# Supporting Families, Empowering Children: A Randomized Controlled Trial on Social Inclusion\*

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#### Abstract

This pilot seeks to improve the levels of social inclusion of families with children and adolescents receiving the Minimum Income Scheme (IMV) and/or the Regional Inclusion Income (RISGA) in the seven largest municipalities in Galicia, Spain. The intervention used stratified random assignment to evaluate the effectiveness of a new model of personalized support, according to the specific needs of each member of the target family, with multiple interventions grouped into three packages (social, educational and labor). The control group received the usual financial aid from the traditional model. The analysis reveals that personalized treatment significantly reduces child material deprivation. Positive effects are also found in the synthetic indicator of social inclusion, with the greatest improvements concentrated in the measures of housing conditions, parental responsibilities, community integration and education. The personalized treatment, however, does not have a significant effect on simplified poverty indicators, on employability or on income from work, despite an improvement in the activations of household members to search for employment.

JEL Classification: I32, I38, E24 Keywords: social inclusion, families, children, randomized controlled trial

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### 1 Introduction

In 2022, 24% of people residing in Galicia were at risk of poverty and social exclusion<sup>1</sup>. The greatest risk of poverty and social exclusion is observed among families with children<sup>2</sup>. The phenomenon of child poverty has different causes and manifests itself in different dimensions. Firstly, poverty in children and adolescents is determined by the economic situation of the home in which they live, specifically of the adults who make up the family unit (often marked by the lack of economic resources and/or income derived from work). Secondly, child poverty is correlated with the educational success of children and adolescents. Finally, health care and aspects of integration and social participation are also associated with the effects of poverty.

This pilot project, implemented by the Xunta de Galicia, tries to address the causes and effects of child poverty, offering a panel of 22 personalized interventions, from a community dimension, according to the specific needs of each member of the recipient family. These interventions are grouped, by their nature, into three packages of measures: social, educational and labor, and respond to the Recommendation (EU) 2021/1004 of the Council of June 14, 2021, which establishes a European Child Guarantee that recognizes that "investment aimed at addressing the disadvantages from an early age pays off, including in the long term, contributing not only to children's inclusion and better socio-economic outcomes as adults, but also to the economy and society".

More specifically, the pilot's main objectives are to reduce child poverty and improve the social inclusion of families with children. This project aims to evaluate the results of personalized interventions compared to those of the traditional model and extract lessons and

<sup>&</sup>lt;sup>1</sup>The AROPE risk of poverty or social exclusion rate (At Risk Of Poverty or social Exclusion) was created in 2010 in order to measure relative poverty in Europe by expanding the concept of the risk of poverty rate, which it only considers income. The reduced AROPE indicator used in this pilot is a simplified version of the European Union to evaluate the degree of compliance with the social inclusion objectives set by the 2030 Agenda. According to the standard definition of the index, a person is in an AROPE situation if meets at least one of the following three criteria: is at risk of poverty, is in a situation of severe material and social deprivation, or is between 0 and 64 years old and lives in a household with low employment intensity. The figures in the text come from the EAPN report (2023) that uses the information collected in the INE Living Conditions Survey.

<sup>&</sup>lt;sup>2</sup>The EAPN report (2022) indicates that, in 2021 in Galicia, for an AROPE rate of 25% among adults, the rates were 34% for the group of minors and 54% in single-parent households.

recommendations for inclusion policies for families receiving minimum incomes (specifically, Minimum Income Scheme or Ingreso Minimo Vital – IMV - , in Spanish, and/or the Inclusion Income of Galicia - RISGA-) and who have minors in charge. In addition, the aim is to promote the transfer of knowledge to the public policy development process and to be accountable for the results of the project.

The project was developed in the 7 main cities of Galicia (A Coruña, Ferrol, Lugo, Ourense, Pontevedra, Santiago de Compostela and Vigo). The original study design aimed to reach a sample size of 3,177 families, of which 1,733 (54.%) would be randomly assigned to the control group and the other 1,444 (45.5%) to the treatment group. The requirements to be part of the study included families with children and adolescents, residents in Galicia and recipients of the IMV and/or RISGA. In addition, priority was given to single-parent families, large families, and families residing in areas with a high concentration of vulnerability factors in their population (low income, high level of unemployment, etc.), especially areas where there are precarious housing settlements.

The recruitment of participants for the program was carried out during December 2022. A total of 2,359 families gave their consent to participate. Random assignment of these families to the treatment and control groups was performed in a stratified manner. That is, first some subgroups (strata) were defined based on observable characteristics of the families and then they were randomized within each subgroup. The variables used in stratification were the type of family (single-parent or not) and the location (the 7 mentioned). Therefore, the total number of randomization strata is  $14 (= 2 \times 7)$ . The randomization algorithm was developed by the team of the Secretary-General of Inclusion (SGI). The result of the draw was communicated to the Xunta so that it could assign the participants following that guideline. This procedure guarantees that the counterpart has no discretion to assign new families to one group or another. In practice, 1,060 families were assigned to the treatment group and 1,299 families to the control group.

The collection of information prior to the intervention (baseline) occurred in January 2023.

Of the 2,359 families included in the randomization, there were 321 that did not complete the first survey or join the intervention. Therefore, 2,038 families began the intervention, 910 in the treatment group and 1,128 in the control group. The intervention was implemented for 9 months, between February and October 2023. In November 2023, the final survey was carried out, which improved the initial survey in several aspects, expanding the number of indicators and simplifying the wording of some of those used initially.

The experimental design of this evaluation does not have a pure control group. The control group in this experiment receives the set of ordinary resources and services to which a person/family has access through public social services (municipal and regional) and the Third Sector of Social Action. In addition, the families participating in the control group received compensation of 25.5 euros, in the form of a gift voucher, per interview carried out in each of the two measurements, as an incentive for their participation and to avoid sample loss. On the other hand, the treatment group receives, in addition to the ordinary offer, the extraordinary, specific and more personalized support offered by the project, with activities and financial aid that cover everything from social protection and employment, health, education and training, housing, family and community relationships<sup>3</sup>.

The total cost of personalized treatment is substantially higher than that of ordinary support. Therefore, any differential impact that the new treatment has compared to the traditional one should be compared with the difference in cost in order to carry out a cost-benefit evaluation.

### 2 Sample description

Table 1 shows the descriptive statistics of the variables related to the intervention, according to the information collected in the baseline survey. That is, the characteristics of the families and the indicators of final and intermediate results available before beginning the

 $<sup>^{3}</sup>$ Appendix 1 to this report details the portfolio of possible services offered to families in the treatment group.

intervention are reported<sup>4</sup>. The table has six columns: the name of the variable, the number of observations, the mean, the standard deviation, and the minimum and maximum values.

Variable	Obs.	Mean	Standard devations	Minimum	Maximum
Treatment	2038	0.45	0.50	0.00	1.00
Stratification variables:					
Single-parent families	2038	0.54	0.50	0.00	1.00
A Coruña	2038	0.23	0.42	0.00	1.00
Ferrol	2038	0.08	0.27	0.00	1.00
Lugo	2038	0.15	0.36	0.00	1.00
Ourense	2038	0.12	0.33	0.00	1.00
Pontevedra	2038	0.07	0.26	0.00	1.00
Santiago de Compostela	2038	0.07	0.26	0.00	1.00
Vigo	2038	0.27	0.44	0.00	1.00
Characteristics of the families:					
IMV	2038	0.88	0.32	0.00	1.00
RISGA	2038	0.12	0.32	0.00	1.00
Number of household members	2038	3.34	1.19	1.00	9.00
Number of household members under 18	2038	1.65	0.85	0.00	6.00
Number of household members who work	2038	0.55	0.66	0.00	3.00
Age of the respondent	2038	40.93	8.33	20.00	75.00
Sex of the respondent: woman	2038	0.87	0.34	0.00	1.00
Nationality of the respondent: Spanish	2038	0.70	0.46	0.00	1.00
Final indicators:					
Reduced AROPE	2038	0.58	0.65	0.00	2.00
- Absence of relative monetary poverty	2038	0.11	0.31	0.00	1.00
- Material and social deprivation	2038	2.48	1.55	0.00	7.00
Synthetic indicator of social inclusion	2038	0.72	0.09	0.31	0.95
- Health indicator	2038	0.78	0.14	0.20	1.00
- Housing indicator	2038	0.66	0.13	0.19	0.99
- Digital skills indicator	2038	0.62	0.16	0.00	1.00
- Parental responsibility indicator	2038	0.69	0.24	0.00	1.00
- Community integration indicator	2038	0.66	0.19	0.00	1.00
- Education indicator	2038	0.90	0.12	0.29	1.00
Intermediate indicators:					
Health literacy level	2038	0.90	0.20	0.00	1.00
Emotional health level	2038	0.62	0.21	0.00	1.00
Knowledge of aids and mechanisms for energy savings	2038	0.50	0.27	0.00	1.00
Delays in payment of expenses	2038	0.70	0.30	0.00	1.00
Interest in the development of digital skills	2038	0.79	0.27	0.00	1.00
Degree of family satisfaction	2038	0.69	0.24	0.00	1.00
Trust in others	2038	0.55	0.27	0.00	1.00

Table 1: Descriptive statistics

45% of the families are part of the treatment group. In the sample, priority has been given to single-parent families (representing more than half) and with a female reference person (87%). By localities, the largest cities (A Coruña and Vigo) also contribute more

<sup>&</sup>lt;sup>4</sup>Appendix 2 to this report details the construction of all the final and intermediate results indicators, as well as the description of all the survey variables included in the calculation of each indicator. Unanswered values are imputed based on the mean of the variable in the corresponding treatment or control group.

families to the pilot. 88% receive the IMV and the rest the RISGA. The average age of the respondent is 41 years and 70% are Spanish nationals.

### 3 Balance in the experimental groups

Table 2 reports the equilibrium contrasts between the control group and the treatment group. All the data reflected in this table refer to the survey carried out before 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 contrast of mean difference (using Student's t-statistic, which is not reported for reasons of space) and which includes the 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 at a confidence level of 5% can be rejected.

In panel A we include the stratification variables (single-parent and localities) that, if the 321 initially randomized families had not failed to respond, would be balanced by design. We see that the balance in these characteristics is maintained despite those families who left before starting. In panel B, we include the family characteristics and outcome indicators measured in the baseline.

Among the demographic characteristics, the only unbalanced variable is the number of household members who work, which is slightly lower in the treatment group (significantly 10%).

The main indicators also do not show differences between the treatment and control groups, with the exception of the synthetic indicator of social inclusion for which we found a difference between the treatment and control group of 0.01 (significant at 5%). If we look at each of its components separately, we see that the initially unbalanced dimensions are those of health, digital skills and community integration.

Panel A: Stratification variables										
	Cont	rol	Treati	nent	t-test					
Variable	Obs./Clusters	Mean/(Var)	Obs./Clusters	Mean/(Var)	Obs./Clusters	p-value				
Single-parent families	1128	0.54	910	0.55	2038	0.83				
	14	(21.54)	14	(17.35)	14					
A Coruña	1128	0.24	910	0.22	2038	0.49				
	14	(15.72)	14	(12.17)	14					
Ferrol	1128	0.08	910	0.08	2038	0.96				
	14	(6.44)	14	(5.16)	14					
Lugo	1128	0.16	910	0.15	2038	0.23				
	14	(11.37)	14	(8.74)	14					
Ourense	1128	0.12	910	0.13	2038	0.26				
	14	(9.02)	14	(7.73)	14					
Pontevedra	1128	0.07	910	0.08	2038	0.35				
	14	(5.59)	14	(5.16)	14					
Santiago de Compostela	1128	0.07	910	0.08	2038	0.36				
	14	(5.78)	14	(4.91)	14					
Vigo	1128	0.27	910	0.27	2038	0.95				
-	14	(17.01)	14	(13.70)	14					

# Table 2: Balancing tests among experimental groups

Control Treatment t tost									
Variable	Obs./Clusters	Mean/(Var)	Obs./Clusters	Mean/(Var)	Obs./Clusters	p-value			
IMV	1128 14	0.88 (8.85)	910 14	0.87 (7.67)	2038 14	0.45			
Number of household members	$\begin{array}{c} 1128 \\ 14 \end{array}$	$3.35 \\ (128.17)$	$910\\14$	3.32 (94.25)	$2038 \\ 14$	0.52			
Number of household members under 18	$\begin{array}{c} 1128 \\ 14 \end{array}$	1.66 (66.41)	$910\\14$	1.63 (45.93)	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.47			
Number of household members who work	$\begin{array}{c} 1128 \\ 14 \end{array}$	$0.58 \\ (39.77)$	$910\\14$	$ \begin{array}{c} 0.52 \\ (28.09) \end{array} $	$2038 \\ 14$	0.07*			
Age of the respondent	$\begin{array}{c} 1128 \\ 14 \end{array}$	40.92 (5562.47)	$910\\14$	40.95 (5297.43)	$2038 \\ 14$	0.98			
Sex of the respondent: woman	$\begin{array}{c} 1128 \\ 14 \end{array}$	$   \begin{array}{c}     0.87 \\     (9.72)   \end{array} $	$910\\14$	$ \begin{array}{c} 0.87 \\ (7.90) \end{array} $	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.87			
Nationality of the respondent: Spanish	$\begin{array}{c} 1128\\14 \end{array}$	$\begin{array}{c} 0.71 \\ (18.02) \end{array}$	$910\\14$	$\begin{array}{c} 0.70 \\ (14.79) \end{array}$	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.70			
Reduced AROPE	$\begin{array}{c} 1128 \\ 14 \end{array}$	0.57 (36.16)	$910\\14$	$0.59 \\ (30.06)$	$2038 \\ 14$	0.56			
- Absence of relative monetary poverty	$\begin{array}{c} 1128 \\ 14 \end{array}$	0.11 (8.47)	$910\\14$	0.11 (6.88)	$2038 \\ 14$	0.82			
- Material and social deprivation	$\begin{array}{c} 1128 \\ 14 \end{array}$	2.49 (209.87)	$910\\14$	2.46 (167.80)	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.76			
Synthetic indicator of social inclusion	$\begin{array}{c} 1128 \\ 14 \end{array}$	$0.72 \\ (0.77)$	$910\\14$	$\begin{array}{c} 0.71 \\ (0.61) \end{array}$	$2038 \\ 14$	0.03**			
- Health indicator	$\begin{array}{c} 1128 \\ 14 \end{array}$	$0.79 \\ (1.74)$	$910\\14$	0.77 (1.50)	$2038 \\ 14$	0.04**			
- Housing indicator	$\begin{array}{c} 1128 \\ 14 \end{array}$	$0.66 \\ (1.48)$	$910\\14$	0.66 (1.25)	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.80			
- Digital skills indicator	$\begin{array}{c} 1128 \\ 14 \end{array}$	$\begin{array}{c} 0.63 \\ (2.31) \end{array}$	$910\\14$	0.61 (1.90)	$\begin{array}{c} 2038\\14 \end{array}$	0.04**			
- Parental responsibility indicator	$\begin{array}{c} 1128\\14\end{array}$	$0.69 \\ (4.95)$	$910\\14$	$0.69 \\ (4.03)$	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.93			
- Community integration indicator	$\begin{array}{c} 1128 \\ 14 \end{array}$	$\begin{array}{c} 0.67 \\ (3.19) \end{array}$	$910\\14$	$   \begin{array}{c}     0.64 \\     (2.51)   \end{array} $	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.00***			
- Education indicator	$\begin{array}{c} 1128 \\ 14 \end{array}$	$0.90 \\ (1.33)$	$910\\14$	$0.90 \\ (0.97)$	$\begin{array}{c} 2038 \\ 14 \end{array}$	0.39			

Note: Standard errors, grouped by randomization layers, in parentheses. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Panel B includes the randomization layers as additional controls.

#### 4 Degree of participation in the intervention and attrition of the sample

Table 3 shows the total number of participants registered in the evaluation. Of the 2,038 respondents to the initial survey, 1,862 (91 per cent) also responded to the final survey. The percentage is similar between the 910 assigned to treatment (91% of them answered the final survey) and those assigned to the control (92%). This is relevant to the variables that are used to construct the final outcome indices because the sample size is reduced in the regressions presented in the next section.

Table 3: Early Dropout Rate							
Group	Total	Final Interview Completed					
Treatment	910	826~(90.8%)					
Control	1,128	$1{,}036~(91.8\%)$					
Total	2,038	1,862~(91,4%)					

To assess whether this difference in the rate of attrition of the sample between the experimental groups is statistically significant, a simple regression of the final survey binary variable not performed on treatment assignment, including strata as regressors, is estimated. Table 4 shows the results in column 1. The coefficient of the treatment variable is 0.011 and is not statistically significant.

In addition, to test whether the sample attrition is selective, regressions are estimated including as additional regressors the family characteristics and the interactions of each of them with the treatment variable. Columns 2 and 3 show the estimated coefficients for interactions. We see that the probability of not performing the final survey is only significantly different in Pontevedra, where the treated performed 5 percentage points fewer final surveys than the controls (significant difference at 5%).

Final Interview Not Completed	(1)	(2)	(3)
Treatment	$\begin{array}{c} 0.011\\ (0.013) \end{array}$	$\begin{array}{c} 0.012\\ (0.089) \end{array}$	0.011 (0.089)
Treatment and Ferrol		-0.024 (0.068)	-0.025 (0.068)
Treatment and Lugo		-0.010 (0.054)	-0.006 (0.053)
Treatment and Ourense		-0.002 (0.054)	$\begin{array}{c} 0.002\\ (0.053) \end{array}$
Treatment and Pontevedra		$0.052^{**}$ (0.022)	$0.051^{**}$ (0.020)
Treatment and Santiago de Compostela		$\begin{array}{c} 0.024\\ (0.070) \end{array}$	0.022 (0.071)
Treatment and Vigo		0.013 (0.014)	0.018 (0.017)
Treatment and Single-parent families		$\begin{array}{c} 0.019\\ (0.027) \end{array}$	$\begin{array}{c} 0.025 \\ (0.031) \end{array}$
Treatment and IMV		-0.011 (0.042)	-0.003 (0.044)
Treatment and Age of the respondent		-0.002 (0.002)	-0.002 (0.002)
Treatment and Sex of the respondent: woman		0.001 (0.025)	0.000 (0.025)
Treatment and Nationality of the respondent: Spanish		$\begin{array}{c} 0.031 \\ (0.022) \end{array}$	$0.032 \\ (0.024)$
Treatment and Number of household members		0.017 (0.012)	0.035 (0.027)
Treatment and Number of household members under 18			-0.030 (0.038)
Treatment and Number of household members who work			-0.015 (0.018)
Observations	2038	2038	2038

Table 4: Regression of the probability of non responding the endline survey

Note: Standard errors, grouped by randomization layers, in parentheses. \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. All columns include the randomization strata as controls. Columns 2 and 3 additionally include the non-interacting variables as additional controls.

### 5 Hypothesis - Evaluation Scheme

The intervention developed in this project aims to reduce child poverty and improve the social inclusion of families with children. The list of primary (HP) and secondary (HS) assumptions is presented below, as well as the indicators used in each case:

### Main hypotheses:

Poverty reduction:

- HP1a1: Reduced AROPE (IRF11), i.e. a synthetic indicator of two measures of relative monetary poverty and material and social deprivation
- HP1b1: Children's material deprivation (IRF12)

Improving social inclusion:

• HP2a1: Synthetic Social Inclusion Indicator (IRF2)

### Secondary hypotheses:

- Improvement of habits and health care: HS3a1 Synthetic Health Indicator (IRI1)
- Reducing the risk of losing housing and improving housing conditions: HS4a1 Synthetic Housing Indicator (IRI2)
- Improving digital skills: HS5a1: Synthetic Digital Skills Indicator (IRI3)
- Greater assumption of parental responsibilities: HS6a1: Synthetic Parental Responsibility Indicator (IRI4)
- Greater integration into the community and better quality of their relationships with the environment: HS7a1: Synthetic Community Integration Indicator (IRI5)
- Greater integration and educational success: HS8a1: Synthetic Education Indicator (IRI6)
- Improving employability: HS9a1: Synthetic Employability Indicator (IRI7)

### 6 Econometric specification

The regression model that is specified to estimate the causal effect in a randomized experiment is usually simply the difference in the variable of interest between the treatment group and the control group, since these groups are statistically comparable thanks to the randomization, conditional on taking into account stratification and unbalanced variables at baseline (in this way we guarantee that the differences between the treatment and control groups before carrying out the intervention are taken into account in the analysis). In addition, the analysis that follows presents regressions in which the initial value of the dependent variable, that is, the value before the intervention, is introduced whenever possible, which improves the precision of the estimates.

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

$$Y_{i,t=1} = \alpha + \beta T_i + \gamma Y_{i,t=0} + X_i \delta_i + \epsilon_i$$

where  $Y_{i,t=1}$  is the dependent variable of interest observed after the intervention for family  $i; T_i$  indicates whether the family has been assigned to the treatment (=1) or the control (=0),  $Y_{i,t=0}$  is the initial value of the dependent variable (i.e., before the intervention),  $X_i$  is a vector of controls (number of working household members and synthetic indicator of social inclusion) and  $\epsilon_i$  is the error term.

Standard errors are always clustered at the level of the randomization stratum. As explained above, the variables used in stratification are the type of family (single-parent or not) and locality (7 cities), so there are a total of 14 randomization strata.

### 7 Results

This section presents the results of the evaluation on the main and secondary indicators, following the structure of the evaluation scheme. All outcome variables have been standardized to have a mean equal to zero and standard deviation equal to one. This allows all regression coefficients to be interpreted in terms of standard deviations, which is useful for comparing the size of effects in different domains.

### 7.1 Poverty reduction

Table 5 shows the results of the poverty reduction intervention. For each indicator, two specifications are presented: one without controls and one with the additional unbalanced controls in Table 2.

In the first two columns, the impact on poverty reduction measured by the simplified AROPE index is estimated. The coefficient of the treatment variable is -0.03 standard deviations without controls and 0.006 standard deviations with controls. None are statistically significant. Neither are the coefficients corresponding to the indicator of the absence of relative monetary poverty in columns 3 and 4 or those of material and social deprivation in columns 5 and 6.

Columns 7 and 8 show the results for the child material deprivation index. In this case, a positive effect of 0.13 standard deviations without controls (statistically significant at 5%) and 0.17 standard deviations with controls (significant at 1%) is observed. This means that the personalized treatment led to an improvement, on average, of 0.13-0.17 standard deviations, compared to the traditional model.

In summary, we found that, compared to the traditional model, personalized accompaniment has a positive effect on the rate of child material deprivation. These results seem to suggest that the extra services received are mainly dedicated to children. In any case, it is important to emphasize that this effect captures the impact of personalized accompaniment (treatment) compared to the traditional model (control), but for the indicator of child material deprivation we do not have information on the difference between the two at baseline. It is also important to note that if there had been a pure control group, which had not received any assistance, it is possible that the estimated effects for personalized accompaniment would have been larger.

	Reduced AROPE		Absence of relative monetary poverty		Material and social deprivation		Child material deprivation	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	-0.031	-0.006	-0.025	-0.005	-0.027	-0.012	0.131**	$0.175^{***}$
	(0.045)	(0.048)	(0.031)	(0.031)	(0.047)	(0.050)	(0.060)	(0.054)
Observations	1862	1862	1862	1862	1862	1862	1862	1862
$R^2$	0.28	0.31	0.18	0.21	0.47	0.48	0.03	0.16
Control mean dep. var.	0.011	0.011	0.011	0.011	0.015	0.015	-0.057	-0.057
Initial value dep. var.	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Additional controls	No	Yes	No	Yes	No	Yes	No	Yes

Table 5: Treatment effect on poverty reduction

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

#### 7.2 Improving social inclusion

Table 6A reports the results of the intervention on the synthetic indicator of social inclusion. In columns (1)-(4) we use the usual index where all variables receive the same weight (unweighted) and in columns (5)-(8) we use Anderson's (2008) weighted index. This method aggregates information from a set of variables that attempt to measure a common latent variable. Intuitively, the method calculates a weighted average of all the variables, where the weight assigned to each of them depends on how correlated it is with the others (the lower the correlation, the greater the weight).

The table follows the same structure as the previous one, although in this case we compare specifications for the same indicator with and without its value in the baseline, since the construction of the same is not exactly comparable in the two periods. In all the specifications considered, regardless of the type of indicator and the regressors included, the effect of the personalized treatment compared to the traditional model is positive and significant at 1%. The improvement on average is 0.20-0.29 standard deviations.

	Synthetic indicator of social inclusion							
		Unwe	ighted			Weig	ghted	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.196***	0.261***	0.259***	0.261***	0.239***	0.295***	0.285***	0.288***
	(0.041)	(0.038)	(0.039)	(0.038)	(0.039)	(0.038)	(0.039)	(0.039)
Observations	1862	1862	1862	1862	1862	1862	1862	1862
$R^2$	0.05	0.38	0.38	0.38	0.05	0.29	0.31	0.31
Control mean dep. var.	-0.085	-0.085	-0.085	-0.085	-0.103	-0.103	-0.103	-0.103
Initial value dep. var.	No	No	Yes	Yes	No	No	Yes	Yes
Additional controls	No	Yes	No	Yes	No	Yes	No	Yes

Table 6A: Treatment effect on social inclusion

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

The synthetic indicator of social inclusion is composed of 7 dimensions that refer to the secondary hypotheses that we will cover below: health, housing, digital skills, parental responsibility, community integration, education and employability. Table 6B shows the impact of the personalized intervention on each of them. In these regressions, the value of the initial indicator has not been included as a control because, depending on the indicator, it is not always available or, if it is, it is not always completely comparable to the final measurement.

The results suggest that the personalized intervention has had a greater impact on the dimensions most directly linked to childhood: housing, parental responsibility, community integration, and education. We did not detect a significant effect on indicators of health, digital skills, or employability.

	Health	Housing	Digital	Parental	Community	Education	Employability
			skills	responsibility	integration		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	0.018	0.167***	0.073	0.150***	0.367***	0.179***	0.017
	(0.048)	(0.040)	(0.056)	(0.032)	(0.052)	(0.030)	(0.047)
Observations	1862	1862	1862	1862	1862	1862	1862
$R^2$	0.15	0.22	0.12	0.23	0.23	0.14	0.03
Control mean dep. var.	0.007	-0.051	-0.013	-0.051	-0.140	-0.061	-0.009
Initial value dep. var.	No	No	No	No	No	No	No
Additional controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 6B: Treatment effect on the dimensions of social inclusion

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

#### 7.2.1 Improving habits and health care

Table 7 reports the health-related outcomes of the intervention. With the synthetic index, the impact of personalized treatment is reduced and not significant. If we analyse each of the variables included in the indicator separately, we see that the level of emotional health (column 4) and the ability of those treated to assume the burden of dental care costs have improved (column 5), but in the aggregate the treatment has not had a significant impact.

	Hea	alth	$\operatorname{Health}$	Emotional	Ability to assume
	indic	eator	literacy	health	the burden of dental
			level	level	care costs
	(1)	(2)	(3)	(4)	(5)
Treatment	0.018	0.037	-0.023	0.099***	0.094*
	(0.048)	(0.051)	(0.052)	(0.025)	(0.049)
Observations	1862	1862	1862	1862	1862
$R^2$	0.15	0.22	0.10	0.42	0.07
Control mean dep. var.	0.007	0.007	0.035	-0.028	-0.045
Initial value dep. var.	No	Yes	Yes	Yes	No
Additional controls	Yes	Yes	Yes	Yes	Yes

Table 7: Treatment effect on health

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level. The added controls include the number of household members who work and the synthetic indicator of social inclusion.

### 7.2.2 Reducing the risk of home loss and improving housing conditions

Table 8 reports the results of the intervention on the housing indicator. With the synthetic index, the impact of personalized treatment is positive and significant. The improvement on average is 0.13-0.17 standard deviations. Looking at each component of the index with a significant impact, a positive impact of the treatment is detected in the better knowledge of aids and mechanisms for energy saving (column 3) and for the better identification of delays in the payment of expenses associated with housing (column 4).

	Housing		Knowledge of aids	Identification of
	indicator		and mechanisms for	delays in the payment
			energy saving	of expenses
	(1)	(2)	(3)	(4)
Treatment	0.167***	0.133***	0.079*	0.164***
	(0.040)	(0.034)	(0.042)	(0.044)
Observations	1862	1862	1862	1862
$R^2$	0.22	0.39	0.16	0.30
Control mean dep. var.	-0.051	-0.051	-0.030	-0.058
Initial value dep. var.	No	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Table 8: Treatment effect on housing conditions

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level. The added controls include the number of household members who work and the synthetic indicator of social inclusion.

### 7.2.3 Improving digital skills

Table 9 reports the results of the intervention on digital skills. With the synthetic index without taking into account the initial value (column 1), the impact of the personalized treatment is not significant, but it is when the precision increases by including the value of the indicator in the baseline in the regression (column 2). Looking at each component of the index with a significant impact, a positive impact of the treatment on the interest in the digital skills of the treated with respect to control is detected (column 3). The improvement on average is 0.11 standard deviations, although it is only significant at 10%.

	Digital s	kills indicator	Interest in digital skills
	(1)	(2)	(3)
Treatment	0.073	0.112*	0.105*
	(0.056)	(0.059)	(0.050)
Observations	1862	1862	1862
$R^2$	0.12	0.34	0.17
Control mean dep. var.	-0.013	-0.013	-0.029
Initial value dep. var.	No	Yes	Yes
Controls	Yes	Yes	Yes

Table 9: Treatment effect on digital skills

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level. The added controls include the number of household members who work and the synthetic indicator of social inclusion.

### 7.2.4 Greater assumption of parental responsibilities

Table 10 reports the results of the intervention on the assumption of parental responsibilities. In this case, the impact is positive and significant, varying between 0.12-0.15 standard deviations. Looking at each component of the index with a significant impact, we see that the impact is positive both in the measure of development of parental skills (column 3) and in the degree of family satisfaction (column 4).

	Par	rental	Development of	Degree of family
	responsibil	ity indicator	parental skills	satisfaction
	(1)	(2)	(3)	(4)
Treatment	$0.150^{***}$	$0.124^{***}$	0.103**	0.113***
	(0.032)	(0.029)	(0.045)	(0.036)
Observations	1862	1862	1862	1862
$R^2$	0.23	0.27	0.14	0.26
Control mean dep. var.	-0.051	-0.051	-0.038	-0.046
Initial value dep. var.	No	Yes	No	Yes
Controls	Yes	Yes	Yes	Yes

Table 10: Treatment effect on parental responsibilities

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

# 7.2.5 Greater integration into the community and better quality of their relationships with the environment

Table 11 reports the results of the intervention on community integration. Again the impact is positive and significant, varying between 0.37-0.40 standard deviations, the largest of all the estimated effects. Looking at each component of the index with a significant impact, this impact is due to both the improvement in the degree of satisfaction in personal relationships (column 3) and in trust in others (column 4).

	Community integration indicator		Satisfaction in personal relationships	Trust in others
	(1)	(2)	(3)	(4)
Treatment	0.367***	$0.398^{***}$	0.076*	0.115***
	(0.052)	(0.047)	(0.042)	(0.035)
Observations	1862	1862	1862	1862
$R^2$	0.23	0.28	0.23	0.26
Control mean dep. var.	-0.140	-0.140	-0.019	-0.018
Initial value dep. var.	No	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Table 11: Treatment effect on community integration

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

### 7.2.6 Greater integration and educational success

Table 12 reports the results of the intervention on integration and educational success. Both concepts are measured with a synthetic indicator that includes the coverage of school material needs, academic results, and the degree of school attendance. Personalized treatment shows a positive and significant effect of between 0.14-0.18 standard deviations, supported by improvements mainly in the coverage of needs, but also in school attendance.

	Synthetic education	Synthetic education	Coverage of school	School
	indicator	indicator	material needs	absentee ism
	(1)	(2)	(3)	(4)
Treatment	$0.179^{***}$	0.142***	0.283***	0.090**
	(0.030)	(0.031)	(0.045)	(0.035)
Observations	1862	1862	1862	1862
$R^2$	0.14	0.38	0.21	0.14
Control mean dep. var.	-0.061	-0.061	-0.118	-0.030
Initial value dep. var.	No	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Table 12: Treatment effect on education

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

Table 13 reports the results of the intervention on the employability of the participants. Employability is measured with a synthetic indicator that consists of a set of questionnaire questions to capture objective factors such as the proportion of household members who are looking for work, the eventual improvement in income from work, and the specific activities carried out to look for work (activations). In this case, personalized treatment does not show any significant effect on employability, job success or income from work, despite an improvement in the activation of household members for job search.

	Employability	Activations for
	indicator	employment
	(1)	(2)
Treatment	0.017	0.127*
	(0.047)	(0.065)
Observations	1862	1862
$R^2$	0.03	0.06
Control mean dep. var.	-0.009	-0.062
Initial value dep. var.	No	No
Controls	Yes	Yes

Table 13: Treatment effect on employability

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level. The added controls include the number of household members who work and the synthetic indicator of social inclusion.

### 7.3 Heterogeneity Analysis

This section presents the analysis of heterogeneity of effects according to the characteristics of the participants. To do this, regressions similar to those in the previous section are specified, but adding the variable for which the heterogeneous effects are to be estimated, and also the interaction of this variable with the treatment.

Table 14 reports heterogeneous results by type of family (single-parent or not). The table has 6 columns, which correspond to the three main hypotheses indicated in the evaluation scheme: poverty reduction, with AROPE rate (columns 1 and 2) or with the indicator of child material deprivation (columns 3 and 4), and social inclusion (columns 5 and 6). For non-single-parent families, as in the total sample, the treatment led to an improvement in the indicators of child material deprivation and social inclusion. The interaction of Treatment and single-parent is positive for both indicators, although in some cases it is estimated with low precision. For the synthetic indicator of social inclusion, an effect of treatment for single-parent families is estimated to double the impact of non-single-parent families. However, we did not detect significant effects on reduced poverty indicators.

	Simplified		Child material		Synthetic indicator of	
	AROPE		deprivation		social inclusion	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	-0.028	-0.002	0.101	0.133*	0.163***	0.166***
	(0.059)	(0.068)	(0.076)	(0.068)	(0.030)	(0.031)
Single-parent families	-0.065	-0.059	0.470***	0.486***	-0.011	-0.001
	(0.041)	(0.048)	(0.052)	(0.046)	(0.020)	(0.027)
Treatment and single-parent	-0.006	-0.008	0.057	0.080	0.179***	0.177***
	(0.088)	(0.094)	(0.115)	(0.098)	(0.046)	(0.047)
Observations	1862	1862	1862	1862	1862	1862
$R^2$	0.28	0.31	0.03	0.16	0.38	0.38
Control mean dep. var.	0.011	0.011	-0.057	-0.057	-0.085	-0.085
Initial value dep. var.	Yes	Yes	No	No	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes

Table 14: Treatment effect by type of family

\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01. Robust/clustered standard errors have been used at the strata level.

The added controls include the number of household members who work and the synthetic indicator of social inclusion.

### 8 Conclusions

This pilot project has made it possible to evaluate the effects of a new model of personalized accompaniment for families with children in poverty compared to the traditional model with the usual aid. The evaluation is experimental, using stratified randomization (by family type and locality), to assign participants to the treatment or control group randomly. The initial sample includes 2,038 families in 7 towns in Galicia.

Personalized treatment has a positive and significant impact on the rate of child material deprivation. Positive effects are also found in the synthetic indicator of social inclusion, with the most important improvements concentrated in the measures of housing conditions, parental responsibilities, community integration and education. Personalized treatment, however, does not show a positive effect on simplified indicators of poverty, employability or on income from work, despite an improvement in the activation of household members for job search.

It would be desirable to complete this assessment with the use of administrative data provided by the Social Security to assess the medium-term effect on the employment outcomes of the reference person. In this sense, it is important to emphasize that the results presented in this report are based on the final survey carried out immediately at the end of the intervention, so the period of analysis has been limited.

### References

- Anderson, M. L. (2008). Multiple Inference and Gender Differences in the Effects of Early Intervention: A Reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects. Journal of the American Statistical Association 103 (484), 1481–1495.
- [2] EAPN (2023): 13th Annual Report on the State of Poverty. Monitoring of the indicators of the EU 2030 Agenda.
- [3] EAPN (2022): 12th Annual Report on the State of Poverty. Monitoring of the indicators of the EU 2030 Agenda.

# Appendix 1: Personalized Treatment Services Portfolio

Table A.1 shows the portfolio of services for personalised treatment.

	Service	Description / Duration
1	Health and care training groups	Each workshop will last 16 hours, which will be held in 8 sessions of 2 hours per week
2	Individualized health and care counseling	Up to a maximum of 60 hours in 12 months (between 3 and 5 monthly
		sessions of one hour per person/family)
3	Aid for health expenses	Financial aid to facilitate access to medical, optical, pharmaceutical or therapeutic consultations that are
		not covered by public resources in response to the needs of families. Up to $200{\ensuremath{\in}}/{\rm year}$ per person
4	Group workshop to improve the quality of housing	Each training action will last 8 hours and can be carried out in several sessions
5	Individualized housing counseling and support	Minimum of two interviews or home visits per year per family
6	Housing payment assistance	Up to $150 \in /month$ as required
7	Aid for home repair	Up to $1500 \in /year$ as required
8	Aid in the payment of supplies	Up to $300 \in /year$ as required
9	Basic Digital Skills Workshop	Each training action will last 12 hours, which can be carried
		out in 6 sessions of 2 hours or 4 sessions of 3 hours every two months
10	Connectivity aids	Monthly payment for the provision of internet connection in prepaid or by contract
		as required of up to $50{\ensuremath{\in}}/{\rm month}$ per family up to a maximum of 12 months
11	Aid for the provision of computer equipment	Up to $150 \in \text{per family per year}$
12	Parental Responsibility Workshop	Each workshop will last 16 hours in 8 sessions of 2 hours and weekly frequency for two months
13	Community Engagement Activities	Each person will participate in a maximum of 24 hours of community engagement activities per quarter.
		The activities may have a variable duration of between 2 and 4 hours
14	Educational reinforcement groups	Adjusted to the school calendar set by the Ministry of Education and respecting the non-
		teaching periods (37 weeks):
		Primary: 1 hour/4 days a week or concentrated in 2 hours/2 days a week
		Secondary: 1.5 hours / 3 days a week
		Post-compulsory (FP or Baccalaureate): 1.5 hours / 3 days a week
15	Individualized School Support Sessions	Adjusted to the school calendar set by the Ministry of Education and respecting the non-
		teaching periods (37 weeks):
		Primary: 1 hour / 4 days a week
		Secondary: 1.5 hours / 3 days a week
		Post-compulsory (FP or Baccalaureate): 1.5 hours / 3 days a week
16	Non-formal education groups	4 hours/week per group during the school term (37 weeks)
17	Aid for school supplies	Up to $150 \in \text{per child} / \text{year}$
18	Grants for non-formal educational activities	Up to $400 \in$ per child / year
19	Basic skills training courses	12 hours per week up to a maximum of 60 hours per training action
20	Training courses in professional skills	Maximum 250 hours per training action
21	Individual Career Counseling Sessions	Up to 10 sessions of a maximum of 2 hours per session
22	Financial aid to cover expenses that favour work-life balance	Up to 478€ / year

Table A.1: Personalized Treatment Services

# Appendix 2: Definition of performance indicators

Table A.2 shows the description and calculation formula of the outcome indicators used in the analysis, using the original names of the survey variables.

Code	Description	Original variable or formula
$IRF11_t$	Reduced AROPE	It meets both conditions: If $(IRF111_t = 1 \text{ and } IRF112_t >= 3)$ then $IRF11_t = 2$
		It meets 1 condition: If $((IRF111_t = 0 \text{ and } IRF112_t >= 3) \text{ or } (IRF111_t = 1 \text{ and } IRF112_t < 3))$ then $IRF11_t = 1$
		It does not meet any: If $(IRF111_t = 0 \text{ and } IRF112_t < 3)$ then $IRF11_t = 0$
$IRF111_t$	Relative monetary poverty	VIRF111 <sub>t</sub>
$IRF112_t$	Material and social deprivation	$VIRF121_t + VIRF122_t + VIRF123_t + VIRF124_t + VIRF125_t + VIRF126_t + VIRF127_t$
$IRF12_t$	Child material deprivation	$VIRF131_t + VIRF132_t + VIRF133_t + VIRF134_t + VIRF135_t + VIRF136_t + VIRF$
		$\mathrm{VIRF137}_t + VIRF138_t + VIRF139_t + VIRF1310_t + VIRF1311_t$
$IRF2_t$	Synthetic indicator of social inclusion	$(IRI1_t + IRI2_t + IRI3_t + IRI5_t + IRI5_t + IRI6_t + IRI7_t)/7$
$IRI1_t4$	Synthetic Health Indicator	$(IRI19_t + IRI15_t + IRI16_t + IRI12_t + IRI14_t + IRI21_t + IRI17_t + IRI18_t)/8$
$IRI19_t$	Perceived household health level	$(VIRI191_t - 5)/(1 - 5)$
$IRI15_t$	Frequency of medical care	$(VIRI151_t - 5)/(1 - 5)$
$IRI16_t$	Frequency of illness	$(VIRI161_t - 5)/(1 - 5)$
$IRI12_t$	Level of health-related quality of life	$(((1/5) * VIRI121_t + VIRI122_t + VIRI123_t + VIRI124_t + VIRI125_t)) - 3)/(1 - 3)$
$IRI14_t$	Level of emotional health	$(1/9)*((VIRI141_t-1)/(5-1)+(VIRI142_t-1)/(5-1)+(VIRI143_t-1)/(5-1)+(VIRI144_t-1)/(5-1)+(VIRI145_t-1)/(5-$
		$(VIRI146_t-1)/(5-1)+(VIRI147_t-1)/(5-1)/(5-1)+(VIRI148_t-5)/(1-5)+(VIRI149_t-1)/(5-1))$
$IRI21_t$	Health literacy level	$((1/4)\ast(dVIRI212_t+dVIRI213_t+dVIRI219_t+dVIRI2110_t)),$ where $dVIRI212_t$ is
		an indicator that takes the value 1 if $VIRI212_t = 1$ or $VIRI212_t = 2$
$IRI17_t$	Dental care expenses	Indicator that the expenses incurred in dental care have not been a burden: $VIRI171_t = 3$
$IRI18_t$	Drug Spending	Indicator that the expenditure incurred on medicines has not been a burden: $VIRI181_t == 3$
$IRI2_t$	Synthetic Housing Indicator	$(IRI41_t + IRI42_t + IRI54_t + IRI51_t + IRI45_t)/5$
$IRI41_t$	Synthetic indicator of residential deprivation due to overcrowding	$((NH/VIRI411_t) - 10)/(0 - 10)$
$IRI42_t$	Indicator of residential deprivation due to structural problems in housing	$((1 - VIRI421_t) + (1 - VIRI431_t) + VIRI441_t + VIRI442_t)/4$
$IRI54_t$	Degree of knowledge of aids and mechanisms for energy saving	$(VIRI541_t - 6)/(1 - 6)$
$IRI51_t$	Identification of delays suffered by the household	$((4 - (VIRI511_t + VIRI521_t + VIRI531_t)) - 0)/4$
	in the payment of expenses related to mortgage loans, rent or utilities	
$IRI45_t$	Indicator of the degree of satisfaction with housing	$(VIRI451_t)/10$
$IRI3_t$	Synthetic indicator of digital skills	$(IRI111_t + IRI132_t + IRI133_t + IRI134_t + IRI122_t)/5$
$IRI111_t$	Internet availability	VIRI1111 <sub>t</sub>
$IRI132_t$	Level of interest in developing digital skills	$(VIRI1321_t - 1)/(3 - 1)$
$IRI133_t$	Level of confidence in the use of digital tools	$(((1/3) * (VIRI1331_t + VIRI1332_t + VIRI1333_t)) - 3)/(1 - 3)$
$IRI134_t$	Digital Signature Certificate	VIRI1341 <sub>t</sub>
$IRI122_t$	Level of interaction with administrations and	$(VIRI1221_t + VIRI1222_t + VIRI1223_t + VIRI1224_t + VIRI1225_t + VIRI1226_t + VIRI1227_t)/7$
	public services through the network	
$IRI4_t$	Synthetic indicator of parental responsibility	$(IRI62_t + IRI72_t)/2$
$IRI62_t$	Level of development of parental skills	$(((VIRI621_t + VIRI622_t + VIRI623_t)/3) - 0)/(3 - 0)$
$IRI72_t$	Degree of family satisfaction	$(((VIRI721_t + VIRI722_t)/2) - 1)/(7 - 1)$
$IRI5_t$	Synthetic indicator of community integration	$(IRI101_t + IRI191_t + IRI181_t + IRI182_t)/4$
$IRI101_t$	Degree of satisfaction in personal relationships	$VIRI1011_t/10$
$IRI191_t$	Degree of trust in others	VIRI911 <sub>t</sub> /10
$IRI181_t$	Degree of perceived social support	$(((VIRI811_t + VIRI814_t + VIRI816_t + VIRI819_t)/4) - 1)/(5 - 1)$
$IRI182_t$	Degree of citizen participation	$(((VIRI821_t + VIRI822_t + VIRI823_t)/3) - 1)/(5 - 1)$
$IRI6_t$	Synthetic Education Indicator	$(IRI161_t + IRI141_t + IRI142_t + IRI151_t)/4$
$IRI161_t$	Indicator on the coverage of school material requirements	$(VIRI1611_t + VIRI1612_t + VIRI1613_t + VIRI1614_t))/4$
$IRI141_t$	School-age repetition indicator for school-age household members $(6-16)$	$(((VIRI1411_{1t} + VIRI1411_{2t} + VIRI1411_{3t} + VIRI1411_{4t} + VIRI1411_{5t} + VIRI1411_{6t})/(menores6_{1}6) - 4)/(1 - 4) = 0$
$-IRI142_t$	Indicator on the number of subjects failed in the last academic	$(((Interval_{S1t} + Interval_{S2t} + Interval_{S3t} + Interval_{S4t} + Interval_{S5t} + Interval_{S6t})/(menores6_{1}6) - 4)/(1 - 4).$ Brackets (1-4) are calculated for
	year by school-age household members (6-16)	failures based on $VIRI1421_{nt}$ , the average of the children is made and normalized so that higher values of the indicator imply fewer failures
$IRI151_t$	Absenteeism indicator	$(((Interval_{F1t} + Interval_{F2t} + Interval_{F3t} + Interval_{F4t} + Interval_{F5t} + Interval_{F6t})/(menores6_{1}6) - 4)/(1 - 4). Brackets (1 - 4) are calculated for the second state of the second sta$
		absences based on $VIRI1511_{nt}$ , the average number of children is made and normalized so that higher values of the indicator imply less absenteeism
$IRI7_t$	Synthetic employability indicator	$(IRI187_t + IRI189_t + IRI202_t + IRI203_t)/4$
$IRI187_t$	Proportion of household members seeking employment	$VIRI1871_t/\mathrm{Number}$ of household members
$IRI189_t$	Number of activations for the employment of household members	$(VIRI1891_t + VIRI1892_t + VIRI1893_t + VIRI1894_t + VIRI1895_t)/5$
$IRI202_t$	Indicator of obtaining a job	$VIRI2021_t$
LR1203.	Proportion of increase in earned income	(VIRI2031, -1)/(4-1)

Table A.2: Description of performance indicators

23

The following list includes the description of the survey variables included in the calculation of each indicator.

• VIRF111<sub>t</sub>

Absence of relative monetary poverty

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRF121 $_t$ 

Material and social deprivation: 1) Your household can afford to go on vacation for at least one week a year.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRF122 $_t$ 

Material and social deprivation: 2) Your household can afford a meal of meat, poultry or fish at least every other day.

0. No 1. Yes

Pre-Post

• VIRF123 $_t$ 

Material and social deprivation: 3) Your home can afford to keep the house at an adequate temperature.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRF124 $_t$ 

Material and social deprivation: 4) Your household can afford to have a car.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRF125 $_t$ 

Material and social deprivation: 5) Your household can afford to replace damaged or old furniture.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRF126 $_t$ 

Material and social deprivation: 6) Their household has the capacity to meet unforeseen expenses of 650 euros.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRF127 $_t$ 

Material and social deprivation: 7) Your household has not had delays in the payment of purchases in installments in the last 12 months.

0. No 1. Yes

Pre-Post

• VIRF131 $_t$ 

Child material deprivation: 1) Children under 16 years of age in the home have new clothes (that are not second-hand)

0. No 1. Yes

Post

• VIRF132 $_t$ 

Child material deprivation: 2) Children under 16 years of age in the household have two pairs of suitable shoes (or a suitable pair for any time of the year) 0. No 1. Yes

Post

• VIRF133 $_t$ 

Child material deprivation: 3) Children under 16 years of age in the household eat fresh fruit and vegetables at least once a day

0. No 1. Yes

Post

• VIRF134 $_t$ 

Child material deprivation: 4) Children under 16 years of age in the household eat at least one meal of meat, poultry or fish (or the vegetarian equivalent) a day

0. No 1. Yes

Post

• VIRF135 $_t$ 

Children's material deprivation: 5) Children under 16 years of age in the home have books appropriate for their age 0. No 1. Yes

Post

• VIRF136 $_t$ 

Children's material deprivation: 6) Children under 16 years of age in the home have outdoor leisure equipment (bicycles, skates, etc.)

0. No 1. Yes

 $\operatorname{Post}$ 

• VIRF137 $_t$ 

Children's material deprivation: 7) Children under 16 years of age in the home have toys that can be used inside the home (educational toys for babies, board games, computer games, etc.). 0. No 1. Yes

Post

• VIRF138 $_t$ 

Children's material deprivation: 8) Children under 16 years of age in the home regularly have leisure activities (sports, swimming, playing an instrument, youth organizations, etc.).

0. No 1. Yes

Post

• VIRF139 $_t$ 

Children's material deprivation: 9) Children under 16 years of age in the home can celebrate special occasions (birthdays, saints, religious events, etc.).

0. No 1. Yes

Post

## • VIRF1310 $_t$

Children's material deprivation: 10) Children under 16 years of age in the home can meet from time to time with their friends to play and invite them to have a drink

0. No 1. Yes

 $\operatorname{Post}$ 

• VIRF1311 $_t$ 

Child material deprivation: 11) Children under 16 years of age from home can go on vacation away from home at least one week a year 0. No 1. Yes

Post

• VIRI191 $_t$ 

Self-assessment of household members' overall health status

1. Very good 2. Good 3. Regular 4. Bad 5. Very bad

Post

• VIRI151 $_t$ 

How often a household member has needed medical care 1.Never 2. Very rarely 3.Sometimes 4.Often 5. Very often Post

• VIRI161 $_t$ 

How often a household member has become ill

1.Never 2. Very rarely 3.Sometimes 4.Often 5. Very often

Post

# • VIRI121 $_t$

Self-perception of the respondent (household referent) regarding their health-related quality of life in the mobility dimension (based on the EQ-5D scale)

1.No I have trouble walking 2. I have some trouble walking 3. I have to be in bed Pre-Post

• VIRI122 $_t$ 

Self-perception of the respondent (household referent) regarding their health-related quality of life in personal care (based on the EQ-5D scale).

I don't have a problem with self-care 2. I have some trouble washing or dressing myself 3.
 I am unable to wash or dress myself

Pre-Post

• VIRI123 $_t$ 

Self-perception of the respondent (household referent) regarding his/her health-related quality of life in the performance of daily activities (based on the EQ-5D scale)

1.No I have trouble doing my daily activities 2. I have some problems performing my daily activities 3. I am unable to perform my daily activities

Pre-Post

• VIRI124 $_t$ 

Self-perception of the respondent (household referent) regarding their health-related quality of life in terms of suffering from pain and/or discomfort (based on the EQ-5D scale)

1.No I have pain or discomfort 2. I have moderate pain or discomfort 3. I have a lot of pain or discomfort

Pre-Post

• VIRI125 $_t$ 

Self-perception of the respondent (household referent) regarding their health-related quality of life in terms of anxiety and/or depression based on the EQ-5D scale)

1.No I am anxious or depressed 2. I am moderately anxious or depressed 3. I am very anxious or depressed

Pre-Post

• VIRI141 $_t$ 

Self-assessment of the respondent (household referent) regarding his/her emotional health expressed in feeling useful and/or productive for others (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI142 $_t$ 

Self-assessment of the respondent (household referent) regarding their emotional well-being expressed in feeling relaxed (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI143 $_t$ 

Self-assessment of the respondent (household referent) regarding their emotional health expressed in feeling energetic to do things (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI144 $_t$ 

Self-assessment of the respondent (household referent) regarding their problem-solving capacity (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI145 $_t$ 

Self-assessment of the respondent (household referent) regarding their well-being (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

### • VIRI146 $_t$

Self-assessment of the respondent (household referent) regarding their emotional health in relation to the feeling of security and confidence (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI147 $_t$ 

Self-assessment of the respondent (household referent) regarding their mood (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI148 $_t$ 

Self-assessment of the respondent (household referent) regarding their ability to fall asleep (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI149 $_t$ 

Self-assessment of the respondent (household referent) regarding their ability to choose and make decisions (based on the EBMWE scale)

1.Never 2. Very rarely 3.Sometimes 4.Often 5.Always

Pre-Post

• VIRI212 $_t$ 

Health literacy of the respondent (household referent) in relation to getting professional help when sick (based on the HLS-EU-Q16 scale) 1.Very easy 2.Easy 3.Regular 4. Difficult 5. Very difficult Pre-Post

• VIRI213 $_t$ 

Health literacy of the respondent (household referent) to understand what the doctor says (based on the HLS-EU-Q16 scale)

1.Very easy 2.Easy 3.Regular 4. Difficult 5. Very difficult

Pre-Post

• VIRI219 $_t$ 

Health literacy of the respondent (household referent) in relation to understanding health warnings with unhealthy habits (based on the HLS-EU-Q16 scale)

1.Very easy 2.Easy 3.Regular 4. Difficult 5. Very difficult

Pre-Post

• VIRI2110 $_t$ 

Health literacy of the respondent (household referent) in understanding how to perform early detection medical check-ups (based on the HLS-EU-Q16 scale)

1. Very easy 2. Easy 3. Regular 4. Difficult 5. Very difficult

 $\operatorname{Pre-Post}$ 

• VIRI171 $_t$ 

Burden on the household of dental care expenses

1.A heavy load 2.A reasonable charge 3.No charge 4. The household has not used dental assistance

Post

• VIRI181 $_t$ 

Burden that drug costs have placed on the household

1.A heavy load 2.A reasonable charge 3.No charge 4. The household has not consumed medicines

Post

• VIRI411<sub>t</sub>

Number of rooms in the house

Numerical

Pre-Post

• VIRI541 $_t$ 

Degree of knowledge of the respondent (household referent) of aid mechanisms for energy saving in the home

1. Very good 2. Good 3. Regular 4. Bad 5. Very bad 6. You've never heard of them

Pre-Post

• VIRI511 $_t$ 

Identification of delays suffered by the household in the payment of expenses related to mortgage loans requested for the purchase of the home

0. No

1. Yes, only once 2. Yes, twice or more

Pre-Post

• VIRI521 $_t$ 

Identification of delays suffered by the household in the payment of expenses related to the rental of the home

0. No

1. Yes, only once 2. Yes, twice or more

Pre-Post

• VIRI531 $_t$ 

Identification of delays experienced by the household in the payment of expenses related to housing supplies

0. No

1. Yes, only once 2. Yes, twice or more

Pre-Post

• VIRI451 $_t$ 

Degree of satisfaction with the respondent's housing (household referent)

Scale from 0 (not at all satisfied) to 10 (fully satisfied)

Pre-Post

• VIRI421 $_t$ 

Presence of structural problems in the home (leaks, dampness in walls, floors, ceilings or foundations or rot in floors, frames, windows or doors)

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRI431 $_t$ 

Housing characterized by a lack of natural light

0. No 1. Yes

• VIRI441 $_t$ 

Adequate temperature of the house in winter

0. No 1. Yes

Pre-Post

• VIRI442 $_t$ 

Adequate temperature of the house in summer

0. No 1. Yes

Pre-Post

### • VIRI1111t

Availability of internet access at home

0. No 1. Yes

Pre-Post

# • VIRI1321 $_t$

Level of interest in the use of digital tools

1. I'm not interested in it and I don't plan to learn how to use it 2. I don't like it very much, but I plan to learn the basics because it's useful. 3. I really like and am interested in learning new things.

Pre-Post

• VIRI1331 $_t$ 

Level of confidence in the handling of digitales<sub>miembroshogarb</sub>ásicotools

1. All 2. Some 3. Nobody

# • VIRI1332 $_t$

Level of confidence in the handling of tools  $digitales_m iembroshogar_b \acute{a}sicowork$ 

1. All 2. Some 3. Nobody

Pre-Post

• VIRI1333t

Level of confidence in the handling of  $digitales_m iembroshogar_a vanzadotools$ 

1. All 2. Some 3. Nobody

Pre-Post

• VIRI1341 $_t$ 

Availability of a digital signature certificate of a household member

0. No 1. Yes

Pre-Post

• VIRI1221 $_t$ 

Procedures carried out with the Public Administration by the interviewee or members of his/her family in the last three months: 1) Download or print official forms.

0. No 1. Yes

Pre-Post

• VIRI1222 $_t$ 

Procedures carried out with the Public Administration by the interviewee or members of his/her family in the last three months: 2) Download the registration certificate.

0. No 1. Yes

### • VIRI1223 $_t$

Procedures carried out with the Public Administration by the interviewee or members of his/her family in the last three months: 3) File the income tax return.

0. No 1. Yes

Pre-Post

• VIRI1224 $_t$ 

Procedures carried out with the Public Administration by the interviewee or members of his/her family in the last three months: 4) Register or renew a job application.

0. No 1. Yes

Pre-Post

• VIRI1225 $_t$ 

Steps taken with the Public Administration by the interviewee or members of his/her family in the last three months: 5) Request unemployment benefit or benefit.

0. No 1. Yes

Pre-Post

• VIRI1226 $_t$ 

Procedures carried out with the Public Administration by the interviewee or members of his/her family in the last three months: 6) Request the Minimum Vital Income.

0. No 1. Yes

Pre-Post

• VIRI1227 $_t$ 

Procedures carried out with the Public Administration by the interviewee or members of his/her family in the last three months: 7) Request the electricity social bonus/thermal social bonus.

0. No 1. Yes

Pre-Post

• VIRI621 $_t$ 

Level of parental skills of the respondent: 1) I see myself as a parent.

0. Never 1. Rarely or sometimes 2. Quite a few / many times 3. Most of the time/always Post

• VIRI622 $_t$ 

Level of parental skills of the respondent: 2) I have a good relationship with my children 0. Never 1. Rarely or sometimes 2. Quite a few / many times 3. Most of the time/always Post

• VIRI623 $_t$ 

Level of parental skills of the respondent: 3) Our family members get along well with each other

0. Never 1. Rarely or sometimes 2. Quite a few / many times 3. Most of the time/always Post

• VIRI721 $_t$ 

Level of satisfaction with the respondent's family life: 1) In most things, my family life is close to my ideal

 Completely disagree 2. Disagree. 3. Rather disagree. 4. Neither agree nor disagree 5. Rather agree. 6. Okay. 7. Completely agree.

 $\operatorname{Post}$ 

• VIRI722 $_t$ 

Level of satisfaction with the respondent's family life: 2) I am satisfied with my family life

Completely disagree 2. Disagree. 3. Rather disagree. 4. Neither agree nor disagree 5.
 Rather agree. 6. Okay. 7. Completely agree.

Post

• VIRI1871 $_t$ 

Household members age 16 and older who have sought employment (or management to start their own business)

Numerical

Post

• VIRI1891 $_t$ 

Activations for the employment of household members aged 16 or over: 1) Has completed some type of study or training

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Post

• VIRI1892 $_t$ 

Activations for employment of household members aged 16 and over: 2) You have updated your CV

0. No 1. Yes

Post

• VIRI1893 $_t$ 

Activations for the employment of household members aged 16 and over: 3) Has used a job search resource (uploading CV on the internet, reading job advertisements,...)

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Post

• VIRI1894 $_t$ 

Activations for employment of household members aged 16 and over: 4) Has completed a job interview

0. No 1. Yes

Post

• VIRI1895 $_t$ 

Activations for the employment of household members aged 16 or over: 5) Has been able to count on family reconciliation services that helped them to train or participate in job search activities

0. No 1. Yes

Post

• VIRI1011 $_t$ 

Level of overall satisfaction of the respondent (household referent) in their personal relationships.

Scale from 0 (not at all satisfied) to 10 (fully satisfied)

Pre-Post

• VIRI911 $_t$ 

Degree of trust in others of the respondent (household referent).

Scale from 0 (I don't trust anyone) to 10 (I trust most people)

Pre-Post

• VIRI811 $_t$ 

Perception of the respondent (household referent) regarding the situation of affective and confidential support provided by other people according to the statement: 1) I receive visits from my friends and family. (Based on the Duke-UNC11 functional social support scale).

1. Much less than I want. 2. Less than I want. 3. Neither too much nor too little. 4. Almost as desire. 5. As much as I wish.

Pre-Post

• VIRI814 $_t$ 

Perception of the respondent (household referent) regarding the situation of affective and confidential support provided by other people according to the statement: 2) I have people who worry about what happens to me. (Based on the Duke-UNC11 functional social support scale).

1. Much less than I want. 2. Less than I want. 3. Neither too much nor too little. 4. Almost as desire. 5. As much as I wish.

Pre-Post

• VIRI816 $_t$ 

Perception of the respondent (household referent) regarding the situation of affective and confidential support provided by other people according to the statement: 3) I have the possibility of talking to someone about my problems. (Based on the Duke-UNC11 functional social support scale).

1. Much less than I want. 2. Less than I want. 3. Neither too much nor too little. 4. Almost as desire. 5. As much as I wish.

Pre-Post

### • VIRI819 $_t$

Perception of the respondent (household referent) regarding the situation of affective and confidential support provided by other people according to the statement: 4) I receive invitations to distract myself and go out with other people. (Based on the Duke-UNC11 functional social support scale).

1. Much less than I want. 2. Less than I want. 3. Neither too much nor too little. 4. Almost as desire. 5. As much as I wish.

 $\operatorname{Pre-Post}$ 

• VIRI821 $_t$ 

Frequency of participation of household members in civic participation activities: 1) Cultural and recreational activities in the family

1.Never 2. Very rarely 3.Sometimes 4.Often 5. Very often

 $\operatorname{Post}$ 

• VIRI822 $_t$ 

Frequency of participation of household members in citizen participation activities: 2) Have professionals and/or support organizations

1.Never 2. Very rarely 3.Sometimes 4.Often 5. Very often

Post

• VIRI823 $_t$ 

Frequency of participation of household members in citizen participation activities: 3) Participation of children outside of school and/or summer hours in recreational or leisure activities

1.Never 2. Very rarely 3.Sometimes 4.Often 5. Very often

 $\operatorname{Post}$ 

• VIRI1611 $_t$ 

Level of coverage of the school material needs of school-age family members: 1) textbooks and complementary study support books.  $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

### • VIRI1612 $_t$

Level of coverage of the school material needs of school-age family members: 2) stationery and photocopies.

0. No 1. Yes

Pre-Post

• VIRI1613 $_t$ 

Level of coverage of the school material needs of school-age family members: 3) uniforms, school sports shoes or clothing, backpacks, etc.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

Pre-Post

• VIRI1614 $_t$ 

Level of coverage of the school material needs of school-age family members: 4) musical instruments, drawing tools or materials, instruments and specialized material (laboratory, optical, etc.).

0. No 1. Yes

Pre-Post

• VIRI1411 $_{nt}$ 

Repeating a school year at some point in life (n=household member aged 6-16).

1. No 2. Yes, once 3. Yes, twice 4. Yes, three or more times

• VIRI1421 $_{nt}$ 

Number of subjects failed by each school-age child during the last school year (n= household member aged 6-16)

Number

Pre-Post

• VIRI1511 $_{nt}$ 

Level of school absenteeism reflected in the number of days that each child of school age has been absent unjustified (n= household member aged 6-16).

Number

Pre-Post

• VIRI2021 $_t$ 

Any member of the household aged 16 or over has found a job.

 $0.\ {\rm No}\ 1.\ {\rm Yes}$ 

 $\operatorname{Post}$ 

• VIRI2031 $_t$ 

Percentage increase in income derived from work

1. No increase 2. Slight increase (up to 5%) 3. Moderate increase (5-10%) 4. Significant increase (10% or more)

Post