportunities or are exposed to online risks. A major shift in the way children access the internet was represented by smartphones, with their use already widespread among 9- to 16-year-olds in 2013–14.[13] Being personal and portable, smartphones are now integrated into different social contexts and activities. With the more recent rise of the Internet of Things and the Internet of Toys,[14] the internet has become more and more ubiquitously embedded in children's everyday lives. For this reason, EU Kids Online recommends that we do not focus on a separation between an online world and 'the real world', but instead look at how our world and our relationships to other people are mediated through the internet.[15]

To investigate children's access to the internet, we asked the children the following question:

How often do you go online or use the internet using the following devices?

Children in all of the countries answered this question about use of: a smartphone or mobile phone; a desktop computer, laptop or notebook; a tablet; other. Some countries also included optional questions about new technologies – a games console; TV; a toy connected to the internet; a wearable device – which we also decided to include in this report. The results about daily use of all said technologies are summarised in Table 2.

- Smartphones are always at hand, providing an 'anywhere, anytime' connectivity, at least in principle. It comes as no surprise, then, that the phone is the most frequently used device to go online. Indeed, if we look at the frequencies through which children access the internet from their phones, the majority report using their smartphones almost all the time, *several times each day* or at least *daily*, although this ranges between 65% (France) and 89% (Lithuania) (Table 2).
- In 11 countries (Croatia, Czech Republic, Germany, Estonia, Italy, Lithuania, Norway, Poland, Portugal, Romania and Serbia), over 80% of children aged 9–16 use a smartphone to access the internet at least once a day.
- In 2010, the number of children going online from their mobile phones ranged from 31% (Norway) to only 2% (Romania). From the EU Kids Online survey 2010, the percentage of children using a phone or smartphone to access the internet in all comparable countries has increased substantially, rising from 31% to 86% in Norway and from 2% to 86% in Romania.

[13] Mascheroni, G. & Ólafsson, K. (2014). *Net Children Go Mobile: Risks and opportunities*. Educatt. www.netchildrengomobile.eu/reports

[14] Mascheroni, G., & Holloway, D. (eds) (2019). *The Internet of Toys. Practices, affordances and the political economy of children's smart play*. Palgrave Macmillan.

[15] Livingstone, S., Mascheroni, G. & Staksrud, E. (2018). European research on children's internet use: Assessing the past and anticipating the future. *New Media & Society, 20*(3), 1103–22. https://doi.org/10.1177/1461444816685930

- Computer (laptop or desktop) is used on a daily basis by a number of children ranging from between 26% (Switzerland) and 66% (Lithuania). The difference in the likelihood of accessing the internet from a smartphone and a computer ranges between 19 percentage points (Malta) and 47 (Portugal). In nine countries (Switzerland, Estonia, Spain, Italy, Norway, Poland, Portugal, Romania, and Serbia), the difference is very close or above 40 percentage points, showing that the gap in popularity of these two devices is considerably wide.
- The daily use of tablets varies between 14% (Poland) and 43% (Malta). Indeed, in most of the countries less than one in four of the children access the internet from a tablet *every day*.
- In some countries, Smart TVs are more popular than tablets (or even computers) – ranging between 17% (Italy) and 75% (Spain) – whereas the use of a games console as a means to access the internet on a daily basis varies between 5% (Slovakia) and 34% (Malta).
- Finally, the number of children who connect to the internet everyday using a smart toy ranges between 0.4% (Serbia) and 18% (France), whereas the use of wearable devices varies between 3% (Croatia and Italy) and 15% (Spain).

For the majority of the children, smartphones are now the preferred means of 'going online'.

Table 2: Daily use of different devices, by country

	Smartphone or mobile phone	Desktop computer, laptop or notebook	Tablet	Games console	TV	Toy connected to the internet	Wearable device	Other
CH	70	26	20	21	n.a.	n.a.	n.a.	17
CZ	82	43	18	n.a.	n.a.	n.a.	n.a.	20
DE	85	46	16	n.a.	n.a.	n.a.	n.a.	8
EE	87	41	16	13	50	9	8	9
ES	76	29	28	30	75	6	15	15
*FI	–	–	–	–	–	–	–	–
FR	65	41	31	26	47	18	13	6
HR	82	52	17	10	20	4	3	4
IT	80	39	20	14	17		3	2
LT	89	66	20	n.a.	n.a.	n.a.	n.a.	26
MT	77	58	43	34	48	11	14	15
NO	86	44	33	26	46	2	10	9
PL	83	40	14	14	59	2	8	8
PT	84	37	27	n.a.	n.a.	n.a.	n.a.	28
RO	86	41	19	n.a.	n.a.	n.a.	n.a.	n.a.
RS	86	40	15	11	61	0	8	13
*RU	–	–	–	–	–	–	–	–
SK	70	43	24	5	21	1	6	n.a.
*VL	–	–	–	–	–	–	–	–
Ave	80	43	22	19	44	6	9	13

* FI/RU/VL: Full age range not available. n.a.: Optional questions, not included in the questionnaire.

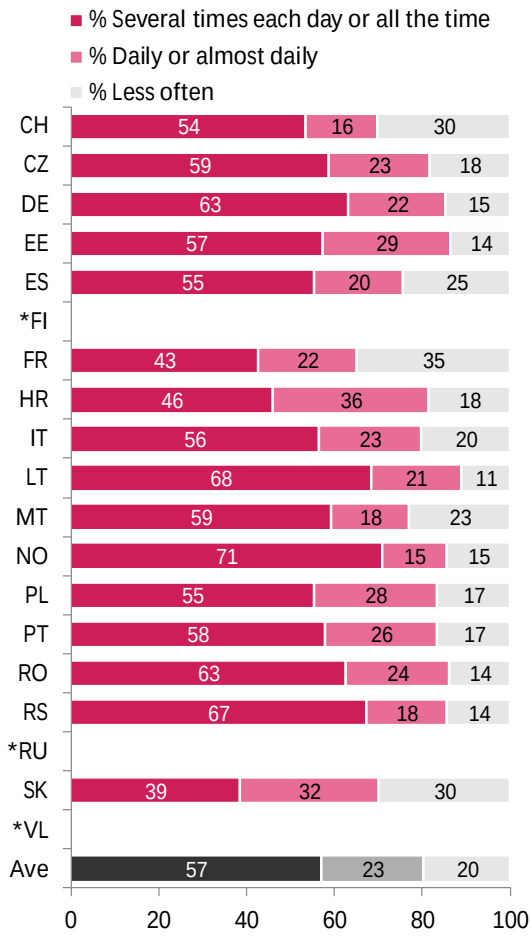
QB5 How often do you go online or use the internet using the following devices? Percentage of children who answered *almost all the time, several times each day*, or *daily or almost daily*.

Base: All children 9–16 who use the internet.

Online on the mobile

- Across the countries more than half of the children report using their smartphones or mobile phones *daily or almost daily*, *several times a day* or *all the time* (Ave = 57%), although this ranges between 39% in Slovakia and 71% in Norway (Figure 4).
- Only a minority of children reportedly access the internet from their smartphones or mobile phones less often than daily or almost daily, ranging between 11% of Lithuanian children and 35% in France (Ave = 20%).

Figure 4: Frequency of using a smartphone to access the internet, by country



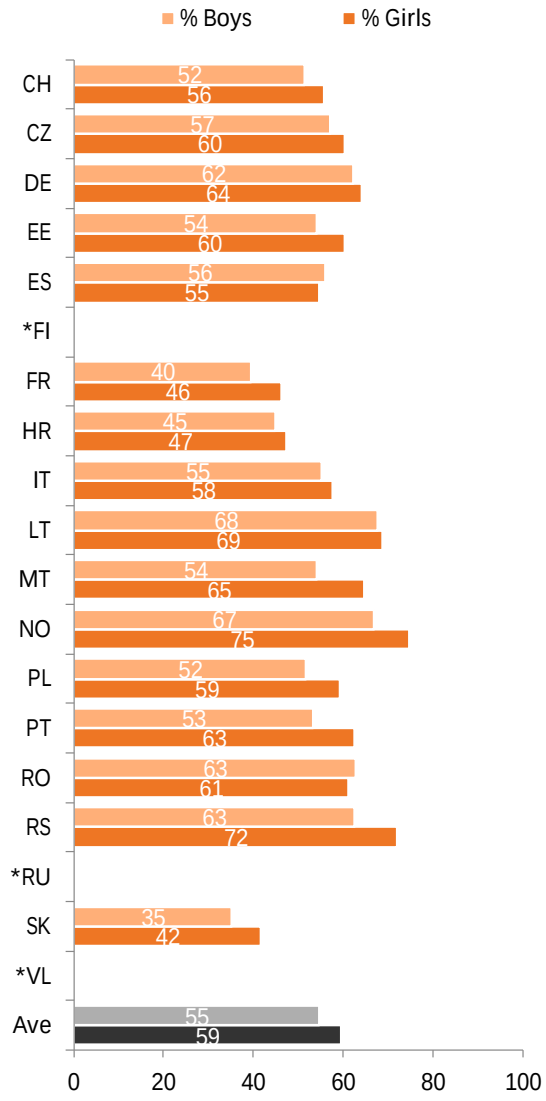
* FI/RU/VL: Full age range not available.

QB5a How often do you go online or use the internet using the following devices? A mobile phone or smartphone.

Base: All children 9–16 who use the internet.

- As shown in smartphones always or several times a day varies between 35% and 68% for boys, and between 42% and 75% for girls.
- Figure 5 and in Figure 6, in many countries the use of smartphones to go online several times a day is differentiated by age and partially by gender.
- The number of children who are online from their smartphones always or several times a day varies between 35% and 68% for boys, and between 42% and 75% for girls.

Figure 5: Using a smartphone several times each day or all the time to access the internet, by gender



* FI/RU/VL: Full age range not available.

QB5a How often do you go online or use the internet using the following devices? A mobile phone or smartphone. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

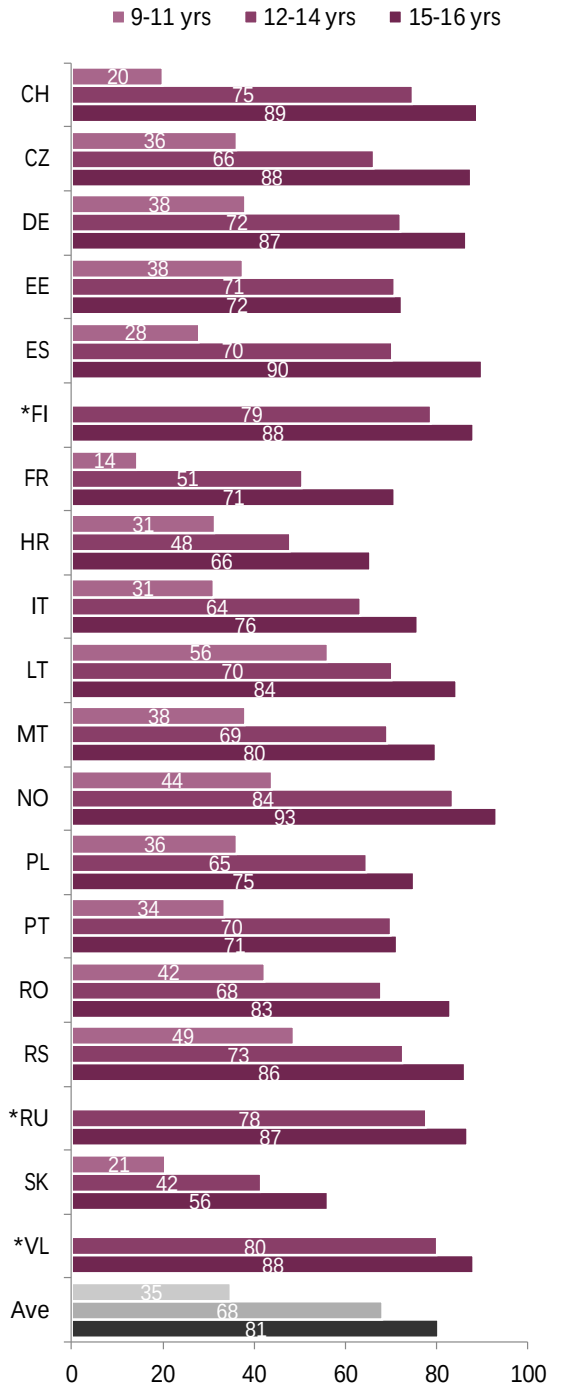
Base: All children 9–16 who use the internet.

- In Estonia, France, Malta, Norway, Poland, Portugal, Serbia and Slovakia, girls are slightly more likely to access the internet from their smartphones several times a day than boys with

percentage points difference ranging between 6 (Estonia) and 11 (Malta).

- In Portugal and Malta, the difference is about 10 percentage points.
- Nevertheless, these differences are rather small and suggest that in most countries, boys and girls use smartphones to a similar extent.
- Age differences are more consistent and prominent. Across all countries, older children are more likely to access the internet daily from their smartphones than younger children, which is especially contrasted between the youngest and oldest age category (Ave = 46 percentage points of difference).
- The number of children in the youngest age category (9–11) who go online from their smartphones every day ranges between 14% in France and 56% in Lithuania. In most countries, however, less than one in three children in this age group accesses the internet from a smartphone several times a day.
- Among 12- to 14-year-olds, the number of those who access the internet very often from a smartphone ranges between 42% (Slovakia) and 84% (Norway).
- Using smartphones to go online several times a day is far more common among 15- to 16-year-olds, ranging between 56% in Slovakia and 93% in Norway.
- In Switzerland and Spain, the gap between the youngest category and oldest category is quite noticeable (69 and 62 percentage points, respectively).
- On the other hand, in Lithuania, Croatia and Slovakia, it is 35 percentage points or less.

Figure 6: Using a smartphone several times each day or all the time to access the internet, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QB5a How often do you go online or use the internet using the following devices? A mobile phone or smartphone. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

Time spent online

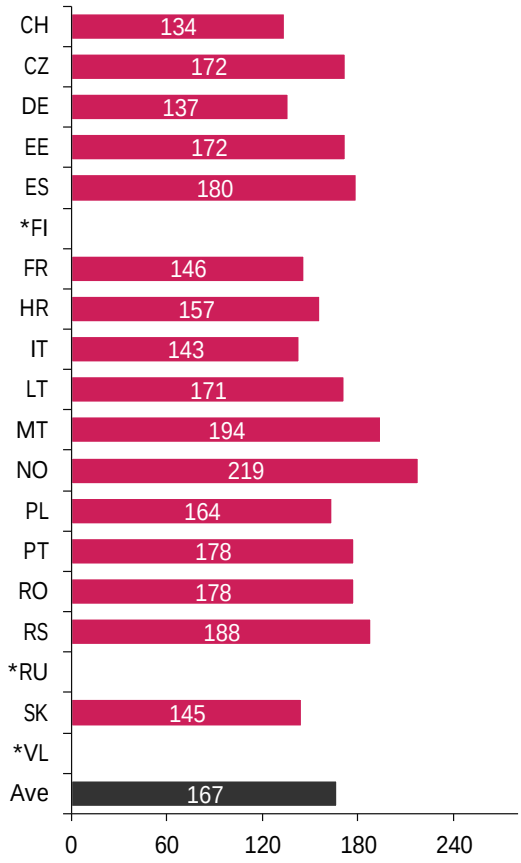
Providing an estimate of the time that children spend online is not an easy task. As noted, having a smartphone 'always at hand' means that children's internet use has become continuous and interstitial, filling up the intervals between daily activities. Children are now able to check messages and notifications, or to look for information and content almost anywhere and anytime, making it difficult to measure the exact time they spend online. Moreover, a growing number of activities, such as watching TV, have moved online, whether on SVOD services (Subscription Video on Demand) or YouTube. However, children might not perceive watching an episode on Netflix as spending time on the internet, thus making time estimates more complicated.

Although we recognise these limitations, we also recognise the need for at least some estimate of time spent online. To achieve this we use we asked the children to estimate how long they spend on the internet on weekdays and at weekend, to give an indication of how embedded the internet is in their everyday lives. By separating between weekdays and weekends, we acknowledge the different structure in the lives of most children during schooldays and non-school days. It is nevertheless necessary to acknowledge that the estimate of time use achieved in this way is bound to be very inaccurate on the individual level.

In the figures below we report the average time children spend online each day. This means that variations across countries can also be attributed to variations in the use of the internet in schools. It should be noted that although we computed the overall time online in minutes, it was measured in hours.

- As shown in Figure 7, children's estimated time online ranges from 134 minutes (Switzerland) to 219 minutes (Norway).
- In EU Kids Online 2010, time spent on the internet every day ranged from about 1 hour (Spain) to 2 hours (Romania). Therefore, in some countries such as France, Germany, Italy, Portugal and Spain, the average time children spend on the internet has doubled or nearly doubled. Instead, in countries where the average time spent online was already near to 2 hours, such as the Czech Republic, Estonia, Poland and Romania, the rise has been less substantial. In Norway, where children were likely to spend 2 hours on average on the internet every day, time spent online nearly doubled, according to the findings of the current survey.

Figure 7: Estimated average time online (in minutes) each day, by country



* FI/RU/VL: Full age range not available.

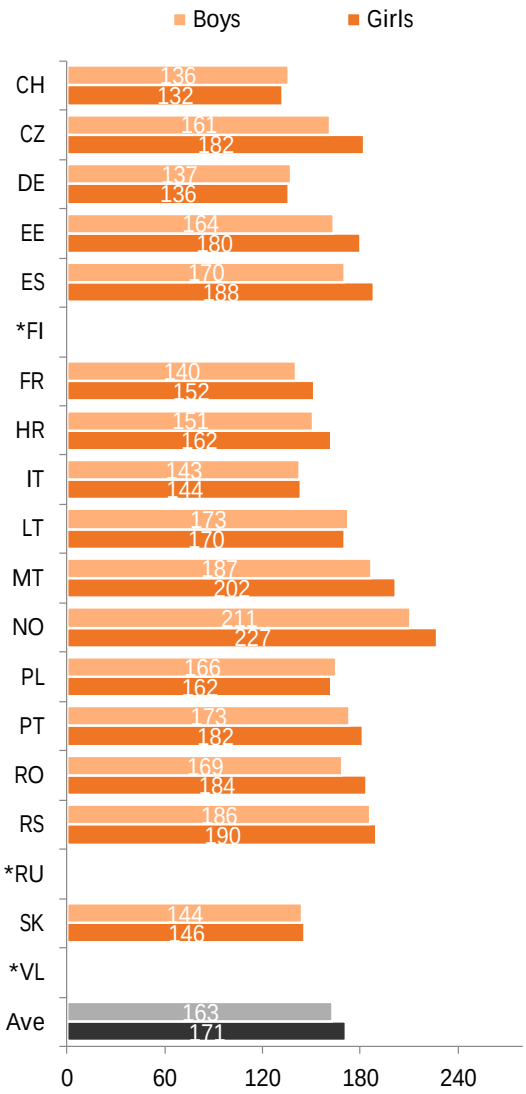
Derived from QB7 and QB8: About how long do you spend on the internet during a regular weekday (school day) and a regular weekend day?

Base: All children 9–16 who use the internet.

As shown in Figure 8, the average time spent online everyday varies little between boys and girls, but in countries where the difference is more than 10 minutes, boys spend a little longer on the internet than girls.

- The difference in time spent online between boys and girls is below 20 minutes in most countries.

Figure 8: Estimated average time online (in minutes) each day, by gender



* FI/RU/VL: Full age range not available.

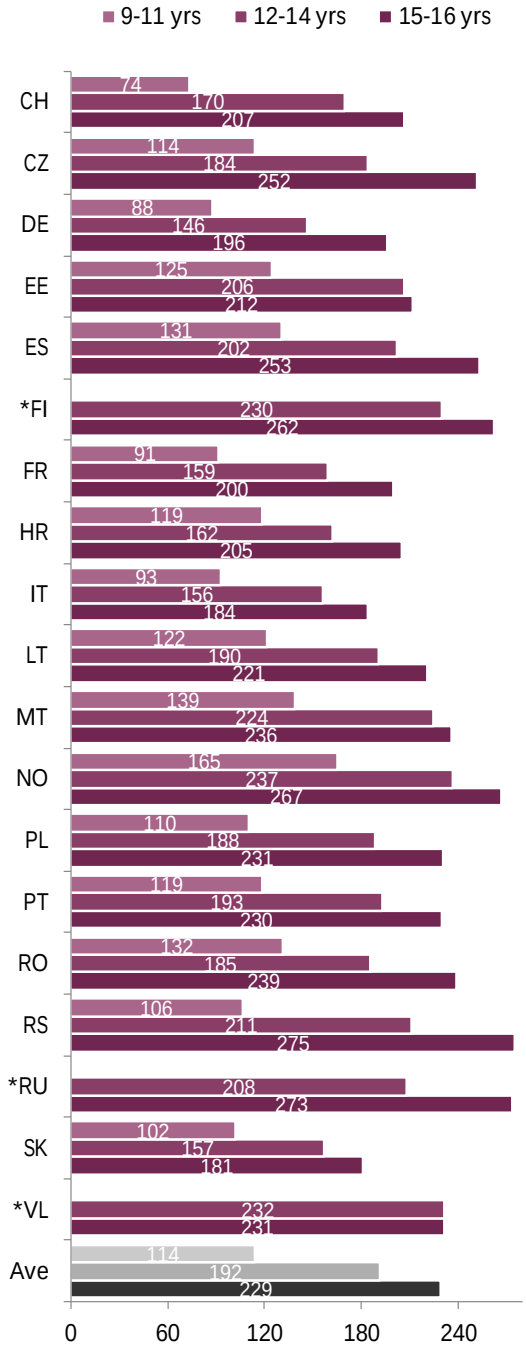
Derived from QB7 and QB8: About how long do you spend on the internet during a regular weekday (school day) and a regular weekend day?

Base: All children 9–16 who use the internet.

As shown in Figure 9, age differences are more stark, with 15- to 16-years-olds spending almost twice as much time online than children in the youngest category.

- The average time spent online by children in the youngest category ranges between 74 minutes (Switzerland) to almost three hours (Norway).
- The time that 12- to 14-year-olds estimate to spend on the internet ranges between two and half hours (Germany) to around four hours (Norway and Flanders).
- Children in the oldest category tend to spend more time on the internet daily, between three hours (Slovakia) and up to four-and-a-half hours (Russia and Serbia).

Figure 9: Estimated average time online (in minutes) each day, by age



* FI/RU/VL: Full age range not available. Data not weighted.

Derived from QB7 and QB8: About how long do you spend on the internet during a regular weekday (school day) and a regular weekend day?

Base: All children 9–16 who use the internet.

Points to consider

- While the data presented in this section suggest a deep integration of the internet in children's daily lives, inequalities in access and use persist and may have consequences in terms of children's digital inclusion. For example, while most of the children access the internet from their smartphones, differences may exist between those who can rely both on mobile web plans and Wi-Fi networks and those who, by contrast, can go online only through mobile data plans, who may experience more constraints in the time spent online (even on a daily basis) and the range of activities taken up.
- Furthermore, we cannot conclude that having the internet 'always at hand' translates into more online opportunities: smartphones are associated with an increase in communication and entertainment activities, but not with more use of the internet for schoolwork.[16]
- Future research could also investigate the variability of online risks that children experience through different devices, such as mobile phones, tablets or laptops. It could be that new devices, such as smart toys, will also bring new risks, such as privacy problems or problems with those toys being hacked.
- In many countries, the time that children report spending online almost doubled compared to the findings of the EU Kids Online survey in 2010. Thus, with regard to general trends, we know that children are now spending more and more time online. Moreover, as the findings show, older children report being online about twice as long as younger children. The differences between age groups vary between countries.
- This finding must be contextualised with the consideration of technology development. The substance of internet use has changed with the use of smartphones that allow quick access to the internet, which many children may use while travelling, waiting for somebody or during breaks at school. However, this raises a question – do children limit some activities more because of the increased time they spend online? Or do they simply incorporate internet use within their daily activities, in which they still actively engage? Such questions could be answered in future research.
- In line with this, we must also acknowledge that with the rise of smartphones, the average time spent online is even more complicated to measure. Therefore, the provided estimate needs to be taken as a rough approximation that has certain limitations. Future research could focus on the development of tools, such as software for mobile phones, which could give the exact measure of 'time online'. This would also be beneficial for users, so that they can keep better track of time they spend on the internet.
- We could also ask whether listening to music online or watching movies via the internet is 'time online' or not. Perspectives on this among policy-makers, researchers, the public and, of course, children themselves vary. Thus, even though we may precisely measure 'time online', with the augmentation of diverse services in the media and on the internet, the question 'How much time do you spend on the internet?' has become inevitably complex.

In most countries 14- to 16-year-olds spend nearly twice as much time online than 9- to 10-year-olds.

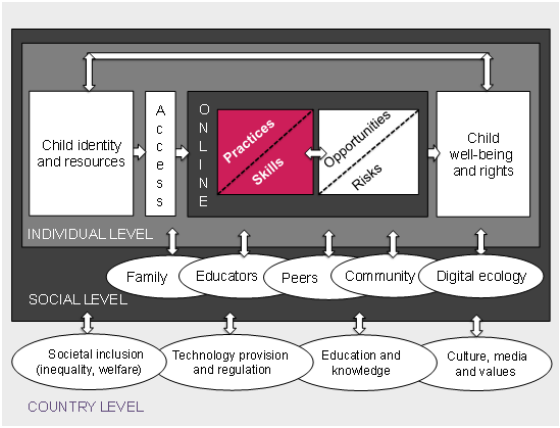
[16] See, for example, Mascheroni, G. & Ólafsson, K. (2015). The mobile internet: Access, use, opportunities and divides among European children. *New Media & Society, 18*(8), 1657–79. https://doi.org/10.1177/1461444814567986

Practices and skills

With the focus on practices and skills, our description moves deeper into what children do online. This particular part of the model considers specific activities children can engage in on the internet and children's digital skills, i.e., the skills to understand and effectively use the internet for their benefit.

Knowing that the possibilities of what children can do online are almost endless and that no research can capture everything, the EU Kids Online survey comprises a carefully selected a set of activities identified in prior literature as the most salient. At the same time, we strived to capture activities that represent three large motives for going online for a school-aged child: entertainment, socialising and education (see Figure 10).

Figure 10: Theoretical model, focusing on Practices and skills (in red)



Online activities

Online activities, i.e., engaging in specific actions the online environment provides, are difficult to define as either entirely beneficial or risky. In the current survey, we asked the children about activities they had done in the last month. Our aim was to understand the online opportunities that children take up more often. Thus, we asked the following question:

How often have you done these things ONLINE in the past month?

The list included activities such as communication with family and friends, entertainment activities, gaming, schoolwork, information-seeking or content creation (see Table 3).

As the internet has become more and more embedded in children's lives, they have moved more of their everyday practices online. However, the range of online activities they take up seems stable across time: the same pattern can be observed as in 2010, whereby the majority of children engage in communication and entertainment activities, along with schoolwork, whereas content creation or seeking news is taken up by only a minority of the children.

Watching videos, listening to music, communicating with friends and family, visiting a social networking site and playing online games top the list of activities done on a daily basis. More specifically, as shown in Table 3:

- Watching videos ranges between 43% (Slovakia) and 82% (Lithuania).
- Similarly, listening to music online varies between 45% (Germany) and 81% (Serbia).
- Using the internet to communicate with friends and families ranges between 14% (Germany) and 77% (Romania), while visiting a social networking site varies between 38% (Spain) and 73% (Serbia).
- A number of children play online games every day, ranging from between 27% (Slovakia) and 71% (Lithuania).
- Using the internet for schoolwork ranges between 16% (Poland) and 46% (Lithuania).
- Buying things online or checking on the internet for the prices of things to buy is less common, taken up by 8% (Germany) to 41% (Romania).
- Using the internet to read or watch the news ranges between 9% (Germany) and 39% (Lithuania).

Table 3: Daily online activities, by country

	Watched video clips	Listened to music online	Communi-cated with family or friends	Visited a social networking site	Played online games	Used the internet for schoolwork	Browsed for things to buy or to see what things cost	Looked for news online
CH	58	63	47	54	36	21	17	20
CZ	73	68	70	66	44	20	27	19
DE	49	45	14	42	34	20	8	9
EE	79	66	71	56	43	28	13	22
ES	58	64	70	38	48	44	23	19
*FI	–	–	–	–	–	–	–	–
FR	46	57	48	41	42	29	13	18
HR	52	64	60	58	40	34	20	18
IT	55	47	74	54	28	35	16	14
LT	82	72	63	61	71	46	16	39
MT	79	72	68	46	54	35	31	17
NO	71	68	65	56	43	41	15	19
PL	70	65	63	48	36	16	24	15
PT	75	76	72	67	47	25	18	25
RO	77	76	77	49	60	37	41	21
RS	80	81	68	73	55	18	23	12
*RU	–	–	–	–	–	–	–	–
SK	43	55	46	62	27	42	17	19
*VL	–	–	–	–	–	–	–	–
Ave	65	65	61	54	44	31	20	19

* FI/RU/VL: Full age range not available.

QC3 How often have you done these things ONLINE in the past month? Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

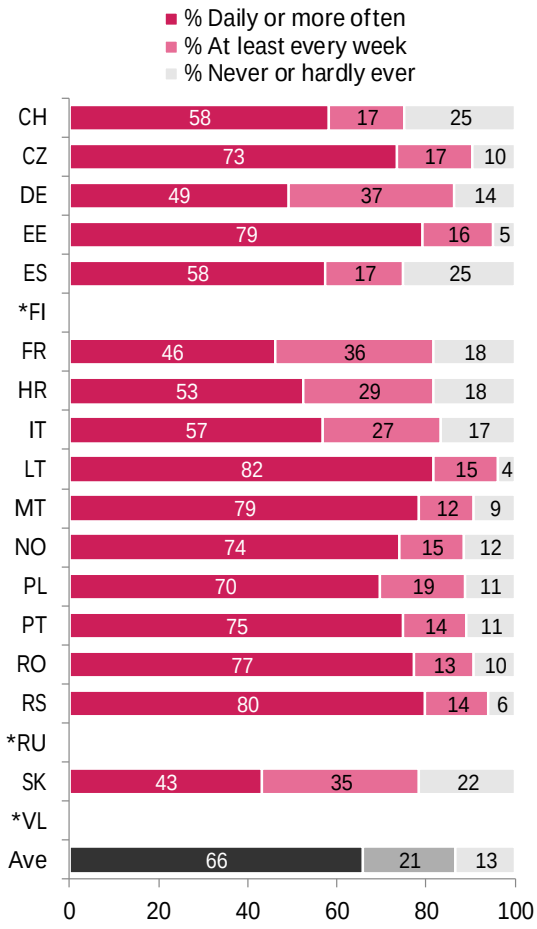
Base: All children 9–16 who use the internet.

Watching videos

Watching videos is a popular online activity, taken up by two-thirds of the children in most of the countries on a daily basis, as shown in Figure 11.

- The number of children who don't watch video clips on the internet, or do so only seldomly, ranges between 4% (Lithuania) and 25% (Switzerland and Spain).
- Gender differences are generally small (see Figure 12), with boys slightly more likely to watch video clips on the internet in most countries.
- In most countries the difference between boys and girls watching video clips is below or equal to 10 percentage points.
- In the Czech Republic, the difference between boys and girls watching video clips is 14 percentage points, and in Norway, 19 percentage points.

Figure 11: Frequency of watching video clips, by country

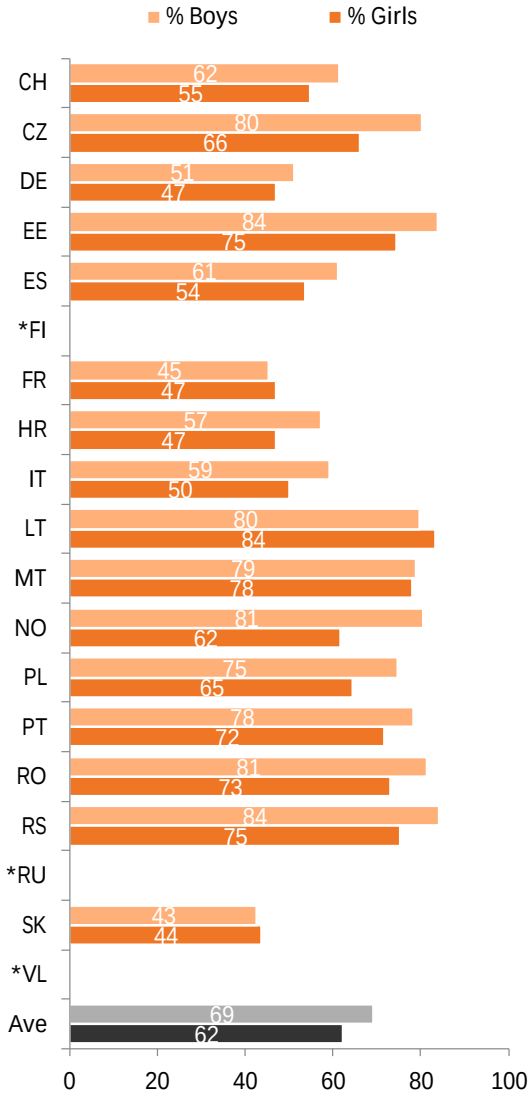


* FI/RU/VL: Full age range not available.

QC3k How often have you done these things ONLINE in the past month? I watched video clips.

Base: All children 9–16 who use the internet.

Figure 12: Watching video clips daily, by gender



* FI/RU/VL: Full age range not available.

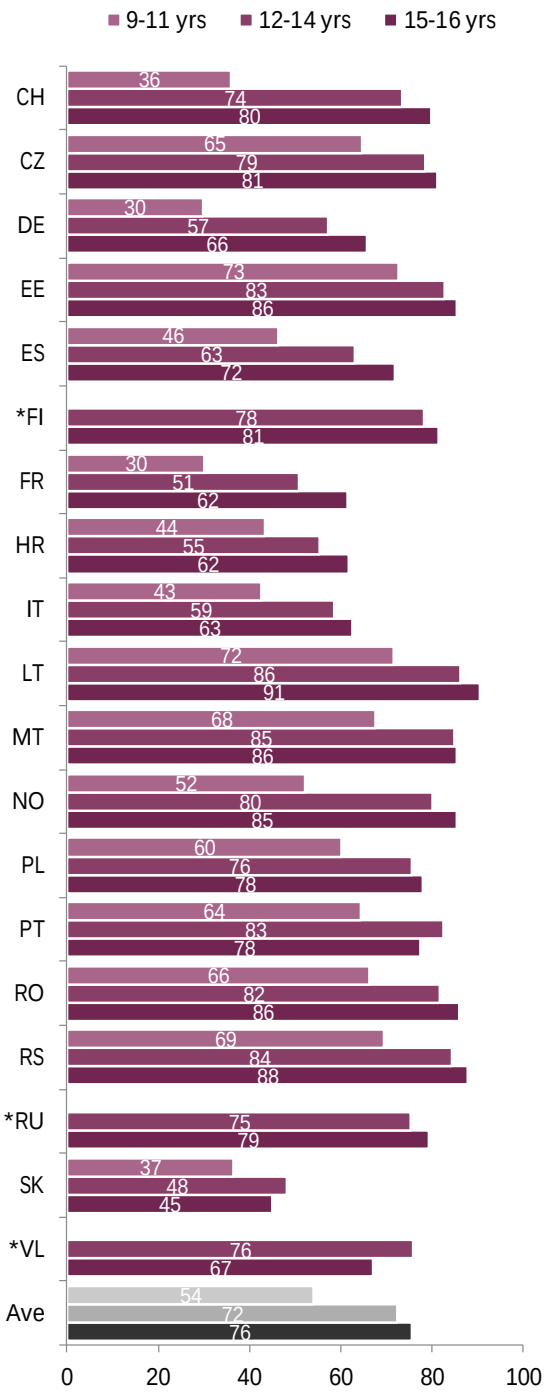
QC3k How often have you done these things ONLINE in the past month? I watched video clips. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

As shown in Figure 13, age differences are more pronounced, especially in comparison between the youngest (9–11) and oldest (15–16) age categories (Ave = 22 percentage points of difference).

- The number of 9- to 11-year-olds who watch videos on the internet everyday ranges from between 30% (France and Germany) and 73% (Estonia). In half of the countries, however, more than half of the youngest children watch videos online.
- Among 12- to 14-year-olds, watching video clips on the internet is taken up on a daily basis by a number of children, ranging from between 48% (Slovakia) and 86% (Lithuania).
- Finally, 15- to 16-year-olds who watch videos online everyday range from between 45% (Slovakia) and 91% (Lithuania).

Figure 13: Watching video clips daily, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QC3k How often have you done these things ONLINE in the past month? I watched video clips. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

Visiting social networking sites

The use of social networking sites has changed consistently across time, with children migrating from Facebook to other social media platforms such as Instagram or to instant messaging services like WhatsApp. This could account for the low response rates in the number of children who visit a social networking site in certain countries, since children might use social media platforms that they do not identify as social network sites. In some countries, however, the questionnaire included a reference to the most popular social media platforms for children.

- The number of children aged 9–16 who report visiting social networking sites daily or more often ranges from between 38% (Spain) and 73% (Serbia) (see Figure 14). Additionally, 7% to 17% of children use social networking sites at least every week. Altogether, in every country besides Spain, more than half the children use social network sites at least every week (Ave = 66%).
- On the other hand, half of the Spanish children and over 40% of children in France, Germany and Malta never or hardly ever visited a social networking site.

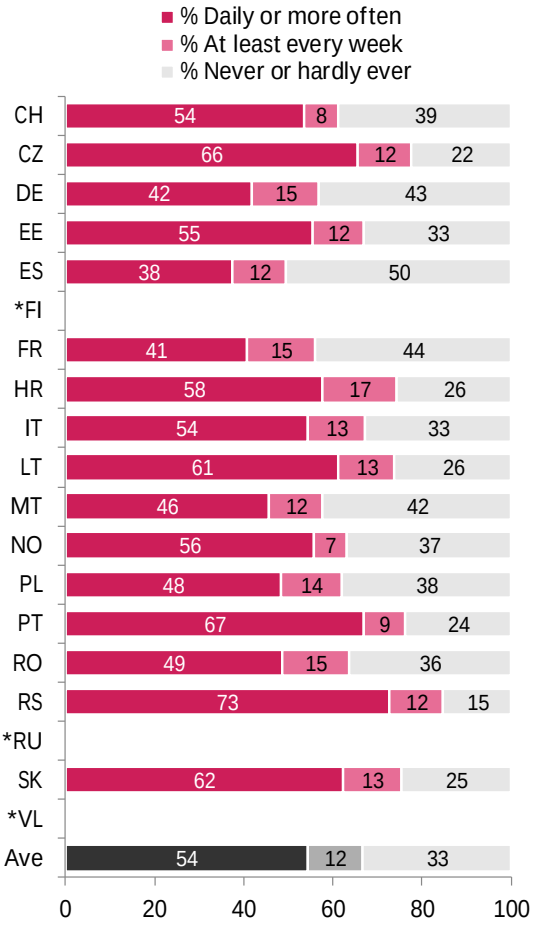
Quite a few 9- to 11-year-olds – from 11% in Germany to 45% in Serbia, report visiting a social networking site every day

- A shown in Figure 15, in the Czech Republic, Estonia, France, Germany, Poland, Portugal, Slovakia and Switzerland, there is only a small gender difference in daily visiting social networking sites (ranging between 6 and 13 percentage points).
- In other countries, the gender differences are very small or negligible (equal or below 5 percentage points).

The use of social networking sites is strongly structured by age (see Figure 16), with the majority of 15- to 16-year-olds reporting doing so every day, against only a minority of children aged 9–11 (Ave = 53 percentage points of difference).

- Despite the age limits for online platforms and the implementation of GDPR's article 8 in EU countries[17] – which requires parental consent for the processing of personal data of children under the ages of 13, 14 or 16 (depending on the country) – a number of 9- to 11-year-olds, ranging between 11% in Germany and 45% in Serbia, report visiting a social networking site every day.

Figure 14: Frequency of visiting social networking sites, by country

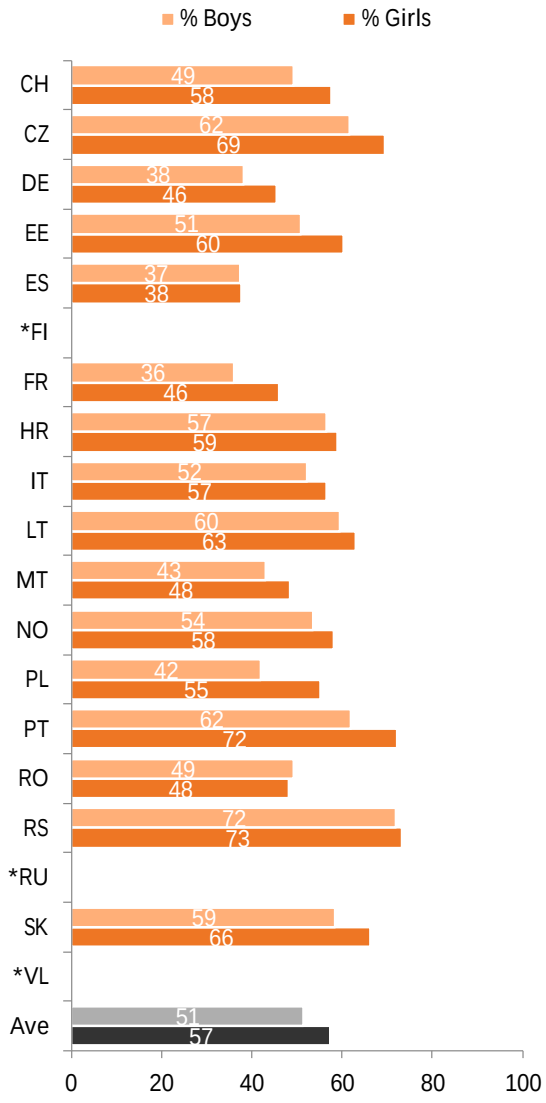


* FI/RU/VL: Full age range not available.

QC3h How often have you done these things ONLINE in the past month? I visited a social networking site.

Base: All children 9–16 who use the internet.

Figure 15: Visiting social networking sites daily, by gender



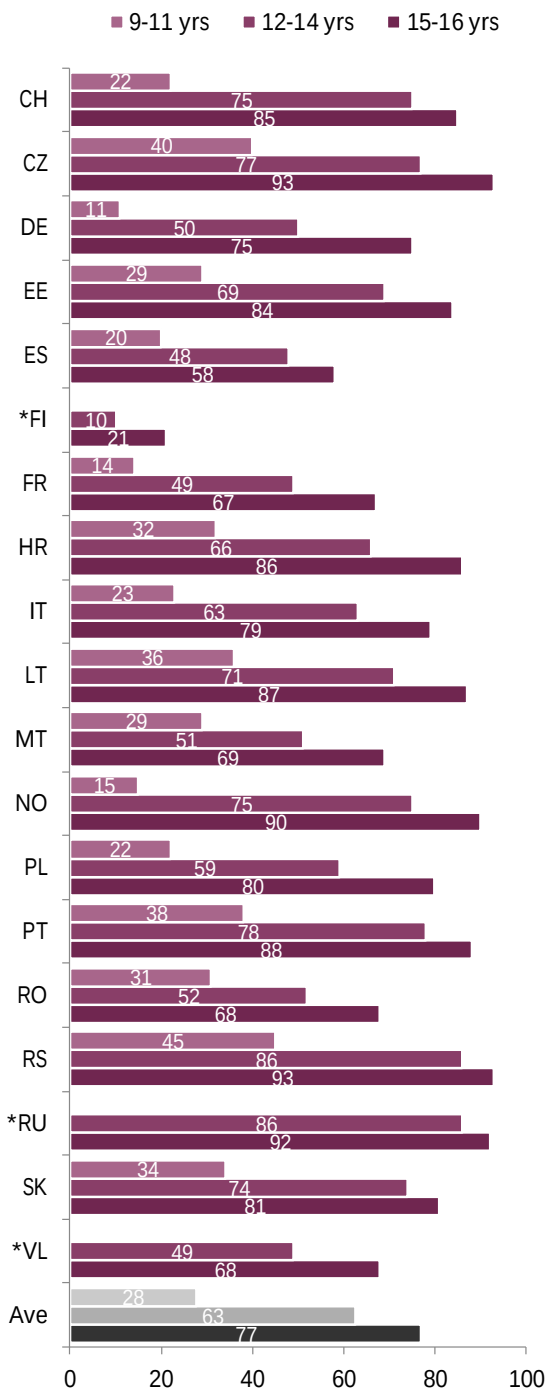
* FI/RU/VL: Full age range not available.

QC3h How often have you done these things ONLINE in the past month? I visited a social networking site. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

[17] Milkaite, I., & Lievens, E. (2019, December 20). Status quo regarding the child's article 8 GDPR age of consent for data processing across the EU. *Better Internet for Kids*. www.betterinternetforkids.eu/web/portal/practice/awareness/detail?articleId=3017751

Figure 16: Visiting social networking sites daily, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QC3h How often have you done these things ONLINE in the past month? I visited a social networking site. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

- However, since the survey data were collected before (e.g., Slovakia and the Czech Republic) or soon after the implementation of the GDPR in May 2018, it will be interesting to monitor over time the influence of different age limits on under-age social networking.
- Similarly, the daily use of social networking sites among 12- to 14-year-olds varies between 10% (Finland) and 86% (Serbia and Russia).
- Finally, the number of 15- to 16-year-olds who use social networking sites daily varies between 21% (Finland) and 93% (Czech Republic and Serbia).

Playing online games

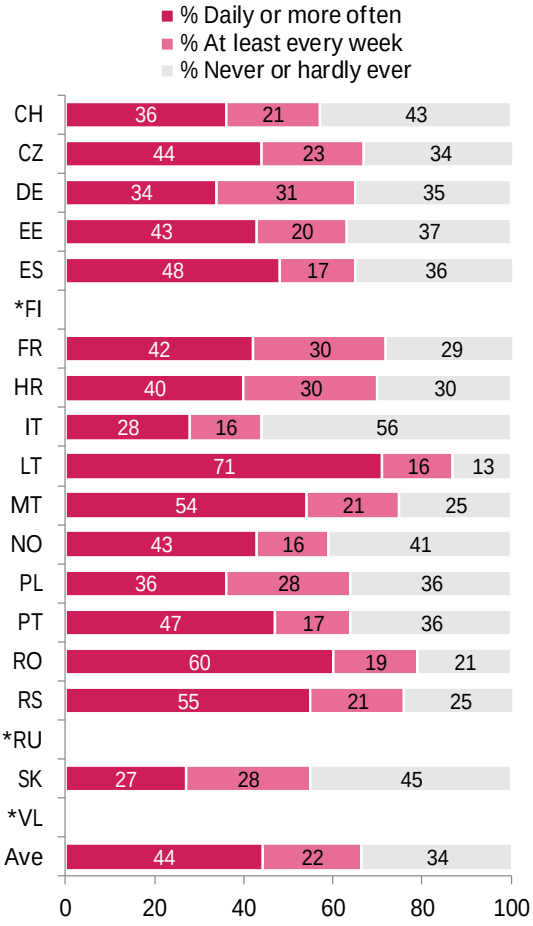
Along with watching videos, playing online games is a common entertainment activity in most countries, practised every day by a number of children, ranging from 27% (Slovakia) to 71% (Lithuania) (see Figure 17).

- Further, two in three children report playing online games at least once a week in most of the countries.
- Gaming is popular in Lithuania and Romania, where only a small proportion of children report never or hardly ever playing online games (13% and 21% respectively).
- On the other hand, in Italy and Slovakia, around half of children do not engage in playing online games on a daily basis (56% and 45%, respectively).

Playing online games is strongly structured by gender (see Figure 18).

- In the majority of countries the difference between boys and girls is between 25 and 41 percentage points (Ave = 30 percentage points of difference).
- In Norway, the difference reaches 54 percentage points. On the other hand, in Lithuania, the difference is 12 percentage points.

Figure 17: Frequency of playing online games, by country



* FI/RU/VL: Full age range not available.

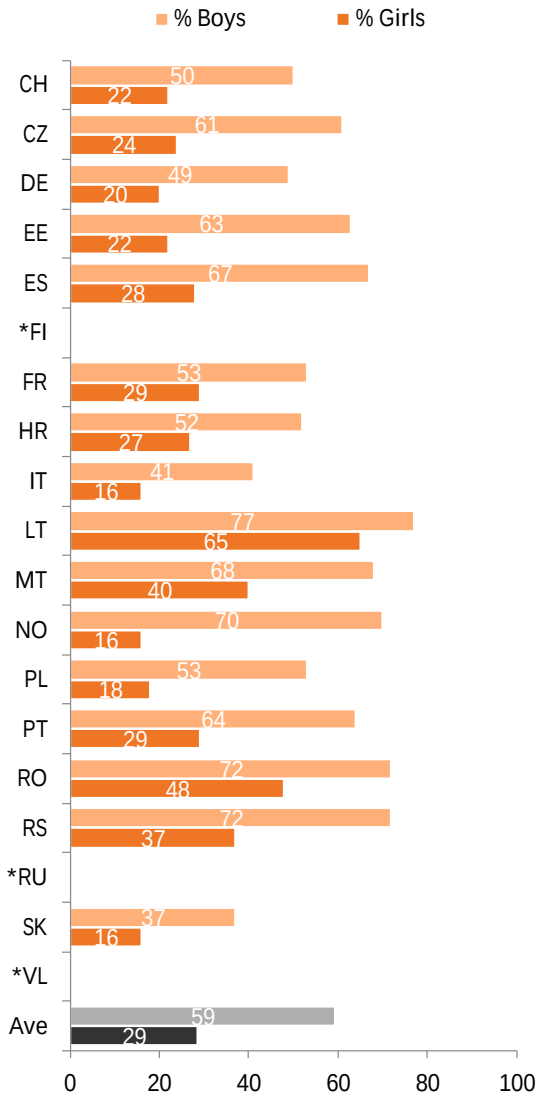
QC3j How often have you done these things ONLINE in the past month? I played online games.

Base: All children 9–16 who use the internet.

As shown in Figure 19, online gaming also varies by age, although different patterns emerge across the countries.

- In most of the countries, the age group who are more likely to play online games every day is represented by 12- to 14-year-olds.
- In Germany and Italy online gaming increases with age, although the difference between younger and older users is 14 and 9 percentage points, respectively, which is a relatively small difference compared to age differences found in other online activities.
- In Croatia, the Czech Republic, Estonia, Serbia and Flanders, playing online games every day decreases by age.

Figure 18: Playing online games daily, by gender



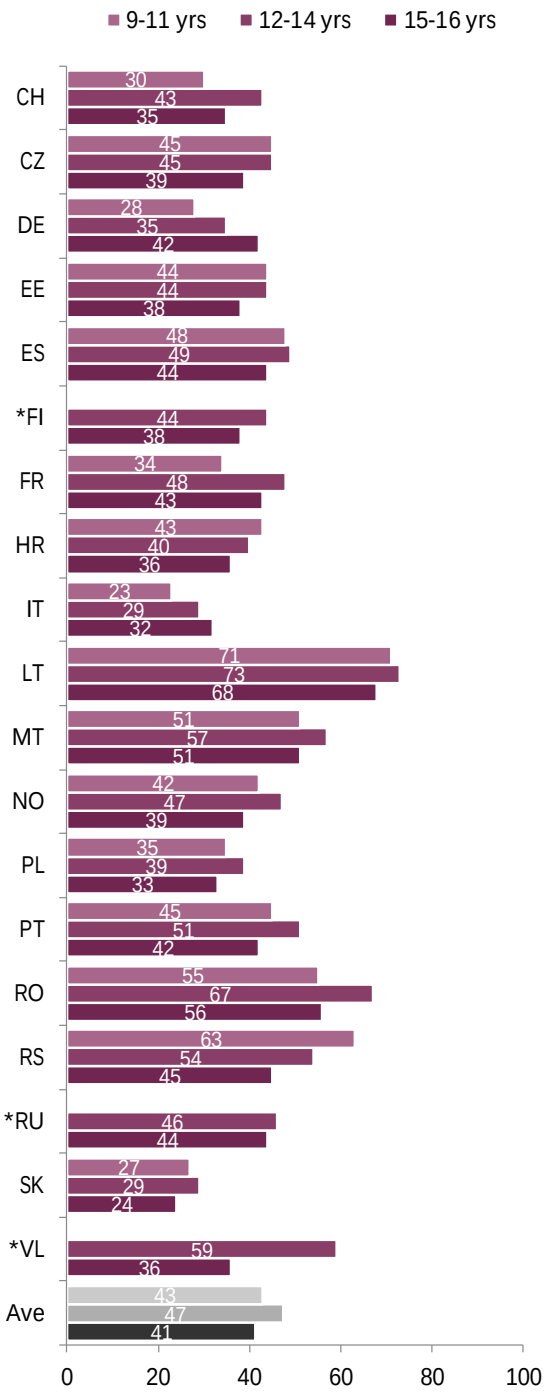
* FI/RU/VL: Full age range not available.

QC3j How often have you done these things ONLINE in the past month? I played online games. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

Playing games online is the most gendered activity, with twice as many boys than girls playing daily in most countries.

Figure 19: Playing online games daily, by age



* FI/RU/VL: Full age range not available.

QC3j How often have you done these things ONLINE in the past month? I played online games. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

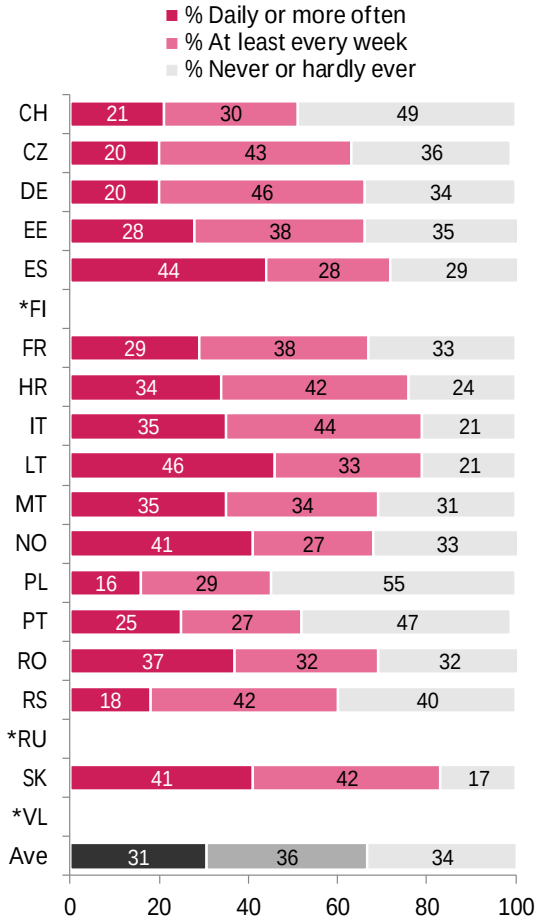
Base: All children 9–16 who use the internet.

Using the internet for schoolwork

Using the internet for schoolwork (Figure 20) is a further indicator of how embedded the internet is in children's everyday lives.

- Using the internet for schoolwork on a daily basis ranges between 16% in Poland and 46% of children in Lithuania.
- In most countries, less than one in three children say they never or hardly ever use the internet for schoolwork.

Figure 20: Using the internet for schoolwork, by country



* FI/RU/VL: Full age range not available.

QC3b How often have you done these things ONLINE in the past month? I used the internet for schoolwork.

Base: All children 9–16 who use the internet.

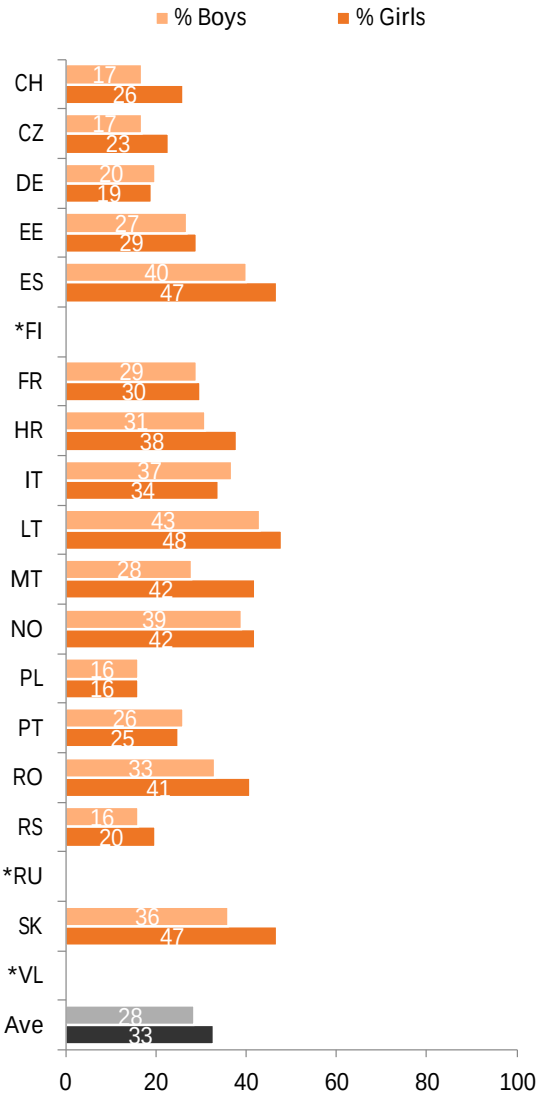
Gender differences in the number of children who use the internet for schoolwork are small or none (see Figure 21). In all countries where boys and girls differ, girls tend to report using the internet for schoolwork more than boys.

- In several countries, boys and girls report using the internet for schoolwork to a very similar

extent: Germany, Estonia, France, Serbia, Italy Lithuania, Norway, Poland and Portugal (differences equal to or below 5 percentage points).

- In six countries, the difference between girls and boys is around 5–9 percentage points.
- In Malta the difference between girls and boys is 14 percentage points.

Figure 21: Using the internet for schoolwork, by gender

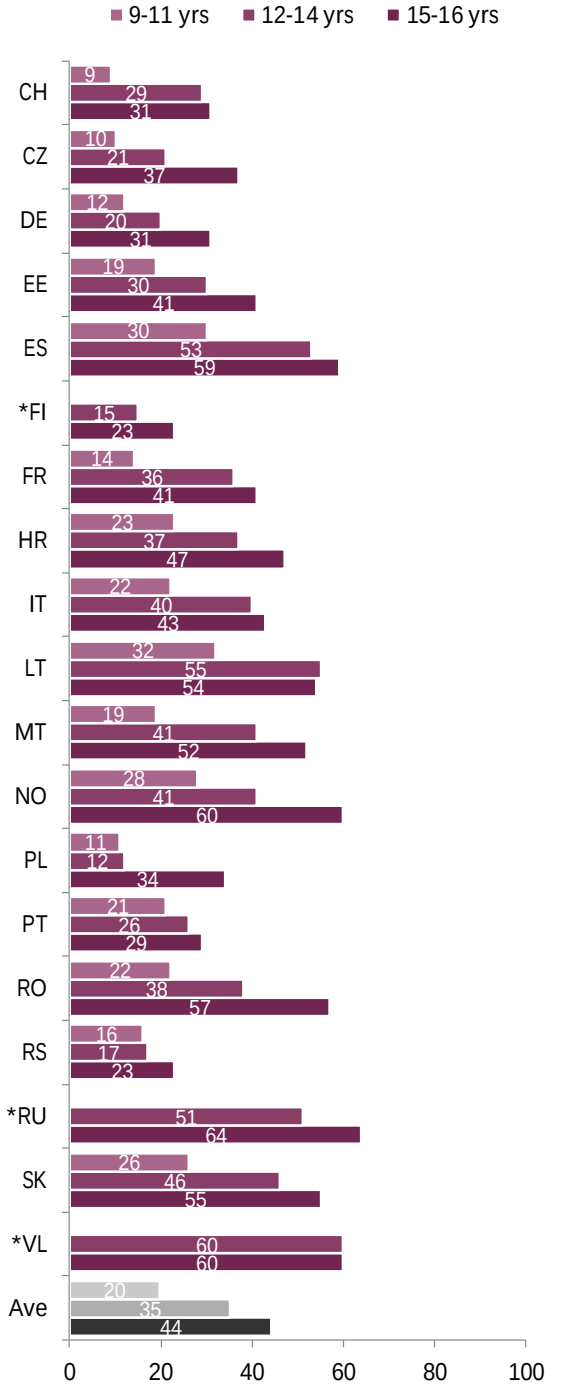


* FI/RU/VL: Full age range not available.

QC3b How often have you done these things ONLINE in the past month? I used the internet for schoolwork. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

Figure 22: Using the internet for schoolwork, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QC3b How often have you done these things ONLINE in the past month? I used the internet for schoolwork. Percentage of children who answered *daily or almost daily, several times a day* or *all the time.*

Base: All children 9–16 who use the internet.

Using the internet for schoolwork everyday is also clearly structured by age (Figure 22), with 15- to 16-year-olds more likely to do so on a daily basis than 9- to 11-year-olds (Ave = 24 percentage points of difference).

- The number of 9- to 11-year-olds who report using the internet for schoolwork every day ranges between 9% (Switzerland) and 32% (Lithuania).
- Among 12- to 14-year-olds, the number of children using the internet for schoolwork everyday ranges between 12% (Poland) and 60% (Flanders).
- Finally, in the oldest age group, school-related internet use ranges between 23% (Finland and Serbia) and 64% (Russia).

Points to consider

- Online activities are closely related to digital skills – and thus to children's digital inclusion – as well as to online opportunities and risks. Prior research has shown that children who take up a wider range of online activities are usually exposed to more risks, but are also better equipped to cope with such risky situations, thus experiencing less harm.[18]
- While the widespread use of mobile devices is associated with an increasing number of online activities, the range of activities taken up is not necessarily more varied. Children still engage mostly in communication and entertainment activities and their progression along the 'ladder of opportunities'[19] is still strongly structured by age.
- The frequency of all the activities increases by age, whereas gender variations tend to be less. Older children are more likely to take up more diverse online activities, suggesting a progression along the 'ladder of opportunities'[20] [21] from more basic uses of the internet – such as communication, entertainment and schoolwork – to more participatory activities.
- Gender differences persist, although they are not very pronounced, with the exception of gaming. Although playing games online can be seen by some as an activity with no substantial outcome, it could be the path to the development of important digital skills. Therefore, whether gender variations translate into more or less digital skills, and what kind of skills are associated with gaming, should be explored further.
- In some countries, the use of the internet for schoolwork is also partially differentiated by gender. Understanding why boys engage less in school-related activities on the internet in such countries is crucial if we want to address disparities in the tangible outcomes of internet use that already exist from childhood.

[18] Livingstone, S., Hasebrink, U., & Görzig, A. (2012). Towards a general model of determinants of risk and safety. In S. Livingstone, L. Haddon & A. Görzig (eds) *Children, risk and safety on the Internet: Research and policy challenges in comparative perspective* (pp. 323–7). Policy Press.

[19] Livingstone, S. & Helsper, E. (2007). Gradations in digital inclusion: Children, young people and the digital divide. *New Media & Society, 9*(4), 671–96. https://doi.org/10.1177/1461444807080335.

[20] Ibid.

[21] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents*. EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

Digital skills

Digital skills are a fundamental precondition of children's successful engagement with the world through the internet: they are relevant for young people's participation in society, education, employment and their general well-being.[22] [23] Digital skills are positively associated with the diversity and frequency of online activities:[24] [25] the more online opportunities children benefit from, the more children develop digital skills, and vice versa. More opportunities, however, are linked to more risks, so that more skilled children do actually encounter more risks, although digital skills can mediate between exposure to online risks and harm or resilience by reducing the harmful consequences of exposure to risks and making children more resilient.[26]

In line with developments in research on digital inclusion, the EU Kids Online survey broadened the scope of the digital skills measured. More specifically, the Internet Skills Scale was adopted, as developed and validated by van Deursen et al,[27] which identifies skills measures in five areas of competence: operational skills, including safety skills; information navigation skills, which enable critical engagement with online information; social skills, i.e., the ability to manage online relationships with others; creative skills, namely the capacity to produce communication; and mobile skills, related to the use of mobile devices.

We asked the children the following question: *Please indicate how true the following things are of you when thinking about how you use technologies such as mobile phones and the internet. If you don't understand what the question is referring to, choose the option 'I don't know'. If you have never done this, then think of how much this would apply to you if you had to do this now. On a scale from 1 to 5, where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?* The response options were then labelled in the following way: *Not true of me, Somewhat not true of me, Neither true nor not true of me, Somewhat true of me, Very true of me.*

This question was only asked of older children in the majority of the countries, so we present only the findings from children aged 12–16.

An overview of skills

In Table 4, we present number of children that say *somewhat true of me* or *very true of me*. Across the countries, the majority of children score high on operational (Ave = 84% and 79%) and social (Ave = 86% and 89%) skills.

Contrary to the myth of the digital natives, information navigation skills are unevenly distributed across the countries. These include the ability to assess the reliability of online information (varies between 36% and 75%) and the ability to choose the right keywords in an online search (varies between 52% and 89%), and are particularly low among children in Spain, Switzerland, Germany, France and Italy.

The evidence counters another myth associated with the digital natives rhetoric and celebratory discourses of web 2.0 users as producers: children also vary greatly across countries with respect to their levels of creative skills (varies between 55% and 86% in creating content and between 27% and 59% in editing content).

Finally, while almost all the children know how to download an app on a mobile device, the management and monitoring of the costs of app use is unevenly distributed across the countries (varies between 48% and 84%).

[22] ITU (2018). *Measuring the Information Society report*. Geneva: ITU. www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2018/MISR-2018-Vol-1-E.pdf

[23] van Deursen, A.J.A.M., Helsper, E.J., & Eynon, R. (2016). Development and validation of the Internet Skills Scale (ISS). *Information, Communication and Society, 19*(6), 804–23. https://doi.org/10.1080/1369118X.2015.1078834

[24] Livingstone, S. & Helsper, E. (2007). Gradations in digital inclusion: Children, young people and the digital divide. *New Media & Society, 9*(4), 671–96. https://doi.org/10.1177/1461444807080335.

[25] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents.* EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

[26] Livingstone, S., Mascheroni, G., & Staksrud, E. (2018). European research on children's internet use: Assessing the past and anticipating the future. *New Media & Society, 20*(3), 1103–22. https://doi.org/10.1177/1461444816685930

[27] van Deursen, A.J.A.M., Helsper, E.J., & Eynon, R. (2016). Development and validation of the Internet Skills Scale (ISS). *Information, Communication and Society, 19*(6), 804–23. https://doi.org/10.1080/1369118X.2015.1078834

Table 4: Measurements of digital skills (% who say very true or somewhat true), by country

	Operational		Information / navigation		Social		Creative		Mobile		
	I know how to save a photo that I find online	I know how to change my privacy settings	I find it easy to check if the information I find online is true	I find it easy to choose the best keywords for online searches	I know which information I should and shouldn't share	I know how to remove people from my contact lists	I know how to create and post online video or music	I know how to edit or make basic changes to online content	I know how to install apps on a mobile device	I know how to keep track of the costs of mobile app use	I know how to make an in-app purchase
CH	77	81	46	71	89	92	55	38	96	62	71
CZ	89	83	58	69	91	94	65	27	96	49	69
DE	85	73	41	86	80	85	65	43	86	62	69
EE	91	84	66	77	91	94	58	39	90	68	66
ES	71	77	36	52	85	88	66	28	94	48	60
*FI	84	81	71	71	90	90	69	49	88	56	74
FR	77	61	47	68	74	71	64	36	83	51	62
*HR	84	81	65	80	86	83	63	–	83	70	67
IT	87	75	49	73	86	88	72	53	90	67	65
LT	91	83	73	89	86	89	86	59	84	72	63
MT	76	82	61	72	87	87	61	44	89	57	61
NO	83	78	61	68	95	92	61	34	98	84	77
PL	83	80	67	73	86	87	62	43	87	70	71
PT	83	87	56	68	88	91	64	39	93	67	67
RO	84	70	69	66	78	88	76	55	88	74	74
RS	92	90	75	78	93	96	75	44	98	62	74
*RU	88	78	55	62	82	91	65	38	91	67	75
SK	86	80	67	82	79	86	71	57	82	64	70
*VL	88	85	56	60	88	92	65	45	93	67	71
Ave	84	79	59	72	86	89	66	43	90	64	69

* FI/RU/VL: Data not weighted. HR: Question QE1h not asked (*I know how to edit or make basic changes to online content*).

QE1 On a scale from 1 to 5, where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you? Percentage of children who answered *very true* or *somewhat true*.

Base: All children aged 12–16 who use the internet.

Overall skills

Overall digital skills measurement is derived from the 11 statements all of which were presented under the heading: *On a scale from 1 to 5, where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?* Answers to all 11 questions were combined and then adjusted to form a measurement scale running from 0 (minimum level of skills) to 10 (maximum level of skills). The overall level of digital skills across countries ranges from 7.1 (France) to 8.3 (Lithuania and Serbia) (see Figure 23).

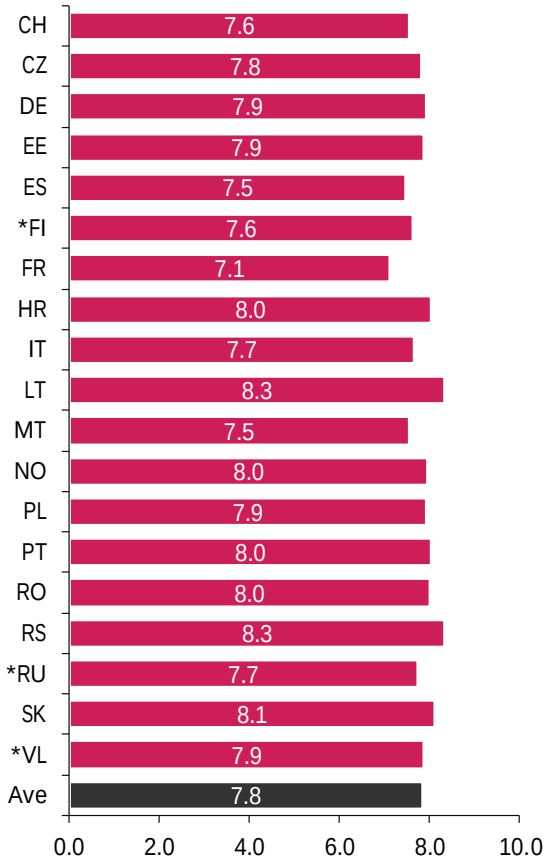
For gender and age comparison, we look to Cohen's suggestion[28] for interpretation of effect sizes which are based on mean differences as measured in standard deviation. In this context, observed differences up to 0.46 can be said to imply negligible effect, differences between 0.46 and 1.15 small effect, and bigger differences as medium or even

[28] Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Lawrence Erlbaum.

large effects. Figure 24 shows the gender differences in the overall level of digital skills.

- In most countries the differences between boys and girls are negligible, below or equal to 0.4.
- In Switzerland, the Czech Republic, Spain, and Norway, boys report higher skill than girls, though the difference is only small.

Figure 23: Overall digital skills, by country

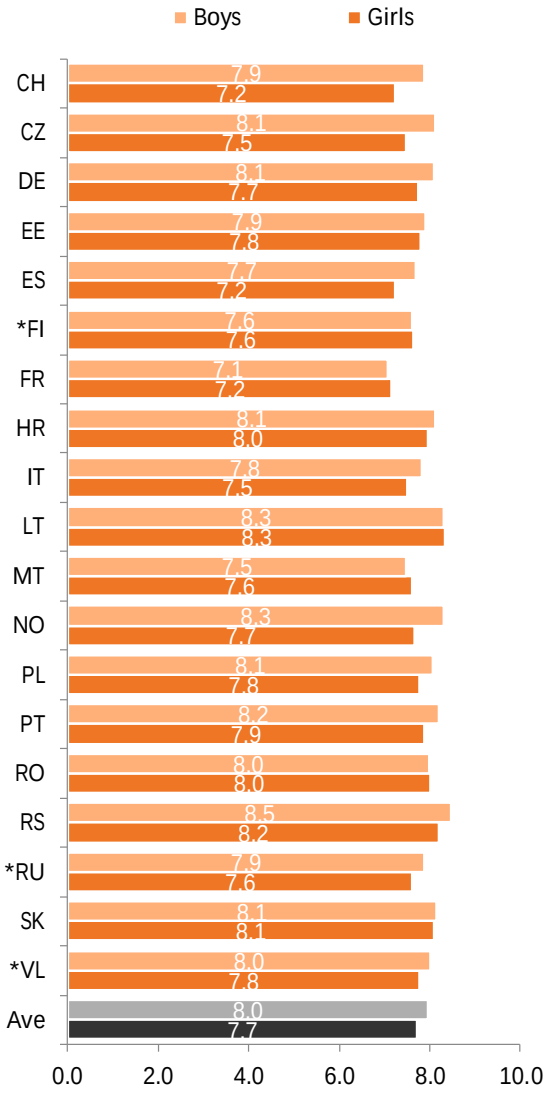


* FI/RU/VL: Data not weighted.

QE1 Derived from QE1 (see Table 4).

Base: All children aged 12–16 who use the internet.

Figure 24: Overall digital skills, by gender



* FI/RU/VL: Data not weighted.

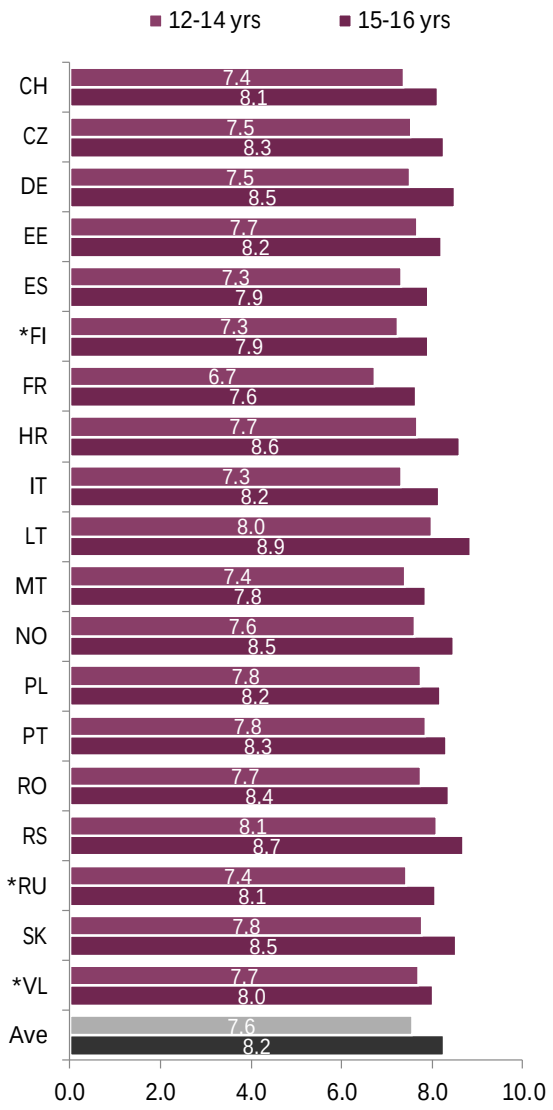
QE1 Derived from QE1 (see Table 4).

Base: All children aged 12–16 who use the internet.

Figure 25 shows that age differences are slightly stronger, ranging between 0.43 (Flanders) and 0.99 (Germany):

- Among 12- to 14-year-olds, the overall level of digital skills ranges between 6.7 (France) and 8.1 (Serbia).
- As expected, 15- to 16-year-olds score higher on the overall level of digital skills, ranging between 7.6 (France) and 8.9 (Lithuania).

Figure 25: Overall digital skills, by age



* FI/RU/VL: Data not weighted.

QE1 Derived from QE1 (see Table 4).

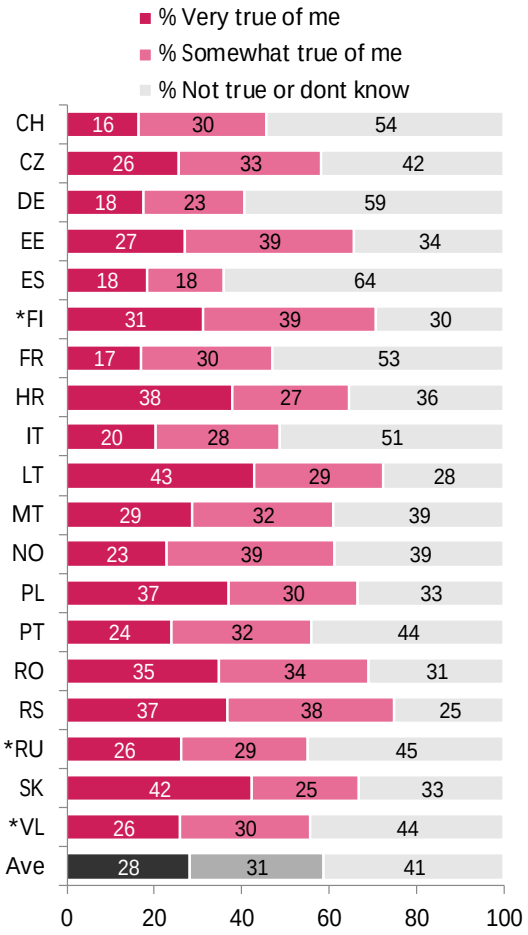
Base: All children aged 12–16 who use the internet.

Information navigation skills

Information navigation skills are represented by the item: *I find it easy to check if the information I find online is true*. The ability to check accuracy and reliability of the information online is critical for the achievement of tangible outcomes of internet use such as education, citizenship and participation. As shown in Figure 26, these skills vary across countries.

- The number of children who report being very confident (i.e., said *very true of me*) and find it very easy to check whether the information they find online ranges between 16% (Switzerland) and 43% (Lithuania).
- In Switzerland, Germany, Spain, France and Italy, only one in five children or fewer are very confident in their information navigation skills.
- On the other hand, the high level of information navigation skills is above or equal 35% in Lithuania, Romania, Serbia, Poland, Croatia and Slovakia.

Figure 26: Information-navigation skills, by country



* FI/RU/VL: Data not weighted.

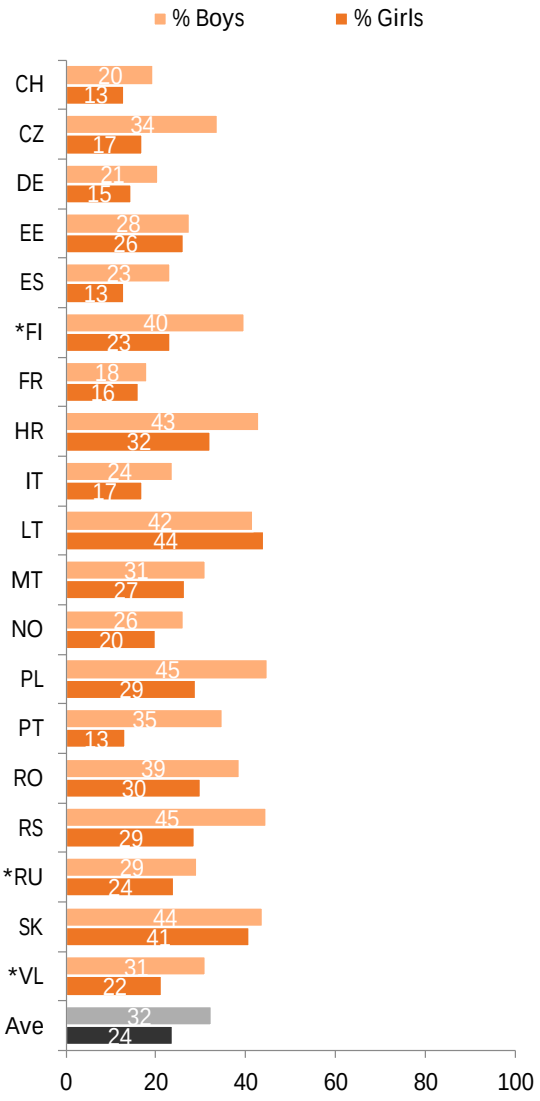
QE1c I find it easy to check if the information I find online is true.

Base: All children aged 12–16 who use the internet.

- As shown in Figure 27, there are only slight gender differences in high information navigation skills (i.e., saying *very true of me*), with more boys saying they are skilled (Ave = 8 percentage points of difference).
- The number of girls who report that it is *very true* of them to be able to assess whether online information is true ranges from 13% of girls in Spain and Switzerland to 44% in Lithuania.

- The proportion of boys who report the same information navigation skills ranges between 18% in France and 45% in Poland and Serbia.

Figure 27: Information navigation skills, by gender



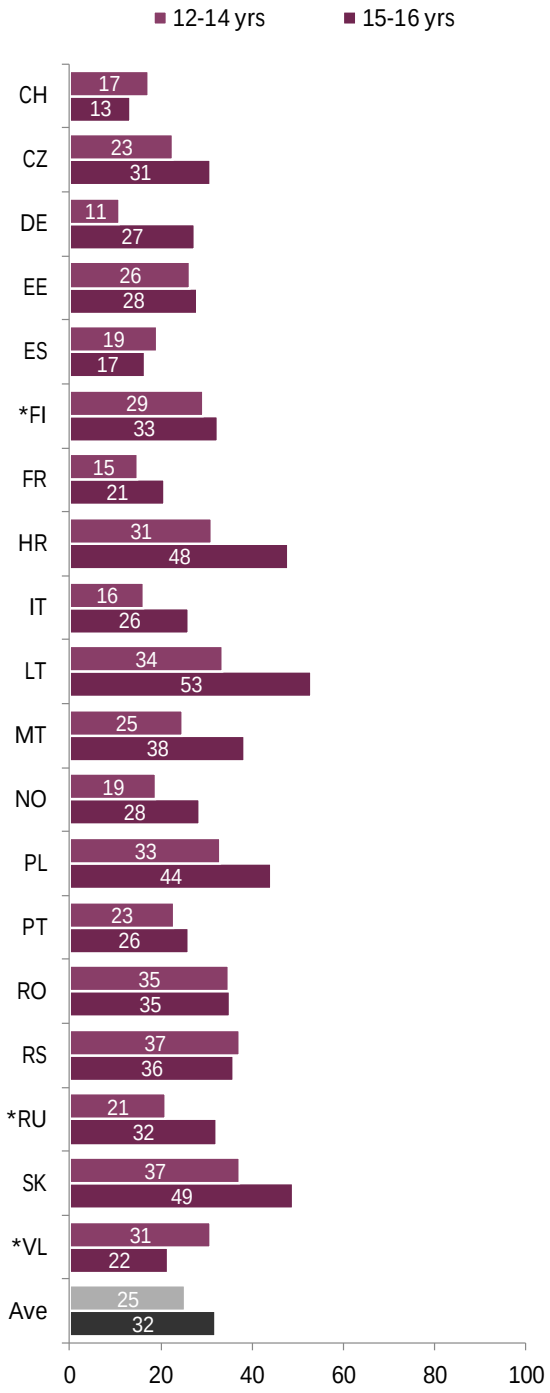
* FI/RU/VL: Data not weighted.

QE1c I find it easy to check if the information I find online is true. Percentage of children who answered *very true or somewhat true*.

Base: All children aged 12–16 who use the internet.

- Gender differences are small or negligible in countries where over a third of children say they are skilled (such as Lithuania and Slovakia) as well in those where less than a fifth of children report this (such as France and Switzerland).
- The gender differences are more pronounced in the Czech Republic (17 percentage points), Poland (16 percentage points), Portugal (22 percentage points) and Serbia (16 percentage points).

Figure 28: Information navigation skills, by age



* FI/RU/VL: Data not weighted.

QE1c I find it easy to check if the information I find online is true. Percentage of children who answered *very true or somewhat true*.

Base: All children aged 12–16 who use the internet.

Figure 28 shows the age differences related to information navigation skills.

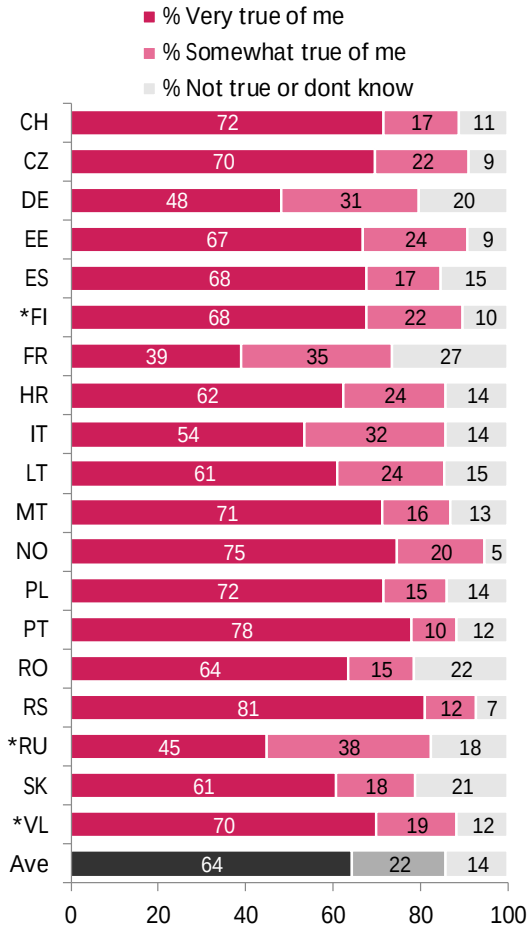
- In about half of the countries more older than younger children report confidence in their ability to check the validity of online information, with the differences between 6 percentage points (France) and 19 (Lithuania).
- In Switzerland, Estonia, Spain, Finland, Portugal, Romania, and Serbia, the age differences were only small or negligible (equal to or below 5 percentage points).
- The information navigation skills of 12- to 14-year-olds range between 11% (Germany) and 37% (Serbia).
- Among 15- to 16-year-olds, the number of children who reportedly possess this skill ranges between 13% (Switzerland) and 53% (Lithuania).
- Therefore, age variations across countries are more pronounced among children in the oldest age category.

Social skills

In general, children score high on the social skills scale, which is represented by item *I know which information I should and shouldn't share online*. Less than third of the children in most of the countries (Ave = 64%) report this is *very true* of them (Figure 29).

- Between 39% (France) and 81% (Serbia) of the children say they have these social skills.
- Less than half the children reported this as very true for them in Germany (48%), France (39%) and Russia (45%).
- On the other hand, over 75% children agreed with this in Portugal (78%) and Serbia (81%).
- The differences between boys and girls in Figure 30 show that in about half of the countries, gender is not substantially differentiated in social skills.
- In Switzerland, Estonia, Finland, Malta, Portugal, Romania and Flanders, more girls than boys say they have social skills (differences range between 6 percentage points in Switzerland and 12 points in Romania and Finland). This finding is contrary to the other skills measured, pointing out that when it comes to social skills and the management of interpersonal relationships online, girls are generally more equipped than boys.

Figure 29: Social skills, by country



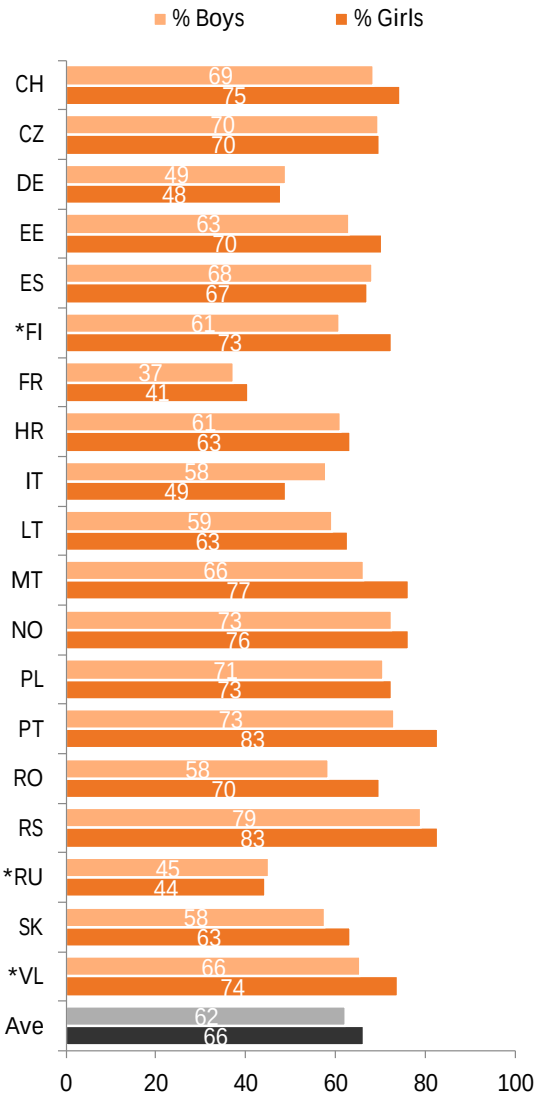
* FI/RU/VL: Data not weighted.

QE1e I know which information I should and shouldn't share online.

Base: All children aged 12–16 who use the internet.

- As shown in Figure 31, there are only slight differences related to the age of the children (Ave = 6 percentage points of difference).
- The level of social skills among 12- to 14-year-olds ranges between 36% (France) and 78% (Portugal and Serbia).
- In the oldest age group, social skills range between 42% (France) and 86% (Serbia).
- In the Czech Republic, Estonia, Spain, Croatia, Malta, Norway, Poland, Portugal and Flanders, the age differences are negligible equal to or below 5 percentage points).
- In other countries, the age differences range between 6 percentage points (France and Finland) and 18 percentage points (Germany).

Figure 30: Social skills, by gender

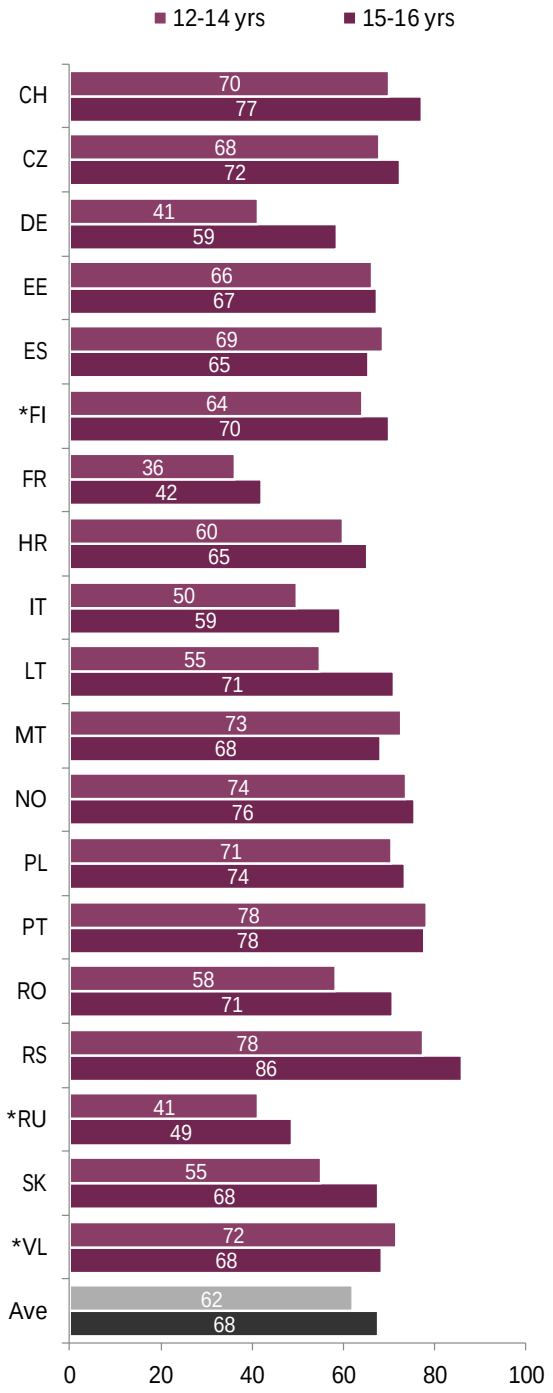


* FI/RU/VL: Data not weighted.

QE1e I know which information I should and shouldn't share online. Percentage of children who answered *very true or somewhat true*.

Base: All children aged 12–16 who use the internet.

Figure 31: Social skills, by age



* FI/RU/VL: Data not weighted.

QE1e I know which information I should and shouldn't share online. Percentage of children who answered *very true or somewhat true*.

Base: All children aged 12–16 who use the internet.

Points to consider

- While most children score high on the operational and social skills scales, a significant proportion lacks information navigation and content creation skills. Future research could investigate how and why children report these differences – specifically, which factors contribute to the development of information navigation and content creation skills, and how we can support their development.
- There is a consistent age gap related to acquisition of some skills. As shown, younger children in particular are less equipped when it comes to assessing the reliability of online information. This should be addressed in efforts to promote higher media literacy.
- Overall, gender differences are small, although in some countries there is a slight gap between boys and girls in the level of information navigation skills.
- As shown in 'Access', some new technologies are on the rise which allow internet access, such as smart toys, but also more complex ones, such as social robots. The effective use of such devices may require specialised digital skills not captured in the survey. Future research should better reflect on the variability of devices that children use to access the internet, and also measure digital skills in relation to these devices. Educator, researchers and policy-makers should find optimal ways to help children develop these new digital skills in relation to devices that they may, in time, end up using on a daily basis.

Information and navigation skills are low, especially in Switzerland, Germany, Spain, France, and Italy.

Risks and opportunities

This section goes a step further, and looks specifically into the online activities and experiences that can have negative or positive impacts on children (see Figure 32). This section deliberately combines risks and opportunities – in most cases, online activities cannot be conclusively defined as generally positive or generally negative. Rather, the same activity can have positive consequences for one child and negative consequences for another. One such example is experiences with sexual messages, where for some young people, under some circumstances, receiving a sexual message from a peer, a girlfriend or a boyfriend can be seen as positive and exciting, while for others, such messages can be the cause of distress and potential harm. Disentangling the factors that lead to one outcome rather than the other is the significant task of researchers.

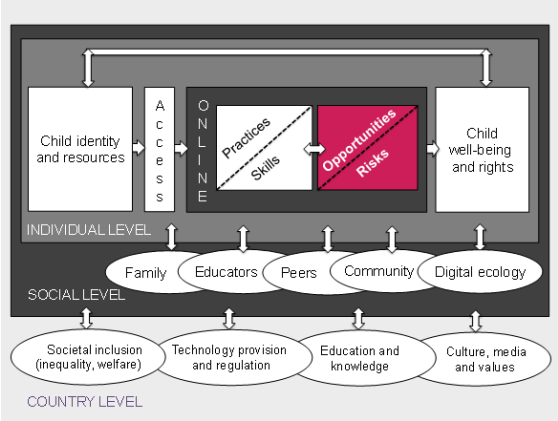
In the findings presented here, we aimed to show the variability of children's engagement in selected activities, and both the negative and positive experiences reflected in their emotional responses. We ordered the topics in this section based on approximate level of experienced harm – from those experiences that in their very definition include some level of harm (such as online aggression) to those that are more neutral in essence (such as meeting new people) and that often lead to positive outcomes. The specific order should, nevertheless, not be taken as a strict rank of risks and opportunities, but only as an effort to give some (albeit imperfect) order to the sections that follow.

The selected risks and opportunities presented in this report are as follows: overall negative experiences encountered online, online aggression and cyberbullying, exposure to potentially harmful content, experienced data misuse, using the internet excessively, sexting, exposure to sexual content, and meeting new people online. We also included a section about children's preferences for online communication, which may represent either a risk or opportunity.

We should point out that researching risks and opportunities has many specific challenges. The next section briefly explains how EU Kids Online dealt with these challenges.

What constitutes online risk and how this can be researched and measured is partly dependent on the context. Since the EU Kids Online 2010 survey, which provided evidence about children's online experiences, children and young people have been afforded new online services, content and new technologies. Perhaps the most obvious example is how the smartphone has changed how, when and where the internet can be accessed (see 'Access'). It has also opened up more private communication for children and young people, enabling them to access content and to communicate with others online when out and about, sharing diverse information and material while removed from the parental gaze. There has also been a change in online praxes, in particular the widespread use of social networking sites in which visual content dominates, which can be easily captured and uploaded through mobile devices. For research this means that some of the risks have also changed (or at least have become much more salient) and the research must react to such changes. Thus, when creating this survey, in addition to the measures of risks used in the EU Kids Online survey in 2010, we included some new questions. For instance, we asked about experiences with unwanted requests for sexual information or sharenting – experiences with parents having shared personal information about the child.

Figure 32: Theoretical model, focusing on Risks and opportunities (in red)



How to research risks and opportunities

Researching risk also means acknowledging that what is defined as a potential risk for some may be seen as an opportunity for others. One example is experiences with sexual messages described next, or meeting with unknown people from the internet. Thus, when asking children and young people about their experiences online, we tried to avoid normative connotations and guidance. In practice this means that we do not use terms such as 'bullying' and 'stranger', but rather we try to operationalise risks to be explicit, in a child-friendly language. The questionnaire options also include a wider range of feelings after the experience. Children were asked if certain experiences had upset them, without assuming that an experience had been problematic

and perceived as harmful by all. We also ask if it resulted in positive feelings and experiences, rather than just levels of distress (with obvious exceptions, notably cyberbullying). Thus, to provide a better insight, some risk sections also included follow-up questions about positive reactions and feelings to what most people might perceive as risk-related and/or abusive behaviour.

Furthermore, considering that older children may have had more experiences with online risks during their lives, we framed the questions within a specific time period (*during the past year*). Also, since the character of the risks varies and subsequently their depiction may differ from one incident to another, when investigating more about the experience, we framed the question to target the latest one (using *the last time this happened to you, …*). In doing this we aimed to increase the likelihood that all children would understand the question in the same manner and would be able to provide comparable answers.

It must be recognised that there are major methodological and ethical challenges associated with mapping risk experienced by children and young people. The countries included in this report collected data by various methods, and while there are different challenges associated with these methods, all the countries and teams collecting data paid due attention to the ethical requirements and dilemmas associated with the research (see 'Methodology'). This concerns in particular anonymity and confidentiality, and comfortable conditions that enable participants to provide honest answers.

To conclude this section, we would like to stress that risk is the potential for something to happen. Sometimes risk experiences result in harm, but risk and harm must be differentiated. In order to measure harm, the EU Kids Online survey uses the concept of intensity, a combination of how one felt after a risk experience and how long this feeling lasted. Readers should also refer to the EU Kids Online 2010 reports for a detailed explanation of the measures of risk versus harm.[29] [30]

[29] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011a). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents*. EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

[30] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Technical report and user guide: The 2010 EU Kids Online Survey. A report on the design and implementation of the EU Kids Online survey of 9-16 year olds and their parents in 25 countries*. EU Kids Online, LSE. http://eprints.lse.ac.uk/45270/

Overall negative online experiences

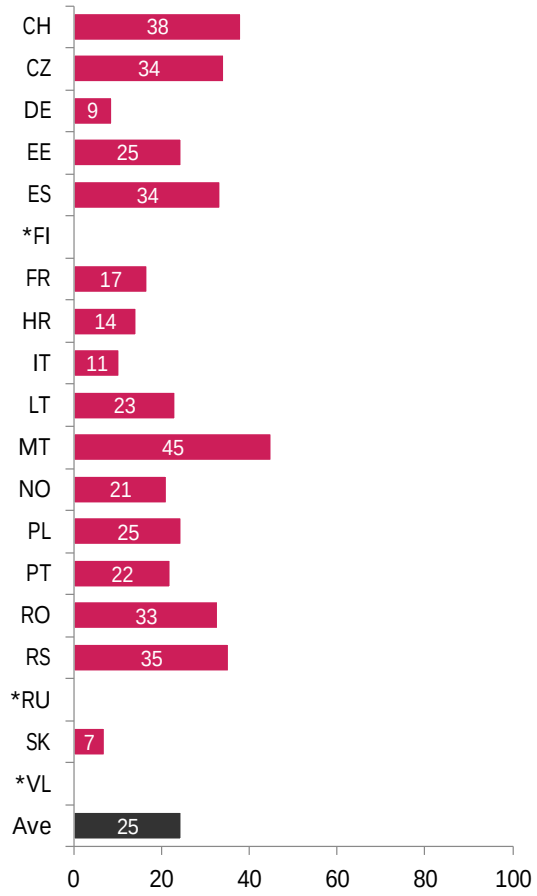
Before asking children about a specific online experience, we asked them about negative online experiences in the broadest possible terms:

In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)?

This question covers different kinds of online experiences that make children upset. In the EU Kids Online survey 2010 we asked children the open question, '*What things on the internet would bother or upset you?*' [31] Children described a broad range of experiences, such as being exposed to online sexual content, aggressive content and other types of unwanted content; inappropriate contacts; online harassment and bullying; hacking; sharing personal information; damage to reputation; and also viruses, spam, pop-ups and online advertisements. Furthermore, in our previous qualitative investigation,[32] children said that they had been bothered online by technical problems, such as when the internet was not working or when the internet connection was slow. That means that children's experiences reported in this section cover many different kinds of online problems, from serious problems (e.g., cyberbullying) to experiences with little negative impact on the children (e.g., technical problems).

- The number of children reporting being bothered by something online varies substantially among countries, ranging between 7% (Slovakia) and 45% (Malta) (Figure 33).
- In some countries (Germany and Slovakia), less than 10% of children aged 9–16 are bothered by something online, but in the Czech Republic, Malta, Romania, Serbia, Spain and Switzerland, more than 30% children report the same.
- In the EU Kids Online survey 2010, the percentage of children who reported that they had been bothered on the internet varied between 6% and 25% across comparable countries. In this EU Kids Online 2020 report, the number of children who reported such experiences was higher (between 7% and 45%; Ave = 25%). Thus, the number of children who reported that they had been bothered online substantially increased in most comparable countries (Czech Republic, Spain, France, Italy, Lithuania, Poland and Romania) while it remained almost the same only in Germany, Estonia and Norway.

Figure 33: Negative online experiences in the past year, by country



*FI/RU/VL: Full age range not available.

QF01 In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)? Percentage of children who answered *yes*.

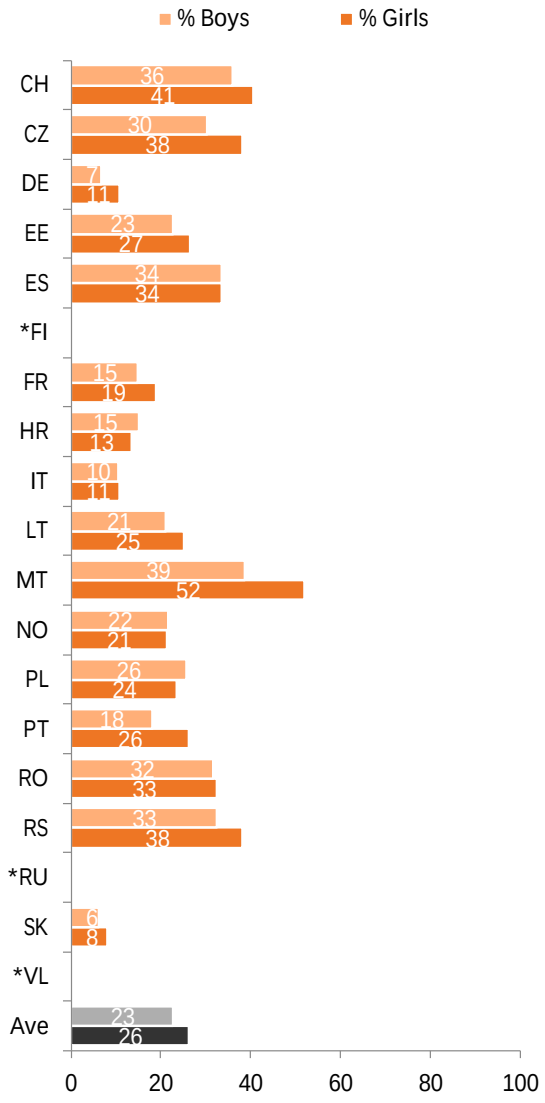
Base: All children 9–16 who use the internet.

- The number of boys reporting being upset by something online ranges between 6% (Slovakia) and 39% (Malta) (Figure 34). The percentage of girls reporting the same problem ranges between 8% (Slovakia) and 52% (Malta).
- In Malta and Switzerland, more than 40% of girls report that they are bothered online.

[31] Livingstone, S., Kirwil, L., Ponte, C., & Staksrud, E. (2013). *In their own words: What bothers children online? With the EU Kids Online Network*. EU Kids Online, LSE. http://eprints.lse.ac.uk/48357/

[32] Smahel, D. & Wright, M.F. (eds) (2014). *Meaning of online problematic situations for children: Results of qualitative cross-cultural investigation in nine European countries*. EU Kids Online, LSE.

Figure 34: Negative online experiences in the past year, by gender



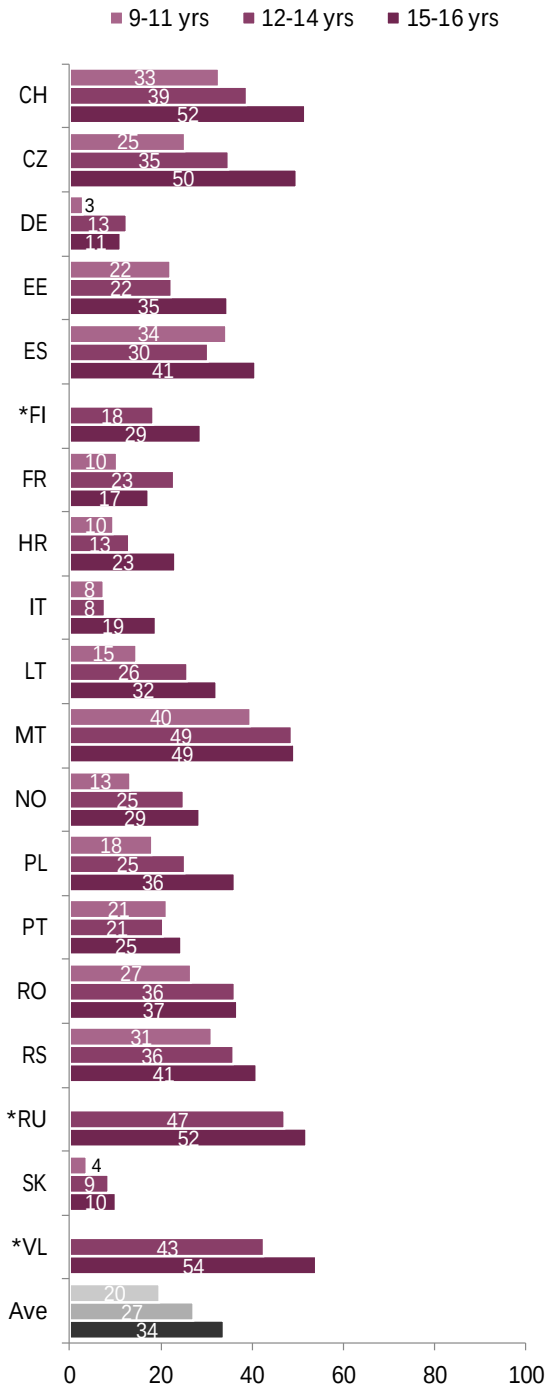
*FI/RU/VL: Full age range not available.

QF01 In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

- In the Czech Republic, Malta, Portugal, and Serbia there are small differences between boys and girls (between 6 and 13 percentage points), with more girls reporting that they are bothered online than boys.
- As Figure 35, shows, more older children report experiencing negative online experiences. In all countries except Portugal, more children in oldest age category report such experience than children in the youngest age category (Ave = 14 percentage points of difference).

Figure 35: Negative online experiences in the past year, by age



*FI/RU/VL: Full age range not available. Data not weighted.

QF01 In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)? Percentage of children who answered *yes*.

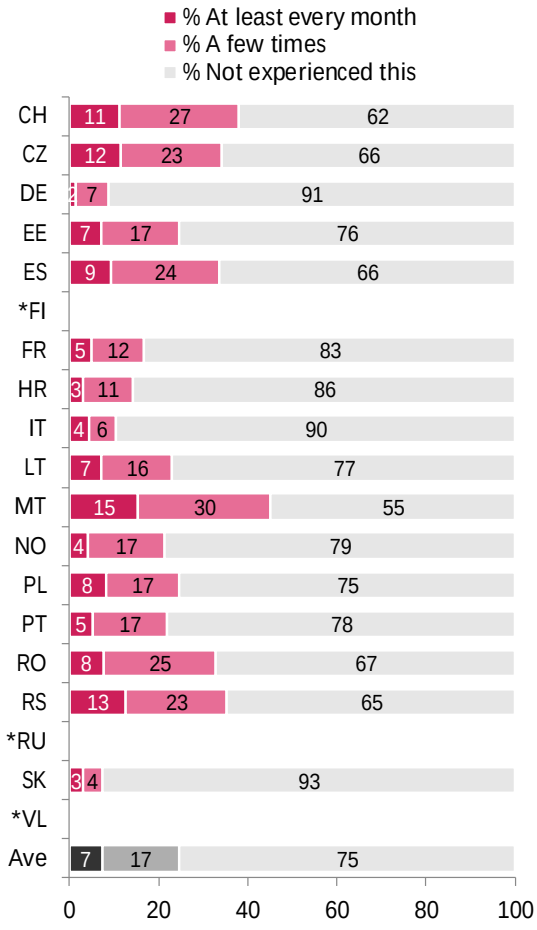
Base: All children 9–16 who use the internet.

How frequent are negative online experiences?

To better understand children's negative online experiences, we asked those children who reported such an experience how often it happened within the past year.

- Most children report being bothered online only sporadically (*a few times*), ranging between 4% (Slovakia) and 30% (Malta).
- A lower number of children are bothered online *at least every month* or more often: between 2% (Germany) and 15% (Malta).
- More than a tenth of children are bothered online at least every month or more often in Switzerland, the Czech Republic, Malta and Serbia.

Figure 36: Frequency of negative online experiences in the past year, by country



*FI/RU/VL: Full age range not available.

QF02 In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way? In the PAST YEAR, how often did this happen?

Base: All children 9–16 who use the internet and reported that something happened online that bothered or upset them.

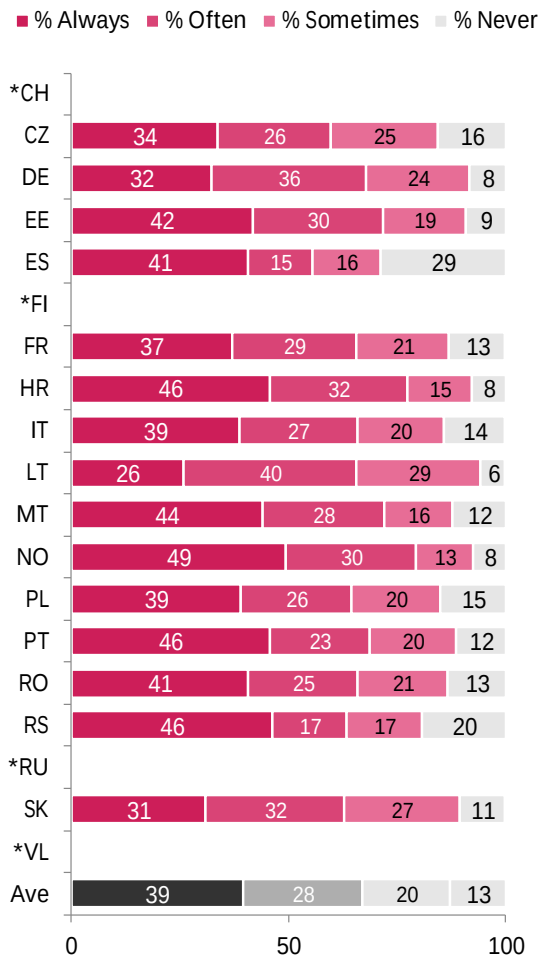
Knowing what to do if someone **acts online in a way children don't** like

Encountering other people whose behaviour children may find wrong, inappropriate or even aggressive is among the online experiences that may upset children. It is important to know whether children know how to handle such situations. Without such perceived self-efficacy, children may avoid being included in many communicative activities online. On the other hand, if they feel that they do have such skills, they may be more prone to engage in online interactions, believing they can handle any bothering situation. Therefore, we asked the children how often the following applied to them:

I know what to do if someone acts online in a way I don't like.

- In all of the countries, most of the children *often* or *always* believe they know how to react to the online behaviours of others they don't like. Between 26% (Lithuania) and 49% (Norway) say they *always* know how to do this (Ave = 39%) (Figure 37).
- On the other hand, between 6% (Lithuania) and 29% (Spain) *never* know how to react in these situations (Ave = 13%).
- In most countries, there are no substantial gender differences (i.e, over 5 percentage points) comparing children who *often* or *always* feel self-efficient in handling such situations. Exceptions are Romania (difference 11 percentage points), Portugal (difference 8 percentage points) and Czech Republic and Portugal (difference 6 percentage points), with more boys than girls feeling self-efficient. Considering that there are almost no differences in most countries, we don't include the figure here.

Figure 37: Knowing how to react to online behaviours of others which children do not like, by country



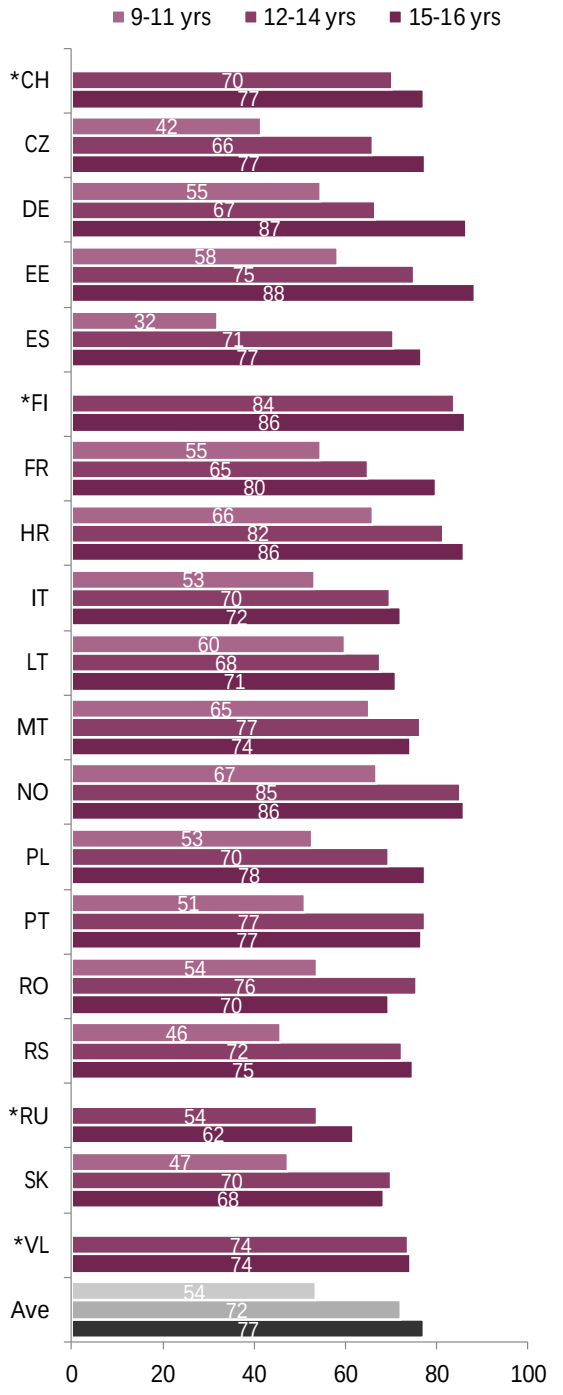
*FI/RU/VL/CH: Full age range not available.

QD2c How often does the following apply to you? I know what to do if someone acts online in a way I don't like.

Base: All children 9–16 who use the internet.

- In most of the countries more of the older children know how to react to the online behaviours of others that they do not like (Figure 38). In the youngest age category, this applies for between 32% (Spain) and 67% (Norway) (Ave = 54%). In the oldest age category, it is between 62% (Russia) and 88% (Estonia) (Ave = 77%).

Figure 38: Knowing how to react to online behaviours of others which children do not like (always or often), by age



*FI/RU/VL/CH: Full age range not available. FI/RU/VL: Data not weighted.

QD2c How often does the following apply to you? I know what to do if someone acts online in a way I don't like. Percentage of children who answered *always* or *often*.

Base: All children 9–16 who use the internet.

Coping with a negative experience – who children talk to

Negative experiences online can cause different reactions. Children may cope with the situation themselves, such as by blocking the person, they may talk to other people, use technical measures, confront the stressor or aggressor, or may just ignore the problem.[33]

In this EU Kids Online survey, we asked children (a) who they talked to about the problem and (b) how they reacted after experiencing the problem.

As noted above, children experience a broad range of problematic situations online, from simple technical problems to possible serious harm. Therefore, the reactions of the children may vary in relation to the nature of the problem.

Table 5 shows who children talk to about a negative online experience. This was only reported by children who had been bothered online. We asked these children the following question:

The last time something happened online that bothered or upset you, did you talk to any of these people about it?

Table 5: Who children talked to after having negative online experiences, by country

	% Mother or father	% Brother or sister	% Friend around my age	% Teacher	% Someone whose job it is to help children	% Another adult I trust	% **I didn't** talk to anyone
*CH	–	–	–	–	–	–	–
CZ	31	15	56	3	1	5	24
DE	44	11	51	3	1	3	16
EE	46	10	38	6	1	5	30
ES	47	31	69	12	8	32	21
*FI	–	–	–	–	–	–	–
FR	59	23	39	4	6	6	4
HR	52	13	39	3	0	3	14
IT	45	11	44	4	0	1	22
LT	40	11	57	3	2	7	15
MT	42	14	39	8	2	9	21
NO	34	8	50	6	5	5	25
PL	34	23	71	13	9	25	9
PT	37	13	44	7	1	10	26
RO	39	13	43	5	3	10	17
RS	31	16	43	3	2	6	26
*RU	–	–	–	–	–	–	–
SK	31	9	54	2	0	2	22
*VL	–	–	–	–	–	–	–
Ave	40	14	50	5	3	9	19

*FI/RU/VL: Full age range not available. CH: Question not asked.

QF04: The last time something happened online that bothered or upset you, did you talk to anyone of these people about it? Percentage of children who answered *yes.*

Base: Children aged 9–16 who use the internet and reported that something happened online that bothered or upset them.

[33] Parris, L., Varjas, K., Meyers, J., & Cutts, H. (2012). High school students' perceptions of coping with cyberbullying. *Youth & Society, 44*(2), 284–306. https://doi.org/10.1177/0044118X11398881

- In the majority of the countries, the most frequent people children talk to are parents (between 31% in the Czech Republic and Serbia to 59% in France; Ave = 41%) or friends (between 38% in Estonia and 71% in Poland; Ave = 49%).
- Most children prefer to talk to a parent in Estonia, France, and Croatia; on the other hand, in the Czech Republic, Germany, Lithuania, Norway, Poland, Portugal, Serbia, Slovakia, Romania and Spain, they mostly talk to a friend.
- In all of the countries only a minority of the children talk to teachers (between 2% and 13%; Ave = 5%) or to a professional whose job it is to help children (0% to 9%; Ave = 3%).
- Some children also report talking to another adult they trust, although in most countries only 10% or fewer children report this (between 1% and 32%; Ave = 9%). However, in Spain and Poland, more than 25% children talk about their experience with a trusted adult.
- Finally, in almost all of the countries there are children who do not talk to anyone, their number ranging between 4% (France) and 30% (Estonia) (Ave = 19%).

In the majority of the countries, the most frequent people children talk to are parents or friends.

Coping with negative experiences: how children react

Besides talking about negative online experiences with someone, children may also react in other ways. We asked children who report they had been bothered or upset by something online the following question:

The last time you had problems with something or someone online that bothered or upset you in some way, did you do any of these things afterwards?

As Table 6 shows, children were asked about different kinds of reactions, from active behaviour (e.g., reporting the problem) to passive behaviour (e.g., ignoring the problem).

- Between 4% (France) and 56% (Poland) of children report that they ignored the problem when it occurred. In all of the countries (except for France), more than a fifth of the children said they ignore the problem. In Poland and Spain, more than half of the children reacted in this way.
- Often-used strategies were closing the window or app (between 20% in France and 60% in Poland) and blocking the person (between 18% in Italy and Romania and 58% in Poland).
- Between 4% (Italy) and 33% (Poland) of children felt a bit guilty about what went wrong.
- After such a negative experience, some children also stopped using the internet for a while. This reaction was reported by 9% (Italy) to 26% (Switzerland) children.
- Between 3% (Italy) and 35% (Poland) of children reported the problem online.

Points to consider

- Quite a high percentage of children report that they had been bothered or upset by something online (7% to 45% overall). In most of the countries this percentage increased from the EU Kids Online survey in 2010. However, the interpretation of these high percentages and the substantial increase from 2010 is quite complex. As noted in the beginning of this section, reported experiences comprise serious ones (e.g., bullying and harmful content) as well as those without a larger negative impact (e.g., technical problems).
- The online environment has dramatically changed in recent years, with children more often using mobile phones to access the internet (see 'Access'). This might also cause a change in the structure of the problems that upset children. For example, children may experience more adverts on their mobile phones or more technical problems with a missing or slow internet connection.
- Thus, in this section we show that children in most of the countries experience more problems online currently than in 2010, but we do not know what kind of problems they are experiencing more of. The following sections of this report will help us to better understand which problems children experience these days, and what might have made them upset online.
- Future research should also investigate in more depth what kind of problems make children upset online when they use different devices to access the internet. Did the new problems arise with the use of mobile phones to access the internet or with smart toys? Further qualitative investigation could answer such questions.
- The various online experiences might have a different impact on the children, not only in terms of the amount of impact (how much the children are upset), but also in terms of time (how long children are upset). Future research could reveal the short- and long-term impacts of different online experiences on children's well-being.

Table 6: How children react after having negative online experiences, by country

	I ignored the problem or hoped the problem would go away by itself	I closed the window or app	I felt a bit guilty about what went wrong	I tried to get the other person to leave me alone	I tried to get back at the other person	I stopped using the internet for a while	I deleted any messages from the other person	I changed my privacy or contact settings	I blocked the person from contacting me	I reported the problem online
CH	46	36	22	28	16	26	24	19	44	25
CZ	44	36	17	18	7	11	21	13	35	12
DE	25	30	16	25	5	4	28	13	30	7
EE	36	41	6	12	4	9	12	5	19	6
ES	54	52	28	56	19	22	35	26	54	16
FI*	–	–	–	–	–	–	–	–	–	–
FR	4	20	11	22	7	8	18	12	33	21
HR	24	56	8	14	12	5	14	19	34	10
IT	28	37	4	14	6	9	15	9	18	3
LT	24	42	10	13	4	21	22	9	35	4
MT	33	30	16	11	8	7	17	14	30	11
NO	28	25	10	16	5	6	10	4	20	16
PL	56	60	33	55	23	20	28	31	58	35
PT	43	29	13	20	10	10	14	11	35	9
RO	45	29	13	16	6	6	13	8	18	7
RS	24	23	7	11	6	7	15	7	31	10
RU*	–	–	–	–	–	–	–	–	–	–
SK	23	30	13	11	5	12	25	20	46	7
VL*	–	–	–	–	–	–	–	–	–	–
Ave	34	36	14	21	9	11	19	14	34	12

*FI/RU/VL: Full age range not available.

QF05: The last time you had problems with something or someone online that bothered or upset you in some way, did you do any of these things afterwards? Percentage of children who answered *yes*.

Base: Children aged 9–16 who use the internet and reported that something happened online that bothered or upset them.

Online aggression and cyberbullying

Cyberbullying, as well as bullying experienced offline, is one of the often discussed topics related to children's development. Considering that bullying, i.e., aggressive acts aimed at an individual or group, has negative physical, psychological and academic effects[34], it is important to know how many children experience victimisation and how many have been involved as aggressors themselves.

Prior evidence has shown that online and offline bullying among young people is often interconnected – those who are involved in online forms of bullying are often involved in offline forms of bullying as well.[35] Thus, to contextualise the findings, we will present the results relating to both online and offline aggression and bullying. Nevertheless, it should be noted that cyberbullying has several specific features that differentiate it from offline aggression. The attacks can come from any place at any time and the victim can be reached even in the relative safety of their own homes.[36] Public attacks can have a substantially wider audience than offline ones.[37] All actors, including perpetrator(s), the victim(s) and other witnesses, can be mutually distant and invisible, even anonymous. As a result, they lack immediate and direct feedback about the impact on the victim, and may feel more disinhibited in their responses.[38] And the hurtful and harmful material published online can be easily copied, stored and shared through many channels (such as a social networking site), opening up the possibility for further harm due to repeated exposure of the material.[39]

It should also be stressed that not all acts of aggression should be labelled as bullying. In line with prior research, cyberbullying is dominantly defined by criteria that have been established for bullying behaviour. These are: the victimisation is repeated and happens over time; the harm is conducted intentionally; and there is an asymmetric power relationship between the aggressor(s) and victim(s).[40] [41]

Acknowledging this, the following definition of bullying was offered to the children who were asked if they had had experience with similar behaviour.

Sometimes children or teenagers say or do hurtful or nasty things to someone and this can often be quite a few times on different days over a period of time, for example. This can include:

- *teasing someone in a way this person does not like*
- *hitting, kicking or pushing someone around*
- *leaving someone out of things.*

When people are hurtful or nasty to someone in this way, it can happen:

- *face-to-face (in person)*
- *by mobile phone (texts, calls, video clips)*
- *on the internet (email, instant messaging, social networking, chatrooms).*

Note that this definition does not differentiate between occasional acts of aggression and more permanent and harmful cyberbullying. Thus, when we present the answers to this question, we label it 'online aggression'. To present the findings of cyberbullying and offline bullying, we further focus on the reported frequency of the aggression and the resulting harm.

[34] Kowalski, R.M. & Limber, S.P. (2013). Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health, 53*(1), S13–S20. https://doi.org/10.1016/j.jadohealth.2012.09.018

[35] Waasdorp, T.E. & Bradshaw, C.P. (2015). The overlap between cyberbullying and traditional bullying. *Journal of Adolescent Health, 56*(5), 483–8. https://doi.org/10.1016/j.jadohealth.2014.12.002

[36] Tokunaga, R.S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior, 26*(3), 277–87. https://doi.org/10.1016/j.chb.2009.11.014

[37] Pfetsch, J. (2016). Who is who in cyberbullying? Conceptual and empirical perspectives on bystanders in cyberbullying. In M.F. Wright (ed.) *A social-ecological approach to cyberbullying* (pp. 121–49). Nova Science Publishers.

[38] Kowalski, R.M., Giumetti, G.W., Schroeder, A.N., & Lattanner, M.R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin, 140*(4), 1073–37. https://doi.org/10.1037/a0035618

[39] Kowalski, R.M., Giumetti, G.W., Schroeder, A.N., & Lattanner, M.R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin, 140*(4), 1073–37. https://doi.org/10.1037/a0035618

[40] Ibid.

[41] Olweus, D. (1994). Bullying at school: Basic facts and effects of a school based intervention program. *Journal of Child Psychology and Psychiatry, 35*(7), 1171–90. https://doi.org/10.1111/j.1469-7610.1994.tb01229.x

Overall victimisation and aggression

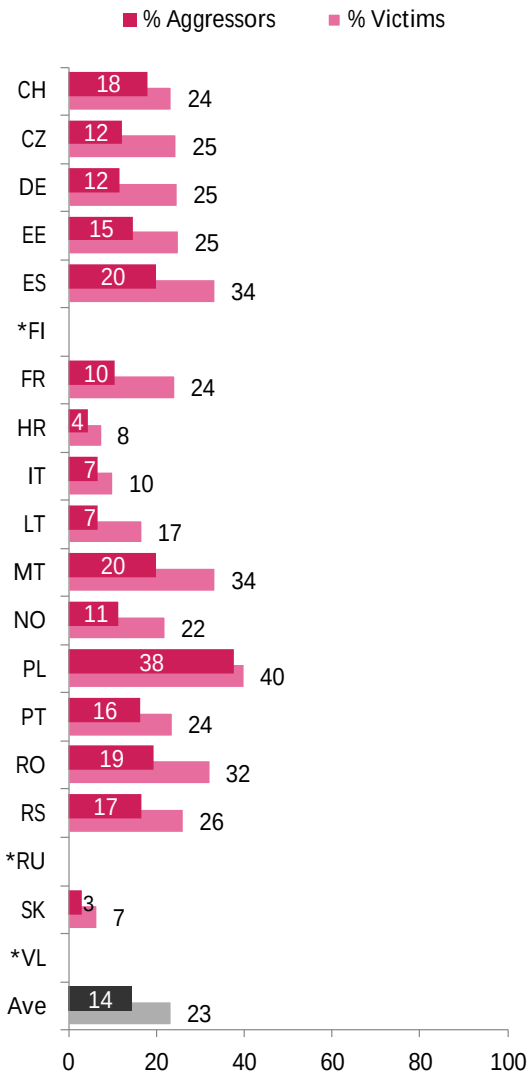
In the initial questions, the children were asked whether they had been involved in any aggressive behaviour in the past year – as a victim and as an aggressor. This may have happened both offline and online.

Specifically, following the definition above, we asked:

In the PAST YEAR, has anyone EVER treated you in such a hurtful or nasty way? In the PAST YEAR, have you EVER TREATED someone else in a hurtful or nasty way?

- In all the countries, more children report being a victim than being an aggressor (see Figure 39). However, there is substantial variation across the countries concerning these experiences.
- The prevalence of victimisation ranges between 7% (Slovakia) and 40% (Poland). In most countries, more than 20% children experienced victimisation.
- The number of children reporting aggression ranges between 3% (Slovakia) and 38% (Poland). The number of perpetrators ranges between 10% and 20% in most countries.
- In only three countries, the victimisation prevalence is 10% or less – Slovakia, Croatia and Italy. In these countries, and in Lithuania and France, the same applies for aggression.
- In the majority of the countries there is no substantial gender difference in victimisation or aggression (i.e., only 5 percentage points or less) (Figure 40). Nevertheless, in Switzerland France and Malta, slightly more girls are victimised than boys (differences between 7 and 8 percentage points). There is no country where boys would be victimised more.
- The opposite trend applied for aggression, where in the Czech Republic, Spain, Poland and Romania more boys are aggressors (differences of between 6 and 9 percentage points), while in no country do girls report such an experience more than boys (Figure 42).
- The age differences are not consistent across the countries Figure 41 and Figure 43). In two countries (Malta and Poland), the victimisation substantially increases with age. But in Romania, for instance, the age group that reports the most victimisation as well as aggression are those aged 12–14. In France, the oldest age category (15–16) reports the lowest number of victimised children, but the opposite applied for aggression, where the least number of aggressors is among those aged 9–11.

Figure 39: Aggression and victimisation in the past year (on- or offline), by country

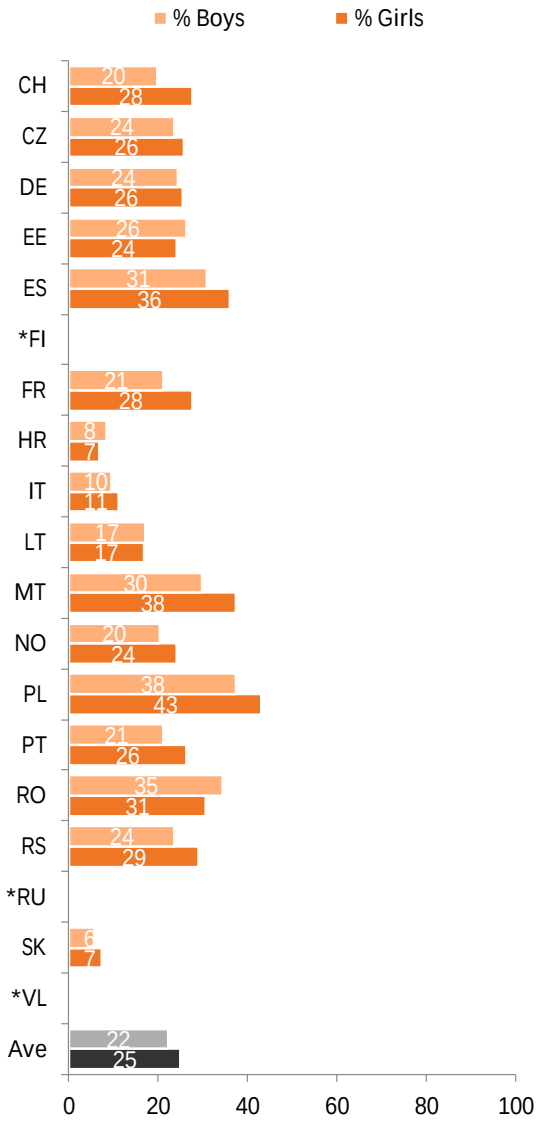


*FI/RU/VL: Full age range not available.

QF20 In the PAST YEAR, has anyone EVER treated you in such a hurtful or nasty way? And QF28 In the PAST YEAR, have you EVER TREATED someone else in a hurtful or nasty way? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

Figure 40: Victimisation in the past year (on- or offline), by gender

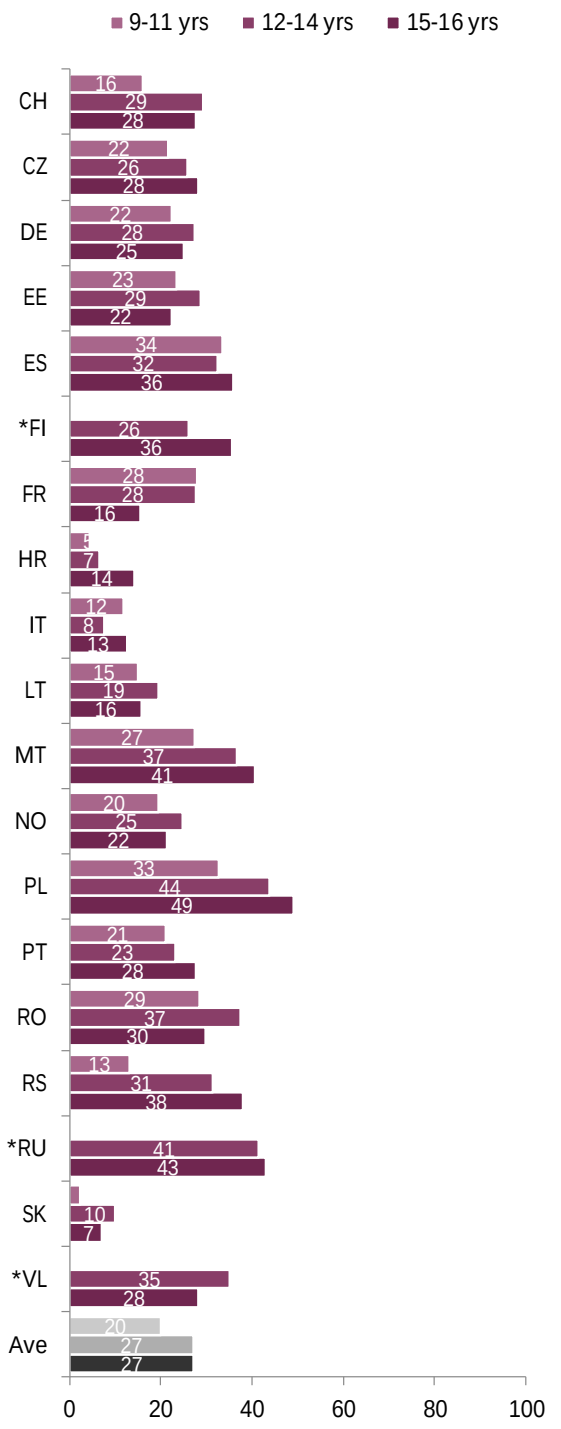


*FI/RU/VL: Full age range not available.

QF20 In the PAST YEAR, has anyone EVER treated you in such a hurtful or nasty way? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

Figure 41: Victimisation in the past year (on- or offline), by age

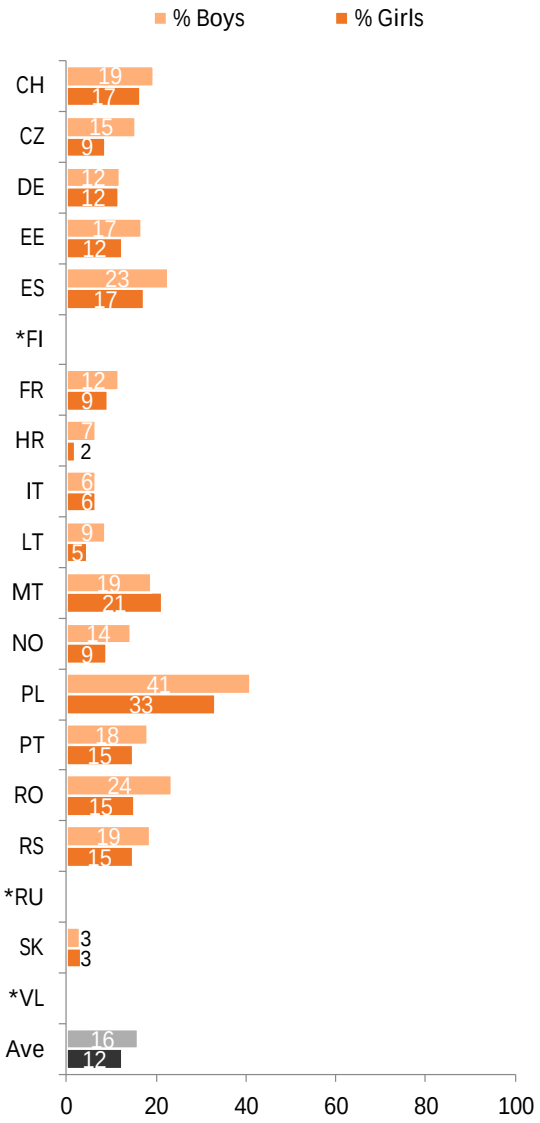


*FI/RU/VL: Full age range not available. Data not weighted.

QF20 In the PAST YEAR, has anyone EVER treated you in such a hurtful or nasty way? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

Figure 42: Aggression in the past year (on- or offline), by gender

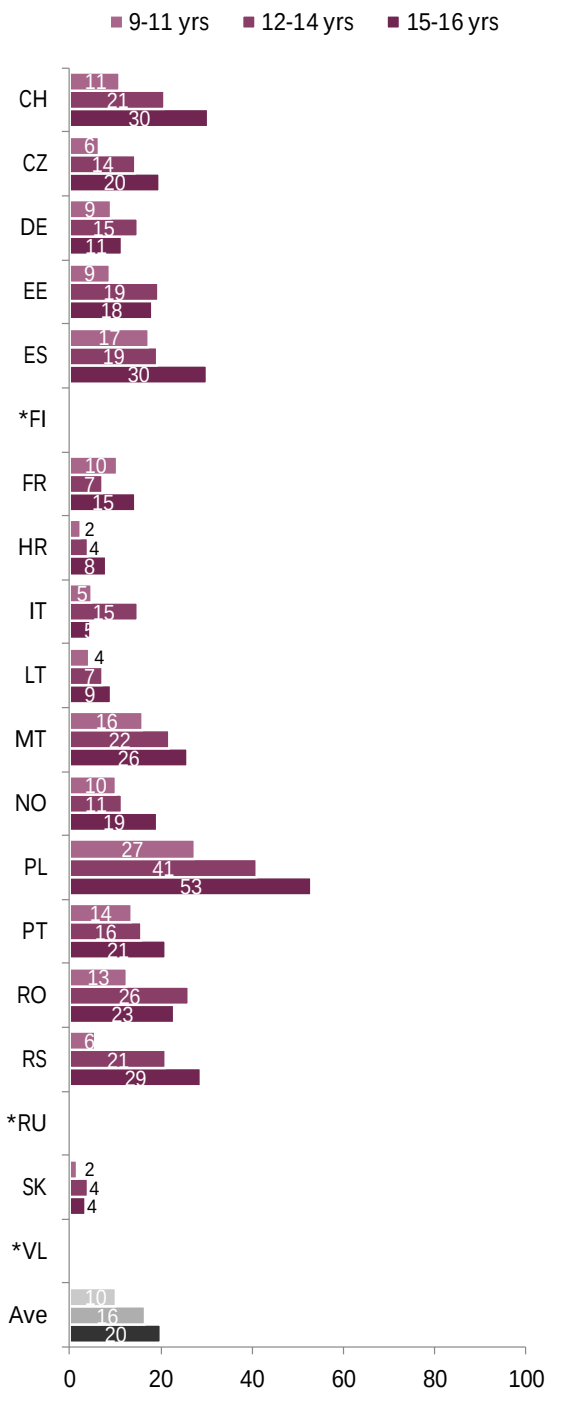


*FI/RU/VL: Full age range not available.

QF28 In the PAST YEAR, have you EVER TREATED someone else in a hurtful or nasty way? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

Figure 43: Aggression in the past year (on- or offline), by age



*FI/RU/VL: Full age range not available. Data not weighted.

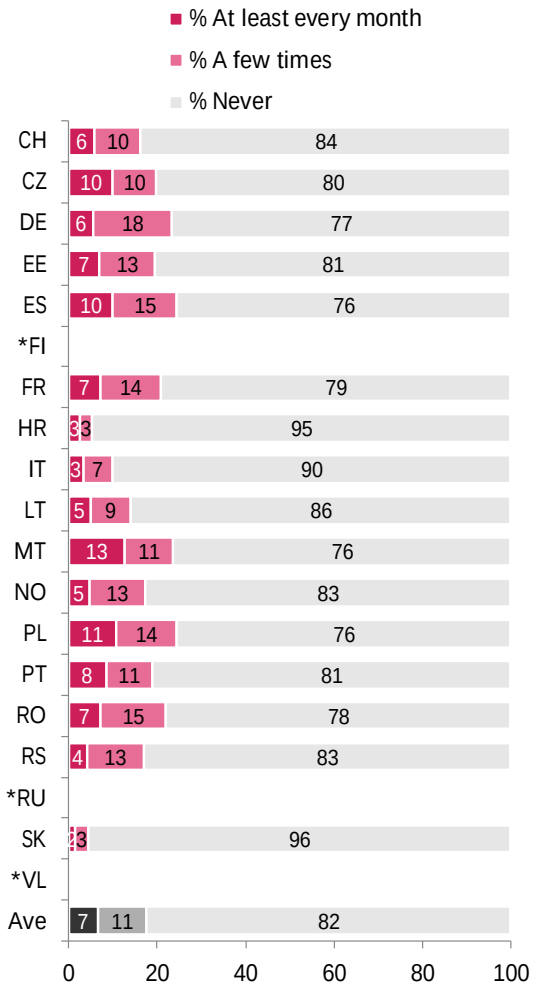
QF28 In the PAST YEAR, have you EVER TREATED someone else in a hurtful or nasty way? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

Frequency of bullying victimisation online and offline

After the question on general experiences with aggression, those children who said that they had been victimised were further asked about the frequency of this experience, both online and offline. The following findings thus apply only to the children who were victimised and not to the whole sample. In both an online and offline context, the most common is sporadic victimisation, which happens only a few times (see Figure 44 and Figure 45).

Figure 44: Frequency of offline victimisation, by country



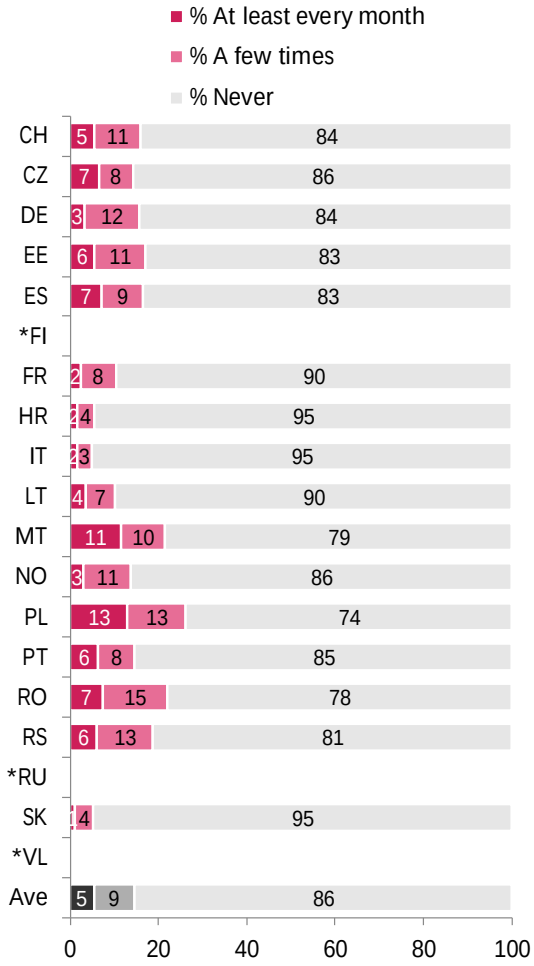
*FI/RU/VL: Full age range not available.

QF21a In the PAST YEAR, how often did this happen in any of the following ways? In person face-to-face (a person who is together with you in the same place at the same time).

Base: All children 9–16 who use the internet.

- If we want to focus on bullying, which is defined by repeated and longer experiences of victimisation, we should consider the group of children who experience victimisation at least every month.
- Among the children, the rates of children bullied offline (monthly) ranges between 2% (Slovakia) and 13% (Malta) (Ave = 7%). Online bullying victimisation ranges between 1% (Slovakia) and 13% (Poland) (Ave = 5%). Overall, in almost all the countries, less than 10% of the children are bullied online.
- Considering that experience of bullying victimisation is not very common, age and gender differences are only very small (below or equal to 5 percentage points). The figures with age and gender differences are not included here.

Figure 45: Frequency of online victimisation, by country



*FI/RU/VL: Full age range not available.

QF21 In the PAST YEAR, how often did this happen in any of the following ways? Via a mobile phone or internet, computer, tablet, etc.

Base: All children 9–16 who use the internet.

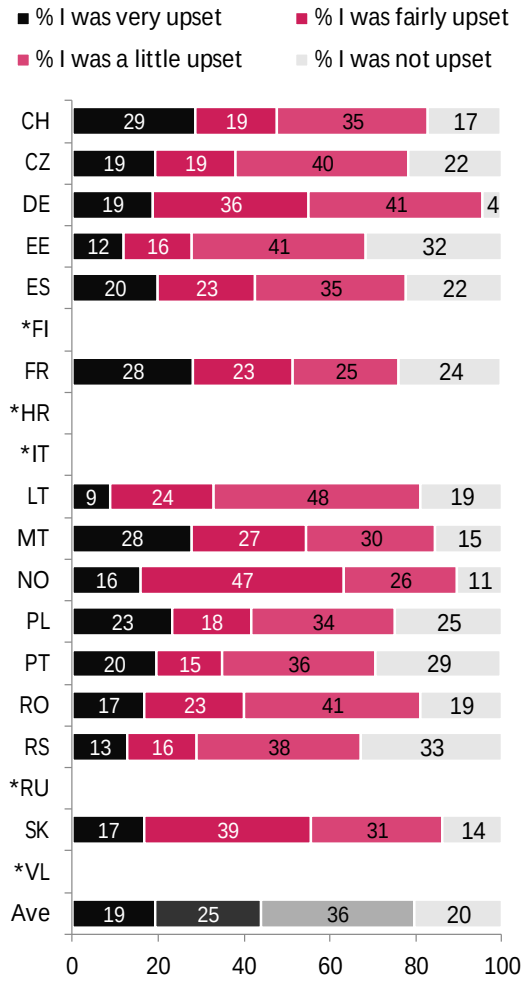
Harm from online victimisation

Length and repetition of victimisation are not the only criteria that should be considered in interpreting the nature of victimisation experiences; resulting harm is also important. Therefore, we asked children who reported online victimisation about the perceived impact of such an experience, specifically:

Thinking of the LAST TIME someone treated you in a hurtful or nasty way ONLINE, how did you feel?

Children could answer *I was not upset, I was a little upset, I was fairly upset* and *I was very upset*. The percentages are again presented only with regard to the subsample consisting of children victimised online (at least a few times).

Figure 46: Harm from online victimisation, by country



*FI/RU/VL: Full age range not available. HR/IT: Question not asked.

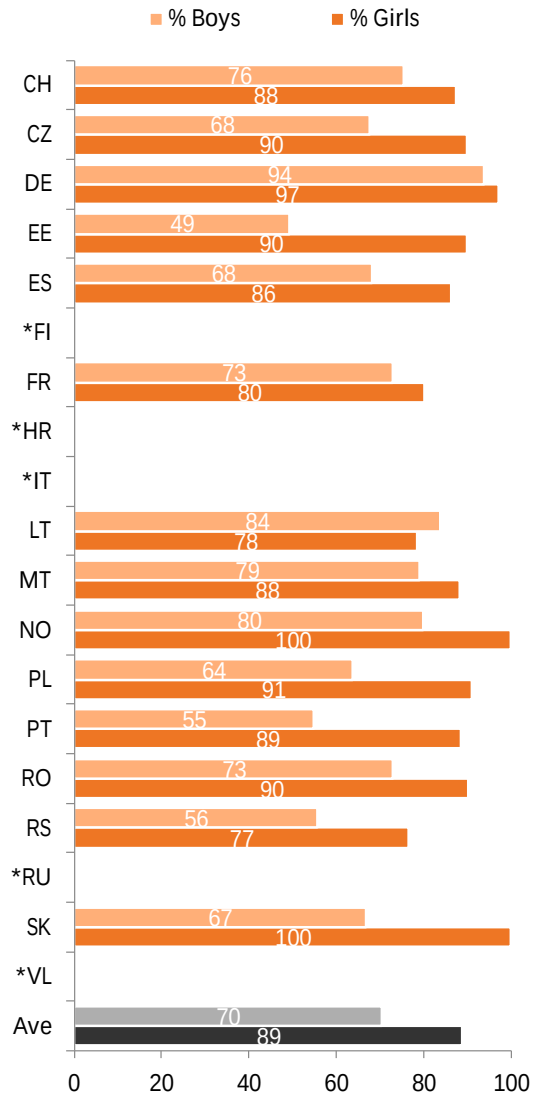
QF24 Thinking of the LAST TIME someone treated you in a hurtful or nasty way ONLINE, how did you feel?

Base: All children 9–16 who use the internet and who reported being victimized online at least *a few times.*

- Between 4% (Germany) and 33% (Serbia) of the children say they were not upset after online victimisation (Ave = 20%). Therefore, we can presume that these children may have encountered something aggressive that was not bullying.
- On the other hand, between 9% (Lithuania) and 29% (Switzerland) of the children say they were very upset after the incident (Ave = 19%). In these cases, we may presume that the attacks were more severe and could leave more intense harm.
- In general, while about a fifth of the children victimised online report no harm, a fifth report quite intense harm.
- If we focus on the comparison between those reporting no harm and those who report at least some level of harm (at least a bit upset), in all countries except Lithuania, more girls report harm than boys (Ave = 19 percentage points of gender difference).
- The age pattern was not so consistent. In some countries, older children report harm (Poland, Malta and Switzerland). In others, the trend is the reverse (Czech Republic, Estonia, Norway, Portugal, Romania, Serbia and Slovakia). However, again, due to the low prevalence of the phenomenon, the exact percentages should be interpreted with caution.

A fifth of the children who were victimised online report no harm, a fifth report intense harm.

Figure 47: Harm from online victimisation (at least a bit upset), by gender

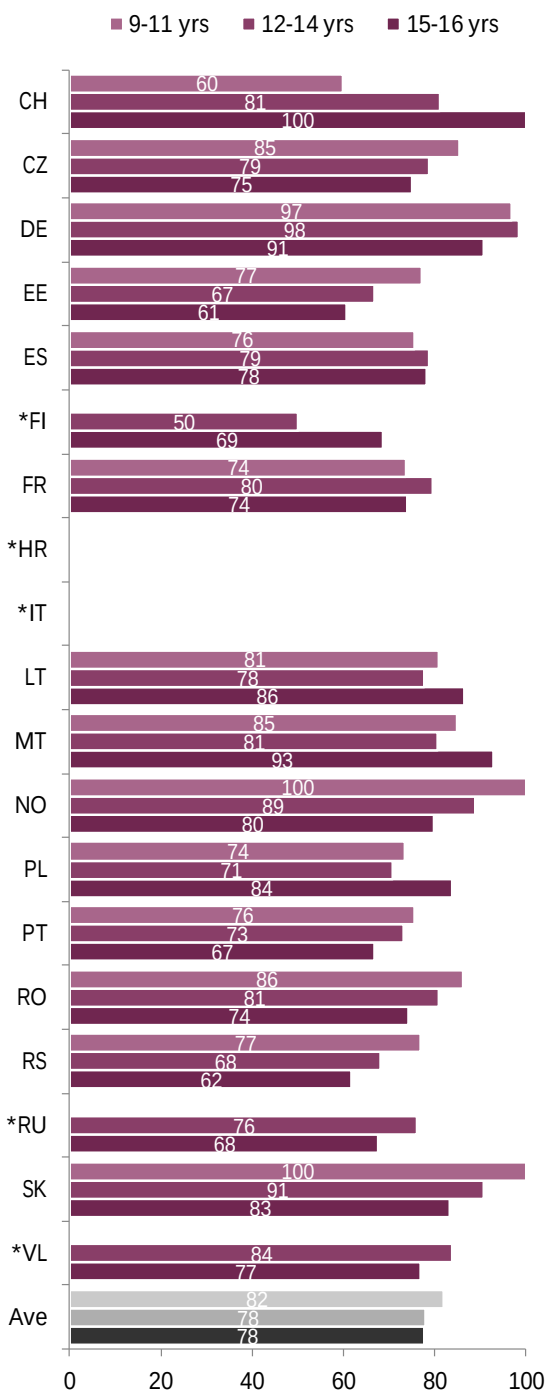


*FI/RU/VL: Full age range not available. HR/IT: Question not asked.

QF24 Thinking of the LAST TIME someone treated you in a hurtful or nasty way ONLINE, how did you feel? Percentage of children who answered *I was a little upset, I was fairly upset,* or *I was very upset.*

Base: All children 9–16 who use the internet and who reported being victimized online at least *a few times*.

Figure 48: Harm from online victimisation (at least a bit upset), by age



*FI/RU/VL: Full age range not available. HR/IT: Question not asked.

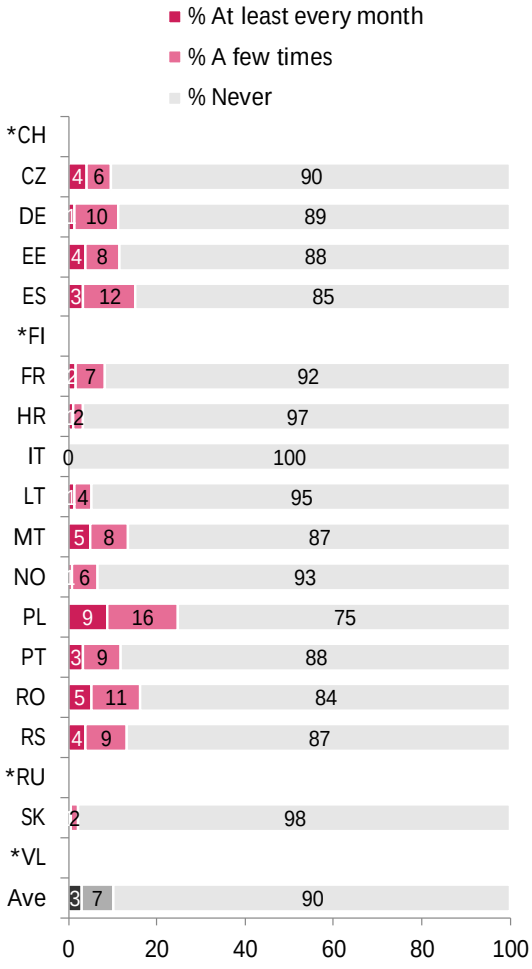
QF24 Thinking of the LAST TIME someone treated you in a hurtful or nasty way ONLINE, how did you feel? Percentage of children who answered *I was a little upset, I was fairly upset,* or *I was very upset.*

Base: All children 9–16 who use the internet and who reported being victimized online at least *a few times*.

Frequency of bullying online and offline

Analogous to victimisation, we also asked children who reported involvement as aggressors about the frequency of such behaviour, both offline and online (see Figure 49 and Figure 50).

Figure 49: Frequency of offline aggression, by country



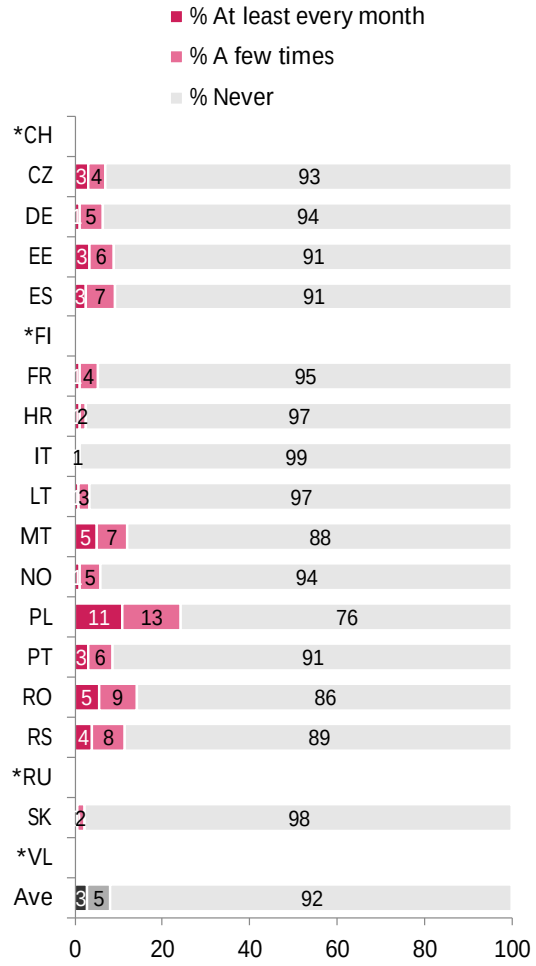
*FI/RU/VL: Full age range not available. CH: Question not asked.

QF29a In the PAST YEAR, how often have you TREATED someone else in any of the following ways? In person face-to-face (a person who is together with you in the same place at the same time).

Base: All children 9–16 who use the internet.

- A similar pattern as in victimisation is related to bullying perpetration, in which monthly experience (Ave = 3% for both offline and online bullying) is less common than sporadic aggression (Ave = 7% offline bullying, Ave = 5% online bullying).
- The number of offline bullies ranges between 0% (Italy) and 9% (Poland). The number of online bullies ranges between 0 (Italy and Slovakia) and 11% (Poland).
- Considering that experience of bullying perpetration is not very common, age and gender differences are only very small (below or equal to 5 percentage points). These figures are not included here.

Figure 50: Frequency of online aggression, by country



*FI/RU/VL: Full age range not available. CH: Question not asked.

QF29b In the PAST YEAR, how often have you TREATED someone else in any of the following ways? Via a mobile phone or internet, computer, tablet, etc.

Base: All children 9–16 who use the internet.

Points to consider

- The findings show that the countries vary in the number of victimised children and children who were involved in aggression. In general, there are no substantial gender differences in either behaviour, although there were inconsistent differences related to age.
- Most children who are victimised or who are aggressors say that this happens only sporadically. In most of the countries, behaviour that could be labelled as bullying, that is happening at least every month, is reported by less than a tenth of the children.
- We considered the frequency of the occurrence of victimisation and aggression as an important factor in distinguishing between acts of aggression and bullying. However, especially in relation to online bullying, we should acknowledge that sporadic incidents might also have a significant impact on children's well-being. For instance, one act of publishing harmful material can be very harmful, especially if it reaches a large audience.
- Thus, resulting harm should also be considered in relation to victimisation. About a fifth of the children victimised online report no resulting harm while about a fifth say they were very upset after the experience. In general, more girls than boys say they were harmed.
- With regard to harm, it is important to consider that it can be connected to the severity of the incident itself as well as to the vulnerability or resilience of the child. Therefore, although it is useful to use harm as a criterion for assessing the experience, it is also important to acknowledge that children differ in their emotional responses to risk experiences.
- Finally, it is important to focus on bullying behaviour, i.e., acts that are more severe and have more detrimental effects on well-being. So far, many initiatives have helped in the prevention and intervention of such behaviour, and these efforts should continue. Nevertheless, we should not diminish children's experiences with acts of online and offline aggression that are less severe. These also constitute an important part of children's experiences and can affect the development of their attitudes and behaviour. Thus, we advise that these experiences are also addressed and that children are helped to understand and to respond to these accordingly.

Harmful content

In this section, we present six different types of harmful content (see Table 7 for an overview). Each of these is distinctive and might be site-specific, although some websites may contain more types of harmful content, such as violent images, ways of physically harming and hate messages. Some of this content might be user-generated, i.e., posted by internet users themselves, while some may also be professional and even presented on various media – e.g., hate messages could be also be part of specific political campaigns. In this research, we asked the children the following:

On the internet, people discuss things that may not be good for you. Here are some questions about these kinds of things. In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things?

This question was asked only of the older children, so we present only findings from children aged 12–16 years.

Table 7: Children aged 12–16 who had seen the harmful content at least monthly, by country

	Ways of physically harming or hurting themselves	Ways of committing suicide	Ways to be very thin	Hate messages that attack certain groups or individuals	Their experiences of taking drugs	Gory or violent images
CH	9	5	8	13	14	10
CZ	18	10	17	25	15	17
DE	2	2	3	4	3	6
EE	7	5	10	14	7	5
ES	8	7	6	17	13	14
*FI	18	8	10	17	10	11
FR	7	4	9	8	6	7
HR	9	6	9	11	7	11
IT	4	4	6	10	7	12
*LT	–	–	–	–	–	–
MT	10	12	12	18	12	15
NO	8	5	12	16	8	9
PL	19	19	32	48	21	28
PT	10	9	12	17	13	15
RO	8	12	12	18	13	18
RS	18	11	17	24	16	23
*RU	16	8	25	24	11	17
SK	2	2	5	8	4	6
*VL	11	8	9	20	16	16
Ave	10	8	12	17	11	13

*FI/RU/VL: Data not weighted. LT: Full age range not available.

QF50 In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

Children answered how often they had seen the content. We did not differentiate if the content was seen intentionally or unintentionally, and if the content was user-generated or not. We also did not measure the impact of seeing such content. However, we know from previous research that there is a strong relationship between online exposure to

harmful content and the internet user's engagement in offline risky behaviour.[42]

In the survey, we asked about overall exposure to six types of harmful content in the past year. In Table 7 the percentages of children who see respective content *at least monthly* or more often are presented.

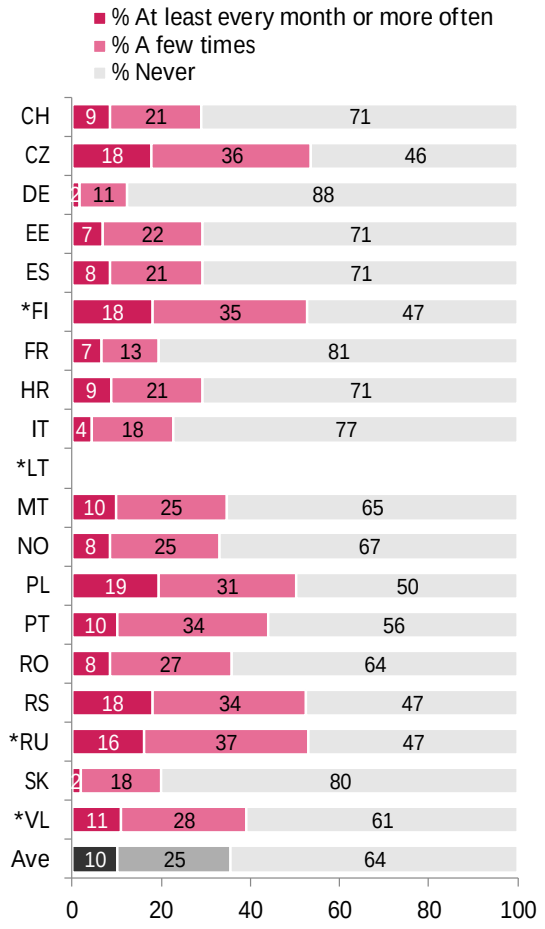
- Overall, the most often reported harmful content children were exposed to *at least monthly* were hate messages (Ave = 17%), followed by gory or violent images (Ave = 13%), content suggesting ways to be very thin (Ave = 12%), content describing experiences with taking drugs (Ave = 11%), ways of physically harming themselves (Ave = 10%) and ways of committing suicide (Ave = 8%).
- However, differences between exposure to diverse harmful content is quite low in many countries – in Germany, any kind of content seen at least monthly was between 2% and 6% of the children, or in Slovakia, between 2% and 8%.
- In some countries, the number of children exposed to harmful content at least monthly is quite varied, depending on the type of content. In Poland, 48% of the children see hate messages at least monthly or more, but ways of physically harming or committing suicide are seen by 19% of the children.
- In general, it seems that exposure to different types of harmful content is interrelated – if children report they see some content, it is more likely that they also see other types of harmful content.

Ways of physically harming or hurting themselves

To better understand children's experiences with exposure to harmful content, we will present three types of harmful content in more detail. The first type comprises materials or discussions concerning Ways of physically harming or hurting themselves. Figure 51 presents how often children have seen such content in the past year.

- The number of children who report seeing such content *at least every month* or more often ranges between 2% (Germany and Slovakia) and 19% (Poland). Sporadic exposure, i.e., a few times a year, is more common, experienced by 11% (Germany) to 37% (Russia) of children.
- The majority of children in most countries say that they have not seen ways of physically harming or hurting themselves on the internet in the past year (between 46% and 88%). Only in four countries (Czech Republic, Poland, Serbia, Finland and Russia) is such content seen at least a few times by over half of the children.

Figure 51: Harmful content: Ways of physically harming themselves, by country



*FI/RU/VL: Data not weighted. LT: Full age range not available.

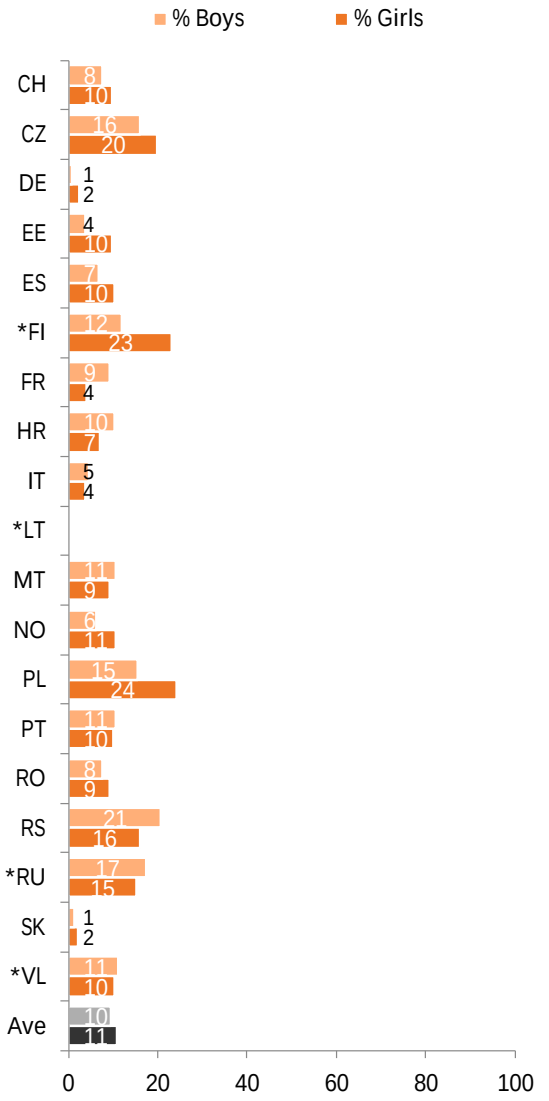
QF50a In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Ways of physically harming or hurting themselves.

Base: All children aged 12–16 who use the internet.

Figure 52 shows the differences between boys and girls who reported that they have seen a discussion from people of ways of physically harming or hurting themselves on the internet in the past year at least monthly or more often.

[42] Branley, D.B. & Covey, J. (2017). Is exposure to online content depicting risky behavior related to viewers' own risky behavior offline? *Computers in Human Behavior, 75*, 283–7. https://doi.org/10.1016/j.chb.2017.05.023

Figure 52: Harmful content: Ways of physically harming themselves, by gender



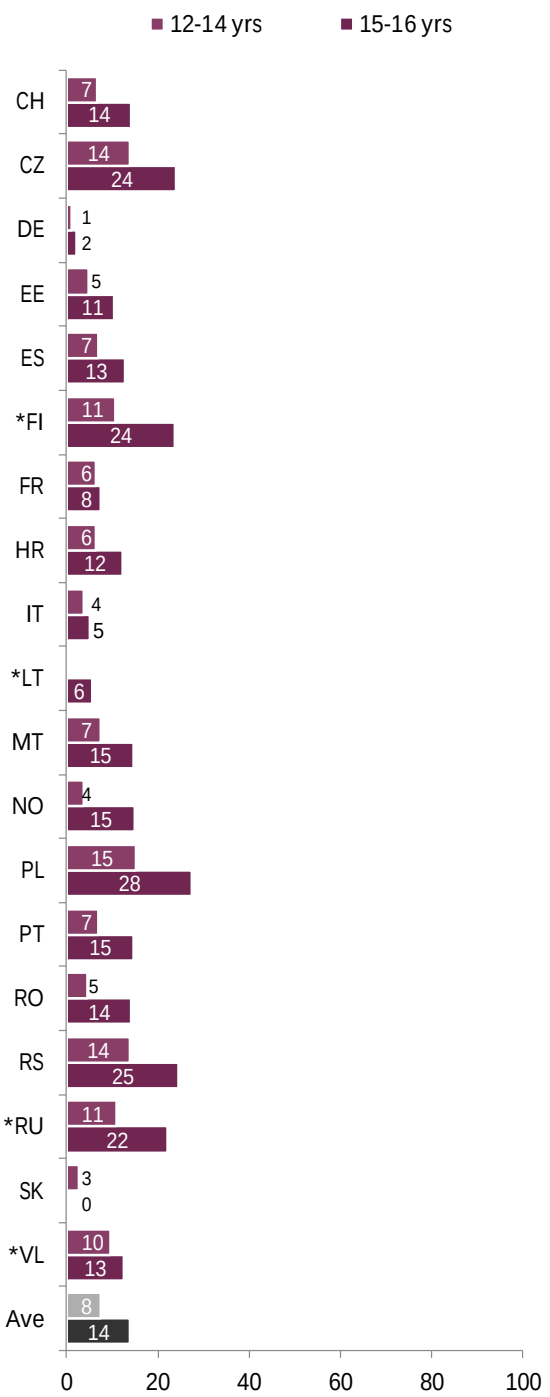
*FI/RU/VL: Data not weighted. LT: Full age range not available.

QF50a In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Ways of physically harming or hurting themselves. Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

- The gender differences range between 1 percentage point (Slovakia, Italy, Portugal and Flanders) and 11 percentage points (Finland). In most countries there are almost none or very low gender differences in exposure to this type of content (equal or below 5 percentage points).
- In three countries, slightly more boys report that they see this type of harmful content than girls: Estonia (6 percentage points difference), Finland (11 percentage points difference) and Poland (9 percentage points difference).

Figure 53: Harmful content: Ways of physically harming themselves, by age



*FI/RU/VL/LT: Full age range not available. FI/RU/VL: Data not weighted.

QF50a In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Ways of physically harming or hurting themselves. Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

Figure 53 presents the differences between children aged 12–14 and 15–16 who have been exposed to harmful content.

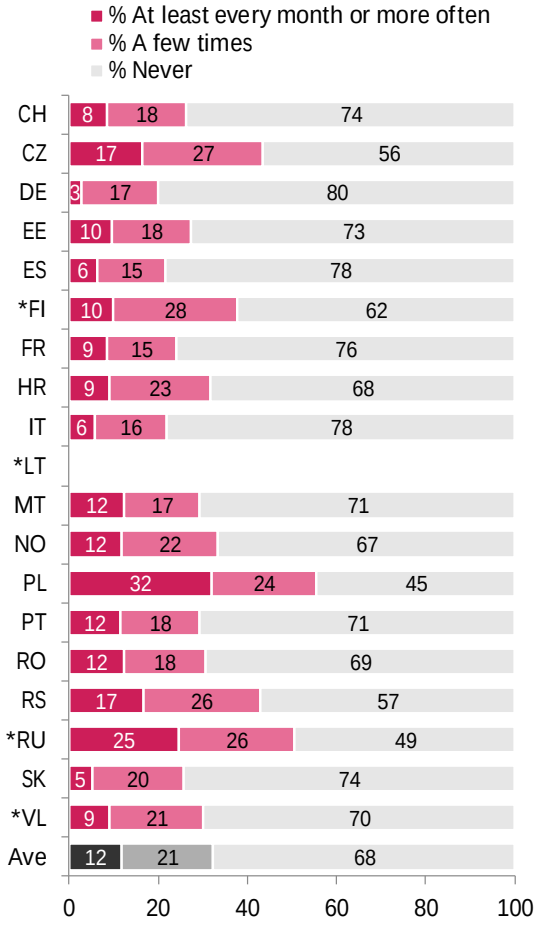
- In most of the countries more older than younger children report seeing ways of physically harming or hurting themselves on the internet at least monthly.
- The difference between age groups varies between 6 percentage points (Estonia, Spain) and 13 percentage points (Finland and Poland).
- The differences between age groups are higher in countries where more children report exposure to such content.

Ways to be very thin

The second type of harmful content presented in more detail is related to problematic eating habits and eating disorders, such as anorexia or bulimia. We asked children whether in the past year they had seen the following content or discussions: *Ways to be very thin (such as being anorexic or bulimic, or thinspiration).* We should note, however, that we do not know if children reported the content that is really related to eating disorders or if they reported content that is related to 'healthy lifestyles' or dieting. The border between healthy and unhealthy content of this type is narrow. However, we know that such type of content can have a negative impact on children's body image.[43] Figure 54 shows how often children have seen such content in the past year.

- The number of children who see ways to be very thin on the internet at least every month or more often varies across countries, ranging between 3% (Germany) and 32% (Poland). Moreover, between 15% (Spain) and 28% (Finland) of children report they see this content a few times a year.
- In most of the countries, the majority of the children report that they have not seen ways to be very thin on the internet in the past year (ranging between 45 and 80%). However, in two countries, Poland and Russia, more than half of the children report that they have seen such content in the past year.

Figure 54: Harmful content: Ways to be very thin, by country



*FI/RU/VL: Data not weighted. LT: Full age range not available.

QF50c In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Ways to be very thin (such as being anorexic or bulimic, or 'thinspiration'). Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

- As we know also from previous research, there are gender differences in exposure to pro-anorexic content, with girls more likely seeing such content.[44] As shown in Figure 55, in some countries, gender differences are also present.
- This applies for Switzerland, the Czech Republic, Estonia, Finland, Norway, Poland, Serbia, and Russia. In these countries, the difference between boys and girls who have seen this

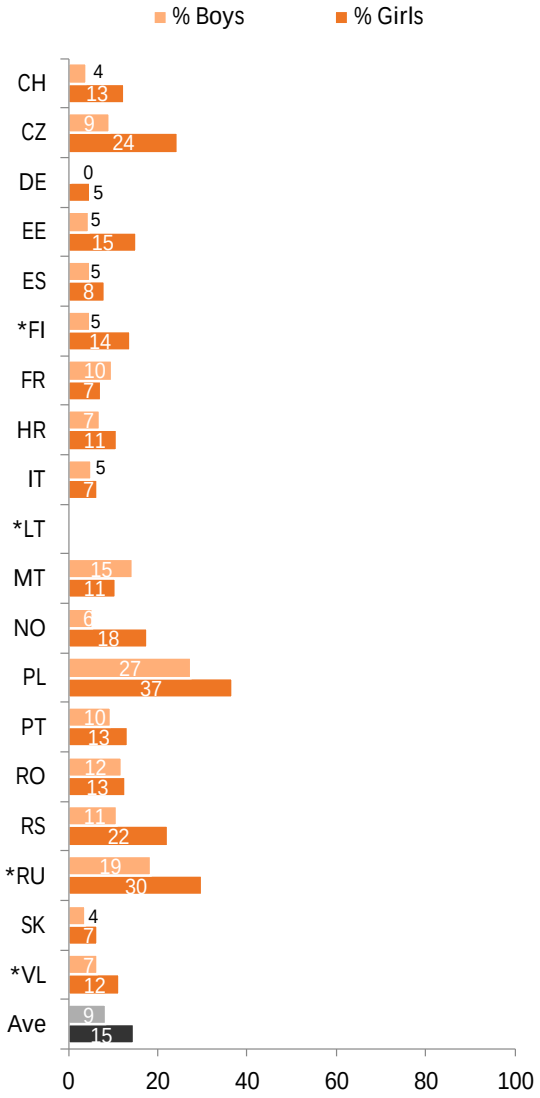
[43] Smahel, D., Machackova, H., Smahelova, M., Cevelicek, M., Almenara, C.A., & Holubciková, J. (2018). *Digital technology, eating behaviors, and eating disorders*. Springer.

[44] Almenara, C.A., Machackova, H., & Smahel, D. (2016). Individual differences associated with exposure to 'ana-mia' websites: An examination of adolescents from 25 European countries. *Cyberpsychology, Behavior, and Social Networking, 19*(8), 475–80. http://dx.doi.org/10.1089/cyber.2016.0098

content *at least every month* is ranging between 9 (Switzerland, Finland) to 15 (Czech Republic).

- In other countries, the gender differences are only small or negligible (equal or below 5 percentage points). The gender differences are particularly low in countries with a low prevalence of children reporting seeing such content. For example, in Italy and Romania the difference between girls and boys is only 1 and 2 percentage points, respectively.

Figure 55: Harmful content: Ways to be very thin, by gender

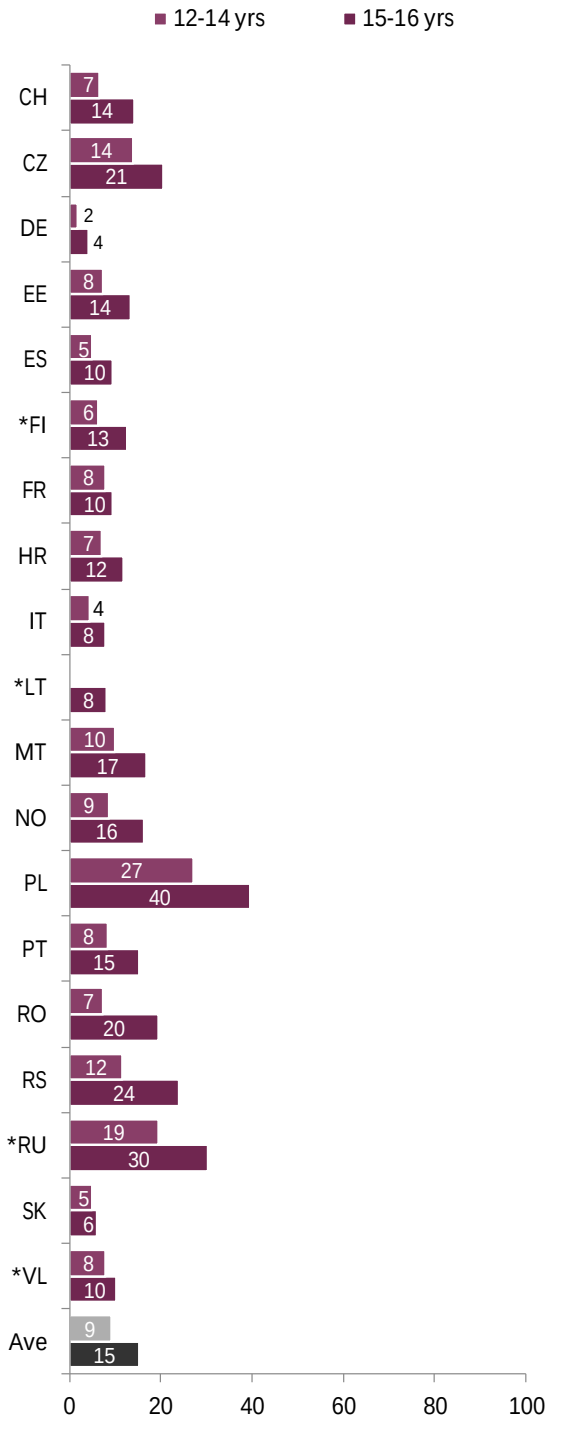


*FI/RU/VL: Data not weighted. LT: Full age range not available.

QF50c In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Ways to be very thin (such as being anorexic or bulimic, or 'thinspiration'). Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

Figure 56: Harmful content: Ways to be very thin in the past year, by age



* FI/RU/VL/LT: Full age range not available. FI/RU/VL: Data not weighted.

QF50c In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Ways to be very thin (such as being anorexic or bulimic, or 'thinspiration'). Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

- With regard to age differences (see Figure 56), in most countries, older children report that they have seen ways to be very thin on the internet at least monthly in the past year more often than younger children.
- The differences between younger and older children vary between 1 percentage point (Slovakia) and 13 percentage points (Poland).
- The differences over 10 percentage points between younger and older children are in Poland, Romania, Serbia and Russia.

Hate messages

The last type of harmful content we focus on in detail are hate messages. Hate messages are related to hate speech, which can be defined as all forms of communication that spread or promote discrimination, xenophobia and other forms of hatred based on intolerance.[45] Hate messages and hate speech can have at least three forms: (1) children are exposed to hate messages that do not directly target them; (2) children are victims of such hateful content and feel they are targets of the content; and (3) children are perpetrators of such content when they create or post it.

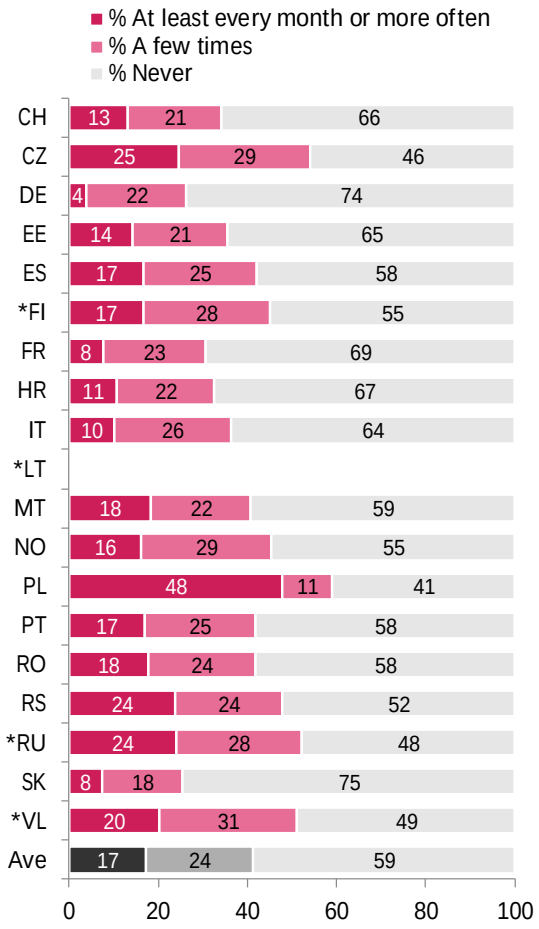
In this report, we focused only on exposure to cyberhate messages (more results from optional questions on cyberhate victimisation and perpetration will be available in the upcoming short reports). Here, we provide findings from the question asking if children had seen the following content or discussions in the past year:

Hate messages that attack certain groups or individuals (e.g., people of different colour, religion, nationality or sexuality)

The results are summarised in Figure 57.

- The countries vary in the number of children seeing hate messages at least every month or more often. The percentage ranges between 4% (Germany) and 48% (Poland). Moreover, between 11% and 31% of children see this content a few times a year.
- More than half of the children see hate content at least *a few times* in the Czech Republic (54%), Poland (59%) Russia (52%) and Flanders (51%).
- On the other hand, in most of the countries, the majority of the children say that they have not seen hate messages in the last year (between 41 and 75%). In Germany and Slovakia, 74% and 75% of children have not seen such messages.

Figure 57: Harmful content: Hate messages, by country



*FI/RU/VL: Data not weighted. LT: Full age range not available.

QF50d In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Hate messages that attack certain groups or individuals (e.g., people of different religion, nationality, or sexuality).

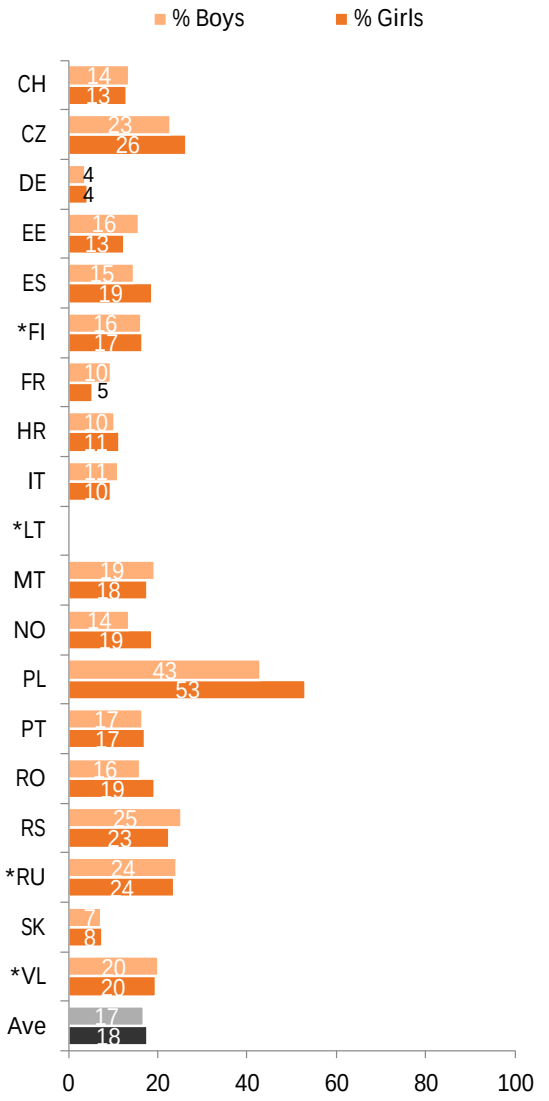
Base: All children aged 12–16 who use the internet.

Figure 58 displays the differences between boys and girls who reported having seen hate messages *at least every month* or more often.

- In most of the countries, there are almost no gender differences in exposure to this type of harmful content.
- In Poland, more girls than boys report seeing hate messages at least every month or more often (difference of 10 percentage points).

[45] Council of Europe (2018). *Hate speech.* www.coe.int/en/web/freedom-expression/hate-speech

Figure 58: Harmful content: Hate messages, by gender



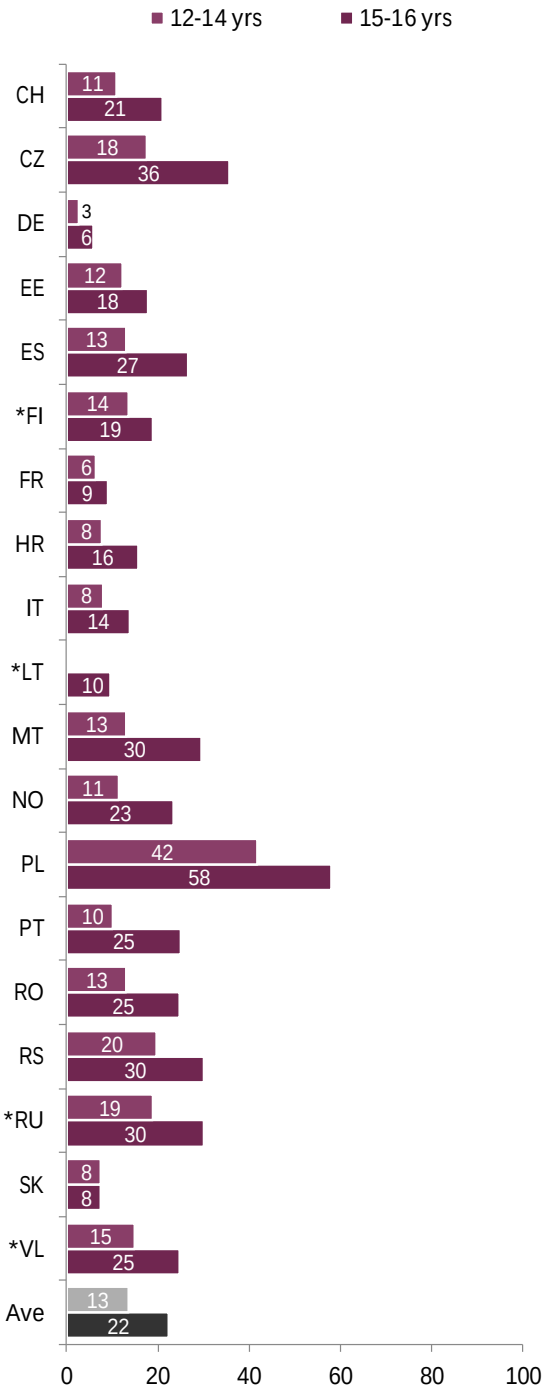
*FI/RU/VL: Data not weighted. LT: Full age range not available.

QF50d In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Hate messages that attack certain groups or individuals (e.g., people of different religion, nationality, or sexuality). Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

Figure 59 presents the differences between age groups in exposure to hate messages at least every month or more often.

Figure 59: Harmful content: Hate messages, by age



*FI/RU/VL/LT: Full age range not available. FI/RU/VL: Data not weighted.

QF50d In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things? Hate messages that attack certain groups or individuals (e.g., people of different religion, nationality, or sexuality). Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children aged 12–16 who use the internet.

- In almost all of the countries, older children report seeing hate messages more often than younger children. Difference between these two age categories ranges between 6 (Italy, Estonia) and 18 (Czech Republic) percentage points. The only exception is Slovakia, where exposure to hate messages is the same for younger and older age groups.
- In Poland and in Malta, more older children than younger children report seeing hate messages online (differences 16 and 17 percentage points, respectively).

Points to consider

- In this section, we investigated six types of harmful content that children may be exposed to. As the findings show, the children are most often exposed to hate messages in most of the countries. In some countries, however, similar percentages of children are exposed to hate messages as to other harmful content. This particularly concerns countries with overall low prevalence of exposure to harmful content, such as Germany, where any kind of harmful content is seen at least every month or more often by 2% to 6% of the children.
- The majority of the children in most of the countries say that they have not seen any type of harmful content online in the past year. However, in some countries, over half of the children saw a specific harmful content. For example, in four countries (Czech Republic, Poland, Serbia and Russia), ways of physically harming or hurting themselves were seen by more than half of the children in the last year.
- There are only minor gender differences in exposure to harmful content in the majority of the countries. The only exception is exposure to content showing ways to be very thin (pro-ana materials), which is seen more by girls in most of the countries, which corroborates previous research.[46] With regard to age differences, more older children are exposed to harmful content than younger ones, suggesting that exposure is probably linked to increasing online activities.
- In further analyses, we found that exposure to different types of harmful content is interrelated – i.e., if a child see one type of content, it is more likely that the same child will also see other types of harmful content. Future research should ask why exposure to different types of harmful content is so interrelated. Do children see the content on the same websites or platforms? Or do similar types of children look for different types of harmful content?
- Future research could also investigate how much of the exposure to harmful content is intentional or unintentional. Researchers and policy-makers should focus on how we can limit unintentional access to harmful content.
- Future research should also uncover other types of harmful content that have not yet been investigated but which may be already present online. The online environment is quickly transforming, and a qualitative investigation could identify and understand the substance of the harmful content that current children may be exposed to.

[46] Almenara, C.A., Machackova, H., & Smahel, D. (2016). Individual differences associated with exposure to 'ana-mia' websites: An examination of adolescents from 25 European countries. *Cyberpsychology, Behavior, and Social Networking, 19*(8), 475–80. http://dx.doi.org/10.1089/cyber.2016.0098

Data misuse

Navigating the contemporary online and offline world involves disseminating a variety of data traces, and children are no exception. As a consequence, children are likely to experience forms of personal data misuse and privacy-related risks in the context of interpersonal, institutional and commercial relations.[47] In the survey, we asked children about seven types of data misuse (see Table 8) and if they had experienced these in the past year.

Specifically, we asked about personal data misuse (*Somebody used my personal information in a way I didn't like, Somebody used my password to access my information or to pretend to be me, Somebody created a page or image about me that was hostile or hurtful*), getting a virus or spyware on a used device, problems regarding losing or spending money online (I *spend too much money on in-app purchases or online games, I lost money by being cheated on the internet*), and being tracked through the device (*Someone found out where I was because they tracked my phone or device*).

The occurrence of data misuse differs with regard to the type of negative experiences. Table 8 shows how many children experience each type of data misuse across all of the countries.

Table 8: Specific types of data misuse, by country

	Somebody used my personal information in a way I **didn't like**	The device (e.g., phone, tablet, computer) I use got a virus or spyware	I lost money by being cheated on the internet	Somebody used my password to access my information or to pretend to be me	Somebody created a page or image about me that was hostile or hurtful	I spent too much money on in-app purchases or in online games	Someone found out where I was because they tracked my phone or device
*CH	–	–	–	–	–	–	–
CZ	7	21	4	9	4	9	4
DE	5	7	1	2	4	6	4
EE	4	15	2	5	3	5	3
ES	8	15	3	9	3	8	3
*FI	–	–	–	–	–	–	–
FR	3	7	1	4	2	3	2
HR	2	10	1	3	1	4	1
IT	4	10	5	2	2	4	2
LT	3	11	2	4	2	2	2
MT	9	23	6	11	7	14	9
NO	3	7	3	4	2	9	8
PL	11	22	6	10	5	6	5
PT	7	17	5	8	3	7	4
RO	12	22	8	14	9	13	8
RS	6	17	4	11	5	5	3
*RU	–	–	–	–	–	–	–
SK	6	9	2	5	3	4	2
*VL	–	–	–	–	–	–	–
Ave	7	14	4	7	4	7	5

*FI/RU/VL/CH: Full age range not available.

QF60 In the PAST YEAR, has any of the following happened to you on the internet? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

[47] Stoilova, M., Nadagiri, R., & Livingstone, S. (2019). Children's understanding of personal data and privacy online – a systematic evidence mapping. *Information, Communication & Society*. https://doi.org/10.1080/1369118X.2019.1657164

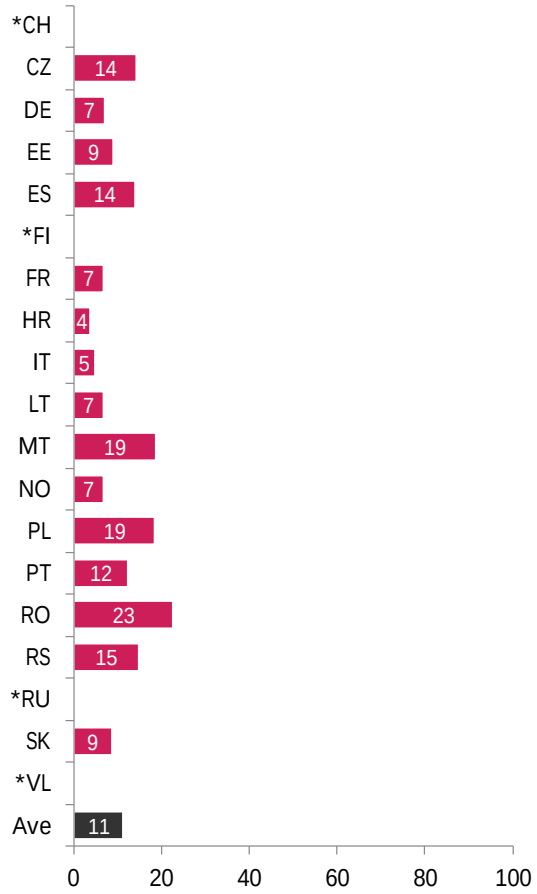
- Experiences with data misuse, apart from getting a virus or spyware, were reported by fewer than 15% of the children in most of the countries. In most cases, these types of data misuse were reported by less than a tenth of the children (ranging between 3% and 7%).
- The most common type of personal data misuse is getting a virus or spyware, reported by 7% (Germany, France and Norway) to 23% (Malta) of the children (Ave = 14%).
- Being located by tracking a phone or device, losing money by being cheated online and having created a hurtful page or image is reported by less than a tenth of the children in all of the countries (Ave = between 4% and 5%).

Experiences with some types of personal data misuse

In the survey, overall experiences with the misuse of personal data were captured by three items: *Somebody used personal information in a way I didn't like, Somebody used my password to access my information or to pretend to be me* and *Somebody created a page or image about me that was hostile or hurtful.* In this section, we focus on children who experienced at least one or more of these types of personal data misuse.

- Overall, in all of the countries, less than a fifth of the children experience at least one of these three misuses of personal data (Figure 60).
- The number of children who report personal data misuse varies across countries, ranging between 4% (Croatia) and 23% (Romania). With the exceptions of Malta, Poland and Romania, 15% or fewer children report such a negative experience.
- In eight countries (Germany, Estonia, France, Croatia, Italy, Lithuania, Norway and Slovakia), less than 10% of the children aged 9–16 report some type of experience with personal data misuse.
- In most of the countries there are no substantial gender differences in experienced personal data misuse (equal to 5 percentage points or less) (Figure 61). The only exception is Malta, where data misuse is reported by 22% of boys and 15% of girls.
- On the other hand, in about half of the countries, the overall experienced misuse of personal data increases with age (Figure 62). Some kind of personal data misuse is reported by 2% to 14% of 9- to 11-year-olds, while the same is reported by 3% to 26% of 12- to 14-year-olds, and by 6% to 33% of 15- to 16-year-olds. In the Czech Republic, Spain, Malta, Poland, Romania, Serbia and Russia, 20% and more children aged 15–16 report some type of personal data misuse. However, in Estonia, Croatia, Italy, Lithuania, Norway and Portugal, the differences between children in the youngest and oldest age categories are 5 percentage points or less.

Figure 60: Personal data misuse, by country



*FI/RU/VL/CH: Full age range not available.

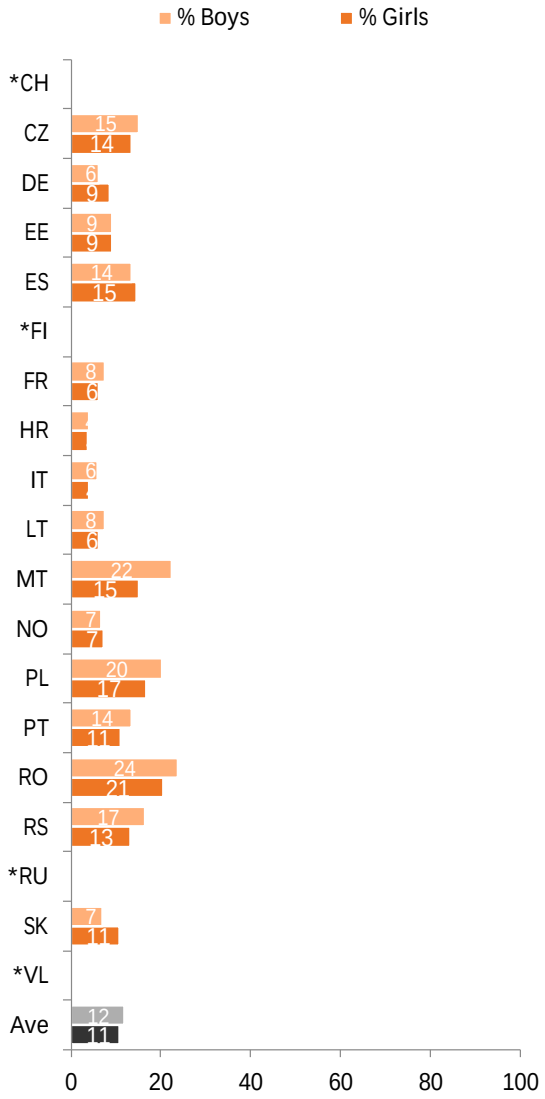
Derived from QF60 a, d, e, percentage of children who answered *yes* to at least one.

Base: All children 9–16 who use the internet.

- If we look at the three types of personal data misuse separately (we don't include the figures based on these analyses here), using personal information in a way children do not like is reported more often by children in the oldest age group compared to the youngest age group. In the Czech Republic, France, Germany, Spain, Malta, Poland, Romania and Slovakia, age differences range between 6 and 14 percentage points. However, in other countries, the differences are not substantial, being 5 percentage points or less.

- Misusing a password is reported more by 15- to 16-year-olds in the Czech Republic, Spain, Romania and Serbia (differences between 8 and 13 percentage points).
- Creating a hostile or hurtful page or image, an experience that is generally not very common, only varies by age in Romania, with the difference of 11 percentage points between the youngest and oldest age categories.

Figure 61: Personal data misuse, by gender

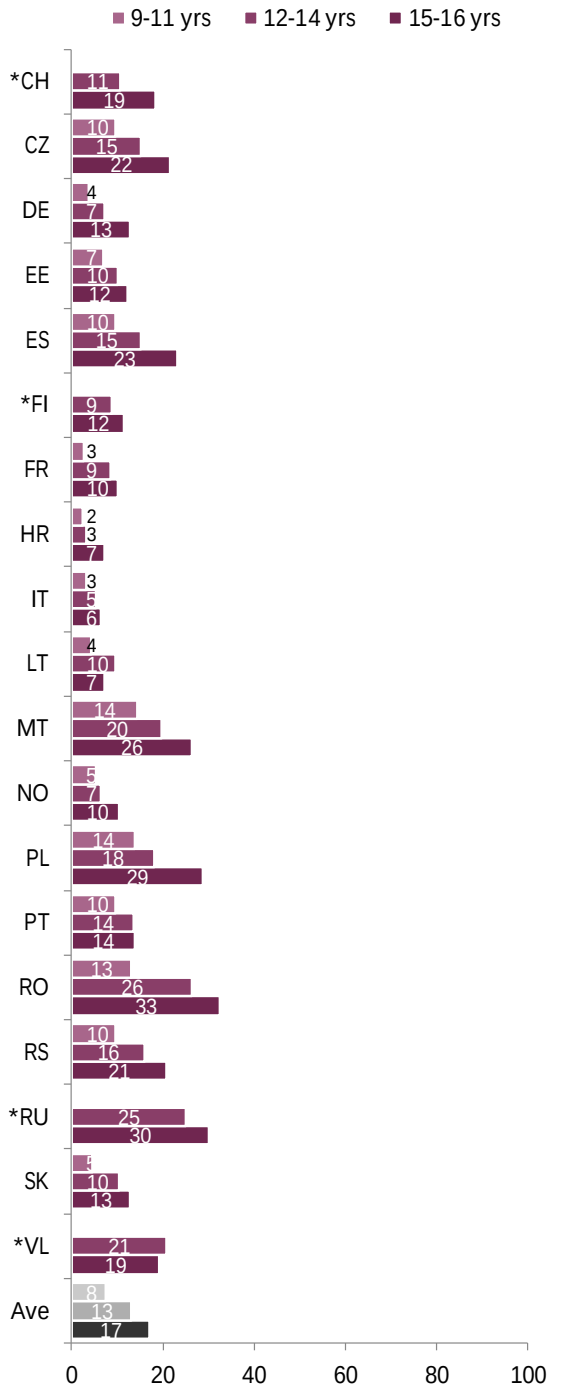


*FI/RU/VL/CH: Full age range not available.

Derived from QF60 a, d, e, percentage of children who answered *yes* to at least one.

Base: All children 9–16 who use the internet.

Figure 62: Personal data misuse, by age



*FI/RU/VL/CH: Full age range not available. FI/RU/VL: Data not weighted.

Derived from QF60 a, d, e, percentage of children who answered *yes* to at least one.

Base: All children 9–16 who use the internet.

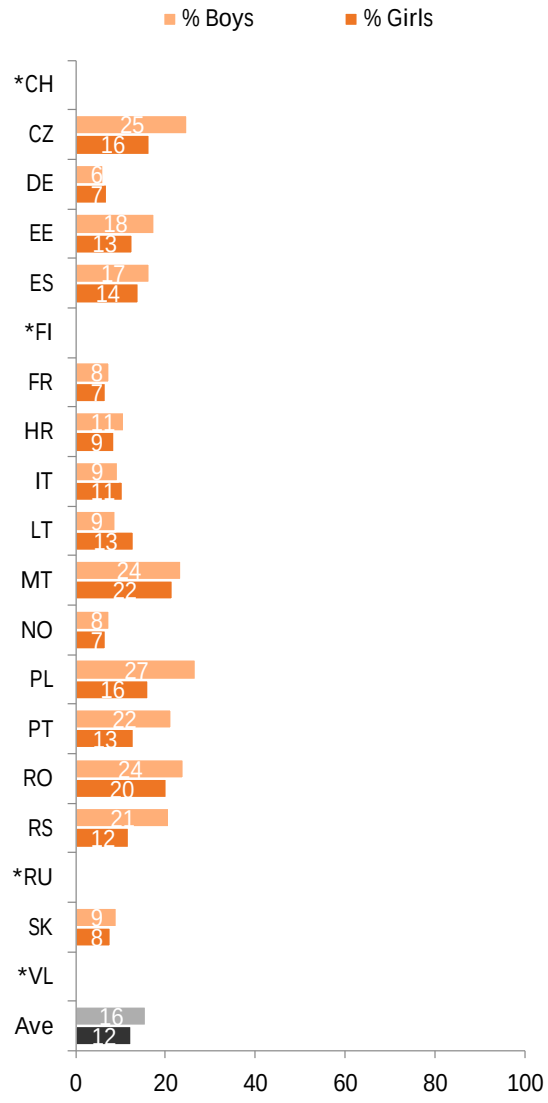
Getting a virus or spyware

Experience with the most common type of data misuse, i.e., getting a virus or spyware, ranges between 7% (Germany, France and Norway) and 23% (Malta) (see Table 8). In the Czech Republic, Malta, Poland and Romania, more than a fifth of the children report getting a virus or spyware.

- In most of the countries, the gender differences are not substantial, equal to or less than 5 percentage points (Figure 63). However, in the Czech Republic, Poland, Portugal and Serbia, the differences range between 9 and 11 percentage points, with more boys than girls reporting getting a virus or spyware.
- In the youngest age group, the range of those experiencing getting spyware is between 3% (France and Germany) and 19% (Czech Republic). Among 12- to 14-year-olds, the same applies for 8% (Norway, Croatia, Germany, and Finland) to 28% (Romania) of the children. Among the oldest children, the range of these experiences is between 8% (France) and 31% (Poland) (Figure 64).
- In Germany, Croatia, Malta, Norway, Poland, Serbia and Slovakia, more children in the oldest age category report having such an experience as compared to the youngest age category (difference between 6 and 14 percentage points). In other countries, there was no substantial relation to age.

The most common experience related to data misuse is getting a virus or spyware.

Figure 63: The device (e.g., phone, tablet, computer) got a virus or spyware, by gender

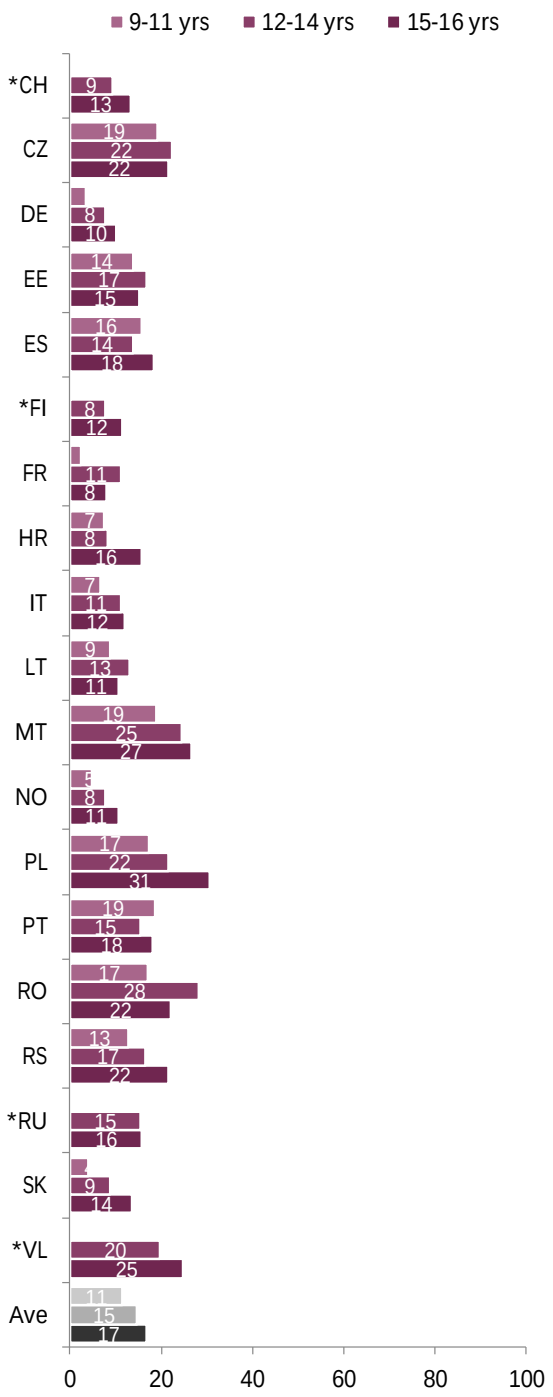


*FI/RU/VL/CH: Full age range not available.

QF60b In the PAST YEAR, has any of the following happened to you on the internet? The device (e.g., phone, tablet, computer) I use got a virus or spyware. Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

Figure 64: The device (e.g., phone, tablet, computer) got a virus or spyware, by age



*FI/RU/VL/CH: Full age range not available. FI/RU/VL: Data not weighted.

QF60b In the PAST YEAR, has any of the following happened to you on the internet? The device (e.g., phone, tablet, computer) I use got a virus or spyware. Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

Problematic situations related to money

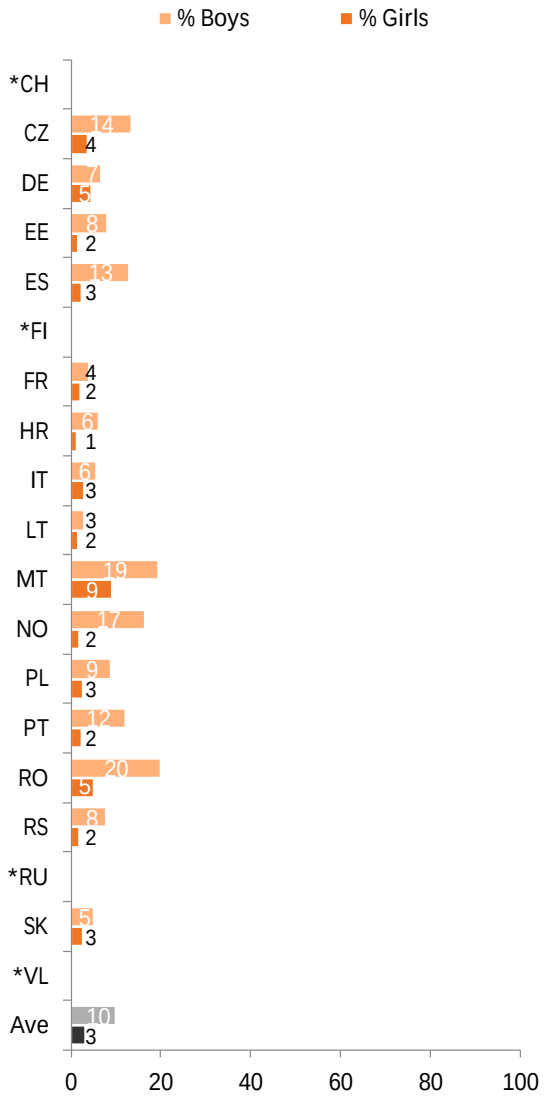
Many online spaces and platforms provide their services for free, although many also require or encourage payment. This may be problematic if children feel that they do not have full control over their spending. Another problematic situation may be connected to the fact that the internet may be misused to illegally get or steel money from the users. In the survey we differentiate between these types of risks, one connected with problematic control, the other with experiences with wrongful or even illegal situations, which results in money lost.

- Only a small number of children experience losing money by being cheated on the internet (Ave = 3%). Across the countries, such an experience ranges between 1% (France, Germany and Croatia) and 8% (Romania). In Malta, Poland and Romania, the range is between 6% and 8% (see Table).
- Spending too much money on in-app purchases or online games is only slightly more common (Ave = 7%), varying between 4% (Lithuania) and 14% (Malta). In the Czech Republic, Germany, Spain, Malta, Norway, Poland, Portugal and Romania, between 6% and 14% children feel that they spend too much money online.
- There are no gender differences regarding losing money by being cheated online, with the exception of Romania, where 11% of boys and 5% of girls report this. Similarly, this experience is no different for age, again with the exception of Romania, where the difference between the youngest and oldest age categories is 12 percentage points. Because there are almost no differences, we don't include the figures here.
- In contrast, there are some gender differences with regard to the experience of spending too much money on in-app purchases or online games (Figure 65). In the Czech Republic, Estonia, Spain, Malta, Norway, Poland, Portugal, Romania and Serbia, more boys spend too much money on in-app purchases or online games than girls (differences between 6 and 15 percentage points). It can be presumed that this is related to higher engagement in gaming among boys (see 'Online activities').

In many countries, more boys spend too much money in apps or games.

- In the Czech Republic, Germany, and Romania, this experience is also related to older age, although the differences between the youngest and oldest age categories are only small (between 6 and 8 percentage points) (Figure 66).

Figure 65: Spending too much money on in-app purchases or online games, by gender

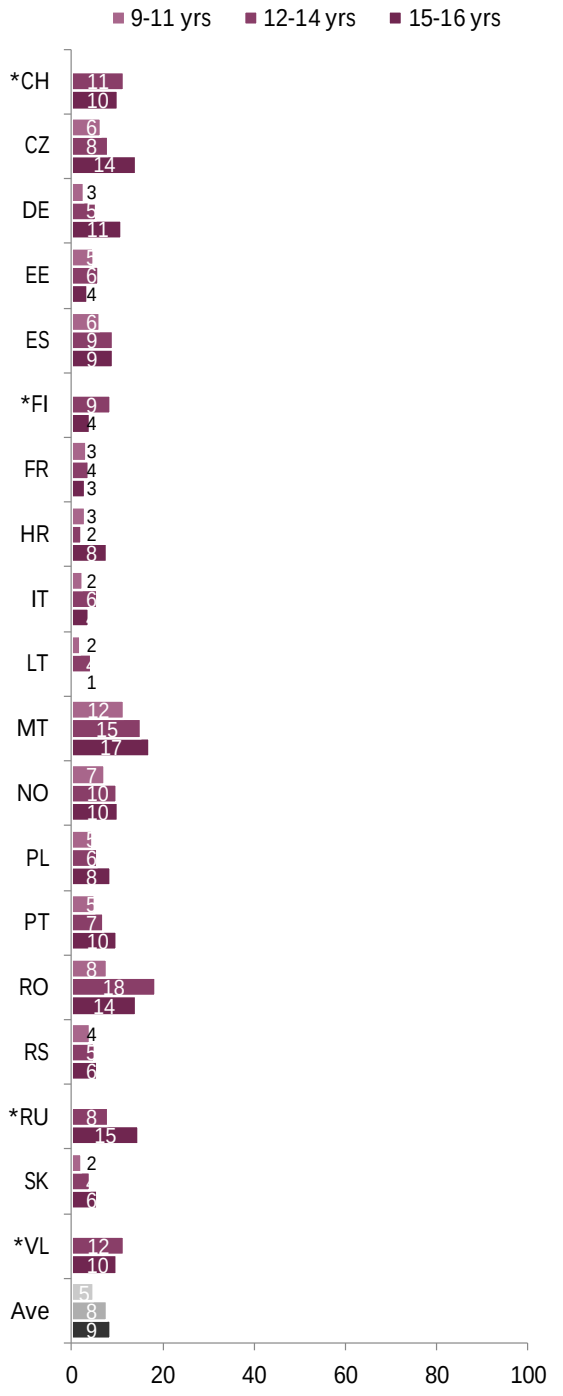


*FI/RU/VL/CH: Full age range not available.

QF60f In the PAST YEAR, has any of the following happened to you on the internet? I spent too much money on in-app purchases or online games. Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

Figure 66: Spending too much money on in-app purchases or online games, by age



*FI/RU/VL/CH: Full age range not available. FI/RU/VL: Data not weighted.

QF60f In the PAST YEAR, has any of the following happened to you on the internet? I spent too much money on in-app purchases or online games. Percentage of children who answered *yes.*

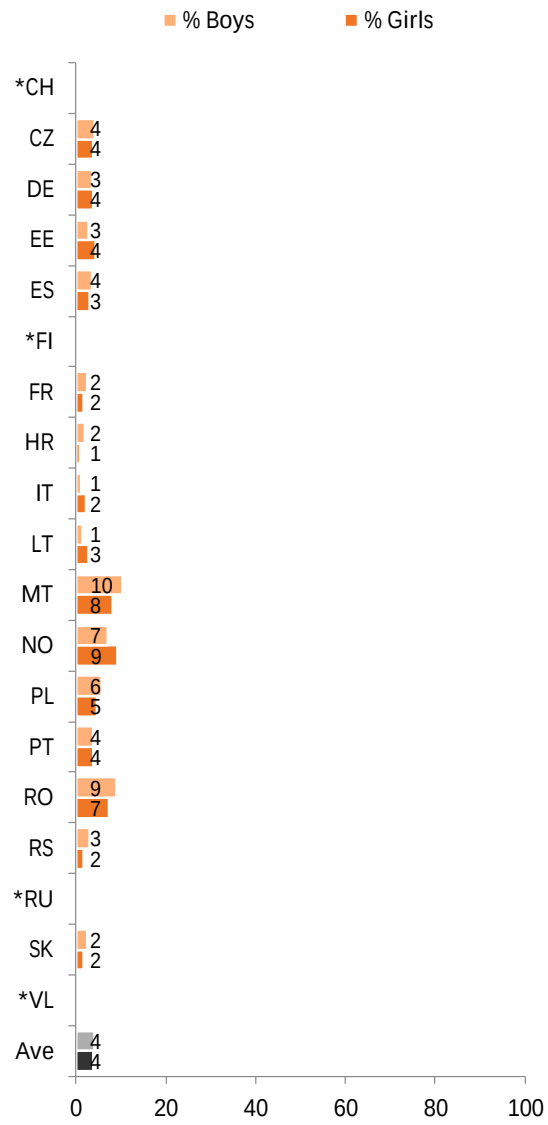
Base: All children 9–16 who use the internet.

Tracking location

The final potential risk the survey asked about was being located by tracking a phone or device. This activity may be beneficial, for instance, supporting parental control over the location of smaller children. Nevertheless, knowing the location of a child also relates to possible risks, especially if this is done without the child's consent. Therefore, we investigated whether children experienced being located via such technology. In most countries, less than 5% of children report such an experience (see Table 8). The exceptions are Poland (5%), Romania and Norway (8%), and Malta (9%).

- There are no gender differences over 5 percentage points in any country (see Figure 67), although this should be interpreted with consideration of the overall lower prevalence of this experience.
- On the other hand, in some countries, there are differences related to the age of the child (see Figure 68). In the youngest age group, the range of experiencing getting spyware is between 1% (France, Croatia, Italy, Lithuania and Slovakia) and 7% (Malta). Among 12- to 14-year-olds, the same applies for 1% (Croatia and Lithuania) to 10% of the children (Flanders and Malta), and in the oldest age group, between 2% (Croatia) and 18% (Flanders). In Estonia, Malta, Norway and Romania, the difference between the youngest and oldest age categories varies between 6 and 15 percentage points.

Figure 67: Tracking location, by gender

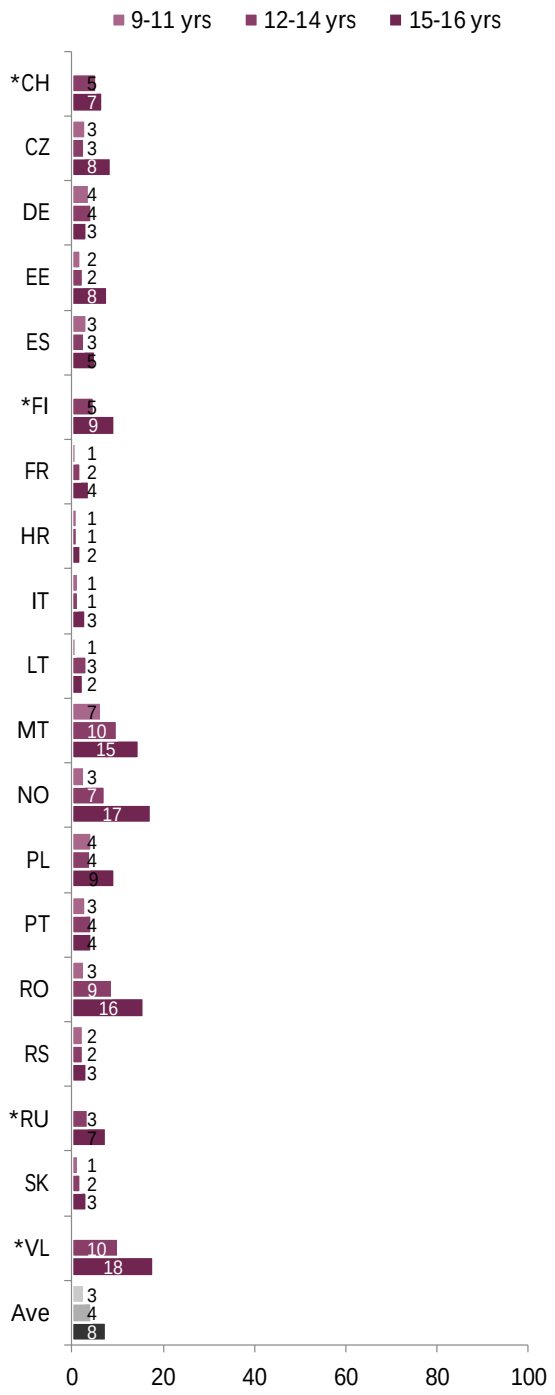


*FI/RU/VL/CH: Full age range not available.

QF60g In the PAST YEAR, has any of the following happened to you on the internet? Someone found out where I was because they tracked my phone or device. Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

Figure 68: Tracking location, by age



*FI/RU/VL/CH: Full age range not available. FI/RU/VL: Data not weighted.

QF60g In the PAST YEAR, has any of the following happened to you on the internet? Someone found out where I was because they tracked my phone or device. Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

Points to consider

- Among the data misuse risks, most common is getting a virus or spyware. For most of these risks, we can see the increasing trend with age. With regard to gender differences, there is a clear trend that in many of the countries, more boys than girls report spending too much money on in-app purchases or online games as well as getting a virus or spyware. The gender difference is probably being caused by gendered patterns in online activities, especially gaming.
- Although we have information about the prevalence of encountering these risks, we should consider that their nature as well as potential resulting harm can vary among children. For example, getting a virus or spyware might, for one child, mean that an antivirus dealt with this problem immediately, while for another it might mean long-term misuse of personal information by spyware.
- Spending 'too much money' may also vary among children. It would be interesting to know if this is an estimate related to a sum that is allowed or at least unproblematic within the family (although still seen as high) or uncontrolled overspending above the children's limit.
- There seem to be a slightly increasing trend of getting tracked via a device with increasing age. Tracking a location is usually discussed with regard to parents controlling their smaller children. For older children in particular, we should therefore also think about who is using the device for such tracking, for instance, if it is the child's family, friends or peers, or someone else.

Excessive internet use

Parents are often afraid that their children spend too much time online, are using the internet excessively, or are at risk of becoming 'internet addicts'. However, whether someone is addicted or an excessive user does not depend solely on the time spent online, but rather on the impact of the internet use on the internet user's life[48]. In this EU Kids Online survey, we measured children's 'excessive internet use', a term often used in non-clinical research to refer to problematic internet use. Our research did not focus on 'internet addiction', a term used more often in clinical settings and referring to psychological diagnosis.

Despite the difference in terminology, excessive internet use still has a negative impact on children's lives and well-being. We know from previous research that it is associated with children's emotional problems, lower self-efficacy, higher sensation-seeking[49] as well as with poor sleeping habits, risk-taking actions, tobacco use, poor nutrition, physical inactivity[50] and other health problems.

In the survey we asked children aged 12–16 five questions corresponding to the criteria of excessive internet use defined in Griffiths' research:[51]

- Salience: when the specific online activity becomes the most important activity in the child's life;
- Mood modification: a subjective experience influenced by the online activity, such as using online activities to improve the mood or feel better;
- Tolerance: the need to increase the amounts of the online activity to achieve the former effects;
- Withdrawal symptoms: unpleasant feelings, states and/or physical states after termination of the online activity;
- Conflict: disagreements between the child and those around them (such as parents or friends) or within the individual's own mind associated with the online activity;
- Relapse: when children tried to reduce the amount spent on the online activity but failed.

These research-based criteria informed the survey item design. Individual items can be seen in Table 9. We asked the children the following question:

In the PAST YEAR, how often have these things happened to you?

The four response options included *never, a few times, at least every week* and *daily or almost daily*. If children answered *at least every week* or *daily or almost daily* they were considered as having experienced the relevant criteria. The cut-off for considering a criterion as present (weekly or daily) was set up to reflect the severity of impact that this behaviour has on the day-to-day lives of excessive users. It is also important to note that according to Griffiths' criteria[52], internet users are considered as excessive users only if they experience all the criteria.

This set of questions was asked only of older children, so we present only findings from children aged 12–16.

Table 9 shows the percentages of children who report experiencing different excessive internet use criteria. As noted, experiencing any single criterion on its own does not constitute excessive internet use.

[48] Vondrackova, P. & Smahel, D. (2019). Internet addiction in context. In M. Khosrow-Pour (ed.) *Advanced methodologies and technologies in artificial intelligence, computer simulation, and human-computer interaction* (pp. 551–62). IGI Global.

[49] Helsper, E.J. & Smahel, D. (2019). Excessive internet use by young Europeans: Psychological vulnerability and digital literacy? *Information, Communication & Society*. https://doi.org/10.1080/1369118X.2018.1563203

[50] Durkee, T., Carli, V., Floderus, B., Wasserman, C., et al (2016). Pathological internet use and risk-behaviors among European adolescents. *International Journal of Environmental Research and Public Health, 13*(3), E294. https://doi.org/10.3390/ijerph13030294

[51] Griffiths, M. (2000). Does internet and computer 'addiction' exist? Some case study evidence. *CyberPsychology & Behavior, 3*(2), 211–18. https://doi.org/10.1089/109493100316067

[52] Ibid

Table 9: Excessive internet use: Children aged 12–16 who answered at least weekly or daily

	I have gone without eating or sleeping because of the internet	I have felt bothered when I cannot be on the internet	I have caught myself using the internet **although I'm** not really interested	I have spent less time than I should with either family, friends or doing schoolwork because of the time I spent on the internet	I have tried unsuccessfully to spend less time on the internet
CH	4	13	14	17	14
CZ	4	8	14	9	13
DE	1	10	8	7	7
EE	4	5	15	11	14
ES	2	9	11	13	10
*FI	4	6	11	15	10
FR	5	16	8	19	7
HR	5	19	15	17	13
IT	0	5	5	9	5
LT	2	3	5	7	4
MT	6	12	13	19	20
NO	4	8	12	16	9
PL	6	17	16	12	10
PT	3	11	15	10	8
RO	11	13	11	14	15
RS	4	10	11	18	12
*RU	1	6	12	6	9
SK	1	3	5	4	5
*VL	5	11	15	21	18
Ave	4	10	11	13	10

*FI/RU/VL: Data not weighted.

QF70 In the PAST YEAR, how often have these things happened to you? Percentage of children who answered *at least every week* or *daily* or *almost daily*.

Base: All children aged 12–16 who use the internet.

- In all of the countries, the children least often report going *at least weekly* without eating and sleeping because of the internet (Ave = 4%). In contrast, more children reported four other criteria (Ave between 10 and 13%).
- The percentage of children who report going without eating and sleeping because of the internet at least weekly ranges between 0% (Italy) and 11% (Romania).
- Between 3% (Lithuania and Slovakia) and 19% (Croatia) of children report that they feel bothered at least weekly when they cannot be on the internet.
- Between 4% (Slovakia) and 21% (Flanders) of the children report they spend less time with family, friends or doing schoolwork daily or weekly because of time spent online.
- Between 4% (Lithuania) and 20% (Malta) of children acknowledge they try unsuccessfully to spend less time on the internet daily or weekly.

How much children experience the criteria of excessive internet use

As already noted, children experience excessive internet use only if all five criteria are present. It is therefore meaningful to look at how many criteria children experienced and how many children have not experienced any of the excessive internet use criteria. Experiencing a criterion is defined here as reporting it as present at least weekly or daily.

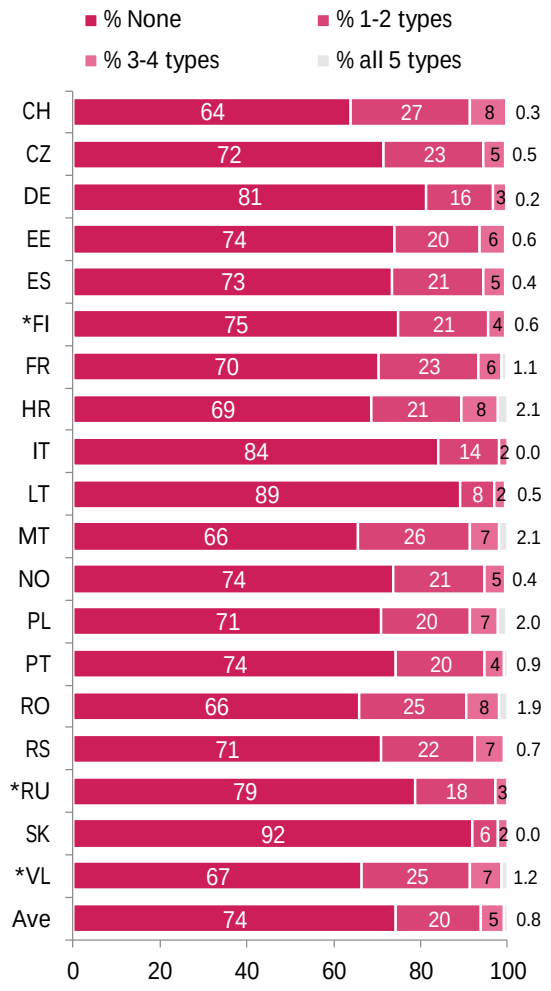
The results are presented in Figure 69, which shows how many of the criteria were experienced by children in the relevant countries. Children in the 'None of the criteria' category did not experience any

of the criteria while children in the '5 criteria' category experienced all the criteria. The number of children who met all five criteria is important, since we can presume that those children are excessive users. Considering that the number is quite low, we report their prevalence with the use of one decimal place.

- All the criteria of excessive internet use are experienced by a minority of children – between 0% (Italy and Slovakia) and 2.1% (Croatia and Malta).
- Between 2% (Italy, Lithuania and Slovakia) and 8% (Switzerland, Croatia and Romania) of the children experience three or four excessive internet use criteria.
- The majority of the children in all of the countries do not experience any of the criteria of excessive internet use. The number of children who did not report any criteria of problematic use ranged between 64% (Switzerland) and 92% (Slovakia).
- This finding corresponds with findings from the EU Kids Online 2010 survey, in which the proportion of children who experience all criteria of excessive internet use also ranged between 0% and 2%. However, it should be noted that the comparison between these findings is complicated because the previous survey used a different response scale – children answered on a 5-point scale from *never/almost never* to *fairly often* or *very often*.[53] In the previous research, the criteria were fulfilled if children answered *fairly often* or *very often*, but it was at *least every week* and *daily or almost daily* in this survey.

Majority of children aged 12-16 do not experience any of the criteria of excessive internet use.

Figure 69: Number of experienced criteria of the excessive internet use, by country



*FI/RU/VL: Data not weighted.

QF70 Derived from QF70 In the PAST YEAR, how often have these things happened to you? Percentage of children who answered *at least every week* or *daily* or *almost daily*.

Base: All children aged 12–16 who use the internet.

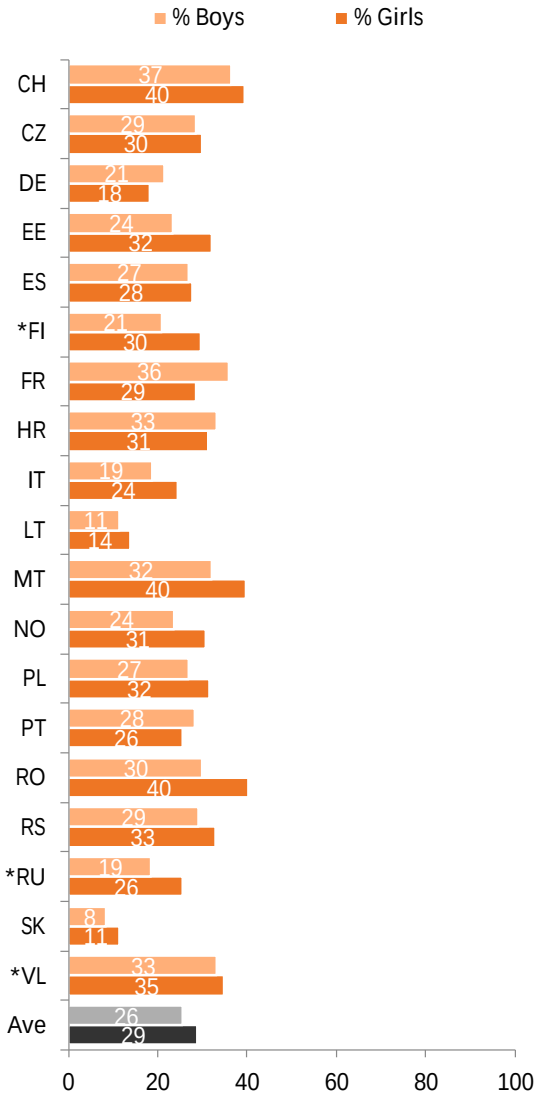
Figure 70 shows the differences between boys and girls who experienced at least one of the five criteria of excessive internet use.

- The gender differences range between 7% (France and Norway) and 10% (Romania). In most countries, there are almost no gender differences (i.e., the difference is equal or less than 5 percentage points).
- The gendered pattern is not consistent across the countries. In some of the countries, more boys experience some of the criteria than girls. In

[53] Smahel, D., Helsper, E., Green, L., Kalmus, V., Blinka, L., & Ólafsson, K. (2012). *Excessive internet use among European children*. EU Kids Online, LSE. http://eprints.lse.ac.uk/47344/

Estonia, this difference is 8 percentage points, in Norway 7 percentage points, and in Romania, 10 percentage points. On the other hand, in France, more girls experience some of the criteria for excessive internet use (a difference of 7 percentage points).

Figure 70: Experienced at least one criterion of excessive internet use, by gender



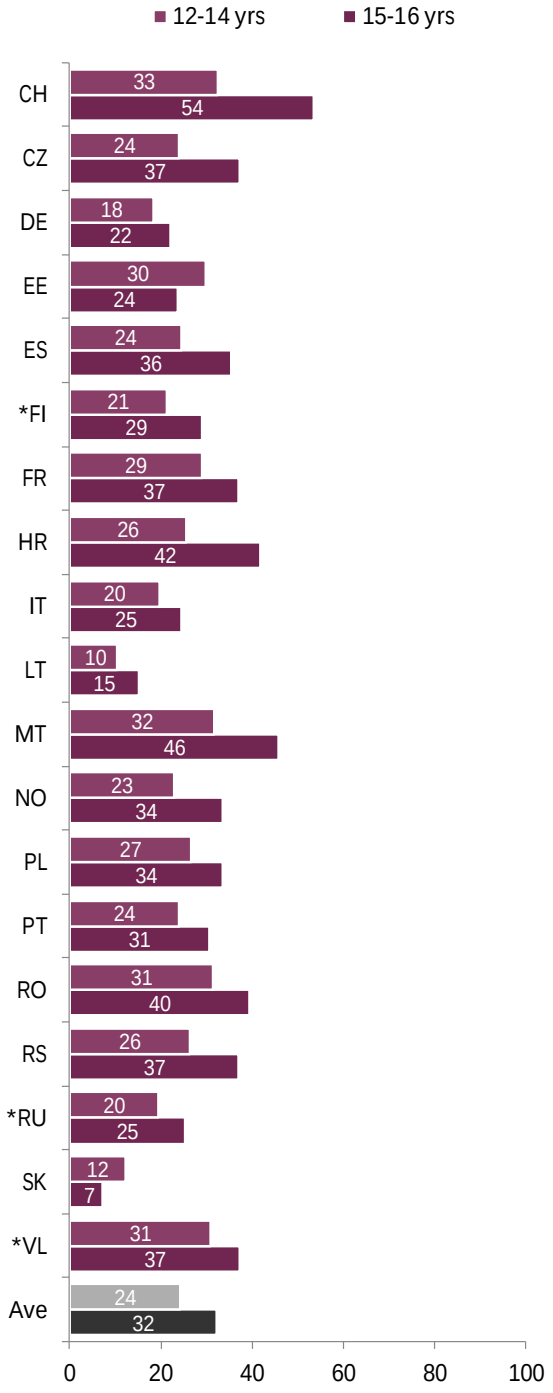
*FI/RU/VL: Data not weighted.

QF70 Derived from QF70 In the PAST YEAR, how often have these things happened to you? Percentage of children who answered *at least every week* or *daily* or *almost daily* to at least one criterion.

Base: All children aged 12–16 who use the internet.

Figure 71 shows the differences between children aged 12–14 and 15–16 who experience at least one criterion of excessive internet use.

Figure 71: Experienced at least one criterion of excessive internet use, by age



*FI/RU/VL: Data not weighted.

QF70 Derived from QF70 In the PAST YEAR, how often have these things happened to you? Percentage of children who answered *at least every week* or *daily* or *almost daily* to at least one criterion.

Base: All children 12–16 who use the internet.

- In the majority of the countries, more older children than younger children report some criterion of internet excessive use, differences ranging between 6 (Estonia, Flanders) and 21 (Switzerland) percentage points.
- This pattern is similar to findings from the survey in 2010, where more older children also experience at least one criterion of excessive internet use.[54]
- In Germany, Italy, Lithuania and Slovakia, there are no substantial age differences. However, these minor differences are particularly present in countries with a low prevalence of children experiencing some of the criteria of excessive internet use, so these differences should be interpreted with caution.

Points to consider

- Based on our findings, we can conclude that the majority of children in most of the participating countries do not experience any of the criteria for excessive internet use. Between 64% and 92% of the children do not report any problematic internet use at least weekly or more often. Only a small number of children meet all five criteria: in Italy and Slovakia none of the children meet all the criteria and the maximum was 2.1% in Croatia and Malta. It also seems that the number of children who report all criteria of excessive internet use did not change from the survey in 2010.
- Concerning differences between boys and girls, there are almost no gender differences in most of the countries. However, in cases where boys and girls differed, there is no consistent pattern across the countries. In some of the countries, more boys experience some of the criteria for excessive internet use (such as in Estonia and Romania). On the other hand, in France, more girls experience these criteria. Concerning age differences, older children experience more criteria for excessive internet use in the majority of the countries. This is probably because older children use the internet on average more intensively (see 'Online activities').
- Our findings may be in contrast with the views of some parents, caregivers and teachers who would argue that the percentages presented in this report are too low and that many more children use the internet 'too much'. However, what is 'too much' and what is 'not too much' is subjective. Such perceptions may vary in different families as they are also part of the family environment. There is no clear answer as to how much is 'too much'. We should stress that in this report we focus on the impact that internet use has on children's lives. This impact is important for measuring excessive internet use because it is what determines the severity of the issue. Whether a parent perceives that a child spends 'too much time on the internet' and whether this has a serious impact on their life may be two different things in most families.
- To the best of our knowledge, parents, caregivers and teachers often overestimate the problem of excessive internet use or online addiction. The phrase 'addicted to the internet' became a buzzword and the common language use grew far apart from its clinical meaning. We recommend educating parents about the clinical meaning of the word 'addiction' and its associated symptoms.
- Future research could look at excessive internet use from a longitudinal perspective, i.e., carrying out research following the same children over a period of time. In this way, we could investigate factors that influence changes in excessive internet use, in both a positive and a negative way.

[54] Smahel, D., Helsper, E., Green, L., Kalmus, V., Blinka, L., & Ólafsson, K. (2012). *Excessive internet use among European children*. EU Kids Online, LSE. http://eprints.lse.ac.uk/47344/

Sexting

The issue of sexting – sending sexually explicit messages via electronic devices – as a risk is complex. On the one hand, sending and receiving sexual messages via electronic devices can be a form of intimate peer interaction, experienced as positive for both the sender and receiver[55]. On the other hand, there are legitimate fears that some forms of sexting come as a result of grooming efforts by adults, or are the result of sexually abusive behaviour, including intimate digital partner violence.[56] [57] [58]

However, regardless of the intentionality and experienced feelings of the involved parties, we need to consider that sexual messages, images and videos sent via online services always have the potential to be distributed and made public, outside the original sender's and receiver's control. Thus, there is also a fear that transgressive behaviour among young people themselves may seriously jeopardise their current and future relations, such as with peers, partners, family and employers.

It is also clear that in many countries sexual images of under-aged, and sometimes prepubescent, children, fall under the creation and distribution of child sexual abuse images (so-called 'child pornography'). This applies even if both the sender and receiver are of the same age (under-age). This creates challenges for prevention, policy development, protection and legislation. National (and international) legislation often falls short of understanding and differentiating between various online sexual practices. Consequently, a gap exists in legislation to protect against images of child sexual abuse (i.e., 'child pornography') and consensual sexual practices, including the sharing of sexual images, between teens. Despite over a decade of policies related to online child protection, issues of fragmentation, unevenness in implementation and penalties intended for adults but applied to minors indicate that the complex nature of the internet and children's use of it requires better informed and holistic approaches to policy and provision.[59]

Against this background, in the survey, we included questions on experiences with sexual messages – both as receivers and senders – also investigating experiences with unwanted requests for such messages or material.

The standard definition of sexting is the sending of sexually explicit messages or images via a mobile phone. In our survey we made a decision to focus on positive and negative experiences afforded by the use of interactive technology, rather than the method of transmission. Thus, throughout the questionnaire, our participants were instructed to include experiences via mobile phones, computer games and wearables, when being asked about 'the internet':

People do all kinds of things on the internet. Sometimes they may send sexual messages or images. By this we mean talk about having sex or images of people naked or images of people having sex. The next few questions ask you about things like this.

Please note how in this question we include both written text (words) and pictures and moving images (videos). Consequently, when referring to the findings in this section, remember that 'sexual messages' can mean different types of content.

We then asked about specific experiences with sexting and unwanted sexual requests. These three questions were asked only of the older children, so we present only findings from children aged 12–16.

[55] Mascheroni, G., Vincent, J., & Jimenez, E. (2015). 'Girls are addicted to likes so they post semi-naked selfies': Peer mediation, normativity and the construction of identity online. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 9*(1), Article 5. https://doi.org/10.5817/CP2015-1-5

[56] Drouin, M., Ross, J., & Tobin, E. (2015). Sexting: A new, digital vehicle for intimate partner aggression? *Computers in Human Behavior, 50*, 197–204. http://dx.doi.org/10.1016/j.chb.2015.04.001

[57] Wood, M., Barter, C., Stanley, N., Aghtaie, N., & Larkins, C. (2015). Images across Europe: The sending and receiving of sexual images and associations with interpersonal violence in young people's relationships. Children *and Youth Services Review, 59*, 149–60. http://dx.doi.org/10.1016/j.childyouth.2015.11.005

[58] Hellevik, P. & Øverlien, C. (2016). Teenage intimate partner violence: Factors associated with victimization among Norwegian youths. *Scandinavian Journal of Public Health, 44*(7), 702-8. https://doi.org/10.1177/1403494816657264

[59] Bulger, M., Burton, P., O'Neill, B., & Staksrud, E. (2017). Where policy and practice collide: Comparing US, South African and European Union approaches to protecting children online. *New Media & Society, 19*(5), 750–64. https://doi.org/10.1177/1461444816686325

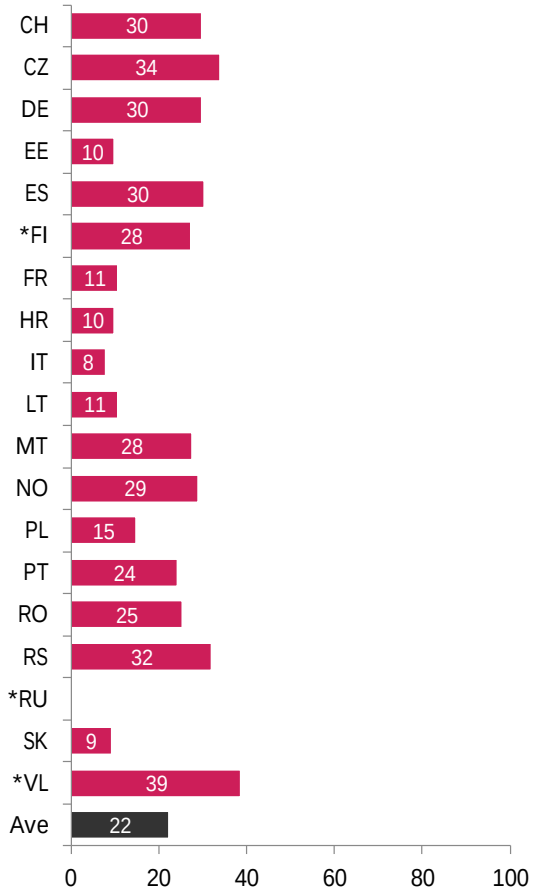
Receiving sexual messages

First, we focused on receiving sexual messages, measured by the question:

In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos.

We aimed to explore how prevalent experiences with sexting were, as well as age and gender differences. As we can see from Figure 72, the number of children who received sexual message in the past year ranged between 8% (Italy) and 39% (Flanders) (Ave = 22%).

Figure 72: Receiving sexual messages, by country



* FI/VL: Data not weighted. RU: Question not asked.

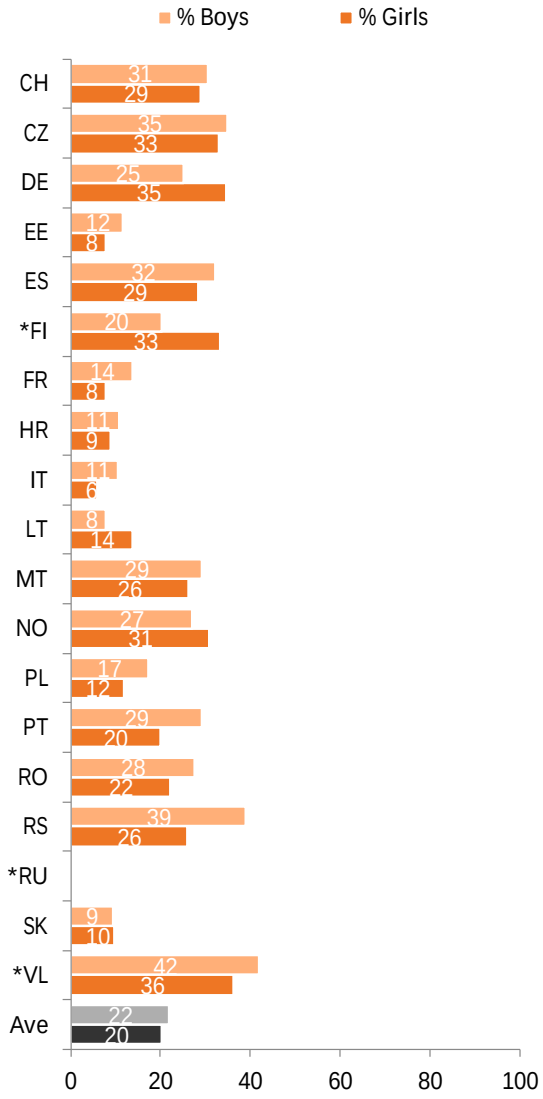
QF40 In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos. Percentage of children who answered *yes*.

Base: All children 12–16 who use the internet.

- In Switzerland, the Czech Republic, Germany, Spain, Malta, Norway, Romania, Flanders, Finland and Serbia, between 25% and 39% of the children receive such messages.
- On the other hand, in Estonia, Croatia, Italy and Slovakia, 10% or fewer children receive these messages.

As shown in Figure 73, in most of the countries the gender differences were negligible, equal to or less than 5 percentage points.

Figure 73: Receiving sexual messages, by gender



* FI/VL: Data not weighted. RU: Question not asked.

QF40 In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos. Percentage of children who answered *yes*.

Base: All children 12–16 who use the internet.

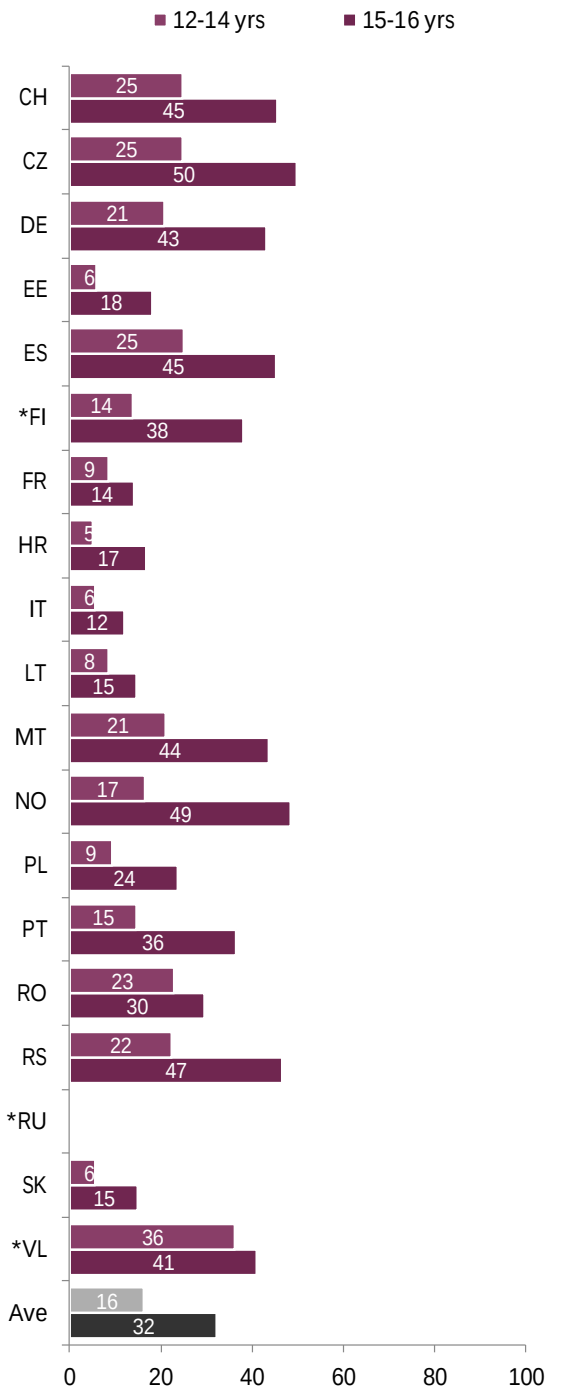
Between 8% (Italy) and 39% (Flanders) of the children aged 12-16 have received sexual message(s) in the past year.

- More boys than girls receive sexual messages in France, Portugal, Flanders and Serbia, with the difference of 13 percentage points (Serbia) and less.
- On the other hand, in Finland, Germany and Lithuania, more girls report such an experience, with a difference of 13, 10 and 6 percentage points.

Receiving sexual messages was related to age (see Figure 74), with substantial differences between the age categories.

- In all of the countries, more children in the oldest age category report receiving sexual messages than children aged 12–14. However, the age differences varied across countries, from between 6 percentage points (Italy) and 32 percentage points (Norway).
- In eight countries (Switzerland, Czech Republic, Germany, Spain, Malta, Norway, Serbia and Flanders) between 40% and 50% of the children in the oldest age category received sexual messages.
- In most of the countries the same is reported by a maximum of 25% of the children aged 12–14, with the exception of Flanders, where 36% of the children in this age category report this.

Figure 74: Receiving sexual messages, by age



* FI/VL: Data not weighted. RU: Question not asked.

QF40 In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos. Percentage of children who answered *yes*.

Base: All children 12–16 who use the internet.

Sending sexual messages

Next, we asked about sending sexual messages:

In the PAST YEAR, how often, if ever, have you SENT or POSTED any sexual MESSAGES (words, pictures or videos) in the following ways?

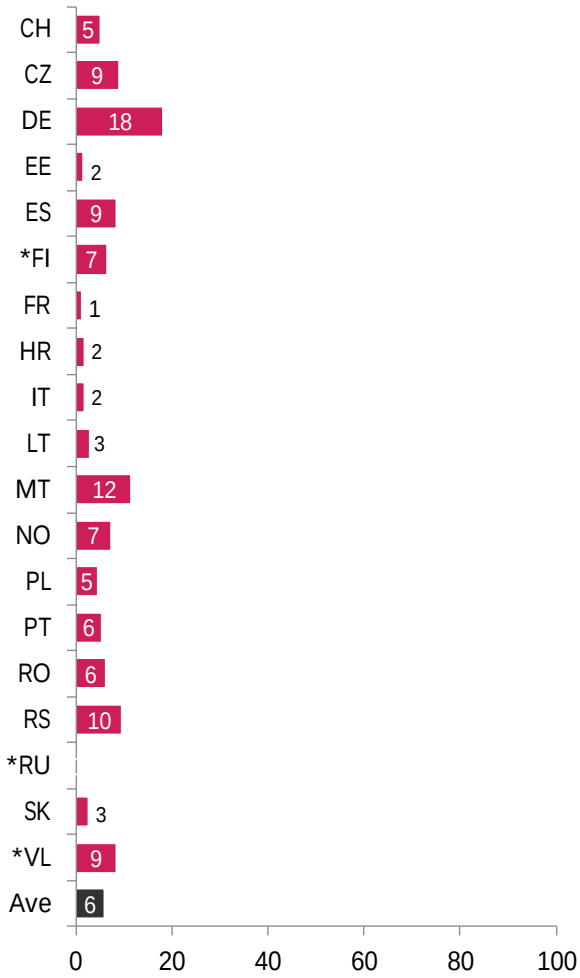
As noted in the introduction to this section, sexting can sometimes be a wilful exchange between peers. It can also be the result of grooming efforts from adults, where an adult lures children into sending sexual messages and/or images. This can be an adult they know face-to-face or someone they first met online.

- Thus, it is interesting to also look into to which degree children say *they themselves* have sent sexual messages. Figure 75 shows the percentage of children in each country who say they have sent sexual messages (words, pictures and/or video) to someone in the past year. Sending sexual messages is less prevalent than receiving such messages, ranging from between 1% (France) and 18% (Germany) (Ave = 6%).
- In Switzerland, Estonia, France, Croatia, Italy, Lithuania, Poland and Slovakia, 5% or fewer children report that they sent sexual message to someone else.
- Only in Germany, Malta and Serbia did more than 10% (but less than 18%) of the children send some sexual messages.

Because this experience is rather low in prevalence, it is not surprising that there are no substantial gender differences. Only in Malta and Serbia did slightly more boys than girls send sexual message (a difference of 7 and 10 percentage points, respectively).

In most of the countries, less than 10% of the children aged 12-16 have sent some sexual message(s) in the past year.

Figure 75: Sending sexual messages, by country



* FI/VL: Data not weighted. RU: Question not asked.

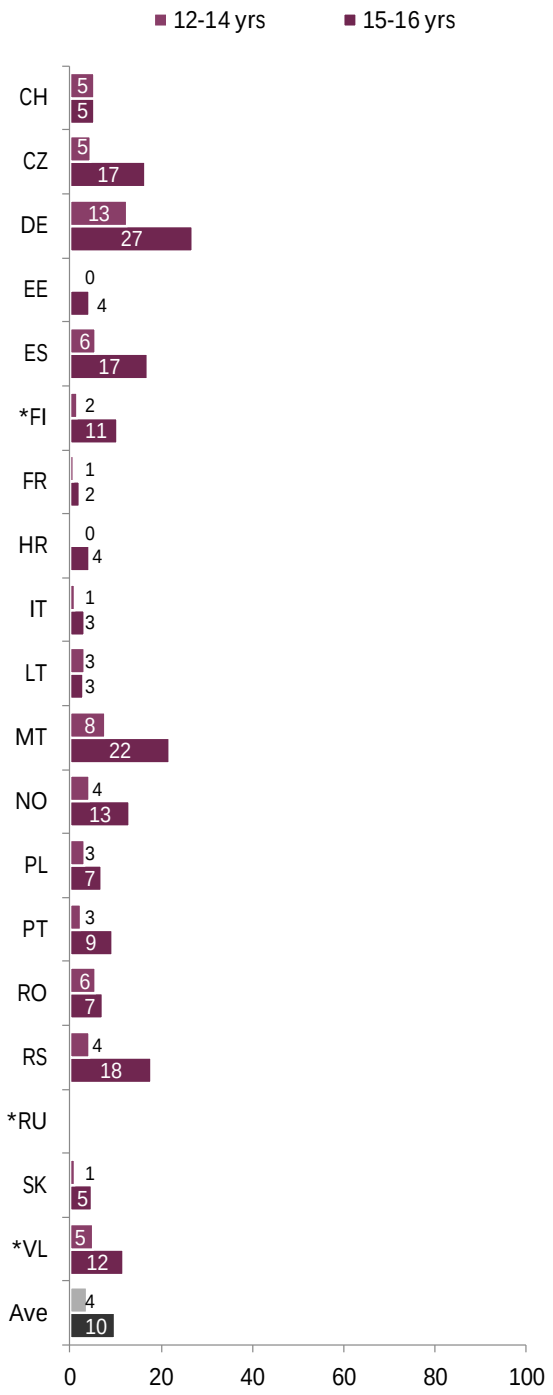
QF45y In the PAST YEAR, have you EVER SENT or POSTED any sexual messages? This could be words, pictures or videos about you or someone else. Percentage of children who answered *yes*.

Base: All children 12–16 who use the internet.

As for age (see Figure 76), the differences are slightly more pronounced, although not in all of the countries. Generally, we see that older children more often state having sent sexual messages (sexting) than younger children.

- In the Czech Republic, Germany, Spain, Finland, Malta, Norway, Portugal, Serbia and Flanders, the age difference in sending sexual messages ranges between 6 and 14 percentage points.

Figure 76: Sending sexual messages, by age



* FI/VL: Data not weighted. RU: Question not asked.

QF45 In the PAST YEAR, have you EVER SENT or POSTED any sexual messages? This could be words, pictures or videos about you or someone else. Percentage of children who answered *yes*.

Base: All children 12–16 who use the internet.

Unwanted requests for sexual information

As noted above, sexting experiences can be a wanted or unwanted activity. We know from previous research how intentionality and expectance is a factor when assessing whether a risk experienced online is coped with or not seen as a problem, or if it leads to distress and the potential for harm. We therefore wanted to separate out those experiences of unwanted requests for sexual information, and if yes, of how often they had experienced this. Consequently, we asked the children participating in the survey:

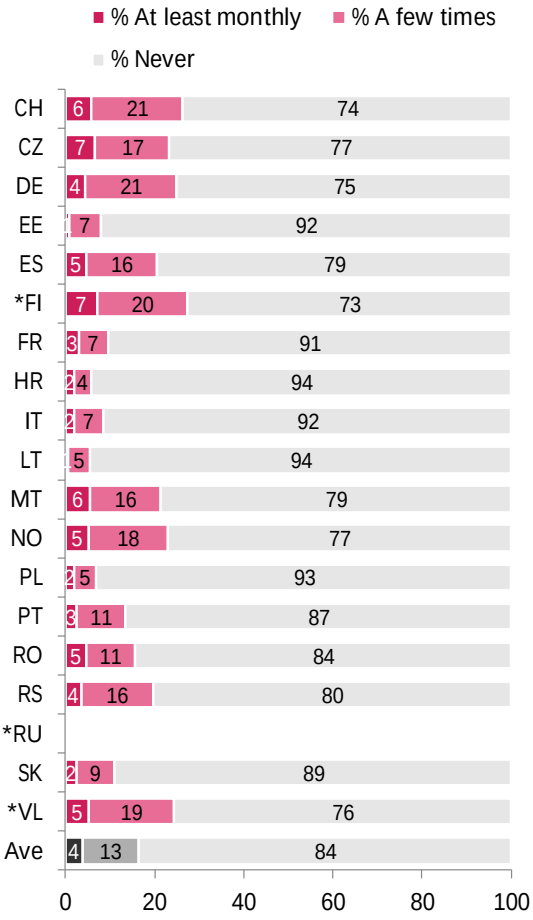
In the PAST YEAR, have you EVER been asked by someone on the internet for sexual information (words, pictures or videos) about yourself (like what your body looks like without clothes on or sexual things you have done) when you did not want to answer such questions?

When looking at children's experience, we focused on the differences in experience of prevalence between them, comparing those who had never experienced something like this and those who had received such a request in the past year *at least a few times* and more often (*at least monthly*).

- The findings show (see Figure 77) that most of the children had never experienced this (between 73% in Finland and 94% in Croatia and Lithuania). For most of those children who had experienced unsolicited sexual messages and requests, this had not happened often.
- In all of the countries, 7% (Finland and the Czech Republic) or fewer children experienced something like this *at least monthly* or more often.

Most of the children aged 12-16 have not received unwanted requests for sexual information.

Figure 77: Unwanted sexual requests, by country



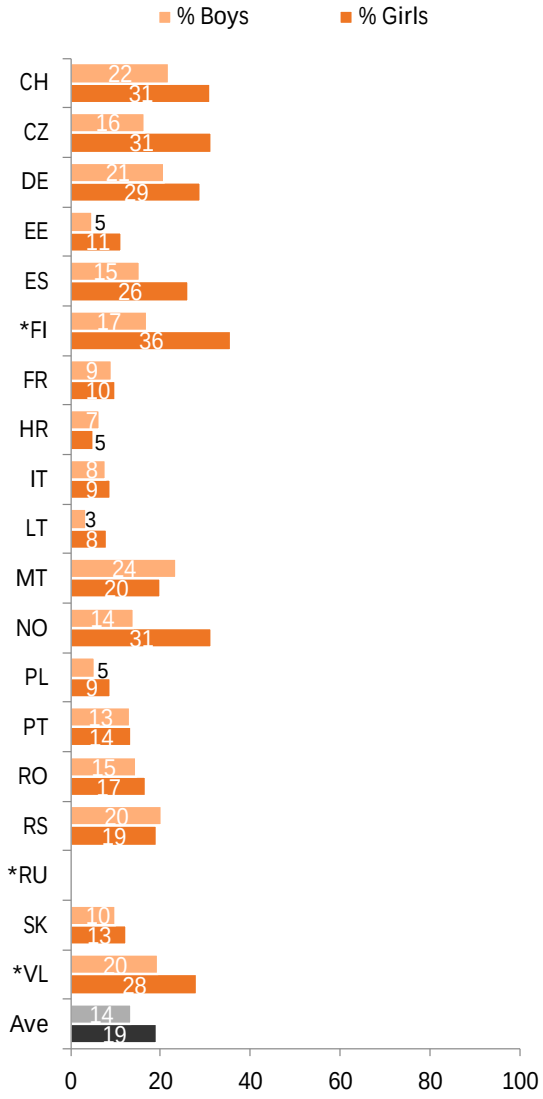
* FI/VL: Data not weighted. RU: Question not asked.

QF47 In the PAST YEAR, how often, if ever, have you been asked by someone on the internet for sexual information (words, pictures or videos) about yourself when you did not want to answer such questions?

Base: All children 12–16 who use the internet.

- In some countries (Slovakia, Serbia, Romania, Portugal, Poland, Malta, Lithuania, Italy, Croatia and France) there were no substantial gender differences (all below or equal to 5 percentage points), although the low prevalence of this experience should be considered.
- In the rest of the countries, more girls experience such unwanted sexual requests than boys, with the difference ranging between 6 (Estonia) and 19 (Finland) percentage points.
- The age pattern is also consistent, showing that in most countries, more older children have such an experience.
- In Norway, Finland, Germany, the Czech Republic and Switzerland, the difference between 12- to 14-year-olds and 15- to 16-year-olds ranges between 23 and 25 percentage points.

Figure 78: Unwanted sexual requests, by gender

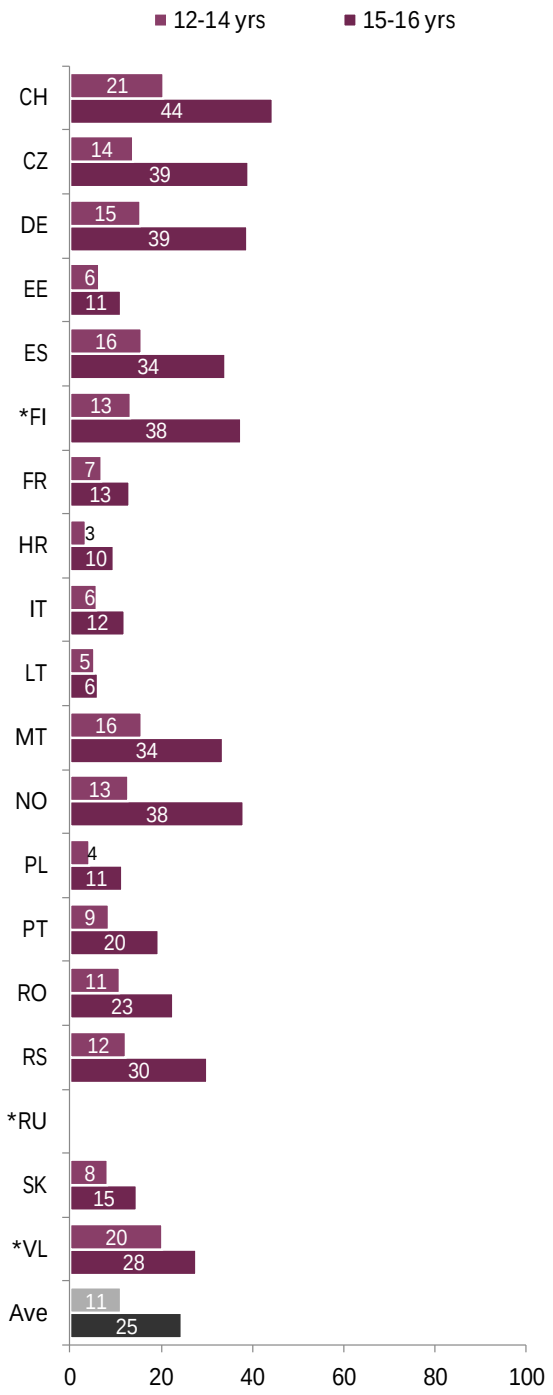


* FI/VL: Data not weighted. RU: Question not asked.

QF47 In the PAST YEAR, how often, if ever, have you been asked by someone on the internet for sexual information (words, pictures or videos) about yourself when you did not want to answer such questions? Percentage of children who answered *a few times, at least monthly* or *daily or almost daily*.

Base: All children 12–16 who use the internet.

Figure 79: Unwanted sexual requests, by age



* FI/VL: Data not weighted. RU: Question not asked.

QF47 In the PAST YEAR, how often, if ever, have you been asked by someone on the internet for sexual information (words, pictures or videos) about yourself when you did not want to answer such questions? Percentage of children who answered *a few times, at least monthly* or *daily or almost daily*.

Base: All children 12–16 who use the internet.

Points to consider

- We must acknowledge that when the internet and mobile phones play such a substantial part in children's – and perhaps especially young people's – general day-to-day lives, then also flirting, exploration of sexuality and the establishment and maintenance of intimate relationships can be mediated via technology. It should also be noted that some of the participants are above the sexual consent age while others are below. It is therefore important, when considering preventive efforts and creating good policy and legislative practice, that we seek to understand the different types of sexting that occur, and to what degree this constitutes a risk of serious harm. A nuanced approach will enable us to identify the right measures to intervene and aid, enabling us to separate between transgressive behaviour between young people, and the potential consequences of this, and sexual abuse and solicitation towards children by adults.
- The risk of conceptualising sexting only as a negative experience is that this may result in providing advice that will be dismissed as it doesn't correspond with the common experiences of young people. The challenge is to develop effective preventive strategies to protect children from the negative consequences of sexting, while ensuring that such strategies stay situated within young people's common experiences.
- Future research should investigate possible harm caused by receiving sexual messages or unwanted requests for sexual information and its impact on children's well-being. We need to understand in more depth the substance of children's experiences. This includes, for instance, examining which platforms are used for sexting, who sends the message(s) and how children cope with such an experience.

Seeing sexual images

One of the concerns related to children and the media is that of exposure to sexual images. The worry that children may be exposed to sexual images online, such as pornographic content, has been the topic of many policy debates and interventions in the field of internet safety. However, what constitutes pornography and sexual images is partly culturally dependent.

Moreover, the responses to exposure to sexual images can also be very diverse. As with other risks, seeing sexual images can, for some children and young people, be considered a positive experience, some don't think much about it, and for some it can cause distress.

In order to give good advice on which children and when are at risk of harm in relation to sexual images, it is important to know more about their experiences. Therefore, we asked if the children had seen something sexual both online and offline, and how they reacted to this experience. To present this topic to the children, we gave the following introduction:

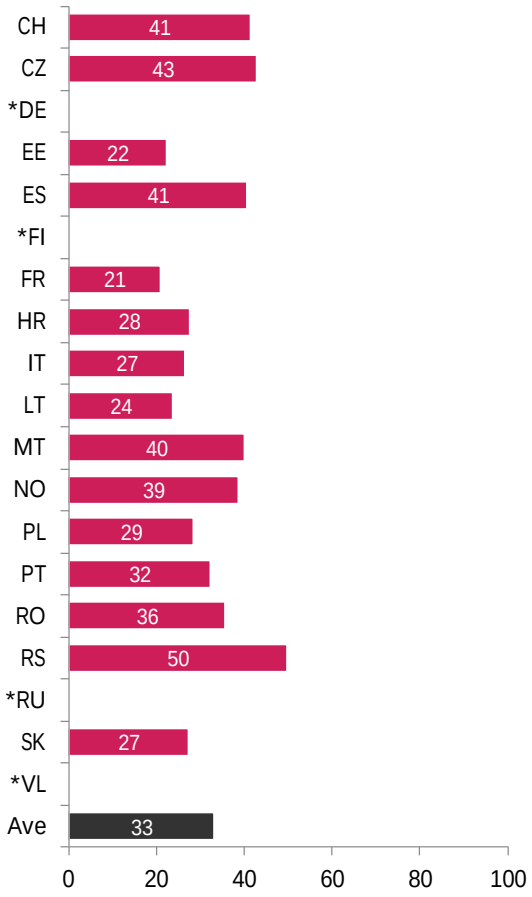
In the PAST YEAR, you have seen lots of different images – pictures, photos, videos. Sometimes, these images might be obviously sexual, e.g., they may show people naked or people having sex. You might never have seen anything like this, or you may have seen something like this on a mobile phone, in a magazine, on the TV, on a DVD or on the internet. The next few questions ask you about things like this.

This definition encompassed all kinds of media-related exposure to sexual images, not only that which happens online. In the questions that followed, we focused on different platforms, both online and offline, in which exposure may have happened, and which will be introduced in the results. Moreover, we should note that we intentionally avoided using the term 'pornography', which can give special connotations, but rather asked the children more broadly to think of images that were obviously sexual.

Our first question in this section related to the frequency of exposure. Figure 80 shows the number of children who reported seeing some kind of sexual image in the past year. Across the countries, between 21% (France) and 50% (Serbia) of the children say they had had such an experience.

- In Croatia, the Czech Republic, Spain, Malta and Serbia, 40% and more of the children had seen some kind of sexual image.
- On the other hand, in Estonia, France and Lithuania, less than one in four children report this experience.

Figure 80: Seeing sexual images (on- or offline), by country



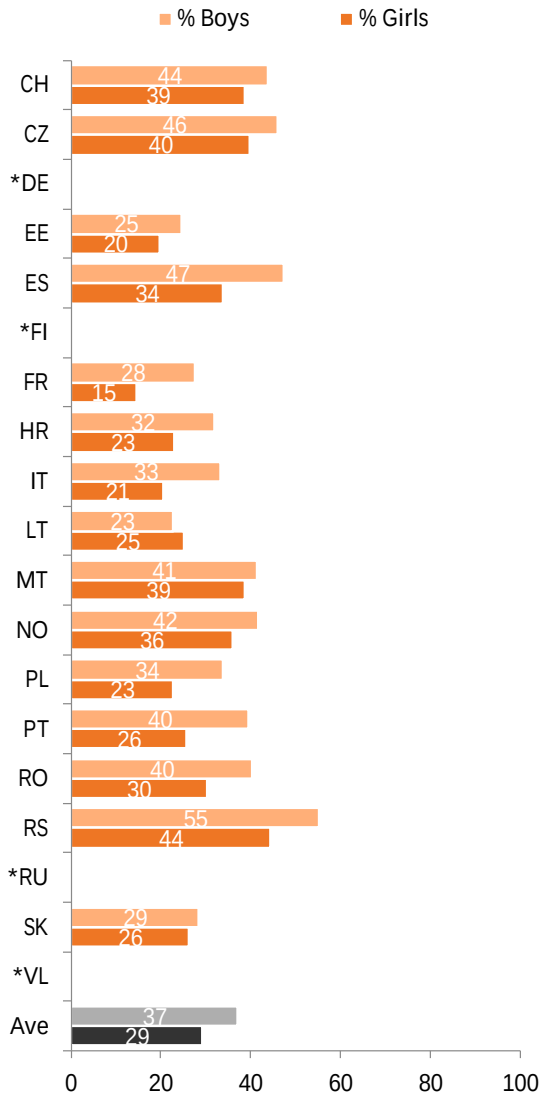
* DE/FI/VL: Full age range not available. RU: Question not asked.

QF30 In the PAST YEAR, have you EVER SEEN any sexual images? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

- Exposure to sexual images varies by age and gender. In all of the countries, more boys than girls reported having seen sexual images (see Figure 81). The gender difference ranged between 2% (Malta and Lithuania) and 14% (Portugal).
- In seven countries (Spain, France, Italy, Poland, Portugal, Romania and Serbia), the gender difference is between 10 and 14 percentage points.

Figure 81: Seeing sexual images (on- or offline), by gender



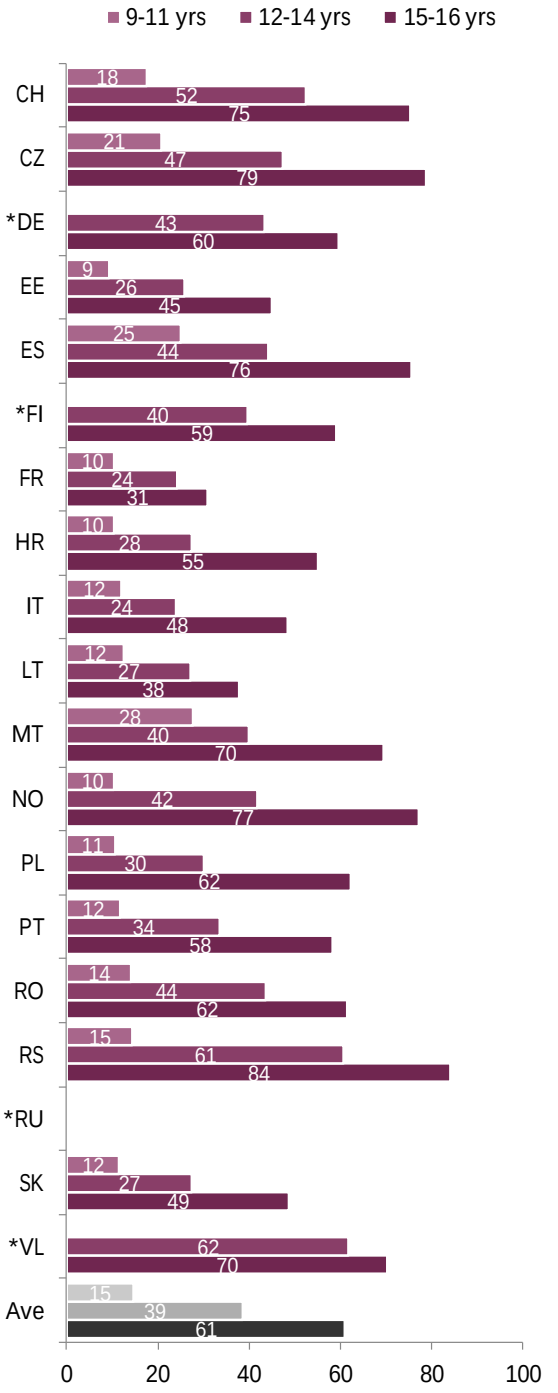
* DE/FI/VL: Full age range not available. RU: Question not asked.

QF30 In the PAST YEAR, have you EVER SEEN any sexual images? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

- Across all the countries there is also a clear age pattern in seeing sexual images (see Figure 82). The older the children are, the more likely they are to see some sexual images. The difference between the youngest and oldest age categories ranges between 21 and 70 percentage points, which shows considerable cross-national variation in relation to age.
- In some countries (Poland, Croatia, Estonia, Portugal, Norway, and Serbia) more than five times as many experience sexual images among 15- to 16-year-olds than 9- to 11-year-olds.
- On the other hand, the difference in Lithuania and France is substantially lower, ranging between 25 and 21 percentage points.

Figure 82: Seeing sexual images (on- or offline), by age



* DE/FI/VL: Full age range not available. RU: Question not asked. FI/VL: Data not weighted.

QF30 In the PAST YEAR, have you EVER SEEN any sexual images? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

Seeing sexual images on different platforms

- Most children see sexual images on devices connected to the internet, such as on a mobile phone, computer, tablet or any other online device (Ave = 14%). Slightly fewer say they have seen sexual images on television or in films (Ave = 11%) and only small number say that they have seen sexual images in a magazine or a book (Ave = 3%).

Table 10: Seeing sexual images at least monthly on different platforms, by country

	In a magazine or book	On TV, film	Via a mobile phone, computer, tablet or any other online device
CH	2	10	17
CZ	5	17	26
*DE	-	-	-
EE	1	7	9
ES	3	10	16
*FI	-	-	-
FR	2	3	4
HR	6	12	12
IT	3	9	8
LT	2	7	7
MT	4	11	16
NO	1	12	17
PL	3	7	10
PT	4	12	16
RO	4	11	13
RS	7	26	28
*RU	-	-	-
SK	3	7	7
*VL	-	-	-
Ave	3	11	14

* DE/FI/VL: Full age range not available. RU: Question not asked.

QF31 In the PAST YEAR, how often have you seen images of this kind in any of the following ways? Percentage of children who answered *at least every month, at least every week,* or *daily or almost daily*.

Base: All children 9–16 who use the internet.

- There is considerable variability between countries in the number of children who say that they have seen sexual images on the internet, ranging between 4% in France and 28% in Serbia.
- In most countries, boys are more likely than girls to say that they have seen sexual images across platforms.
- There is also a consistent age pattern across all of the countries, with more children in the oldest age category seeing sexual images online than in the youngest age category.

Between 4% (France) and 28% (Serbia) of the children see sexual images on the internet.

How children felt after seeing sexual images

As noted in the introduction for this section, being exposed to sexual images can be perceived both as a positive and a negative experience, depending on the context and the individual child. How sexual images are perceived can also be influenced by intentionality – the response to exposure due to seeking out sexual images could differ from unexpected exposure. The emotional response is also connected to the developmental stage and needs of the children, reflected by age. In line with our intent to research children's own experiences from a non-normative starting point, we also asked children the following question:

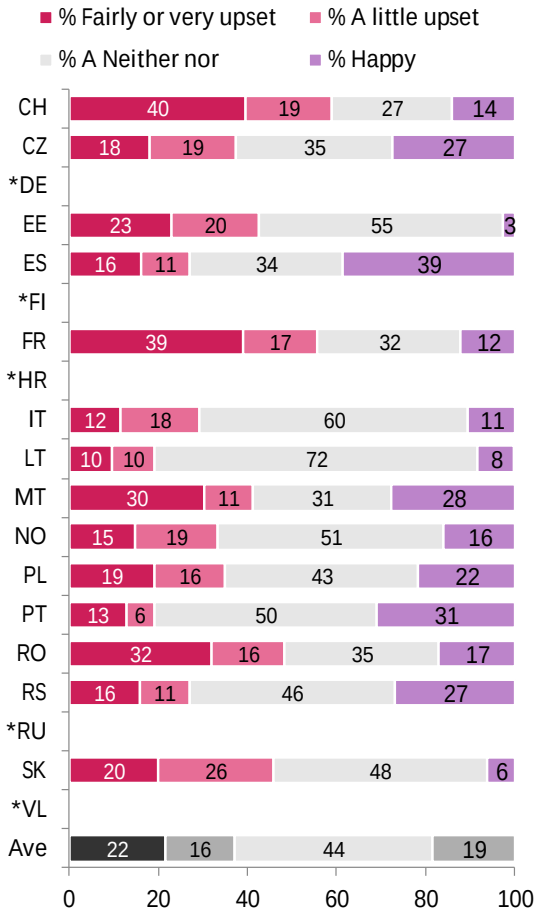
Thinking of the LAST TIME you have seen images of this kind, how did you feel about it?

The children could report one of these options*: I was happy, I was not happy or upset, I was a little upset, I was fairly upset* and *I was very upse*t (see Figure 83). Please note that these images could be both online and offline.

- Figure 83 shows that in most of the countries, most of the children who saw some sexual image were neither upset nor happy (Ave = 44%), ranging between 27% (Switzerland) and 72% (Lithuania).
- In contrast, between 10% (Lithuania) and 40% (Switzerland) of the children were fairly or very upset (Ave = 22%), while feeling happy after seeing sexual images was reported by a similar number of children across the countries, ranging between 3% in Estonia and 39% in Spain.

- In Romania, France and Switzerland, being fairly or very upset after seeing sexual images was reported by more than fourth of the children who saw them. On the other hand, in Finland, Italy, Lithuania, and Portugal, being fairly or very upset was reported by less than 15% of the children.

Figure 83: How children reacted to seeing sexual images, by country



* DE/FI/VL: Full age range not available. HR/RU: Question not asked.

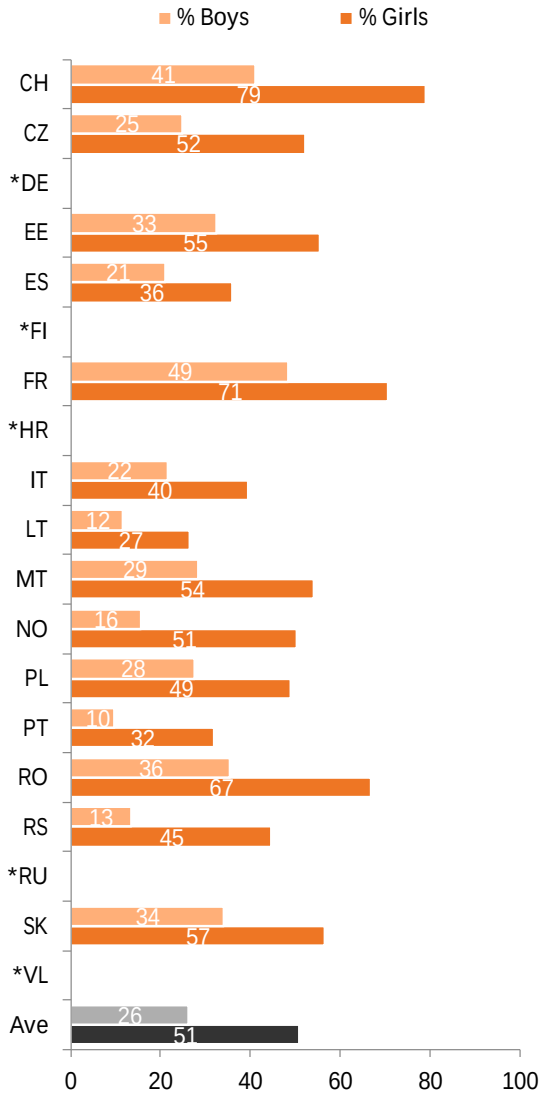
QF32 Thinking of the LAST TIME you have seen images of this kind, how did you feel about it?

Base: All children 9–16 who use the internet and who had seen sexual images.

In all of the countries more girls than boys are upset by seeing sexual images.

Figure 84 shows sharp differences between boys and girls in their emotional response to seeing sexual images. In all of the countries, girls report being a little or fairly or very upset more often than boys. The difference between boys and girls varies between 15 percentage points (Lithuania) and 38 percentage points (Switzerland) (Ave = 26 percentage points in difference).

Figure 84: Children who are a little, fairly or very upset by sexual images, by gender

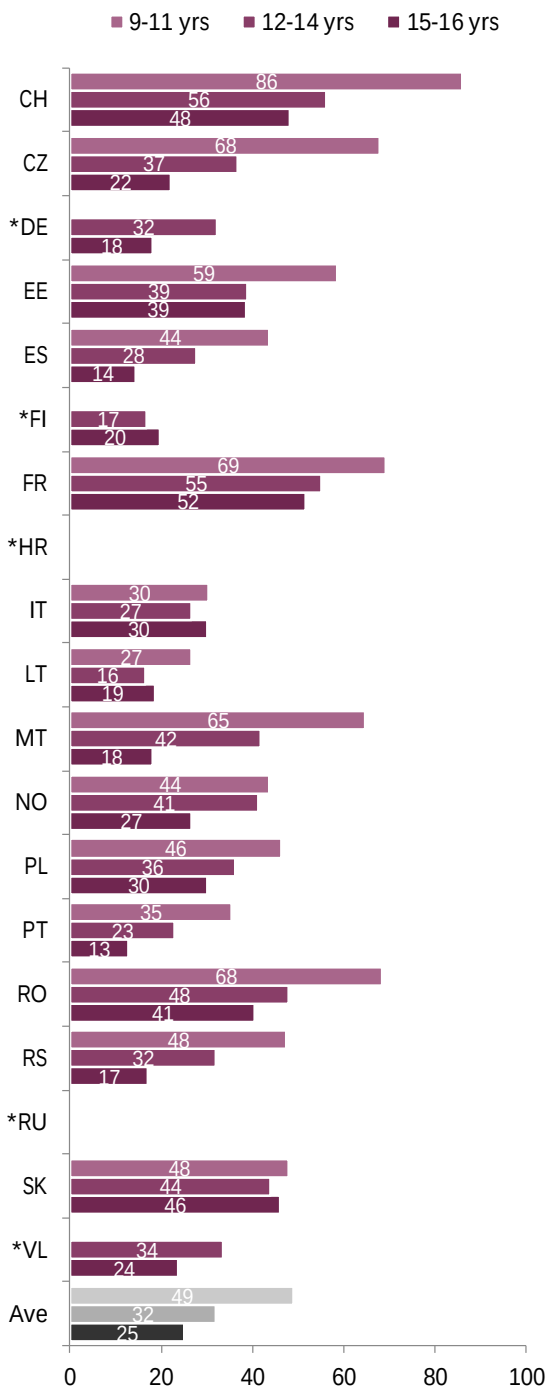


* DE/FI/VL: Full age range not available. HR/RU: Question not asked.

QF32 Thinking of the LAST TIME you have seen images of this kind, how did you feel about it? Percentage of children who answered *little upset, fairly upset* or *very upset*.

Base: All children 9–16 who use the internet and who had seen sexual images.

Figure 85: Children who are a little, fairly or very upset by sexual images, by age



* DE/FI/VL: Full age range not available. HR/RU: Question not asked. FI/VL: Data not weighted.

QF32 Thinking of the LAST TIME you have seen images of this kind, how did you feel about it? Percentage of children who answered *little upset, fairly upset* or *very upset*.

Base: All children 9–16 who use the internet and who had seen sexual images.

- Figure 85 shows that in most countries there are consistent age differences in emotional responses to seeing sexual images. More children in the youngest age category report being upset from seeing sexual images than children in the oldest age category. This difference ranges between 8 percentage points (Lithuania) and 47 percentage points (Malta) (Ave = 25 percentage points in difference).
- However, in Slovakia and Italy, there are no substantial age differences in emotional response (the differences between all age groups are under 5 percentage points).

Points to consider

- Some children and young people intentionally seek out sexual content. Some may seek them due to curiosity, others may try to find answers for questions they have about puberty, their own body and sexual identity. Thus, as with other perceived risks, seeing sexual images might also represent an opportunity and help for some. How do we ensure a balanced approach to sexual images online – and in other media – that steers away from media panic, seeing the nuances in the rationales behind the various intentional experiences with sexual content online?
- On the other hand, some sexual content, which children are exposed to, may also have an educational purpose. It could be relevant information about sexuality or about having a safe sexual experience. How can we ensure that sexual educational content is age-appropriate and relevant, and who should take responsibility for this?
- Despite the need to consider the differences related to intent, we also need to focus on the consequences of exposure to sexual materials. As the results showed, a substantial number of children were positive about their experience. This is also in line with the presumption that children use the internet to fill their developmental needs. Nevertheless, we need to acknowledge that both wanted and unwanted exposure can lead to both positive and negative feelings – and sometimes also to an impact that is much more differentiated and nuanced, and that our survey could not sufficiently capture.
- However, prior research has also shown that some children, especially younger children and girls more often than boys, do not seek out sexual images but are unwillingly exposed to them, and some find this to be problematic. It is important to ensure that children who have accidentally accessed or been sent sexual content by others have a way of coping with this, so that it does not lead to any form of harm.

Meeting new people

Meeting new people on the internet represents one of the pronounced online risks in the media. Media reports, often using expressive language (e.g., 'online predators' or 'online paedophiles'), focus on the possibility of physical or sexual abuse stemming from meeting unknown people online, people who manipulate children using lies and pretending to be their peers.[60, 61] Even though these cases are extremely rare,[62, 63] they raise substantial concerns. As a result, the general public tend to perceive such interactions as harmful, and forget that meeting new people is a natural part of everyone's life, and that, besides the aforementioned potential risks, it can also bring potential benefits: finding new friends with similar interests, receiving emotional support, learning new information or practising a foreign language in a conversation.[64, 65] All these possible benefits are especially important for adolescents, for whom widening their social circle is part of their developmental needs, which may be a driving force for children to engage in these activities.

The EU Kids Online survey focused on two aspects of interactions with unknown people: (1) whether the children had contact online with someone previously not met face-to-face, and (2) whether they also met such a person face-to-face, in the physical world.

We asked the children two questions:

Have you EVER had contact on the internet with someone you have not met face-to-face before?

In the PAST YEAR, have you EVER met anyone face-to-face you first got to know on the internet?

- As shown in Figure 86, being in contact with someone unknown on the internet is a common experience among children (Ave = 37%). However, the prevalence of such contacts varies across countries, between 23% (Italy) and 57% (Norway).
- Meeting new people from the internet face-to-face is a less common experience (Ave = 16%), ranging between 5% of children who met someone new from the internet face-to-face in France to 25% in Serbia.
- Since having contact with someone unknown online is a precondition to a face-to-face meeting, the pattern across countries is similar: those countries where fewer children had contact with someone unknown online are the same countries where the frequency of meeting them face-to-face is low.
- In the EU Kids Online 2010 survey, the countries also varied substantially. Between 18% and 54% of the children reported having contact with someone unknown on the internet, and 3% to 25% met them face-to-face. However, despite this seeming similarity, there were also several differences in comparable countries. In Norway, Poland, Portugal, Romania and Spain, the experience of having online contacts has increased, with an increase ranging from between 6 percentage points (Romania) to 30 percentage points (Portugal). In the Czech Republic and Italy, both activities stayed at approximately the same level. The increase in face-to-face meetings is also apparent in the same countries, although to a smaller extent (between 6 percentage points in Italy and Norway and 15 percentage points in Portugal). On the other hand, in Estonia, France and Lithuania, both activities decreased, with online contacts decreasing by 7 percentage points in France up to a 20 percentage point decrease in Lithuania. A decrease in face-to-face meetings ranged between 7 percentage points in France and 11 percentage points Lithuania.
- As noted, having online contact with someone unknown is a prerequisite of a face-to-face meeting. Hence, we also looked at the proportion of children who went to face-to-face meetings out of those who had had online contact. In the Czech Republic, Italy, Norway, Poland, Portugal, Romania and Spain, the number of such children who had online contact and chose to also meet face-to-face increased (the difference ranged between an 6 percentage point increase in Norway and a 29 percentage point increase in Italy). Another trend was apparent in Estonia, France and Lithuania, where children less often

[60] boyd, D., & Marwick, A. (2009). The conundrum of visibility: Youth safety and the Internet. *Journal of Children and Media, 3*(4), 410–14.

[61] Mascheroni, G., Jorge, A., & Farrugia, L. (2014). Media representations and children's discourses on online risks: Findings from qualitative research in nine European countries. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 8*(2), Article 2. http://dx.doi.org/10.5817/CP2014-2-2

[62] Marwick, A.E. (2008). To catch a predator? The MySpace moral panic. *First Monday, 13*(6), 1174–96.

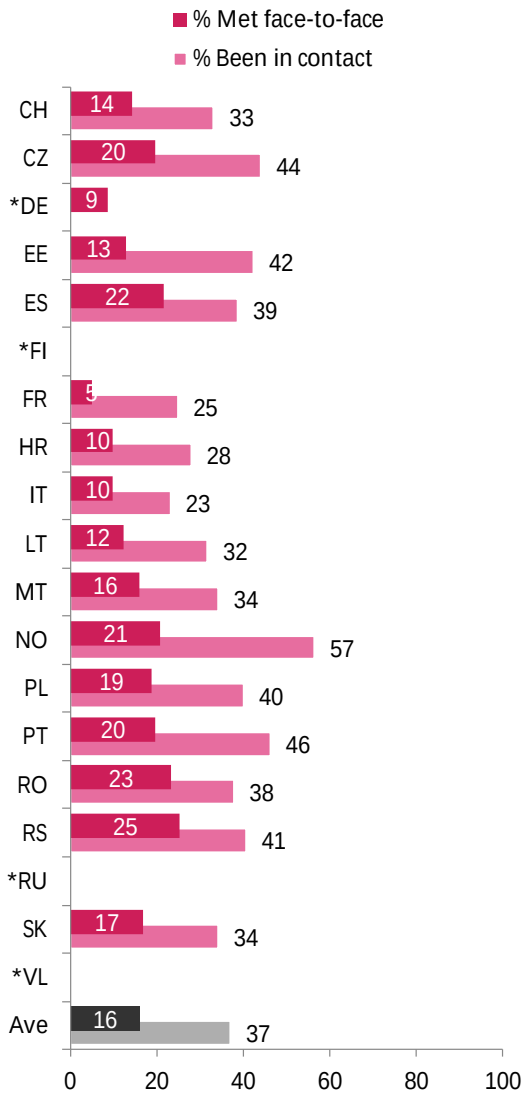
[63] Wolak, J., Finkelhor, D., & Mitchell, K. (2004). Internet-initiated sex crimes against minors: Implications for prevention based on findings from a national study. *Journal of Adolescent Health, 35*(5), 424-e11-424e20. https://doi.org/10.1016/j.jadohealth.2004.05.006

[64] Dedkova, L. (2015). Stranger is not always danger: The myth and reality of meetings with online strangers. In P. Lorentz, D. Smahel, M. Metykova & M.F. Wright (eds) *Living in the digital age: Self-presentation, networking, playing, and participating in politics* (pp. 78–94). Muni Press.

[65] Holmes, J. (2009). Myths and missed opportunities: Young people's not so risky use of online communication. *Information, Communication & Society, 12*(8), 1174–96. https://doi.org/10.1080/13691180902769873

chose to meet their online contacts face-to-face (the differences were 15, 17 and 7 percentage points, respectively).

Figure 86: Child has communicated online, or gone to an offline meeting, with someone not met face-to-face before



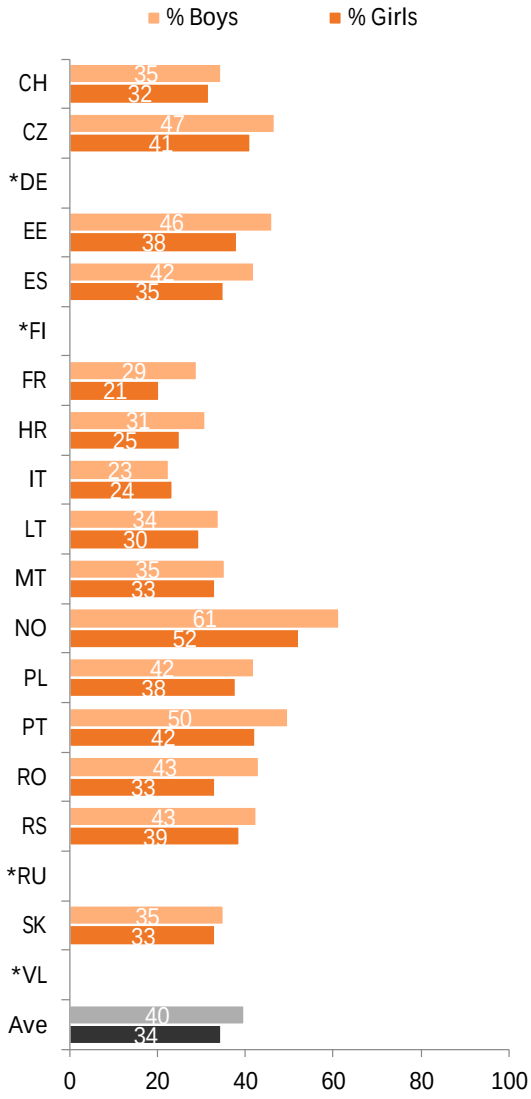
* FI/RU/VL: Full age range not available. DE: Question about online contact not asked.

QF11 Have you EVER had contact on the internet with someone you have not met face-to-face before? And QF12 In the PAST YEAR, have you EVER met anyone face-to-face that you first got to know on the internet? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

- In most of the countries, the differences between boys and girls were only small. Regarding online contacts (see Figure 86), boys and girls differed in eight countries (Croatia, Czech Republic, Estonia, France, Norway, Portugal, Romania and Spain), however, the differences are only small, between 6 (Czech Republic) and 10 percentage points (Romania). In all these countries, more boys than girls report having online contact with unknown people online. In the other countries, there are no substantial gender differences (equal to or below 5 percentage points).

Figure 87: Having a contact with previously unknown person on the internet, by gender



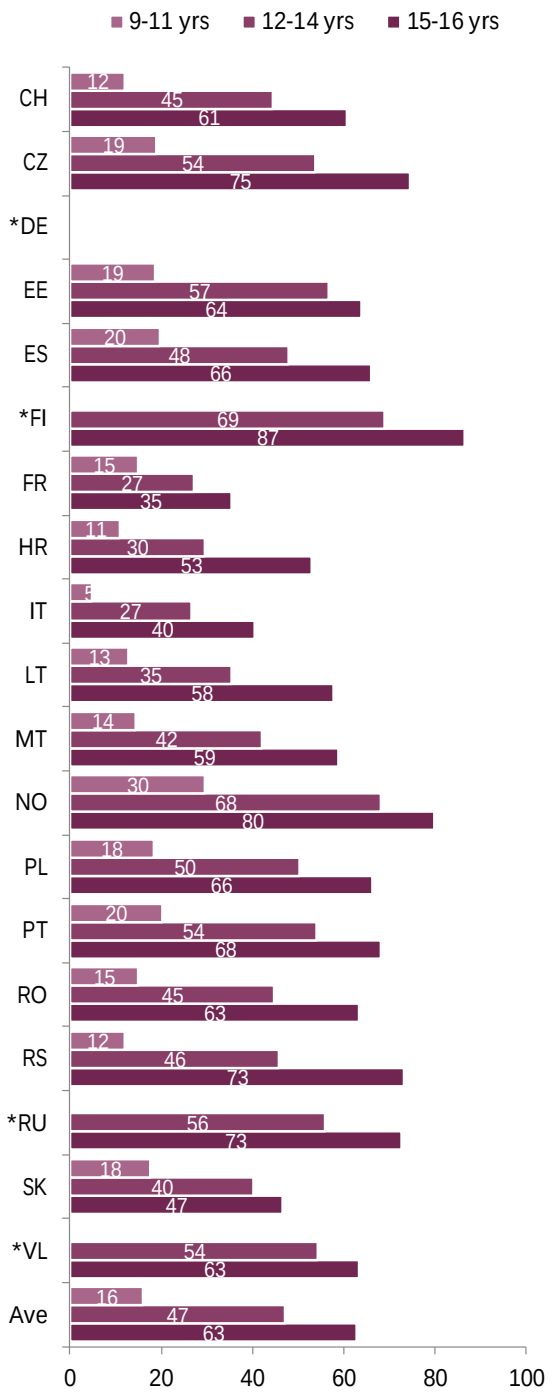
* FI/RU/VL: Full age range not available. DE: Question not asked.

QF11 Have you EVER had contact on the internet with someone you have not met face-to-face before? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

- Regarding face-to-face meetings, there were only gender differences only in Romania, where 28% of boys met someone face-to-face, whereas only 19% of girls did so. The gender differences in all the other countries are not substantial (equal to or below 5 percentage points). For parsimony, we don't display the figure.

Figure 88: Having a contact with previously unknown person on the internet, by age



* FI/RU/VL: Full age range not available. DE: Question not asked. FI/RU/VL: Data not weighted.

QF11 Have you EVER had contact on the internet with someone you have not met face-to-face before? Percentage of children who answered *yes*.

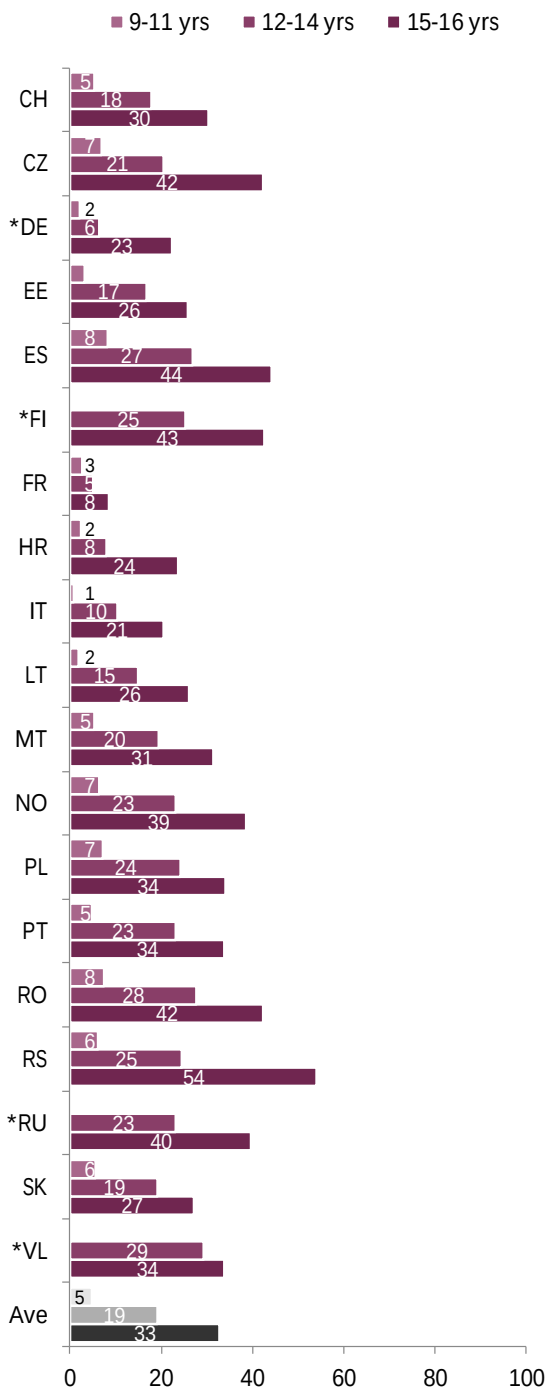
Base: All children 9–16 who use the internet.

- Regarding face-to-face meetings (see Figure 89), the youngest age category differs from the oldest age category by 5 percentage points (France) to 48 percentage points (Serbia). In most countries, this difference is over 20 percentage points.
- In all of the countries, there is a clear age pattern in both activities: more older children had contacts with unknown people online than younger ones, and more of the older children also met them face-to-face.
- Regarding online contacts with new people (see Figure 88), the differences between the youngest and oldest age categories ranges between 20 percentage points (France) and 61 percentage points (Serbia) for online contacts. These differences are over 40 percentage points in most countries.

Slightly more boys than girls have online contacts with unknown people but almost no gender differences are found with regard to face-to-face meetings.

In all countries more older children interact with unknown people than younger children.

Figure 89: Meeting previously unknown person from the internet face-to-face, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QF12 In the PAST YEAR, have you EVER met anyone face-to-face that you first got to know on the internet? Percentage of children who answered *yes*.

Base: All children 9–16 who use the internet.

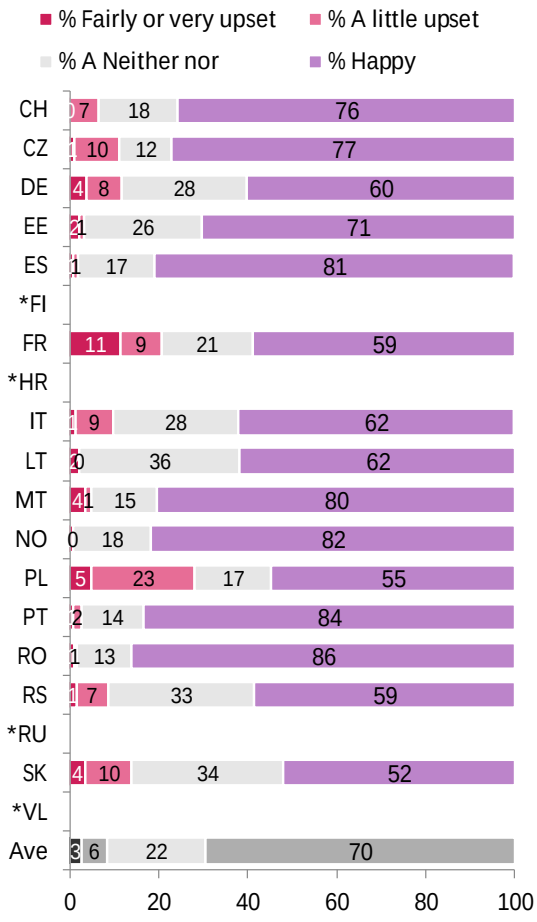
How children felt after a face-to-face meeting

As noted, meeting face-to-face with a previously unknown person from the internet raises many concerns. We therefore asked the children how they felt after the last time they met someone from the internet face-to-face. They could choose from these options: *I was happy, I was not happy or upset, I was a little upset, I was fairly upset* and *I was very upset* (see Figure 90).

- More than half of the children who met someone face-to-face report that they were happy after the meeting (Ave = 70%). In Malta, Norway, Portugal, Romania and Spain, more than 80% of the children who went to such a meeting reported feeling happy after the meeting.
- In all of the countries except Poland, the second largest group of children consists of those reporting feeling neither happy nor upset. The percentages range between 12% in the Czech Republic and 36% in Lithuania (Ave = 22%).
- Being at least a little upset was least common (Ave = 9%). In seven countries (Spain, Estonia, Lithuania, Malta, Norway, Portugal, Romania), 5% or fewer children report any feelings of upset, and between 6% and 10% in another four (Switzerland, Germany, Italy, Serbia). However, Poland, 23% of the children were upset after a face-to-face meeting.
- Nevertheless, when the children were upset, they mostly rated the negative feeling as being a little upset. Being fairly or very upset was reported by 5% or fewer children who met their online contact face-to-face in all of the countries except France (11%). Moreover, the most severe feelings – being very upset – were reported by only a handful of the children. In about half of the countries there was no such child; in the other countries this applies to less than 1.5% of the children who went to a face-to face meeting with an unknown person from the internet.

Majority of the children who met someone face-to-face report that they were happy after the meeting.

Figure 90: How children felt after meeting offline contacts in person (only those who had done so)



* FI/RU/VL: Full age range not available. HR: Question not asked.

QF13 Thinking of the LAST TIME you met anyone face-to-face that you first got to know on the internet, how did you feel about it?

Base: All children 9–16 who have met online contacts face-to-face.

The percentages out of those who went to such a meeting could be misleading when making an overall estimation of the number of children who are upset by the experience. In Table 11, we thus also present the percentages of upset children out of the whole sample. In this table (and following gender comparisons), we merged the answers *I was a little upset*, *I was fairly upset* and *I was very upset* together into one category. It should be stressed that this category mostly consists of children who felt *a little upset*.

- With regard to the whole sample, the percentage of children reporting upsetting face-to-face meetings with unknown people from the internet is very low in all of the countries. In most of the countries, 1% or fewer children experienced any upsetting feelings after such a meeting. In the Czech Republic, Serbia and Slovakia, 2% of the children report feeling upset, and in Poland, it is 5% of children (however, it should be repeated that most of these children were only a little upset).

- In most of the countries, the same proportion of boys and girls report feeling upset after a face-to-face meeting. In Switzerland, the Czech Republic and Italy, slightly more girls experienced feeling upset after a face-to-face meeting with their online contact than boys. The differences range between 6 percentage points (in the Czech Republic and Italy) and 11 percentage points (in Switzerland). In France, more boys reported feeling at least a bit upset, and the difference was 12 percentage points. The figure is not included here.

- Regarding feeling happy after a meeting, more girls than boys report feeling happy in France, Italy, Lithuania, Malta, Norway, Poland, Portugal and Romania. The gender differences range between 7 percentage points (Romania) and 23 percentage points (France). On the other hand, more boys than girls report feeling happy in Switzerland (a difference of 6 percentage points). The figure is not included here.

- Considering the low number of children who experienced any upsetting feelings and the overall pattern of small differences across the countries, these differences should be interpreted with caution. It is plausible that gender does not play a substantial role in how children evaluate the face-to-face meetings with people from the internet, and that there are other more important factors that affect their evaluations.

- Due to low prevalence, we also did not examine age patterns across the countries.

Table 11: Children who are upset after face-to-face meetings with online contacts, by country

	% Have had a face-to-face meeting	% At least a bit upset	
		Those who had face-to-face meetings	Whole sample
CH	14	7	0.9
CZ	20	11	2.2
DE	9	12	1.0
EE	13	3	0.4
ES	22	2	0.4
*FI	–	–	–
FR	5	21	1.0
*HR	10	–	–
IT	10	10	1.0
LT	12	2	0.3
MT	16	5	0.8
NO	21	1	0.1
PL	19	28	5.3
PT	20	3	0.5
RO	23	1	0.3
RS	25	9	2.2
*RU	–	–	–
SK	17	14	2.3
*VL	–	–	–
Ave	16	8	1.3

* FI/RU/VL: Full age range not available. HR: Question about feelings after the meeting not asked.

QF12 In the PAST YEAR, have you EVER met anyone face-to-face that you first got to know on the internet? And QF13 Thinking of the LAST TIME you met anyone face-to-face that you first got to know on the internet, how did you feel about it? Percentage of children who answered *a little upset, fairly upset,* or *very upset*.

Base: All children 9–16 who have met online contacts face-to-face.

Points to consider

- Meeting with unknown people online is usually perceived as a risk, but it may also bring benefits, and we should not forget that.
- The majority of the children were happy after meeting with new people from the internet. Nevertheless, we still believe that meeting someone unknown from the internet should be treated with caution, and that children should be encouraged to employ preventive measures to assure their safety before and during such a meeting (e.g., telling someone about the meeting, meeting in a public place).
- There are apparent gender differences in most of the countries for having an online contact with unknown people (more boys than girls reporting online contacts), but almost no gender differences in face-to-face meetings. This may suggest either that boys are more 'picky' in choosing with whom they want to meet face-to-face, or that their online activities provide more opportunities to have online contacts with unknown people than girls' activities. Given the large difference between boys and girls in playing online games (see 'Online activities'), we believe the second explanation is more plausible. Online games, which are more popular among boys, provide many means to connect with unknown people, which is sometimes even a necessity for playing.
- On the other hand, there is very clear age trend across all of the countries in both activities. Similar to almost every other online activity, more older children than younger ones have online contacts and meet unknown people from the internet. This points to overall increases in using the internet for many day-to-day activities with maturation, and also stresses the developmental conditionality of interactions with new people: as children enter adolescence, the need to communicate with new people increases.

Preference of online communication

In this section, we examine children's preferences of online communication – specifically, whether children find online communication easier and tend to self-disclose more online than offline. The preference of online communication can have both positive and negative aspects. It might be positive if children prefer the internet in certain situations for identity exploration or as the onset for communication about sensitive topics, such as sexuality.[66] In such cases, the online environment can serve as a safe environment for the exploration that is a natural part of the child's development. On the other hand, especially those with higher emotional problems, such as loneliness, social anxiety or low self-esteem, prefer online communication because the online environment gives them an opportunity for better self-control of the self-presentation.[67] Although such preference can be beneficial since it enriches social life, it may be problematic if it becomes central for communication while offline communication and offline relationships deteriorate, or if it leads to excessive internet use. Therefore, the preference of online communication might be both positive ('healthy') and negative ('unhealthy') and may become an opportunity or a risk. In the positive form, the online environment provides the means to enrich and supplement offline communication. In the negative form, the online environment substitutes for offline communication.

In the survey, we provided the following three statements related to the preference of online communication:

I find it easier to be myself online than when I am with people face-to-face.

I talk about different things online than I do when speaking to people face-to-face.

I talk about personal things online which I do not talk about with people face-to-face.

Children replied if this applied to them never, sometimes, often or always.

It should be noted that these questions do not assess if the preference of online communication is positive or negative. However, they provide an insight into the children's overall preferences related to online communication.

Table 12 shows how many children say this applies to them *often* or *always* in relation to these items.

Table 12: Preference of online communication (applies often or always), by country

	I find it easier to be myself online	I talk about different things online than face-to-face	I talk about personal things online which I do not talk about face-to-face
*CH	–	–	–
CZ	27	19	5
DE	24	18	11
EE	30	23	8
ES	24	18	6
*FI	–	–	–
FR	37	21	17
HR	33	24	16
IT	24	17	9
LT	38	27	19
MT	30	29	10
NO	25	22	8
PL	19	19	9
PT	28	15	9
*RO	38	16	–
RS	27	18	6
*RU	–	–	–
SK	27	18	12
*VL	–	–	–
Ave	29	21	11

* CH/FI/RU/VL: Full age range not available. RO: Question on talking about personal things not asked.

QD2d, e, f: How often does the following apply to you? I find it easier to be myself online than when I am with people face-to-face. I talk about different things online than I do when speaking to people face-to-face. I talk about personal things online that I do not talk about with people face-to-face. I have met online contacts face-to-face. Percentage of children who answered *often* or *always*.

Base: All children 9–16 who use the internet.

- Between 19% (Poland) and 38% (Romania) of the children often or always find it easier to be themselves online than offline (Ave = 29%).
- Between 16% (Romania) and 29% (Malta) of the children report that they often or always talk

[66] Subrahmanyam, K. & Smahel, D. (2011). *Digital youth: The role of media in development.* Springer Science & Business Media.

[67] Caplan, S.E. (2010). Theory and measurement of generalized problematic internet use: A two-step approach. *Computers in Human Behavior, 26*(5), 1089–97. https://doi.org/10.1016/j.chb.2010.03.012

about different things online than they do when speaking to people face-to-face.

- The least number of children (Ave = 11%) often or always talk about personal things online that they do not talk about with people face-to-face.

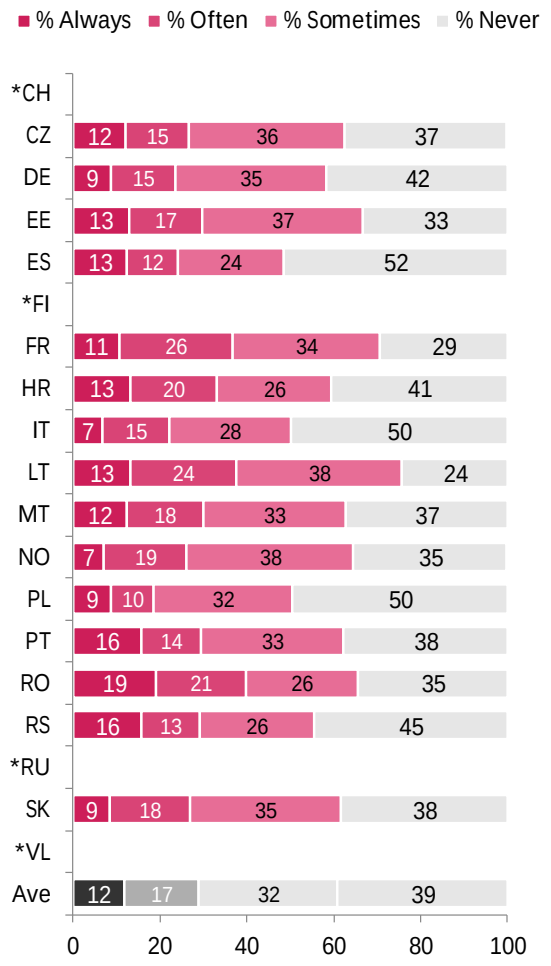
In the following sections we provide the results of the two first mentioned items in more depth, focusing on the frequency of the experience and gender and age differences. We selected these two because a higher number of children agreed with them.

I find it easier to be myself online

- Between 49% (Spain) and 75% (Lithuania) of the children report that they at least sometimes or more often find it easier to be themselves online than when they are with people face-to-face (Ave = 61%).
- Between 7% (Italy and Norway) and 19% (Romania) of children report that it happens to them always.
- Between 26% (Croatia, Romania and Serbia) and 38% (Lithuania and Norway) of the children say it happens to them sometimes.
- As Figure 92 shows, in about half of the countries (Serbia, Romania, Portugal, Poland, Italy, Croatia, Spain, Estonia), boys report more often than girls that they find it often or always easier to be themselves online than with people face-to-face. The gender differences range between 7 (Spain) percentage points and 13 percentage points (Portugal). In the other countries, there are no substantial gender differences (i.e., above 5 percentage points).
- The largest differences are in Croatia (12%) and Portugal (13%).
- In about half of the countries, boys more often than girls report finding it easier to be themselves online.

In most of the countries, the majority of the children report they find it easier to be themselves online at least sometimes or more often.

Figure 91: I find it easier to be myself online than when I am with people face-to-face, by country

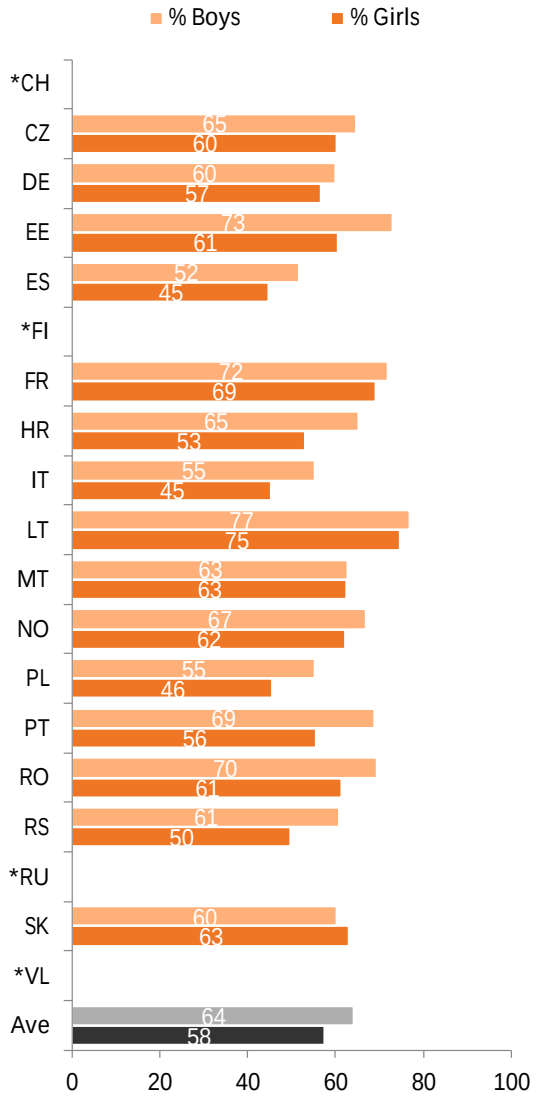


* CH/FI/RU/VL: Full age range not available.

QD2d How often does the following apply to you? I find it easier to be myself online than when I am with people face-to-face.

Base: All children 9–16 who use the internet.

Figure 92: I find it easier to be myself online than when I am with people face-to-face (at least sometimes or more often), by gender



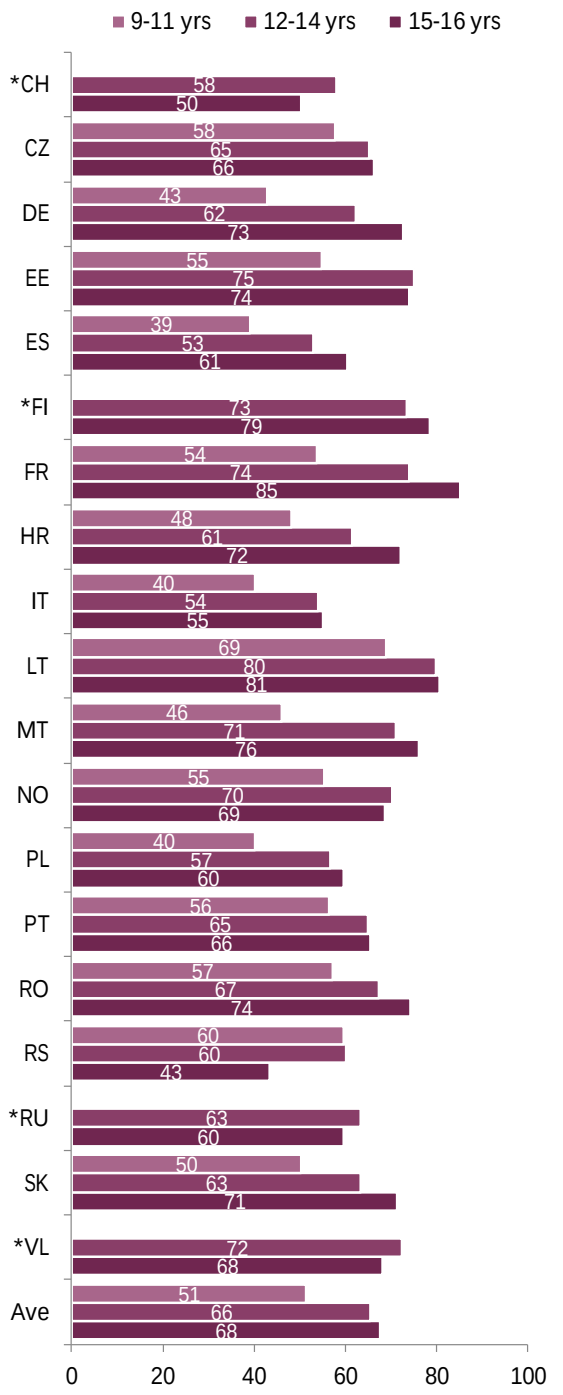
* CH/FI/RU/VL: Full age range not available.

QD2d How often does the following apply to you? I find it easier to be myself online than when I am with people face-to-face. Percentage of children who answered *sometimes*, *often* or *always*.

Base: All children 9–16 who use the internet.

- Concerning age differences (see Figure 93), in most of the countries, fewer children aged 9–11 than older children report that they found it easier to be themselves online than when they were with people face-to-face with difference ranging between 8 (the Czech republic) and 31 (France) percentage points.
- In most of the countries, there are none or only small differences between 12- to 14-year-olds and 15- to 16-year-olds (equal or below 5 percentage points).

Figure 93: I find it easier to be myself online than when I am with people face-to-face (at least sometimes or more often), by age



* CH/FI/RU/VL: Full age range not available. FI/RU/VL: Data not weighted.

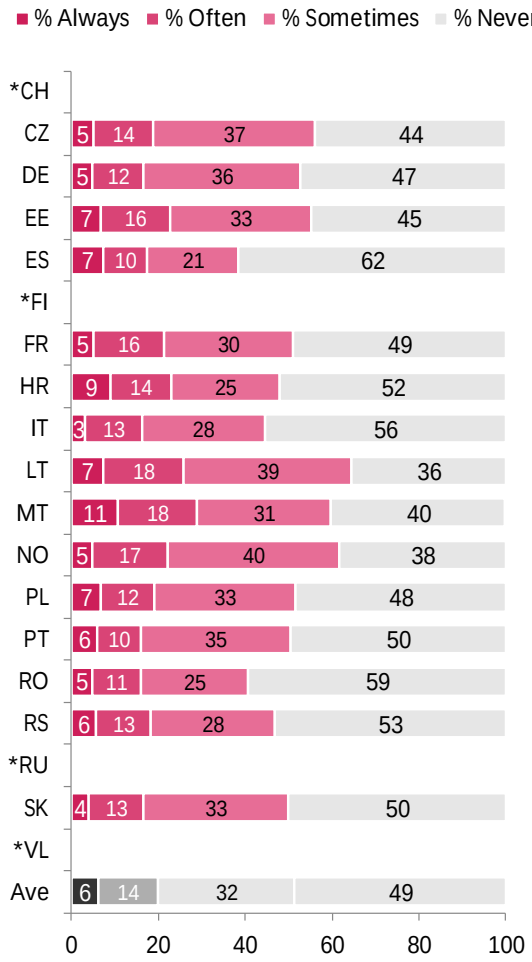
QD2d How often does the following apply to you? I find it easier to be myself online than when I am with people face-to-face. Percentage of children who answered *sometimes*, *often* or *always*.

Base: All children 9–16 who use the internet.

I talk about different things online than I do when speaking to people face-to-face

- In about half of the countries (the Czech Republic, Germany, Estonia, France, Lithuania, Malta, Norway, Poland and Portugal), the majority of the children talk about different things online than offline *at least sometimes*, *often* or *always*. This is reported by between 38% (Spain) and 64% (Lithuania) of the children (Ave = 52%).

Figure 94: I talk about different things online than I do when speaking to people face-to-face, by country



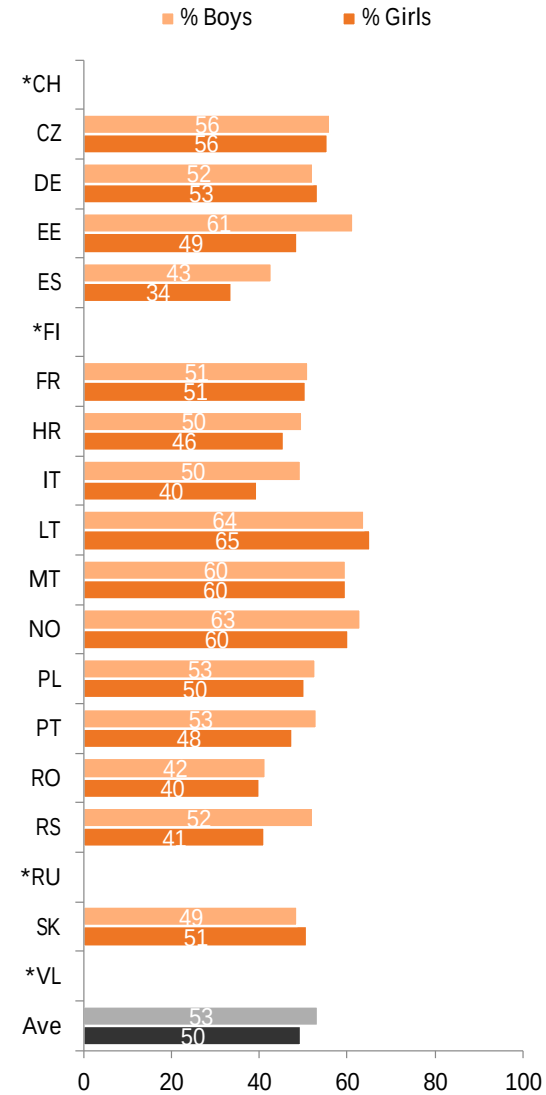
* CH/FI/RU/VL: Full age range not available.

QD2e How often does the following apply to you? I talk about different things online than I do when speaking to people face-to-face.

Base: All children 9–16 who use the internet.

- It seems that this experience is happening to children most often sometimes. Between 21% (Spain) and 40% (Norway) of the children report that they talk about different things online than offline sometimes.
- However, only between 3% (Italy) and 11% (Malta) of the children report it happens to them always.

Figure 95: I talk about different things online than I do when speaking to people face-to-face (at least sometimes or more often), by gender



* CH/FI/RU/VL: Full age range not available.

QD2e How often does the following apply to you? I talk about different things online than I do when speaking to people face-to-face. Percentage of children who answered *sometimes*, *often* or *always*.

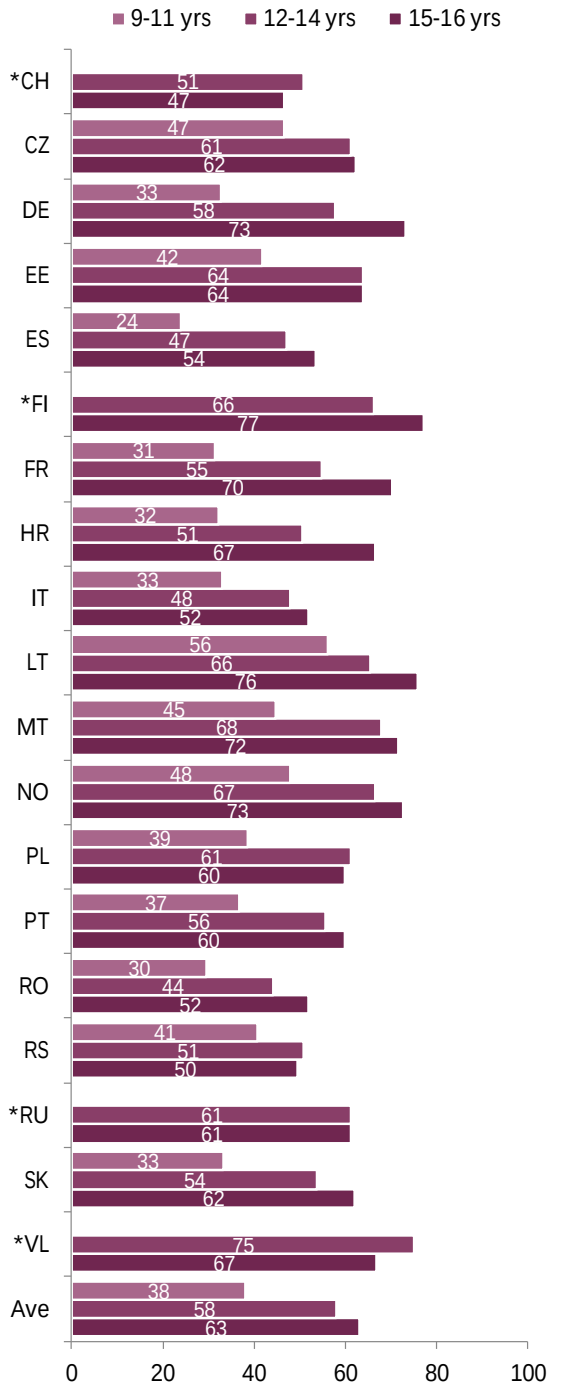
Base: All children 9–16 who use the internet.

- As Figure 95 shows, in the majority of the countries, there are none or only minor gender differences.
- In some of the countries (Serbia, Italy, Spain, Estonia), boys more often than girls acknowledge that they often or always talk about different things online than when speaking to people face-to-face. The differences are between 9 (Spain) and 12 (Estonia) percentage points. Only in Switzerland girls reported doing this more often, with 6 percentile points of difference.

In the majority all of the of the countries, more older than younger children report that they talk about different things online than offline at least often or always. The differences between the youngest and oldest age categories range between 9 (Serbia) to 39 (France) percentage points.

In eight of the countries, the majority of the children report talking about different things online than offline at least sometimes or more often.

Figure 96: I talk about different things online than I do when speaking to people face-to-face (at least sometimes or more often), by age



* CH/FI/RU/VL: Full age range not available. FI/RU/VL: Data not weighted.

QD2e How often does the following apply to you? I talk about different things online than I do when speaking to people face-to-face. Percentage of children who answered *sometimes*, *often* or *always*.

Base: All children 9–16 who use the internet.

Points to consider

- The majority of the children in most of the countries agreed that they at least sometimes or more often find it easier to be themselves online than when they are with people face-to-face. However, as stated at the beginning of this section, this can have both positive and negative consequences for children's well-being. Thus, we should better understand why children prefer online communication and for which children this might have negative outcomes. Qualitative research in particular could provide more insight into the situations and context in which children feel easier being themselves online.

- In about half of the countries, more boys report that they find it easier to be themselves online than when they are with people face-to-face. However, a question remains as to what is behind these systematic gender differences. Is it because boys more often visit different online environments, such as online games? Or are there other reasons? Future research could reveal why there are gender differences in the preference of online communication.

- We should also better understand the impact of the preference of online communication on children's well-being. We know that the preference of online communication might be unhealthy in its extreme form and could sometimes be sometimes related to excessive internet use.[68] In such situations, children might prefer online contact to offline contact, which would negatively impact their lives. However, the preference of online communication can have also positive outcomes, such as in identity exploration.

- The tools of online communication vary greatly, such as when children can use only the text form in messengers, but also voice and video calls via tools such as Skype. However, in this research, we did not specify the online communication channels children use. Future research could identify which kinds of online communication children prefer. Is it the text form, video calls or perhaps anonymous communication? Such results could bring a deeper understanding to the reasons behind the preference of online communication.

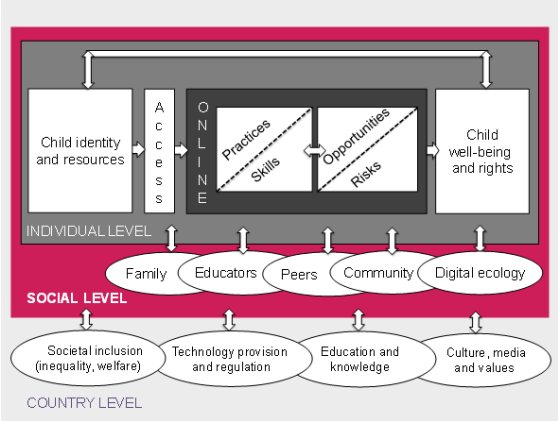
[68] Smahel, D., Brown, B.B., & Blinka, L. (2012). Associations between online friendship and internet addiction among adolescents and emerging adults. *Developmental Psychology, 48*(2), 381–88. https://doi.org/10.1037/a0027025

Social context

The previous sections ('Access', 'Practices and skills', 'Opportunities and risks') focused on individual-level factors influencing children's online presence. In this section, we consider another level of factors – that of children's social environment or context. This acknowledges that children are embedded within various social contexts, and that these contexts and other people in these contexts largely influence children too.

Growing up, the most influential people in children's lives are their nuclear family, their parents. Children's friends play a significant role too, more so after children enter school and even more so when entering adolescence. During school, teachers also become influential actors. Considering that with the spread of the internet we no longer meet others just in a 'physical world' but we also meet them online, we acknowledge the role of digital ecologies, i.e., online social contexts. These may be represented by an online community regularly visiting a dedicated online platform, players in a multiplayer online game, or more generally, by people anywhere on the internet who children can encounter.

Figure 97: Theoretical model, focusing on Social Level (in red)



The influence of social contexts on children's online experiences is diverse. This EU Kids Online survey focused on selected aspects of this possible influence, namely on online mediation (i.e., efforts to influence children's internet use, aiming at maximising opportunities and minimising risks and harm), on sharenting (i.e., parental practices to share personal information about their child online) and children's perceptions of people on the internet and the online environment as a safe space (see Figure 97).

Mediation

Children's internet use is codetermined by how other actors in their lives approach the technology, what rules regarding use they are expected to follow, and what advice or dis/encouragement they receive from the people around them. The most notable actors who strive to influence children's internet use in order to maximise the benefits and minimise the risks and harm are parents. Their efforts to affect children's internet use are labelled 'parental mediation', and two broad types of parental mediation can be distinguished.[69] Enabling mediation encompasses parental practices that aim at enabling children's positive use of the internet. Restrictive mediation then aims to limit children's use of the internet. This EU Kids Online 2020 report focuses on three subtypes of parental mediation, with the first two (active mediation and technical monitoring) both falling under enabling mediation, while selected restrictive strategies fall under restrictive mediation.

Active mediation: talking with children about their internet use, sharing online activities, and explaining what is good and bad on the internet. Active mediation is considered the most desirable type of mediation because it is connected to higher digital skills, it enhances children's understanding of the internet and makes them better equipped to interpret and deal with media content and potentially bothering situations online.[70] We asked the children the following questions related to parents' active mediation.

When you use the internet, how often does your parent/carer do any of these things?

Encourages me to explore and learn things on the internet.

[69] Livingstone, S., Ólafsson, K., Helsper, E.J., Lupiáñez-Villanueva, F., Veltri, G.A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of Communication, 67*(1), 82–105. https://doi.org/10.1111/jcom.12277

[70] Shin, W. & Lwin, M. O. (2017). How does 'talking about the internet with others' affect teenagers' experience of online risks? The role of active mediation by parents, peers, and school teachers. *New Media & Society, 19*(7), 1109–26. https://doi.org/10.1177/1461444815626612

Suggests ways to use the internet safely.

Talks to me about what I do on the internet.

Helps me when something bothers me on the internet.

Technical monitoring: using technological means to monitor children's online use (e.g., parental control software). Monitoring is a strategy that provides parents with knowledge of their children's whereabouts – what they do on the internet or with technologies. It can be done in many ways – parents can simply ask, or they can see what their children do online by checking their screen etc. This survey focused on the possibilities of technical monitoring, i.e., on using technological advances such as specialised software or services to gain information on what their children do online. The children answered these questions related to technical monitoring:

Does your parent/carer make use of any of the following…?

Parental controls or other means of blocking or filtering some types of content.

Parental controls or other means of keeping track of the internet content I look at or apps I use.

Technology to track where I am (such as GPS).

Restrictions: in general this covers setting rules regarding internet use, which limits either access and time when children can use the internet, or activities that children can do online. Restrictive mediation is generally most effective in lowering experienced risks online, but it also has a downside – children who are more restricted in their use tend to also have lower digital skills, making them less equipped to deal with problematic situations.[71] This survey specifically focused on restricting selected specific online activities. The children answered the following questions:

Does your parent/carer allow you to do the following things on the internet and if so, do you need their permission to do them?

Use a web or phone camera (e.g., for Skype or video chat).

Download music or films.

Use a social networking site (e.g., Facebook, Snapchat, Instagram, Twitter).

Parents are nevertheless not only actors who can be engaged in the mediation of children's internet use; there are other actors who play an important role in children's lives and who may be particularly engaged in active mediation: peers and teachers. This EU Kids Online survey also focused on how peers and teachers encourage safe internet use or help children with bothering experiences. We asked the children these questions about teachers' active mediation:

Have any teachers at your school done these things?

Suggested ways to use the internet safely.

Encouraged me to explore and learn things on the internet.

Helped me in the past when something has bothered me on the internet.

The following questions were asked about friends' active mediation:

Have any of your friends done these things?

Suggested ways to use the internet safely.

Encouraged me to explore and learn things on the internet.

Helped me in the past when something has bothered me on the internet.

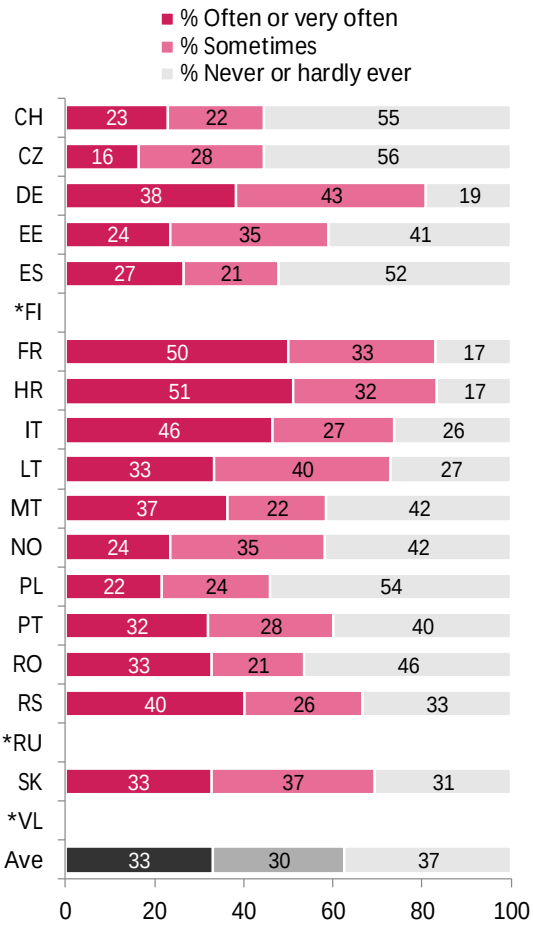
Active mediation

A basic part of active mediation of internet use is talking with the children about what they do when they use the internet. Figure 98 shows the distribution by country of how often parents talk to their children about their internet use.

- In 12 of the countries (Germany, Estonia, France, Croatia, Italy, Lithuania, Malta, Norway, Portugal, Romania, Serbia, Slovakia), more than half of the children say that their parents talk to them at least sometimes about what they do online. In three countries (Germany, France and Croatia), more than 80% of the children talk with their parents.
- On the other hand, in four countries (Switzerland, the Czech Republic, Spain and Poland), over half of the children say their parents never or hardly ever talk to them about what they do on the internet.

[71] Livingstone, S., Ólafsson, K., Helsper, E.J., Lupiáñez-Villanueva, F., Veltri, G.A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of Communication, 67*(1), 82–105. https://doi.org/10.1111/jcom.12277

Figure 98: How often parents talk to their children about their internet use, by country



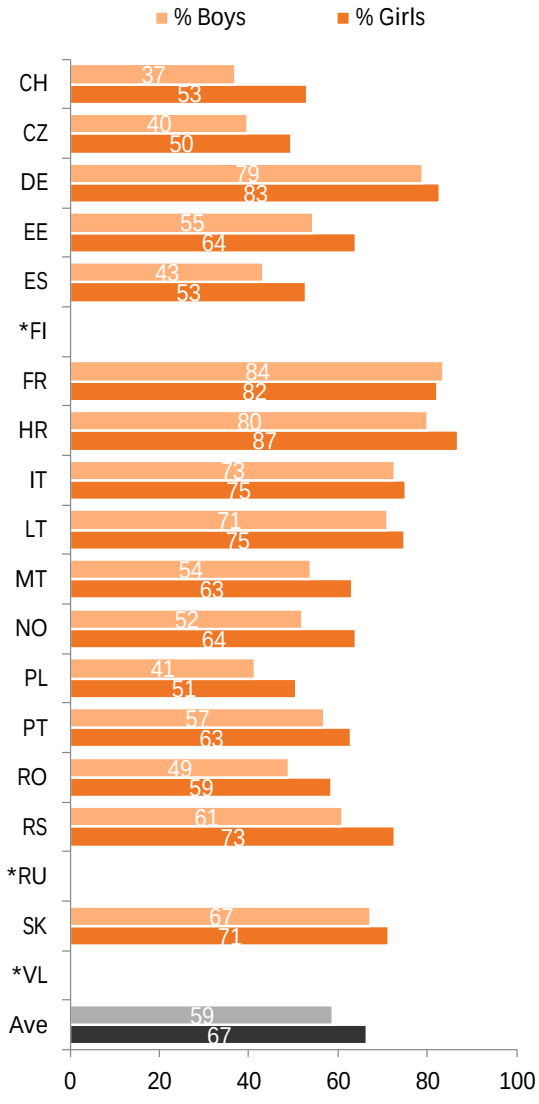
* FI/RU/VL: Full age range not available.

QI4 When you use the internet, how often does your parent or carer do any of these things? Talks to me about what I do on the internet.

Base: All children 9–16 who use the internet.

- Figure 99 shows gender differences among those children who report they talk with their parents at least sometimes.
- In five countries (Germany, France, Italy, Lithuania and Slovakia), boys and girls do not differ substantially in this regard (a difference equal to or below 5 percentage points). In all the other countries, however, more girls than boys report talking with their parents about their online activities *at least sometimes*. Generally, these gender differences were small – between 6 percentage points in Portugal and 16 percentage points in Switzerland.
- Age patterns are less consistent. In about half of the countries there is an understandable decrease in the number of children who talk with their parents about their online activities at least sometimes, with difference between oldest and youngest age category ranging between 9 (Malta) and 25 (Estonia) percentage points. The only exception is Switzerland, where more 15- to 16-year-olds children talk to their parents than the youngest, with difference of 6 percentage points.
- As the child grow older, it may be harder for the parent to discuss their online activities. In Portugal and Norway, however, 12- to 14-year-olds talk to their parents more than children in the other two age categories (the difference between 6 and 12 percentage points.

Figure 99: Children whose parents talk to them about what they do online at least sometimes, by gender

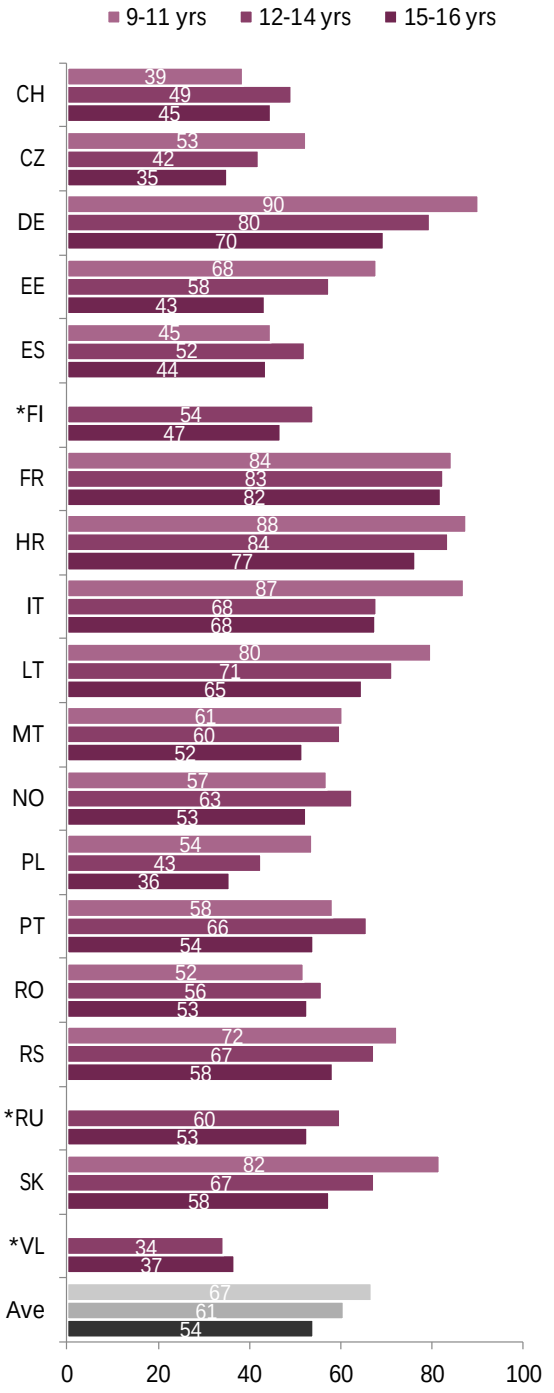


* FI/RU/VL: Full age range not available.

QI4 When you use the internet, how often does your parent or carer do any of these things? Talks to me about what I do on the internet. Percentage of children who answered *sometimes, often* or *very often*.

Base: All children 9–16 who use the internet.

Figure 100: Children whose parents talk to them about what they do online at least sometimes, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QI4 When you use the internet, how often does your parent or carer do any of these things? Talks to me about what I do on the internet. Percentage of children who answered *sometimes, often* or *very often*.

Base: All children 9–16 who use the internet.

Parents, peers and teachers

This survey asked children how often parents, peers (friends) and teachers do the following:

Suggest ways to use the internet safely.

Help me when something bothers me on the internet.

Encourage me to explore and learn things on the internet.

- When it comes to advice on how to use the internet safely (Table 13), more than half of the children receive such advice from parents at least sometimes: between 52% of Swiss children and up to 86% of Croatian children. Teachers are quite often sources of such advice too, reported by between 51% (Spain) and 78% (Croatia) of the children. On the other hand, fewer children identified friends as a source of suggestions for safe internet use. In 12 of the countries, less than half of the children agree with the statement (the range across all countries is between 32% in Switzerland and 65% in Slovakia).

- In most of the countries, parents are less likely to encourage their children to learn and explore new things on the internet (Ave = 58%) than suggesting ways to use the internet safely (Ave = 69%). Still, more than half of the children in 12 of the countries report being encouraged by parents (between 28% in Switzerland and 75% in France). In half of the countries (Switzerland, Spain, Lithuania, Malta, Poland, Portugal and Slovakia) more teachers than parents encourage children to learn new things online (a difference of between 6 and 16 percentage points in Slovakia and Switzerland, respectively). Only in France did children report that parents encourage them more than teachers, and in the other countries, there is no difference in this regard. In 7 of the countries, parents also encourage their children more than their friends. The difference ranges between 8 percentage points (Malta) and 29 percentage points (Estonia), with most of these differences being equal or over 15 percentage points. In other countries, the differences are negligible (equal or below 5 percentage points).

- Finally, parents are also the main source of help when something bothering happens online to the children (Ave = 64%). In all of the countries, more than half of the children say their parents help them at least sometimes (between 52% in the Czech Republic and Poland and 82% in France). Friends are reported as sources of help by fewer children – in 13 of the countries, less than half of the children get help from friends at least sometimes (a range of between 35% in Poland and 64% in Slovakia). Finally, in most of the countries, teachers are the least reported source of help. The percentage of children saying teachers help them when something bothers

them on the internet ranges between 19% in Spain and 57% in Croatia and Slovakia, but in most of the countries, this percentage is below 40%. It should be noted, however, that answers to this particular question are most likely affected by how many children were bothered by something on the internet in the countries (see 'Overall negative online experiences' and the sections about online risks and opportunities), thus the figures should be interpreted with this in mind.

Table 13: Active mediation by parents, peers, and teachers. Children who reported that parents, friends a**nd teachers at least sometimes ...**

	Suggest ways to use the internet safely			Encourage me to explore and learn things on the internet			Help me when something bothers me on the internet		
	Parents	Friends	Teachers	Parents	Friends	Teachers	Parents	Friends	Teachers
CH	52	32	58	28	37	44	57	40	20
CZ	56	34	58	46	31	43	52	41	25
DE	75	54	60	62	63	50	67	39	31
EE	65	35	67	61	32	58	63	43	36
ES	65	38	51	47	45	57	55	39	19
*FI	–	–	–	–	–	–	–	–	–
FR	79	40	58	75	53	61	82	41	34
HR	86	51	78	72	54	74	73	58	57
IT	82	47	62	54	51	53	67	33	27
LT	76	51	76	67	51	74	65	49	50
MT	70	47	74	63	55	72	70	54	47
*NO	64	-	60	60	-	64	70	-	25
PL	57	32	68	43	38	53	52	35	39
PT	71	48	64	51	49	61	63	50	31
RO	67	49	55	57	52	56	62	47	37
RS	73	41	58	67	48	66	70	44	29
*RU	–	–	–	–	–	–	–	–	–
SK	68	65	74	70	70	76	63	64	57
*VL	–	–	–	–	–	–	–	–	–
AVE	69	44	64	58	49	60	64	45	35

* FI/RU/VL: Full age range not available. NO: Full age range not available for questions about friends.

QI4 When you use the internet, how often does your parent/carer do any of these things? QJ2 Have any teachers at your school done these things? QK2 Have any of your friends done these things? Percentage of children who answered *sometimes, often* or *very often.*

Base: All children 9–16 who use the internet.

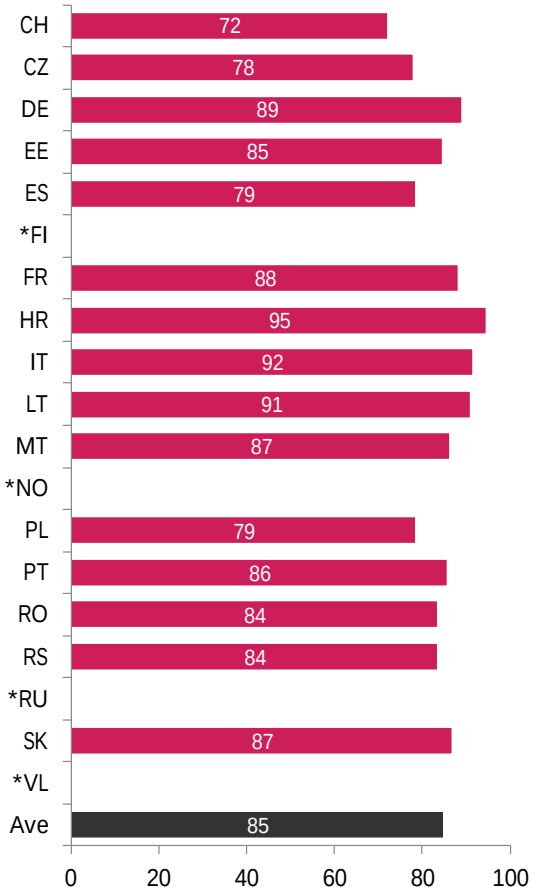
Ways to use the internet safely

Teaching children how to use the internet safely is an important part of digital education that children should receive. Table 13 shows that quite a lot of children are at least sometimes reminded of safe internet use by parents, teachers and/or their friends. Considering that when parents do not provide such advice it may still be perfectly sufficient to receive it from a teacher (or vice versa), we also examined how many children in general reported being given advice as to how to use the internet safely irrespective of the source of the advice. That is, we distinguished between children who receive such advice at least sometimes from any of the three actors (parents, friends or teachers) from those who never or hardly ever receive such advice (see Figure 101).

- The proportion of children who receive safety advice *at least sometimes* varies from 72% in Switzerland to 95% in Croatia, with over three in four children in most of the countries reporting this to be the case.

- Looking at the issue from the other perspective, in most of the countries, the proportion of children not receiving safety advice from parents, teachers or friends is between 11% (Germany) and 28% (Switzerland) of the children.

Figure 101: Parents, friends or teachers suggested ways of using the internet safely, by country



* FI/RU/VL: Full age range not available. NO: Full age range not available for questions about friends.

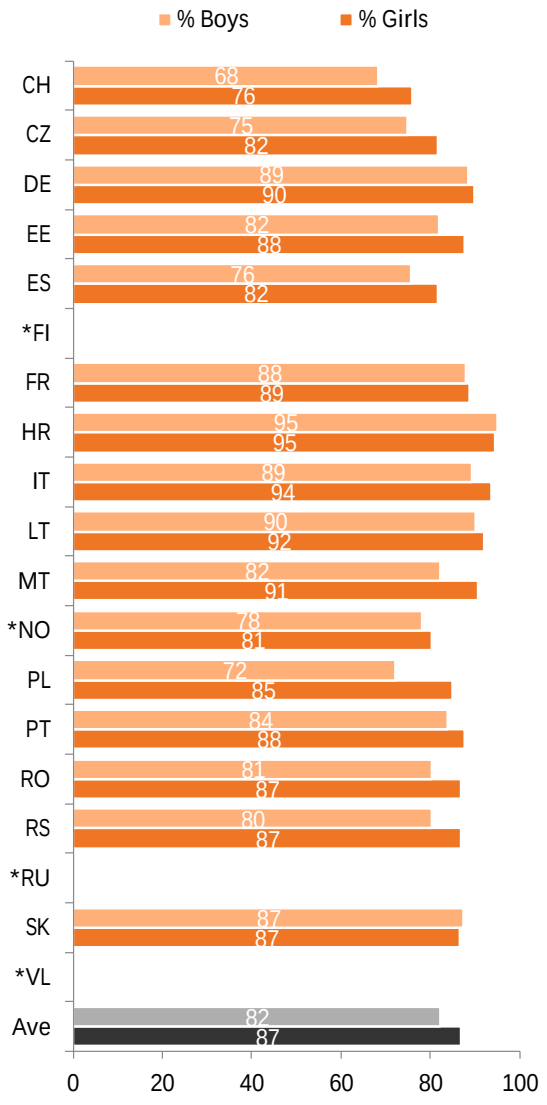
Derived from QI4 When you use the internet, how often does your parent/carer do any of these things? QJ2 Have any teachers at your school done these things? QK2 Have any of your friends done these things? Suggests ways to use the internet safely. Percentage of children who answered *sometimes, often* or *very often* to at least one of the three questions.

Base: All children 9–16 who use the internet.

In most of the countries, over 80% of the children receive advice on safe internet use from parents, friends or teachers.

- As Figure 102 shows, gender differences are small but noticeable in several countries. In Switzerland, the Czech Republic, Estonia, Spain, Malta, Poland, Romania and Serbia, more girls report being advised on safe internet use than boys – the differences range between 6 percentage points (Estonia, Romania) and 13 percentage points (Poland). In the other countries, there are no substantial differences.

Figure 102: Parents, friends or teachers suggested ways of using the internet safely at least sometimes, by gender

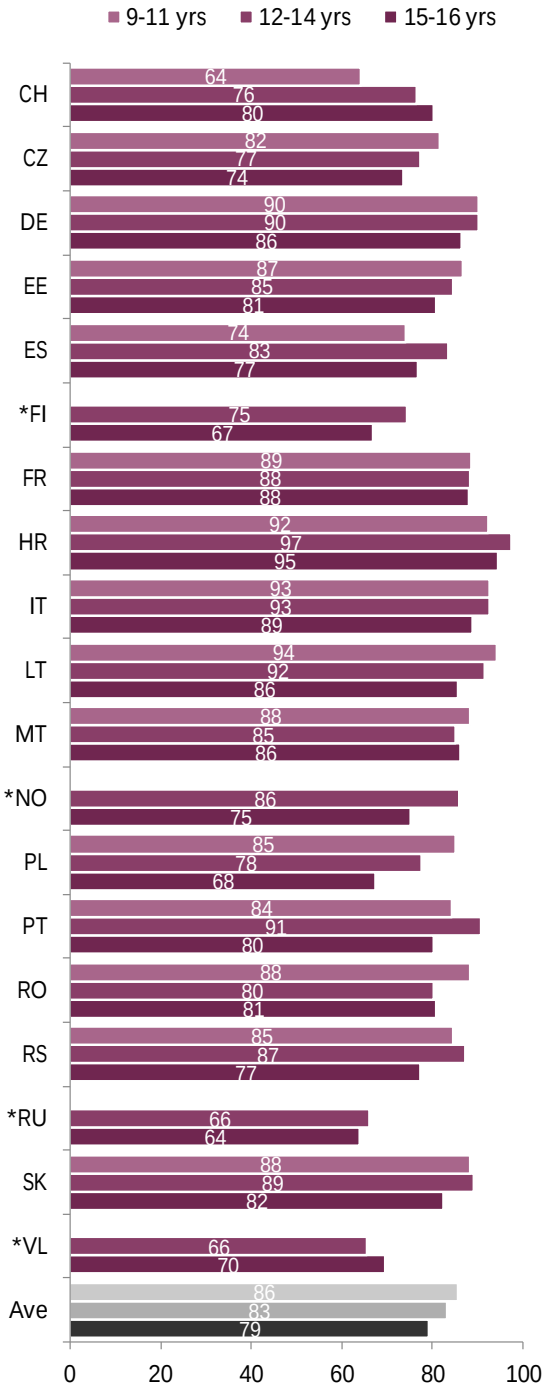


* FI/RU/VL: Full age range not available. NO: Full age range not available for questions about friends.

Derived from QI4 When you use the internet, how often does your parent/carer do any of these things? QJ2 Have any teachers at your school done these things? QK2 Have any of your friends done these things? Suggests ways to use the internet safely. Percentage of children who answered *sometimes, often* or *very often* to at least one of the three questions.

Base: All children 9–16 who use the internet.

Figure 103: Parents, friends or teachers suggested ways of using the internet safely at least sometimes, by age



* FI/RU/VL: Full age range not available. NO: Full age range not available for questions about friends.

Derived from QI4 When you use the internet, how often does your parent/carer do any of these things? QJ2 Have any teachers at your school done these things? QK2 Have any of your friends done these things? Suggests ways to use the internet safely. Percentage of children who answered *sometimes, often* or *very often* to at least one of the three questions.

Base: All children 9–16 who use the internet.

- Generally, age differences are rather small (Figure 103). In Poland there is a clear age pattern, with the youngest age category (9–11) reporting being advised about online safety more (85%) than 12- to 14-year-olds (78%) and 15- to 16-year-olds (68%). In Spain and Portugal, the 12- to 14-year-olds report being advised more than both other age categories. There are a few other small differences in the other countries (particularly in Switzerland, Romania or Serbia), but generally age makes no substantial difference with regard to this issue.

Technical means to restrict or **monitor children's internet use**

Given the spread of software that is now available to monitor or filter children's online activities, the survey focused on three technological options parents can use: whether (to a child's knowledge) parents *use parental control software that would block or filter the content on the internet*; whether parents *keep track of applications or online activities children engage in;* and whether they *use any technology to track the location of the child, such as GPS* (see Table 14).

- In most of the countries, a minority of children report parental use of any of these technological controls (Ave = 22% and less). In only two of the countries, the proportion of children who report their parents use any technological control exceeds a third. In France, 39% of children say their parents use software to block or filter some type of content, and 37% say parents keep track of their applications or activities. In Malta, both types of parental controls are applied to 33% of the children. Combined with 26% of children reporting their parents track their locations, Maltese parents seem to be those most using technological options to monitor their children's online presence.

- On the other hand, in Lithuania, the proportion of children reporting their parents use the three technological means is rather low.

- There are no clear patterns in children's knowledge of different technological means. In France, Croatia and Italy, tracking children's locations is substantially lower compared to using the other two parental controls, whereas in many of the other countries, the three options asked about are used similarly.

- In most of the countries, there are no substantial differences related to gender. In Croatia, girls report blocking or filtering software slightly more often than boys, and the opposite applies for Polish and Slovakian children, where both these technological means are reported more by boys than girls. In Malta, Poland, Portugal and Romania, boys report having their location tracked more often than girls. All these differences are, however, only small (between 6

and 10 percentage points). Considering that there are almost no differences, for parsimony, we don't display the figure.

Table 14: Usage of technical means to **monitor or restrict children's internet** use

	Parental controls or means of blocking or filtering some types of content	Parental controls or means of keeping track of content or apps	Technology to track where I am (such as GPS)
CH	30	20	12
CZ	14	17	9
DE	20	12	12
EE	12	13	16
ES	16	13	15
*FI	–	–	–
FR	39	37	17
HR	22	24	5
IT	26	22	9
LT	12	11	8
MT	33	33	26
NO	19	20	19
PL	19	14	19
PT	24	23	16
RO	20	24	21
RS	23	26	24
*RU	–	–	–
SK	20	21	10
*VL	–	–	–
Ave	22	21	15

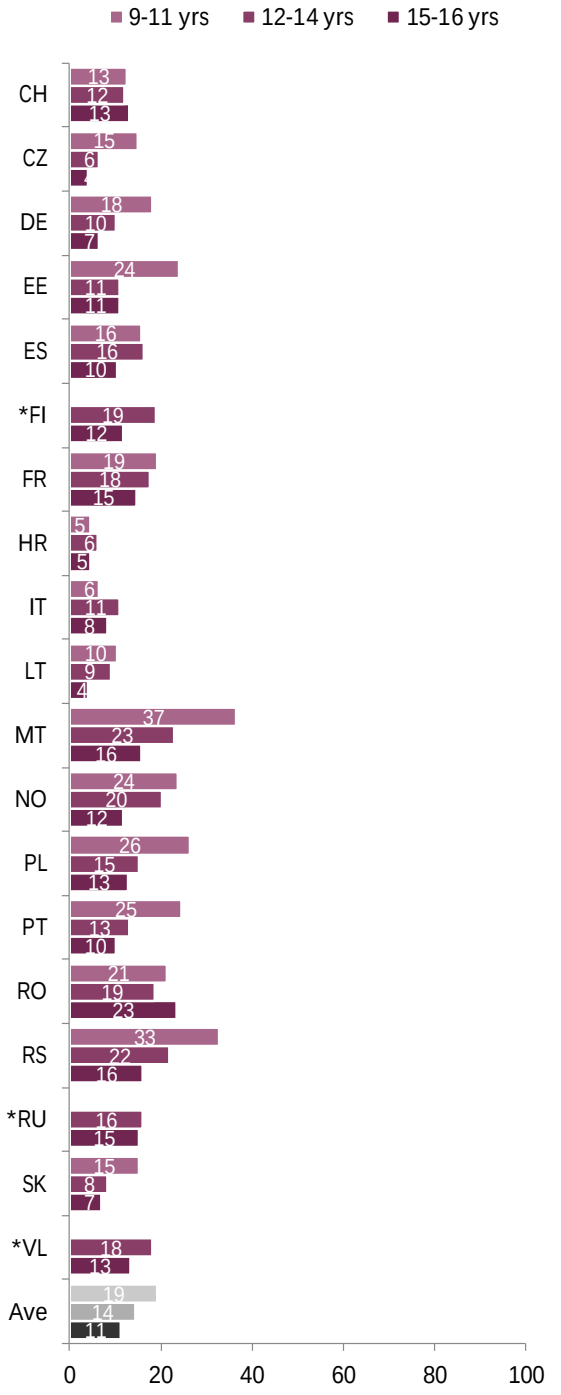
* FI/RU/VL: Full age range not available.

QI7 Does your parent/carer make use of any of the following...? Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

- Age patterns are clearer – in the majority of the countries, older children report fewer parental controls than younger children. Only in Romania are there no substantial age differences. Because the age patterns are similar for all three options, we only present Figure 104 as an example – children reporting on whether their parents use parental controls or other means of keeping track of what they do online.
- However, it is important to keep in mind that these answers reflect what children know. There may be a number of children whose parents use some of these technical advances without their children's knowledge.

Figure 104: Children who say their parents use technology to track where they are (such as GPS), by age



* FI/RU/VL: Full age range not available. Data not weighted.

QI7 Does your parent or carer make use of any of the following...? Technology to track where I am (such as GPS). Percentage of children who answered *yes.*

Base: All children 9–16 who use the internet.

Restrictions

In the survey, we asked the children whether their parents allow them to *use a web or phone camera (e.g., for Skype or video chat), download music or films, and use a social networking site (e.g., Facebook, Snapchat, Instagram, Twitter).*

- Overall, only a small proportion of children are not allowed to use web or phone cameras, download content or use a social networking sites (Table 15).
- In 10 of the countries, 15% or fewer children said they are not allowed to use a web or phone camera (ranging between 6% and 45%). Quite similarly, in 9 of the countries, 15% or fewer are not allowed to use social networking sites (ranging between 9% and 34%). Downloading music or films is restricted to a lesser extent – in half of the countries fewer than 10% of the children are not allowed this (ranging between 4% and 37%).
- In France and Germany we can find the highest proportion of children who are not allowed to do any of the activities: 45% of French children are not allowed to use a web or phone camera, 37% are not allowed to download music or films, and 34% are not allowed to use social networking sites. In Germany, the respective percentages are 25%, 24% and 31%.

Because social networking sites are a particularly interesting activity, which is much discussed, we also examined the restrictions of social networking sites with regard to gender (Figure 105) and age differences (Figure 106).

- Being a boy or girl does not seem to motivate restrictions on social networking sites to any great extent. There are no substantial differences in 14 of the countries. The only two exceptions are Norway and Slovakia, where slightly more boys report not being allowed to use social networking sites than girls (the differences are 8 and 7 percentage points, respectively).

Table 15: Restrictions: Is a child NOT allowed to **...**

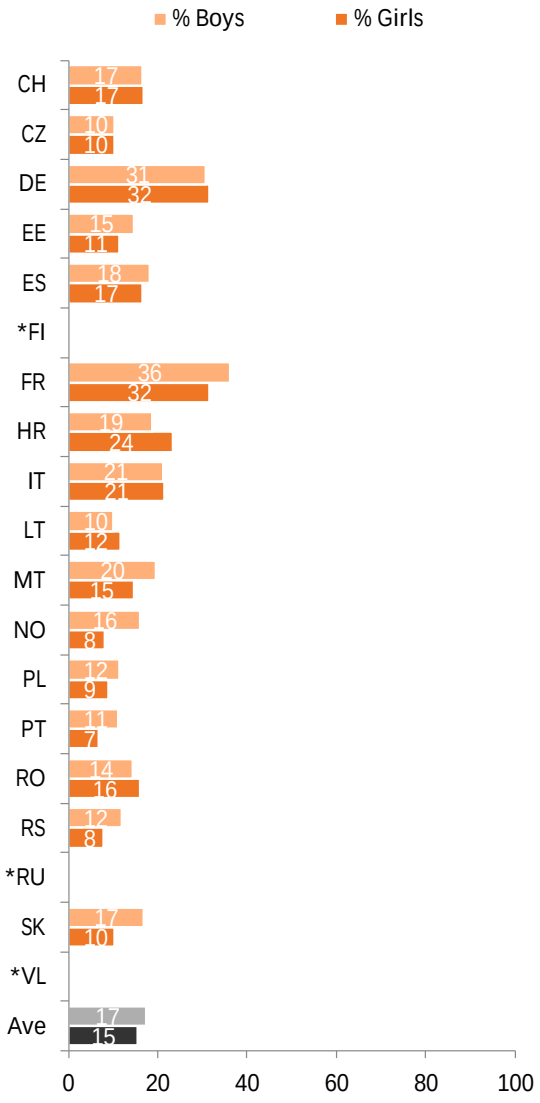
	Use a web or phone camera	Download music or films	Use a social networking site
CH	13	11	17
CZ	10	4	10
DE	25	24	31
EE	12	10	13
ES	15	7	17
*FI	–	–	–
FR	45	37	34
HR	22	19	21
IT	24	15	21
LT	8	9	11
MT	10	9	17
NO	6	5	12
PL	13	9	10
PT	11	6	9
RO	20	11	15
RS	10	6	10
*RU	–	–	–
SK	18	14	14
*VL	–	–	–
Ave	16	12	16

* FI/RU/VL: Full age range not available.

QI6 Does your parent/carer allow you to do the following things on the internet and if so, do you need their permission to do them? Percentage of children who answered *I am not allowed to do this.*

Base: All children 9–16 who use the internet.

Figure 105: Social networking sites not allowed, by gender



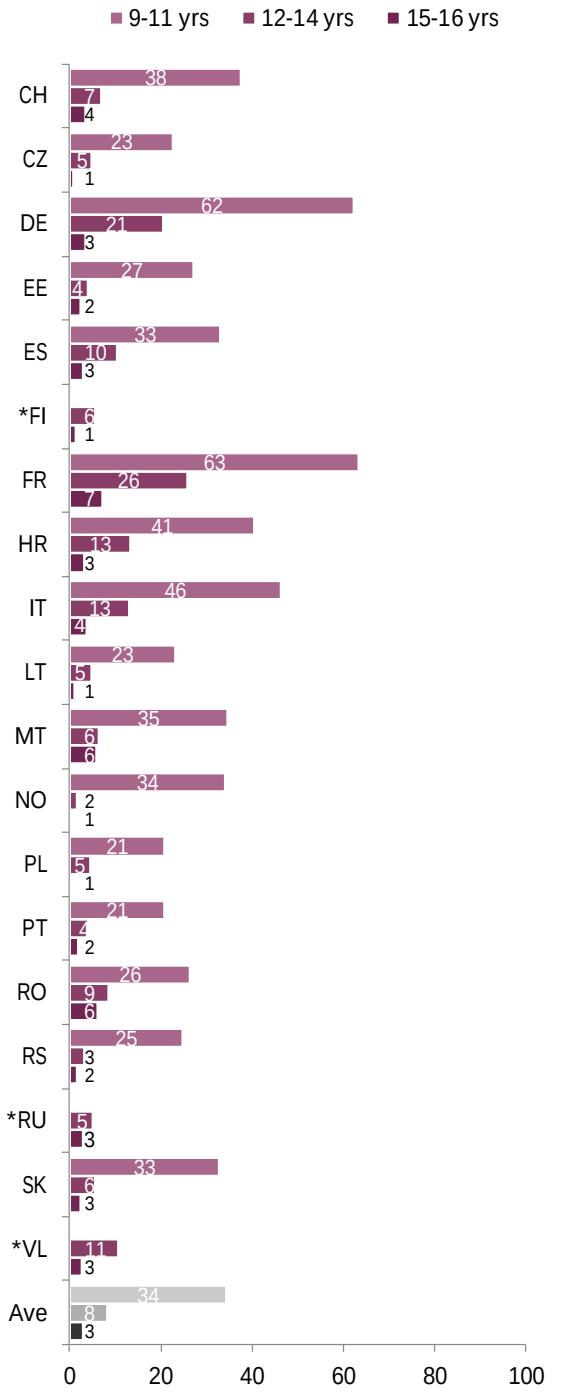
* FI/RU/VL: Full age range not available.

QI6 Does your parent/carer allow you to do the following things on the internet and if so, do you need their permission to do them? Percentage of children who answered *I am not allowed to do this.*

Base: All children 9–16 who use the internet.

- Age patterns, however, are very clear and correspond to the age limits that many social networking sites have (Figure 106). The youngest age category (9- to 11-year-olds) is not allowed to use social networking sites the most (Ave = 34%). Between 21% (Portugal and Poland) and 63% (France) of the youngest children are not allowed to use social networking sites. On the other hand, in the oldest age group (15- to 16-year-olds), between 1% (Poland, Norway, Lithuania, Finland, Czech Republic) and 7% (France) of the children reported the same.

Figure 106: Social networking sites not allowed, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QI6 Does your parent/carer allow you to do the following things on the internet and if so, do you need their permission to do them? Percentage of children who answered *I am not allowed to do this.*

Base: All children 9–16 who use the internet.

In comparison to older children, more 9- to 11-year-olds are not allowed to use social networking sites.

Reverse mediation

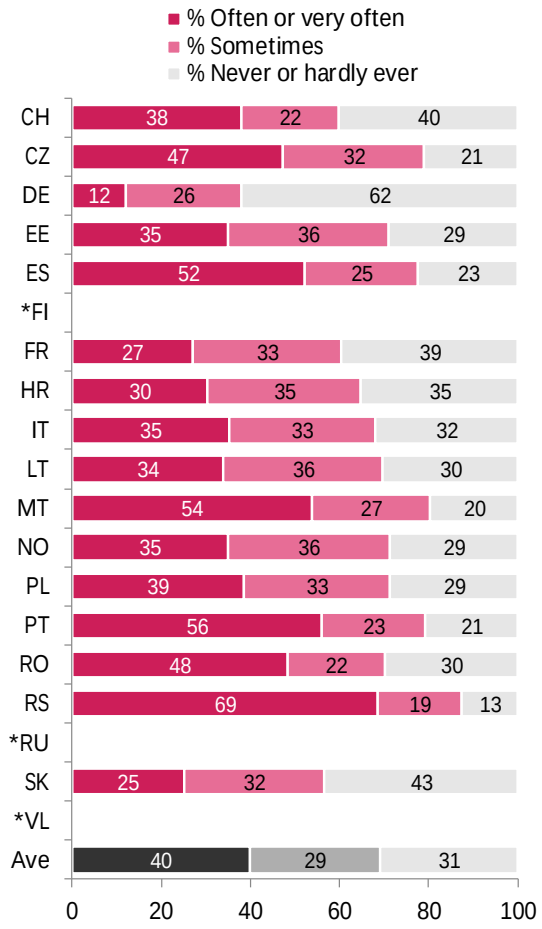
Children nowadays are growing up with information and communication technologies present from a very early age. They quickly learn to use them and spend a lot of time online. Their parents, on the other hand, grew up in a different media landscape, and often feel less skilled in their internet use than their children. Consequently, it may not always be just a parent who teaches a child about internet use, but also the other way around – a child can teach the parent, and explain and show them how digital technologies work. This can be labelled 'reverse mediation'. To examine this, the survey asked the children the following question:

Have you EVER done any of these things?

Helped my parent/carer to do something they found difficult on the internet.

- As Figure 107 shows, in many of the countries, the proportion of children who help their parents often or very often, sometimes and never or hardly ever is relatively even (Ave = 40%, 29% and 31%, respectively).
- While in Germany 62% of children never or hardly ever help their parents, in Serbia, 69% help their parents often or very often.
- In most of the countries there are no substantial gender differences (Figure 108). In Switzerland, Italy, Norway, Portugal and Romania, more girls help their parents often or very often than boys (a difference of between 6 percentage points in Italy and 14 percentage points in Portugal).
- As shown in Figure 108, in most of the countries, older children help their parents more often than younger ones. The difference between these two age group is between 9 (Slovakia) and 34 (Switzerland) percentage points. Only in France and Malta are no substantial age differences.

Figure 107: Helping parents when they found something difficult online, by country

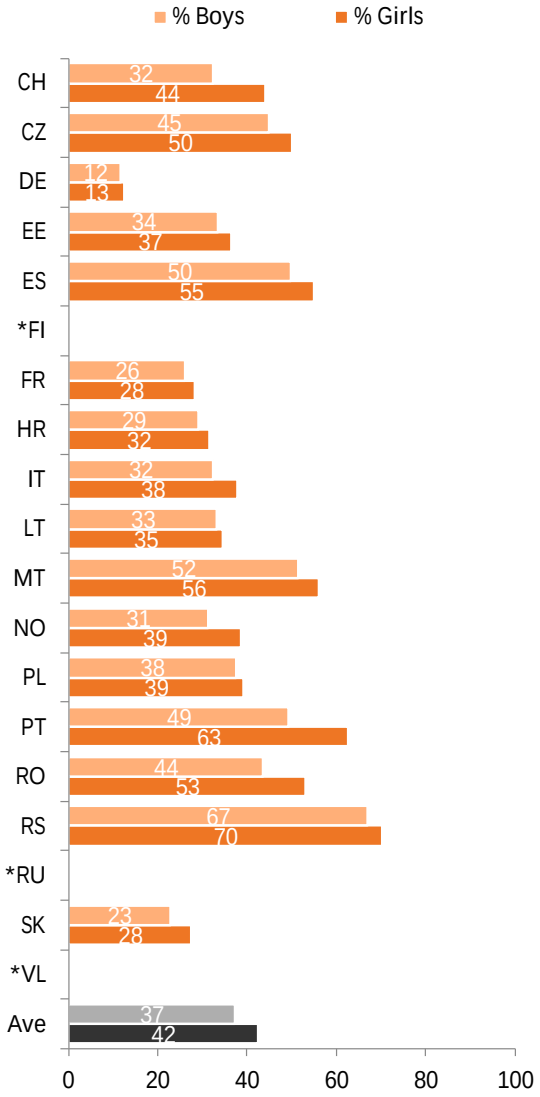


* FI/RU/VL: Full age range not available.

c_QI5 Have you EVER done any of these things? Helped my parent/carer to do something they found difficult on the internet.

Base: All children 9–16 who use the internet.

Figure 108: Helping parents when they found something difficult online often or very often, by gender

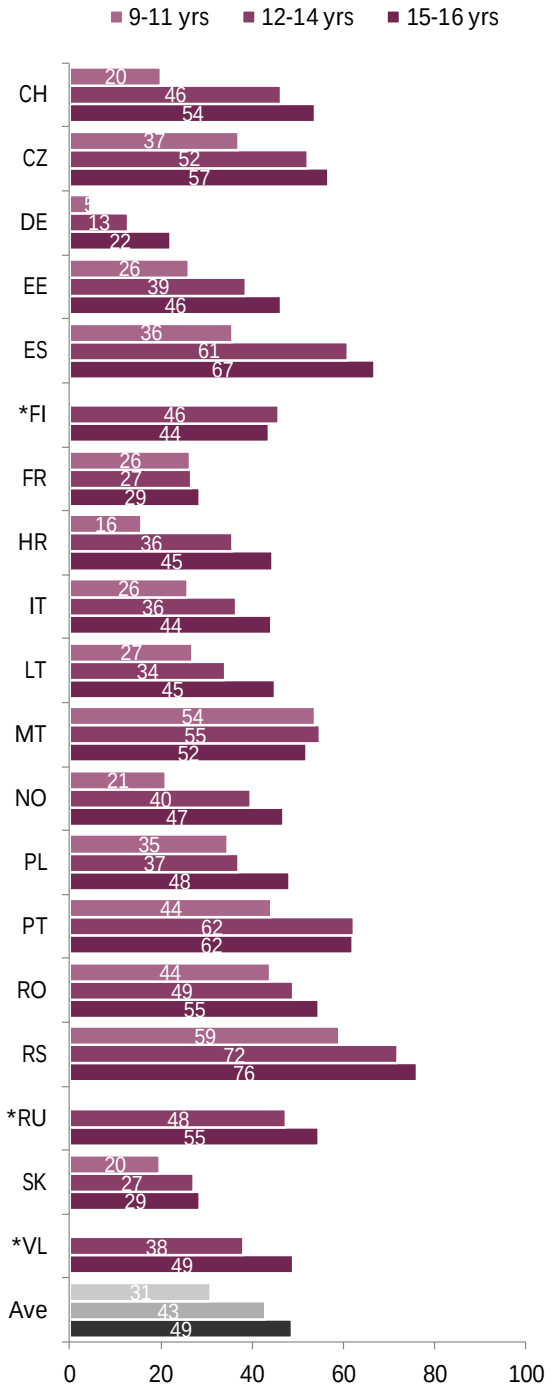


* FI/RU/VL: Full age range not available.

c_QI5 Have you EVER done any of these things? Helped my parent/carer to do something they found difficult on the internet. Percentage of children who answered *often* or *very often.*

Base: All children 9–16 who use the internet.

Figure 109: Helping parents when they found something difficult online often or very often, by age



* FI/RU/VL: Full age range not available. Data not weighted.

c_QI5 Have you EVER done any of these things? Helped my parent/carer to do something they found difficult on the internet. Percentage of children who answered *often* or *very often.*

Base: All children 9–16 who use the internet.

Ignoring parental advice about internet use

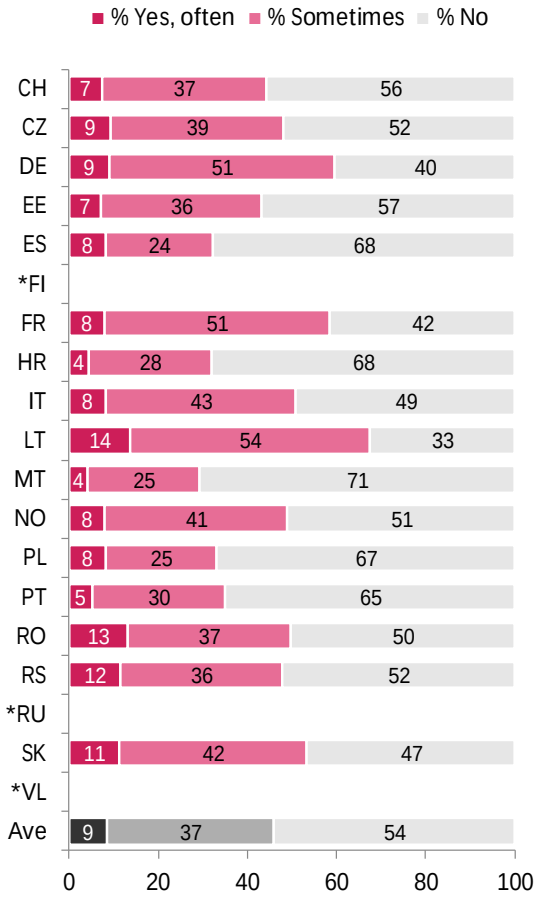
Parental mediation, especially active mediation, is an important tool to guide children's internet use. Despite the fact that the mediation is usually motivated by an effort to help children gain the most benefits from the internet while avoiding problems, children themselves may sometimes evaluate parental advice as poor, useless or even senseless. The survey thus asked the children the following question:

Do you ever ignore what your parent/carer tells you about how and when you can use the internet?

- Only a small proportion of children say they often ignore their parents' advice on internet use (between 4% in Croatia and Malta and 14% in Lithuania) (Figure 110).
- The majority of the children in most of the countries do not ignore what their parents say about when and how to use the internet. In most of the countries this applies to more than half of the children, ranging between 33% (Lithuania) and 71% (Malta).
- In Germany, France and Lithuania, however, the largest proportion of children (between 51 and 54%) say that they sometimes do ignore their parents.
- There are no substantial gender differences in ignoring parents in about half of the countries (Figure 111). In Germany, Estonia, France, Italy, Lithuania, Malta and Poland, more boys than girls report ignoring their parents, although the differences are small (between 8 and 12 percentage points).
- In most of the countries, the age pattern is apparent – older children ignore their parents more than younger children. The difference between the oldest and youngest category ranges between 9 (Norway) and 32 (Serbia) percentage points.
- In Estonia, the differences are smaller (equal or below 5 percentage points). In Malta, the highest proportion of children who ignore their parents is among the 12- to 14-year-olds.
- Comparing the findings with EU Kids Online 2010, in Estonia, Italy and Romania, there are no differences – approximately the same percentage of children said they ignore their parents in the 2010 survey as they did in this survey. In the Czech Republic and Estonia, there has been a small decrease in the percentage of children ignoring parental advice (of 6 and 10 percentage points, respectively). In the remaining countries, more children report ignoring their parents in this survey than in 2010. In Poland and Portugal, the difference is small (7 and 6 percentage points, respectively), in France, the increase is 11 percentage points, and in Norway, Lithuania and Germany, the increase is more than 20 percentage points (Norway: 23 percentage points, Lithuania: percentage points, and Germany: 33 percentage points).

In most of the countries the majority of the children do not ignore what their parents say about when and how to use the internet.

Figure 110: Whether child ignores what parents say about when and how to use the internet, by country

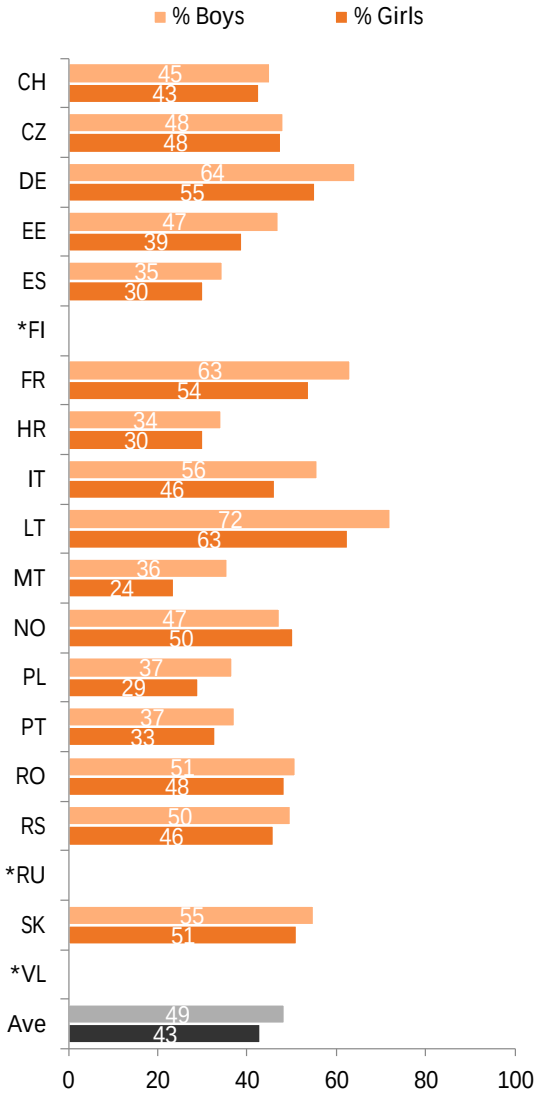


* FI/RU/VL: Full age range not available.

QI13 Do you ever ignore what your parent/carer tells you about how and when you can use the internet?

Base: All children 9–16 who use the internet.

Figure 111: Whether child ignores what parents say about when and how to use the internet at least sometimes, by gender

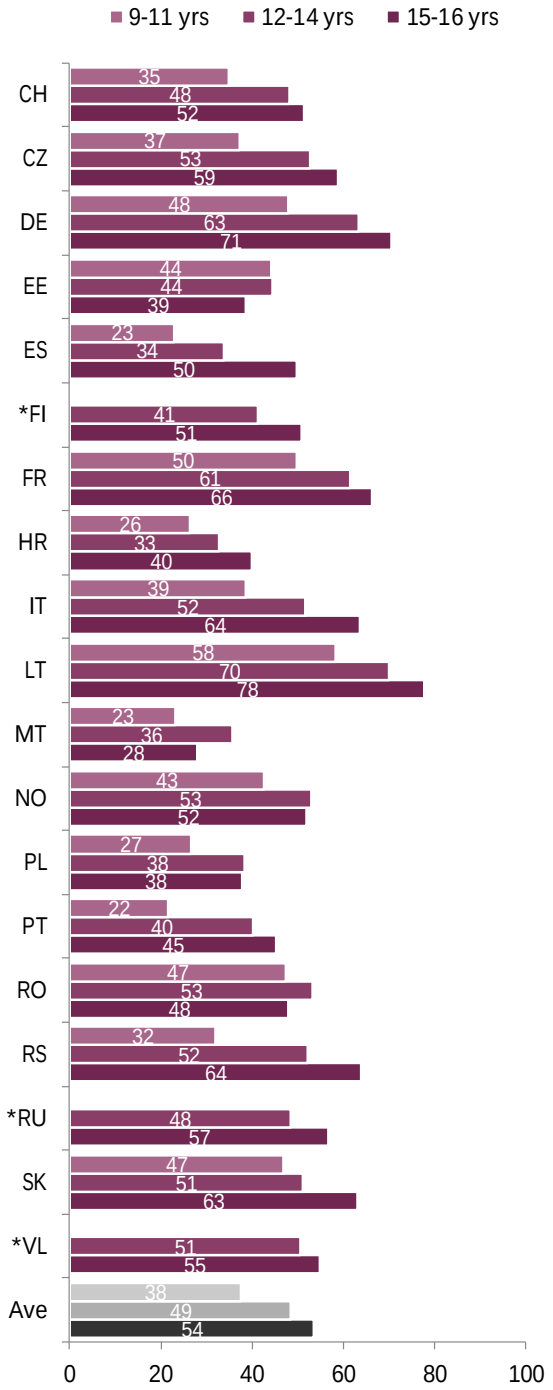


* FI/RU/VL: Full age range not available.

QI13 Do you ever ignore what your parent/carer tells you about how and when you can use the internet? Percentage of children who answered *yes, sometimes* or *yes, often.*

Base: All children 9–16 who use the internet.

Figure 112: Whether child ignores what parents say about when and how to use the internet at least sometimes, by age



* FI/RU/VL: Full age range not available. Data not weighted.

QI13 Do you ever ignore what your parent/carer tells you about how and when you can use the internet? Percentage of children who answered *yes, sometimes* or *yes, often.*

Base: All children 9–16 who use the internet

Points to consider

- In most of the countries, the majority of the children acknowledge that their parents engage in active mediation (talk to them, encourage them, help them and suggest ways to use the internet safely). When compared to friends and teachers who may also serve as a source of mediation of internet use, parents are generally more active. Active mediation is a strategy that is associated with higher digital skills and higher opportunities. It also supports children's own decision-making and evaluation of what is good and what is bad on the internet.[72] Thus, we strongly support parental efforts in this way.
- However, among active mediation strategies, parents focus on encouraging the safe use of the internet rather than encouraging them to explore the opportunities that the internet offers.
- Despite the overall high active mediation, there is also a substantial proportion of children who report their parents hardly ever or never talking to them about what they do on the internet. Even though there is an understandable age effect – older children reporting talking with their parents less than younger children – in several of the countries, the proportion of children hardly ever or never talking with their parents is around half, even in the youngest age category (9- to 11-year-olds). We believe that parents should be encouraged to talk to their children more, as talking with them about what they do is a basic mechanism of gaining knowledge about their child.
- Restrictions are reported to a much lesser extent than active mediation – only a minority of the children report their parents not allowing them to use a phone or web cam, download music or films or visit social networking sites. Yet this should not be interpreted as a general lack of restrictions or rules in the family. Restrictive mediation is often very popular, especially for parents of younger children, and this is also apparent in social network restriction by age in this survey. However, restrictions are also connected to lower online risks, but also lower digital skills.[73] Thus, we advise parents not to use restrictions alone, but always accompany this strategy with active mediation – explaining to children why some rules or restrictions are being put into place, and lessening the restrictions as the child grows older and gains more experience.
- A considerable number of children quite frequently (i.e., often or very often) help their parents when parents find something difficult online. This reverse mediation points to the continuing generation gap, where parents may lag behind their children in digital skills. This can also be seen positively as it points to the fact that parents are not afraid to let their children help them.

[72] Shin, W. & Lwin, M. O. (2017). How does 'talking about the internet with others' affect teenagers' experience of online risks? The role of active mediation by parents, peers, and school teachers. *New Media & Society, 19*(7), 1109–26. https://doi.org/10.1177/1461444815626612

[73] Livingstone, S., Ólafsson, K., Helsper, E.J., Lupiáñez-Villanueva, F., Veltri, G.A., & Folkvord, F. (2017). Maximizing opportunities and minimizing risks for children online: The role of digital skills in emerging strategies of parental mediation. *Journal of Communication, 67*(1), 82–105. https://doi.org/10.1111/jcom.12277

Sharenting

Sharenting – a combination of the words *sharing* and *parenting* – is used to describe parents sharing personal information about their child online. This could be words, pictures and/or videos, and the sharing can be consensual and informed (parents asking their children if it is okay to post something or informing them about the posting) or it can be without the child knowing what has been shared. For babies and toddlers, the latter will always be the case, but older children have the capacity to understand and make their own judgement.

Sharing content related to children may be seen as a 'natural' part of parental behaviour, especially if parents are proud of their children and their accomplishments, or more generally in their family life and common experiences (such as holidays), and it is understandable that they want to share this with other people. Considering the proliferation of the use of social networking sites for publishing content which is important and which we want to share with others, it is not surprising that many parents use them for sharenting purposes.

However, there can be a tension between the behaviour of parents and the children's perspective. On the one hand, parents and carers are considered the legal guardians of children, and are also generally the ones making decisions on their personal information and its distribution. However, sharing personal information about children is not unproblematic. Several concerns have been raised, including concerns over children's right to privacy, which can be breached when information once shared online remains in the public domain 'forever', becoming a form of 'digital tattoos'. Thus, on the other hand, we need to remember that children have, as do all others, the right to their own personal information and stories. For the past few years we have seen how there can be a strong conflict between the best interests of the child and the protection of their privacy and the wishes and actions of their parents or legal guardians. In some more extreme cases, courts have had to intervene.

Sharenting is also problematic because of other issues besides children's rights. There is a concern that seemingly innocent images in one context (such as a child playing on a beach) may be used and abused in other contexts. Moreover, some online services might acquire copyright over the posted images as part of their terms of service. This means that the information can be used for other purposes, such as commercial ones.

Thus, as with most of the online services and activities research by the EU Kids Online network, sharenting also includes both potential positive and negative dimensions.

In this EU Kids Online 2020 report we aim to grasp the prevalence of this phenomenon, and importantly, how children perceive sharenting by their parents. Is it a problem? Although we asked about the past year, we also need to consider that sharenting is something that could have happened when the children were younger (such as when they were toddlers). This could also be captured by some items, specifically about removing things online and receiving hurtful comments due to something published online by a parent.

First, we tried to map out the nature of the potential experience of the child, asking if they had ever experienced any of the following situations in the past year. The children were asked in the following way:

My parent/carer published information (such as text, pictures or movies) about me on the internet without asking first if I was okay with it.

I asked my parent/carer to remove things they had published on the internet.

I was upset because of information my parents published online.

I received negative or hurtful comments from someone because of something my parent/carer published online.

These questions were asked only of older children, so we present only findings from children aged 12–16.

In Table 14, we present the overall experiences with sharenting and its impact. The percentages correspond to the number of children who say that they experienced this at least a few times or more often during the past year.

- Between 8% (Lithuania and Slovakia) and 36% (Norway and Flanders) of the children report that their parents or carers published information online without asking them first if it was okay for them to do so (Ave = 20%).
- The number of children who say that they ask parents or carers to remove things they have published online varies between 3% (Lithuania) and 29% (Romania) (Ave = 14%).
- Some children also report being upset because of information their parents publish online, ranging from between 3% (Lithuania and Slovakia) and 21% (Romania) of the children (Ave = 9%).
- When it comes to children reporting receiving negative and/or hurtful comments because of something their parents published online, this was the least common experience (Ave = 7%), ranging between 1% (Lithuania) and 22% (Romania).

Table 16: Sharenting, by country

	My parent published information online without asking first if I was okay with it	I asked my parent or carer to remove things they had published on the internet	I was upset because of information my parents published online	I received negative or hurtful comments because of something my parent published online
CH	15	10	5	3
CZ	24	12	7	6
DE	9	6	7	4
EE	17	8	4	2
ES	24	16	11	4
*FI	19	13	12	6
FR	13	9	9	7
HR	11	10	9	7
IT	16	12	6	5
LT	8	3	3	1
MT	28	24	15	13
NO	36	19	9	6
PL	11	10	13	9
PT	29	14	13	6
RO	28	29	21	22
RS	21	21	6	6
*RU	23	18	13	7
SK	8	4	3	3
*VL	36	21	12	10
Ave	20	14	9	7

* FI/RU/VL: Data not weighted

QF80a In the PAST YEAR, how often has this happened to you? Percentage of children who answered *a few times, at least every month, at least every week,* or *daily or almost daily.*

Base: All children 12–16 who use the internet.

Parents published information without asking

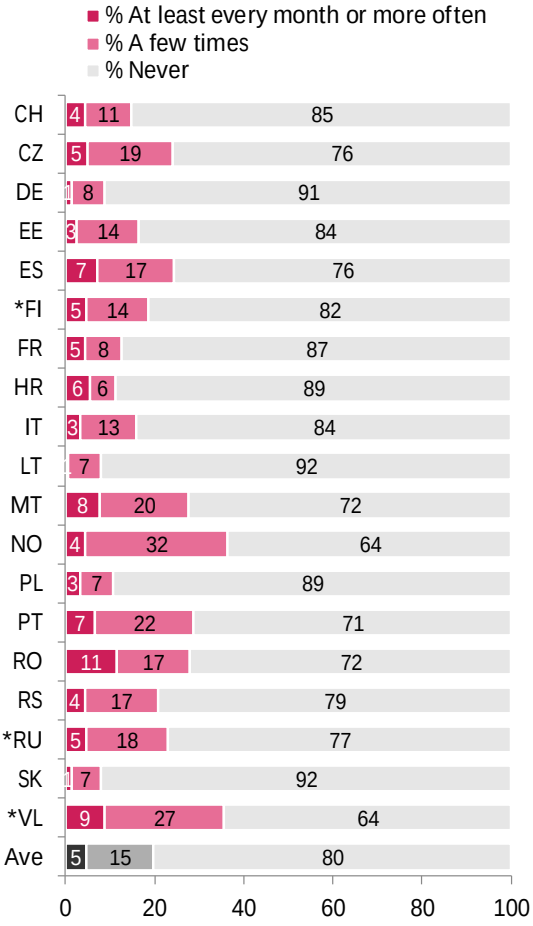
In order to better understand sharenting as a phenomenon and practice, we also looked into some of the background data. In particular, we were interested not only if sharenting had happened, but also how often. We might hypothesise that there is a difference between having something personal about you published once, and having this experienced as more of a regular practice.

We therefore also asked the children how often they had experienced their parent/carer publishing information (such as text, pictures or movies) about them on the internet without asking first if they were okay with it.

Here, children could answer on a scale from never to daily or almost daily. In presenting the findings (see Figure 113), we merged all the children who answered *a few times* or more often into one group.

- In general, only a minority of the children experienced this form of sharenting. In the majority of the countries, less than a third of the children experienced having their parents publish something online about them without asking them first.
- For most of these children, this happened only a few times a year. This was reported by between 6% (Croatia) and 32% (Norway) of the children.
- Between 1% (Germany, Lithuania and Slovakia) and 11% (Romania) of the children reported that they experienced this problem at least every month or more often per year.

Figure 113: Parents published information without asking in the past year, by country



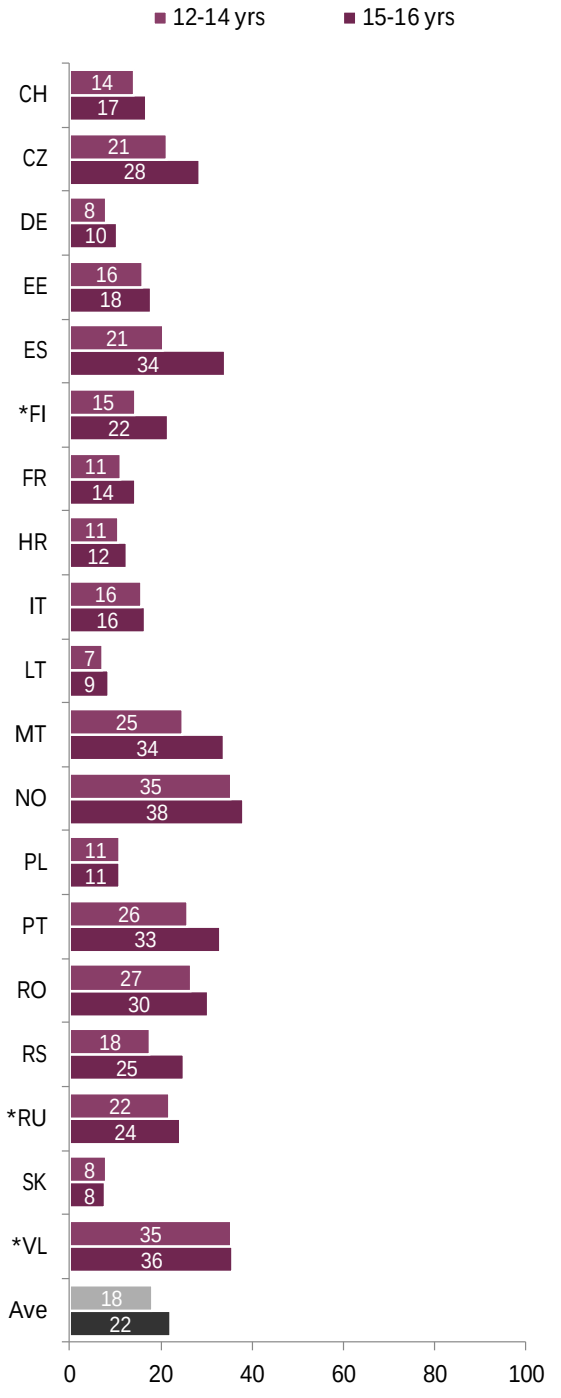
* FI/RU/VL: Data not weighted

QF80a In the PAST YEAR, how often has this happened to you? My parent or carer published information (such as text, pictures or movies) about me on the internet without asking first if I was okay with it.

Base: All children 12–16 who use the internet.

- In all of the countries there are almost none or very small gender differences (equal to or below 5 percentage points). Only in Switzerland the gender difference is 7 percentage points. For parsimony, we don't include the figure.
- Figure 114 shows age differences among children who experienced the problem at least a few times a year.
- In about half of the countries, there are almost no differences between 12- to 14-year-olds and 15- to 16-year-olds.
- In the Czech Republic, Spain, Finland, Malta, Portugal and Serbia, more children in the oldest age category report this experience (differences of between 7 and 13 percentage points).

Figure 114: Parents published information without asking in the past year, by age



* FI/RU/VL: Data not weighted

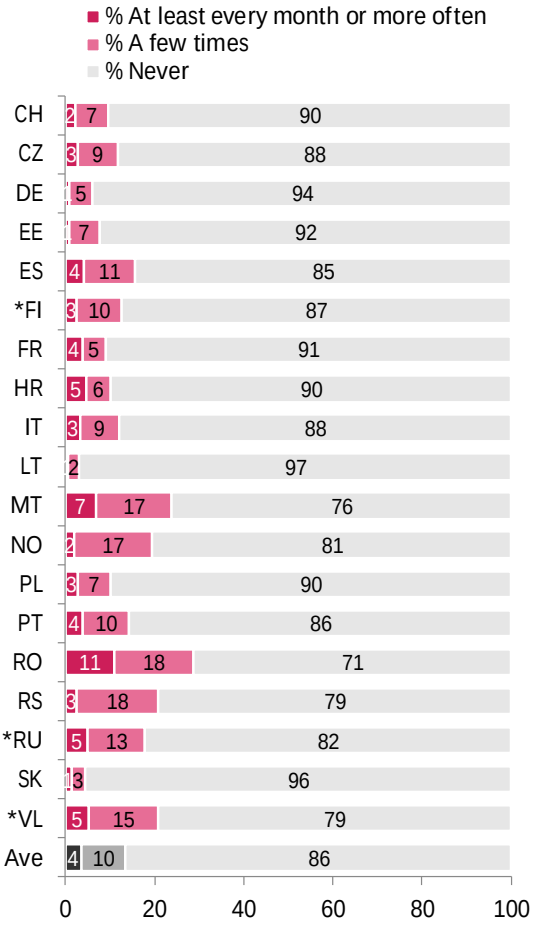
QF80a In the PAST YEAR, how often has this happened to you? My parent or carer published information (such as text, pictures or movies) about me on the internet without asking first if I was okay with it. Percentage of children who answered *a few times, at least every month, at least every week,* or *daily or almost daily.*

Base: All children 12–16 who use the internet.

Children requesting parents remove things they had published on the internet

The second type of the sharenting we present in more detail is when children request parents/carers remove content they published on the internet without their child's consent. In Figure 115, we have again merged all the children who answered at least every month or more often into one group.

Figure 115: Children have asked parents to remove things they had published on the internet, by country



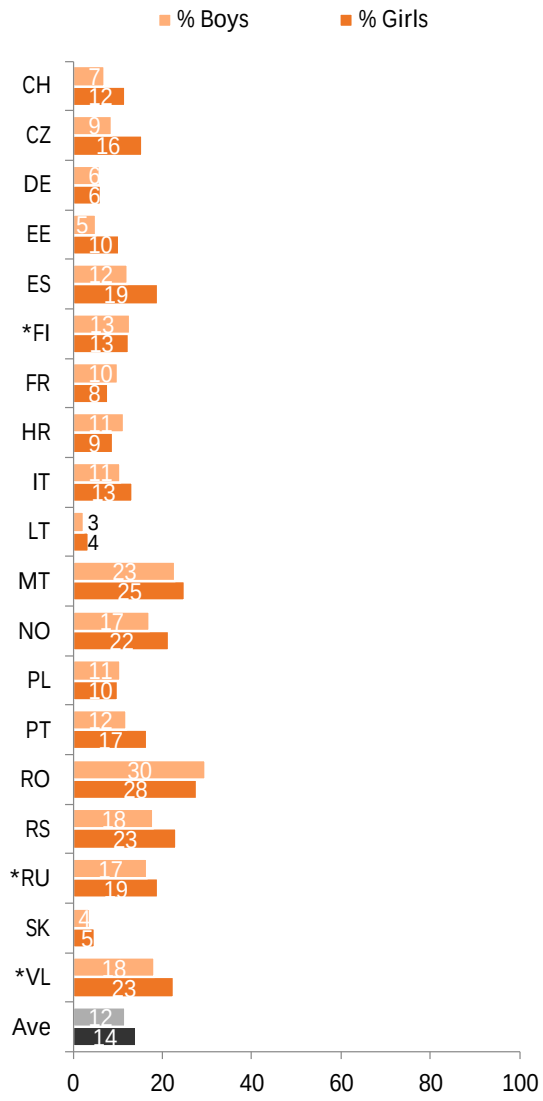
* FI/RU/VL: Data not weighted

QF80c In the PAST YEAR, how often has this happened to you? I asked my parent or carer to remove things they had published on the internet.

Base: All children 12–16 who use the internet.

- In most of the countries, the majority of the children experienced this problem a few times a year. This was reported by between 2% (Lithuania) and 18% (Romania and Serbia) of the children.
- Fewer children report experiencing this problem at least every month or more often during the past year. As Figure 115 shows, this is reported by between 1% (Germany, Estonia, Lithuania and Slovakia) to 11% (Romania) of the children.
- In most of the countries, the gender differences are negligible (Figure 116). In the Czech Republic and Spain, slightly more boys experience this at least a few times or more often (a difference of 7 percentage points).

Figure 116: Children have asked parents to remove things they had published on the internet, by gender

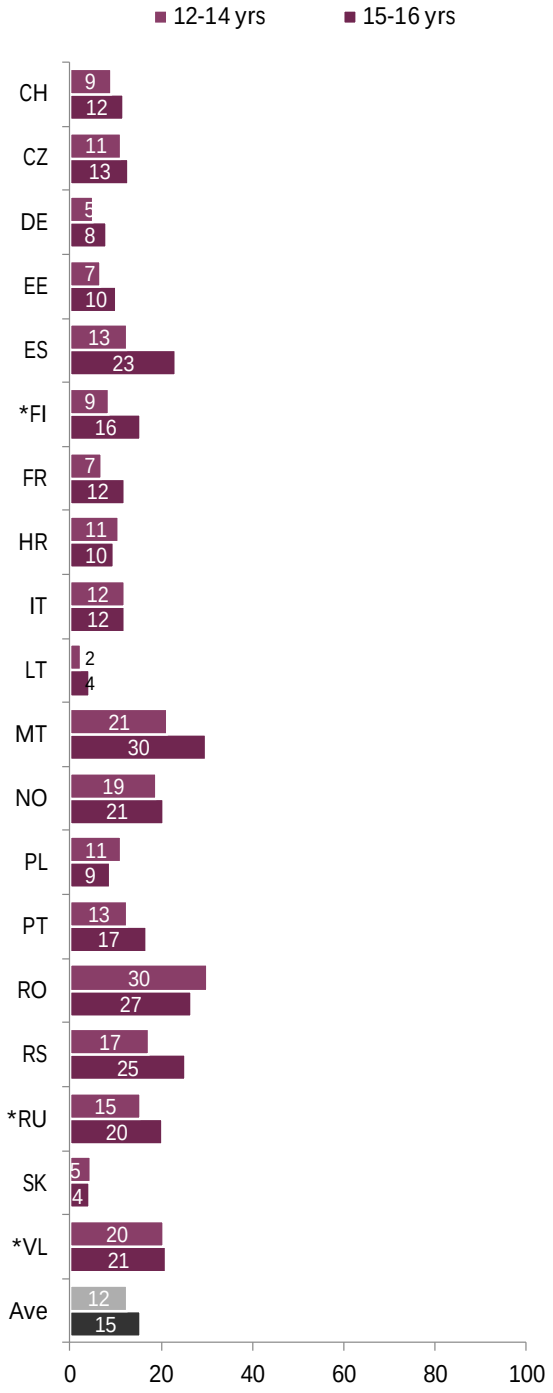


* FI/RU/VL: Data not weighted

QF80c In the PAST YEAR, how often has this happened to you? I asked my parent or carer to remove things they had published on the internet. Percentage of children who answered *a few times, at least every month, at least every week,* or *daily or almost daily.*

Base: All children 12–16 who use the internet.

Figure 117: Children have asked parents to remove things they had published on the internet, by age



* FI/RU/VL: Data not weighted

QF80c In the PAST YEAR, how often has this happened to you? I asked my parent or carer to remove things they had published on the internet. Percentage of children who answered *a few times, at least every month, at least every week,* or *daily or almost daily.*

Base: All children 12–16 who use the internet.

- In most of the countries, there are none or only minor differences between both age groups (Figure 117).
- In Spain, Finland, Serbia and Malta, slightly more children in the oldest age category reported such an experience (a difference of between 7 and 10 percentage points).

Between 3% (Lithuania) and 29% (Romania) of the children aged 12-16 requested parents to remove content they published on the internet.

Points to consider

- As explained at the beginning of this section, sharenting can be consensual and informed or it can be without a child's agreement. In this survey, we asked only about 'problematic sharenting', i.e., when parents do not ask children if it is okay. Future research should also look more closely at consensual sharenting, i.e., when children agree that parents can share the content or even when they share the content together.
- However, if younger children agreed with sharing content between themselves, this does not mean they will agree in the future about the content that was shared. Older children might be more aware of their privacy and may change their opinion about what is okay and what is not okay to share. It is always the parent's responsibility to carefully consider which content is potentially hurtful or which may be seen by a child as unwanted or inappropriate at a later age.
- When people share content on the internet, it is crucial to know to whom the content is shared. The content can be shared with the public, friends from a social network, or only in the family circle. Future research should also investigate with whom parents share the content, both consensual and without the child's agreement.
- It is also unclear how many parents know or do not know that sharing content without the child's agreement may potentially cause harm to their child. It is probable that at least some parents are not aware that sharenting may even be dangerous for children. A public campaign to increase awareness of parents about this potentially damaging aspect of sharenting could be considered. Nevertheless, as stated before, parents also need to consider other negative aspects, and should always act in the best interests of their child.

Digital ecology

In this section, we focus on the children's perception of the online environment. How children see the online environment is crucial, since it shapes their online behaviour, limiting certain activities or, on the other hand, boosting their confidence to engage in others. Specifically, we were interested in whether or not children feel safe online, and if they find people online kind and helpful.

We asked the children how often the following applies to them:

I feel safe on the internet.

I find other people are kind and helpful on the internet.

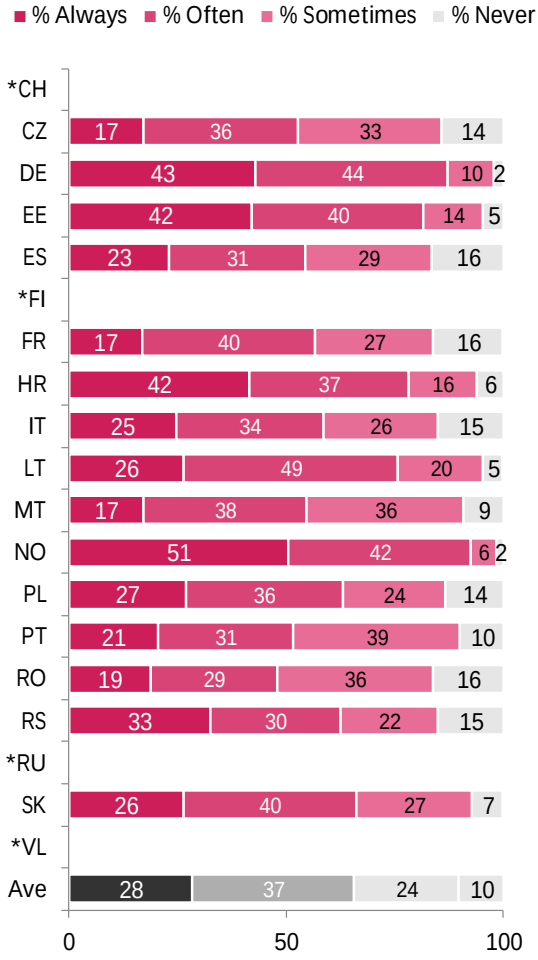
The children answered on a scale ranging from never to always. We focus on the frequency of these experiences. When focusing on gender and age differences, we compare the groups of children who answered *never* or *sometimes* with those who answered *often* or *always*.

Feeling safe online

To feel safe in the online environment is an important factor for engagement in many online activities. If children do not feel safe, they can't fully reap all the benefits that the internet offers and that were described in 'Online activities'.

- A constant safe feeling (feeling like this *always*) was reported by 17% to 51% of the children (Ave = 28%). In Germany, Estonia, Croatia, and Norway, over 40% of the children report feeling *always* safe.
- Only between 2% and 16% of the children report never feeling safe online (Ave = 10%). In the Czech Republic, Spain, France, Italy, Poland, Portugal, Romania and Serbia, between 10% and 16% of the children report this. On the other hand, in Germany, Estonia, Lithuania and Norway, 5% of the children or fewer report this.
- In Switzerland, Czech Republic, Spain, Croatia, Italy, Lithuania, Malta, Poland, Portugal, Romania, and Serbia, more boys than girls say that they *often* or *always* feel safe on the internet. The difference ranges between 6 (Romania) and 19 (Portugal) percentage points. In other countries, the differences are negligible (equal to or below 5 percentage points).
- In most countries we find age differences in feeling safe online, with more children in the oldest age category reporting feeling *often* or *always* safe online. The differences range between 7 percentage points in Norway and 22 percentage points in Portugal. The opposite trend is in Slovakia, where more younger children feel safe online (difference of 13 percentage points).
- In Germany, Italy and Lithuania, the age differences are negligible (equal to or below 5 percentage points).

Figure 118: Feeling safe online, by country

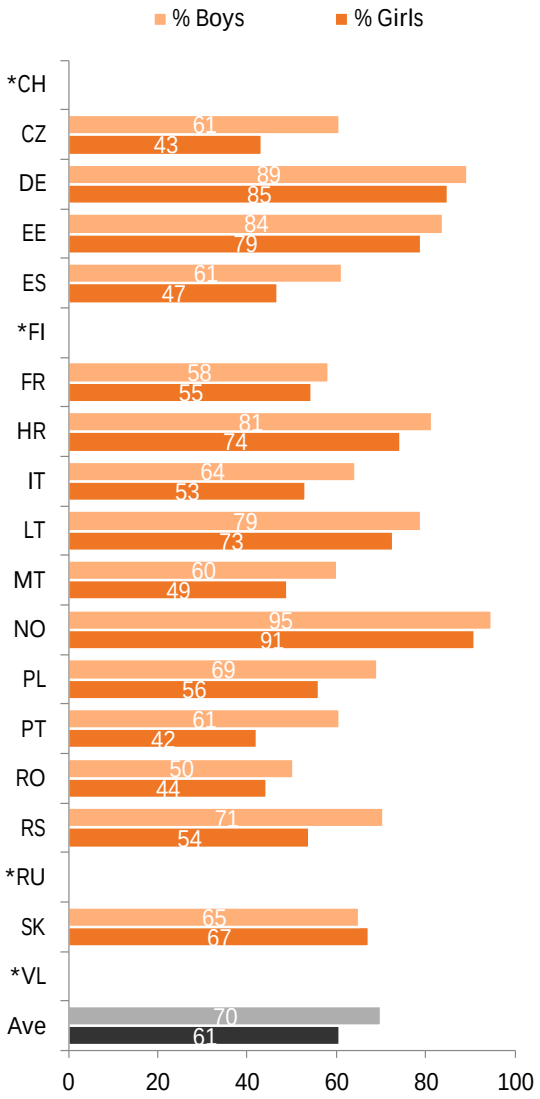


* CH/FI/RU/VL: Full age range not available.

QD2a How often does the following apply to you? I feel safe on the internet.

Base: All children 9–16 who use the internet.

Figure 119: Feeling safe online (always or often), by gender

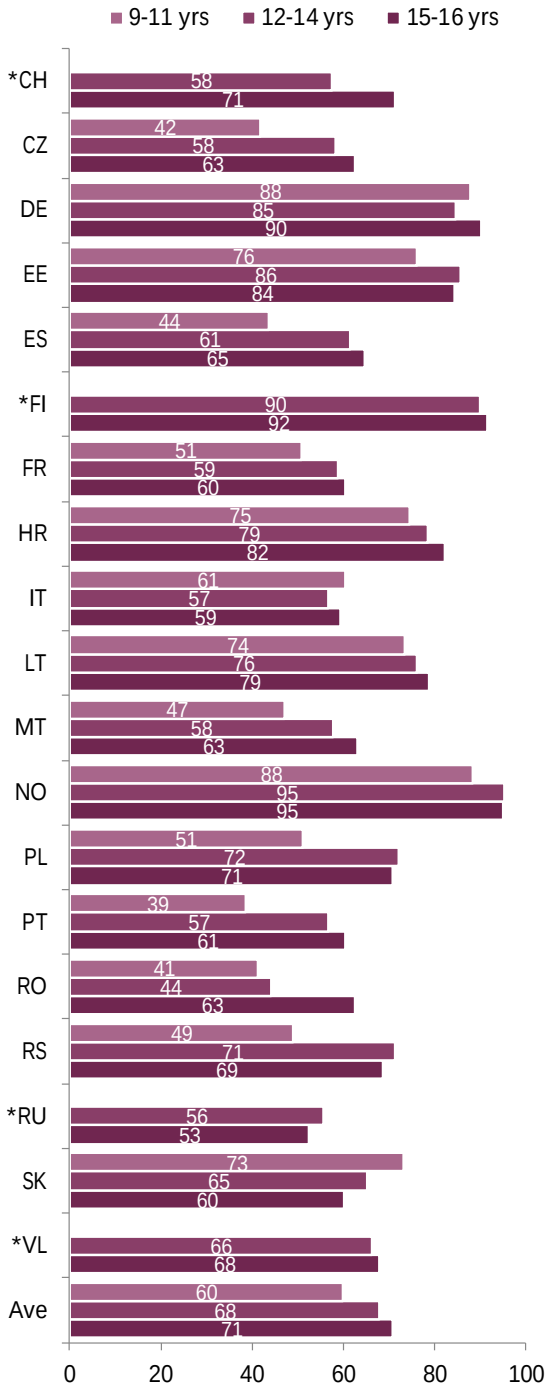


* CH/FI/RU/VL: Full age range not available. FI/RU/VL: Data not weighted.

QD2a How often does the following apply to you? I feel safe on the internet Percentage of children who answered *always* or *often.*

Base: All children 9–16 who use the internet.

Figure 120: Feeling safe online (always or often), by age



* CH/FI/RU/VL: Full age range not available. FI/RU/VL: Data not weighted.

QD2a How often does the following apply to you? I feel safe on the internet Percentage of children who answered *always* or *often.*

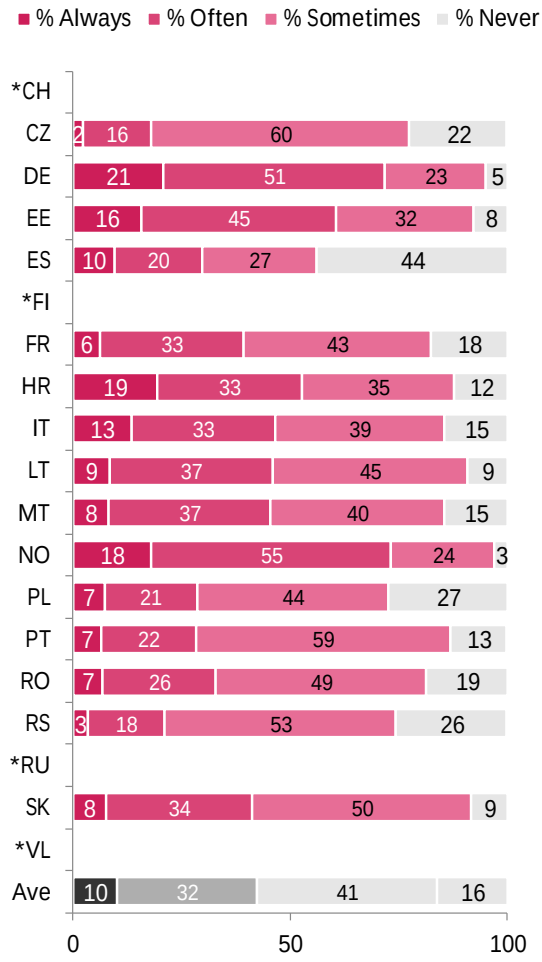
Base: All children 9–16 who use the internet.

Perceptions of people online

Another crucial aspect related to pattern of internet use is how children see other people on the internet. This is especially important in relation to communication with people online or seeking support or information on the internet. Therefore, the survey asked the children how often they find other people are kind and helpful on the internet.

- If we compare numbers of children who see people as kind *never* and *always*, in most countries, more children never see people online as kind and helpful (Figure 121). The opposite applies for Germany, Estonia, Croatia and Norway (differences of between 7 and 16 percentage points).
- Countries are quite varied in this regard: between 3% (Norway) and 44% (Spain) of children *never* see people as kind and helpful online, while between 2% (the Czech Republic) and 21% (Germany) said they find this to be *always* true.
- In Spain, Italy, Poland, Portugal, Romania, and Serbia, more boys than girls *often* or *always* find people as kind and helpful online (differences ranging between 6 and 11 percentage points) Figure 122). The opposite applies for Estonia and Slovakia, with more girls saying the find people kind and helpful online (difference of 8 and 15 percentage points, respectively). In Switzerland, Czech Republic, Germany, France, Croatia, Lithuania, Malta, and Norway, there are no substantial gender differences (all below 5 percentage points).
- Countries are varied with regard to age differences, related to overall prevalence of this experience Figure 123). In about half of the countries, there are no substantial age differences (equal to or below 5 percentage points). However, in Estonia, Spain, France, Malta, Norway, Poland, and Portugal, more children in the oldest age category *often* or *always* find people kind and helpful online than children in the youngest age category. The difference ranges between 7 (Portugal) and 29 (Poland) percentage points. Exception is Slovakia, where the trend is reverse (difference of 20 percentage points between youngest and oldest age category).

Figure 121: Other people are kind and helpful on the internet, by country



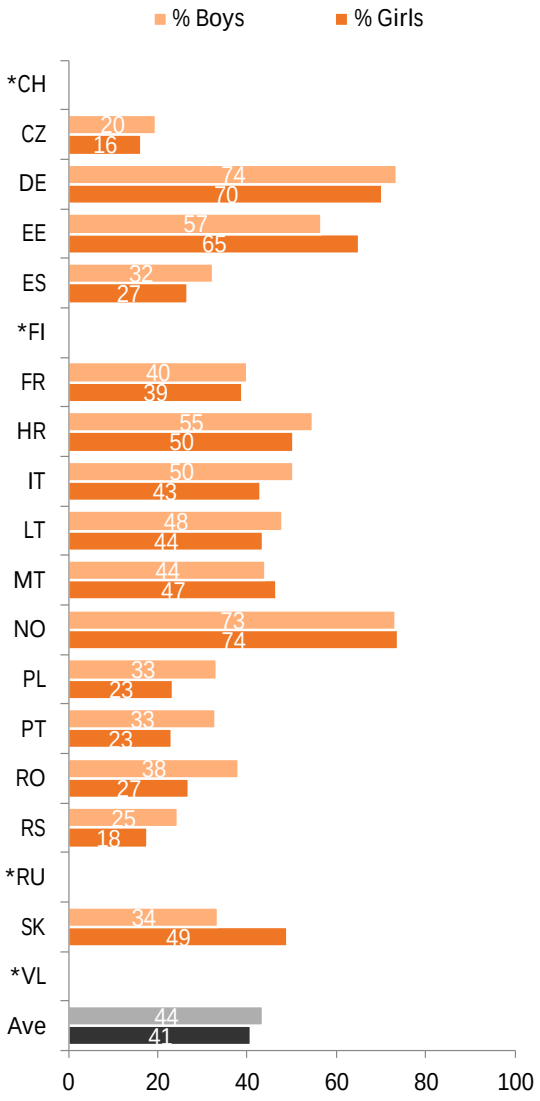
* FI/RU/VL/CH: Full age range not available.

QD2b How often does the following apply to you? I find other people are kind and helpful on the internet.

Base: All children 9–16 who use the internet.

Between 3 % (Norway) and 44% (Spain) of the children never see people online as kind and helpful.

Figure 122: Other people are kind and helpful on the internet (always or often), by gender

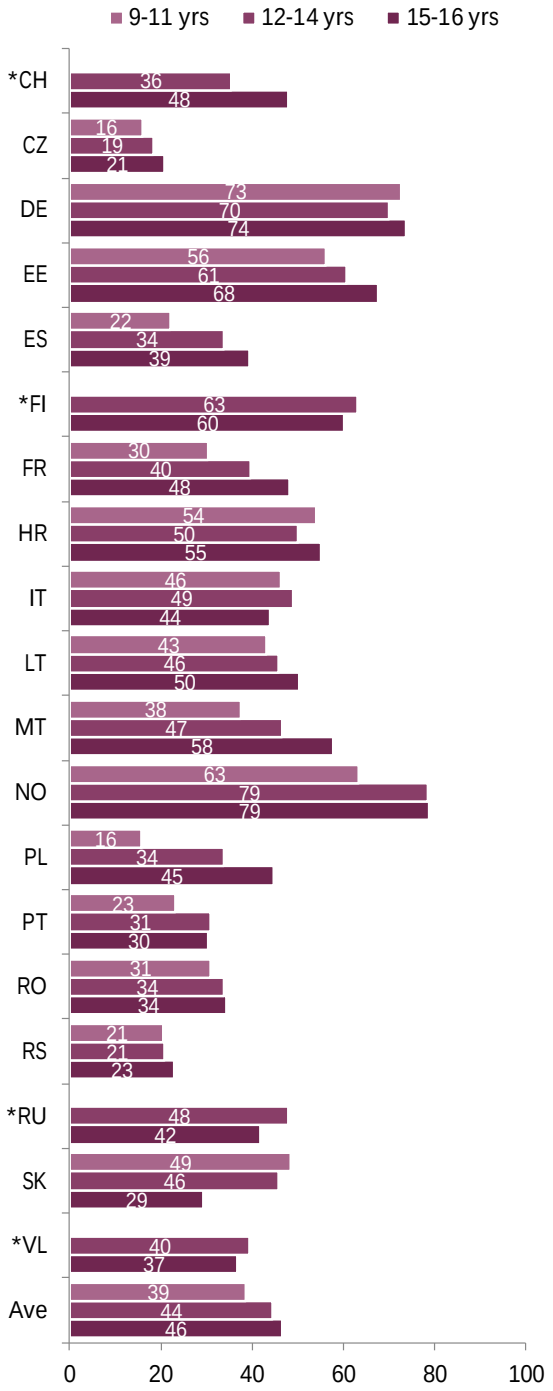


* CH/FI/RU/VL: Full age range not available. FI/RU/VL: Data not weighted.

QD2b How often does the following apply to you? I find other people are kind and helpful on the internet. Percentage of children who answered *always* or *often.*

Base: All children 9–16 who use the internet.

Figure 123: Other people are kind and helpful on the internet (always or often), by age



* CH/FI/RU/VL: Full age range not available. FI/RU/VL: Data not weighted.

QD2b How often does the following apply to you? I find other people are kind and helpful on the internet. Percentage of children who answered *always* or *often.*

Base: All children 9–16 who use the internet.

Points to consider

- The findings show that while children feel safe online, fewer of them find people online as kind and helpful. There are almost no differences between boys and girls in these regards. However, in many of the countries, older children feel more often safe.
- The findings need to be interpreted taking the formulations of the questions into account. Specifically, we asked children about their perceptions, not the actual state of thins. If children report feeling safe online, it doesn't mean they are really safe online.
- Moreover, although it is important for children to feel safe or confident, we should also consider that if not corresponding with actual state, overconfidence or overestimation of the kindness of people may result in negative experiences, for example if children engage in hurtful communication which results in harmful outcomes.
- It would be very fruitful to know why children perceive the online environment in either a positive or negative way. It would be especially beneficial to know if their perception is shaped by past and current experiences, or if it is related to their overall views and perspectives. Future research could also investigate the role of parents in how children feel online.

Conclusions and policy implications

Here we highlight new findings from this survey, drawing out the main research and policy implications. The differences within and across the countries are summarised and discussed in turn, before noting the next steps for research into children's online opportunities and risks in Europe.

Interpreting the evidence

This EU Kids Online 2020 report has presented a wealth of findings from 19 countries from children aged 9–16. The data were collected between autumn 2017 and summer 2019 from 25,101 children by national teams from the network. In relation to the theoretical-analytical model presented at the beginning of the report, the findings concern many elements of the model.[74] These encompass children's online access and use, their digital activities and skills, a range of activities posing risks of harm or opportunity encountered by children, and information about social contexts, including the parental mediation that children receive. This is how the main elements (white shapes in the model – Figure 2 of this report) have been examined. The survey asked more than we were able to include in this report. For example, regarding children's identity and resources, we prioritised only age and gender among the many possible factors that allow us to differentiate among children's experiences in relation to the online environment. Most of the findings presented here, we also note, concern the individual level of the model. In relation to the social level, we mostly focused on parents and to a lesser extent on friends and teachers. Other elements in the model remain for future investigation.

Also important is that we have presented descriptive findings by age, gender and country, but have not, as yet, examined the interrelations between the elements in the model (shown in the model by white arrows). Of most interest is whether and how children's online experiences shape their well-being and their enjoyment of their rights, whether positively or negatively. The next steps for the network will be to conduct statistical analyses to test the relationships in the model indicated by these arrows. Most of these, we hypothesise, operate bi-directionally, and most effects (whether on skills or risks or well-being, for example) are likely to be multiply determined.[75] From July 2021, the database will be publicly available for all interested parties to analyse.

Usefully, even basic descriptive statistics can serve to counter myths, challenge media panics and, more positively, ground interventions in policy and practice by providing estimates of prevalence. For example, according to the evidence, the degree to which children are exposed to risk online is shown to be less than sometimes feared by parents or claimed by mass media. This doesn't warrant the claim that nothing should be done, but it does invite a careful assessment of priorities, and a weighing of the consequences of different kinds of interventions. Relatedly, knowing which age groups, or genders, are particularly missing out on online opportunities, or are particularly affected by online risks of harm, is of value to policy-makers in designing interventions to improve children's well-being in a digital world.

Some tasks for policy-makers, however, remain seemingly simple but still only partially achieved. For instance, although most children have received internet safety advice, there remains a minority who have not – these may be the so-called 'hard to reach' or disadvantaged children, but nonetheless, no child should be left behind in the digital age, especially not those already disadvantaged in other ways.

[74] Livingstone, S., Mascheroni, G., & Staksrud, E. (2018). European research on children's internet use: Assessing the past and anticipating the future. *New Media & Society, 20*(3), 1103–22. https://doi.org/10.1177/1461444816685930

[75] Researchers will appreciate that underpinning the present report is a substantial and rich dataset with which many significant, complex and interesting hypotheses can be tested. Some of these have already been explored in the many reports and publications available on the website at www.eukidsonline.net (under 'Reports and findings'). Some hypotheses, too, have been tested on Global Kids Online data, which has fielded a similar survey questionnaire in a wide selection of countries (Livingstone, S., Kardefelt Winther, D., Hussein, M., & UNICEF Office of Research - Innocenti (2019a). *Global Kids Online: Comparative report*. UNICEF Office of Research – Innocenti. www.unicef-irc.org/publications/1059-global-kids-online-comparative-report.html).

Differences and inequalities within countries

A host of individual factors shape children's digital experiences and may introduce inequalities that differentiate their access and use, opportunities and risks, and forms of safety mediation, as explained at the outset of this report. We also explained that the findings presented in this report would be analysed in terms of age and gender. This is because other forms of difference and inequality that make a difference to outcomes for children tend to vary by country and culture. Even socioeconomic status is difficult to measure in a way that is consistent across European countries, and other factors (region, religion, ethnicity, disability or other kinds of minority status, and so forth) are even more variable. The fact that we do not report or comment on such differences in this report, especially regarding socioeconomic status, does not mean we consider them unimportant; rather, these await further research.

Age

Differences are not necessarily inequalities but observed differences in the survey findings may point to inequalities of either opportunity or outcome that do merit concern and, possibly, policy intervention. For instance, for most online activities, the findings show a strong age progression, with teenagers doing a wider range of activities, and spending more time on them, compared with younger children. This means that teenagers enjoy a more diverse range of activities, including some that can be considered 'higher' on the 'ladder of opportunities'.[76] For example, across Europe, the number of children who use the internet for schoolwork every day ranges from one in five to one in three, with only minor gender differences. However, the proportion of older teenagers who do this is around twice that of younger children.

This could be considered part and parcel of growing older and acting more independently in the world. Or it could be considered problematic, with younger children being held back from enjoying many online activities because of parental anxieties and restrictions, or perhaps because of their lower levels of digital skills due to receiving less digital education at school (as also discussed by Global Kids Online research; see Livingstone et al, 2019a). For example, among the least common activities was 'looking for news online', especially among younger children. This raises policy questions about whether more children – especially younger ones – should be more proactively supported to engage more widely with online opportunities, to encourage more civic, participatory and creative benefits of internet access. Similarly, does society consider that the internet is more useful for the schoolwork of older than younger children, or should changes be made so that younger children also gain more educational benefits from today's digital world? Further research might address the benefits (or harms) of online access, to help address such questions. It might also usefully explore whether certain activities (such as gaming – common among younger children, or chatting – favoured by older children) could even help to build the digital skills needed for more 'advanced' or less common activities.[77]

The European debate over setting lower age limits for children to use digital platforms has been lively in recent years. According to the evidence, any limits set by platforms are only partially effective. Although our age intervals do not permit us to report exactly how many children under 13 use platforms whose lower age limit is 13, this will be explored in further research. Notably, we could discern no relation between the so-called 'digital age of consent', defined differently in different European countries following adoption of the General Data Protection Regulation (GDPR),[78] and the substantial proportion of 'under-age' social media users or indeed, the levels of children's digital skills, amount of online risk encountered or frequency of parental mediation in different countries. This raises questions for policy-makers as to the evidence base for national decisions regarding the internet access of younger children with or without parental permission.

Gender

It would seem odd not to report findings for boys and girls, not least because of the long-standing evidence that girls are relatively disadvantaged in a digital world.[79] However, it is noteworthy that for the most

[76] Livingstone, S., Kardefelt-Winther, D., Kanchev, P., Cabello, P., Claro, M., Burton, P., & Phyfer, J. (2019b). *Is there a ladder of children's online participation? Findings from three Global Kids Online countries*. UNICEF Office of Research - Innocenti. www.unicef-irc.org/publications/1019-ladder-of-childrens-online-participation-findings-from-three-gko-countries.html

[77] Livingstone, S., Kardefelt Winther, D., Hussein, M., & UNICEF Office of Research - Innocenti (2019a). *Global Kids Online: Comparative report*. UNICEF Office of Research - Innocenti. www.unicef-irc.org/publications/1059-global-kids-online-comparative-report.html

[78] Milkaite, I. & Lievens, E. (2019, December 20). Status quo regarding the child's article 8 GDPR age of consent for data processing across the EU. *Better Internet for Kids.* www.betterinternetforkids.eu/web/portal/practice/awareness/detail?articleId=3017751

[79] Sey, A. & Hafkin, N. (eds) (2019). *Taking stock: Data and evidence on gender equality in digital access, skills and leadership*. United Nations University Institute on

part, gender differences are few and far between. Where they do exist, they are often inconsistent in ways that are difficult to explain, with girls having slightly more of some kinds of online experiences than boys in one country, but with the reverse finding in another country. One possible conclusion is that, as gender inequalities in basic access to the internet are gradually overcome, especially in the relatively wealthy countries of Europe, and as use of the internet becomes taken for granted in everyday life, gender inequalities gradually disappear. Some persistent differences – for instance, that boys do more online gaming than girls – might be better labelled 'gender preferences' rather than inequalities. Yet it may be that gaming builds digital skills in ways that benefit boys more than girls, in which case intervention of some kind may be needed.

The general lack of gender differences applies not only to opportunities but also to the risk of harm: asked whether, in the past year, they had experienced something that bothered or upset them, around one in four 9- to 16-year-olds said 'yes', but gender differences were minimal in most of the countries. This reflected, in turn, the finding that few of the risks (for example, meeting new online contacts face-to-face or sending/receiving sexual messages or exposure to self-harm) asked about were experienced very differently by boys or girls.

On the other hand, some gender differences persist and do, we suggest, merit research explanation and policy intervention. These include:

- In some countries (for example, Switzerland, Malta, and Slovakia), girls use the internet somewhat more for schoolwork than boys.
- Boys report better skills in some countries, and for some skills, for instance, the ability to navigate information online and determine its quality, although girls report better social skills online in some countries.
- As for the risk of harm, harm from online bullying was more often reported by girls in almost all countries. Gender differences in exposure to sexual images online are greater, with more boys reporting this in almost half of the countries surveyed, but girls reporting more negative emotions concerning sexual images. Further, in a few countries, girls more than boys are more exposed to pro-anorexia content.
- Across Europe, more boys than girls reported spending too much money on in-app purchases or online games, as well as getting a virus or spyware. This is probably related to their general higher usage of online games.

Comparisons across countries

The EU Kids Online model includes a range of country-level mediators such as broadband infrastructure or education systems that could explain observed differences in children's online experiences by country. These country-level factors have not been measured in the present study, and it remains for future research to map these onto the findings, as was previously done for the 2010 EU Kids Online survey.[80] In that earlier report, we grouped countries according to the survey findings, revealing four country clusters: those 'protected by restrictions' (especially Western European countries), 'supported risky explorers' (Nordic and Northern European countries), 'semi-supported risky gamers' (mainly in Eastern Europe) and 'unprotected networkers' (middle European countries). What seemed to make the difference between the first two clusters was the cultural balance struck differently in different parts of Europe between favouring children's civil rights and freedoms online (to explore, express themselves, etc), even if this may put children at risk, or favouring a more protective approach given a context of online risk and associated parental anxiety, even if this was at the cost of children's online opportunities. Children in the other two country clusters tended to experience both online opportunities and risks, because parental mediation was less, especially in the case of the 'unprotected networkers'.[81]

Much has changed since the EU Kids Online survey in 2010, but variation in national approach is still considerable. This is evident from the considerable cross-national differences shown in many of the figures included in this report. In this regard, we stress here (and through the whole report) that caution is needed in making any simple comparisons

Computing and Society/International Telecommunications Union. www.itu.int/en/action/gender-equality/Documents/EQUALS%20Research%20Report%202019.pdf

[80] Helsper, E.J., Kalmus, V., Hasebrink, U., Sagvari, B., & de Haan, J. (2013). *Country classification: Opportunities, risks, harm and parental mediation*. EU Kids Online, LSE. http://eprints.lse.ac.uk/52023/

[81] O'Neill (2014) further showed that these cross-national differences are not just a matter of children's and parents' activities or values but also, national policy and implementation. Specifically, the first two clusters of countries had invested in a greater breadth and depth of safer internet practices at a national level. Furthermore, 'protected by restrictions' countries relied more on legal and regulatory frameworks that prioritised safety, while 'supported risky explorers' countries prioritised public sector funding and involvement in enabling children's internet use, often centred on educational initiatives. The other two country clusters revealed fewer initiatives and less coordination, relying more on the actions of the European Commission-funded Safer Internet Centres.

of percentages across countries given the variation in methodology.

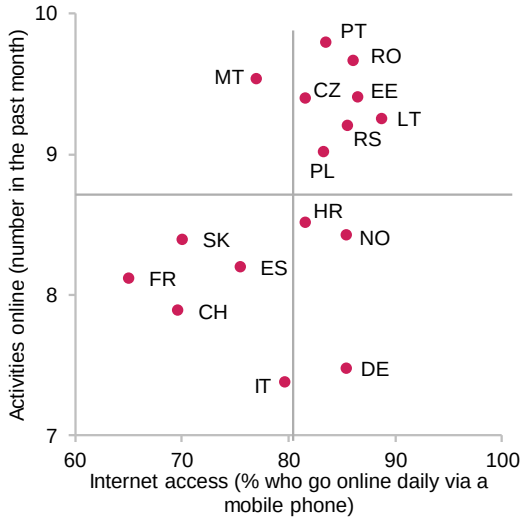
In this final section, we focus more on the links between selected factors, to capture key patterns across the countries. While in-depth analysis must wait for future research, we present here three final figures, exploring the relations among key variables to reveal country groupings and to raise questions about whether these groupings merit distinct types of policy action. These figures present simple scatterplots of countries plotted on two key variables, to capture their interrelations and differences.

First, consider the relationship between access (or use) and activities. It may be supposed that more use of the internet results in a wider range of online activities. Broadly, this is indeed the case, as shown in Figure 124. As internet use (here, the proportion of children who go online daily with their mobile phone) rises in a country, so does the average number of online activities (out of 15) undertaken by children in the past month in that country. The graph shows clearly that children in some countries have less access and, presumably related, fewer opportunities to benefit from the internet. France, Switzerland and Italy are not the poorest countries in Europe, so access cannot simply be a matter of affluence or lack thereof (whether measured at the level of families or national resources).

Furthermore, there is a fair amount of variation in Figure 124. For instance, in Italy, Spain and Malta, the level of internet use is more or less similar (nearly 80% of children go online via their mobile phone daily), but the average number of online activities varies from just over seven (Italy) to eight (Spain) to almost ten (Malta). The reason for this is surely worth investigating, for perhaps Malta's family, educational or policy context is more encouraging for children? Also, why do German children do so much less online than their counterparts in other countries, even when they have almost the best access in terms of frequency and, presumably, convenience?

It has been important in the EU Kids Online conceptual framework to recognise that while online risk carries a probability of harm to a child, harm is not inevitable. Many factors can make a child more resilient or vulnerable to the consequences of exposure to risk. This report 2020 findings show that a large majority of children have not been bothered or upset by something online in the past year. This is important to keep in mind since the mass media highlight, even exaggerate, the problems that children experience online, and since parental anxieties are often considerable. On the other hand, the percentage of children who reported that they had been bothered or upset on the internet in 2010 varied from 6% to 25% across countries – a considerably lower proportion overall than observed in this survey when it was from 7% to 45%.

Figure 124: Proportion of 9- to 16-year-olds who access the internet, and their frequency of online activities, by country



Over and above the finding that reports of exposure to risk are generally higher than reports of harm, as measured by whether children have been upset or bothered by something online, we also found national variation in the relation between risk and harm. This is shown in Figure 125 below. The horizontal dimension shows variation in how many risks children in a country reported in the past year, on average, measured out of the seven risks we asked about.[82] As may be seen, children in Croatia reported the fewest risks, and children in Russia the most. The vertical dimension shows the percentage of children who reported being upset by something online in the past year, with the fewest children in Slovakia and most children in Malta saying 'yes' this had happened to them.

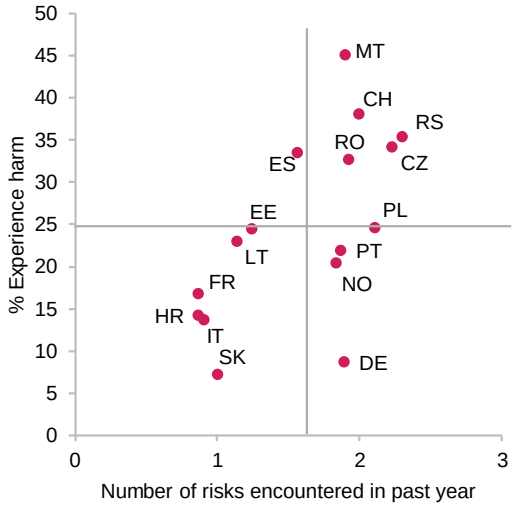
Clearly there is a broadly positive association between the two measures – the more risks, the more harm, as children report it. Yet there is also a lot of variation that invites further investigation. For example, children in Germany report more risks than those in Slovakia yet no more harm: possibly, the safer internet provision in Germany is greater, so that encountering risk is less likely to result in children being upset, by comparison with the situation in Slovakia. Overall, too, we see one group of countries where higher risk is not linked to more harm –

[82] These seven risks were, percentage of children: treated in a hurtful or nasty way on a mobile phone or on the internet; who had seen sexual images; who had received sexual messages; who had met online contacts offline; who experienced misuse of personal data; who experienced one or more type of negative user-generated content; who agreed to one or more of the items related to excessive use. For the exact measures used, see the relevant section in the report.

Germany, Norway and Portugal. Then there are countries where even just a few risks are linked to more harm – Estonia and Spain in particular.

While certainly the countries where both risk and harm are highest (top-right quadrant) merit investigation and possible intervention, our point here is that policy interventions should focus more on reducing harm than risk. This is because, as EU Kids Online[83] has shown, children cannot develop resilience if they are protected from all forms of risk, and further, such protections are often achieved by also limiting children's online opportunities. In other words, there may be much to be learned from countries in which children encounter as much risk, but less harm, than in other countries. Do those countries practise more parental mediation? Or do they have better regulation of platforms? Or a culture of respecting children's expression of concern and of providing help services? Such questions remain for further research.

Figure 125: Number of online risks encountered by 12- to 16-year-olds, and the proportion who report being upset or bothered online in the past year, by country



We should caution at this point that our measures of both risk (adding up reports of different activities, traditionally perceived as risks) and of harm (saying that something upset the child in the past year) are rather simple and may be subject to critique. It might, for instance, be argued that a child is harmed by exposure to pornography even if the child says it didn't upset them. Also, a child may encounter one severe risk that results in more or longer-term problems than a casual and mild exposure to a range of different risks. Consequently, our present discussion is intended more to invite reflection and further investigation than to pronounce definitively on the relation between risk and harm in different countries and cultures.

A holistic approach **to children's well**-being in a digital world

A holistic approach to children's well-being is often called for but less easy to deliver. It is still the case that most researchers and policy-makers concentrate either on the opportunities of a digital world – concerned with education or civic participation or creative expression, for example – or on the risks of harm to children – concerned with e-safety, parental mediation or internet regulation. Achieving a holistic approach – whether at the level of a country or culture, or for an individual child – remains difficult. Those excited by digital opportunities still tend to neglect or postpone thinking about the ways in which increasing opportunities tend to go hand in hand with increasing the risks of the digital world for children. Those who prioritise child protection and safety may struggle to realise that their interventions could also serve to limit children's civil rights and freedoms.

We conclude this report with a final figure that makes a simple, but we believe, important point: countries are striking a different balance between risks and opportunities. The reasons for this, and whether the balance achieved is desirable or warrants intervention, should be examined. One contribution of a multi-country comparative research project is that countries can learn from each other – both by reflecting on their position in the mix of comparative findings, and by identifying which countries appear to have achieved the position that they might desire – and so they can inquire further into the conditions that apply in other countries.

In Figure 126, we plot countries along two key dimensions already discussed above – one captures the number of risks children encounter (measured out of seven risks asked about in this report), the other the online activities they undertake (here, a proxy measure for opportunities taken up). By plotting them against each other, we highlight the balance in each country between children's online opportunities and risks. Again, we see a broadly positive association – the more opportunities, the more risks – although the relationship is not as strong as the previous two country scatterplots.

[83] Livingstone, S., Haddon, L., & Görzig, A. (eds) (2012). *Children, risk and safety online: Research and policy challenges in comparative perspective*. Policy Press. http://eprints.lse.ac.uk/44761/

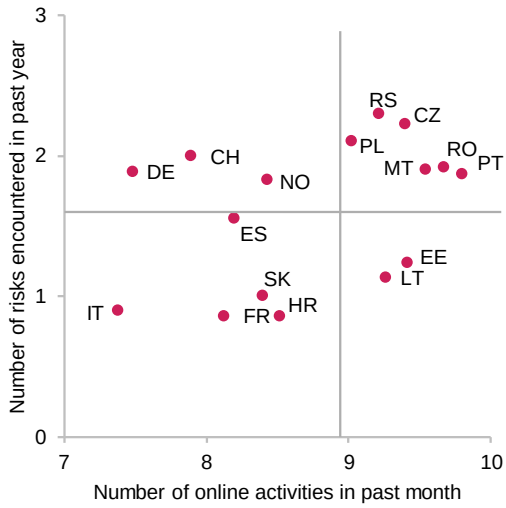
What this suggests to us is that if, on the one hand, a country takes steps to increase the opportunities available to children, this may bring more risks. And on the other hand, if they take steps to reduce the risks, this may also reduce children's opportunities.

However, the association shown is fairly weak. This suggests that there may be ways of increasing opportunities without increasing risks too much. For example, in Lithuania and Estonia, it seems that children undertake many more online activities than children in Italy, but without an increase in their online risk. Looked at another way, children in Lithuania and Estonia enjoy as many opportunities as the children in the countries in the top-right quadrant, but in the latter countries, levels of risk are higher. While we do not know what country or social level factors account for these differences, it may be that policy-makers in a higher risk/lower opportunity country can learn from initiatives in countries where risks are lower or opportunities are higher.

Not only does it appear that in Lithuania and Estonia children enjoy a positive online experience, but in the countries positioned in the top-left quadrant (Germany, Switzerland and Norway) they appear to have the worst of both worlds, relatively speaking: fewer opportunities, but more risks. In the countries in the lower left-hand quadrant, children's engagement with the internet is generally lower, whether because of more limited access and use or a greater culture of protection and safety, or for some other reason. In short, not only may different countries define their goals for children online in different ways, but they also have different kinds of outcomes. These may or may not require intervention, but the cross-national differences are surely thought-provoking.

Finally, we note that although both the 2010 EU Kids Online survey and this survey were cross-sectional in design, with some differences also in the exact questions asked, we have been able to observe some constant findings and some changes.[84] Some of these changes – most notably, in the extent of children's digital access and use, and in the proportion of online risks that children encounter and report to be upsetting – call for urgent interventions in policy and practice. At the same time, the slow pace of improvement in children's levels of digital skills or their enjoyment of online opportunities (especially those that include creative, civic and participatory activities) is also concerning. For this reason, as in all our work, we urge that attention to the risks of harm does not obscure the imperative to ensure that children benefit fully and fairly from society's widespread adoption of all things digital.

Figure 126: Number of online activities undertaken by 12- to 16-year-olds, and the number of risks that they encountered, by country



Just how this can be achieved is still open to debate. Where appropriate, we have noted some policy implications regarding the situation for Europe as a whole. Specific implications for particular countries are also highlighted in the country profile pages at the end of this report. Importantly, this is a fast-changing environment, in which evidence is still lacking and good practice not yet evaluated. For this reason, the report invites its readers to ask questions, and to consider possibilities with an open mind, by identifying 'points to consider' throughout the foregoing text. We also hope that the country comparisons are thought-provoking, inviting a wider European debate about the next steps, and providing evidence that can guide the selection of policies or practical initiatives, and against which future developments can be benchmarked.

[84] Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risk and safety on the internet: The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents*. EU Kids Online, LSE. http://eprints.lse.ac.uk/33731/

Country profiles

This section contains country profiles of the 19 countries that participated in this survey. They were authored by researchers from national teams, listed in each profile. Most profiles also contain links to national reports, which provide more information concerning findings at a national level. It should be noted that the country profiles do not summarise the results for each country, and are not based on a comparison of international data.

The country profiles aim to show specific national results that may be of interest for readers wanting to learn more about the findings of respective countries. As this report focuses only on selected core items used in the questionnaire, and its main goal is to present the results from all the countries, the space to present specific findings for a national level was limited.

The country profiles aim to provide a glimpse into the rich nature of the collected data in the context of the selected country-specific findings. These are centred on the key national results as well as highlights from each country that go beyond the results presented in this report. This includes several types of national-level data that are, for the most part, not present in the main text of this report – specifically, findings based on additional questions added by respective countries in their survey, findings based on data provided by parents of interviewed children, or the results of more complex analyses of national data that provide more insight into the national context.

Citing country profiles

Please cite the country profiles in the following way:

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Croatia (HR)

Croatian EU Kids Online team

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Croatian national report

Ciboci, L., Ćosić Pregrad, I., Kanižaj, I., Potočnik, D., & Vinković, D. (2020). *Nacionalno istraživanje sigurnosti djece i mladih na internetu – HR Kids Online.* Zagreb: Društvo za komunikacijsku i medijsku kulturu.

Key findings

The survey included 1,017 children aged 9 to 17 and their parents, with the participation of a parent who was more familiar with the digital habits of their children; 78.4% of the parent participants were mothers. More than three-quarters of children use the internet every weekday. Children, as well as their parents, mostly access the internet via a mobile phone or smartphone. Children spend more time 'hanging out' and having fun with their friends face-to-face rather than via online activities. The results show that most of the children aged 9 to 17 use the internet at least once a week for educational purposes both at school and at home.

Some parents are not very familiar with their children's online activities. Almost every fifth child between the ages of 9 and 17 points out that their parents 'never' or 'almost never' talk to them about what they do on the internet. This is not surprising given that two-thirds of parents think that children are more proficient than them in using new technologies. Parents talk more often with younger children about online activities. When it comes to monitoring internet usage, parents most often check websites their child has visited, their messages on email or other applications, and view their profiles on social networks. Children who have troublesome experiences on the internet are more likely to ignore advice from their parents. In addition to rarely receiving parental support for internet usage, the research shows that they also rarely get support from teachers. Older children are more likely to be supported by teachers in using the internet than younger children.

Highlights

Almost every third child between the ages of 9 and 17 communicated online with someone they did not go on to meet in person. There are more boys (34%) than girls (27%) among this group, with 50% in the 15–17 age group. Only 13% of the parents knew that their child had had contact with a person on the internet they had not had face-to-face contact with before; 14% met offline with a person they had met online. This increases with age, so in this group the majority are children aged 15 to 17 (27%), then children aged from 12 to 14 (12%), and finally, 3% of the youngest children (aged 9 to 11).

Thirty per cent of children aged 9 to 17 have seen sexual content online. Among them, over two-thirds have seen sexual photos or films with nudity on the internet in the past year, despite having no intention of seeing such content, while almost a fifth have seen such content intentionally.

Czech Republic (CZ)

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Czech national report

Bedrošová, M., Hlavová, R., Macháčková, H., Dědková, L., & Šmahel, D. (2018). *Czech children and adolescents on the internet: Report from a survey at primary and secondary schools*. EU Kids Online IV in the Czech Republic 2017–2018. Brno: Masaryk University, https://irtis.muni.cz/media/3137007/eu_kids_online_report_2018_en_main.pdf

Key findings

Czech children aged 9 to 17 most frequently use smartphones to access the internet – 84% do so daily. Older children generally use the internet more often and participate in more online activities; consequently, they also encounter more online risks. Interestingly, some commonly feared online risks do not seem to upset Czech young people very often. After encountering sexually explicit content, 41% reported feeling happy and 39% were not upset. Similarly, 78% were happy and 10% were not upset after a face-to-face meeting with a person they only knew from the internet. It is worth noting that a majority of such meetings (67%) was with someone their age, and only 7% were with adults.

There are some intriguing gender differences regarding online risks. For example, while slightly more boys received sexually charged messages, girls were more often specifically asked to share intimate information. Girls also encountered online content supporting extreme thinness more frequently. On the other hand, more boys than girls struggle with computer viruses and spend too much money on in-app purchases and online games. Regarding cyberaggression, girls, as well as younger children, were more upset after being attacked online. The highest percentage of cyber aggressors was among older boys aged 13 to 17 (19%), more than twice as much as among girls of the same age (8%).

Highlights

Some Czech children are exposed to harmful content – 27% saw hate messages, 19% saw gory or violent images and 17% saw eating disorder-related websites at least once a month. In the Czech Republic, exposure to harmful content is associated with children's emotional problems and sensation-seeking. Parental mediation strategies – enabling, restrictive and technical mediation – were not associated with exposure to harmful content. However, a positive family environment was a protective factor.

Therefore, it seems that while restricting access to the internet doesn't work, it might help if parents could focus on building good relationships with their children.

Estonia (EE)

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Estonian national report

Sukk, M. & Soo, K. (2018). *EU Kids Online'i Eesti 2018. Aasta uuringu esialgsed tulemused*. Kalmus, V., Kurvits, R., Siibak, A. (Eds). Tartu: University of Tartu, Institute of Social Studies,

https://sisu.ut.ee/sites/default/files/euko/files/eu_kids_online_eesti_2018_raport.pdf

Summary (in English):

https://sisu.ut.ee/sites/default/files/euko/files/eu_kids_online_2018_estonia_summary.pdf

Key findings

The use of the internet is thoroughly embedded in Estonian children's daily lives: 97% of children aged 9 to 17 access the internet every day, using at least one device. Children from Russian-speaking families spend more time online than children from Estonian-speaking families (both on schooldays and at weekends). For example, only 6% of Estonian-speaking children spent more than 6 hours online during the week, while the proportion of heavy users among Russian-speaking children was 14%.

Searching for new friends and contacts plays a big role in children's online communication. Almost half (46%) of the children had had online contact with someone they had never met face-to-face. Every third child who had had contact with strangers on the internet had also met that person face-to-face.

In eight years, the percentage of children who had experienced cyberbullying had not decreased, despite numerous stakeholder initiatives. Thirty-nine per cent of the children had encountered harmful websites, most often hate speech. Most of those Estonian children who had experienced online harm used a communicative coping strategy, mostly consulting their friends or parents. The latter, however, were not always aware of their children's encounters of internet risks, as more than a quarter of the children tended to keep their negative online experiences to themselves.

Estonian parents can still be considered active mediators of their children's internet use and safety. Most of the parents (92%) said that they had talked to their child about what the child did online, and 59% had given advice about using the internet safely. Children, however, considered their parents' role in the social mediation of their internet use much smaller.

Highlights

Estonian children and their parents are active and confident internet users, with less than half of the children claiming they needed some guidance when using the internet; 79% of the parents said that they knew a lot about using the internet. The myth about 'digital natives' still prevails among Estonian parents. Only half of them believed that they knew more about the internet compared to their children, even though the data about skills did not confirm this.

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Key findings

In Finland 97% of the children have access to a smartphone and most have their own phone. Eighty-five per cent of all participants are online daily, and 80% of pupils at upper comprehensive schools are online several times a day or almost all the time. Girls, especially those aged 12 and older, are active users of smartphones. Boys go online via a computer or gaming device. Age is a significant factor, as those at upper comprehensive schools are almost always online, if possible.

Gender has no significance for activity level, yet services, application and agency differ significantly by gender. Boys play games on global forums and use different digital content provided by different platforms. Girls communicate or share content among their own circles with those with whom already have at least some relationship.

Being online is for entertaining oneself and avoiding boredom. Hardly any of the participants considered themselves socially active or used the internet for any purpose other than entertainment at school. Traditional social media was particularly unpopular as well as participating in online campaigns (10%) – less than 2% had participated in online discussions on social issues, an online petition or another similar activity.

Highlights

The participants are tolerant and see no justification for violence or bullying. About 40% have recently seen bullying or hate speech online. A little over 10% have been bullied in some way online. This was the same between boys and girls, although girls reported being bullied because of their appearance or background. About 10% of participants had sent negative comments, messages or content online.

Participants saw non-wanted content, such as negative comments, bullying or explicit content, on the platforms they use or on communication apps. Ninety per cent of the children feel safe most of the time when online. Seventy-five per cent considered themselves competent online, that is, they could use a device, change settings and understood security and privacy issues – yet only 50% thought they could make a distinction between incorrect or false content. Over 80% knew what content could be shared online.

Flanders – Belgium (VL)

Belgian EU Kids Online team

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Key findings

Eighty-three per cent of the Flemish 13- to 17-year-old participants (N = 1,180) predominantly use their smartphone to go online, where they mainly communicate with friends and family (79%). However, the outcomes of internet use are not always beneficial, as Flemish young people are also exposed to risky content online. For example, up to 34% have seen hate speech online against certain groups of people (such as Muslim or Jewish people and migrants), 26% of whom saw it at least once a week; 11% of those who had been exposed to hate speech had searched for it themselves. Only a minority of Flemish young people (7%) had sent or posted hate speech messages online.

Furthermore, Flemish young people were most exposed to potentially harmful content concerning violence (16% at least once a month) and drug use (14% at least once a month).

Flemish young people employ various coping strategies when they feel distressed after an online risky experience. For example, those who had received sexual messages online at least once a month (12%) mainly coped by talking to their peers about it (32%), by neglecting the problem (26%) or by blocking the sender (20%). Similarly, those who are the victims of cyberbullying at least once a month (7%) mainly talk to their peers (40%) and parents (22%) about it. They mostly try to neglect the problem (33%), block the perpetrator (30%) or try to make sure the perpetrator leaves them alone (29%).

Highlights

Flemish young people were asked to evaluate their digital skills: basic skills (e.g. changing privacy settings), advanced skills (e.g. using keyboard shortcuts), expert skills (e.g. programming languages) and reflective skills (e.g. deciding whether online information is true). Strikingly, digital skills do not protect them from online risks (while controlling for age, gender and time spent online). On the contrary, 9% with above-average expert skill levels were exposed to risky online content once a month, while this was only true for 2% of those with below-average expert skills.

Digital skills do not seem to guard young people from feelings of harm after an online risk experience: there are no significant differences in harm experienced after online risk exposure based on a young person's basic, advanced, expert or reflective skill levels.

France (FR)

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Key findings

Sixty-two per cent of young people access the internet daily using their mobile phone and 39% use a computer. A third of the participants use tablets.

The average time spent online daily is 2 hours and 6 minutes during the week and 3 hours and 16 minutes during weekends. Eight per cent of the participants spend over 6 hours a day online during the week and 18% at weekends. Those who spend more time online are young people aged 14 to 15 during the week and those aged 16 to 17 during weekends. Fifty per cent of the children have a profile on a social network. The most used application is Snapchat (25%), with a significant difference between girls and boys (31.6% vs 17.7%). Facebook comes second, with 23%. The majority of children in France use the internet for entertainment (videos and music) and communication.

As for safety, 60% of the children report knowing what they should or should not publish on the internet. A small majority (51%) report that they know what to do if something online bothers or upsets them and 53% know how to block unwanted contacts; only 44% can manage their safety parameters. Thirty-one per cent know how to keep track of the cost of their mobile app use. Forty per cent had been sent nasty or hurtful messages online during the year preceding the survey, among which 8.4% reported this happened often.

Highlights

Exposure and involvement in cyberhate, that is, hate based on ethnic or religious criteria, is a preoccupying societal issue as it impacts not only individuals but also their communities and social cohesion. The majority of young people understand that cyberhate is a form of aggression and that it has negative consequences on people's lives. Participants were involved as exposed, victims or perpetrators. However, 15% stated that they had been exposed to cyberhate (racism, xenophobia or religious-based content), 3% had been victims of cyberhate and 2% self-reported being authors of cyberhate.

Although these percentages are small, being a victim is associated with negative outcomes and should be taken seriously. Structural equation models highlight that offline victimisation and cyberhate are correlated with both cyberhate perpetration and victimisation. Moreover, victimisation is related to negative and deviant behaviours (lying, stealing, fighting, etc.) and it affects wellbeing as victims score higher levels of anxiety and impulsivity and have lower self-esteem.

Germany (DE)

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German national report

Hasebrink, U., Lampert, C., & Thiel, K. (2019). *Online-Erfahrungen von 9- bis 17-Jährigen. Ergebnisse der EU Kids Online-Befragung in Deutschland 2019*. 2. überarb. Auflage. Hamburg: Verlag Hans-Bredow-Institut, bit.ly/EUKO_DE

Summary (in English): bit.ly/EUKidsOnline_DE_engl

Key findings

Despite the many opportunities of being online, digitally engaged children are exposed to various cyber risks. Exposure to sexual, violent or hateful content and risks associated with personal disclosure (e.g. giving out personal information) appear quite frequently. Contact as well as conduct risks vary in incidence. While bullying (online or offline) and receiving or sending sexual messages seem quite normal, meeting online contacts offline is less common. However, only 9% of children and adolescents (aged 9 to 17) state that, in the past year, they have been bothered or upset by something they experienced online. On the contrary, meeting an online contact in real life was a pleasant experience for the majority of the children (63%). The same applies to sexual images and messages, which some participants – especially teenage boys – enjoy and even turn to actively. These findings indicate that adolescents have a different perception of online risks than adults.

Regarding digital citizenship, German findings show that most of the 9- to 17-year-olds have heard about #FridaysForFuture (83%), 39% have informed themselves on the internet and 14% have participated in demonstrations. However, the children and adolescents tend to rate their own knowledge of politics and current world affairs (internal political efficacy) as rather low. The same applies to the feeling of being able to influence political events (external political efficacy).

Highlights

Sometimes it is not the children but their parents whose thoughtless online behaviour puts them at risk online: 9% of German children and adolescents say that their parent or carer published a picture of them without their permission, which, in some cases (4%), led to mean or hurtful comments. Thus, it is crucial to raise parents' awareness of possible negative consequences, and to point out their children's right to privacy.

Italy (IT)

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Italian national report

Mascheroni, G. & Ólafsson, K. (2018). *Accesso, usi, rischi e opportunità di internet per i ragazzi italiani. I risultati di EU Kids Online 2017.* EU Kids Online, OssCom, www.lse.ac.uk/media-and-communications/assets/documents/research/eu-kids-online/reports/EU-Kids-Online-Italy-report-06-2018.pdf

Summary (in English): www.lse.ac.uk/media-and-communications/assets/documents/research/eu-kids-online/reports/Executive-summary-Italy-june-2018.pdf

Key findings

Italian children aged 9 to 17 go online primarily from their smartphones – 84% do so daily. While the internet is an integral part of children's daily lives, differences persist in online activities and, more significantly, in online skills. With misinformation being one of the highest concerns on the public agenda, it is striking that only 42% of Italian children reportedly find it easy to check if the information they find online is true.

The number of children who have felt bothered (upset, uncomfortable or scared) by something they experienced on the internet has more than doubled, from 6% in 2013 to 13% in 2017 (and from 3% to 13% among 9- to 10-year-olds). The most common risk is being exposed to harmful user-generated content (UGC) – 51% of 11- to 17-year-olds have been exposed to at least one form of negative UGC in the past year, including hate messages (31%). Most feel sad, angry and full of hatred for what they have seen. However, 58% of those who have seen hate speech in the past year did nothing about it. Similarly, 50% of children who have witnessed someone else being bullied on the internet reportedly did nothing about it.

Highlights

One in three children adopt passive responses to online risks that bother them, and one in four do not talk to anyone about what happened. This is surprising, since children report living in supportive and safe environments at home, school and among peers. Italian parents adopt especially enabling mediation practices, thus favouring dialogue over restrictions. However, findings suggest that the internet is perceived as more of a risky place than an opportunity: 52% of parents suggest ways to use the internet safely and 38% help children when something bothers them on the internet, but only 21% encourage children to explore and learn things on the internet. Teachers make rules and friends suggest things to do.

Lithuania (LT)

Lithuanian EU Kids Online team

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Lithuanian national report

Pakalniskiene, V., Raizeine, S., & Grigutyte, N. (2018). *Lithuanian children on the internet: Report from a survey in 2018*. Project EU Kids Online IV. Vilnius University.

Key findings

The findings show that 92% of children aged 9 to 17 access the internet daily, using at least one device. The most common way to access the internet is via a mobile phone or smartphone, and in 2018 89% went online daily while using their phones; 37% of all the children say that they are online on their mobile 'almost all the time'. The majority of Lithuanian children use the internet for entertainment and communication purposes. The most common daily activities are watching videos (72%), listening to music (71%), gaming online (69%), visiting social networking sites (52%) or communicating with friends and family (52%).

Lithuanian children are quite skilled in many online activities: most of the 9- to 17-year-olds can remove people from their contact lists (81%), they know which information shouldn't be shared online (79%) and how to change privacy settings (70%). While searching for new friends and contacts plays a big role in children's online communication, only 23% added someone to their contacts they had never met face-to-face. Even though 34% had had contact with a stranger on the internet, they never met that person face-to-face.

Children engage in various activities, and it is no wonder that they could experience various risks – 16% reported that they had been treated in a hurtful or nasty way online. Half of these children said that they were receiving nasty messages. Twenty-one per cent of the children had encountered harmful websites, most often showing people harming or hurting themselves. Lithuanian parents can still be considered active mediators of their children's internet use and safety. Most of the parents (92%) said that they gave advice on how to use the internet safely, and 80% were interested in what their children were doing online.

Highlights

Lithuanian children and their parents are active internet users. Eighty per cent of parents are interested in what their children are doing online, so it seems that Lithuanian children are not left alone and have parents who could help them. However, only half of the parents help their children if the child is facing something online that is causing them anxiety. It might be that the parents don't really know what their children are actually facing online.

Malta (MT)

Malta EU Kids Online team

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Maltese national report

Lauri, M.A. & Farrugia, L. (2019). *Access, use, risks and opportunities for Maltese children on the internet*. Msida: University of Malta.

Key findings

Smartphone use increases with age, with about half of the younger children aged between 9 and 10 accessing the internet through a mobile phone. This number increases to 9 out of every 10 children between the ages of 15 and 16. For all participants, the two most common online activities are watching video clips (79%) and listening to music (72%).

One in every four children had received sexually explicit messages and one in five received requests of a sexual nature. Of those aged 15 to 16, 70% have seen sexual content in the last year. Younger children (24% of 9- to 10-year-olds and 34% of 11- to 12-year-olds) were very upset by these images; 21% of children aged between 9 and 16 did not speak to anybody about an online experience that had disturbed them. Friends (39%) and parents (42%) were the main source of support in cases when they did seek help. The percentage of children who did nothing when facing such problems remains high, with 33% ignoring the problem or hoping that it would go away and 30% closing the website or app.

The belief that teachers care about children is well above the average (74%). Despite a climate of trust in classrooms, mediation by teachers is low and remains restrictive rather than enabling; 43% of participants said they had received rules about what they were allowed to do on the internet at school, while 45% said they had received advice on how to use the internet safely.

Highlights

Eighty-nine per cent said that they use the internet every day at home. Far fewer (5%) of 15- to 16-year-olds use the internet at school. This may reflect less openness to technology in the classroom. Internet use at school is higher among students between the ages of 9 and 10 (13%). Thirty-five per cent of children aged 9 to 16 made contact with people online they had never met offline. Around half of these children met in real life the people they had come to know online.

The small size of the country is possibly one reason why so many children could meet up with somebody they met online. The majority of those who decided to meet these online acquaintances in real life were happy to have done so; however, 6% were uncomfortable with this.

Among risks related to privacy, 11% experience people pretending to be them and 7% say that somebody had created fake pages or images and circulated them to damage their reputation. These privacy risks are more common among adolescents and may lead to widespread damage because of the familiarity that characterises the local context.

Norway (NO)

Norwegian EU Kids Online team

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Norwegian national report

Staksrud, E. & Ólafsson, K. (2019). *Tilgang, bruk, risiko og muligheter: Norske barn på Internett. Resultater fra EU Kids Online Undersøkelsen i Norge 2018*. EU Kids Online and the Department of Media and Communication, Olso: University of Oslo, bit.ly/2XuKcbV

Summary (in English): bit.ly/35a6HWe

Key findings

Most Norwegian children experience the internet as a positive social environment and feel safe online. Ninety-six per cent own their own mobile phone with internet access. On average they use the internet for a little less than 4 hours a day; 40% of 9- to 17-year-olds say they have rules about how long or when they are allowed to be online. This is interesting since we know that over half of the Norwegian parents generally express significant concern or worry about the amount of time their children spend online – 54% (70% of parents under the age of 40) say they worry 'a lot' that their child spends too much time on their phone, and 49% say they worry 'a lot' that their child is spending too much time playing video games.

Interestingly, we found that when controlling for factors such as age, gender, socio-economic status, emotional and peer problems, the amount of time children spent online positively influences self-reported wellbeing. Norwegian children are understood to have a high risk of encountering sexual messages – 32% of those aged 11 to 17 have received such messages. Fewer of the younger group have received one or more sexual messages during the previous year (7% of 11- to 12-year-olds). At all ages, girls are significantly more upset than boys on receipt of sexual messages, although this decreases with age.

Highlights

The use of mobile phones in schools is a controversial topic in Norwegian public discourse. Our data shows that where teachers are either positive towards or allow mobile phone use at school, children experience a higher degree of self-reported wellbeing.

Too much focus on risk among researchers, government authorities, politicians, parents and teachers can have an alienating effect for children who experience the internet as a positive social arena. We need to think about how we can ensure that those who experience risk get the help and support they need, without detracting from the positive experiences of internet use.

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Polish national report

Pyżalski, J., Zdrodowska, A., Tomczyk, Ł. & Abramczuk K. (2019) *Polskie badania EU Kids Online 2018. Najważniejsze wyniki i wnioski*. Poznań: Wydawnictwo Naukowe UAM, www.academia.edu/38511454/Py%C5%BCalski_J._Zdrodowska_A._Tomczyk_%C5%81._Abramczuk_K._2019_._Polskie_badanie_EU_Kids_Online_2018._Najwa%C5%BCniejsze_wyniki_i_wnioski._Pozna%C5%84_Wydawnictwo_Naukowe_UAM

Key findings

Polish children aged 9 to 17 are mostly mobile internet users. They usually connect to the internet via a mobile phone or smartphone – about eight in ten (84%) do this daily or more often. Interestingly, girls turned out to use mobile internet more often than boys. The internet is mostly used for entertainment and peer communication.

Older students and girls use the internet more often for learning and social engagement. At school the internet is used for passive learning, e.g. more than 80% of the students never post the content on a school discussion group or blog. Still, the internet is involved more often in older students' learning.

A minority of young people are exposed to serious risks. For instance, about 14% of older students had received sexual messages and 9% of the whole sample had sent hurtful or nasty messages online. Only about 7% of participants carried out cyberbullying or hate speech. Unfortunately, the percentage of passive recipients is higher, reaching one-third.

Young people generally assess their online competences critically – only about 60% highly evaluate their ability to decide which content may be published on the internet, and a third are totally sure they can install mobile applications. About 12% admit not being able to set privacy settings (e.g. on social networking sites).

Highlights

Cyberbullying in Polish children overlaps with traditional bullying where technologies are not used (physical violence, verbal violence and exclusion). It rarely happens that someone is a victim or a perpetrator online without being involved in traditional peer violence.

Using the internet moderately when it comes to time online only slightly affects involvement in online risks. Those using the internet for half an hour or less a day experienced online risks almost as often as the rest of the sample.

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Portuguese national report

Ponte, C. & Batista, S. (2019). *EU Kids Online Portugal. Usos, competências, riscos e mediações da internet reportados por crianças e jovens (9-17 anos).* EU Kids Online and NOVA FCSH, www.fcsh.unl.pt/eukidsonline/documentos/

Key findings

Gender differences matter in the way Portuguese children deal with online risky situations, parental mediation and incorporate new generations of smart technology (IoT) in daily life. Engaging in online activities, girls (27%) report more bothering online experiences than boys (18%). Facing these situations, girls request more support from peers and adults they trust (parents, teachers) than boys, who use more proactive and isolated answers. From the 33% of children that reported having seen sexual content, almost half of the boys felt happy about it, compared to 7% of the girls. Gender differences are also visible in the way children report family practices and supervision around online experiences.

A cluster analysis based on frequency of those practices reveals that absence of family communication and mutual support are mainly reported by boys, while parental support and regulation are more often reported by girls. Self-perception of competence (where boys see themselves more competent than girls) does not translate into patterns of familial assistance (it is usually girls who help out grown-ups).

Regarding pioneering adoption of the Internet of Things, app-controllable toys, such as cars or robots (25%), smart watches and Toys-to-Life (21%), are the most popular among boys, while girls' favourites are smart home appliances (10%). Overall, results point to the replication of gendered stereotypes in digital spaces, but also to autonomous mobilisation of technology by girls.

Highlights

Portuguese children report difficulties on choosing the best keywords for online searches (67%), or to verify whether online information is true (53%). These lower rates may also reflect critical awareness of the complexity of such competencies. Informational skills are part of the national ICT curriculum taught at schools, whose most reported topics are related to online safety, e-etiquette and copyright duties.

Taking advantage of opportunities for civic engagement and for participation in public debates are reported by only 15%. The ICT curriculum in schools should take more account of the challenges of the online and offline experiences of young people regarding critical information search and evaluation as well as civic engagement and participation.

Republic of Serbia (RS)

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Serbian national report

Kuzmanović, D., Pavlović, Z., Popadić, D. & Milosevic, T. (2019). *Internet and digital technology use among children and youth in Serbia*. EU Kids Online Survey Results, 2018, www.lse.ac.uk/media-and-communications/assets/documents/research/eu-kids-online/participant-countries/serbia/EU-Kids-Online-ENG-2019.pdf

Key findings

Children in Serbia aged 9 to 17 most frequently use smartphones to access the internet – 86% do so daily, from 65% in the youngest group of 9- to 10-year-olds. Underage use of social media and gaming platforms is conspicuous: 41% of 9- to 10-year-olds and 72% of 11- to 12-year-olds have a profile on such platforms. Sixty per cent of children and young people never use the internet for creative purposes, such as to share content (videos or music) they created on their own.

Serbian children assess their own digital skills as above average (above the arithmetic mean). Older children display greater confidence across the range of digital skills except for programming (e.g. in Scratch or Python), where younger children aged 11 and 12 feel more competent than older ones. This may be due to the fact that children of this age have a compulsory computer science subject at school.

Highlights

Additional analyses about excessive internet use reveals that, when a range of children's socio-demographic characteristics are controlled for, restrictive mediation is a significant predictor of time spent online (parental restrictions reduce the time spent online), but not of excessive internet use. The main predictor of excessive internet use is the child's anxiety (emotional problems). Active mediation, however, does reduce excessive internet use, but it doesn't affect time spent online. While there is a significant correlation between the amount of time spent online and excessive internet use, time spent online should not be considered as a necessary or sufficient condition for excessive internet use. We therefore warn against pathologising screen time, and emphasise the need to look into the broader context of children's internet use. The use of active mediation among parents in Serbia is rather limited, however. Only 40% of participants say their parents or caregivers often suggest ways of how to use the internet safely, and 39% say their parents often help them when something bothers them online.

Romania (RO)

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Romanian national report

Velicu, A., Balea, B., & Barbovschi, M. (2019). *Acces, utilizări, riscuri și oportunități ale internetului pentru copiii din România*. Rezultatele EU Kids Online 2018. EU Kids Online și DigiLiv-REI, http://rokidsonline.net/wp/wp-content/uploads/2019/01/EU-Kids-Online-RO-report-15012019_DL.pdf

Key findings

Although internet access for Romanian children from mobile devices has increased more than four times since 2010 (reaching 84% in 2018), access limitations remain due to economic factors such as cost or poor infrastructure. Therefore, 65% of children perceive the devices as too expensive, 37% perceive the costs of connecting to the internet as too high, while 25% report the internet signal as being too weak or non-existent in the area in which they live.

Self-reported negative online experiences of children have increased (33% in 2018 vs 21% in 2010). The highest increase can be found among 9- to 10-year-olds (29%), which means earlier exposure to online risks. Regarding cyberbullying, although boys report having been victims more than girls, girls tend to be twice as bothered as boys (53% vs 24%). A third said they had witnessed someone being bullied online in the past year (from 21% for 9- to 10-year-olds to 45% for 15- to 17-year-olds). Of those who noticed online bullying, almost half tried to help the victim, 45% did nothing, while 7% encouraged the aggressor. Sharing children's personal data on the internet without their consent is frequent in Romania (for 28% of children's parents and 17% of children's teachers). As a consequence, almost a third received negative comments (boys more than girls, who were more upset); they were also more likely to ask for the content to be removed.

Highlights

A third of Romanian children have been exposed to some form of cyberhate speech in the past year (from a quarter for the 9- to 10-year-old group to half for the 15- to 17-year-olds). Twelve per cent of all children have themselves received hate messages online, targeting them or their group (of these, half received these messages monthly).

In a rather permissive attitude, almost half of the children condone the use of violence against someone who insults family or friends, reflected in the data about cyberhate: of those exposed to cyberhate, almost a quarter have intentionally searched for this type of content (a worrisome 30% in the 9- to 10-year-old group), while 8% of all children reported they have sent these kinds of messages themselves.

Russian Federation (RU)

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Key findings

The average time using the internet by adolescents aged 12 to 13 is 3.5 hours a day and by older adolescents aged 14 to 17 it is 5 hours – 17% of these older adolescents spend more than 8 hours online every day, more than a third of their lives. Parents' user activity is lower: a third (35%) use the internet for less than an hour a day, and the other third (34%) use the internet for 2 to 3 hours a day.

One out of three 12- to 13-year-olds (34%) and one out of two 14- to 17-year-olds (52%) have met at least once in person someone they originally got to know online. Among parents, only 15% know about such meetings. In other words, the under-estimation of adolescents meeting up with strangers they got to know online is extremely high. Yet half of those aged 12 to 13 (57%) and the majority of those aged 14 to 17 (73%) said that these meetings evoked positive rather than negative emotions.

Among online risks, risks relating to rude or inappropriate communication was the most common: 85% of those aged 14 to 17 encounter at least one of them, and among those aged 12 to 13 it is 71%. More than half face cyberaggression. Exposure to inappropriate or harmful content online – content risks – are in second place (76% of those aged 14 to 17 and 54% of those aged 12 to 13). One out of three adolescents encounters technical risks such as password theft or computer viruses, spyware and other programs that interfere with system operations. Every fifth older adolescent faces consumer risks – online fraud, cash theft or unwanted cash spending. A fifth of adolescents show signs of having excessive internet use problems.

Parents significantly under-estimate the experience of adolescents in dealing with communication (17%) and content (32%) risks, and over-estimate the impact of consumer risks (29%). At the same time, the majority of parents (75%) believe that they use active safety mediation. However, adolescents' scores are slightly lower; about half believe that their parents use active safety mediation.

Highlights

Approximately 90% of adolescents use social networks every day. Nasty or hurtful messages were sent to 69% of those aged 14 to 17 and 58% of those aged 12 to 13. Older adolescents admit that they were the initiators of cyberaggression much more often compared to younger children: 70% vs 37%.

Parents feel more competent in helping their children: 83% feel that they can help their children to cope with things online that bother or upset them, and 67% monitor their children's social media profiles. Every second adolescent often helps their parents when they have difficulties using the internet.

Slovak Republic (SK)

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Slovak national report

Izrael, P., Holdoš, J., Ďurka, R., Hasák, M. (2020). *EU Kids Online IV v Slovenskej republike. Slovenské deti a dospievajúci na internete: Správa z výskumu*. Ružomberok: Katolícka univerzita v Ružomberku, http://rodinaamedia.ku.sk/publikacie/

Key findings

Slovak children aged 9 to 17 access the internet mostly via smartphones – 72% do so daily. The main motive for using the internet is entertainment and social interaction, and internet use increases during the weekend. Fifty-six per cent of children aged 9 to 12 visit a social networking site at least once a week despite the general age limit for such use at 13 years, and only 20% of parents do not allow them to use a social networking site.

In addition, parents of children of this age group allow them to use instant messaging applications without them having to ask for permission (62%). Younger girls (aged 9 to 12) use social networking sites more often than boys, while there is no such gender difference in older children (aged 13 to 17). At the same time, frequent use of social networking sites in younger children is associated with a higher risk of experiencing something that bothers or upsets them.

As for other gender differences, it is girls rather than boys who find people on the internet kind and helpful, yet this attitude is not associated with negative experiences online. There are no significant gender differences regarding encountering harmful content. Experience with face-to-face meeting with a person only known from the internet (17%) is associated with sensation-seeking and emotional problems. After a face-to-face meeting with a person only known from the internet, 53% of the children reported feeling happy and 15% were upset.

Highlights

Altogether, 21% of children aged 11 to 17 saw physical self-harm content, 10% saw suicide-related content and 26% encountered content promoting anorexia and bulimia. Exposure to harmful content is associated with children's emotional problems, sensation-seeking, hyperactivity and conduct problems. Exposure to one type of harmful content also means exposure to other types. A little worrying is the finding that when children are bothered or upset by something online, 26% do not talk to anyone, and this percentage increases with age. Almost a fifth of parents think their child hasn't had contact on the internet with someone the child has not met face-to-face before, although the child has had such an experience. A significant number of parents (40%) rarely or never apply active mediation. On the other hand, the use of active mediation is more frequent in families with a higher income and parents with a higher education.

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Spanish national report

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Key findings

Spanish children's engagement online with communication and entertainment activities has increased since 2015. Their preference for communicating with family and friends (70%), and leisure activities – such as listening to music (63%), watching video clips (55%) and playing online (46%) – on a daily basis stands out, whereas the evidence shows lower interest in participatory and civic activities.

While engaging in their everyday online activities, 33% of the children were bothered or upset online. Social and instrumental skills are the most widespread among Spanish children, whereas informational and creative skills are a little less common. This shows the need for improving school mediation.

Even though Spanish children feel their school is a place they belong to, with supportive teachers willing to help them, teachers don't really mediate their online activities and tend to be more restrictive (39%) than proactive (29%) when mediating the students' online activities. They also tend to set more restrictions on teenagers (43%) rather than on pre-teens (33%). Policy on digital literacy in primary and secondary education focusing on safer internet use and pedagogical change would definitely contribute to developing children's online skills.

Highlights

The number of teen girls who access content related to ways of physically hurting themselves (6% vs 2%), committing suicide (5% vs 1%), ways of being very thin (4% vs 1%) and hate messages (12% vs 4%) is significantly higher than among boys. Consequently, teen girls have found themselves in situations on the internet that have bothered them (40%) significantly more often than boys (29%). Parents tend to encourage boys more than girls to explore online, while more often restricting activities for girls. These findings, consistent with previous results, show their worry especially for girls' online safety.

Switzerland (CH)

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Swiss national report

Hermida, M. (2019) *EU Kids Online Schweiz. Schweizer Kinder und Jugendliche im Internet: Risiken und Chancen*. Goldau: Pädagogische Hochschule Schwyz, www.eukidsonline.ch/files/Hermida-2019-EU-Kids-Online.pdf

Key findings

Almost a third (30%) of Swiss 9- to 10-year-olds use a mobile phone to go online at least several times a week. From 13 years on most children (86%) report being online via a mobile phone several times a day. Risky online experiences are quite common. More than half (64%) experienced at least one of the risks inquired about, and among the oldest children (15 to 16 years), almost all (94%) have experienced one or more risks. The most common is seeing problematic user-generated content, reported by 26% of 11- to 12-year-olds and 64% of 15- to 16-year-olds. Still, many children (29%) who had negative experiences didn't tell anyone.

Dealing with negative online experiences, most children (36%) try to resolve the problem by blocking another person – which indeed turns out to be the most successful countermeasure.

Many children meet face-to-face with people they met online, and many younger children already have online social media profiles. While often depicted as especially risky, most children associate these activities with positive experiences. Meeting a stranger is mostly something the children enjoyed. And even younger children see social media as a useful tool to find new friends. With the increasing importance of digital media in children's daily lives, asking them to stay away from such activities seems increasingly futile. It may be much more reasonable to emphasise risk management over risk avoidance – even for younger children. This may offer the best protection while also allowing children to take full advantage of the opportunities the internet offers.

Highlights

Contact with online risks is less an exception and much more the rule. Older age, more skills and owning a smartphone lead to more risky experiences. Therefore, increasing exposure to risks turns out to be a general side effect of growing up in a digital world. This calls for a good balance between the desire to avoid risks and the necessity to manage risks.

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