Inclusion Policy Laboratory:

Results of Evaluation

Fundación Secretariado Gitano – Comprehensive Educational and Social Support Initiative for Marginalized Families

April 2024

The General Secretariat for Inclusion of the Ministry of Inclusion, Social Security, and Migration has prepared this report within the framework of the Inclusion Policy Laboratory, as part of the Plan for Recovery, Transformation and Resilience (RTRP), with funding from the Next Generation EU funds. As the organization in charge of carrying out the project, the *Fundación Secretariado Gitano* has participated in the elaboration of this report. This collaborating organization is one of the implementers of the pilot projects and has collaborated with the General Secretariat for Inclusion in the design of the RCT methodology, actively participating in the provision of the necessary information for the design, monitoring, and evaluation of the social inclusion itinerary. Likewise, their collaboration has been essential to gathering informed consents, ensuring that the participants in the itinerary were adequately informed and their participation was voluntary.

The team of researchers coordinated by the CEMFI (Center for Monetary and Financial Studies) has collaborated substantially in the realization of this study. Specifically, Ana García-Hernández, senior research and policy manager at JPAL Europe, Inés Torres Rojas, research and public policy associate at J-PAL Europe, Pablo Montero Lomas, employee of the Tragsa Group, and Paola Giannattasio, predoctoral researcher at CEMFI have participated in the event, under the coordination of Mónica Martínez-Bravo (until January 8, 2024) and Samuel Bentolila, professors at CEMFI. The researchers have actively participated in all phases of the project, including the adaptation of the initial proposal to the evaluation needs through randomized experiments, the evaluation design, the definition of measurement instruments, data processing, and the performance of econometric estimations that lead to quantitative results.

The collaboration with J-PAL Europe has been a vital component in the efforts of the General Secretariat for Inclusion to improve social inclusion in Spain. Their team has provided technical support and shared international experience, assisting the General Secretariat in the comprehensive evaluation of pilot programs. Throughout this partnership, J-PAL Europe has consistently demonstrated a commitment to promoting evidence-based policies, facilitating the integration of empirical data into strategies that seek to promote inclusion and progress within our society.

The researchers have conducted this evaluation report using the data available at the time of its writing and it is based on the knowledge acquired about the project up to that date. They reserve the right to clarify, modify, or delve into the results presented in this report in future publications. These potential variations could be based on the availability of additional data, advances in evaluation methodologies, or the emergence of new information related to the project that may affect the interpretation of the results. The researchers are committed to continuing exploring and providing more accurate and updated results for the benefit of the scientific community and society at large.

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Executive Summary

- The **Minimum Income Scheme,** established in May 2020, is a minimum income policy that aims to guarantee a minimum income to vulnerable groups and provide ways to promote their social and labor integration.

- Within the framework of this policy, the Ministry of Inclusion, Social Security and Migration (MISSM) promotes a strategy to promote inclusion through pilot projects of social innovation, which is conducted in the **Inclusion Policy Lab**. These projects are evaluated according to the standards of scientific rigor and using the methodology of randomized controlled trials.

- This document presents the evaluation results and main findings of the "Comprehensive Educational and Social Support Initiative for Marginalized Families", which has been conducted in **cooperation between the MISSM and the Fundación Secretariado Gitano (FSG),** an organization of the Third Sector of Social Action, which develops actions aimed at the comprehensive promotion and defense of the rights of the Roma community in Spain and Europe.

- This study assesses the implementation of educational itineraries for children and social support for their families. The project targets students experiencing social exclusion, primarily of Roma descent, who are enrolled between the 3rd year of primary school and the 3rd year of secondary school, along with their families.

- The **treatment group** received an educational itinerary aimed at children with three levels of intervention: individual, group and socio-community. In addition, the participating families received a social and personal support service and a technological accessibility service consisting of the acquisition of digital skills, an internet access point and the loan of a tablet. The **control group** did not receive any type of intervention, except for concrete and specific support related to basic needs, such as access to benefits such as the Minimum Income Scheme or emergency cases that for reasons of ethical responsibility the organization decided to attend.

- The project took place in seven locations in six different autonomous communities: A Coruña and Ferrol in Galicia, Gijón in Asturias, Granada in Andalusia, León in Castilla y León, Madrid in the Community of Madrid and Murcia in the Region of Murcia. The study involved a total of 538 students and 647 adults from 399 families. A total of 197 families were assigned to the treatment group, corresponding to 270 children and 335 adults, and 202 families were assigned to the control group, consisting of 268 children and 313 adults.

- Half of the children in the treatment group participated in more than 40% of the educational reinforcement sessions, with an uneven degree of participation depending on the locality. Families participated in an average of 6 individual sessions and 2 group social support activities, as well as in activities in the educational field (mainly family interviews) and the technological accessibility service.

- The main results of the evaluation are as follows:
    - **Improving Education:**
        - The children involved in the program experienced a positive transformation in their educational trajectory, **improving their school success by 18%.** Children in the treatment group scored 1.5 points higher than children in the

control group (5.49 points in the treatment group vs. 3.99 in the control group). This means that the treatment led to a 38% improvement in the children's academic performance.

- Families who received the treatment are more interested and involved in their children's education than those in the control group. In addition, children **increase their educational expectations**.
- These results are key elements that can positively influence children's future educational trajectory.

o **Access to resources:** Families who were part of the treatment have become more familiar with the public aid and benefits available. Families in the treatment group participate 21% more in their communities.

o **Digital skills:** Both young people and adults improved their digital skills, with an increase of 16% and 12% respectively, compared to those who did not receive treatment.

1 Introduction

General Regulatory Framework

The Minimum Income Scheme (MIS), regulated by Law 19/2021[1], is an economic benefit whose main objective is to prevent the risk of poverty and social exclusion of people in situations of economic vulnerability. Thus, it is part of the protective action of the Social Security system in its non-contributory modality and responds to the recommendations of various international organizations to address the problem of inequality and poverty in Spain.

The provision of the MIS has a double objective: to provide economic support to those who need it most and to promote social inclusion and employability in the labor market. This is one of the social inclusion measures designed by the General State Administration, together with the support of the Autonomous Communities, the Third Sector of Social Action and local corporations[2]. It is a central policy of the Welfare State that aims to provide minimum economic resources to all people in Spain, regardless of where they live.

Within the framework of the National Recovery, Transformation, and Resilience Plan (RTRP)[3] the General Secretariat of Inclusion (SGI) of the Ministry of Inclusion, Social Security, and Migration (MISSM) participates significantly in Component 23 "New public policies for a dynamic, resilient, and inclusive labor market", framed in Policy Area VIII: "New care economy and employment policies".

Among the reforms and investments proposed in this Component 23 is investment 7 "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme", which promotes the implementation of a new model of inclusion based on the Minimum Income Scheme (MIS), which reduces income inequality and poverty rates. Therefore, the MIS goes beyond being a mere economic benefit and supports the development of a series of complementary programs that promote socio-labor inclusion. However, the range of possible inclusion programs is very wide, and the government decides to pilot different programs and interventions to evaluate them and generate knowledge that allows prioritizing certain actions. With the support of investment 7 under component 23, the MISSM establishes a new framework for pilot inclusion projects constituted in two phases, through two royal decrees covering a set of pilot projects based on experimentation and evaluation:

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[1] Law 19/2021, dated December 20, establishing the Minimum Income Scheme (BOE-A-2021-21007).

[2] Article 31.1 of Law 19/2021, dated December 20, 2021, establishing the Minimum Income Scheme.

[3] The Recovery, Transformation, and Resilience Plan refers to the Recovery Plan for Europe, which was designed by the European Union in response to the economic and social crisis triggered by the COVID-19 pandemic. This plan, also known as Next Generation EU, sets out a framework for the allocation of recovery funds and for boosting the transformation and resilience of member countries' economies.

- **Phase I: Royal Decree 938/2021**[4], through which the MISSM grants subsidies for the execution of 16 pilot projects of inclusion pathways corresponding to autonomous communities, local organizations, and the Third Sector of Social Action organizations. This royal decree contributed to the fulfillment of milestone number 350[5] and monitoring indicator 351.1[6] of the RTRP.

- **Phase II: Royal Decree 378/2022**[7], which grants subsidies for a total of 18 pilot projects of inclusion pathways executed by autonomous communities, local organizations, and the Third Sector of Social Action organizations. Along with the preceding Royal Decree, this one helped the RTRP's monitoring indicator number 351.1 to be fulfilled.

To support the implementation of evidence-based public and social policies, the Government of Spain decided to evaluate the social inclusion pilot projects using the Randomized Controlled Trial (RCT) methodology. This methodology, which has gained relevance in recent years, represents one of the most rigorous tools to measure the causal impact of a public policy intervention or a social program on indicators of interest, such as social and labor insertion or the well-being of beneficiaries.

Specifically, RCT is an experimental method of impact evaluation in which a representative sample of the population potentially benefiting from a public program or policy is randomly assigned either to a group receiving the intervention or to a comparison group that does not receive the intervention for the duration of the evaluation. Thanks to the randomization in the allocation of the program, this methodology can statistically identify the causal impact of an intervention on a series of variables of interest and enables us to analyze the effect of this measure, which helps determine if the policy is adequate to achieve the planned public policy objectives. Experimental evaluations enable us to obtain rigorous results of the intervention effect, i.e., what changes the participants have experienced in their lives due to the intervention. In addition, these evaluations provide an exhaustive analysis of the program and its effects, providing insights into why the program was effective, who has benefited most from the interventions, whether there were indirect or unexpected effects, and which components of the intervention worked, and which did not.

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[4] Royal Decree 938/2021, of October 26, 2021, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security and Migration in the field of social inclusion, for an amount of €109,787,404, within the framework of the Recovery, Transformation and Resilience Plan (BOE-A-2021-17464).

[5] Milestone 350 of the RTRP: "Improve the rate of access to the Minimum Income Scheme and increase the effectiveness of the MIS through inclusion policies, which, according to its description, will translate into supporting the socio-economic inclusion of the beneficiaries of the MIS through itineraries: eight collaboration agreements signed with subnational public administrations, social partners and social action entities of the third sector to conduct the itineraries. The objectives of these partnership agreements are: (i) to improve the MVI access rate; ii) increase the effectiveness of the MVI through inclusion policies."

[6] Monitoring indicator 351.1 of the RTRP: "at least 10 additional collaboration agreements signed with subnational public administrations, social partners and social action entities of the third sector to conduct pilot projects to support the socio-economic inclusion of MVI beneficiaries through itineraries".

[7] Royal Decree 378/2022, of May 17, 2022, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security and Migration in the field of social inclusion, for an amount of €102,036,066, within the framework of the Recovery, Transformation and Resilience Plan (BOE-A-2022-8124).

These evaluations have focused on the promotion of social and labor inclusion among MIS beneficiaries, recipients of regional minimum incomes and other vulnerable groups. In this way, the MISSM establishes a design and impact evaluation of results-oriented inclusion policies, which offers evidence for decision-making and its potential application in the rest of the territories. The promotion and coordination of 32 pilot projects by the Government of Spain has led to the establishment of a laboratory for innovation in public policies of global reference named as the Inclusion Policy Lab.

For the implementation and development of the Inclusion Policy Lab, the General Secretariat of Inclusion has established a governance framework that has made it possible to establish a clear and potentially scalable methodology for the design of future evaluations, and promoting decision-making based on empirical evidence. The General State Administration has had a triple role as promoter, evaluator and executive of the different programs. Different regional and local administrations and the Third Sector of Social Action organizations have implemented the programs, collaborating closely in all their facets, including evaluation and monitoring. In addition, the Ministry has had the academic and scientific support of the Abdul Latif Jameel Poverty Action Lab (J-PAL) Europe and the Centre for Monetary and Financial Studies (CEMFI), as strategic partners to ensure scientific rigor in the assessments. Likewise, the Inclusion Policy Lab has an Ethics Committee[8], which has ensured the strictest compliance with the protection of the rights of the people participating in the social inclusion pathways.

This report refers to "Educational and Social Support Project for Families in a Situation of Exclusion", implemented within the framework of Royal *Decree 938/2021 by the Fundación Secretariado Gitano* (FSG), an entity of the Third Sector of Social Action, which develops actions aimed at the comprehensive promotion and defense of the rights of the Roma community in Spain and Europe. This report contributes to the fulfillment of milestone 351 of the RTRP "Following the completion of at least 18 pilot projects, publication of an evaluation on the coverage, effectiveness and success of the MIS, including recommendations to increase the level of request and improve the effectiveness of social inclusion policies".

Context of the project

In Spain, the Roma community contends with severe inequalities, poverty, and social marginalization. Despite concerted efforts from multiple sectors and organizations, community members continue to encounter significant hurdles in accessing education, employment, and avenues for personal development. Discrimination and pervasive social stereotypes exacerbate these challenges, perpetuating the vulnerability of the Roma community and obstructing their comprehensive integration into Spanish society.

One of the fundamental causes of this problem is the educational gap that exists between the Roma community and the rest of Spanish society. Roma students often find themselves immersed in an educational environment not very inclusive, with limited resources, poor family support (in many

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[8] Regulated by Order ISM/208/2022, of March 10, 2022, which creates the Ethics Committee linked to social inclusion itineraries, on 20/05/2022 it issued a favorable report for the realization of the project that is the subject of the report.

cases, due to a lack of cultural capital and economic resources), and insufficient educational reinforcement.

Figure 1, based on the results of the report "The educational situation of Roma students in Spain" by the Fundación Secretariado Gitano, shows a clear gap between national and Roma students in Spain. The school failure rate refers to young people between the ages of 16 and 24 who have not graduated from secondary school. In 2022, this rate was 62.8% among the Roma population, while for the general population it was only 4%[9] in 2021. In addition, of the Roma students who manage to obtain the ESO degree, only 14.3% continue their studies, a figure that is 5 times below the national average in Spain. The early school leaving rate also has a gap, being 86.3% for the Roma population compared to 13.3% for the young Spanish population.

Figure 1: School failure
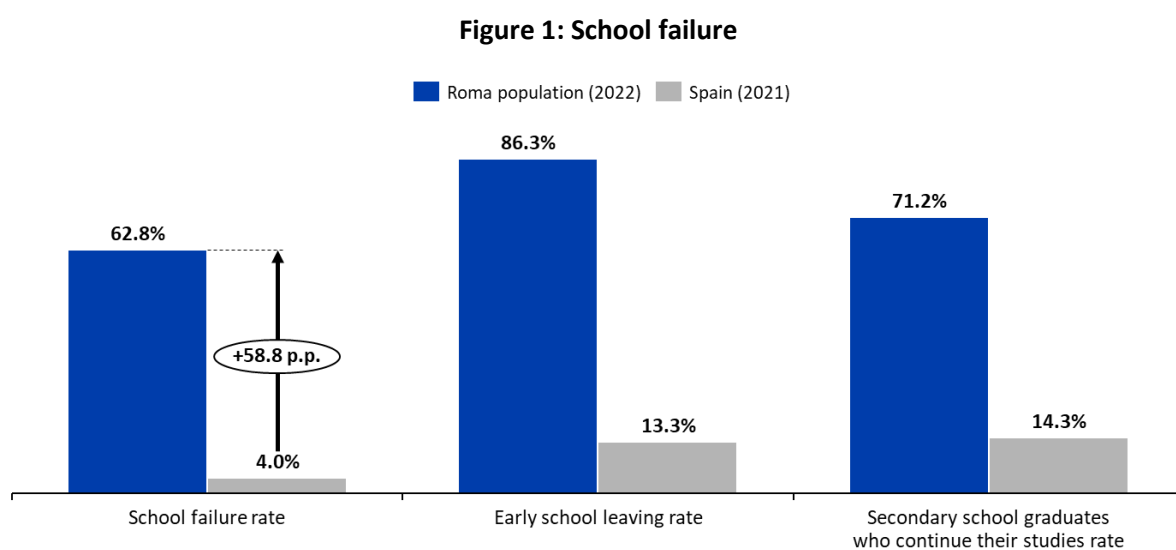
Source: The educational situation of Roma students in Spain, FSG.

Social exclusion and poor educational outcomes are both cause and consequence. Low levels of education at home mean a greater propensity to unemployment, precarious and low-income employment. Economic insecurity prevents families from investing in the education of their children and this influences the intergenerational transmission of educational disadvantages. **Figure 2** shows the extreme situation of vulnerability faced by the Roma population. The Roma population has a 10 per cent illiteracy rate, while illiteracy in the general population is almost eradicated. In addition, the unemployment rate among the Roma population is significantly higher, reaching 52% in contrast to 11.8% in the general population. In addition, 92% of Roma are at risk of social exclusion or poverty, compared to 26.9% of the general population. This highlights the importance of addressing education as a crucial element for the social mobility and development of the Roma community, being a fundamental tool to break the intergenerational cycle of poverty.

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9 The indicators on school failure and secondary school graduates for the Roma population are prepared by FSG itself. The indicators of the general population have been constructed by FSG from data from the Labour Force Survey (INE, 2021)

Figure 2: Socio-economic comparison
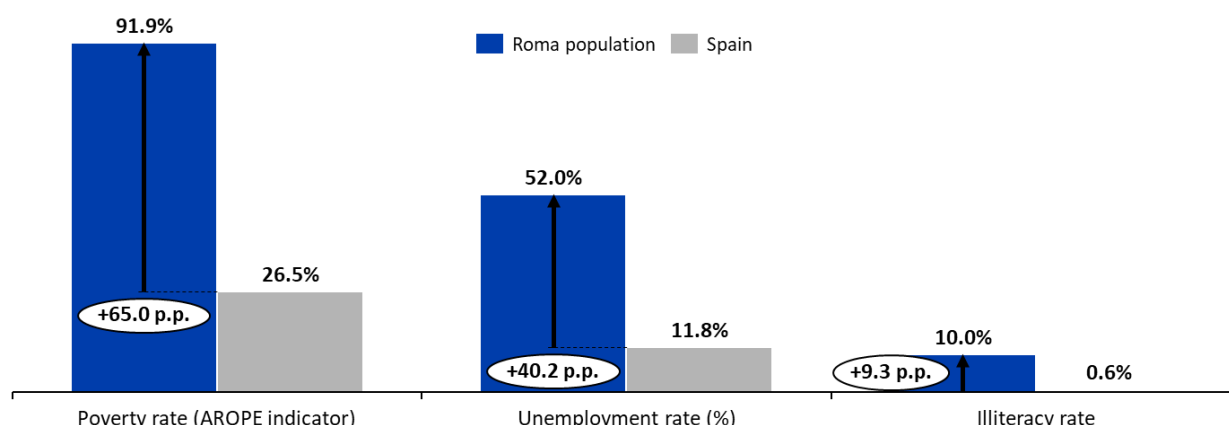
Source: Comparative study on the situation of the Roma population in Spain in relation to employment and poverty, FSG. Labor Force Survey, INE. Survey of Living Conditions, INE. [10]

Regulatory framework associated with the project and governance structure

The strategic framework for promoting equality, inclusion, and participation among the Roma population, adopted at the European level in October 2020, stands as a notable initiative. This document underscores the dedication to the welfare of Roma individuals and outlines seven key objectives, including enhancing equitable access to high-quality general education, narrowing educational participation and completion disparities, and striving to mitigate segregated educational practices.

On their behalf, the Government of Spain has developed the National Strategy for the Equality, Inclusion and Participation of Roma People 2021-2030. The approval of this strategy responds to the commitment of the Government of Spain to social cohesion and progress, paying special attention to people in situations of poverty or social exclusion of the Roma population.

Finally, all European and national regulations are in line with the framework established in the 2030 Agenda and the Sustainable Development Goals (SDGs).

The pilot project that is the subject of this report is aligned with European and national strategies in the field of the digital-skill gap and social exclusion, as well as with the 2030 Agenda for Sustainable Development, specifically contributing to SDGs 1, 3, 4, 5 and 10.

Given the close relationship between social exclusion and the educational situation of the Roma community, the *Fundación Secretariado Gitano* has conceived a project aimed at contributing to the elimination of obstacles that limit the social inclusion of people in situations of social exclusion, mainly Roma people, through educational itineraries accompanied by individual and family plans for social inclusion and the promotion of digital citizenship.

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[10] Data relating to the Roma community are based on information collected in 2018, while data relating to the total Spanish population as a whole is based on information collected in 2023.

The scientific objective of the project is to investigate and contrast whether the implementation of personalized educational itineraries, together with individual and family plans for social inclusion, leads to a substantial improvement in the situation of the vulnerable population.

The governance framework configured for the correct execution and evaluation of the project includes the following actors:

- **Fundación Secretariado Gitano**, as the entity responsible for the design and implementation of the project. The *Fundación Secretariado Gitano* is an intercultural, non-profit social organization that has been working for 40 years for the promotion and equal opportunities of the Roma population in Spain and Europe.

- The **Ministry of Inclusion, Social Security and Migration** (MISSM), as the founder of the project and responsible for the RCT evaluation. For this reason, the General Secretariat for Inclusion assumes a series of commitments with the *Fundación Secretariado Gitano*:
  - Assist the beneficiary organization in the design of the actions to be conducted, for the implementation and monitoring of the object of the subsidy, as well as for the profiling of the potential participants of the pilot project.

  - Design the randomized controlled trial (RCT) methodology of the pilot project in coordination with the beneficiary organization and scientific collaborators. Also, conduct the evaluation of the project.

  - Ensure strict compliance with ethical considerations by obtaining the approval of the Ethics Committee.

- **CEMFI and J-PAL Europe,** as scientific and academic institutions that support MISSM in the design and the RCT evaluation of the project.

In view of the above, the present report follows the following structure. The researchers make a **project description** in **section 2**, detailing the problem to be solved, the specific interventions associated with each of the experimental groups, and the target audience to which the intervention is directed. Next, **section 3** contains information relating to the **evaluation design**, defining the Theory of Change linked to the project and the hypotheses, sources of information and indicators used. In **section 4** the researchers describe the **implementation of the intervention**, analyzing the sample, the results of randomization, and the degree of participation and attrition of the intervention. This section is followed by **section 5** where **the results of the evaluation** are presented, with a detailed analysis of the econometric analysis carried out and the results for each of the indicators used. **Conclusions** of the project evaluation are described in **section 6**. In **Economic and regulatory management appendix** additional information is provided on the management tools and governance of the pilot project.

Ethics Committee linked to Social Inclusion Itineraries

During research involving human subjects, whether in the field of biology or the social sciences, researchers and workers associated with the program often face ethical or moral dilemmas in the development of the project or its implementation. For this reason, in many countries it is common practice to create ethics committees that verify the ethical viability of a project as well as its compliance with current legislation on research involving human beings. The Belmont Report (1979) and its three fundamental ethical principles – respect for persons, profit and justice – constitute the most common frame of reference in which ethics committees operate, in addition to the corresponding legislation in each country.

With the aim of protecting the rights of participants in the development of social inclusion itineraries and ensuring that their dignity and respect for their autonomy and privacy are guaranteed, Order ISM/208/2022 dated March 10 creates the Ethics Committee linked to Social Inclusion Itineraries. The Ethics Committee, attached to the General Secretariat for Inclusion and Social Welfare Objectives and Policies, is made up of a president – with an outstanding professional career in defense of ethical values, a social scientific profile of recognized prestige and experience in evaluation processes – and two experts appointed as members.

The Ethics Committee has conducted analysis and advice on the ethical issues that have arisen in the execution, development, and evaluation of the itineraries, formulated proposals in those cases that present conflicts of values and approved the evaluation plans of all the itineraries. In particular, the Ethics Committee issued its approval for the development of this evaluation on May 20, 2022.

2 Description of the program and its context

This section describes the program the *Fundación Secretariado Gitano* implemented within the framework of the evaluation project. Furthermore, it describes the target population and territorial framework, and it provides a detailed description of the intervention.

2.1 Introduction

The primary objective of this project is to mitigate barriers that limit the social inclusion of people in vulnerable situations, especially the Roma community. It adopts a comprehensive approach, targeting families as a whole and emphasizing three key facets for fostering inclusion: youth education, comprehensive social and personal assistance for families, and an overarching focus on digital citizenship. By addressing these critical areas, the project aims to break the cycle of intergenerational poverty, empowering families to overcome systemic barriers and participate meaningfully in society.

The project has benefited significantly from the available scientific literature, which has directly influenced its conception and structure. Notably, the *Fundación Secretariado Gitano* has issued

numerous reports about the Roma people, such as the report "The educational situation of Roma students in Spain", which offers a comprehensive analysis of the educational panorama of Roma students at different stages of the education system and compares it with a similar diagnosis for Spain as a whole. In addition, it delves into family and social factors influencing educational success. The report provides a valuable framework for the development of education policies for the Roma community. It has also issued other reports related to the situation of poverty and social exclusion of the Roma community ("Comparative study about the Roma population in Spain in relation to employment and poverty 2018") that highlight the great inequality suffered by many Roma families and how this affects the present and future of Roma children and the exercise of their citizenship.

In addition, several studies support the implementation of comprehensive intervention programs that combine educational pathways within inclusion projects. For example, the RCT study conducted by conducted by Gertler, Huillery, and de Laat (2016) examined a program in Bulgaria designed to bridge the early learning gap among Roma children. This initiative encompassed various measures, including financial support for educational expenses, conditional cash transfers to incentivize attendance, and informational campaigns promoting the benefits of preschool education. The outcomes revealed increased enrollment and attendance in kindergartens, as well as heightened parental aspirations for their children's development. Furthermore, in Italy and Spain, different RCTs have been conducted to study the effectiveness of intensive tutorials, although focused on the online environment. Studies by Carlana and La Ferrara (2021) and Gortazar, Hupkau and Roldan (2023) have shown positive and significant effects on the academic results of online tutoring, as well as on subjective aspects such as students' aspirations. However, the study by Kraft et al. (2022) shows that the effectiveness of online-only tutoring is still limited.

Regarding the familial aspect of the project, Negrão et al. (2014) conducted a study in Portugal centered on enhancing parenting skills within impoverished families. Their findings revealed significant improvements in family well-being attributable to enhancements in parental abilities and enhanced communication between parents and children. Similarly, Noble et al. (2021) investigated the impact of an intervention encompassing economic assistance alongside parenting support services and community resource accessibility. These interventions yielded notably positive outcomes, notably in poverty reduction, bolstering financial security, enhancing child development, and augmenting overall family welfare.

2.1 Target population and territorial scope

The project targets primarily:

- Mostly Roma, but also non-Roma students from families receiving MIS or in a social exclusion situation, who are studying compulsory educational stages from the third year of primary school to the third year of secondary school, both included. The project prioritizes the inclusion of girls by setting a maximum limit of 60%, compared to a maximum limit of 50% for boys.
- Families: parents and/or legal guardians of children and teenagers.

The pilot project covers seven locations in six different Autonomous Communities: A Coruña and Ferrol in Galicia, Gijón in Asturias, Granada in Andalusia, León in Castilla y León, Madrid in the Community of Madrid and Murcia in the Region of Murcia.

2.2   Description of interventions

The development of educational itineraries, accompanied by individual and family social inclusion projects, has an innovative component determined fundamentally by the way in which the inclusion itineraries have been designed. Additionally, a counterfactual impact assessment is integrated into the pilot project from the beginning of the intervention. To achieve this, participating families are randomly distributed into two different groups: the treatment group and the control group.

Figure 3: Itinerary outline
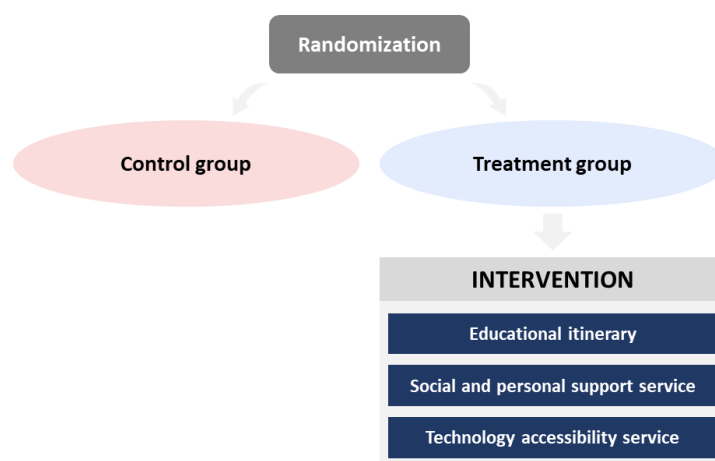
The control group remains uninvolved in the interventions, except in cases where there is a specific and concrete demand for support related to basic needs, such as access to benefits like the MIS, or in emergency situations where the organization decided to aid based on ethical responsibility. This control group received financial incentives in the periodic delivery of academic grades, as did the treatment group. For their part, the families assigned to the treatment group participate in the educational itinerary, the social and personal support service and the technology accessibility service. These interventions are targeted at the family unit and its members with the aim of (i) address social or personal needs detected in the diagnosis, (ii) offer transversal actions and digital citizenship, and (iii) accompany the family during the development of the intervention.

The services provided to families in the treatment group are presented below.

Educational itinerary

The educational itinerary focuses on children and teenagers who are currently studying in the 21-22 academic year and their families, prioritizing students from 3rd year of Primary to 3rd year of Secondary Education.

At the individual level, the educational itinerary is delineated as a tailored journey aimed at guiding students and families. It addresses personal, contextual, and familial factors or barriers that extend

beyond the strictly curricular domain but significantly influence the academic outcomes of students. Each student and their family are furnished with an "Individual Family Intervention Plan" meticulously crafted to cater to their unique needs. This plan delineates specific goals, outlines action steps, and establishes timelines, facilitating a structured approach towards addressing challenges and fostering academic success.

Three levels of intervention are defined: individual, group and socio-community, the intensity of which is adapted to the profile of the participants.

Individual activities include interviews with families and tutoring with students, with a special focus on the gender barriers faced by Roma women, such as work-life balance, and considering the aspects that specifically influence the educational itinerary of students. In addition, coordination actions are conducted with schools and other agents for effective collaboration.

At the group level, the educational itinerary implements strategies to enhance students' educational, professional, and transversal competencies. It establishes specialized classrooms for school support and assisted study, creating an environment that fosters the improvement of academic skills. Additionally, it conducts group school support sessions for six hours a week. The itinerary also organizes group orientation sessions with students and families to develop transversal skills that are crucial for school success and personal autonomy. These sessions cover various areas such as time management, homework organization, parental responsibility, achievement orientation, and conflict resolution.

Regarding initiatives at the socio-community level, the focus is on establishing strong networks with the surrounding environment and other social agents. The meetings involving students and families serve as a vital platform for exchanging experiences and finding solutions to shared challenges, aiming to inspire other students and their families. In addition, social participation actions in FSG's own activities or in collaboration with other organizations play a fundamental role in the personal development of Roma children and young people, helping to shed light on an often-overlooked reality and to promote their social integration.

Social and personal support service

The social and personal support service targets all adults within the participating family units and encompasses diverse areas of intervention. Firstly, social care is provided, offering accompaniment to enhance family living conditions and facilitating access to assistance programs and aid. This includes support in managing benefits such as the Minimum Insertion Income (MIS) and other forms of aid. Additionally, guidance is offered to improve healthy lifestyle habits, nutrition, access to and maintenance of housing and essential supplies. The focus extends to acquiring knowledge about household and energy economics, among other pertinent aspects.

In addition, basic personal and social competencies are developed, such as self-knowledge, self-esteem, personal motivation, social and communication skills, time management, planning of personal and family goals, and conflict management and intra- and extra-familial coexistence, including the neighborhood. At the same time, complementary actions are carried out, such as the

promotion of participation and active citizenship, gender equality and the promotion of equal treatment, addressing awareness of rights and the prevention of discrimination.

Technology accessibility service

The technological accessibility service is dedicated to fostering the acquisition and enhancement of digital skills while preventing the inappropriate use of Relationship, Information, and Communication Technologies (RICT), and promoting digital security. To achieve these objectives, digital accessibility resources have been provided for each family and student in the treatment group. This includes an internet connection device (MIFI with data for families) and a personal computer on loan for each student. Additionally, computer devices with internet connectivity have been made accessible to participants at the project headquarters for both individual and group training purposes.

The actions designed within this service will be aimed at minors participating in the educational pathways, their parents or legal guardians, as well as other members of the family unit who may benefit from this service (for example, their siblings, aunts and uncles, etc.).

As for the actions developed from this service, on the one hand, individualized activities were conducted to advise, support and accompany participants so that they acquire or develop digital skills and can access the public services available virtually, as well as all those actions that they require to have full digital citizenship (digital keys and certificates, processing, complaints, corrections, etc. through platforms, among others.).

Likewise, group training activities were conducted for both adult participants and students based on the 5 areas of the DigComp: digital skills, use of the internet, tools and applications, online communication platforms, cybersecurity, etc.

The phases of the project are broadly as follows:

Figure 4: Phases of the itinerary

START	INTERVENTION	EXIT
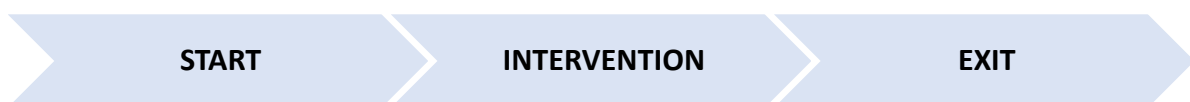
- At the **start**, researchers make the initial contact with the family that expressed its desire to participate in the project, and they obtain the necessary authorizations and data to guarantee the participation of the family unit. After the randomization process, each family is informed of their assigned group. For families in the treatment group, a Comprehensive Social Diagnosis is conducted to design the intervention adapted to each family, which is reflected in a Family Action Plan.
- The **intervention** develops the actions contemplated in the Family Action Plan which are specific to each service provided to the treatment group. This includes monitoring the achievement of objectives and the periodic collection of information and compensation for both groups (treatment and control).

- The **exit** phase conducts the evaluation of the achievement of objectives and the results of the project. The technological material is returned and finally the study conducts the evaluation of the satisfaction of the participants with the services received.

3 Evaluation design

This section describes the design of the impact assessment of the projects described in the previous section. The Theory of Change is described, which identifies the mechanisms and aspects to be measured, the hypotheses to be tested in the evaluation, the sources of information to build the indicators, the indicators and the design of the experiment.

3.1 Theory of Change

This report, with the aim to design an evaluation that enables us to understand the causal relationship between the intervention and its final objective, develops a Theory of Change. The Theory of Change makes it possible to schematize the relationship between the needs identified in the target population, the benefits or services that the intervention provides, and the immediate and medium-long term results sought by the intervention, understanding the relationships between them, the assumptions on which they rest, and outlining measures or outcome indicators.

Theory of Change

A Theory of Change begins with the correct identification of the needs or problems to be addressed and their underlying causes. This situational analysis should guide the design of the intervention, i.e., the activities or products that are provided to alleviate or resolve the needs, as well as the processes necessary to properly implement the treatment. Next, we identify the expected effects based on the initial hypothesis, i.e., what changes – in behavior, expectations or knowledge – are expected to be obtained in the short term with the actions conducted. Finally, the process concludes with the definition of the medium- to long-term results that the intervention aims to achieve. Sometimes, the effects directly obtained with the actions are identified as intermediate results, and in the final results, the indirect effects.

The development of a Theory of Change is a fundamental element of impact evaluation. At the design stage, the Theory of Change helps to formulate hypotheses and identify the indicators needed for the measurement of results. Once the results are achieved, the Theory of Change makes it easier, if not as expected, to detect which part of the hypothetical causal chain failed, as well as to identify, in case of positive results, the mechanisms through which the program works. Likewise, the identification of the mechanisms that made the expected change possible allows a greater understanding of the possible generalization or not of the results to different contexts.

Therefore, based on the theoretical framework of the Theory of Change described, a logical sequence of impact is proposed for the personalized intervention aimed at promoting the social and educational inclusion of the Roma population. The overarching objective of this pilot project is to bridge the gap between the Roma community and Spanish society across key domains including education, employment, and technology. By addressing this disparity, the project seeks to mitigate the dearth of job prospects and break the cycle of social exclusion perpetuated within the Roma community.

To address this issue, the project focuses on improving access to material and technological resources, with an emphasis on education and social support. The educational itinerary seeks to improve the educational situation and skills of vulnerable students through individual educational guidance sessions with students and families and group school reinforcement sessions with students. In addition, the social and personal support service seeks to improve family living conditions by providing access to benefits such as the MIS, tools for personal development, guidance on healthy habits, housing, and financial and energy education. Finally, the project offers access and training to address the digital-skill gap.

All these resources and activities carried out result in a series of outputs. By measuring the outputs obtained, it is identified whether the beneficiaries have received the activities or inputs and to what extent. Receiving the resources and activities properly conducted is essential for the program to achieve the expected intermediate and results. Indeed, as if beneficiaries do not effectively receive the program, it is difficult to observe improvements in the indicators of employment, housing situation or quality of life. Within the framework of this project, the outputs are defined according to several indicators: the number of students who receive educational and socio-emotional support, the families who participate in socio-educational skills training programs, the number of individuals and families who receive support in their personal and social development, and finally, the number of families who acquire access and knowledge to use digital media. For instance, through support services and technological accessibility, recipient families gain assistance in personal and social development, encompassing aspects such as motivation, self-esteem, autonomy, and family organization. Without the receipt of these products or benefits, there can be no hope of improvement in the situation of the beneficiaries.

It is anticipated that the intervention will produce significant improvements in several vital aspects of the participants. Further development of skills and improvement of students' academic performance is expected, as well as improvements in the socio-educational skills of families. In addition, the intervention is expected to improve families' basic personal and social skills, their access to public resources and support, and an increase in their social participation. It is also expected to improve digital knowledge and skills, as well as autonomy in accessing and using digital tools. All of this would ultimately result in better academic results and better living conditions for the family[11].

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[11] It should be borne in mind that, because the intervention only occurs during one academic year, a reduced impact is expected, since the intervention in education needs to be continuous and sustained over time in order to see high-impact results in all performance variables. The same happens with changing habits and improving the competencies and skills of families.

Figure 5: Theory of Change
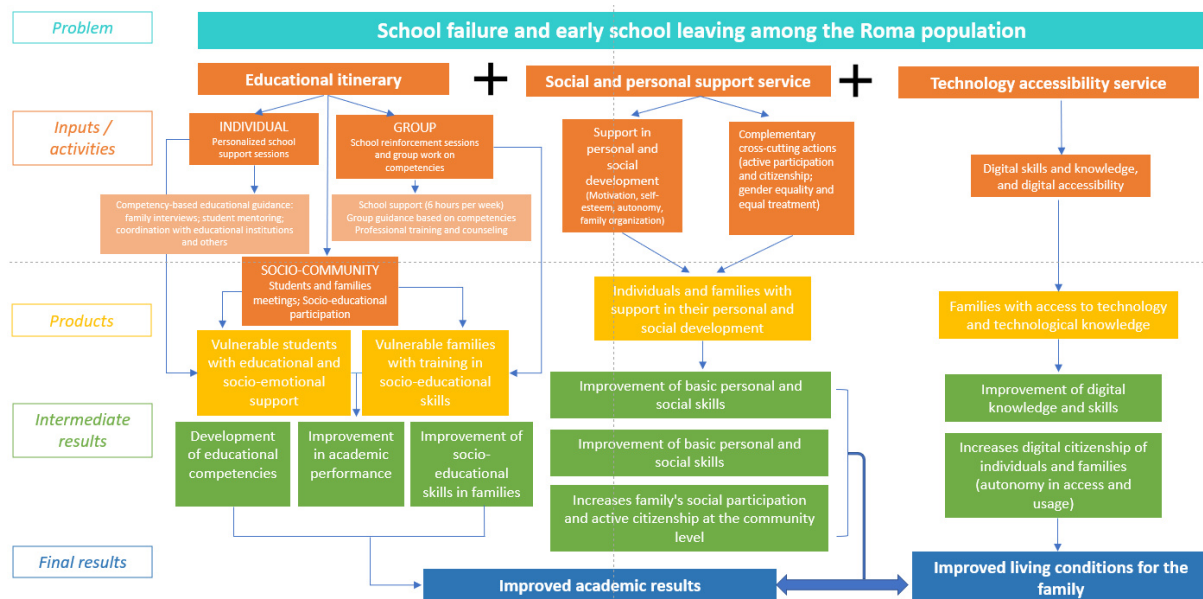
3.2 Hypothesis

The main objective of the intervention is to contribute to the elimination of obstacles that limit the social inclusion of people, mostly of Roma ethnicity, in situations of social exclusion. It is important to note that this project is not limited exclusively to the field of education, but covers a wider range, including social services and the digital-skill gap, among other aspects.

Next, the hypotheses to be tested in each of the major areas are presented, where the main hypotheses are the expected results of the Theory of Change, while the secondary hypotheses are based on the defined intermediate results.

Better academic results

The main hypothesis establishes that the treatment improves students' academic performance. In addition, two secondary hypotheses are presented: one indicates that the treatment will improve students' perceptions and attitudes towards education, and the other suggests that it will also increase the participation of families in the educational environment.

Better living conditions for families

The main hypothesis is that treatment improves the social situation of the family, adults and children.

Improving digital knowledge and skills

The central hypothesis in this area is that the intervention results in a significant improvement in digital accessibility, for both child and adult participants.

3.3 Sources of information

To collect the information needed to construct the outcome indicators, surveys aimed at participants are used, as well as standardized tests for minors and data from report cards. Surveys are conducted at two time points: **pre-intervention** (baseline survey), and **post-intervention** (end-line survey). Researchers designed two questionnaires, one aimed at adults and the other aimed at minor participants:

- **Questionnaire for adults:** These are conducted by the social worker to all the adults in the family unit who participate in the project (the mother, father or legal guardian of the participating children[12]). In this questionnaire, questions are asked related to the impact indicators of the social support service project and the technological accessibility service, that is, to the areas in which it is going to intervene with adults, as well as to the expectations of adults regarding the educational success of minors. The questions are based on questionnaires previously tested by the FSG.
- **Questionnaire for minor participants:** The educational counselors apply the questionnaires to the children of the family unit who participate in the project. It asks questions related to the project's impact indicators of both the educational itinerary and the rest of the areas (health care, technological skills, etc.). The questions are based on questionnaires previously tested by the FSG.
- Standardized **tests** assess students' mathematical and reading comprehension skills and are applied by the project's teachers. The tests were developed by adapting those designed and validated by the Ministry of Education.
- The **children's quarterly report books** are collected, provided by each family participating in the project (both from the treatment group and the control group). The information provided by the report books is related both to the grades of the different evaluations and to the attendance, if it was included in the report card.

Likewise, during the first interview, the social worker completes the profile form-data of the family and participants, with a questionnaire made for the reference person of the household. This document includes information on the composition of the household (children and spouse, if any), the primary care diagnosis, and the education diagnosis.

3.4 Indicators

The information sources described above play an essential role in providing an enriching data set, which enables the generation of indicators. These indicators play a critical role in the evaluation of the project, providing quantitative measures to analyze and validate the hypotheses raised. The indicators are catalogued in three axes, which in turn correspond to the hypotheses set out in previous sections.

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[12] Sometimes only one of the parents answered this questionnaire, but in many cases both parents answered separately.

Academic results

Multiple indicators are used to evaluate the hypothesis about better academic outcomes.

Global School Success Index: A synthetic indicator that studies the school situation of the **participating children**. This indicator is generated from the weighted sum of the following indicators:

- **School Performance (50%):** A composite indicator that evaluates students' academic achievements. The indicator is created from the weighted sum of two indicators:
  - **Competency test (60%):** An indicator that assesses students' performance on standardized tests, focusing on reading comprehension and math skills.
  - **Average grade (40%):** It includes the average quarterly grade obtained from the administrative register (school bulletins).
- **Key competencies (40%):** Synthetic indicator that addresses crucial aspects for the performance and development of participants. This is calculated as the weighted sum of the following indicators:
  - **Level of motivation (37.5%):** Synthetic indicator generated from eight responses from participants in relation to their level of agreement with different statements related to involvement in classroom activities, completion of tasks, academic motivation, punctuality or completion of tasks at home.
  - **Attendance rate (37.5%):** Indicator that includes attendance per quarter in a range between 0 (non-attendance) and 1 (complete attendance).
  - **Level of expectations (12.5%):** Indicator that evaluates students' perspectives regarding the long-term pathway, from primary education to postgraduate education.
  - **Level of satisfaction and behavior with respect to school reality (12.5%):** Based on answers to six questions about adaptation to the school environment, periods of expulsion and beliefs related to teachers' expectations. Each block contributes uniformly to the overall indicator.
- **Personal variables (10%):** Synthetic indicator generated by seven responses from minor participants in relation to their level of agreement with different statements that explore the perception of social relationships, difficulties in forming friendships, general relationships with peers, beliefs about success, and academic self-concept.

Degree of involvement in the educational pathway: Synthetic indicator generated from 13 questions addressed to the **participating adults**. These questions address family participation and support in children's school education, including knowledge about the education system, involvement in the educational process, class attendance, and commitment to study and homework.

Living conditions of families

To assess the impact on the family's living conditions, the following indicators are used:

Social Protection Index of Participating Children: Synthetic indicator generated from the weighted sum of the following indicators:

- **Personal and social competencies (70%)**: Synthetic indicator that explores children's eating habits through 10 questions.
- **Social participation and active citizenship (30%)**: Indicator that explores the frequency with which children have participated in community and neighborhood activities (sports tournaments, fairs, etc.) in their neighborhood or city in the last year.

Participating Adult Social Protection Index: synthetic indicator generated from the weighted sum of the following indicators:

- **Access to resources and public aid (60%):** Synthetic indicator that explores the access of families to various economic aid or public benefits during the last year, as well as their autonomy in the management of these aids and their knowledge of assistance programs to cover basic supplies.
- **Personal and social skills (30%):** Synthetic indicator that investigates the frequency of weekly consumption of fruit, vegetables or pastries and soft drinks and household energy-saving measures.
- **Social participation and active citizenship of the family at the community level (10%)**: Indicator that explores the frequency with which adults have participated in community and neighborhood activities in the past year. (sports tournaments, fairs, etc.) of your neighborhood or city.

Digital knowledge and skills

In the area of digital training, the following indicators are used:

Digital Accessibility Index of Participating Minors: Synthetic indicator generated from the weighted sum of the following indicators:

- **Digital knowledge and competences (60%):** This synthetic indicator aims to assess students' digital skills. It investigates the ability of minors to use computers and perform specific related tasks, as well as the activities they have conducted on the internet or with a computer in the last seven days.
- **Trust and security in access to the digital world (40%):** Indicator that measures the student's perception of risk when posting content on social networks, their attitude towards cyberbullying or what privacy settings they have on Instagram.

Digital Accessibility Index of Adult Participants: Synthetic indicator generated from the weighted sum of the following indicators:

- **Digital knowledge and skills (54%):** This synthetic indicator aims to assess access to and ability to use digital media. It explores the availability of electronic devices and Wi-Fi in the home and investigates adults' abilities to use computers and perform specific related tasks.
- **Trust and security in access to the digital world (40%)**: Synthetic indicator that examines the frequency with which adults carry out good practices in terms of computer security (logging out of applications after use, using different passwords, not forwarding strings and sweepstakes on social networks, etc.).

- **Digital citizenship (6%)**: An indicator that explores whether the adult has some type of digital certificate.

3.5 Design of the experiment

This experiment aims to assess the effect of the pathway on the indicators outlined above by using an experimental assessment (RCT), in which participants are randomly assigned between the treatment and control groups. The process of recruiting and selecting the beneficiaries of the intervention, as well as the random assignment and time frame of the experiment, is detailed below.

Recruitment of the beneficiaries of the intervention

The recruitment of the families participating in the project is conducted either directly by FSG with the families with which it establishes direct contact or channeled by FSG from referrals received from the schools, and eventually from other organizations of the municipality (social services and other public resources) of the 7 cities involved in the pilot project: Granada, León, A Coruña, Ferrol, Gijón, Murcia and Madrid (Cañada Real). Families participating in the project must meet the following requirements:

- Families in a situation of social vulnerability with dependent children
- At least one of the minors must be enrolled between the 3rd year of Primary and the 3rd year of Secondary Education.

To facilitate the referral of educational centers, social services and other resources, some letters of introduction of the project have been prepared. These letters serve to establish agreements with these centers and organizations:

- General project letter: Addressed to social services or other resources to publicize the project in the territory where it is going to be developed.
- Letter for schools: Like the previous one, but more detailed and specific. The project is presented specifically for schools.

The FSG team contacted the potentially participating families, inviting them to participate and relying on an explanatory brochure of the project as support material that the families can retain after contacting the recruitment team. Families who meet the requirements and agree to participate sign the informed consent form to become part of the sample. Because the experimental methodology associated with the project required random assignment, this has influenced families when deciding about their final participation, as some did not want to run the risk of being assigned to the control group.

The design of the project states that in each locality it is essential to capture at least twice as many families as can receive treatment, as half will be assigned to the control group. So, if in a locality, León, for example, treatment can be offered to 50 families, it is necessary to recruit at least 100 families (50x2) in that locality.

Informed Consent

One of the fundamental ethical principles of research involving human subjects (respect for persons) requires that study participants be informed about the research and consent to be included in the study. Informed consent is usually given as part of the initial interview and has two essential parts: the explanation of the experiment to the subject, and the request and registration of their consent to participate. Consent should begin with a comprehensible presentation of key information that will help the subject make an informed decision, i.e., understand the research, what is expected of it, and the potential risks and benefits. Documentation is required as a record that the process has taken place and as proof of informed consent, if so.

Informed consent is required in most research and may be oral or written depending on different factors such as the literacy of the population or the risks posed by consent. Only under very specific circumstances, such as when the potential risks to participants are minimal and the informed consent is very complex to obtain or would harm the validity of the experiment, informed consent may be avoided, or partial information may be given to participants with the approval of the ethics committee.

Random assignment of participants

Once the recruitment has been conducted, the participant is randomized into two groups (treatment group and control group) of equal size. Randomization is done at the family level. Two stratification variables are considered:

- Location: León, A Coruña-Ferrol, Gijón, Granada, Madrid and Murcia
- Stages of the participating children:
    - Families where all participating children are in primary school.
    - Families where all participating children are in high school.
    - Families with children participating in primary and secondary school.

All this would generate a total of 18 strata (six values for the first variable crossed with three values for the second).

The assignment is made once informed consents have been obtained and initial questionnaires have been completed by all families. After this, the families of each stratum are distributed equally between the treatment group and the control group. To make this assignment, a number is randomly assigned to each family. In each stratum, families are ranked according to this number, from lowest to highest, and the first half of families are assigned to the treatment group. The rest of the families in this stratum will remain in the control group.

Figure 6: Sample Design
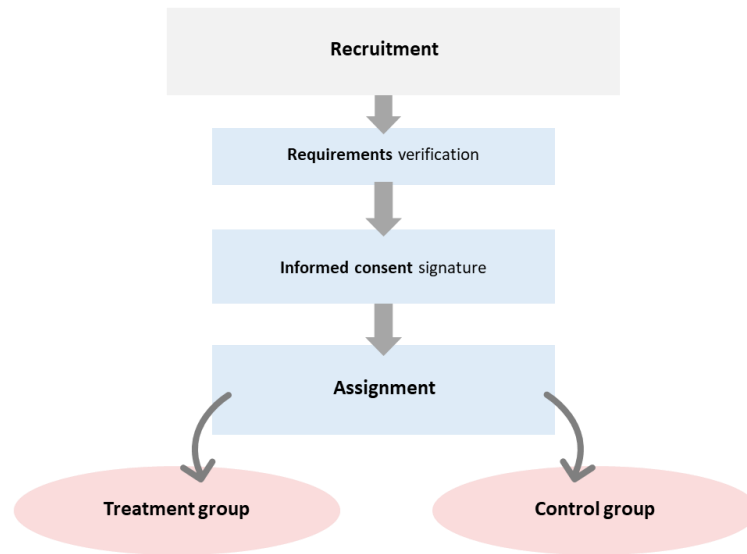
Figure 7 shows the time frame in which the implementation and evaluation occurs. The collection takes place between the months of February and June 2022. Participants complete the baseline survey between July and September 2022. At the end of the month of September, participants who meet the criteria and who have signed the informed consent form and are interested in participating are randomly assigned. The development of the itinerary or intervention extends from the end of October 2022 to June 2023. In November 2022, after the start of the interventions, there were a series of dropouts among the participants in Madrid (Cañada Real), so the researchers decided to start a second recruitment process in this town. The newly recruited participants were assigned in December of the same year. Finally, the collection of the post data (end-line survey) was conducted between June and July 2023.

Figure 7: Timeframe of the evaluation
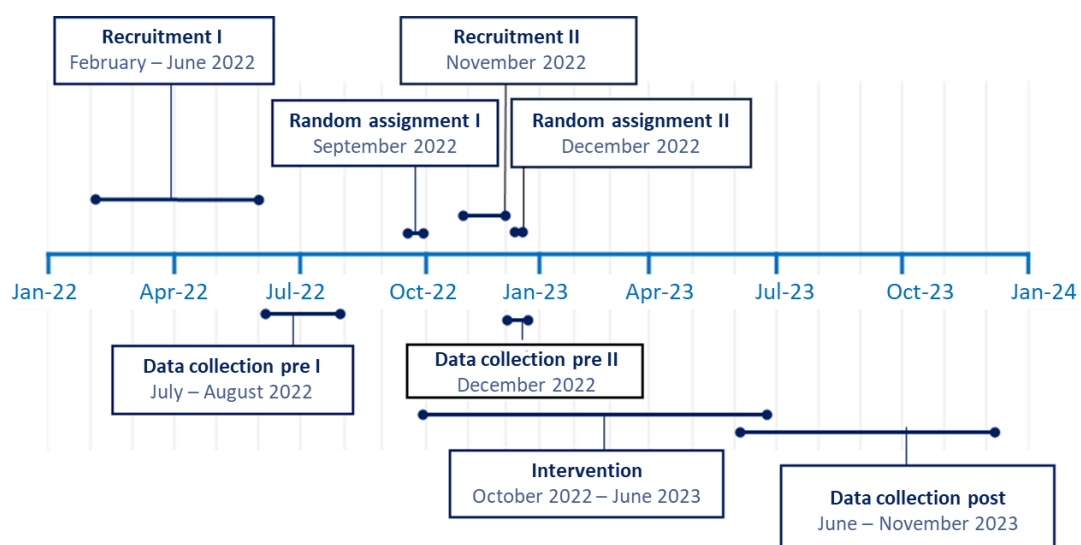
4 Description of the implementation of the intervention

4.1 Sample Description

To disseminate information about the project to Roma families and professionals from public and private resources[13], a total of 43 people belonging to the FSG's intervention teams and coordinators in different locations were involved. The process took an average of seven months. There were variations in duration by territory, with A Coruña-Ferrol and León ending in 4, 5 and 6 months, while other territories took between 9 and 10 months. Madrid ended in December 2022 due to difficulties in the intervention neighborhood.

As for means of contact, these varied in frequency according to the location, although at a general level the main means of contact was by telephone, accounting for more than half of the cases. The next most used means were those referred by educational institutions, with almost 1 in 5 cases, followed by face-to-face contacts. **Table 1** summarize the results of the recruitment process.

Table 1: Record of the recruitment process

Families	Total
Number of potential families	**1538**
1. Number of families attempted to contact but unable to reach	**145**
2. Number of families contacted	**1393**
2.1.1 Total number of families rejected for not meeting the participation requirements of the project	**290**
Due to being in educational levels outside the program's intervention range	191
Due to other reasons	74
Due to issues with mandatory documentation to be submitted	15
Due to mistakenly reporting the educational level of minors due to lack of knowledge	8
Due to not being able to guarantee compliance with activity schedules	2
2.1.2 Families who have declined to participate in the project	**704**
Due to lack of interest	450
Because they were interested but their participation did not materialize (did not respond to subsequent calls, did not attend the appointment, etc.)	158
Due to other reasons (relocation to another city or address, distance between their residence and the activities, etc.)	45
Because they were enrolled in other programs offered by different organizations	42
Due to lack of time	4

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[13] The resources include social services, educational centers in the areas of intervention (public, private or subsidized), social organizations, Roma associations, etc.

Because they were presented with other projects during the recruitment process	3
Because they did not want to share their data	2
2.1.3 Total number of families who have agreed to participate	**399**

Out of a potential size of 1,538 families in total, only 145 families could not be contacted, reaching a total of 1,393 families.

Of the families contacted, 704 declined to participate. The main reason was the lack of interest of 450 families, representing 63.9%. In addition, 22.4% of the families initially showed interest but were unable to participate, either because they did not attend the appointment or did not answer the calls, and 6.0% of the families were enrolled in other programs.

On the other hand, 290 applications from families were rejected. The main reason, representing 65.9% of the cases, was that the children were at educational levels outside the range of intervention of the program, with a total of 191 cases.

A total of 399 families were recruited and agreed to participate in the program.

Characteristics of the evaluation final sample

The study involved a total of 537[14] students and 647 adults belonging to the 399[15] families recruited. This section provides a summary of the sociodemographic profiles and pre-intervention (baseline) indicators of study participants. A differentiated analysis is performed for children and adults, with data presented in tables containing the name of the variable, the mean, the standard deviation, the minimum and maximum values, and the number of observations.

Table 2 provides a breakdown of the socio-demographic characteristics and pre-intervention outcomes of primary and secondary school students. The breakdown includes outcome indicators on children's academic performance, living conditions and digital skills. In a similar format,

Table 3 presents sociodemographic data for adult participants, covering employment status, educational background, literacy skills, and outcomes on the three indicators on children's educational involvement, living conditions, and digital skills. Additional data on household demographics and characteristics are detailed in the **Table 4**.

On average, the youngest participants are almost 12 years old, with a gender distribution of 52% female and 48% male. The majority, 85%, belong to the Roma community. Geographically, 8% live in A Coruña, 8% in Ferrol, 17% in Granada, 17% in León, 18% in Madrid, 17% in Murcia and the remaining 15% in Gijón. Approximately 14 per cent of children participate in external educational support

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[14] The initial sample consisted of 538 children, however, one of them left the project before answering the baseline survey, so there is no data available on its characteristics.

[15] In November 2022 in Madrid, after the start of the interventions, there were a series of dropouts, so it was decided to start a second recruitment process. In this process, which ended on December 1, 2022, 4 new families were recruited. On December 12, 2022, these families were randomized, following the same criteria as in the previous procedure, assigning 3 of these 4 families to the treatment group and 1 to the control group.

programs. The educational breakdown shows that 62% are in primary education, 38% in secondary education and less than 1% in professional training (Basic FP, in Spanish, *Formación Profesional Básica*). Academic indicators reveal generally low expectations, averaging 3 out of 8, as well as test proficiency and academic performance scores averaging 3.9 out of 10. Also, the average school rating is 4.8 out of 10. Regarding the social protection and digital accessibility indices for children, the average scores are 1.74 and 1.1 out of 3, respectively.

For adult participants, the average age at baseline is 39 years, with a female-to-male ratio of 60% for the former and 40% for the latter. 90% are Spanish citizens and 81% are Roma. The adult demographic is predominantly composed of mothers (58%), followed by fathers (39%) and other relatives (3%). Educational levels vary, with 26% having no formal education, 45% only primary education, 28% having secondary education, and only 1% having university or higher education. In addition, 4% of the adult population was beginning to learn to read at the time of responding to the baseline (Neo-reader), and 6% cannot read or write. In terms of employment, only 13% said they were employed. Adults show low participation in children's education (on average 2.6 out of 8) and score 1.09 and 1.37 out of 3 on the social protection and digital accessibility indices, respectively.

The low level of education and the low employment rate of the people in this sample explain the importance of projects of this magnitude, where the objective is to find the cause of social exclusion and possible interventions to help them exercise their citizenship on equal terms with the rest of the population, while also reducing the intergenerational transmission of poverty.

Table 4 highlights the geographical origins of the families, showing the distribution in A Coruña, Ferrol, Gijón, Granada, León, Madrid and Murcia. Within these families, 36% have all their children in primary education, 16% in secondary education and 48% with children at both levels. On average, families have 2 children, predominantly in primary education (on average 1.11) compared to secondary education (on average 0.59).

Table 2: Descriptive Statistics – Children

Variable	N.	Mean	Standard Deviation	Min.	Max.
Characteristics (children)					
Female	537	0.52	0.50	0	1
Age	537	11.91	2.39	0	17
Roma population	537	0.85	0.36	0	1
Primary education	537	0.62	0.49	0	1
Secondary education	537	0.38	0.49	0	1
Basic FP	537	0.00	0.04	0	1
Participation in education reinforcement programs	537	0.14	0.35	0	1
A Coruña	537	0.08	0.28	0	1
Ferrol	537	0.08	0.28	0	1

Variable	N.	Mean	Standard Deviation	Min.	Max.
Granada	537	0.17	0.37	0	1
León	537	0.17	0.37	0	1
Madrid-Cañada	537	0.18	0.38	0	1
Murcia	537	0.17	0.37	0	1
Gijón	537	0.15	0.36	0	1
Block 1 – Academic results					
Motivation level	537	2.25	0.73	0	5
Attendance rate	402	0.96	0.09	0	1
Hours missed at school	398	57.77	124.07	0	868
Expectations	537	3.07	2.27	0	8
Satisfaction level	537	1.76	0.34	0	2
Test scores	537	3.86	2.03	0	10
Average school marks	535	4.88	1.83	0	10
Educational competencies	402	1.80	0.42	1	3
Personal perception – integration	537	0.77	0.45	0	2
Academic performance	535	4.27	1.53	0	9
Educational success	402	2.97	0.78	1	5
Block 2 – Living conditions					
Healthy habits	473	2.03	0.36	1	3
Active citizenship	529	1.04	0.99	0	3
Social protection index	469	1.74	0.42	1	3
Block 3 – Digital skills					
Digital competencies and skills	525	1.10	0.44	0	2
Confidence/security in accessing digital world	537	1.05	0.62	0	3
Digital accessibility index	525	1.09	0.42	0	2

Table 3: Descriptive Statistics – Adults

Variable	N.	Mean	Standard Deviation	Min.	Max.
Characteristics (adults)					
Female	647	0.60	0.49	0	1
Age	647	39.29	8.02	22	73
Roma population	647	0.81	0.39	0	1

Variable	N.	Mean	Standard Deviation	Min.	Max.
Spanish nationality	647	0.90	0.30	0	1
Mother	647	0.58	0.49	0	1
Father	647	0.39	0.49	0	1
Other relatives	647	0.03	0.17	0	1
Disability	647	0.04	0.20	0	1
No education	647	0.26	0.44	0	1
Primary education	647	0.45	0.50	0	1
Secondary education	647	0.28	0.45	0	1
University (higher level education)	647	0.01	0.10	0	1
Neo-reader	447	0.04	0.20	0	1
Can read	486	0.94	0.23	0	1
Can write	486	0.94	0.24	0	1
Employed	647	0.13	0.34	0	1
A Coruña	647	0.09	0.29	0	1
Ferrol	647	0.08	0.28	0	1
Granada	647	0.16	0.37	0	1
León	647	0.18	0.38	0	1
Madrid-Cañada	647	0.18	0.39	0	1
Murcia	647	0.16	0.37	0	1
Gijón	647	0.14	0.35	0	1

Block 1 – Academic results

Variable	N.	Mean	Standard Deviation	Min.	Max.
Family involvement in education	340	2.67	1.18	0	8

Block 2 – Living conditions

Variable	N.	Mean	Standard Deviation	Min.	Max.
Access to resources	217	0.71	0.18	0	1
Personal and social competencies	493	1.65	0.51	0	3
Active citizenship	637	1.21	1.22	0	3
Social protection index	161	1.09	0.22	0	2

Block 3 – Digital skills

Variable	N.	Mean	Standard Deviation	Min.	Max.
Digital competencies and skills	186	1.45	0.29	1	2
Confidence/security accessing digital world	154	1.23	0.44	0	2
Digital accessibility index	65	1.37	0.25	0	2

Table 4: Descriptive Statistics – Families

Variable	N.	Mean	Standard Deviation	Min.	Max.
Characteristics - families					
Nº of minors in the house	399	2.34	1.08	1	8
Nº of minors in infant education	395	0.27	0.49	0	2
Nº of minors in primary education	398	1.11	0.80	0	4
Nº of minors in secondary education	391	0.59	0.67	0	3
Nº of minors in post-secondary education	387	0.03	0.17	0	2
Nº of minors in superior education	388	0.01	0.07	0	1
Nº of children below 6yrs out of school	388	0.22	0.49	0	4
Nº of children btw 7yrs and 18yrs out of school	386	0.07	0.27	0	2
All children in primary school	399	0.36	0.48	0	1
All children in secondary school	399	0.16	0.37	0	1
Children in both primary and secondary school	399	0.48	0.50	0	1
A Coruña	399	0.09	0.28	0	1
Ferrol	399	0.08	0.27	0	1
Granada	399	0.17	0.38	0	1
León	399	0.18	0.38	0	1
León-Las Ventas	399	0.06	0.23	0	1
Madrid-Cañada	399	0.17	0.37	0	1
Murcia	399	0.16	0.36	0	1
Gijón	399	0.17	0.37	0	1

4.2 Random Assignment Results

Once the sample has been defined, the participants are randomly assigned to the control group or treatment group, as explained in **section 0**. The following table shows the results of the random assignment, detailing the number of families and children assigned to each group and disaggregating this information according to the different stratification variables.

Table 5: Result of random assignment[16]

Location	Families			Children		
	Sample	CG	TG	Sample	CG	TG
A Coruña	35	15	20	45	17	28
Ferrol	32	18	14	45	28	17
Gijón	66	34	32	82	42	40
Granada	68	35	33	90	46	44
León - Las Ventas	24	13	11	31	16	15
León - Michaisa/Armunia	46	22	24	59	28	31
Madrid - Cañada	66	33	33	97	44	53
Murcia	62	32	30	89	47	42
Total	399	202	197	538[17]	268	270

To ensure that random assignment effectively delineates statistically comparable control and treatment groups, a balance test is conducted. This test aims to validate that, on average, the observable characteristics of participants in both groups are equivalent. The balance between the experimental groups is key to being able to infer the causal effect of the program by comparing its results. **Figure 8**, **Figure 9** and **Figure 10** present the results of these tests for children, adults, and families. All data shown in this figure refer to the survey conducted prior to the intervention (baseline). For each observable variable, a dot represents the difference between the mean of that variable in the treatment group and the control group. Additionally, the 95% confidence interval of that difference is centered around the dot, providing a measure of uncertainty. A confidence interval containing zero, i.e., the vertical axis, will indicate that the mean difference between groups is not statistically significant or, in other words, is not statistically different from zero. Therefore, it will be concluded that the intervention groups are balanced in this characteristic. In the case where the confidence interval of the mean difference does not contain zero, it can be concluded that the difference is statistically significant and, therefore, the groups are unbalanced in this characteristic.

The graphs show that, for most sociodemographic characteristics and baseline outcome indicators, the treatment and control groups do not present statistically significant differences. However, in the **Figure 9**, we observed a statistically significant difference between the two groups in the proportion

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[16] In the **annex Random Assignment Result** the results of randomization are presented with a higher level of disaggregation

[17] En la muestra inicial se contaba con 538 menores, sin embargo, uno de ellos abandonó el proyecto antes de contestar a la encuesta de línea de base, por lo que no se dispone de datos sobre sus características

of adults who have some type of disability (p<0.05) and have no level of education (p<0.05). No statistically significant difference was found in the main outcomes for the adult population.

For families (see **Figure 10**), no statistically significant difference was found between the two groups for any of the variables. It is crucial not to find significant differences between families in the treatment and control groups, because the unit of randomization was precisely the family. This would indicate that randomization successfully defined statistically comparable groups.

Encouragingly, our analysis demonstrates that there are no statistically significant differences between the treatment and control groups in these outcome variables, indicating a high degree of balance. Balance tests illustrate that the treatment and control groups are well matched, with any observed differences being statistically insignificant. This balanced distribution of covariates improves the credibility of our subsequent analyses and strengthens the validity of our study findings. However, in addition to the controls that we will use in the estimated regressions (gender, academic level, Roma population, whether they receive educational reinforcement and whether they had to repeat the academic year), the variables that are unbalanced will be used as additional controls.

Figure 8: Standardized mean difference between treatment group and control group (95% confidence interval) – Minor
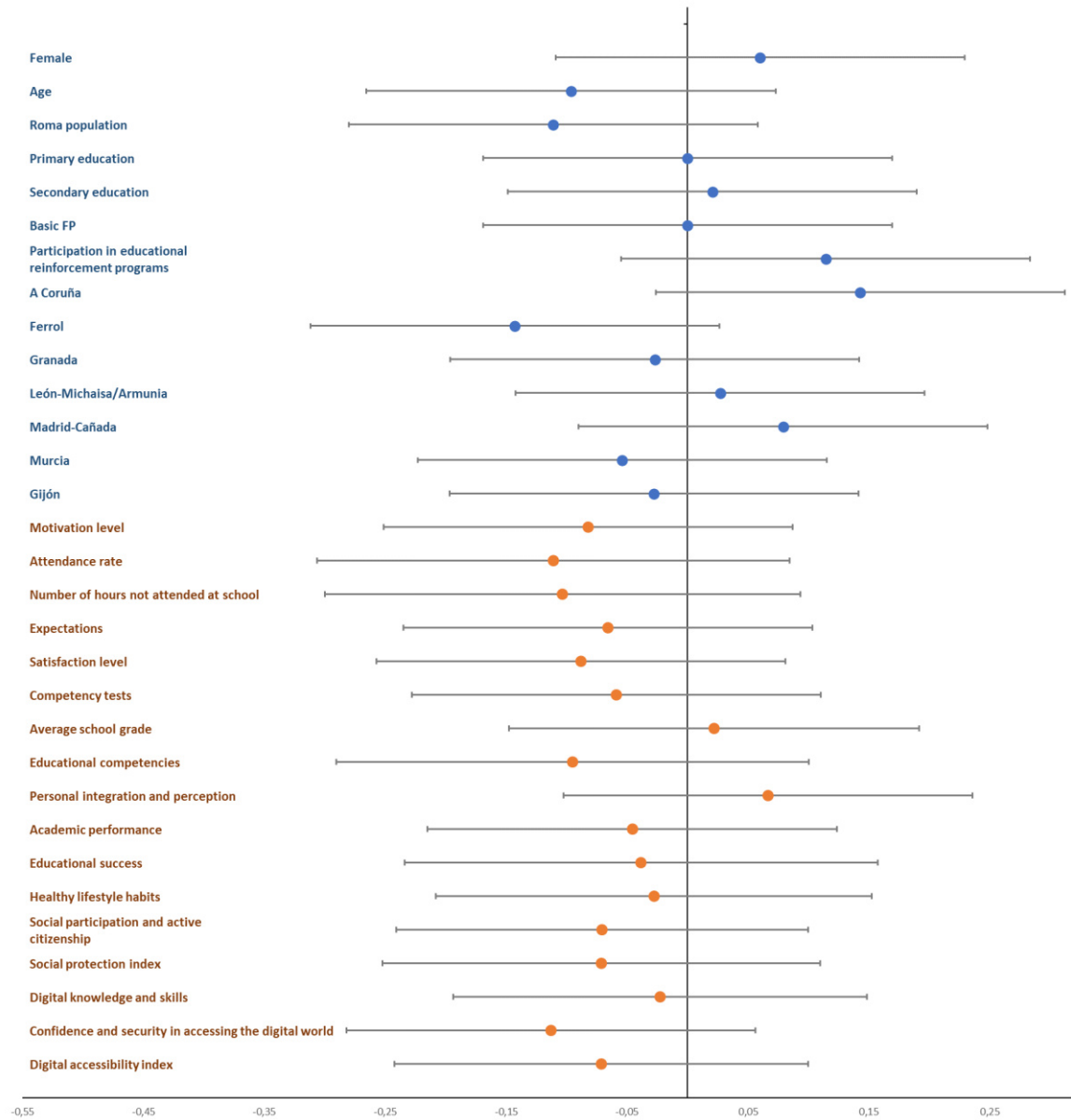
Note: the socio-demographic variables are shown in blue, and the specific indicators used for the evaluation of the project are shown in orange

Figure 9: Standardized mean difference between treatment group and control group (95% confidence interval) – Adults
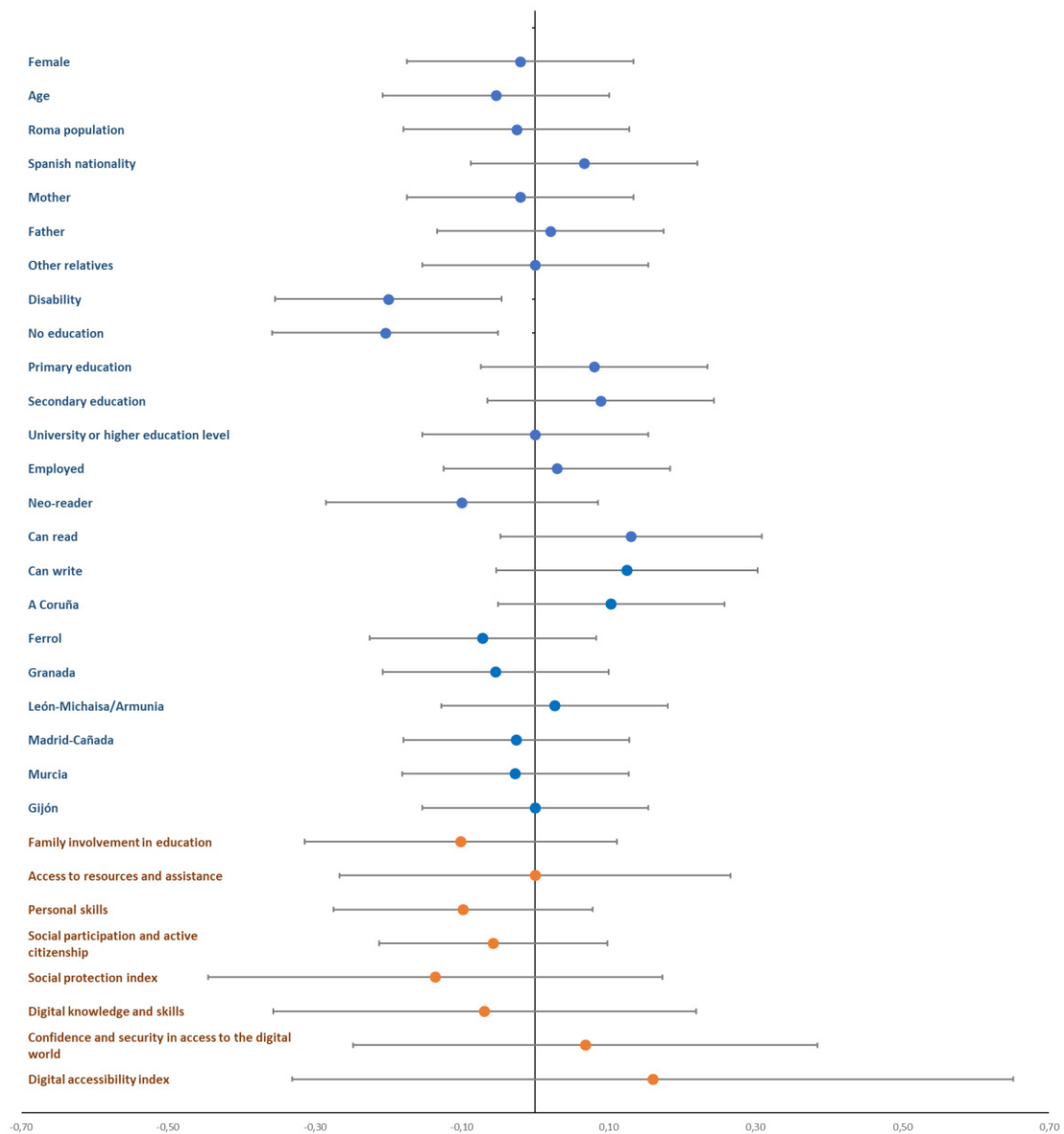
Note: the socio-demographic variables are shown in blue, and the specific indicators used for the evaluation of the project are shown in orange

Figure 10: Standardized mean difference between treatment group and control group (95% confidence interval) – Families
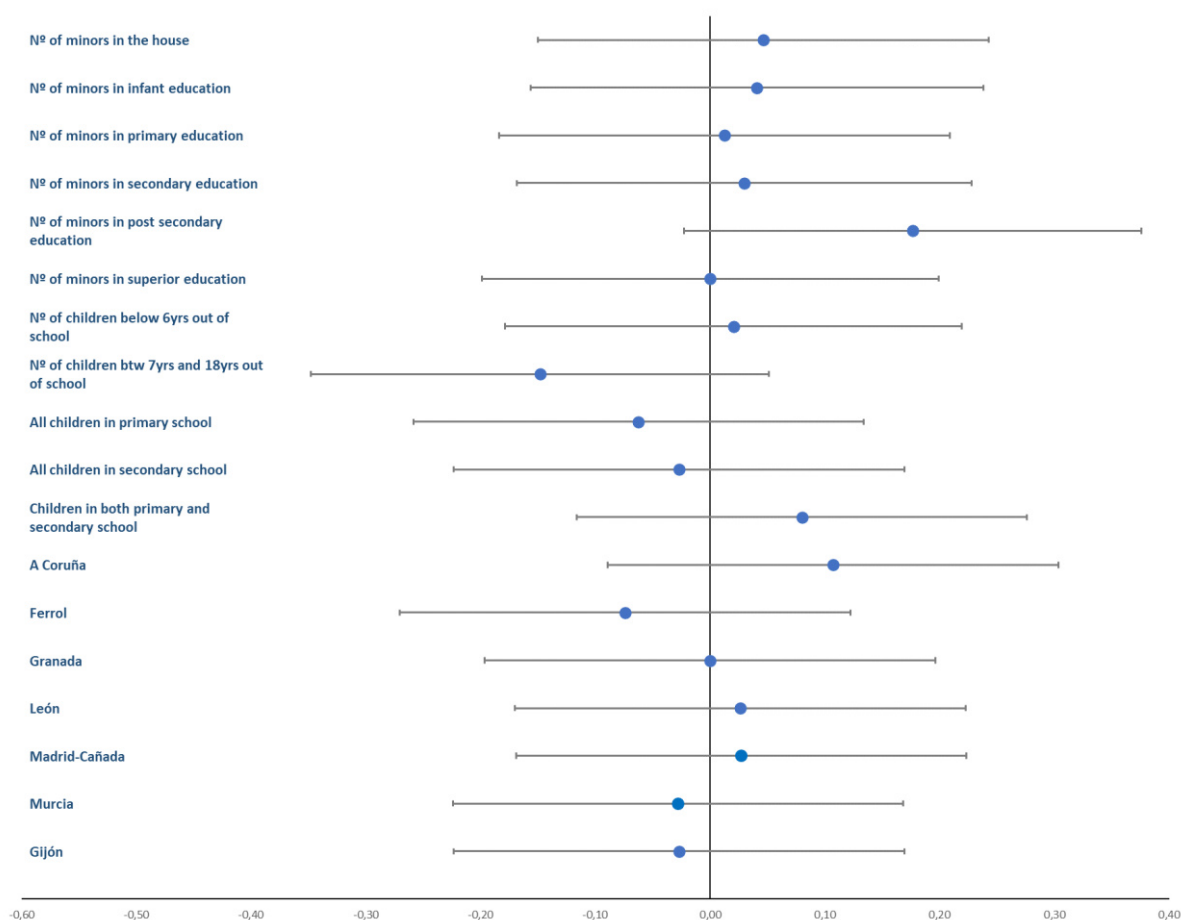
Note: the variables used for the stratification of the sample are shown in gray and the rest of the sociodemographic variables are shown in blue.

4.3 Degree of participation and attrition by groups

The group signing the informed consent group constitutes an experimental sample that was randomly assigned to the control and treatment groups. However, both participation in the program and response to the initial and final surveys are voluntary. On the one hand, it is convenient to analyze the degree of participation in the program, since the estimation of results will refer to the effects on average of offering it, given the degree of participation. For example, if participation in treatment activities is low, the treatment and control groups will be very similar, and it will be more difficult to find an effect. On the other hand, this section tests whether the non-completion of the final survey by some of the participants reduces the comparability of the treatment and control groups after the intervention, if the response rate is different between groups or according to the demographic characteristics of the participants in each group.

The degree of participation of the children in the educational reinforcement activities was moderate: half of the children in the treatment group participated in less than 40% of the planned sessions. The

degree of participation also varied between the different autonomous communities where the intervention was conducted: while in Madrid 39% of minors participated in more than 80% of the reinforcement sessions, in other areas such as León and A Coruña this percentage is below 5%. In contrast, concerning the remaining activities outlined in the itinerary, children in the treatment group engaged in an average of 6 activities focused on technological accessibility and 7 activities within the educational realm, predominantly individual tutorials. As for activities targeting adults, families in the treatment group participated in an average of 6 individual social support sessions and 2 group social support sessions. Additionally, they engaged in 5 educational activities, primarily family interviews, along with 3 activities centered on technological accessibility.

A total of 39 children and 54 adults in the sample dropped out from the program at different stages of the experiment. In some cases, the whole family left the intervention, while in other cases, the children dropped out of the program, while the rest of the family continued to participate. The most common reason for dropping out is loss of interest in the program and other less frequent reasons include change of address, difficulties in attending the program due to conflicts in the area, inability to contact them, in some cases upon reaching compulsory school age, dissatisfaction with the assigned intervention group, or inability to attend the program at the scheduled time. **Table 6** reports the number of dropouts per group for adults and children, as well as their percentage.

Table 6: Dropouts from the program

Random assignment	Total	Dropouts
Adults		
Control group	329	17 (5%)
Treatment group	318	37 (12%)
Children		
Control group	268	11 (4%)
Treatment group	269	28 (10.4%)

A total of 8 families in the treatment group quit during the first month after the intervention began and were replaced by families from the control group, who were non-randomly reassigned to receive the intervention. This was conducted according to a protocol established jointly by FSG and the MISSM, with the aim of taking advantage of the available resources and not unbalancing the sizes of the groups. However, for the purposes of the impact assessment, it has been decided to consider these families who were transferred from the control group to the treatment group as "non-compliant", and to consider them with their original randomization in the analysis. In addition, the 37 adults and 28 minors in the treatment group who dropped out and therefore stopped participating in the program are also considered non-compliant. Finally, it should be noted that some families assigned to the control group dropped out at the beginning because they did not agree with this assignment.

Table 7 shows compliance with randomization for adults and children. 5.1 per cent of adults and 5.5 per cent of children in the control group, and 88 per cent of adults and 89.5 per cent of children in the treatment group participated in program activities. The non-compliance with random assignment diminishes the difference in treatment exposure between the treatment group and the control group. Consequently, the estimate of Intention to Treat (ITT), based on the difference in post-program

outcomes between those randomly assigned to the treatment and control group, indicates the effect of offering the program. However, it does not report on the impact of participating in program activities due to partial compliance. For that reason, the study will additionally estimate the Local Average Treatment Effect (LATE), which enables this report to capture, under certain assumptions, the effect of treatment on those who comply[18].

Table 7: Compliance with random assignment

Random assignment	Took the treatment	Did not take the treatment	Total	% Take-up of the program
Adults				
Control group	329	17	312	5,1%
Treatment group	318	281	37	88%
Children				
Control group	268	15	253	5,5%
Treatment group	269	241	28	89,5%

The attrition rate, indicating the proportion of potential respondents with missing information at the end of the study, stands at 8.3% for adults and 7.3% for children. These figures are equal to dropout rates, reflected in **Table 6**, as survey information was not collected for families who quit the program. These are low levels of attrition compared to similar studies.

To assess whether attrition introduces bias into the estimates, it is essential to explore two key aspects: (1) whether attrition varies between intervention groups, which is called differential attrition, and (2) whether the characteristics of dropouts differ significantly between groups, which is known as selective attrition.

To test whether the differential dropout between groups is significant, this study estimates equations (1) and (2), where $Attrition_i$ is an indicator variable that takes the value 1 if an individual i has dropped out and 0 if he has not, $Treatment_i$ is the indicator of treatment and y_i are the fixed effects of the strata. Standard errors are grouped at the family level, as it was the unit of randomization.

$$Attrition_i = \alpha + \beta\, Treatment_i + \varepsilon_i \quad (1)$$

$$Attrition_i = \alpha + \beta\, Treatment_i + y_i + \varepsilon_i \quad (2)$$

The first column on **Table 8: Attrition analysis - Children**

Variable	Attrition	Attrition	Attrition
Treatment	0.063***	0.062***	0.194
Treatment X Female			-0.081

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[18] See the next section for a more detailed explanation of the LATE estimator.

Variable	Attrition	Attrition	Attrition
Treatment X Roma population			0.098*
Treatment X Primary education			-0.141
Treatment X Secondary education			0.000
Treatment X Basic FP			0.000
Treatment X 3º Primary			-0.120*
Treatment X 4º Primary			-0.160**
Treatment X 5º Primary			-0.090
Treatment X 6º Primary			0.000
Treatment X 1º Secondary			-0.123
Treatment X 2º Secondary			-0.137
Treatment X 3º Secondary			0.000
Treatment X 1 Basic FP			0.000
Treatment X education reinforcement programs			0.064
Treatment X ACI *dummy*			-0.017
Control Mean	0.04	0.04	0.04
R^2	0.01	0.07	0.15
N	537	537	537
Controls	No	No	Sí
Strata	No	Sí	Sí
F-statistic			0.11

Tabla 9: Análisis del nivel de desgaste de la muestra - Adultos

Variable	Attrition	Attrition	Attrition
Treatment	0.065***	0.062**	0.066
Treatment X Female			-0.026
Treatment X Age			-0.003
Treatment X Roma population			-0.028
Treatment X No education			0.036
Treatment X Primary education			0.031
Treatment X Secondary education			0.016
Treatment X Higher education			0.000
Treatment X Employed			0.062
Treatment X Disability			-0.127
Control Mean	0.05	0.05	0.05
R^2	0.01	0.10	0.13

Variable	Attrition	Attrition	Attrition
N	647	647	647
Controls	No	No	Sí
Strata	No	Sí	Sí
F-statistic			0.92

and ¡Error! No se encuentra el origen de la referencia. presents the results of the estimation of the child and adult population, respectively. The data shows that the dropout rate in the treatment group is statistically higher at 6.3% in children (p<0.01) and 6.5% in adults (p<0.01). When strata fixed effects are incorporated, the attrition rate in the treatment group remains 6.2% for the young population (p<0.01) and 6.2% for the adult population (p<0.05).

Given the significant difference in the dropout rate between the treatment and control groups in both populations, the report checks whether dropouts in the treatment and control groups differ in any of the characteristics observable at baseline. The third column in **Table 8: Attrition analysis - Children**

Variable	Attrition	Attrition	Attrition
Treatment	0.063***	0.062***	0.194
Treatment X Female			-0.081
Treatment X Roma population			0.098*
Treatment X Primary education			-0.141
Treatment X Secondary education			0.000
Treatment X Basic FP			0.000
Treatment X 3º Primary			-0.120*
Treatment X 4º Primary			-0.160**
Treatment X 5º Primary			-0.090
Treatment X 6º Primary			0.000
Treatment X 1º Secondary			-0.123
Treatment X 2º Secondary			-0.137
Treatment X 3º Secondary			0.000
Treatment X 1 Basic FP			0.000
Treatment X education reinforcement programs			0.064
Treatment X ACI *dummy*			-0.017
Control Mean	0.04	0.04	0.04
R^2	0.01	0.07	0.15
N	537	537	537
Controls	No	No	Sí
Strata	No	Sí	Sí
F-statistic			0.11

Tabla 9: Análisis del nivel de desgaste de la muestra - Adultos

Variable	Attrition	Attrition	Attrition
Treatment	0.065***	0.062**	0.066
Treatment X Female			-0.026
Treatment X Age			-0.003
Treatment X Roma population			-0.028
Treatment X No education			0.036
Treatment X Primary education			0.031
Treatment X Secondary education			0.016
Treatment X Higher education			0.000
Treatment X Employed			0.062
Treatment X Disability			-0.127
Control Mean	0.05	0.05	0.05
R^2	0.01	0.10	0.13
N	647	647	647
Controls	No	No	Sí
Strata	No	Sí	Sí
F-statistic			0.92

and ¡Error! No se encuentra el origen de la referencia. shows the results of the estimation of equation (3), where X_k are the observable features and δ_k the parameters of interest. A significant coefficient δ_k would indicate that dropouts from the control group and the treatment group differ significantly in characteristics X_k.

$$Attrition_i = \alpha + \beta\, Treatment_i + \Sigma_k \beta_k X_{ik} + \Sigma_k \delta_k X_{ik} \times Treatment_i + \varepsilon_i \quad (3)$$

Although there are mostly no statistically significant differences between dropouts in the treatment and control groups for the younger population, there are some exceptions. Significant differences were observed related to the Roma population, with a 10% higher dropout rate in the treatment group (p<0.1). In addition, among those enrolled in the third and fourth grades of primary school, a higher dropout rate was found in the control group (p<0.1).

On the other hand, for the adult population, we did not observe any statistical difference between dropouts in the control and treatment groups in this second model, so this suggests that, for adults, dropouts in the two groups do not show systematic variations in their characteristics.

Table 8: Attrition analysis - Children

Variable	Attrition	Attrition	Attrition
Treatment	0.063***	0.062***	0.194

Variable	Attrition	Attrition	Attrition
Treatment X Female			-0.081
Treatment X Roma population			0.098*
Treatment X Primary education			-0.141
Treatment X Secondary education			0.000
Treatment X Basic FP			0.000
Treatment X 3º Primary			-0.120*
Treatment X 4º Primary			-0.160**
Treatment X 5º Primary			-0.090
Treatment X 6º Primary			0.000
Treatment X 1º Secondary			-0.123
Treatment X 2º Secondary			-0.137
Treatment X 3º Secondary			0.000
Treatment X 1 Basic FP			0.000
Treatment X education reinforcement programs			0.064
Treatment X ACI *dummy*			-0.017
Control Mean	0.04	0.04	0.04
R^2	0.01	0.07	0.15
N	537	537	537
Controls	No	No	Sí
Strata	No	Sí	Sí
F-statistic			0.11

Tabla 9: Análisis del nivel de desgaste de la muestra - Adultos

Variable	Attrition	Attrition	Attrition
Treatment	0.065***	0.062**	0.066
Treatment X Female			-0.026
Treatment X Age			-0.003
Treatment X Roma population			-0.028
Treatment X No education			0.036
Treatment X Primary education			0.031
Treatment X Secondary education			0.016
Treatment X Higher education			0.000
Treatment X Employed			0.062
Treatment X Disability			-0.127
Control Mean	0.05	0.05	0.05

Variable	Attrition	Attrition	Attrition
R^2	0.01	0.10	0.13
N	647	647	647
Controls	No	No	Sí
Strata	No	Sí	Sí
F-statistic			0.92

5 Results of the evaluation

Random assignment of the experimental sample to the control and treatment groups ensures that, with a sufficiently large sample, the groups are statistically comparable. Therefore, any differences observed after the intervention can be causally associated with the treatment. Econometric analysis provides, in essence, this comparison. Nevertheless, this analysis has the advantages of allowing other variables to be included to increase accuracy in the estimates and provide confidence intervals for the estimates. In this section, the econometric analysis and the estimated regressions are presented, as well as the analysis of the results obtained.

5.1 Description of the econometric analysis: estimated regressions

The regression model specified to estimate the causal effect of an intervention in a randomized controlled trial (RCT) estimates the difference in the mean outcome of interest between the treatment and control groups after treatment. This difference is what we call the impact of the project. This estimate captures the causal impact of the intervention, as the randomization procedure ensures that, on average, the treatment and control groups are comparable, and any observed differences in outcomes between the two groups can be attributed to the intervention.

The analysis focuses on the Intention to Treat (ITT) estimation, which compares people assigned to treatment with those assigned to control, regardless of whether they meet the random assignment. This is generally the policy-relevant estimate of the program's impact, since, in most cases, program compliance cannot be fully assured.

This analysis presents regressions in which the researchers control for the lagged value of the dependent variable, i.e., the pre-intervention value, stratum fixed effects, and additional covariates at baseline. In the analysis of the sample of children, they were controlled by gender, academic level, Roma population, whether they received external educational support and whether they repeated an academic year. In adult regressions, we controlled gender, age, nationality, education level, employment status, and disability. This ensures that differences between the pre-intervention treatment and control groups are considered in the analysis.

Specifically, the specification of the regressions presented below is as follows:

$$Y_{i,t=1} = \alpha + \beta T_i + \gamma Y_{i,t=0} + \delta X_i + \theta \lambda_i + \varepsilon_i \quad (1)$$

where $Y_{i,t=1}$ is the dependent variable of interest observed after the intervention for the child or adult i, T_i indicates whether the i person's family has been assigned to the treatment (=1) or control (=0), $Y_{i,t=0}$ is the lagging value of the dependent variable, i.e., before the intervention, X_i is a vector of controls[19], λ_i is the stratum fixed effects, and ε_i is the error term. Standard errors are grouped at the family level in both child and adult regressions, as it is the unit of randomization. The coefficient of the Treatment variable, β, captures the ITT, our parameter of interest.

As discussed in **section 4.3,** compliance with randomization is not perfect. Program adherence in the control group, instead of 0%, is 5.1% for adults and 5.5% for children, while adherence in the treatment group, instead of 100%, is 88% in adults and 89.5% in children. Failure to adhere to randomization reduces the difference in treatment exposure between the treatment and control groups. Accordingly, the ITT estimate captures the effect of offering the program but does not report on the impact of taking the program due to imperfect non-compliance. It will often provide a lower limit on the Average Treatment Effect (ATE), because it includes some people who did not receive the treatment in the treatment group and some people who received the treatment in the comparison group.

Therefore, we will also additionally estimate the Local Average Treatment Effect (LATE), which provides an estimate of the treatment effect for those who are compliant. Formally, it is given by:

$$LATE = \frac{E(Y_i|T_i=1) - E(Y_i|T_i=0)}{E(d_i|T_i=1) - E(d_i|T_i=0)} = \frac{ITT}{(tomar\ tratamiento) - (tomar\ control)} \quad (2)$$

where Y_i is the outcome observed after the intervention, T_i randomization, and d_i is a *dummy* (or binary) variable that indicates whether treatment was received. Random assignment of treatment is used as an instrument for the actual treatment received.

In addition to the standard assumption of independence that is derived from randomization, this model is based on two key assumptions:

- Monotony: Assignment to treatment does not make you less likely to receive it.
- Exclusion restriction: Individuals respond to the treatment itself, not to the treatment allocation, so that the outcome is the same for those who would not have received the treatment, regardless of the treatment allocation.

For the analysis of heterogeneity, we will investigate whether the results differ by gender (for both children and adults) and by children's academic level. For this analysis, we will interact the treatment with the heterogeneity variable (gender or educational level) and control for the outcome at baseline and additional covariates:

$$Y_{i,t=1} = \alpha + \beta\ T_i + \gamma Y_{i,t=0} + \delta X_i\ \beta_2\ T_i * B_i \theta \lambda_i \varepsilon_i \quad (3)$$

Where B_i is the heterogeneity variable.

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[19] Controls for minors included gender, grade, educational level, Roma population, repetition of school year and participation in external educational reinforcement programs. For the adult population, gender, age, Roma population, Spanish nationality, educational level attained, disability and employment status are included.

5.1 Analysis of the results

5.1.1 Primary and secondary outcomes

Academic Success

Table 10 presents the impact of the intervention on major academic success outcomes for children. We found that the treatment significantly increased the composite educational success index by 18% compared to the control group (0.55 points, p<0.01). This index is the weighted average of educational competencies, personal perceptions, and academic performance, which are presented in columns 2, 3, and 4 of **Table 10**, respectively.

The program's positive effect on the overall educational success index (column 1) is given by the positive and significant effect on academic performance of 28% (1.23 points, p<0.01), which includes scores from school tests and proficiency tests conducted by FSG. Also due to the positive impact of the sub-index of personal perception and integration of 15% (0.09 points, p<0.01). Finally, the study does not have any significant impact on the subcomponent of educational competencies, which include level of motivation, attendance rate, expectations, and satisfaction.

In **Table 11** and **Table 12**, we show the results of the secondary indicators of academic success for children, which are the subcomponents of the index of educational competencies and integration and personal perception analyzed in **Table 10**, respectively. As can be seen, we found a positive and significant impact on students' expectations and test scores with coefficients of 0.52 (p<0.05) and 1.58 (p<0.01), respectively. This means an increase in expectations in the treatment group compared to the control of 16% and an increase in proficiency test scores of 40%. However, we found a negative effect on the level of satisfaction of children of almost 5% (-0.09 points, p<0.01). In addition, no significant impact was found on the level of motivation, attendance rate, number of hours not attended school, and school grade point average.

In summary, the educational pathway significantly improves overall educational success (18% increase), self-perception and integration (15% increase) and academic performance (28%) and shows positive effects on children's expectations (16%) and proficiency tests (40%). However, the program has a negative impact on children's satisfaction (5% decrease) and does not significantly affect motivation, attendance, and average school grades. These results may be because the intervention contributes to children's awareness of the difficulties they face, as well as the difficulty of affecting school grades in a single academic year. As anticipated, the LATE estimator, which can be found at the bottom of the tables, captures greater effects for those who comply with the treatment: 19% increase in educational success, 17% increase in self-perception and integration, 29% increase in academic achievement, 17% increase in expectations, and 45% increase in proficiency test scores.

Table 10: Academic results (main outcomes) - Children

Variable	Educational success	Educational competencies	Personal perception and integration	Academic performance
	Subscript – Academic results			
	(1)	(2)	(3)	(4)
Treatment	0.55***	0.02	0.09***	1.23***
	(0.08)	(0.05)	(0.04)	(0.13)
Control Mean	3.00	1.85	0.59	4.42
N	349	351	498	485
LATE	0.57***	0.02	0.10***	1.30***
R^2	0.54	0.34	0.32	0.52

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 11: Academic results (secondary outcomes) – Children (1/2)

Variable	Motivation level	Attendance rate	Hours missed at school	Expectations
	Subscript – Academic results			
	(1)	(2)	(3)	(4)
Treatment	0.02	0.01	-2.92	0.52**
	(0.06)	(0.01)	(8.04)	(0.21)
Control Mean	2.30	0.93	77.33	3.17
N	498	353	348	498
LATE	0.02	0.01	-3.08	0.55**
R^2	0.46	0.50	0.70	0.16

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 12: Academic results (secondary outcomes) – Children (2/2)

Variable	Satisfaction level	Test scores	Average school marks
	Subscript – Academic results		
	(5)	(6)	(7)
Treatment	-0.09***	1.58***	0.09
	(0.03)	(0.23)	(0.11)
Control Mean	0.063	0.062	0.194
N	497	537	-0.081
LATE	-0.10***	1.89***	0.098
R^2	0.34	0.34	-0.141

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Regarding the main results corresponding to the first block (academic success) of this analysis for adults, we found that, in the adult population, the involvement of the family in the education of their children increases by 17% (0.49 points, p<0.01) when they receive the intervention (see **Table 13: Academic results – Adults**

). According to the LATE estimator, treatment increases family engagement by 18% for those who comply with treatment. This index includes information on the family's knowledge of the education system, their participation in terms of time and resources spent on their children's education, notifying the school in case children do not attend, and time spent with their children studying or doing homework.

Table 13: Academic results – Adults

Variable	Family involvement in education (1)
Treatment	0.49***
	(0.18)
Control Mean	2.91
N	113
LATE	0.53***
R^2	0.57

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Social protection

The ¡Error! No se encuentra el origen de la referencia. shows the results for the social protection indices for minors. In this part, no significant impact has been found for any of the outcomes: healthy habits, active citizenship and social protection index that includes both. It should be noted that the intervention with minors was not aimed at this area, but it was focused on academic reinforcement and digital skills.

Table 14: Social protection – Children

Variable	Social protection index (1)	Subscript – Social protection index	
		Healthy habits (2)	Active citizenship (3)
Treatment	0.00	-0.05	0.14
	(0.04)	(0.03)	(0.09)
Control Mean	1.77	2.07	1.09
N	394	399	488
LATE	0.00	-0.06*	0.14
R^2	0.20	0.27	0.19

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 15 shows the results for the social protection block in the adult population. The program significantly increases the overall social protection index by 8% (0.1, p<0.1), which is a weighted average of access to public resources and support, personal and social skills, and social participation and active citizenship. Of these subcomponents, the intervention significantly increases access to resources by 17% (0.12, p<0.01) and active citizenship by 19% (0.29, p<0.01). However, no significant effect was found on personal and social competencies.

According to the LATE estimate, these effects are slightly larger for the population of compliers, with the treatment increasing access to resources by 19% and active citizenship by 22% with respect to the control group. The effect on the social protection index stays the same, with an increase of 8%.

Table 15: Social Protection – Adults

Variable	Social protection index	Subscript – Social protection index		
		Access to resources	Personal and social competencies	Active citizenship
	(1)	*(2)*	*(3)*	*(4)*
Treatment	0.10*	0.12***	-0.03	0.27**
	(0.05)	(0.03)	(0.06)	(0.10)
Control Mean	1.21	0.69	2.08	1.39
N	83	136	366	575
LATE	0.10**	0.13***	-0.04	0.28***
R^2	0.53	0.44	0.19	0.29

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Digital Accessibility

Table 16 presents the results corresponding to the hypotheses of digital accessibility for children. The intervention led to a positive and significant increase in the overall digital accessibility index of 15% (0.19 points, p<0.01), which includes measures of digital knowledge and competence, as well as trust and security in access to the digital world. Of these index subcomponents, the program significantly increased the digital knowledge and skills of the treatment group by 16% compared to the control group (0.2 points, p<0.01). However, no significant effect was found on trust and security in accessing the digital world.

When looking at the effect on those who meet the assignment, the LATE estimate reports larger effects: a 15% increase in the digital accessibility index and a 17% increase in digital knowledge and skills.

Table 16: Digital Accessibility – Children

| Variable | Digital accessibility index | *Subscript – Digital skills* | |
| | | Digital competencies and skills | Confidence/security in accessing digital world |
	(1)	*(2)*	*(3)*
Treatment	0.20***	0.20***	0.05
	(0.04)	(0.04)	(0.06)
Control Mean	1.30	1.26	1.29
N	473	473	537
LATE	0.21***	0.21***	0.06
R^2	0.37	0.33	0.15

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 17 provides results for digital accessibility in adults. As a result, the researchers find a positive and significant impact for the adult population in digital knowledge and skills of almost 12%, with a coefficient of 0.17 (p<0.01). For those who meet the assignment, the LATE estimator reports a slightly higher increase in digital competencies of nearly 13%. For the rest of the outcome variables (digital accessibility index and trust and security in access to the digital world), we did not find any significant effect.

Table 17: Digital Accessibility – Adults

| Variable | Digital accessibility index | *Subscript – Digital skills* | |
| | | Digital competencies and skills | Confidence/security in accessing digital world |
	(1)	*(2)*	*(3)*
Treatment	0.12	0.17***	0.10
	(0.19)	(0.05)	(0.11)
Control Mean	1.52	1.46	1.42
N	35	160	65
LATE	0.16	0.18***	0.11
R^2	0.47	0.60	0.33

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.1.2 Heterogeneity analysis

Heterogeneity by gender

Academic Success

Table 18 and **Table 19** report heterogeneous effects on primary and secondary outcomes of academic success by gender for both youth and adult populations. The coefficient of interest in this case

corresponds to the interaction between the treatment and the binary variable indicating gender (Treatment*Female), which captures the difference in effect in women compared to men. The treatment indicator coefficient estimates the effect of treatment in men. In neither case is the coefficient of the interaction significantly different from zero. Therefore, the analysis concludes that there is no gender-heterogeneous effects on academic success outcomes for children (see **Table 18** and the **Table 19**). Similarly, the intervention did not have a significant differential effect on family participation in adult gender education (see **Table 20**)

Table 18: Gender heterogeneity analysis - Academic success (main outcomes) - Children

| Variable | Educational success | Subscript – Academic results | | |
| | | Educational competencies | Personal perception and integration | Academic performance |
	(1)	(2)	(3)	(4)
Treatment	0.59***	-0.01	0.10**	1.26***
	(0.12)	(0.06)	(0.05)	(0.18)
Female	0.10	-0.02	0.04	0.06
	(0.12)	(0.06)	(0.05)	(0.18)
Treatment *Female	-0.08	0.06	-0.02	-0.04
	(0.16)	(0.09)	(0.07)	(0.24)
Control Mean	3.00	1.85	0.59	4.42
N	349	351	498	485
R^2	0.54	0.34	0.32	0.52

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 19: Gender heterogeneity analysis - Academic success (secondary outcomes) – Children (1/2)

| Variable | Subscript – Academic results | | | |
| | Motivation level | Attendance rate | Hours missed at school | Expectations |
	(1)	(2)	(3)	(4)
Treatment	-0.05	0.02	-5.59	0.58*
	(0.09)	(0.01)	(11.58)	(0.30)
Female	0.04	0.00	-7.62	-0.23
	(0.08)	(0.01)	(9.96)	(0.26)
Treatment *Female	0.14	-0.03	5.19	-0.12
	(0.11)	(0.02)	(15.38)	(0.40)
Control Mean	2.30	0.93	77.33	3.17
N	498	353	348	498
R^2	0.46	0.50	0.70	0.16

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 19: Gender heterogeneity analysis - Academic success (secondary outcomes) – Children (2/2)

Variable	Subscript – Academic results		
	Satisfaction level	Test scores	Average school marks
	(5)	*(6)*	*(7)*
Treatment	-0.13***	1.46***	0.06
	(0.04)	(0.31)	(0.15)
Female	0.06	-0.07	0.01
	(0.04)	(0.28)	(0.17)
Treatment *Female	0.08	0.22	0.06
	(0.06)	(0.43)	(0.22)
Control Mean	1.84	3.96	4.81
N	497	537	485
R^2	0.34	0.34	0.64

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 20: Gender Heterogeneous Analysis - Academic results – Adults

	Family involvement in education
	(1)
Treatment	0.71**
	(0.27)
Female	0.18
	(0.24)
Treatment *Female	-0.36
	(0.34)
Control Mean	2.91
N	113
R^2	0.58

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Social protection

Table 21 and **Table 22** report heterogeneous effects by gender on living conditions outcomes for both the youth and adult populations. All coefficients capturing differential treatment effects are not significantly different from zero, indicating that the treatment has no differential impact on females with respect to males in terms of living conditions outcomes for children and adults.

Table 21: Gender Heterogeneous Analysis – Social Protection – Children

| 0,19 | Social protection index | *Subscript – Social protection index* | |
| | | Healthy habits | Active citizenship |
	(1)	(2)	(3)
Treatment	0.03	-0.02	0.10
	(0.06)	(0.05)	(0.13)
Female	-0.02	-0.02	-0.10
	(0.06)	(0.05)	(0.13)
Treatment *Female	-0.05	-0.06	0.06
	(0.08)	(0.07)	(0.18)
Control Mean	1.77	2.07	1.09
N	394	399	488
R^2	0.20	0.27	0.19

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 22: Gender Heterogeneous Analysis – Social Protection – Adults

| Variable | Social protection index | *Subscript – Social protection index* | | |
| | | Access to resources | Personal and social competencies | Active citizenship |
	(1)	(2)	(3)	(4)
Treatment	0.02	0.09	-0.10	0.22
	(0.09)	(0.06)	(0.08)	(0.14)
Female	0.05	0.05	0.04	0.09
	(0.08)	(0.05)	(0.06)	(0.10)
Treatment *Female	0.10	0.05	0.10	0.08
	(0.10)	(0.07)	(0.08)	(0.15)
Control Mean	1.21	0.69	2.08	1.39
N	83	136	366	575
R^2	0.54	0.44	0.19	0.29

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Digital Accessibility

Table 23 and **Table 24** report the results of the analysis of heterogeneity in the results of the third block: digital accessibility. The analysis shows, for the underage population, that the treatment has differential effects in terms of security and confidence when accessing the digital world, although the treatment does not seem to have a significant effect on boys, this result increases significantly by more than 11% (p<0.1) for girls.

This significant impact for the girls in the sample makes sense from the initial baseline, since the level of digital accessibility in boys is higher than in girls at baseline. From this starting point, an increase due to the treatment of the population of girls rather than boys is consistent and logical with the situation proposed.

On the other hand, there is no differential gender impact for the adult population in terms of digital accessibility (see **Table 24**).

Table 23: Heterogeneous analysis by gender - Digital accessibility - Children

| Variable | Digital accessibility index | Subscript – Digital skills | |
| | | Digital competencies and skills | Confidence/security in accessing digital world |
	(1)	(2)	(3)
Treatment	0.14***	0.16***	-0.05
	(0.05)	(0.06)	(0.09)
Female	-0.09*	-0.07	-0.09
	(0.05)	(0.05)	(0.07)
Treatment *Female	0.11	0.08	0.20*
	(0.07)	(0.07)	(0.12)
Control Mean	1.30	1.26	1.29
N	473	473	537
R^2	0.38	0.34	0.15

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 24: Heterogeneous analysis by gender - Digital accessibility - Adults

| Variable | Digital accessibility index | Subscript – Digital skills | |
| | | Digital competencies and skills | Confidence/security in accessing digital world |
	(1)	(2)	(3)
Treatment	0.00	0.22***	0.09
	(0.31)	(0.06)	(0.19)
Female	-0.05	0.02	0.07
	(0.26)	(0.05)	(0.17)
Treatment *Female	0.24	-0.09	0.01
	(0.38)	(0.07)	(0.27)
Control Mean	1.52	1.46	1.42
N	35	160	65
R^2	0.49	0.60	0.33

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Heterogeneity by academic level

Table 25 shows the effect of interventions by academic level on the main outcomes of student success in the juvenile population. The interventions had no significant differential effect on any of the main outcomes. However, Table 26 shows that the intervention had different effects by educational level on secondary outcomes of academic success. In particular, the treatment had a significant and positive impact on the attendance rate for those subjects who were in secondary education, while the effect was negative, although very small (-1%), for those who were in primary school (p<0.05). In addition, it did not have any significant differential impact on social protection outcomes (see **Table 27**) or digital accessibility outcomes (see **Table 28**).

Table 25: Heterogeneous analysis by academic level - Academic results (main outcomes) - Children

Variable	Educational success	Educational competencies	Personal perception and integration	Academic performance
	(1)	*(2)*	*(3)*	*(4)*
Treatment	0.44***	-0.03	0.12**	1.18***
	(0.13)	(0.09)	(0.06)	(0.20)
Primary education	0.28**	0.08	-0.03	0.55**
	(0.14)	(0.08)	(0.06)	(0.21)
Treatment *Primary education	0.16	0.07	-0.04	0.07
	(0.16)	(0.10)	(0.07)	(0.25)
Control Mean	3.00	1.85	0.59	4.42
N	349	351	498	485
R^2	0.51	0.33	0.32	0.50

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 26: Heterogeneous analysis by academic level - Academic results (secondary outcomes) - Children (1/2)

Variable	Motivation level	Attendance rate	Hours missed at school	Expectations
	(1)	*(2)*	*(3)*	*(4)*
Treatment	0.06	0.04*	8.23	0.35
	(0.10)	(0.02)	(18.69)	(0.36)
Primary education	0.20**	0.04**	-22.90*	0.39
	(0.09)	(0.02)	(13.59)	(0.30)
Treatment *Primary education	-0.05	-0.05**	-14.85	0.28
	(0.11)	(0.03)	(20.69)	(0.42)
Control Mean	2.29	0.93	77.33	3.17
N	498	353	348	498

Variable	Subscript – Academic results			
	Motivation level	Attendance rate	Hours missed at school	Expectations
	(1)	(2)	(3)	(4)
R^2	0.45	0.50	0.67	0.14

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 26: Heterogeneous analysis by academic level - Academic results (secondary outcomes) - Children (2/2)

Variable	Subscript – Academic results		
	Satisfaction level	Test scores	Average school marks
	(5)	(6)	(7)
Treatment	-0.09*	1.31***	-0.03
	(0.05)	(0.36)	(0.21)
Primary education	0.11**	0.81**	0.24
	(0.05)	(0.32)	(0.23)
Treatment *Primary education	-0.00	0.39	0.15
	(0.06)	(0.42)	(0.25)
Control Mean	1.84	3.96	4.81
N	497	537	485
R^2	0.31	0.33	0.59

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 27: Heterogeneous analysis by academic level – Social protection – Children

Variable	Subscript – Social protection index		
	Social protection index	Healthy habits	Active citizenship
	(1)	(2)	(3)
Treatment	0.02	-0.04	0.08
	(0.07)	(0.06)	(0.14)
Primary education	0.17**	0.14**	0.25
	(0.07)	(0.06)	(0.17)
Treatment *Primary education	-0.04	-0.02	0.07
	(0.09)	(0.07)	(0.19)
Control Mean	1.77	2.07	1.09
N	394	399	488
R^2	0.18	0.26	0.18

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 28: Heterogeneous analysis by academic level - Digital accessibility - Children

Variable	Digital accessibility index (1)	Subscript – Digital skills	
		Digital competencies and skills (2)	Confidence/security in accessing digital world (3)
Tratamiento	0,22***	-0,18***	-0,02
	(0,05)	(0,06)	(0,11)
Educación primaria	-0,06	-0,11	-0,06
	(0,06)	(0,07)	(0,10)
Tratamiento* Educación Primaria	-0,04	0,01	0,06
	(0,07)	(0,07)	(0,12)
Media control	1,30	1,26	1,29
N	473	473	537
R^2	0,34	0,29	0,14

Note: Standard bugs, grouped at the family level, reported in parentheses.
Levels of significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

6 Conclusions of the evaluation

The program implemented by the Fundación Secretariado Gitano is targeted at vulnerable families with school-age children and includes educational, social and digital itineraries, with the aim of promoting social inclusion. This study offers valuable insights into the effects of the program on school attendance and performance, as well as on social protection and digital accessibility.

Through a randomized controlled trial, the study had a sample of 399 families in different locations in Spain. Within this initial sample, 197 families were randomly assigned to the treatment group, while the remaining 202 formed the control group. Families in the treatment group received the comprehensive program for one academic year, which included educational tutoring for the children, social and individual support, and training in digital accessibility for adults and children in the families, while the control group received no assistance at all.

Using baseline and endline survey data answered by children and adults in families, along with scores from school tests and proficiency tests conducted by FSG, the analysis was performed for the samples of children and adults. The study faced a dropout rate of 8.3% for adults and 7.3% for minors, revealing a higher dropout within the treatment group ($p < 0.01$) for the adult and children population. In addition, a detailed analysis suggested that participants who dropped out of the project from the treatment and control groups did not consistently show differences in most of their characteristics.

Figure 11: Effect of the intervention on the main indicators – Children
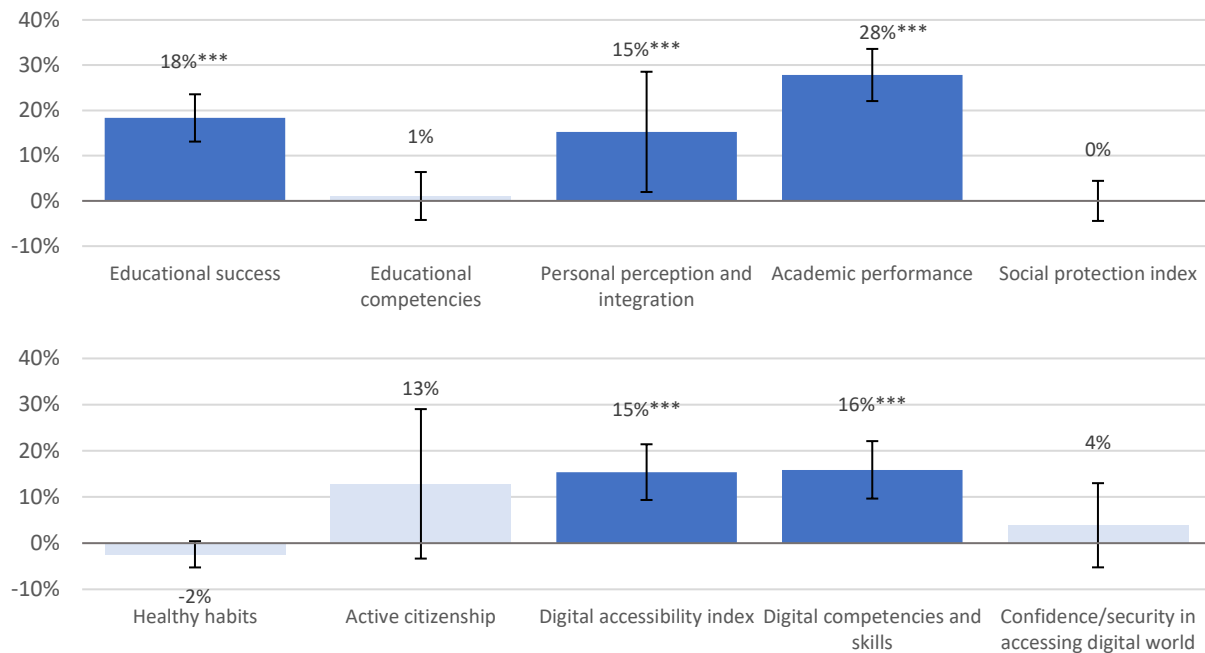
Note: Indicators whose treatment effect is significant at 1% are presented in dark blue and indicators that are not significant are presented in light blue. The effects included in the graphs refer to regressions with controls and are expressed as a percentage of the mean of the control group.

In terms of main outcomes, the interventions demonstrated a positive impact on students' overall educational success, academic performance, and personal perception. In addition, the treatment group in the underage population experienced a positive effect on their expectations of academic success and their scores on proficiency tests conducted by FSG, but a negative impact on their level of satisfaction. In addition, the interventions increased their digital accessibility through a positive impact on the Digital Accessibility Index and digital knowledge and skills.

Figure 12: Effect of Intervention on Leading Indicators - Adults
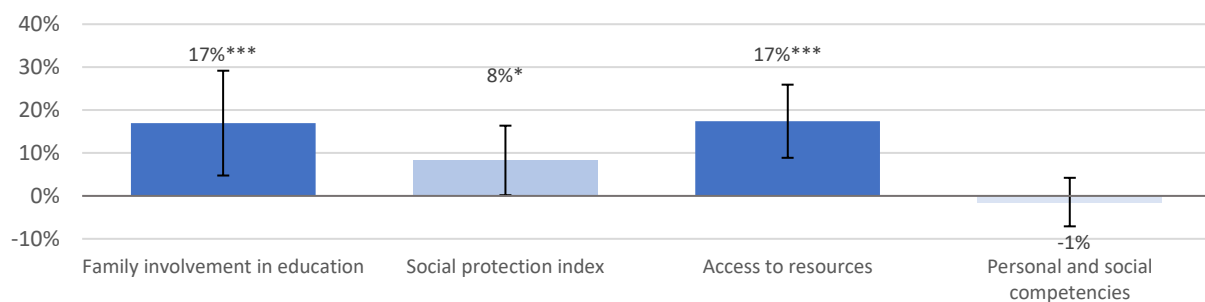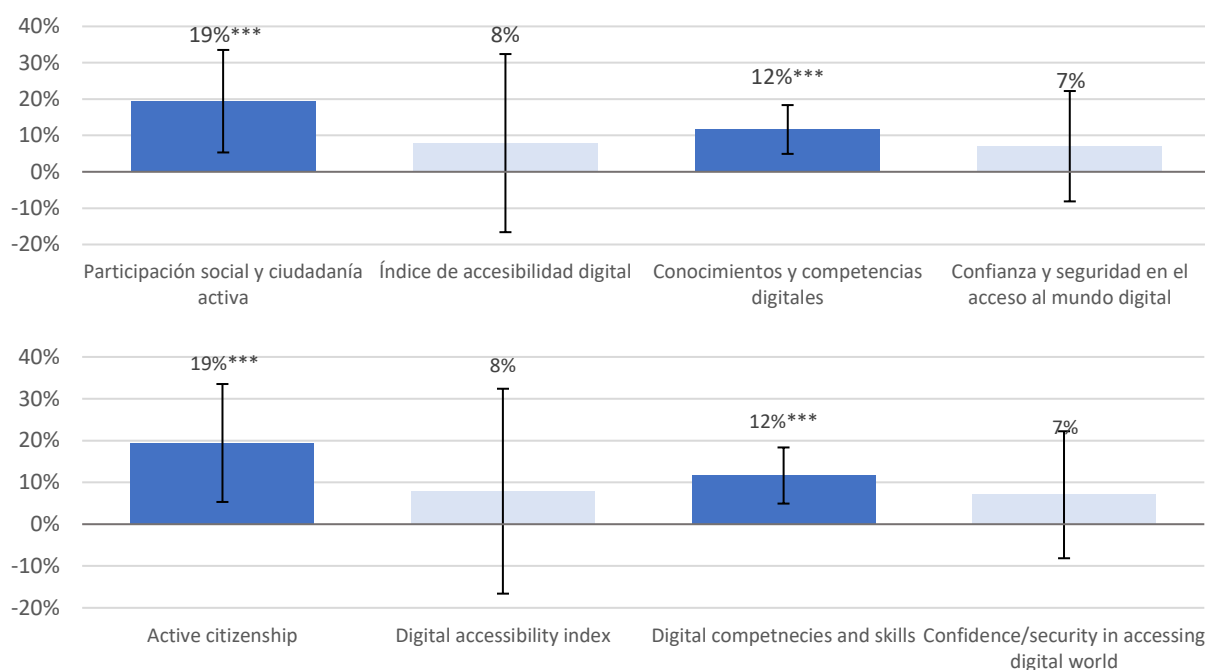
Note: Indicators whose treatment effect is significant at 1% are presented in dark blue, significant effects at 10% are presented in blue, and indicators that are not significant are presented in light blue. The effects included in the graphs refer to regressions with controls and are expressed as a percentage of the change from the mean of the control group.

For the adult population, the interventions had a positive and significant impact on families' participation in their children's education, their social protection index, active citizenship, and their access to resources. In addition, they experienced an increase in their digital knowledge and skills.

The analysis explored gender heterogeneity for both adults and children, and by educational level in the sample of children. Generally, treatment effects do not show significant gender heterogeneity in any of the samples, except for a greater positive effect for girls than boys, on the Digital Media Safety Index.

Regarding heterogeneity by educational level, the results only showed variable impacts by academic level on the school attendance rate. The program had a significant and positive impact on the attendance rate for children in secondary education, while it had a negative, although very small, effect on the attendance rate of students in primary education.

In conclusion, the results of this study highlight the potential of projects addressing poverty and social exclusion with an integral approach to improve the social inclusion of vulnerable sectors of the population through better educational performance and larger involvement of families in children's education, more active citizenship, better access to resources and improved digital competencies and skills. In Spain, where the high illiteracy rates and levels of poverty of the Roma population are worrisome, it is vitally important to introduce policies that help to promote a lower dropout rate in education, better academic performance, and provide advice on the different economic and social problems that these families face.

Bibliography

Carlana, M., & La Ferrara, E. (2021). Apart but Connected: Online Tutoring and Student Outcomes during the COVID-19 Pandemic. EdWorkingPaper No. 21-350. *Annenberg Institute for School Reform at Brown University*. Recuperado de https://eric.ed.gov/?id=ED613650

Fundación Secretariado Gitano; prepared by, ISEAK Foundation; Team, Sara de la Rica (dir.) [et al.] (2019). Comparative study on the situation of the Roma population in Spain in relation to employment and poverty 2018. Madrid. Retrieved from:
https://www.gitanos.org/estudios/estudio_comparado_sobre_la_situacion_de_la_poblacion_gitana_en_espana_en_relacion_al_empleo_y_la_pobreza_2018.html.es

Fundación Secretariado Gitano (2023). The educational situation of Roma students in Spain. Madrid. Retrieved from:
https://www.gitanos.org/estudios/la_situacion_educativa_del_alumnado_gitano_en_espana.html.es

Gortazar, L., Hupkau, C., & Roldán, A. (2023). Online tutoring works: Experimental evidence from a program with vulnerable children. Available at SSRN 4390248. Recuperado de:
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4390248

INE. (2024). Labour Force Survey (LFS). Fourth quarter 2023. Madrid: Instituto Nacional de Estadística. Retrieved from
https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176918&menu=resultados&idp=1254735976595#!tabs-1254736195129

INE. (2023). Living Conditions Survey (LCS). Year 2022. Madrid: Instituto Nacional de Estadística. Retrieved from
https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176807&menu=ultiDatos&idp=1254735976608

Kraft, M. A., List, J. A., Livingston, J. A., & Sadoff, S. (2022, May). Online tutoring by college volunteers: Experimental evidence from a pilot program. In AEA Papers and Proceedings (Vol. 112, pp. 614-618). 2014 Broadway, Suite 305, Nashville, TN 37203: American Economic Association. Recuperado de https://www.aeaweb.org/articles?id=10.1257/pandp.20221038

Ministry of Social Rights, Consumer Affairs and the 2030 Agenda. (2021). National Strategy for Roma Equality, Inclusion and Participation 2021-2030. Madrid, Spain. Retrieved from
https://www.mdsocialesa2030.gob.es/derechos-sociales/poblacion-gitana/estrategia-nacional/futura-estrategia.htm

Negrão, M., Pereira, M., Soares, I., & Mesman, J. (2014). Enhancing positive parent–child interactions and family functioning in a poverty sample: a randomized control trial. Attachment & human development, 16(4), 315-328. Recuperado de
https://www.tandfonline.com/doi/abs/10.1080/14616734.2014.912485

Noble, K. G., Magnuson, K., Gennetian, L. A., Duncan, G. J., Yoshikawa, H., Fox, N. A., & Halpern-Meekin, S. (2021). Baby's first years: design of a randomized controlled trial of poverty reduction in the United States. Pediatrics, 148(4). Recuperado de https://publications.aap.org/pediatrics/article/148/4/e2020049702/181277/Baby-s-First-Years-Design-of-a-Randomized

European Union. (2020). *Strategic Framework for Roma Equality, Inclusion and Participation in the European Union*. Brussels, Belgium. Retrieved from https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/combatting-discrimination/roma-eu/roma-equality-inclusion-and-participation-eu_es

Appendix

Economic and regulatory management

1. Introduction

Within the framework of the Recovery, Transformation, and Resilience Plan, the General Secretariat for Inclusion of the Ministry of Inclusion, Social Security and Migration is significantly involved in Component 23 "New public policies for a dynamic, resilient and inclusive labor market", framed in policy area VIII "New care economy and employment policies".

Among the reforms and investments proposed in this Component 23 is investment 7 "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme", which promotes the implementation of a new model of inclusion based on the Minimum Income Scheme (MIS), which reduces income inequality and poverty rates. To achieve this objective, the development of pilot projects has been proposed, among others, for the implementation of social inclusion itineraries with the autonomous communities and cities, local organizations and organizations of the Third Sector of Social Action, as well as with the different social agents.

Royal Decree 938/2021, of October 26, 2021, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security and Migration in the field of social inclusion, for an amount of 109,787,404 euros, within the framework of the Plan for Recovery, Transformation and Resilience[20] contributed to the fulfillment of the critical milestone (set out in the Council Implementing Decision) number 350 for the first quarter of 2022 "Improving the rate of access to the Minimum Income Scheme, and increase the effectiveness of the MIS through inclusion policies, which, according to its description, will translate into supporting the socio-economic inclusion of the beneficiaries of the MIS through itineraries: eight collaboration agreements signed with subnational public administrations, social partners and organizations of the Third Sector of Social Action to conduct the itineraries. The objectives of these partnership agreements are: (i) to improve the MIS access rate; ii) increase the effectiveness of the MIS through inclusion policies." Likewise, along with Royal Decree 378/2022, of May 17, 2022[21], contributed to compliance with monitoring indicator number 351.1 in the first quarter of 2023 "at least 10 additional collaboration agreements signed with subnational public administrations, social partners and organizations of the third sector of Social Action to implement pilot projects to support the socio-economic inclusion of the beneficiaries of MIS through itineraries", contributed to the fulfillment of monitoring indicator number 351.1 in the first quarter of 2023 linked to the Operational Arrangements document[22].

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[20] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-17464

[21] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-8124

[22] Decision of the European Commission approving the document Operational Provisions of the Plan for Recovery, Transformation and Resilience, which can be consulted at the following link:
https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/hacienda/Documents/2021/101121-CountersignedESFirstCopy.pdf

In addition, after the implementation and evaluation of each of the subsidized pilot projects, an evaluation will be conducted to assess the coverage, effectiveness and success of the minimum income schemes. The publication of this evaluation, which will include specific recommendations to improve the rate of access to benefits and improve the effectiveness of social inclusion policies, contributes to the achievement of milestone 351 of the Plan for Recovery, Transformation and Resilience scheduled for the first quarter of 2024.

In accordance with Article 3 of Royal Decree 938/2021, of 26 October, the granting of subsidies will be conducted by means of a resolution accompanied by an agreement of the head of the Ministry of Inclusion, Social Security, and Migration as the competent authority for granting them, without prejudice to the existing delegations of competence in the matter, upon request by the beneficiary organizations.

On December 14, 2021, the organization Fundación Secretariado Gitano was notified of the Resolution of the General Secretariat for Inclusion and Social Welfare Objectives and Policies (hereinafter SGOPIPS) granting a subsidy amounting to 2,536,971 euros to the Fundación Secretariado Gitano and, on December 14, 2021, An agreement is signed between the General State Administration, through the SGOPIPS and the Fundación Secretariado Gitano for the implementation of a social inclusion project within the framework of the Plan for Recovery, Transformation and Resilience, which was published in the "Official State Gazette" on February 1, 2022 (BOE no. 27).[23]

2. Timeframe of the intervention

Article 16(1) of Royal Decree 938/2021 of 26 October 2021 established that the deadline for the implementation of the pilot projects of social inclusion itineraries subject to the subsidies provided for in this text shall not exceed the deadline of June 30, 2023, while the evaluation shall not extend beyond March 31, 2024, to meet the milestones set by the Plan for Recovery, Transformation, and Resilience with regard to social inclusion policies.

Within this general timeframe, the implementation begins on **October 1, 2022**, with the start of the intervention itinerary, continuing the execution tasks until **June 30, 2023**, and subsequently developing only dissemination and evaluation tasks of the project until **March 31, 2024**.

3. Relevant Agents

Among the relevant agents for the implementation of the project are:

- o **Fundación Secretariado Gitano**, as the beneficiary organization and coordinator of the project.

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[23] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-1641

- The **Ministry of Inclusion, Social Security and Migration (MISSM)** as the sponsor of the project, and as the main responsible for the RCT evaluation process. The General Secretariat for Inclusion (SGI) assumes the following commitments:
    a) Assist the beneficiary organization in the design of the activities to be carried out for the implementation and monitoring of the object of the grant, as well as for the profiling of the potential participants of the pilot project.
    b) Design the randomized controlled trial (RCT) methodology of the pilot project in coordination with the beneficiary organization.
    c) Evaluate the pilot project in coordination with the beneficiary organization.
- **CEMFI and J-PAL Europe,** as scientific and academic institutions that support MISSM in the design and the RCT evaluation of the project.

Random Assignment Result

Table 26: Result random assignment by stratification variables

	Families						
	All children in primary school		All children in secondary school		Children in both primary and secondary school		Sample
Location	CG	TG	CG	TG	CG	TG	
A Coruña	8	9	6	8	1	3	35
Ferrol	6	6	9	6	3	2	32
Gijón	13	12	17	16	4	4	66
Granada	16	15	13	13	6	5	68
León - Las Ventas	3	5	8	4	2	2	24
León - Michaisa/Armunia	9	7	9	13	4	4	46
Madrid - Cañada	10	10	17	17	6	6	66
Murcia	12	11	13	13	7	6	62
Total	77	75	92	90	33	32	399

	Children						
	All children in primary school		All children in secondary school		Children in both primary and secondary school		Sample
Location	CG	TG	CG	TG	CG	TG	
A Coruña	8	11	6	10	3	7	45
Ferrol	7	6	13	7	8	4	45
Gijón	15	12	18	20	9	8	82
Granada	17	16	17	15	12	13	90
León - Las Ventas	3	6	9	5	4	4	31
León - Michaisa/Armunia	10	7	10	16	8	8	59
Madrid - Cañada	11	13	20	24	13	16	97

Murcia	15	12	15	17	17	13	89
Total	86	83	108	114	74	73	538

Sample Balance

Table 29 reports the balance contrasts between the control group and the treatment group. All the data reflected in this table refer to the survey conducted prior to the intervention. The mean value of each variable for both groups is reported, as well as the number of observations in each group and the p-value resulting from a mean difference contrast (using the Student's *t* statistic, which is not reported for reasons of space) and includes randomization strata as additional controls. The lower the p-value, the more confidently one can reject the hypothesis that the mean of the variable in both groups is equal. For example, if the p-value is less than 0.05, the hypothesis of equality of means can be rejected at a 5% confidence level.

Table 29: Balance Test - Minors

Variable	(1) Control N	(1) Control Mean/(Var)	(2) Treatment N	(2) Treatment Mean/(Var)	(2) - (1) Pairwise t-test N	(2) - (1) Pairwise t-test P-value
Female	268	0.50 (0.33)	269	0.53 (0.34)	537	0.48
Age	268	12.03 (6.45)	268	11.80 (8.95)	536	0.26
Roma population	268	0.87 (0.15)	269	0.83 (0.19)	537	0.26
Primary education	268	0.62 (0.31)	269	0.62 (0.32)	537	0.88
Secondary education	268	0.37 (0.31)	269	0.38 (0.32)	537	0.81
Basic FP	268	0.00 (0.00)	269	0.00 (0.00)	537	0.32
Participation in education reinforcement programs	268	0.12 (0.14)	269	0.16 (0.19)	537	0.21
A Coruña	268	0.06 (0.08)	269	0.10 (0.13)	537	0.17
Ferrol	268	0.10 (0.12)	269	0.06 (0.08)	537	0.18
Granada	268	0.17 (0.19)	269	0.16 (0.19)	537	0.84
León	268	0.16 (0.18)	269	0.19 (0.21)	537	0.50
Madrid-Cañada	268	0.18 (0.19)	269	0.16 (0.18)	537	0.65

Variable	N	(1) Control Mean/(Var)	N	(2) Treatment Mean/(Var)	N	(2) - (1) Pairwise t-test P-value
Murcia	268	0.16 (0.18)	269	0.15 (0.17)	537	0.83
Gijón	268	0.50 (0.33)	269	0.53 (0.34)	537	0.48
Motivation level	268	2.28 (0.69)	269	2.22 (0.74)	537	0.38
Attendance rate	206	0.96 (0.01)	196	0.95 (0.01)	402	0.72
Hours missed at school	206	63.96 (25525.50)	192	51.13 (12980.86)	398	0.36
Expectations	268	3.14 (7.18)	269	2.99 (6.65)	537	0.45
Satisfaction level	268	1.78 (0.15)	269	1.75 (0.17)	537	0.36
Test scores	268	3.92 (5.90)	269	3.80 (5.17)	537	0.54
Average school marks	268	4.86 (4.31)	267	4.90 (4.71)	535	0.85
Educational competencies	206	1.82 (0.22)	196	1.78 (0.23)	402	0.39
Personal perception and integration	268	0.75 (0.27)	269	0.78 (0.27)	537	0.40
Academic performance	268	4.30 (3.24)	267	4.23 (3.07)	535	0.67
Educational success	206	2.98 (0.78)	196	2.95 (0.77)	402	0.66
Healthy habits	241	2.04 (0.15)	232	2.03 (0.19)	473	0.69
Active citizenship	264	1.07 (1.33)	265	1.00 (1.32)	529	0.50
Social protection index	239	1.75 (0.19)	230	1.72 (0.26)	469	0.48
Digital competencies and skills	259	1.11 (0.26)	266	1.10 (0.25)	525	0.97
Confidence/security in accessing digital world	268	1.09 (0.53)	269	1.02 (0.50)	537	0.23
Digital accessibility index	259	1.10 (0.25)	266	1.07 (0.22)	525	0.42

Table 30: Balance Test - Adults

Variable	N	(1) Control Mean/(Var)	N	(2) Treatment Mean/(Var)	N	(2)-(1) Pairwise t-test P-value
Female	329	0,61 (0,39)	318	0,60 (0,39)	647	0,59
Age	329	39,50 (104,56)	318	39,07 (104,00)	647	0,58
Roma population	329	0,82 (0,24)	318	0,81 (0,25)	647	0,74
Spanish nationality	329	0,89 (0,16)	318	0,91 (0,13)	647	0,59
Mother	329	0,59 (0,40)	318	0,58 (0,39)	647	0,61
Father	329	0,38 (0,39)	318	0,39 (0,39)	647	0,53
Other relatives	329	0,03 (0,05)	318	0,03 (0,04)	647	0,90
Disability	329	0,06 (0,09)	318	0,02 (0,03)	647	0,01**
No education	329	0,30 (0,34)	318	0,21 (0,27)	647	0,02**
Primary education	329	0,43 (0,40)	318	0,47 (0,40)	647	0,33
Secondary education	329	0,26 (0,31)	318	0,30 (0,34)	647	0,36
University (higher level Education)	329	0,01 (0,01)	318	0,01 (0,02)	647	0,97
Employed	329	0,13 (0,19)	318	0,14 (0,19)	647	0,96
Neo-reader	222	0,05 (0,08)	225	0,03 (0,04)	447	0,24
Can read	254	0,93 (0,10)	232	0,96 (0,06)	486	0,29
Can write	254	0,93 (0,11)	232	0,96 (0,06)	486	0,17
A Coruña	329	0,08 (0,11)	318	0,11 (0,16)	647	0,23
Ferrol	329	0,09 (0,14)	318	0,07 (0,11)	647	0,45

Variable	(1) Control N	(1) Control Mean/(Var)	(2) Treatment N	(2) Treatment Mean/(Var)	(2)-(1) Pairwise t-test N	(2)-(1) Pairwise t-test P-value
Granada	329	0,17 (0,23)	318	0,15 (0,21)	647	0,67
León	329	0,17 (0,23)	318	0,18 (0,24)	647	0,76
Madrid-Cañada	329	0,19 (0,25)	318	0,18 (0,24)	647	0,94
Murcia	329	0,16 (0,22)	318	0,15 (0,21)	647	0,79
Gijón	329	0,14 (0,20)	318	0,14 (0,20)	647	0,96
Family involvement in education	176	2,72 (2,32)	164	2,60 (1,70)	340	0,41
Access to resources	105	0,71 (0,04)	112	0,71 (0,05)	217	0,82
Personal and social competencies	253	1,68 (0,39)	240	1,63 (0,36)	493	0,36
Active citizenship	322	1,24 (2,45)	315	1,17 (2,38)	637	0,57
Social protection index	76	1,11 (0,06)	85	1,08 (0,07)	161	0,44
Digital competencies and skills	98	1,46 (0,12)	88	1,44 (0,13)	186	0,78
Confidence/security accessing Digital world	78	1,21 (0,26)	76	1,24 (0,24)	154	0,69
Digital accessibility index	37	1,35 (0,10)	28	1,39 (0,05)	65	0,49

Table 31: Balance Test - Families

Variable	N	(1) Control Mean/(Var)	N	(2) Treatment Mean/(Var)	N	(2)-(1) Pairwise t-test P-value
Nº of minors in the house	202	2,32	(104,56)	2,37	(104,00)	0,65
		329		318		
Nº of minors in infant education	199	0,26	(0,24)	0,28	(0,25)	0,70
		329		318		
Nº of minors in primary education	201	1,10	(0,16)	1,11	(0,13)	0,98
		329		318		
Nº of minors in secondary education	198	0,58	(0,40)	0,60	(0,39)	0,71
		329		318		
Nº of minors in post secondary education	196	0,01	(0,39)	0,04	(0,39)	0,07*
		329		318		
Nº of minors in superior education	197	0,01	(0,05)	0,01	(0,04)	0,98
		329		318		
Nº of children below 6yrs out of school	196	0,21	(0,09)	0,22	(0,03)	0,85
		329		318		
Nº of children btw 7yrs and 18yrs out of school	197	0,09	(0,34)	0,05	(0,27)	0,22
		329		318		
All children in primary school	202	0,38	(0,40)	0,35	(0,40)	0,52
		329		318		
All children in secondary school	202	0,17	(0,31)	0,16	(0,34)	0,77
		329		318		
Children in both primary and secondary school	202	0,46	(0,01)	0,50	(0,02)	0,40
		329		318		
A Coruña	202	0,07	(0,19)	0,10	(0,19)	0,34
		222		225		
Ferrol	202	0,09	(0,08)	0,07	(0,04)	0,51
		254		232		
Granada	202	0,17	(0,10)	0,17	(0,06)	0,88
		254		232		
León	202	0,17	(0,11)	0,18	(0,06)	0,91
		329		318		
Madrid-Cañada	202	0,16	(0,11)	0,17	(0,16)	0,91
		329		318		
Murcia	202	0,16	(0,14)	0,15	(0,11)	0,87
		329		318		
Gijón	202	0,17	(0,23)	0,16	(0,21)	0,87
		329		318		