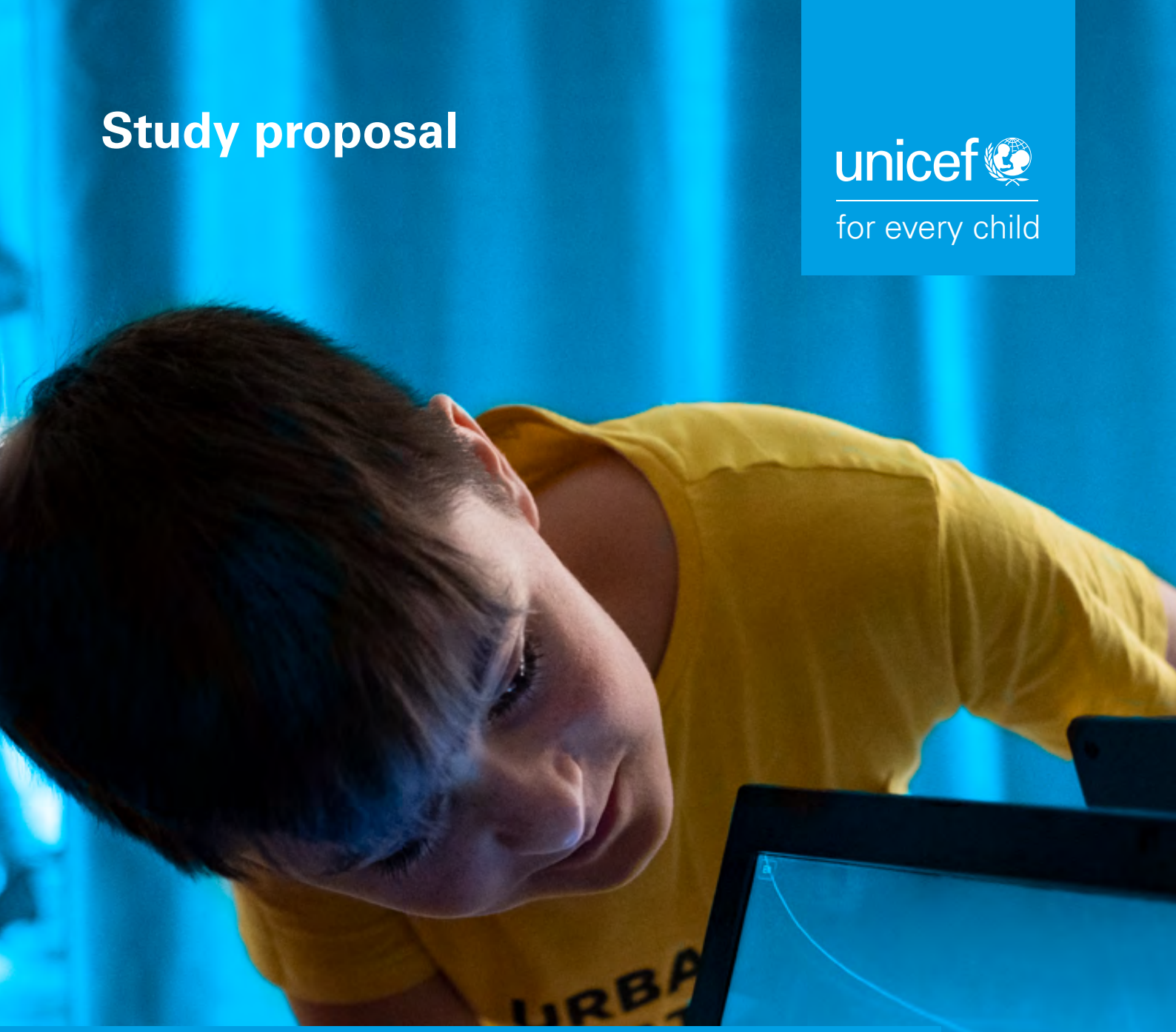
Study proposal

unicef
for every child



CHILD RIGHTS IN THE DIGITAL ENVIRONMENT

A shared responsibility

GOBIERNO DE ESPAÑA MINISTERIO PARA LA TRANSFORMACIÓN DIGITAL Y DE LA FUNCIÓN PÚBLICA
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01
Growing up in the digital era

Digital technology has profoundly transformed our lives. Nowadays, there is no knowledge field nor life sphere that is not affected by technological development, putting at our disposal infinite possibilities in terms of relationships, communication, entertainment, creativity and personal development. Adolescents are active users of technology as well as full-fledged consumers from entertainment applications, video games, social networks, to modern digital platforms in the educational field.

This interaction with technology requires a comprehensive approach to ensure that they can take advantage of the digital environment. It is essential to recognize and address the benefits and challenges that technology brings to ensure their well-being and adecuate development in the digital age. In order to achive this, it is essential to address the situation regarding the relationship with technology from a position that guarantees children's rights.

For this purpose, a holistic and systematic understanding of the impact it has on their lives is requiered.

From a child right's perspective, we will have to ensure that their digital experience will not be detrimental to their physical and mental health, that we will be able to contribute to the development of a protective environment where there will be no room for any form of violence and that we will make available to them all they need to develop, participate and improve their understanding of the world.

For this great challenge to be accomplished, we ask your collaboration, to understand the main challenges in order to **provide institutional decision-makers and the general public with the information they need to help them to assess the problem** and design the appropriate policies and plans required by such a dynamic and cross-cutting reality.

This project is developed by UNICEF Spain, the University of Santiago de Compostela, the General Council of Computer Engineering and Red.es, under the Ministry for Digital Transformation and Public Function. Its main objective is to carry out a baseline diagnosis on the relationship that currently exists between teengaers and digital technologies. **For this purpose, we will carry out an ambitious empirical work, including a qualitative phase and a quantitative study, with a sample of 100,000 non-university students aged between 10 and 20 years old, as well with another 5,000 teachers.** This study will constitute one of the most relevant empirical studies to date on adolescents and technology, and it will provide a broad and rigorous vision of the state of the art, supported by internationally renowned organizations and high-level experts from different disciplines.

To achieve this, it is essential to have the **opinion of adolescentes themselves and the commitment, involvement and collaboration of the authorities and professionals from different disciplines such as educators, social and health practitioners; as well as families and Institutional representatives,** in order to understand the situation and contribute to the search for solutions that benefit and enhance the balanced use of technology.

100,000
Non-university students aged between 10 and 20 years old

5,000
teachers

01/ Growing up in the digital era

The support of the Regional Departments of Education will allow us to involve the whole school comunity to help us understand children and teenage interaction with digital technologies. These Departments are key players in ensuring that adolescents in all territories are represented, as well as in ensuring an inclusive and equitable approach.

As a country committed with child rights it is essential to understand and include them in the digital environment. The solutions we seek and the design of a new digital space that contributes to education, participation, health and development of teenagers, requires the vision and active participation of the institutions and those in charge of the promotion of children's rights.

In order to build a fairer and more prosperous society, it is necessary that children and teenagers feel safe, access to learning opporunities, growth and social participation through technology.

02

Impact of the RICTs

Health

Physical health
Lifestyle, sleep, diet, overweight/obesity, body image.

Mental health
Emotional well-being, vital satisfaction, social integration.

Addictions
Pathological/problematic gambling, problematic Internet use, video game addiction.

Participation and freedom of expression

Personal development and social integration

Civic participation
Free decision making. Education in values, aspirational model. Capacity for critical analysis and participation of children and teenagers.

Gender Identity

Education

Cognitive functions
Attention, memory, information processing, language development, creativity.

Socialization

Learning
Media literacy and digital skills, knowledge of children's rights.

Affective-sexual education

Coexistence

Family

School and relationships

Bullying and cyberbullying
Conflict in schools. Tolerance to frustration, empathy.

Social media
New model of relationships, attachment.

Protection

Online risk behaviors
Sexting, grooming, dark web, early access to pornographic content.

Image overexposure and contact with strangers.

Privacy

03
A matter of social interest

The use of technology and screens constitues one of the greatest issues of interest for administrations, professionals and researchers in the field of health, education and peer relationships, as well as at policy and regulatory level.

The National Strategy on Addictions 2017-2024 (National Plan on Drugs 2019) of the Ministry of Health, includes some strategies to prevent and address the so-called non-substance addictions:

- To promote social awareness of risks,
- To increase the perception of risk associated with consumption and certain addictive behaviors,
- To encourage citizen participation for this purpose, and
- To promote healthy lifestyles, habits use of technologies and healthy leisure alternatives.

Civil society organizations have developed a proposal for a **State Pact to protect children in the digital environment,** with a series of measures that will allow progress to be made within a framework of political and social consensus.

Also, Spain's Strategy for the rights of children and teenagers includes measures to protect them in the digital environment.

This would be achieved through the development of digital education programs aiming to promote a safe and responsible use of technology, as well as the active participation of adolescents in the decision making about their own online safety. The strategy also includes the creation of tools and resources to help families and educators monitor and guide the use of technology, as well as fostering with the private sector to ensure their protection.

From a safeguarding perspective, the emergence of new forms of violence have also been raising concern, such as **sextortion, cyberbullying** or **grooming**, as well as gambling websites, games of chance and online video games that may be unsuitable for adolescents.

On the other hand, **unlimited access to all the diversity and complexity of** available **content**, without the necessary guidance and education, can contribute to the rise of certain intolerant attitudes in digital environments.

Furthermore, hospital units, specialized centers and specific prevention and intervention programs have emerged in recent years, seeking to re-educate towards a healthy use of the Internet and mitigate the negative effects from this problem.

The strategy includes the creation of tools and resources to help families and educators to supervise and guide the use of the technology

04

What does the data say?

Presence of screens from an early age

According to the Unicef Spain 2021 study (Andrade *et al.*, 2021)..

- In average, children receive their first mobile phone in our country at the age of 10.96 years old.
- Approximately 6 out of 10 (59.1%) of spanish middle school students take their mobile phones every day or almost every day to school, and more than half (58.4%) usually sleep with the phone their bedroom.
- 97.7% of Spanish adolescents aged 12-13 are registered in some social network (78.8% in three or more), despite the fact that the minimum age required in our country is 14 years old.
- Nearly 1 out of 3 children (31.6%) spend more than 5 hours a day connected to the Internet on a typical weekday, rising to 49.6% during the weekend.
- Undoubtedly, technology plays an important role in the lives of children and teens, affecting their routines, health and relationships.

98% of
Spanish teenagers aged 12 to 13 are registered on at least one social network

Online risk behaviors

- According to the EU Kids Online IV study (Smahel *et al.*, 2020), in Spain, 9% of adolescents between 12 and 16 years of age acknowledged having sent sexual messages (conversations, photos or videos). In the last year (active sexting), while 30% reported having received them (passive sexting). Thirty-nine percent reported having made contact through the Internet with someone they did not know personally, a number that doubled the percentage obtained in the EU Kids Online II study a decade earlier (21%) (Garmendia *et al.*, 2011). According to this same study, 22% would have met in person with someone they met through the Internet, much higher than the 9% found in 2011.

The Unicef Spain 2021 study confirms the progression of all these figures:

- Sexting rates among Spanish middle school students ranged from 13.8% (active sexting) to 42% (passive sexting), with 11.4% of adolescents stating that they have suffered pressure or attempts at blackmail or sextortion. Although sexting is practiced by both genders, girls are the ones that suffer pressures the most. In the 3rd and 4th years of middle school, sexting rates doubled.
- Contact with strangers through the Internet, social networks or online video games is a relatively common practice among adolescents. Thus, 57.2% of middle schoolers acknowledge having accepted strangers on a social network and 21.5% have met in person with people they met exclusively online. All this constitutes a worrying breeding ground for grooming.
- 1 in 10 adolescents has received a sexual proposition by an adult through the Internet.

04/ What does the data say?

Impact on physical and mental health

According to the Barrié Foundation's study (2022)..

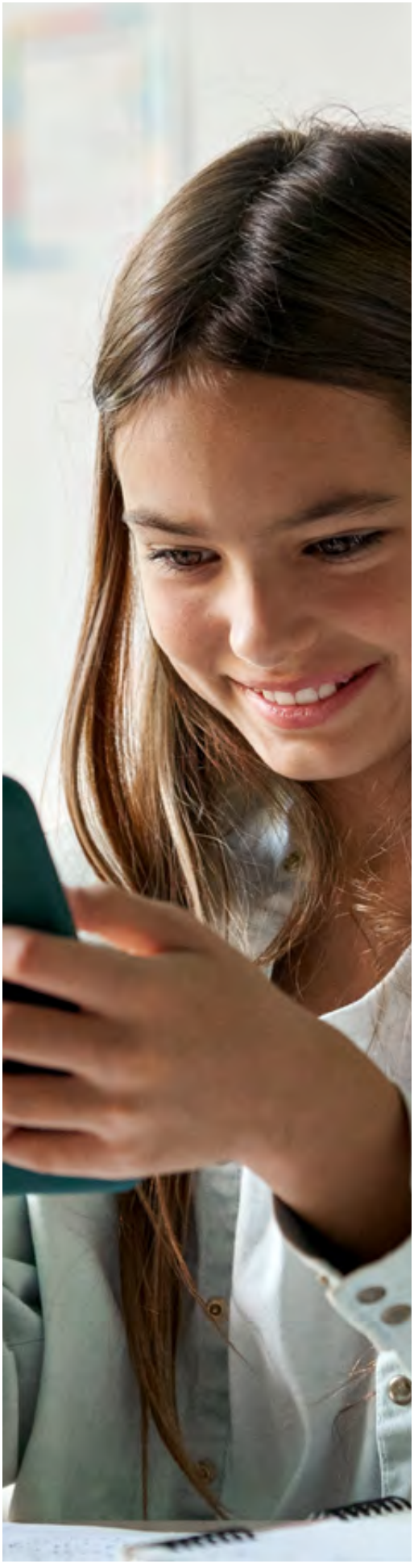
- The percentage of adolescents who sleep 5 hours doubles among those who develop Problematic Internet Use (PIU) (6.5% vs. 13.9%) and obesity rates triple (3% vs. 1%).
- Adolescents with PIU show 3 to 4 times higher levels of depression and suicidal ideation, lower emotional well-being and lower life satisfaction.
- These results coincide with those reported in the UNICEF Spain 2021 study and those reported in studies such as those of Machimbarrena *et al.* (2019) and Ortuño *et al.* (2022). Works such as that of Miller *et al.* (2023) also warn that frequent and intensive use of screens can have functional consequences in the adolescent brain.
- Recent international-relevant studies (Montag *et al.*, 2024) also alert of the serious health and coexistence correlates that can result from the misuse of technology but insist on the need of not considering it as a necessarily negative element.

New forms of addiction

- The so-called non-substance addictions are on the rise: Pathological Gambling or Gambling Disorder already affects 4.7% of Spanish adolescents, according to the latest edition of the ESTUDES Survey (Spanish Observatory on Drugs and Addictions, 2022). Video Game Use Disorder or Gaming Disorder affects 5.1% and Problematic or Compulsive Internet Use affects 20.5%.
- This new type of addiction is already a serious public health problem that requires a greater effort in terms of detection and early intervention. Any potentially addictive behavior that begins in adolescence is 3 to 4 times greater of becoming an addiction on the medium run.

Impact on family and school coexistence

- The UNICEF study also indicates that screens have become the main source of conflict in at least 1 out of 5 Spanish households. The rate of teenagers who show aggresive behaviour with their parents is 6 times higher among those who present an addition to video games (Fundación Barrié, 2022).
- PIU is also associated with higher rates of bullying and cyberbullying (Feijóo *et al.*, 2021) and the consumption of PEGI18 video games (with explicit violence) doubles the rate of aggressors (Rial *et al.*, 2024). Lower levels of frustration tolerance and a greater disconnection from empathy have also been found.



04/ What does the data say?

Early access to pornography

- According to the studies of Durán et al. (2022) around 90% of adolescents aged 13-18 have consumed pornography at some point, a figure that represents a 20% increase compared to 2018.
- The first contact with porn occurs around the age of 11 (10.89 in girls and 10.93 in boys) and normalizes around 13 years old.
- 72% of the pornography regularly consumed by adolescents is labeled as "hardcore" (with explicit sex and different forms of violence) and 45% of teenagers accessed pornographic pages by chance.
- Pornography consumption at this age contributes to the normalization of sexist attitudes and behaviors among both boys and girls (Ballester, 2023), and forms the basis for new and tempting forms of prostitution targeting young people and adolescents (Villena *et al.*, 2024).
- All these data, together with the evidence gathered in other studies carried out in Spain by Save The Children (2020) or FAD (Gómez *et al.*, 2023) lead to the establishment of pornography as a priority area of policy and reaserch.

Only the

13.2%

of parents limit the content their children have access to on the web

It is also what they stop doing

- Comparatively, the percentage of adolescents with PIU who practice sport regularly in their leisure time is 10% lower, and that of readers is more than 15% lower than teenagers without PIU (UNICEF Spain, 2021).

Role of families and the need to set an example

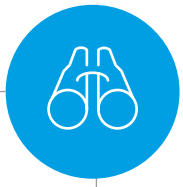
- Despite the current concern, only 13.2% of parents limit the content their children access online, 23.94% limit the hours of use and 29.1% set some kind of rules (UNICEF Spain, 2021). However, 36.8% of parents use their cell phones during family meals, with their children showing significantly more online risk behaviors and screen addiction problems.

05

Expected contributions from the study

01

Using a **comprehensive** approach, the data will allow us to develop **prevention recommendations**, learn about trends in the use and consumption of the Internet, video games and social networks and contribute to the design of necessary policies for this changing reality.



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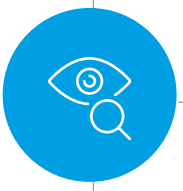


This study will address the social demand for **understanding of the dimension of the new challenges, risks and problems resulting from the continued and excessive use of technologies, as well as the access to certain contents not suitable for their age and in their lives.**

03

Proper digital hygiene will be promoted. Data and analysis will be provided on the factors that trigger problems and negative effects on mental health, relationships with the environment and the development of children and teenagers.

04

Aspects related to **digital skills and literacy**, expectations and trends in the educational community will also be analyzed.

05

Likewise, we will identify **factors, behaviors and practices that can favor a balanced use** of technology and allow the realization of children's rights in the digital environment.

06
Study results

- A global report with a nationally representative sample of **100,000 adolescents** aged 10-20 years, and a qualitative study qualitative study.

- A specific report with the data from each Spanish region.

- A report for each participating school with its individual results, benchmarked against those obtained in it's Autonomous Community and in Spain as a whole. It will also include specific guidelines and recommendations, for the work of the centers.

- Presentation and dissemination of results and recommendations.

The meaningful participation of adolescents in the design of a digital environment that favors the exercise of their rights is both an opportunity and a necessity.

We need a strategy that includes all adolescents and helps us when we find ourselves in vulnerable situations, a strategy that promotes and supports our right to participate in the decisions that affect us. Because nothing that is decided for children should be decided without them. It is time to normalize children's participation.

(Children's conclusions at the 13th European Forum on the Rights of the Child, 2020).

07
Technical Aspects

Scope:
Spain.

Universe:
Infinite. Children and teens aged between 10 and 20 years old, who are in 5th and 6th grade of Elementary School, Middle School, Basic vocational training / Intermediate Training cycles or High School in public, private and subsidized schools in the State (Approximate number: 4,100,000).

Type of sampling:
Stratified clusters, according to Autonomous Community, educational level and ownership of the center. A compromise allocation will be used, with a sample floor of 1,937 individuals per Community/ Autonomous city, which will allow a maximum error of ± 2 % at the disaggregated level.

Sample size:
100,000 children and teenagers.

Worst case scenario:
p=q=0,50

Level of significance:
α=0,05

Overall sampling error (for Spain as a whole):
±0.3%

Maximum sampling error for each autonomous community/city:
±2%

08
Geographic scope

Autonomous Communities	N	n	Centers to contact
ANDALUSIA	800,427	14,271	72
ARAGON	108,844	3,615	18
ASTURIAS, PRINCIPALITY	68,999	3,002	15
BALEARS, ILLES	97,070	3,431	17
CANARY ISLANDS	172,960	4,600	23
CANTABRIA	47,189	2,667	13
CASTILLA Y LEÓN	175,682	4,645	23
CASTILLA-LA MANCHA	182,937	4,759	24
CATALONIA	677,237	12,373	63
VALENCIAN COMMUNITY	451,977	8,903	44
EXTREMADURA	87,306	3,280	16
GALICIA	197,378	4,977	25
MADRID, COMMUNITY OF	593,131	11,078	56
MURCIA, REGION OF	152,937	4,290	21
NAVARRA, FORAL COMMUNITY OF	58,064	2,831	14
BASQUE COUNTRY	181,648	4,732	24
RIOJA, LA	27,506	2,364	12
CEUTA	9,919	2,090	10
MELILLA	10,057	2,092	10
TOTAL	**4,101,268**	**100,000**	**500**

09

Methodology

A **mixed strategy** will be used:

- **At the qualitative level,** different focus groups and in- depth interviews will be carried out. Adolescents of different age ranges, mothers and fathers, as well as professionals from the socio-health and education fields will participate. In-depth interviews will be conducted with recognized national and international experts in the legal, technological, health, educational and institutional fields.
- **At a quantitative level**, a survey among the adolescent population throughout Spain will be conducted. Given the concern raised by the increase in problems related to the use of technology and electronic devices at each time earlier ages, the universe…
  The universe under study will be made up of students residing in Spain, aged between 10 and 20 years old, enrolled in the 5th or 6th year of elementary school, middle school (ESO), high school or intermediate or basic vocational training courses (approximate N = 4,100,000; approximate n = 100,000 individuals).
- As a complementary and exploratory measure, a **survey** will be also carried out **among** elementary and middle and high school **teachers**, with a sample size of 5,000 professionals.

10

Scientific advisory team

This team is made up of people of international prestige, accredited researchers, academics and professionals from different fields, ranging from technology, education, mental health, addiction prevention, school bullying and cyberbullying. Their participation will be particularly relevant in three specifics stages: (1) the review and approval of the methodological design; (2) the elaboration of the questionnaire and selection of variables and evaluation instruments; and (3) the interpretation of the results, helping us to calibrate the scope of the results and to propose appropriate actions.

11
Data collection instrument

A*d hoc* questionnaire, which will include questions from different reference studies carried out at national and international level (in order to facilitate the comparability of the gathered data), alongside items we have developed ourselves and specific scales to assess the possible impact of the use of technology in different spheres of teenagers' lives (mental health, general health, living habits, family coexistence, school bullying and cyberbullying, etc.). Specific tools will also be included for assessing digital competences and skills, parental supervision, different online risk behaviors and even for screening of substance-free addictions (from Gaming Disorder, to Gambling Disorder or Problematic Internet Use). The selection of the different scales will be carried out considering their psychometric properties and the scientific evidence that supports them, their appropriateness to the context and target object of study, always with the endorsement of the study's scientific advisory team.

12
Procedure

The online questionnaire will be developed using LimeSurvey and implemented on a specific platform at the University of Santiago de Compostela, hosted by the Supercomputing Center of Galicia. Technical and legal oversight will be provided by the General Council of Professional Associations of Computer Engineering of Spain, in accordance with current regulations on data protection. The study protocol includes the approval of the Research Ethics Committee of the University of Santiago de Compostela. Participation in the study is completely voluntary, both for the centers, teachers and students. All of them, including families, will be informed in advance of its objectives, and they may decline to participate if they wish.

13
Privacy and data protection

The data will be handled in a completely anonymous and confidential manner. Each center will be provided with a link to the platform, which will be valid only for an assigned period of time. In order to anonymize the questionnaires, no password or username will be used, nor any type of personal data that could identify the students. The procedure for managing all information (data collection, storage, and analysis) will be conducted with all legal guarantees, in compliance with current regulations and data protection protocols at the State and regional levels. At no time will comparative tables or rankings be prepared between schools or region, nor will any individual results be made public.

14
Process

Phase 1

- Research design and elaboration of the questionnaire.
- Qualitative phase.
- Offline and online questionnaire piloting.

Phase 2

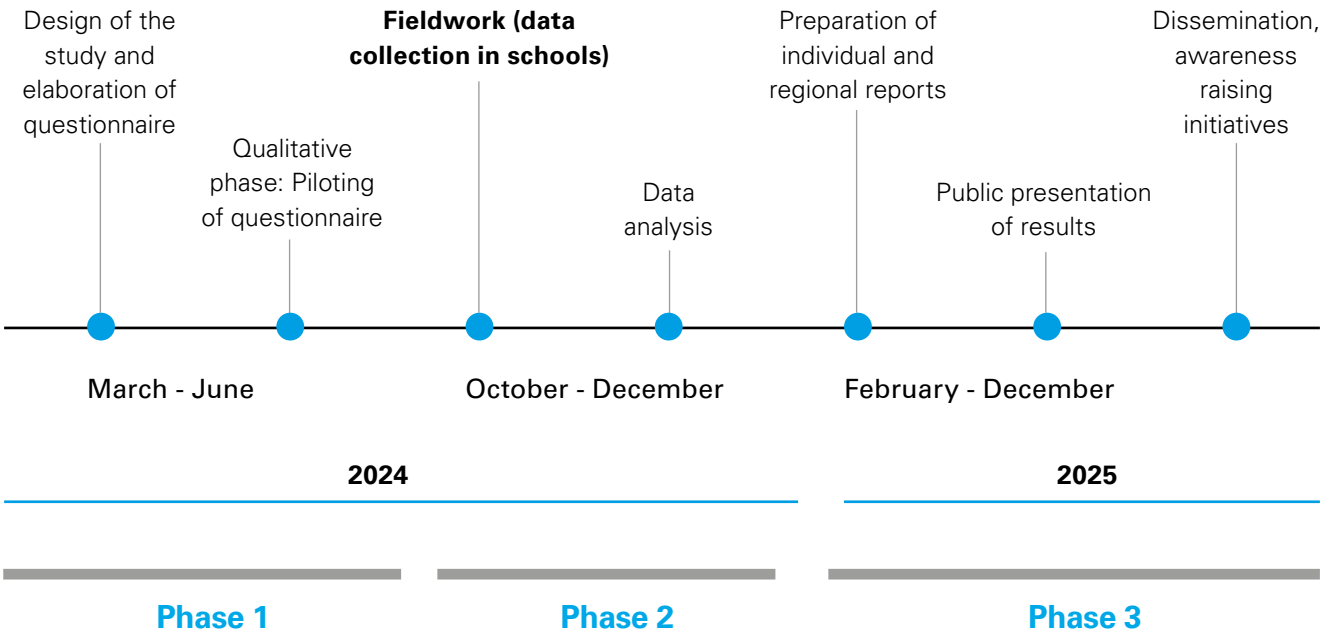
Field work:
The data will be collected in each school, in their computer room or library, in small groups (15-20 adolescents), during tutoring hours and in a coordinated manner by the psycho-pedagogical guidance team or the person designated by the center, who will receive specific training.

Phase 3

- Preparation of confidential individual reports (one for each participating center).
- Specific reports for each region and a comprehensive national report.
- Public presentation of the report.

15
Schedule

Development plan



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References

- Andrade, B., Guadix, I., Rial, A. and Suárez, F. (2021). *Impact of technology in adolescence. Relationships, risks and opportunities.* Madrid: UNICEF España.
- Ballester, L. (2023). *Association between pornography consumption and the attitudes and behaviors of sexual aggression. In: La violencia sexual: sus causas y manifestaciones.* Diaz, A. (coord.). Madrid: Dykinson.
- Duran, M., Milano, V., Ortega, Susana, Aznar, B., Ballester, L. .. (2022). *Study on pornography in the Balearic Islands: access and impact on adolescence, applicable international and national law and technological solutions for control and blocking.* Balearic Institute of Women. University of the Balearic Islands.
- Feijóo, S., Foodie, M., O`Higgins, J., Pichel, R and Rial, A. (2021). *Cyberbullied, cyberbullies and Problematic Internet Use: some reasonable similarities.* 33, 198-205. https://doi.org/10.7334/psicothema2020.209
- Fundación Barrié (2022). *Adolescence, Technology, Health and Coexistence. A proactive study from the adolescents themselves.* https://doi.org/10.13140/RG.2.2.29279.02726
- Garmendia, M., Garitaonandia, C., Martínez, G. and Casado, M. A. (2011). *Risks and safety on the Internet: Spanish minors in the European context.* Bilbao: EU Kids Online.
- Gómez, A., Kuric, S. y Sanmartín, A. (2023). *Youth and pornography in the digital age: consumption, perception and effects.* Madrid: Centro Reina Sofía de FAD Juventud. https://doi.org/10.5281/zenodo.10144121.
- Machimbarrena, J.M., González-Cabrera, J., Ortega, J., Beranuy, M., Alvarez-Bardón, A. & Tejero, B. (2019). *Profiles of Problematic Internet Use and Its Impact on Adolescents' Health-Related Quality of Life.* International Journal of Environmental Research and Public Health. 16. 3877. https://doi.org/10.3390/ijerph16203877.
- Miller, J., Mills, K., Vuoree, M., Orben, M. & Przybylski, A.K. (2023). *Impact of digital screen media activity on functional brain organization in late childhood: Evidence from the ABCD study.* Cortex, 169, 290-308. https://doi.org/10.1016/j.cortex.2023.09.009
- Ministry of Social Rights and Agenda 2030 (2023). *Estrategia Estatal De Derechos de la Infancia y Adolescencia de España.* Madrid: Ministry of Social Rights and Agenda 2030. General Technical Secretariat. Centro de Publicaciones.
- Montag, C., Demetrovics, Z., Elhai, J.D., Grant, D., Koning, I., Rumpf, H.J. (2024). *Problematic social media use in childhood and adolescence.* Addictive Behaviors, 153, 10798. https://doi.org/10.1016/j.addbeh.2024.107980
- Spanish Observatory on Drugs and Addictions (2022). *Report on Behavioral Addictions 2021.* Government Delegation for the National Plan on Drugs.
- Ortuño-Sierra, J., Lucas-Molina, B., Gutiérrez, A., Solana, R., Pérez-Albéniz, A. & Fonseca-Pedrero, E. (2022). *Suicide behaviour and Problematic Internet Use.* European Psychiatry, 65. S69-S70. 10.1192/j.eurpsy.2022.220.
- National Drug Plan (2018). *National Strategy on Addictions 2017-2024.* Madrid, Spain: Government Delegation for the National Plan on Drugs, Ministry of Health and Consumer Affairs.
- Rial-Boubeta, A., Theotonio, Á., Neira-de Paz, A., Braña-Tobío, T. & Varela-Mallou, J. (2024). *Relationship between the consumption of PEGI18 video games with explicit violence, bullying, and cyberbullying.* Psychology, Society & Education, 16(1), 10-19. https://doi.org/10.21071/pse.v16i1.16718
- Save The Children (2020). *(Sexual (mis)information: pornography and adolescence.*
- Smahel, D., Machackova, H., Mascheroni, G., Dedkova, L., Staksrud, E., Ólafsson, K., Livingstone, S. and Hasebrink, U. (2020). *EU Kids Online 2020: Survey results from 19 countries.* EU Kids Online. https://doi.org/10.21953/lse.47fdeqj01ofo
- Villena, A., Brage, L., Santamaria, M. & Gutiérrez, A. (2024). *Pornography consumption as a form of exploitation and digital prostitution of women and girls- A human rights issue.*

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